British Columbia Specifications and Guidelines for Geomatics

Content Series
Volume 3

Digital Baseline Mapping at 1:20 000

Release 2.0
January 1992

Ministry of Environment, Lands and Parks
Geographic Data BC
Province of British Columbia

Foreword

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This report is Volume 3 of a series of documents providing a content reference for the specification and transfer of geomatics data. In the broad field of geomatics, one of the main limiting factors to the wide use of Geographic Information Systems has been the lack of widely applicable data specifications. The current work and its companion volumes describe a set of specifications appropriate for geomatics data management and data sharing.

A way of thinking about geomatics specifications is to establish a common framework encompassing the definition and documentation of (1) a Reference Series and (2) a Content Series. The Reference Series includes methodologies for describing geomatics data and for handling it in various computer and communications environments. The Content Series defines the features and attributes, as related to topographic data, cadastral data, forestry data, soils data, and a variety of other themes. The constructs and classes required for the content definitions are supported directly by the reference data model. Thus, the notions of reference and content are complementary, yet integrated. The two series and the associated approaches to their development describe completely the definition and documentation framework.
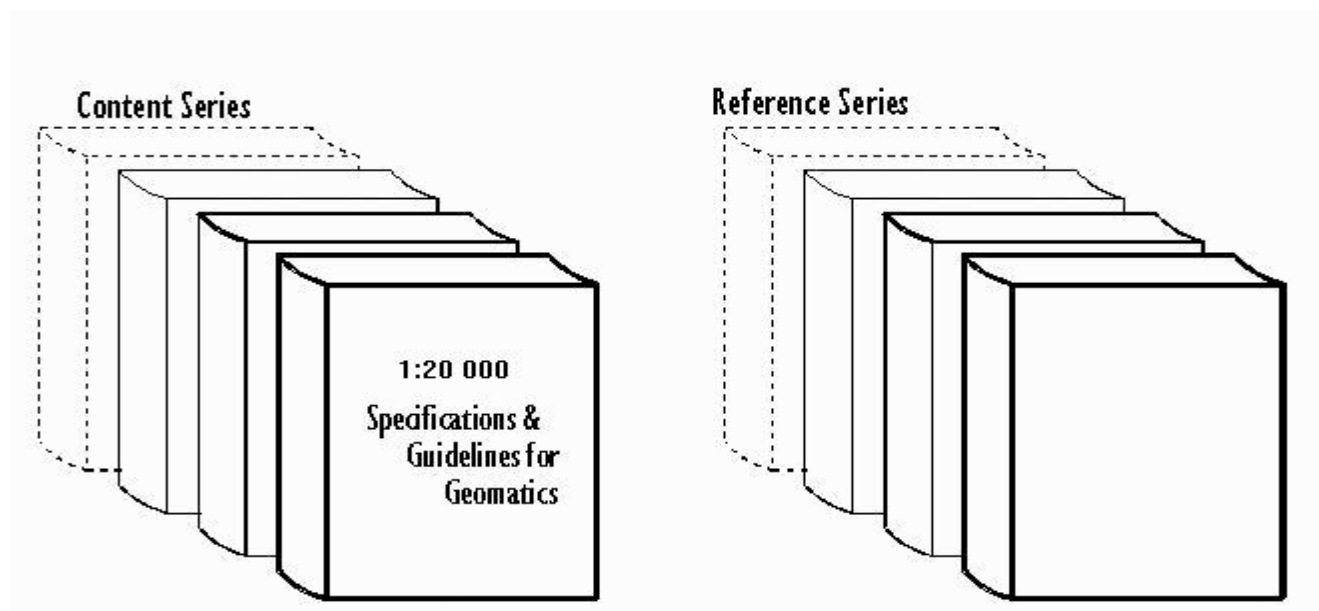
The current document is Volume 3 of the Content Series of the British Columbia Specifications and Guidelines for Geomatics. This manual of specifications represents the culmination of some three years of testing and applied application. Many committee members have participated and each has left his or her particular imprint. For this, they are all owed a debt of gratitude by those of us who will reap the benefit of their effort. These specifications represent a significant step in the Province of British Columbia toward the standardization of cartographic representation as indicated by the acceptance of the "Map Representational File" depiction standards. However, there remains much to be done in the way of obtaining a broader acceptance of the theory of a generic data format in the form of the MOEP file or an accepted alternative.

Adoption of the Canadian Council on Surveying and Mapping (CCSM) feature codes has set the stage for this development and will assure unique feature codes for all mapped features in British Columbia. As well, there must be development of specifications for the thematic aspects of geo-referenced data and its associated databases. Work is now in progress toward that objective. The increasing demand for usable digital data from different sources to be integrated in Geographic Information Systems will force an adoption of common standards of accuracy, data structure, storage and transfer formats and cartographic representation by data producers. The British Columbia Specifications and Guidelines for Geomatics represent recognition of this fact and a positive step in that direction.

Introduction

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Objective

The Surveys and Resources mapping Branch of the Ministry of Environment and Parks is coordinating the development of a Corporate Land Information Strategic Plan for the government of British Columbia. The requirements of such a plan will include a common digital map framework for the various land information retrieval systems.   This will be provided by the Ministry of Environment, Lands and Parks. The Geographic Data BC is currently developing a Provincial Digital Atlas based principally on three distinct data sets at various scales; (1) 1:2 000 (one map covering the entire province), (2) 1:250 000 (84 map sheets covering the province), (3) the 1:20 000 TRIM product (7,000 map sheets for all of B.C.).

This volume relates directly to (3), the 1:20 000 product. In particular, these specifications relate to the generation of topographic data at the scale of 1:20 000 (1:10 000/1:50 000 derived) in hard copy and digital form. Contractors, Provincial Government Ministries and other agencies can obtain copies of these specifications from the Geographic Data BC, Ministry of Environment, Lands and Parks (Herein referred to as the Branch).

Format

This manual consists of four parts

Part I   General Specifications
Part II   Detailed Geographic Object Specifications
Part III   Detailed Business Object Specifications
Part IV Appendices

Table of Contents

Part I GENERAL SPECIFICATIONS

Section 1 - System of Mapping

All mapping produced using these specifications for the Ministry of Lands conforms to the British Columbia Geographic System of Mapping (B.C.G.S) as defined in the Ministry of Environment publication entitled British Columbia Standards System of Mapping, 1976 Edition.

1.1   British Columbia Geographic System

The British Columbia Geographic System is a geographic system in which the coverage in minutes and seconds of longitude is double the coverage in minutes and seconds of latitude for sheets at all scales. The smallest scale in the system is 1:20 000 derived from a breakdown of the N.T.S. 1:250 000 sheet into 100 parts. Larger scales are obtained by successive quartering or further division into 100 parts. A map number consists of the appropriate N.T.S. 1:250 000 map number followed by the numbers of each successive breakdown, each separated by a period. See Table 1.1 and Figure 1.

Table 1.1

B.C.G.S. Scales, Map Numbers and Coverage

Scale	Map Number	Longitude	Latitude
1:20 000	82F.035	12'	6'
1:10 000	82F.035.1	6'	3'
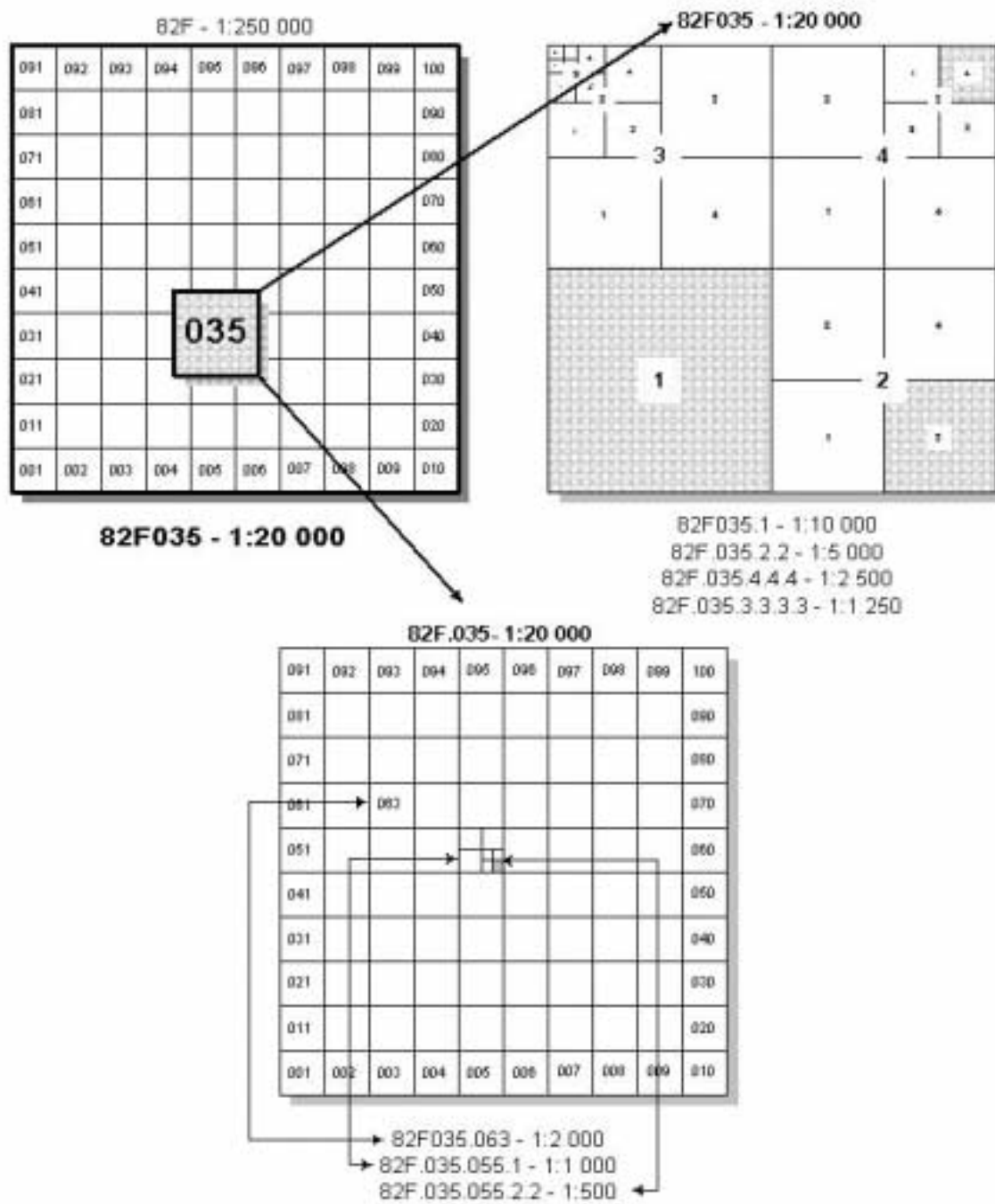
Figure 1

Note: Unless specified otherwise, all 1:10 000 scale mapping shall be derived from mapping compiled at 1:20 000 scale.

Section 2 - Cartographic Framework

All mapping is presented on the Universal Transverse Mercator Coordinate System (based on the 1983 North American Datum). The following points define more closely the map coverage as projected onto this datum.

a. The trimmed size of the sheet shall be 969 millimetres by 600 millimetres. The neat line shall be defined in Latitude by straight-line segments joining the geographic sheet corners and calculated at each six seconds of Longitude. The neat line shall be defined in Longitude by the straight line joining the geographic sheet corners.

b. For 1:500 scale mapping the neat line is defined in latitude by the straight-line segments joining the geographic sheet corners and calculated at each three seconds of longitude. The neat line is defined in longitude by a straight line joining the geographic sheet corners.

c. The plane reference grid will be the Universal Transverse Mercator Coordinate System depicted at ten centimetre intervals at map scale. The datum used is the North American Datum defined in 1983 (NAD 83).

d. The vertical datum will be mean sea level as established by the Geodetic Survey of Canada.

e. For datasets that have a sheet boundary coincident with the 490 or 600 parallel, the 490 or 600 parallel is defined and labelled at the corners but the sheet neatline is either the parallel or the surveyed B.C. boundary or a combination of both such that maximum area is covered. The B.C. boundary is a surveyed line and is not always consistent with the line of latitude. The surveyed line is apparent at times north of the parallel, at times it will cross or be coincident with the parallel, and at other times it is evident south of the parallel.

Section 3 - Digital Data Files

3.1 General

a.   The following data files will be available for each map sheet

Positional Files:

Data File 1 - Digital Elevation Model
   Data File 2 - Raw Contour File
   Data File 3 - Non-Positional
   Data File 4 - Planimetric Positional File
   Data File 5 - Toponymy File

   Representational Files:
  Data File 1 -Planimetric Representational File (Section 3.4)
  Data File 2 -Contour Representational File (Section 3.4)
  Data File 3 - Master surround (Optional)

b.   Digital planimetric raw contour data shall be "clipped" to the neat line as defined in Part I, Section 2a. Digital Elevation model data verification plot shall extend beyond the 1:20 000 map sheet neat line by 200 mtres.

c.   All planimetric and elevation data shall be submitted in continuous 3-D form (i.e. easting, northing and elevation).

d.   Digital data shall be feature coded according to the feratures given in section 3 (National Standards codes as adopted by the CCSM).

e.   The positional toponymy file contains all toponymic information present in the planimetric representational file. NOTE: The toponymy file is extracted from the planimetric representational file and so is not available until representational file completion.

f.   The master surround is the non-variable surround information as described in Appendix D. This file is available upon request.

3.2   Digital Data Format

The digital data files specified for the project shall be in the following formats:

Positional Files - Interchange format as per Part I, Section 7.

Representational File - Intergraph Design File (IGDS)

3.3   Positional Files

Each Positional file shall contain positionally correct, complete edited map data for one 1:20 000 map sheet. The data shall consist of all digital planimetric data compiled directly by stereo compilation. The digital data contained in the Positional files shall be according to those map features given in the detailed specifications in Part II of this manual, and shall be collected in accordance with the guidelines set out in Appendix "B". No positional adjustments of data to eliminate conflicts shall be performed on this file.

All 1: 20 000 map sheet data files will be completed to the full map sheet boundary regardless of provincial, municipal or district boundary conflicts, where the aerial triangulation and/or control survey permits.

Map data shall be edited as outlined in Part I Section 5 to the extent that all stereo model edge ties have been performed. Ties to adjacent map sheets have been performed.   Linear features have connectivity and continuity, areal features have been explicitly closed, redundant data have been eliminated, and data have been coded according to the detailed specifications in Section 3.

Computer-assisted verification plots, produced from the Positional Files at a scale of 1:20 000, are required for each positional file submitted. (refer to Appendix "A")

The verification plots shall contain an identification title. Data which describes symbology or patterning construction elements used to produce the hard copy plot should not be included in the Planimetric Positional File, it should be placed in a separate Non-Positional File.

Digital Elevation Models shall contain all DEM points collected directly by stereo compilation, breaklines (sharp and rounded), and supplementary data indicated in Part II that has been filtered to the specifications outlined in Part I Section 6.2.3. This data will extend beyond the 1:20 000 neat line by 200 metres, as specified in Part I Section 3.1(b). The new contours generated from the DEM shall be a separate file on the tape containing the positional information.

Any changes made to the Positional Files as a result of quality control, e.g. missing data, incorrect coding, etc., must be corrected and the appropriate data file re-submitted in its corrected form.

3.4   Representational Files

Each Representational File shall contain cartographically correct, complete edited map data for one 1:20 000 map sheet.

All positional offsets (cartographic enhancement/generalization) of map data for the purposes of feature clarity or cartographic symbolization shall be performed on this file, which initially shall be a copy of the Planimetric Positional File and the Raw Contour File. Where offsets are required they shall abe made in accordance with the hierarchy described in Appendix "B".

These files shall be used to produce the final hard copy separations of the 1:20 000 base map as outlined in Appendix "D".

Section 4 – Data Accuracy

The accuracy requirements stated in these specifications will reflect those standards set under the North American Treaty Organization (NATO) Standard Agreement (STANAG) for the evaluation of Land Maps.

The following information will provide a common understanding of the requirements and the statistical probabilities involved.

NATO accuracy standards are referenced to the Linear Map Accuracy Standard in Z and the Circular Map Accuracy Standard in X, Y at the ninety percent confidence intervals. In mapping there are two major types of distribution:

A. Univariate.
B. Bivariate.

a. Univariate

The univariate case is one dimensional and in mapping refers to the Z value or elevation (height). It is referred to as the Standard Error or the Mean Square Error in Height (MSEH).

Standard Error:

$$\sigma_Z = \left[\sum_{i=1}^{n} \left(\frac{xi - \bar{x}}{n-1} \right)^2 \right]^{1/2}$$

Standard Error	$=1.00\sigma_Z$	$=68.27\%$ probability
Linear Map Accuracy Standard	$=1.64\sigma_Z$	$=90.00\%$ probability
Near Certainty Error	$=3.00\sigma_Z$	$=99.73\%$ probability
(Rejection level)	$=2.57\sigma_Z$	$=99.00\%$ probability

b. Bivariate

There are two methods of considering the bivariate case, those being the Mean Square Error (MSE) or Mean Square Error of Position (MSEP) and the Circular Standard Error (CSE).
The MSE or MSEP can be unreliable in probability if the elipticity deviates significantly from a circle.

Mean Square Error (MSE) or Mean Square Error of Position (MSEP):

$$\sigma_{XY} = (\sigma_X^2 + \sigma_Y^2)^{1/2}$$

Mean Square Error   = $1.000\sigma_{XY}$ = 63.21% probability
Mean Square Error   = $1.520\sigma_{XY}$ = 90.00% probability
Mean Square Error   = $2.470\sigma_{XY}$ = 99.78% probability
(Rejection level)   = $2.140\sigma_{XY}$ = 99.00% probability

Circular Standard Error:
$$\sigma_C = 0.7071(\sigma_X^2 + \sigma_Y^2)^{1/2}$$

Circular Standard Error   = $1.000\sigma_C$ = 39.35% probability
Circular Map Accuracy Standard   = $2.146\sigma_C$ = 90.00% probability
Circular Near Certainty Error   = $3.500\sigma_C$ = 99.78% probability
(Rejection level)   = $3.035\sigma_C$ = 99.00% probability

4.1 Topographic Mapping

4.1.1 Photogrammetric Instrument Accuracy

The instrument to be used in stereo compilation shall be of sufficient accuracy to produce data conforming to the accuracies stated below.

An instrument manufacturer's written calibration report recent to within 1 year shall be available for inspection prior to compilation and shall be prepared annually.

The optical-mechanical train of all instruments shall be tested for accuracy immediately prior to project compilation and every three months during project compilation. These reports shall be submitted, as required by the Branch.

4.1.2 Absolute Orientation Accuracy

The stereo models will be physically oriented by the operator prior to data capture. The orientation will be absolute. This will allow the operator to read true values in the model and thus better interpret the model.

Earth curvature and atmospheric refraction correction will be applied where applicable.

Scaling:

At least six (6) ground/photogrammetric control points located at the Von Gruber points of the model shall be positioned such that all control points fit to within 4 metres of the adjusted coordinates. Control points not meeting this specification shall be "flagged" on model set-up records and brought to the attention of the Client.

Leveling:

At least six (6) ground/photogrammetric control points located at the Von Gruber points of the model shall be levelled such that all control points fit to within 4 metres. Control points not meeting this specification shall be "flagged" on model set-up records and brought to the attention of the Client.

4.1.3 Map Positional File Accuracy

a. Ninety percent of all well defined planimetric features shall be coordinated to within 10 metres (0.5mm x 20,000) of their true position. This corresponds to the following:

Bivariate:

$$CMAS = 2.146\sigma_C \qquad \leq 10.00 \text{ metres } (90.00\%)$$
$$CSE = 1.000\sigma_C \qquad \leq 4.66 \text{ metres } (39.35\%)$$
$$MSEP = 1.000\sigma_{XY} \qquad \leq 6.60 \text{ metres } (63.21\%)$$
$$MSEP = 1.520\sigma_{XY} \qquad \leq 10.03 \text{ metres } (90.00\%)$$

Rejection (blunders):

$$MSEP = 2.47\sigma_{XY} \qquad \leq 16.31 \text{ metres } (99.78\%)$$
$$CMAS = 3.5\sigma_C \qquad \leq 16.31 \text{ metres } (99.78\%)$$

b. Ninety percent of all discrete spot elevations and DEM points shall be accurate to within 5 metres of their true elevation. This corresponds to the following:

Univariate:

$$LMAS = 1.640\sigma_Z \leq 5.00 \text{ metres } (90\%) \text{ probability}$$
$$LSE = 1.000\sigma_Z \leq 3.00 \text{ metres } (68.27\%) \text{ probability}$$
NOTE: Linear Standard Error ≤ Mean Standard Error in Height LSE = MSEH

Rejection (blunders):
$$\text{Univariate} = 3.0\sigma_Z \leq 9.00 \text{ metres } (99.73\%) \text{ probability}$$

c. Ninety percent of all points interpolated from the DEM (including contour data) shall be accurate to within 10 meters of their true elevation. This corresponds to the following:

Univariate:

$$LMAS = 1.64\sigma_Z \leq 10.00 \text{ metres } (90\%) \text{ probability}$$
$$LSE = 1.00\sigma_Z \leq 6.10 \text{ metres } (68.27\%) \text{ probability}$$

Rejection (blunder):
$$\text{Univariate} = 3.0\sigma_Z \leq 18.30 \text{ metres } (99.73\%) \text{ probability}$$

d.   True position/elevation is defined as the coordinates, which would be obtained from positioning with high order ground methods.

e.   Accuracies relating to elevations refer to ground not sufficiently obscured by vegetation or other features to cause significant error.

4.2 Graphical Data Accuracy

Hard copy, computer generated graphical products shall be produced on equipment meeting or exceeding the following specifications:

Positional File | Map Representational File Plot
Verification Plot | (Cartographic Separations)
Accuracy + 1.5 mm | + 0.15 mm

The plotter used to produce the final cartographic separations (refer to Part IV, Appendix "D") shall have sufficient resolution (i.e. step size) to ensure that all map features (including text) are fair drawn in accordance with good cartographic practice.

Accuracy of the plotter shall be measured by checking map grids. Grids shall be checked with reference to a standard grid which has been plotted to a + 0.1mm tolerance. A best fit of check grid and plotted grid shall be achieved and discrepancies at grid intersections evaluated.

4.3   Published Map Accuracy

a. Ninety percent of all well defined planimetric features measured from the published map shall be accurate to within 0.6 metres (1:1 000), 0.3 metres (1:500). This corresponds to the following:

Bivariate:

$$\text{CMAS} = 2.140\sigma_C \quad \leq 12.0 \text{ metres } (90.00\%) \text{ probability}$$
$$\text{CSE} = 1.000\sigma_C \quad \leq 5.6 \text{ metres } (39.35\%) \text{ probability}$$
$$\text{MSEP} = 1.000\sigma_{XY} \quad \leq 7.9 \text{ metres } (63.21\%) \text{ probability}$$
$$\text{MSEP} = 1.520\sigma_{XY} \quad \leq 12.0 \text{ metres } (90.00\%) \text{ probability}$$

Rejection (blunder):
$$\text{MSEP} = 2.47\sigma_{XY} \quad \leq 19.5 \text{ metres } (99.78\%) \text{ probability}$$
$$\text{Circular} = 3.5\sigma_C \quad \leq 19.6 \text{ metres } (99.78\%) \text{ probability}$$

b.   The Mean Square Error in Height (MSEH) for contours displayed on the published map shall meet the following specifications:

Univariate:

$$\text{LMAS} = (11 + 4.5 \tan \alpha) \text{ metres} = 1.64\sigma_Z = 90\% \text{ probability}$$
$(\alpha = \text{terrain slope at any given point})$
$$\text{MSEH} = \text{LMAS}/1.64$$

Rejection (blunder):
$$\text{Univariate} = 3.00\sigma_Z = 99.73\% \text{ probability}$$

c.   The Mean Square Error in Height for spot heights displayed on the published map shall meet or exceed the following specifications:

Spot Heights:

LMAS = (5.5 + 4.5 tan α) metres = $1.64\sigma_Z$ = 90% probability

(α = terrain slope at any given point)

MSEH = LMAS/1.64

Rejection (blunder):

Linear = $3.00\sigma_Z$ = 99.73% probability

d.   The above accuracies are relative to the true position of the features as defined by the coordinates which would be obtained from positioning with higher order ground methods.

e.   Relief stated in "b" and "c" above relate to ground not sufficiently obscured by vegetation or other features to cause significant error.

Section 5 Data Structure

Section 5 - Capture Rules for Specific Data Type

5.1 Feature Types

5.1.1   Point Features (Type 01)

SYMBOLIZED
DAM

45°

ANGLE IS MEASURED COUNTER CLOCKWISE
FROM THE X AXIS
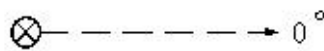
SIMPLE
Default Orientation
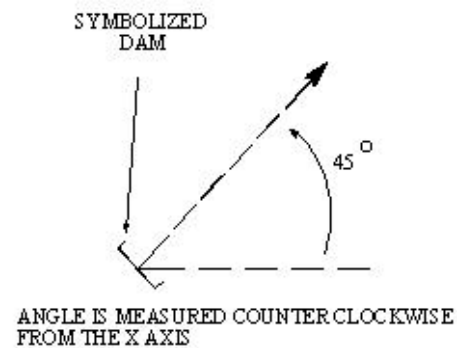
COMPLEX
Explicit Orientation

SIMPLE
Standard Scale
X and Y symbol scale

COMPLEX
Non-standard, Scaled Size
0.75, 0.75 for X and Y symbol scales

The cordinates of the point define its position at any scale (within project accuracies).

5.1.2 Line Features (Type 02 and Type 12)

SIMPLE
Single line segment

COMPLEX
Multiple line segments

Each point on the feature defines an exact beginning or end point, or a point of deflection and the line joining the points defines the true position of the feature being plotted (within project accuracies).

When features are collinear, the features having lesser hierarchical order will be coded as a construction line (Type 12). They can then be eliminated in the Representational file.

5.1.3   Curvilinear Features (Type 03 and Type 13)

Each point lies on the feature, however, the line joining the points may or may not define the true position of the features being plotted, depending on the scale used to depict the feature. The number of points on the feature will be such as to cartographically represent it at 1:1 000/1:500 with a minimum of three points.

This type of line may be Asmoothed@ by interpolating a curve through the data points.

When features are collinear, the features having lesser hierarchical order will be coded as a curvilinear construction line (Type 13). They can thus be eliminated in the Representational file.

All curvilinear line strings (Type 03) features when clipped on sheet edges must contain three or more unique points or be changed to line (Type 02) feature.

5.1.4 Text Features (Type 06)
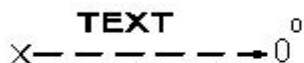
SIMPLE
Default Orientation
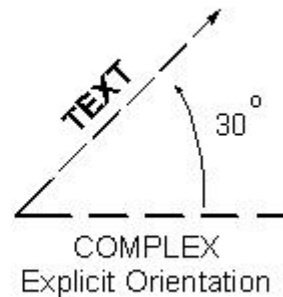
COMPLEX
Explicit Orientation

5.2   Digitizing Guidelines

5.2.1   Right Hand Rule

Feature boundaries will be digitized such that the feature being bounded is kept to the right hand side relative to the forward motion of the stereoplotter floating mark.

NOTE: Right Hand Rule is superseded by the Downstream Rule for double<196>sided Hydrographic features.

5.2.2   Downstream Rule

Hydrographic features having a gradient will be digitized in a downstream direction.

NOTE: Right Hand Rule is superseded by the Downstream Rule for double-sided hydrographic features.
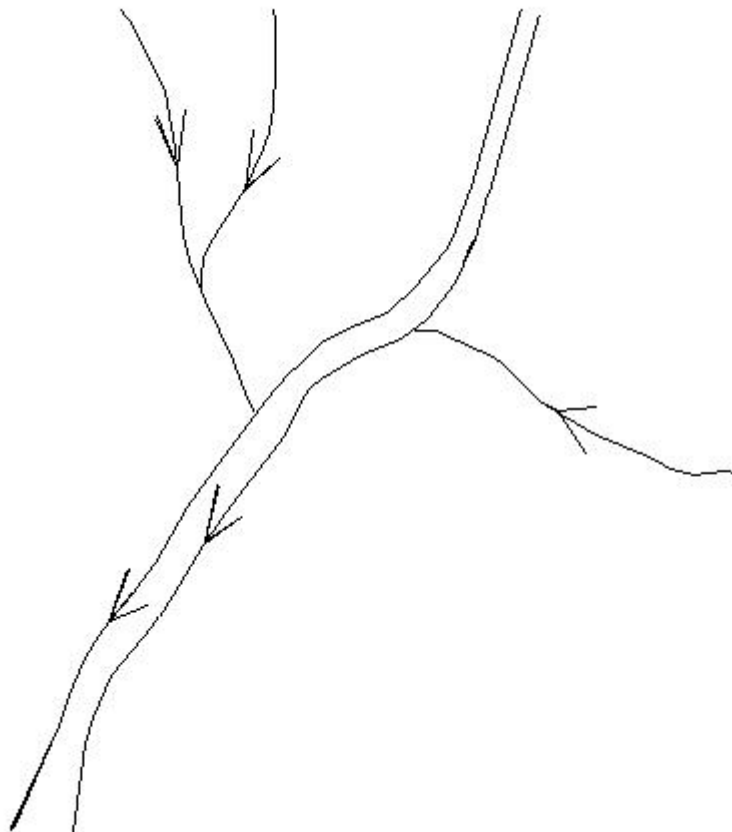
5.2.3   Continuity Rule

Hydrographic features will not be broken for other feature groups; i.e. rivers will be digitized continuously across roads, through dams, etc.
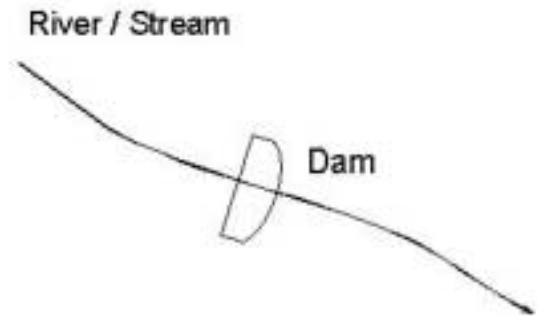
5.2.4   Polygon Rule

All areal features such as wooded areas, built<196>up areas, designated areas, reservoirs, etc. will be explicitly closed polygonal areas, with Right Hand or Downstream rules applied, except where an areal feature meets the map sheet boundary. Exact duplication of data will be done to close all polygonal features, and these duplicated line segments will be represented as either visible or non-visible as per Appendix B ARepresentational Hierarchy@.

e.g. Reservoirs will be completed along dams.
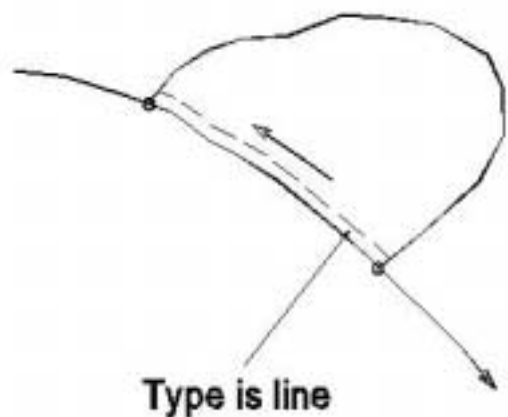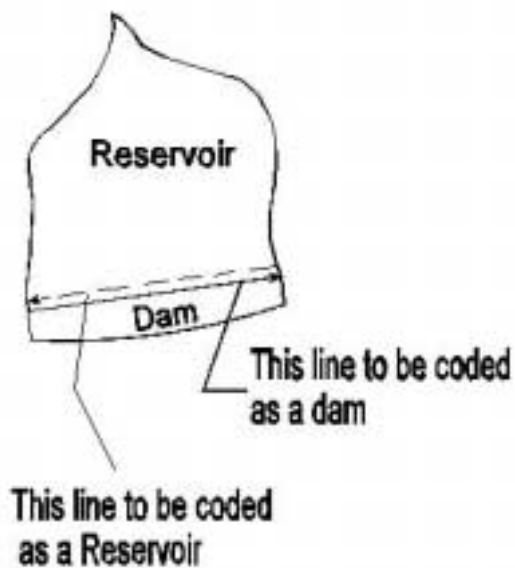
5.2.5   Connectivity and Network Rule

All lines of like and unlike feature groups, which intersect or close on themselves will do so at numerically and mathematically exact coordinated junction points or nodes. These nodes divide continuous features into discrete elements which begin and end at nodes.

All features which intersect planimetrically (X,Y) but not vertically (Z), will do so at numerically exact X,Y coordinate positions, but will not connect numerically in Z.

Wooded areas, cutlines, and seismic lines are exempt from the normal 0.25 and 0.12 metre vertical accuracy requirement. These features must be snapped to other intersecting features at ground elevation (x,y,z) (1 metre vertical accuracy).

NOTE: An X, Y or Z jog is acceptable, provided the 0.5 metre planimetric, and 0.25 metre Z accuracy standards (tree line excepted) are met, and the jog is not noticeable at published map scale. (See below)
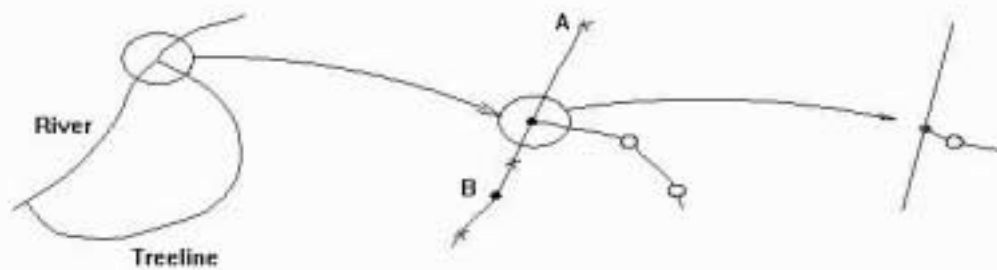
x   point on river
o   point on treeline
•   Start point of treeline with coordinates lying on line connecting points A and B on river
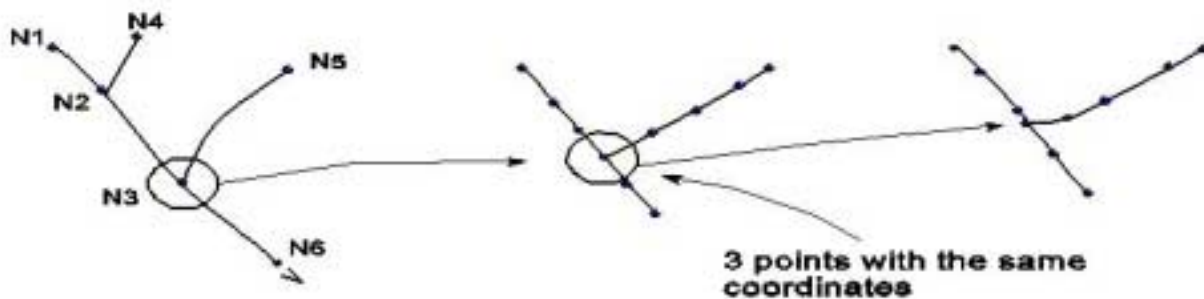
The line connecting N1, N2, N3 and N6 is a continuous feature which has been broken into 3 discrete, separately identifiable elements between the nodes N1-N2, N2-N3, N3-N6.   (This may be done interactively or in batch mode.)

5.2.6 Data Collection 3-D

a) Features that intersect in 3 dimensions will have an x,y,z node. Features that intersect in x,y but do not intersect vertically will be captured with a x,y node.
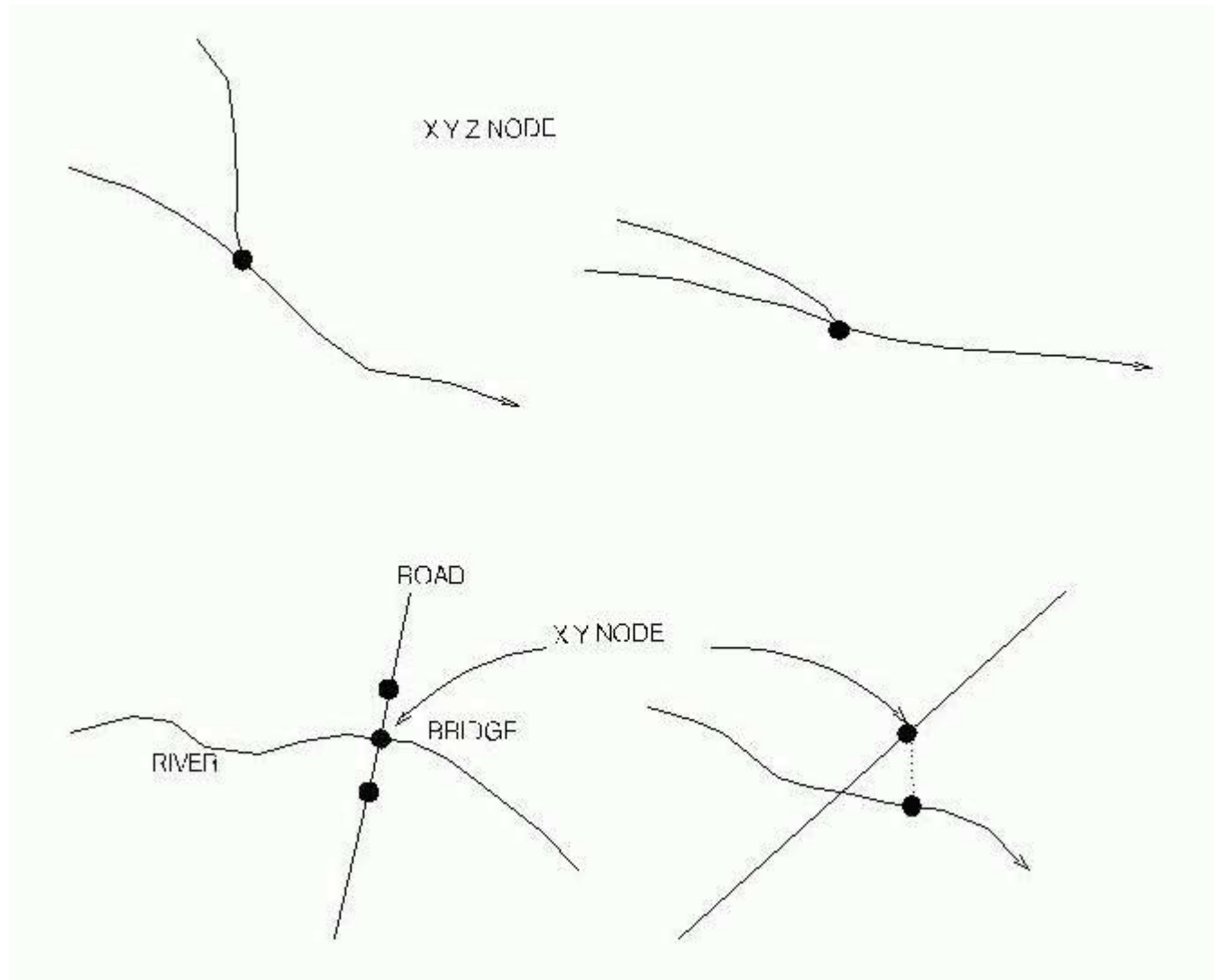
b) Linear planimetric positional data will be captured to create consistent data sets. The sampling will conform to the following resolution at map scale:

 delta x of 0.35 millimetres,
 delta y of 0.35 millimetres,
 delta z of 0.25 millimetres

Linear planimetric positional data may be filtered to the following resolution:

 delta x of 1.25 millimetres,
 delta y of 1.25 millimetres,
 delta z of 0.5 millimetres

Provided the resulting filtered line does not deviate from the sampled line by more than 0.05 metres.

c)   The following linear planimetric positional features may be exempt from the above spacing requirements when they can be represented by straight lines that comply with positional accuracy and cartographic representation requirements.

AerialCableway	Airfield	AirPort / Airstrip (Abandoned)
Airport	AmmunitionDump	AutoWrecker
Barn	Breakwater	Bridge
Building	Builtup Area	Cable
CampGround/Campsite	Cemetery	Church
CityHall	College	Contour(all types)
Conveyor	Courthouse	CustomsOffice
CutlineSeismicLine	Dam(all types)	DEMPoint.type"Check"
DesignatedArea	DriveinTheatre	DrivingRange
DryDock	Dump	
ElectricalSubstationComplex	ExhibitionGrounds	Falls
Fence	FerryDock	FerryRoute
FerryTerminal	FireStation	FishHatchery
Flume	FootBridge	GolfCourse
GreenHouse	Hospital Library	
LumberYard	MarinaYachtClub	MilitaryEstablishment
Nursery	Orchard	Park/PicnicArea
Penitentiary	PhotoCentre	Pier/Wharf
Pipeline	PoliceStation	PostOffice
RaceTrack	RailLine(all types)	Rapids
Road(all types)	School	Scree
SewageTreatmentArea	SkiJump	SkiLift
Snowshed	SportsField	SportTrack
StockYard	Tank	TollGate
TransmissionLine(all types)	TrailerPark	Trestle
Tunnel	University	Vineyard
WoodedArea	Yard	Zoo

NOTE:
These exemptions refer to point spacing requirements only. They are not exemptions to the accuracy requirements.

Section 6 Digital Elevation Models

Section 6 - Digital Elevation Models

6.1   DEM Definitions

In order that communication of ideologies and concepts pertaining to Digital Elevation Models (DEM) is clearly understood, the following will serve as a list of definitions:

DEM - A DEM is a file of points captured specifically to represent the topographic surface shape in explicit Z values and X,Y values. It is composed of a series of spot elevations read using either a gridded or random method.

It also contains other supplementary vertical information. This supplementary data will take the form of data digitized for planimetric detail representation which is of a suitable accuracy for the DEM, break lines both sharp and rounded and spot elevations. The DEM is the basis for the mathematical representation of the surface.

Supplementary DEM Data - These are data, which have been digitized for planimetric representation of detail and are also used in the DEM. These data can take the form of streams, railways, roads and other features as detailed in Part II. These data will be filtered, to the specified density for inclusion in the DEM. All points in the DEM file will carry a DEM feature code.

Break lines extracted from the planimetric file will have a DEM feature code which will indicate the source of the breakline eg. Transportation, Hydrographic, Hypsographic. (See Part II).

Break line - A breakline is a natural or man made occurrence in the topography where there is a definite and obvious change in contour direction. There is a definite change in deflection along a breakline, and elevations are captured along its entirety. An example would be a stream or a vertical bluff.

I. Sharp Breakline: A sharp breakline causes a definite pointed character to the interpolated contour.

ii. Rounded Breakline: A rounded breakline causes a smoother but still well defined deflection to the contour.

Areas of Indefinite Contours - These are areas which are outlined in the DEM in such a manner that contours which are interpolated within its boundary will be depicted as indefinite. They may be explicitly digitized or defined by copying actual feature outlines.

Indefinite Contours - These contours are coded where the ground cannot be accurately interpreted, i.e. glaciers, icefields, shadows areas and stereo dead zones (DEM spacing may be increased to 200 metres if necessary).
Areas of Exclusion - These are areas, which are outlined in the DEM in such a manner that contours will not be interpolated within the enclosing polygon. Examples would be man made features such as dam faces or active pits. They may be explicitly digitized or defined by copying actual feature outlines.

6.2   DEM Specifications

The DEM data in the file will extend ten millimetres (map scale) beyond the sheet corners. This will provide for proper contour interpolation on the sheet boundary. Data will be common to the adjacent sheet.

In order that the DEM data be of a sufficiently dense nature to meet the vertical accuracy requirements, and generate interpolated contours with character representative of the terrain, the data capture specifications for DEM in gridded or random method will be followed. All point to point linear features captured as stream digitized that are included in DEM must meet specifications.

6.2.1   Gridded DEM Data Capture

When reading DEM data on a gridded pattern, the grid density specifications will be as follows:

a) In areas where the average slope of the terrain is less than 25°, the grid spacing will be 75 metres.

b) In areas where the average slope of the terrain is more than 25°, the grid spacing will be 50 metres.

6.2.2   Random DEM Data Capture

When reading DEM data in a random pattern, the density specifications will be as follows:

a) In areas where the average slope of the terrain is less than 25°, the average spacing between points will be approximately 100 metres, and approximately 120 points per square kilometre.

b) In areas where the average slope of the terrain is more than 25°, the average spacing between points will be approximately 75 metres, and approximately 200 points per square kilometre.

The DEM should be captured in one direction, i.e., from the bottom to the top of the model or from the top to the bottom of the model.
Supplementary DEM Data Resolution

6.2.3   Supplimentary DEM Data Resolution

Data that is being passed from planimetric capture to form parts of the DEM must not exceed the following resolution:

- delta X of 25 metres and
- delta Y of 25 metres and
- delta Z of 10 metres

Densification (see Part I, Section 5.2.6b and c.) or filtering software applied to linear breakline elements to achieve this spacing resolution is subject to approval by the Branch.

6.2.4   Data to be Excluded from DEM

Type 12 and type 13 construction lines will not be included in DEM data.

There is an extensive list of supplementary data that is not to be used in the DEM. These features are identified in Part II, Geographic Object Specifications.

6.2.5   Breakline Interpretation

Breaklines will be captured in such a manner as to provide contour interpolation control in areas of poorly modelled topography. The minimum length of a breakline will be 15 millimetres at map scale. These breaklines may be pre-interpreted on the photographs; however, it is to be noted that at the time of compilation the operator may include additional breaklines, which can be

more easily interpreted in the stereo model. The operator may also capture breaklines of less than the minimum length where the feature is of landmark importance, such as in a land slide area.

Section 7 Transfer Format

Section 7 - Transfer File Format

MOEP is now the format in use by the Branch. Users of this manual may wish to use different data formats based on their software and hardware. This will not affect data integration between GIS users as long as data is captured according to this specification. All positional data must be supplied in the following format:

7.1 Magnetic Tape Format

1. Half inch (1/2) wide industry standard magnetic tape;

2. 2400 foot reels;

3. 9 track recording;

4. 1600 bpi density;

5. No standard labelling;

6. MOEP format data must consist of ASCII characters only;

7. Each block will consist of 50 records, 80 characters in length, for a total of 4,000 characters of data. The last block may be shorter as required.

8. Each tape will be clearly labelled as to density, content, source, and numbers of records in each file.

```
SHEET:          000P.000              SUBMISSION: 1
FORMAT:         MOEPFILE TYPE:    Positional
File 1 -        DEM
File 2 -        Contours
File 3 –        Non-Positional Data
File 4 -        Planimetric
CONTRACTOR:                          DATE: 92-00-00
```

Band label should read:

```
SHEET:          000P.000              SUBMISSION:
FORMAT:         MOEP FILE  TYPE:  Positional
CONTRACTOR:                          DATE: 92-00-00
```

9.   Each representational file tape must be labelled as follows:

SHEET: 82F.040   SUBMISSION: 1
TYPE: Representational
DATE: 92-10-05
FORMAT: IGDS - VAX Copy
FILE 1:   Planimetry - 82F040P.REP
FILE 2:   Contours - 82F040T.REP
CONTRACTOR:

Band label should read:

SHEET: 82F.040   TYPE: Rep
DATE: 92-10-05   FORMAT: IGDS
CONTR: SUB: 1

7.2   MOEP ASCII Format

7.2.1   ASCII Record Format

Byte Data

1-2 .   Feature type
4-13 .   Feature code
15-24   X coordinate (easting in millimetres)
26-35   Y coordinate (northing in millimetres)
37-44   Z coordinate (elevation in millimetres)
46   ARC sweep direction (0 - counterclockwise, 1 - clockwise)
46-55   X - depending on feature type
57-66   Y - depending on feature type
68-75   Z - depending on feature type
46-55   Point or text rotation angle (for types 01 and 06). Angle in
           decimal degrees to four decimal places in addition to a
           decimal point (90.0000). A horizontal UTM grid line in a
           west to east direction is 0 degrees and all rotation angles of
           points and text are measured counterclockwise from 0 degrees.

57-67   Text size in millimetres
68-72   Point horizontal scale factor prior to rotation show to
           two decimal places in addition to a decimal point (2.50).
74-78   Point vertical scale factor prior to rotation show to
           two decimal places in addition to a decimal point (2.50).
15-80.   Annotation characters
4-13.   Total data record count

7.2.2   MOEP Feature Types

00 Continuation of previous feature code
01 Point
02 Line
03 Curvilinear line string
04 ARC
05 Attribute
06 Text
07 Map header
12 Construction line
13 Construction curvilinear line string
99 Total data record count

7.2.3   MOEP Feature Type Definition

01 record contains: POINT
> feature type (01)
> feature code
> x,y,z location
> symbol rotation (optional)
> horizontal scale factor (optional)
> vertical scale factor (optional)

Example:

01 FC90000000 328654000 6510351000 1421000 0.0000 1.00 1.00

The x,y,z location of a point feature marks the centre of the symbol used to represent that feature.

Symbol scales and rotation may be used to indicate non-standard size symbols.

02 record contains: SIMPLE LINE
> feature type (02)
> feature code
> 2 x,y,z triplets

Example:

02 FC90000000 328654000 6510351000 1421000 328654000 6510354000 1421000
00 FC90000000 328655000 6510353000 1422000 328654000 6510364000 1422000
00 FC90000000 328655000 6510357000 1422000

Line features should be followed by as many 00 continuation records as are required to describe the feature.

Line features must contain at least two x,y,z triplets. Note that the last 00 continuation record may contain only one x,y,z triplet.

03 record contains: COMPLEX LINE
> feature type (03)
> feature code
> 2 x,y,z triplets

Example:

03 FC90000000 328654000 6510351000 1421000 328654000 6510354000 1421000
00 FC90000000 328655000 6510353000 1422000 328654000 6510364000 1422000
00 FC90000000 328655000 6510357000 1422000

Curvilinear features should be followed by as many 00 continuation records as are required to describe the feature. Curvilinear features must contain at least three x,y,z triplets. Note that the last 00 continuation record may contain only one x,y,z triplet.

04 record contains: ARC

Line 1
> feature type (04)
> feature code
> x, y, z ARC start location
> x, y, z ARC end location

Line 2
> feature type (00)
> feature code
> x, y, z, ARC origin
> ARC sweep direction (0 - counterclockwise, 1 - clockwise)

Example:

04 FC90000000 328654000 6510351000 1421000 328654000 6510354000 1421000
00 FC90000000 328655000 6510353000 1422000 0

05 record contains: ATTRIBUTE
> feature type (05)
> feature code
> attribute - maximum 66 characters

Example:

05 FC90000000 Attribute

Attribute features appear as the first record preceding every planimetric feature. They may contain such information as watershed codes and tower heights or be blank. Attribute data will begin at byte position 15 and be left justified. DEM points, contours and text do not require an 05 (attribute) record.

06 record contains: TEXT
> feature type (06)
> feature code
> x,y,z location
> text rotation angle

> size of annotation in millimetres at ground scale

The x,y,z triplet denotes the bottom left corner of the first character of the text string. The 06 record is followed by one or more 00 records containing the annotation characters. Toponymic text elements require a preceding type 05 attribute record. This record contains the font, weight, and unique group number (for text strings that require more than one origin).

The type 05 element is organized as follows:

Byte Data

1-2 feature type
4-13 feature code
15-17 font number
19-20 weight value
22-26 unique text group identifier

Example:

05 FC90000000 31 2 2100
06 FC90000000 328654000 6510351000 1421000 0.0000 100000
00 FC90000000 Text Sting

07 record contains: MAP HEADER
> feature type (07)
> file type - byte position 4 contains a 1 character code specifying file type. 1. DEM, 2. RAW contours,
> 3. Non- Positional, 4. Planimetric Positional
> map name - byte positions 15-44 contain a 1:1000 BCGS map sheet number (i.e. 82F.035.45.1) left justified
> submission date year month day (numeric) (921005) byte positions 45-50.

Example:

07 4 94K.071.45.1 900812

12 record contains: CONSTRUCTION SIMPLE LINE
> feature type (12)
> feature code
> 2 x,y,z triplets

Example:

12 FC90000000 328654000 6510351000 1421000 328654000 6510354000 1421000
00 FC90000000 328655000 6510353000 1422000 328654000 6510364000 1422000
00 FC90000000 328655000 6510357000 1422000

Identifies lines that are duplicates. Lines must contain two or more x,y,z triplets.

Note this data is not to be included in the DEM Data Set.

13 record contains: CONSTRUCTION COMPLEX LINE

> feature type (13)
> feature code
> 2 x,y,z triplets

Example:

13 FC90000000 328654000 6510351000 1421000 328654000 6510354000 1421000
00 FC90000000 328655000 6510353000 1422000 328654000 6510364000 1422000
00 FC90000000 328655000 6510357000 1422000

Identifies splines that are duplicates. Splines must contain three or more x,y,z triplets.

Note this data is not to be included in the DEM Data Set.
99 record contains:
> feature type (99)
> total data record count

Example:

99 67890

This value is the total data record count excluding itself.

7.2.4 Sample MOEP ASCII Format File

```
07 4          94K.071   880127
05 BA90000000
01 BA90000000   328654000  6510351000  1421000       0.0000       1.00       1.00
05 GE09400000
02 GE09400000   328654000  6510353000  1421000  328654000  6510354000  1421000
00 GE09400000   328654000  6510355000  1422000  328654000  6510356000  1422000
00 GE09400000   328655000  6510357000  1422000  328655000  6510358000  1422000
05 GA24850000  90-500-030
03 GA24850000   328655000  6510359000  1423000  328655000  6510360000  1423000

00 GA24850000   328655000  6510361000  1423000  328655000  6510362000  1423000
00 GA24850000   328655000  6510363000  1423000  328655000  6510364000  1423000
00 GA24850000   328655000  6510365000  1422000  328656000  6510366000  1422000
00 GA24850000   328656000  6510367000  1422000  328656000  6510368000  1422000
00 GA24850000   328656000  6510369000  1422000  328656000  6510370000  1422000
05 GE09400000
12 GE09400000   328656000  6510373000  1423000  328656000  6510372000  1423000
00 GE09400000   328656000  6510375000  1424000  328656000  6510374000  1423000
00 GE09400000   328657000  6510377000  1424000  328657000  6510376000  1424000
05 GA24850000  90-500-030
03 GA24850000   328657000  6510379000  1425000  328657000  6510378000  1425000
00 GA24850000   328657000  6510381000  1425000  328657000  6510380000  1425000
00 GA24850000   328657000  6510383000  1425000  328657000  6510382000  1425000
00 GA24850000   328657000  6510385000  1424000  328658000  6510384000  1425000
00 GA24850000   328658000  6510387000  1424000  328658000  6510386000  1424000
00 GA24850000   328658000  6510389000  1424000  328658000  6510388000  1424000
99    25
```

7.3 MOEP Binary Format

7.3.1 ASCII to Binary Comparison

a) Type 07 Header

In the MOEP ASCII format the first record of every file is a type 07 record containing the file type, map sheet number, and submission date plus enough blanks to pad out to 80 characters.

This is replaced in the compressed format by the first 26 bytes of the file. These bytes contain the file type, map sheet number, the submission date, and the x and y offsets.

b) Feature Coordinates

In the MOEP ASCII format every feature is described by one or more sets of x,y,z coordinates. The x and y coordinates are UTM values that can be precise to the nearest millimetre. Similarly the z value is a height above sea level with possible millimetre precision. Submissions under the 1:250 000 and 1:20 000 mapping programs supply all coordinates to the nearest metre which conforms to published accuracy requirements. This results in all feature coordinates having three trailing zeroes that are a constant for all 1:20 000 and 1:250 000 scale topographic submissions and so are eliminated from the compressed version.

Feature x and y grid values are stored in the MOEP ASCII format as UTM coordinates. To reduce the grid value size, all coordinates are redefined to a new grid with the 0,0 point at the centre of the map sheet. Map sheet centre coordinates can be calculated for 1:500 000, 1:250 000, 1:100 000, 1:50 000, 1:20 000, 1:10 000, 1:5 000, 1:2 500, 1:1 000 and 1:500 map sheets. For scales at 1:50 000 and larger, the new coordinates are stored as two byte integers. For scales smaller than 1:50 000, four byte integers are used to represent the x and y coordinates. Elevations are stored as two byte integers in all cases.

i.e. For the map sheet 82F.050, the UTM coordinates at the centre of the map sheet are E 565233 N 5477871. If the first feature is located at UTM coordinates 570273000 5474622000 z-1645000 the redefined coordinates for this feature would be -5040 3249 1645.

c) Feature Code

Feature codes are currently stored as the second field of every feature. The compressed format would store a feature code only once for a feature and only if the feature code was different than that of the previous feature.

i.e. If ten river features occur in sequence then the feature code GA 24850 000 is stored only for the first feature.

d) Type 05 Attribute

Currently most features carry a type 05 attribute record. This record is most often blank but even when it contains data it is padded out to the full 80 characters. In the compressed format, the attribute data is truncated and the number of attribute characters is saved followed by the characters themselves. If no type 05 is present for the feature then the number of characters is set to -1.

i.e. If a type 05 contains a tower height 55 plus 54 blanks, the compressed format would contain the number of characters (2) and the tower height.

e) Scale and Rotation Factors

The ASCII format contains scale and rotation values for all point and text features. In the compressed format these values are stored as integers only if they are not 1.0 for the scaling factors and 0.0 for the rotation factor.

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i.e. If a point symbol feature contains the vertical and horizontal scale factors 1.50 2.00 and a rotation value of 45.0000, the compressed feature stores them as 150 200 and 450000.

f) Continuation Records

In line features the 00 continuation type is not maintained in the compressed format. A byte count takes their place as the first one or two bytes preceding the coordinate list. (see i)iv) below)

g) Text Records

In the compressed format the text record is truncated and preceded by a character count. This eliminated the storage of padded blanks. Note that in the compressed format a maximum of 66 characters of annotation are stored.

h) Field Separators

In the ASCII format blanks are required to separate all fields for legibility. In the binary format these blanks are not required and so are eliminated.

i) Feature Type

The compressed format carries a much more descriptive feature type. This feature type describes the following:
a) What type of feature is it? (point, line, or text)
b) Is a feature code present or is this feature the same code as the preceding one?

c) If this is a linear feature is it planimetric data or contour data?
d) If this is a linear feature how many coordinates are present?
e) If this is a point or text feature is a rotation stored, are scaling factors stored, are both scale and rotation stored, or are neither present?

j) Type 99

The MOEP ASCII file contains as the last record a total data record count. This is eliminated in the compressed format. The final byte in the compressed format is a -1 to signal the end of file.

7.3.2 MOEP Binary Format Description

VAX Environment - Fixed length unformatted 512 byte records Each compressed record contains several MOEP compressed features. Note that features will cross record boundaries.

The first 26 bytes of the file contain header information as follows:

byte 1 - file type (1-DEM, 2-contour, 4-plan, 5-Cadastre).

this byte value is increased by 100 if the map scale is smaller then 1:50 000 to indicate that an I*4 coordinate system has been used.

- bytes 2-12 - BCGS/NTS map number (ASCII).

- bytes 13-18 - submission date (ASCII year month day - e.g 921005).

- Bytes 19-22 - I*4 Easting offset (UTM centre of map sheet).

- bytes 23-26 - I*4 Northing offset (UTM centre of map sheet).

The first byte of a feature is the feature key.

Range 1-146

100's range 0-1
- 0 - feature code is the same as the last feature code and so is not stored. <%0>

- 1 - feature code is different than the last feature code and so is<R>stored in the next ten bytes.

10's range 0-4

- 0 - no coordinate byte count, rotation, or scale stored

- 1 - a one byte coordinate count is stored if line, a rotation only is stored if point or text

- 2 - a two byte coordinate count is stored if line, scale only is stored if point

- 3 - a one byte coordinate count is stored (contour data) scale and rotation is stored if point

- 4 - a two byte coordinate count is stored (contour data)

1's range 1-7

1 - feature type 01 (point)
2 - feature type 02 (line)
3 - feature type 03 (line)
4 - feature type 12 (line)
5 - feature type 13 (line)
6 - feature type 06 (text)
7 - feature type 04 (arc)

The feature code if present fills the next 10 bytes.

The next byte either following the feature key or following the feature code if present is the type 05 key.

range -1 - 66

- 1 - no feature type 05 present

- 0-66 - number of feature type 05 bytes to follow

The next one or two bytes either following the type 05 key or following the type 05 bytes if present is the number of feature coordinates to follow. If the feature is a type 01 (point), type 06 (text), or type 04 (arc) then this byte is not present.

The next bytes are the feature coordinates. If the feature is a point or text then a single x,y,z triplet is represented by 6 bytes (x-I*2, y-I*2, z-I*2) for scales larger than 1:50 000 or 10 bytes (x-I*4, y-I*4, z-I*2) for scales smaller than 1:50 000. If the feature is an arc then three x,y,z triplets are used to represent the start, end, and origin of the arc. These triplets take up 18 bytes for scales of 1:50 000 or larger or 30 bytes for scales smaller than 1:50 000. If the feature is a line type then the number of bytes is one of the following.

for scales 1:50 000 and larger (x-I*2, y-I*2, z-I*2)

- non-contour data - number of coordinates times 6
- contour data - 2 bytes z value plus number of coordinates times 4

for scales smaller than 1:50 000 (x-I*4, y-I*4, z-I*2)

- non-contour data - number of coordinates times 10
- contour data - 2 bytes z value plus number of coordinates times 8

Line feature - complete

Arc feature - next byte contains the sweep direction indicator -
- 0 - counterclockwise
- 1 - clockwise

Point feature - next 4 bytes contain rotation angle if not 0.0 - I*4
- next 4 bytes contain horizontal and vertical scale factors if not 1.0 - 2 I*2

Text feature - next 4 bytes contain rotation angle if not 0.0 - I*4
- next 2 bytes contain text size in metres I*2
- next byte contains number of text characters - maximum 66
- next bytes contain text data

The last byte of the file is a -1 to signal the end of file.

7.3.3   MOEP Binary Examples

NOTE - The following examples use 570000 and 5470000 as offsets

1 - Point feature with type 05, scale factors and rotation present, and feature code different than the previous feature

MOEP ASCII format

05 HA90100000 ATTRIBUTE
01 HA90100000 570273000 5474622000 1645000 5.6100 5.00 1.75

Compressed format (fields separated for clarity)
131 HA90100000 9 ATTRIBUTE 273 4622 1645 56100 500 175

2 - Point feature with a blank type 05, default scale factors and rotation, and a feature code the same as the previous feature

MOEP ASCII format

05 HA90100000
01 HA90100000 570273000 5474622000 1645000 0.0000 1.00 1.00

Compressed format (fields separated for clarity)
1 0 273 4622 1645

3 - Text feature with type 05 attribute, rotation present, and a feature code different than the last feature.

MOEP ASCII format
05 KC90000000 Text Feature
06 KC90000000 570273000 5474622000 1645000 5.6100 500000
00 KC90000000 Annotation

Compressed format (fields separated for clarity)
116 KC90000000 12 Text Feature 273 4622 1645 56100 500 10 Annotation

4 - Text feature with blank type 05, no rotation present, and a feature code the same as the last feature.

MOEP ASCII format

05 KC90000000

06 KC90000000 570273000 5474622000 1645000 0.0000 500000
00 KC90000000 Annotation

Compressed format (fields separated for clarity)
6 0 273 4622 1645 500 10 Annotation

5 - Linear planimetric feature with 9 points, a type 05 attribute, and a feature code different than the last feature.

MOEP ASCII format

05 GA94850000 ATTRIBUTE
02 GA94850000 570273000 5474622000 1645000 570373000 5473622000 1545000
00 GA94850000 570473000 5472622000 1625000 570573000 5471622000 1525000
00 GA94850000 570673000 5470622000 1605000 570773000 5469622000 1505000
00 GA94850000 570873000 5468622000 1585000 570973000 5467622000 1485000
00 GA94850000 571073000 5466622000 1565000

Compressed format (fields separated for clarity)
112 GA94850000 9 ATTRIBUTE 9 273 4622 1645 373 3622 1545 473 2622 1625 573 1622 1525 673 622 1605 773 -378 1505 873 -1378 1585 973 -2378 1485 1073 -3378 1565

6 - Linear planimetric feature with 9 points, no type 05 attribute, and a feature code not different than the last feature.

MOEP ASCII format

12 GA94850000 570273000 5474622000 1645000 570373000 5473622000 1545000
00 GA94850000 570473000 5472622000 1625000 570573000 5471622000 1525000
00 GA94850000 570673000 5470622000 1605000 570773000 5469622000 1505000
00 GA94850000 570873000 5468622000 1585000 570973000 5467622000 1485000
00 GA94850000 571073000 5466622000 1565000

Compressed format (fields separated for clarity)
14 -1 9 273 4622 1645 373 3622 1545 473 2622 1625 573 1622 1525 673 622 1605 773 -378 1505 873 -1378 1585 973 -2378 1485 1073 -3378 1565

7 - Linear contour feature with 9 points, a type 05 attribute, and a feature code different than the last feature.

MOEP ASCII format

5 HA90001000 ATTRIBUTE
3 HA90001000 570273000 5474622000 1600000 570373000 5473622000 1600000
00 HA90001000 570473000 5472622000 1600000 570573000 5471622000 1600000
00 HA90001000 570673000 5470622000 1600000 570773000 5469622000 1600000
00 HA90001000 570873000 5468622000 1600000 570973000 5467622000 1600000
00 HA90001000 571073000 5466622000 1600000

Compressed format (fields separated for clarity)
133 HA90001000 9 ATTRIBUTE 9 1600 273 4622 373 3622 473 2622 573 1622 673 622 773 -378 873 -1378 973 -2378 1073 -3378

8 - Linear contour feature with 9 points, no type 05 attribute, and a feature code not different than the last feature.

MOEP ASCII format

13 HA90001000 570273000 5474622000 1600000 570373000 5473622000 1600000
00 HA90001000 570473000 5472622000 1600000 570573000 5471622000 1600000
00 HA90001000 570673000 5470622000 1600000 570773000 5469622000 1600000
00 HA90001000 570873000 5468622000 1600000 570973000 5467622000 1600000
00 HA90001000 571073000 5466622000 1600000

Compressed format (fields separated for clarity)

35 -1 9 1600 273 4622 373 3622 473 2622 573 1622 673 622 773 -378 873 -1378 973 -2378 1073 -3378

9 - Sample MOEP ASCII file - 2720 bytes

07 1 TESTFILE 920423
05 HA90100000 ATTRIBUTE
01 HA90100000 570273000 5474622000 1645000 5.6100 5.00 1.75
05 HA90100000
01 HA90100000 570273000 5474622000 1645000 0.0000 1.00 1.00
05 KC90000000 Text Feature
06 KC90000000 570273000 5474622000 1645000 5.6100 500000
00 KC90000000 Annotation
05 KC90000000
06 KC90000000 570273000 5474622000 1645000 0.0000 500000
00 KC90000000 Annotation
05 GA94850000 ATTRIBUTE
02 GA94850000 570273000 5474622000 1645000 570373000 5473622000 1545000
00 GA94850000 570473000 5472622000 1625000 570573000 5471622000 1525000
00 GA94850000 570673000 5470622000 1605000 570773000 5469622000 1505000
00 GA94850000 570873000 5468622000 1585000 570973000 5467622000 1485000
00 GA94850000 571073000 5466622000 1565000
12 GA94850000 570273000 5474622000 1645000 570373000 5473622000 1545000
00 GA94850000 570473000 5472622000 1625000 570573000 5471622000 1525000
00 GA94850000 570673000 5470622000 1605000 570773000 5469622000 1505000
00 GA94850000 570873000 5468622000 1585000 570973000 5467622000 1485000
00 GA94850000 571073000 5466622000 1565000
05 HA90001000 ATTRIBUTE
03 HA90001000 570273000 5474622000 1600000 570373000 5473622000 1600000
00 HA90001000 570473000 5472622000 1600000 570573000 5471622000 1600000
00 HA90001000 570673000 5470622000 1600000 570773000 5469622000 1600000
00 HA90001000 570873000 5468622000 1600000 570973000 5467622000 1600000
00 HA90001000 571073000 5466622000 1600000
13 HA90001000 570273000 5474622000 1600000 570373000 5473622000 1600000
00 HA90001000 570473000 5472622000 1600000 570573000 5471622000 1600000
00 HA90001000 570673000 5470622000 1600000 570773000 5469622000 1600000
00 HA90001000 570873000 5468622000 1600000 570973000 5467622000 1600000
00 HA90001000 571073000 5466622000 1600000
99 33

Sample Compressed MOEP file (fields separated for clarity) - 367 bytes

1 TESTFILE 920423 570000 5470000 131 HA90100000 9 ATTRIBUTE 273 4622 1645 56100 500 175 1 0 273 4622 1645 116 KC90000000 12 Text Feature 273 4622 1645 56100 500 10 Annotation 6 0 273 4622 1645 500 10 Annotation 112 GA94850000 9 ATTRIBUTE 9 273 4622 1645 373 3622 1545 473 2622 1625 573 1622 1525 673 622 1605 773 -378 1505 873 -1378 1585 973 - 2378 1485 1073 -3378 1565 14 -1 9 273 4622 1645 373 3622 1545 473 2622 1625 573 1622 1525 673 622 1605 773 -378 1505 873 -1378 1585 973 -2378 1485 1073 -3378 1565 133 HA90001000 9 ATTRIBUTE 9 1600 273 4622 373 3622 473 2622 573 1622 673 622 773 -378 873 -1378 973 -2378 1073 -3378 35 -1 9 1600 273 4622 373 3622 473 2622 573 1622 673 622 773 -378 873 -1378 973 -2378 1073 -3378 -1

Part II Detailed Geographic Object Specifications

Section 1 Feature Name / Feature Code Correlation

Section 1 - Feature Name / Feature Code Correlation

1.1 Feature Class / Feature Code Listing by Class

Although numerous combinations of feature class and attribute are possible, only a subset of those combinations are relevant to the scale and discipline of the data specified in this document. This section provides the user with a feature name and code listing of the relevant combinations by class.

Aerial Triangulation Feature Class
    CadastralPoint.status"PermanentlyMarked" (symbol)   FD90500000
    ControlPoint.type"Vertical".status"PermanentlyMarked" (symbol)   FB18650000
    ControlPoint.type"Horizontal".status"PermanentlyMarked" (symbol)   FB18450000
    Photo Centre   FD21100000

Hydrographic Feature Class

Coastline *Geometric Rep Qualifier:* Definite	GG05800000
Coastline *Geometric Rep Qualifier:* Indefinite	GG95800130

Hydro Structure

Breakwater (to scale)	GE03050110
(symbolized)	GE03050120
Dam	
Beaver (to scale)	GA08450110
Dam.section"Base"	GA98450100
Dam.section"Spillway/Penstock" (to scale)	GA28550000
Dam.section"Top" (to scale)	GA08450000
(symbol)	GA98450000
Dyke	GE09400000
Falls (to scale)	GA10450000
Falls (symbol)	GA90002110
Island *Geometric Rep Qualifier:* Position Approximate	GE94850100
Island (to scale)	GE14850000
Island *Geometric Rep Qualifier:*Definite (symbol)	GE94850000
Rapids (to scale)	GA23500000
Rapids (symbol)	GA23500110
Sand/GravelBar (area outline)	GE25850000
Sand/GravelBar (area symbol)	GE90100000
SeaWall	GE26250000

Water Body

FloodedLand.type"Inundated" (area outline)	GB11350110
FloodedLand.type"Inundated" (area symbol)	GB90000000
IceMass Glacier	GD12300000
IceField	GD14450000
Lake *Geometric Rep Qualifier*: Definite	GB15300000
Lake *Geometric Rep Qualifier*: Indefinite	GB15300130
Lake.type"Intermittent"	GB15300140
Marsh (area outline)	GC17100000
Marsh (area symbol)	GC90100000
Reservoir *Geometric Rep Qualifier:* Definite	GB24300000
Reservoir *Geometric Rep Qualifier:* Indefinite	GB90100000
Reservoir.type"Intermittent"	GB90100110
Reservoir.type"ProposedMaxResLevel"	GB90100120
Swamp (area outline)	GC30050000
Swamp (area symbol)	GC90200000
Water Course	
Arrowhead (symbol)	GE90200110
Canal	GA03950000
Canal.type"LeftBank"	GA90001110
Canal.type"RightBank"	GA90001120
Ditch	GA08800110
Flume	GA11500000
River/Stream *Geometric Rep Qualifier:* Definite	GA24850000
River/Stream *Geometric Rep Qualifier:* Indefinite	GA24850140
River/Stream.type"Dry"	GA24850130

River/Stream.type"Intermittent"	GA24850150
River/Stream.type"LeftBank"	GA90000110
River/Stream.type"RightBank"	GA90000120
Sinkhole	HB27550000
Spring (symbol)	GF28750000

Hypsographic Feature

PhotoCentre (symbol)	FD21100000
AreaofExclusion	HC90000000
AreaofIndefiniteContours	HC90000100
BreakLine.type"Hydrographic"	HA90200130
BreakLine.type"Hypsographic"	HA90200120
BreakLine.type"Round"	HA90200110
BreakLine.type"Sharp"	HA90200000
BreakLine.type"TransportationandOtherManMade"	HA90200140
Contour.type"Index"	HA90000000
Contour.type"Index".option"Depression"	HA90000130
Contour.type"Index".option"DepressionIndefinite"	HA90000140
Contour.type"Index".option"Indefinite"	HA90000110
Contour.type"Intermediate"	HA90001000
Contour.type"Intermediate".option"Depression"	HA90001130
Contour.type"Intermediate".option"DepressionIndefinite"	HA90001140
Contour.type"Intermediate".option"Indefinite"	HA90001110
DEMPoint.type"Definite" (symbol)	HA90100000
DEMPoint.type"Check" (symbol)	HA90400000
DEMPoint.type"Indefinite" (symbol)	HA90100110
DEMPoint.type"Interpolated" (symbol)	HA90300000
MountainPeak	HB18800000
SpotHeight (symbol)	HA28700000
WaterLevel(DateofPhotography) (symbol)	HA33100000

Land Cover Feature Class

Nursery	JB19150000
Orchard	JB19650000
Vineyard	JB32800000
WoodedArea	JA33750000

Land Form Feature Class

CliffScarp	HB05650000
Esker	HB10200000
ForeshoreFlats (area symbol)	GE90850100
LavaBed	HB15850000
Moraine	HB18700000
Scree	HB26150000
Slide (area outline)	HB27900000
Slide (area symbol)	HB90000000
VolcanicCrater	HB07650130

Land Mark Feature Class

Beacon (symbol)	CQ01850000
Building	BR90000000
Building (symbol)	BR90000110
Barn	BA01450000
Church (to scale)	BM05300000
(symbolized)	BM91100000
CityHall (to scale)	BF05550000
CityHall (symbolized)	BF91200000
College (to scale)	BE90800000
College (symbolized)	BE05900000
CommunicationsBuilding (symbol)	BC29250000
Courthouse (to scale)	BF07550000
Courthouse (symbolized)	BF91300000
CustomsOffice (to scale)	BF01850000
CustomsOffice (symbolized)	BF90100000
FireStation (to scale)	BF11000000
FireStation (symbolized)	BF90200000
Greenhouse (to scale)	BA12800000
Greenhouse (symbol)	BA90100000
Hospital (to scale)	BH13950000
Hospital (symbol)	BH90300000
Library (to scale)	BE16200000
Library (symbol)	BE90700000
Lighthouse (symbol)	CQ16350100
Penitentiary (to scale)	BF20950000
Penitentiary (symbol)	BF90400000
PoliceStation (to scale)	BF22000000
PoliceStation (symbol)	BF90500000
PostOffice (to scale)	BF22250000
PostOffice (symbol)	BF90600000
School (to scale)	BE26000000
School (symbol)	BE90900000
Silo (symbol)	BA90000110
University (to scale)	BE32400000
University (symbol)	BE91000000
BuiltupArea	AR03400000
Burner (symbol)	CG03550000
Cable	EA03800000
Conveyor	CQ06400000

Designated Area	AS90000000
AmmunitionDump	AJ00650000
AutoWrecker	AB33850110
CampgroundCampsite	AL03900000
Cemetery	AM04560000
DriveinTheatre	AL09000000
DrivingRange	AL23300120
Dump	AP09200000
ElectricalSubstationComplex	AG09850000
ExhibitionGrounds	AL10250000
FishHatchery	AF11150000
GolfCourse	AL12350000
LumberYard	AB33850140
MilitaryEstablishment	AJ01650000
Mine	AG17750000
Mine.type"OpenPit"	AG17600000
Park/PicnicArea	AL20150000
Pit.type"Abandoned"	AG21550001
Pit.type"GravelSand"	AG21550000
RaceTrack	AL22650000
RifleRange	AL23300140
SettlingPond	EA26700100
SewageTreatmentArea	AP26750000
SportTrack	AL22650110
SportsField	AL21900000
StockYard	AB33850150
TailingArea	AP30300000
TailingPond	AP90300100
TrailerPark	AN31950000
Yard	AB33850000
Zoo	AL33900000
DryDock	CG09100000
Fence	CR10750000
FerryDock	CQ08850130
FerryTerminal(to scale)	BQ30750140
FerryTerminal(symbolized)	BQ90750140
FireLookoutTower	BF10950120
GasWell	CG12150000
Marina / Dock	CQ08850160
OilWell	CG19600000
Pier/Wharf(to scale	CQ21250000
Pier/Wharf (symbolized)	CQ90000120
Pile	AG21275000
Pipeline	EA21400000
Quarry	GB22500000
SkiJump	CL27750000
SkiLift	CL27800000
SmokestackChimney	CG28300000
Tank (to scale)	EA30400000
(symbolized)	EA90000000
TollGate (to scale)	DD31000000
(symbolized)	DD91000000
Tower.type"Microwave"	CC31150110
Tower.type"Transmission"	CC90000000
Tower.type"Unspecified"	CC31150000
TransmissionLine	EA16400120
WeighScale (to scale)	CG33250000

(symbolized)	CG33250100

Text Feature Class

AerialTriangulation	KC90000000
Generic	KC91000000
Hydrographic	KB14250000
HypsographicContourNumbers	KC14300130
HypsographicExcludingContourNumbers	KC14300000
LandCover	KC14300310
LandForm	KC90500000
Landmark	KC90200000
Toponymy	KC90300000
Transportation	KC90100000

Transportation Feature Class

Air Feature

AirField	AQ00450000
Airport	AQ00500000
Airstrip	AQ00550000
Helipad	AQ13451000

AirFeature.type"Abandoned"

AirField/Airstrip	AQ00550001
CutlineSeismicLine	JA08400000
FerryRoute	AQ10800000
HighwayID.type"Numbers"	UNDEFINED
HighwayID.type"SymbolCircle"	UNDEFINED
HighwayID.type"SymbolOval"	UNDEFINED

Rail Feature

RailLine.type"AbandonedTrack"	DE22950001
RailLine.type"DoubleTrack"	DE22850000
RailLine.type"MultipleTrack"	DE22900000
RailLine.type"SingleTrack"	DE22950000
RailLine.type"Spur"	DF28850000
Turntable	DD32300000
Road.surface"Loose".lanes"1".type"Undivided"	DA25000110
Road.surface"Loose".lanes"1".type"Undivided".status"U/C"	DA25000160
Road.surface"Loose".lanes"2".type"Undivided"	DA25000120
Road.surface"Loose".lanes"2".type"Undivided".status"U/C"	DA25000170
Road.surface"Paved".lanes"1".type"Undivided"	DA25100180
Road.surface"Paved".lanes"1".type"Undivided".status"U/C"	DA25100320
Road.surface"Paved".lanes"2".type"Divided"	DA25050180
Road.surface"Paved".lanes"2".type"Divided".status"U/C'	DA25050310
Road.surface"Paved".lanes"2".lanedir"OneWay"	DA25100190
Road.surface"Paved".lanes"2".lanedir"OneWay".status"U/C"	DA25100330
Road.surface"Paved".lanes"3".type"Undivided"	DA25100200
Road.surface"Paved".lanes"3".type"Undivided".status"U/C"	DA25100340
Road.surface"Paved".lanes"4".type"Divided"	DA25050190
Road.surface"Paved".lanes"4".type"Divided.status"U/C"	DA25050320
Road.surface"Paved".lanes"4".type"Undivided"	DA25100210
Road.surface"Paved".lanes"4".type"Undivided".status"U/C"	DA25100350
Road.surface"Paved".lanes"6".type"Divided"	DA25050200
Road.surface"Paved".lanes"6".type"Divided".status"U/C"	DA25050330
Road.surface"Paved".lanes"6".type"Undivided"	DA25100220

Road.surface"Paved".lanes"6".type"Undivided".status"U/C"   DA25100360
Road.surface"Rough"   DA25150000

Transportation Structure

AerialCableway	CQ00300000
Bridge	DD93250000
CutEarthwork	DD08350000
FillEmbankment	DD09950000
FootBridge	DD93100000
Snowshed	DD28350000
Trestle	DD93200000
Tunnel	DD93220000
Trail	DD31700000

1.2 Feature Code / Feature Name Index

This section provides the data user with a listing of feature names and their correlated feature codes sorted alphabetically by feature code.

Feature Code	Feature Name
A	
AB33850000	Yard
AB33850110	AutoWrecker
AB33850140	LumberYard
AB33850150	StockYard
AF11150000	FishHatchery
AG09850000	ElectricalSubstationComplex
AG17600000	Mine.type"OpenPit"
AG17750000	Mine
AG21275000	Pile
AG21550000	Pit.type"GravelSand"
AG21550001	Pit.type"Abandoned"
AJ00650000	AmmunitionDump
AJ01650000	MilitaryEstablishment
AL03900000	CampgroundCampsite
AL09000000	DriveinTheatre
AL10250000	ExhibitionGrounds
AL12350000	GolfCourse
AL20150000	Park/PicnicArea
AL21900000	SportsField
AL22650000	RaceTrack
AL22650110	SportTrack
AL23300120	DrivingRange
AL33900000	Zoo
AM04560000	Cemetery
AN31950000	TrailerPark
AP09200000	Dump
AP26750000	SewageTreatmentArea
AP30300000	TailingArea
AP90300100	TailingPond
AQ00450000	AirField
AQ00500000	Airport
AQ00550000	Airstrip
AQ00550001	Airport.status"Abandoned"
AQ10800000	FerryRoute
AQ13450000	Helipad
AR03400000	BiultupArea
AS90000000	DesignatedArea

B

BA01450000	Barn
BA12800000	Greenhouse
BA90000000	Barn (symbolized)
BA90000110	Silo (symbol)
BA90100000	Greenhouse (symbol)
BC29250000	CommunicationsBuilding (symbol)
BE05900000	College
BE16200000	Library
BE26000000	School
BE32400000	University
BE90700000	Library (symbolized)
BE90800000	College (symbolized)
BE90900000	School (symbolized)
BE91000000	University (symbolized)
BF01850000	CustomsOffice
BF05550000	CityHall
BF07550000	Courthouse
BF10950120	FireLookoutTower (symbol)
BF11000000	FireStation
BF20950000	Penitentiary
BF22000000	PoliceStation
BF22250000	PostOffice
BF90100000	CustomsOffice (symbolized)
BF90200000	FireStation (symbolized)
BF90400000	Penitentiary (symbolized)
BF90500000	PoliceStation (symbolized)
BF90600000	PostOffice (symbolized)
BF91200000	CityHall (symbolized)
BF91300000	CourtHouse (symbolized)
BH13950000	Hospital
BH90300000	Hospital (symbolized)
BM03500000	Church (to scale)
BM91100000	Church (symbolized)
BQ30750140	FerryTerminal
BQ90750140	FerryTerminal (symbolized)
BR90000000	Building
BR90000110	Building (symbol)

C

CC31150000	Tower.type"Unspecified" (symbol)
CC31150110	Tower.type"Microwave" (symbol)
CC90000000	Tower.type"Transmission" (symbol)
CG03550000	Burner (symbol)
CG07600000	Crane.type"Permanent" (symbol)
CG09100000	Drydock
CG12150000	Well.type"Gas" (symbol)
CG19600000	Well.type"Oil" (symbol)
CG28300000	SmokestackChimney (symbol)
CG33250000	WeighScale
CG33250100	WeighScale (symbolized)
CL27750000	SkiJump

63

[CL27800000](#)	SkiLift
[CQ00300000](#)	AerialCableway
[CQ01850000](#)	Beacon (symbol)
[CQ06400000](#)	Conveyor
[CQ08850130](#)	FerryDock
[CQ08850160](#)	Dock/Marina
[CQ16350000](#)	Lighthouse (symbolized)
[CQ21250000](#)	Pier/Wharf (to scale)
[CQ90000120](#)	Pier/Wharf (symbolized)
[CR10750000](#)	Fence

D

[DA25000110](#)	Road.surface"Loose".lanes"1".type"Undivided"
[DA25000120](#)	Road.surface"Loose".lanes"2".type"Undivided"
[DA25000160](#)	Road.surface"Loose".lanes"1".type"Undivided".status"U/C"
[DA25000170](#)	Road.surface"Loose".lanes"2".type"Undivided".status"U/C"
[DA25050180](#)	Road.surface"Paved".lanes"2".type"Divided"
[DA25050190](#)	Road.surface"Paved".lanes"4".type"Divided"
[DA25050200](#)	Road.surface"Paved".lanes"6".type"Divided"
[DA25050310](#)	Road.surface"Paved".lanes"2".type"Divided".status"U/C'
[DA25050320](#)	Road.surface"Paved".lanes"4".type"Divided.status"U/C"
[DA25050330](#)	Road.surface"Paved".lanes"6".type"Divided".status"U/C"
[DA25100180](#)	Road.surface"Paved".lanes"1".type"Undivided"
[DA25100190](#)	Road.surface"Paved".lanes"2".lanedir"OneWay"
[DA25100200](#)	Road.surface"Paved".lanes"3".type"Undivided"
[DA25100210](#)	Road.surface"Paved".lanes"4".type"Undivided"
[DA25100220](#)	Road.surface"Paved".lanes"6".type"Undivided"
[DA25100320](#)	Road.surface"Paved".lanes"1".type"Undivided".status"U/C"
[DA25100330](#)	Road.surface"Paved".lanes"2".lanedir"OneWay".status"U/C"
[DA25100340](#)	Road.surface"Paved".lanes"3".type"Undivided".status"U/C"
[DA25100350](#)	Road.surface"Paved".lanes"4".type"Undivided".status"U/C"
[DA25100360](#)	Road.surface"Paved".lanes"6".type"Undivided".status"U/C"
[DA25150000](#)	Road.surface"Rough"
[DD08350000](#)	CutEarthwork
[DD09950000](#)	FillEmbankment
[DD24600000](#)	Wall.type"Retaining"
[DD28350000](#)	Snowshed
[DD31000000](#)	TollGate
[DD31700000](#)	Trail
[DD32300000](#)	RailwayTurntable
[DD91000000](#)	TollGate (symbolized)
[DD93100000](#)	FootBridge
[DD93200000](#)	Trestle
[DD93220000](#)	Tunnel
[DD93250000](#)	Bridge
[DE22850000](#)	RailLine.type"DoubleTrack"
[DE22900000](#)	RailLine.type"MultipleTrack"
[DE22950000](#)	RailLine.type"SingleTrack"
[DE22950001](#)	RailLine.type"AbandonedTrack"
[DF28850000](#)	RailLine.type"Spur"

E
EA03800000   Cable.type"Insulated"
EA16400120   TransmissionLine.type"Hydro"
EA21400000   Pipeline
EA26700100   SettlingPond
EA30400000   Tank
EA90000000   Tank (symbol)

F

FB18450000   ControlPoint.type"Horizontal".status"PermanentlyMarked" (symbol)
FB18650000   ControlPoint.type"Vertical".status"PermanentlyMarked" (symbol)
FD21100000   PhotoCentre (symbol)
FD90500000   CadastralPoint.status"PermanentlyMarked" (symbol)

G
GA03950000   Canal
GA08450000   Dam.section"Top"
GA08450110   BeaverDam
GA08800110   Ditch
GA10450000   Falls
GA11500000   Flume
GA23500000   Rapids
GA23500110   Rapids (symbol)
GA24850000   River/*Stream Geometric Rep Qualifier*Definite
GA24850130   River/Stream.type"Dry"
GA24850140   River/Stream *Geometric Rep Qualifier*Indefinite
GA24850150   River/Stream.type"Intermittent"
GA28550000   Dam.section"Spillway"
GA90000110   River/Stream.type"LeftBank"
GA90000120   River/Stream.type"RightBank"
GA90001110   Canal.type"LeftBank"
GA90001120   Canal.type"RightBank"
GA90002110   Falls (symbol)
GA98450000   Dam (symbol)
GA98450100   Dam.section"Base"
GB11350110   FloodedLand.type"Inundated" (area outline)
GB15300000   Lake *Geometric Rep Qualifier* Definite
GB15300130   Lake *Geometric Rep Qualifier* Indefinite
GB15300140   Lake.type"Intermittent"
GB22500000   Quarry
GB24300000   Reservoir *Geometric Rep Qualifier* Definite
GB90000000   FloodedLand.type"Inundated" (area symbol)
GB90100000   Reservoir *Geometric Rep Qualifier* Indefinite
GB90100110   Reservoir.type"Intermittent"
GB90100120   Reservoir.type"ProposedMaxResLevel"
GC17100000   Marsh (area outline)
GC30050000   Swamp (area outline)
GC90100000   Marsh (area symbol)
GC90200000   Swamp (area symbol)

GD12300000	Glacier
GD14450000	Icemass.type"PermanentSnow&Ice"
GE03050110	Breakwater
GE03050120	Breakwater (symbolized)
GE09400000	Dyke
GE14850000	Island *Geometric Rep Qualifier*: Position Approximate
GE25850000	Sand/GravelBar (area outline)
GE26250000	SeaWall
GE90100000	Sand/GravelBar (area symbol)
GE90200000	FlowArrow
GE90200110	Arrowhead (symbol)
GE94850000	Island *Geometric Rep Qualifier*:Definite (symbol)
GE94850100	Island *Geometric Rep Qualifier*: Position Approximate
GF28750000	Spring (symbol)
GG05800000	Coastline *Geometric Rep Qualifier*: Definite
GG95800130	Coastline *Geometric Rep Qualifier*: Indefinite

H

HA28700000	SpotHeight (symbol)
HA33100000	WaterLevel(DateofPhotography) (symbol)
HA90000000	Contour.type"Index"
HA90000110	Contour.type"Index".option"Indefinite"
HA90000130	Contour.type"Index".option"Depression"
HA90000140	Contour.type"Index".option"DepressionIndefinite"
HA90001000	Contour.type"Intermediate"
HA90001110	Contour.type"Intermediate".option"Indefinite"
HA90001130	Contour.type"Intermediate".option"Depression"
HA90001140	Contour.type"Intermediate".option"DepressionIndefinite"
HA90100000	DEMPoint.type"Definite" (symbol)
HA90100110	DEMPoint.type"Indefinite" (symbol)
HA90200000	BreakLine.type"Sharp"
HA90200110	BreakLine.type"Round"
HA90200120	BreakLine.type"Hypsographic"
HA90200130	BreakLine.type"Hydrographic"
HA90200140	BreakLine.type"TransportationandOtherManMade"
HA90300000	DEMPoint.type"Interpolated"
HA90400000	DEMPoint.type"Check"
HB05650000	CliffScarp
HB07650130	VolcanicCrater
HB10200000	Esker
HB15850000	LavaBed
HB18700000	Moraine
HB18800000	MountainPeak (symbol)
HB26150000	Scree
HB27550000	Sinkhole (symbol)
HB27900000	Slide (area outline)
HB90000000	Slide (area symbol)
HC90000000	AreaofExclusion
HC90000100	AreaofIndefiniteContours

J

JA08400000	CutlineSeismicLine
JA33750000	WoodedArea
JB19150000	Nursery
JB19650000	Orchard
JB32800000	Vineyard

K

KB14250000	Text.type"Hydrographic"
KC14300000	Text.type"HypsographicExcludingContourNumbers"
KC14300130	Text.type"HypsographicContourNumbers"
KC14300310	Text.type"LandCover"
KC14300320	Text.type"LandForm"
KC90000000	Text.type"AerialTriangulation"
KC90100000	Text.type"Transportation"
KC90200000	Text.type"Landmark"
KC90300000	Text.type"Toponymy"
KC91000000	Text.type"Generic"

U

UNDEFINED	HighwayID.type"Numbers"
UNDEFINED	HighwayID.type"SymbolOval"
UNDEFINED	HighwayID.type"SymbolCircle"

1.3 Feature Name / Feature Code Index

This section provides the data user with a listing of feature names and their correlated feature codes sorted alphabetically by feature name. The location of a feature within this list corresponds to the position of the feature within the detailed specification Section 2.

A

Feature Name	Feature Code
AerialCableway	CQ00300000
Airport.status"Abandoned"	AQ00550001
AirField	AQ00450000
Airport	AQ00500000
Airstrip	AQ00550000
AmmunitionDump	AJ00650000
AreaofExclusion	HC90000000
AreaofIndefiniteContours	HC90000100
Arrowhead (symbol)	GE90200110
AutoWrecker	AB33850110

B

Feature Name	Feature Code
Barn	BA01450000
Barn (symbolized)	BA90000000
Beacon (symbol)	CQ01850000
BeaverDam	GA08450110
BreakLine.type"Hydrographic"	HA90200130
BreakLine.type"Hypsographic"	HA90200120
BreakLine.type"Round"	HA90200110
BreakLine.type"Sharp"	HA90200000
BreakLine.type"TransportationandOtherManMade"	HA90200140
Breakwater	GE03050110
Breakwater (symbolized)	GE03050120
Bridge	DD93250000
Building	BR90000000
Building (symbol)	BR90000110
BuiltupArea	AR03400000
Burner (symbol)	CG03550000

C

Feature Name	Feature Code
Cable	EA03800000
CadastralPoint.status"PermanentlyMarked" (symbol)	FD90500000
CampgroundCampsite	AL03900000
Canal	GA03950000
Canal.type"LeftBank"	GA90001110
Canal.type"RightBank"	GA90001120
Cemetery	AM04560000
Church (to scale)	BM05300000
Church (symbolized)	BM91100000
CityHall	BF05550000
CityHall (symbolized)	BF91200000
CliffScarp	HB05650000
Coastline *Geometric Rep Qualifier:*Definite	GG05800000
Coastline *Geometric Rep Qualifier:*Indefinite	GG95800130
College	BE05900000
College (symbolized)	BE90800000
CommunicationsBuilding (symbol)	BC29250000
Contour.type"Index"	HA90000000
Contour.type"Index".option"Depression"	HA90000130
Contour.type"Index".option"DepressionIndefinite"	HA90000140

Contour.type"Index".option"Indefinite"	HA90000110
Contour.type"Intermediate"	HA90001000
Contour.type"Intermediate".option"Depression"	HA90001130
Contour.type"Intermediate".option"DepressionIndefinite"	HA90001140
Contour.type"Intermediate".option"Indefinite"	HA90001110
ControlPoint.type"Horizontal".status"PermanentlyMarked" (symbol)	FB18450000
ControlPoint.type"Vertical".status"PermanentlyMarked" (symbol)	FB18650000
Conveyor	CQ06400000
Courthouse	BF07550000
Courthouse (symbolized)	BF91300000
Crane.type"Permanent"	CG07610000
CustomsOffice (to scale)	BF01850000
CustomsOffice (symbolized)	BF90100000
CutEarthwork	DD08350000
CutlineSeismicLine	JA08400000

D

Dam.section"Base"	GA98450100
Dam.section"Spillway"	GA28550000
Dam.section"Top"	GA08450000
Dam (symbolized)	GA98450000
DEMPoint.type"Check" (symbol)	HA90400000
DEMPoint.type"Definite" (symbol)	HA90100000
DEMPoint.type"Interpolated" (symbol)	HA90300000
DEMPoint.type"Indefinite" (symbol)	HA90100110
DesignatedArea	AS90000000
Ditch	GA08800110
DriveinTheatre	AL09000000
DrivingRange	AL23300120
Drydock	CG09100000
Dump	AP09200000
Dyke	GE09400000

E

ElectricalSubstationComplex	AG09850000
Esker	HB10200000
ExhibitionGrounds	AL10250000

F
Falls	GA10450000
Falls (symbol)	GA90002110
Fence	CR10750000
FerryDock	CQ08850130
FerryRoute	AQ10800000
FerryTerminal (symbolized)	BQ90750140
FerryTerminal (to scale)	BQ30750140
FillEmbankment	DD09950000
FireLookoutTower	BF10951120
FireStation (symbolized)	BF90200000
FireStation (to scale)	BF11000000
FishHatchery	AF11150000
FloodedLand.type"Inundated" (area outline)	GB11350110
FloodedLand.type"Inundated" (area symbol)	GB90000000
FlowArrow	GE90200000

Flume	GA11500000
FootBridge	DD93100000

G

GasWell	CG12150000
Glacier	GD12300000
GolfCourse	AL12350000
Greenhouse	BA12800000
Greenhouse (symbol)	BA90100000

H

Helipad	AQ13451000
HighwayID.type"Numbers"	UNDEFINED
HighwayID.type"SymbolCircle"	UNDEFINED
HighwayID.type"SymbolOval"	UNDEFINED
Hospital (to scale)	BH13950000
Hospital (symbolized)	BH90300000

I

IceField	GD14450000
Island (to scale)	GE14850000
Island (symbolized)	GE94850100
Island *Geometric Representation Qualifier* Position Approximate	GE94850100

L

Lake *Geometric Rep Qualifier:*Definite	GB15300000
Lake *Geometric Rep Qualifier:*Indefinite	GB15300130
Lake.type"Intermittent"	GB15300140
LavaBed	HB15850000
Library	BE16200000
Library (symbolized)	BE90700000
Lighthouse (symbolized)	CQ16350000
LumberYard	AB33850140

M

Marina/Dock	CQ08850160
Marsh (area outline)	GC17100000
Marsh (area symbol)	GC90100000
MilitaryEstablishment	AJ01650000
Mine	AG17750000
Mine.type"OpenPit"	AG17600000
Moraine	HB18700000
MountainPeak (symbol)	HB18800000

N

Nursery	JB19150000

O

OilWell	CG19600000
Orchard	JB19650000

P

Park/PicnicArea	AL20150000
Penitentiary	BF20950000
Penitentiary (symbolized	BF90400000
PhotoCentre (symbol)	FD21100000
Pier/Wharf (to scale)	CQ21250000
Pier/Wharf (symbolized)	CQ90000120
Pile	AG21275000
Pipeline	EA21400000
Pit.type"Abandoned"	AG21550001
Pit.type"GravelSand"	AG21550000
PoliceStation	BF22000000
PoliceStation (symbolized)	BF90500000
PostOffice	BF22250000
PostOffice (symbolized)	BF90600000

Q

Quarry.type"WaterFilled"	GB22500000

R

RaceTrack	AL22650000
RailLine.type"AbandonedTrack"	DE22950001
RailLine.type"DoubleTrack"	DE22850000
RailLine.type"MultipleTrack"	DE22900000
RailLine.type"SingleTrack"	DE22950000
RailLine.type"Spur"	DF28850000
Rapids	GA23500000
Rapids (symbol)	GA23500110
Reservoir *Geometric Rep Qualifier:* Definite	GB24300000
Reservoir *Geometric Rep Qualifier* :Indefinite	GB90100000
Reservoir.type"Intermittent"	GB90100110
Reservoir.type"ProposedMaxResLevel"	GB90100120
RifleRange	AL23300140
River/Stream *Geometric Rep Qualifier:* Definite	GA24850000
River/Stream *Geometric Rep Qualifier:* Indefinite	GA24850140
River/Stream.type"Dry"	GA24850130
River/Stream.type"Intermittent"	GA24850150
River/Stream.type"LeftBank"	GA90000110
River/Stream.type"RightBank"	GA90000120
Road.surface"Loose".lanes"1".type"Undivided"	DA25000110
Road.surface"Loose".lanes"1".type"Undivided".status"U/C"	DA25000160
Road.surface"Loose".lanes"2".type"Undivided"	DA25000120
Road.surface"Loose".lanes"2".type"Undivided".status"U/C"	DA25000170
Road.surface"Paved".lanes"1".type"Undivided"	DA25100180
Road.surface"Paved".lanes"1".type"Undivided".status"U/C"	DA25100320
Road.surface"Paved".lanes"2".type"Divided"	DA25050180
Road.surface"Paved".lanes"2".type"Divided".status"U/C'	DA25050310
Road.surface"Paved".lanes"2".type"Undivided"	DA25300190
Road.surface"Paved".lanes"2".type"Undivided".status"U/C"	DA25300330
Road.surface"Paved".lanes"3".type"Undivided"	DA25100200
Road.surface"Paved".lanes"3".type"Undivided".status"U/C"	DA25100340
Road.surface"Paved".lanes"4".type"Divided"	DA25050190
Road.surface"Paved".lanes"4".type"Divided.status"U/C"	DA25050320
Road.surface"Paved".lanes"4".type"Undivided"	DA25100210
Road.surface"Paved".lanes"4".type"Undivided".status"U/C"	DA25100350
Road.surface"Paved".lanes"6".type"Divided"	DA25050200
Road.surface"Paved".lanes"6".type"Divided".status"U/C"	DA25050330

Road.surface"Paved".lanes"6".type"Undivided"	DA25100220
Road.surface"Paved".lanes"6".type"Undivided".status"U/C"	DA25100360
Road.surface"Rough" DA25150000	

S
Sand/GravelBar (area outline)	GE25850000
Sand/GravelBar (area symbol)	GE90100000
School	BE26000000
School (symbolized)	BE90900000
Scree	HB26150000
SeaWall	GE26250000
SettlingPond	EA26700100
SewageTreatmentArea	AP26750000
Silo	CA27500000
Silo (symbol)	BA90000110
Sinkhole (symbol)	HB27550000
SkiJump	CL27750000
SkiLift	CL27800000
Slide (area outline)	HB27900000
Slide (area symbol)	HB90000000
SmokestackChimney	CG28300100
SmokestackChimney (symbol)	CG28300000
Snowshed	DD28350000
SportTrack	AL22650110
SportsField	AL21900000
SpotHeight (symbol)	HA28700000
Spring (symbol)	GF28750000
StockYard	AB33850150
Swamp (area outline)	GC30050000
Swamp (area symbol)	GC90200000

T
TailingArea	AP30300000
TailingPond	AP90300100
Tank	EA30400000
Tank (symbol)	EA90000000
Text.type"AerialTriangulation"	KC90000000
Text.type"Generic"	KC91000000
Text.type"Hydrographic"	KB14250000
Text.type"HypsographicContourNumbers"	KC14300130
Text.type"HypsographicExcludingContourNumbers"	KC14300000
Text.type"LandCover"	KC14300310
Text.type"LandForm"	KC90500000
Text.type"Landmark"	KC90200000
Text.type"Toponymy"	KC90300000
Text.type"Transportation"	KC90100000
TollGate	DD31000000
TollGate (symbol)	DD91000000
Tower.type"Microwave"	CC31152110
Tower.type"Transmission"	CC90000000
Tower.type"Unspecified" (symbol)	CC31150000
Trail	DD31700000
TrailerPark	AN31950000
TransmissionLine.type"Hydro"	EA16400120
Trestle	DD93200000
Tunnel	DD93220000
Turntable	DD32300000

U
University   BE32400000

V
Vineyard   JB32800000
VolcanicCrater   HB07650130

W
Wall.type"Retaining"   DD24600000
WaterLevel(DateofPhotography) (symbol)   HA33100000
WaterTower (symbol)   EA31050110
WeighScale   CG33250000
WoodedArea   JA33750000

Y
Yard   AB33850000

Z
Zoo   AL33900000

Section 2 Detailed Geographic Object Specifications

Section 2 - Detailed Geographic Object Specifications

2.1 General Notes

The following section will provide the user or supplier of 1:20 000 digital baseline data with a detailed specification of each possible feature that is relevant to this discipline at this scale. The intention is to provide specifications in a vendor and program independent way. In this release, codes are included that are necessary to support existing contractual programs, but future releases may only contain code references as correlation tables found in the appendices. All measurements and display parameter guidelines required to generate verification plots and to interpret representational products are explicitly included in each feature table. The measurements in the detailed section are stated in millimetres at map scale. All display guidelines are stated in vendor independent terms, e.g. colour is given as BLUE rather than a vendor dependent parameter such as "002". To facilitate updating of feature tables, this section is alphabetically arranged without page numbering. This will allow for the insertion of addenda when required without the need for section reprinting and index generation.

All digital data shall be digitized and edited in accordance with the guidelines provided in Part I Section 5.

All digital data files shall be coded (i.e. feature code and feature type) in accordance with the detailed specifications provided in Part II Section 2.

Contours will be generated by computer interpolation from the Digital Elevation Model compiled in stereo compilation.

Contour interpolation will be achieved using computer software previously approved by the Branch.

Part II Section 1 contains indices to map features found in the detailed specification section.

Part II Section 2.2 contains instructions on the use of the detailed specification section.

2.2 Instructions on Use of Detailed Specifications Tables

Feature Object, Feature Code, FeatureType

| Subclass AccessLane | DB00100000 | 02 |

Feature Object Definition — Definition: A specially prepared route for the movement of vehicles from place to place. A private route not open to through traffic.

Positional Verification

Positional Verification Plot Guidelines — 0.25mm width solid line

Plot colour Black

Cartographic Representation — 0.2mm width solid line

MOEP font 31 U/C text

Compilation Instructions and Remarks — Remarks: Capture to scale if over 2.5 millimetres. Symbolized if under 2.5 millimetres.

DBM Break line.type"TransportationandOtherManMade" -HA90200140

Cartographic Representation Product Guidelines

Feature Object:
The Feature Object is a member of a feature class with values (null or otherwise) assigned to each categorical attribute associated with the definition of the feature class. A Feature Class is a division of real world phenomenon based on similar operational characteristics, but without reference to geometry, topology, and representation. It is described by its position in the simple hierarchy and by a sequence of categorical attributes. (Canadian General Standards Board National Committee on Geomatics - joint meeting of Working Groups 1,2 and 3, April 1990). The simple hierarchy referenced in the above definition is the feature identification model described in Section 1 of this volume. Note that in future releases the feature identification model from which all feature objects are derived will comprise an independent volume under the BC-SAIF document series.

Feature Object Definition:
English definition of each feature object. Currently these definitions have been created by the Geographic Data BC. Future releases will contain definitions from a National Geomatics Feature Identification Model.

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Feature Code:
    This code is the CCSM convention derived codification of the Feature Object. It represents the link between the feature object and the current method of data transfer, i.e. the MOEP format. Note that this field is redundant in that it is identical in meaning to the Feature Object.

Feature Type:
    The feature type is the MOEP format code identifying the authorized geometry for the identified feature object. Note that this code is specified under the Compilation Instructions and Remarks section, e.g. the example provides the MOEP feature type "02" for an aerial cableway; the definition of the MOEP type 02 "Point to point linear feature" is found in the remarks.

    Positional Verification Plot Guidelines
    This section gives a pictorial example of the feature object and a verbal description of the required representational parameters. Both the representational parameters and the pictorial example are applicable only to the plot of positional data used for verification.

    Cartographic Representation Product Guidelines
This section gives a monochrome pictorial example and verbal description of representation parameters for the representational product. These are the parameters used to create the hard copy published product. They also represent representational guidelines for GIS display parameters.

    NOTE:
    The pictorial examples from both the verification plot and representation product guidelines were produced through a combination of automated procedures and formats. They will not exactly match the results that can be obtained through vector plot and offset lithographic methods. They have been included to give an approximate pictorial guideline to the display of the feature objects.

    Compilation Instructions and Remarks
    This section relates additional remarks and instruction relevant to the capture of the target feature. Here can be found the geometric type of the feature, comments regarding capture minimums and maximums, and authorized representational qualifiers.

2.3 Notes on Detailed Specifications

    There are some features within the specifications which are to appear on the Positional Verification File plot but are not found in the MOEP format Positional Files. To facilitate plotting symbology and text on the MOEP positional verification plots, these features which are not required in the planimetric positional file will be placed in a separate MOEP format file. (Non-Positional File) This file will contain the following features:

Arrowhead
Sand/GravelBar (Area Symbol)
FloodedLand (Area Symbol)
FlowArrow
Marsh (Area Symbol)
MarshInWater (Area Symbol)
PhotoCentre
Slide (Area Symbol)
Swamp (Area Symbol)

Include also generic text related to positional plot features (i.e. Scree, Glacier).

2.3.1   Remarks - Aerial Triangulation and Related Features

Photo centres and permanently marked control points are the only aerial triangulation features to be contained in the Map Representational Data Files.

2.3.2   Remarks - Hydrographic and Related Features

See Figure II.2.1 for a graphic illustration of the following remarks.
All distances, unless other specified are at map scale, not ground scale.

For the purpose of these specifications, drainage related features have been divided into two distinct classifications:

i.   Tidal
ii.   Non-tidal

The point at which tidal water features change to non-tidal water features will be specified for each project.

The intention is to show natural and manmade hydrographic features that are continuous for a distance of over 10 millimetres in length.

All graphic elements depicting hydrographic features having a discernible gradient must be digitized in a downstream direction, e.g. rivers, streams, canals, ditches.

Where hydrographic features pass under roads or other linear features, the continuity of the digital data must be retained in the map position file (e.g. Do not break the feature for bridges or dams, etc. There will be a node placed at point of intersection.).

Culverts shall not be captured.

Rivers/streams shall be shown as continuous, even though flowing through lake features that are below the minimum size specification, or through swamp or marsh areas. (Hanging drainage will be avoided when possible.)

Ditches shall only be captured if they form part of the main drainage system.

The apparent high water mark of any lake, or other body of water is where the presence and action of the water are so common and usual as to mark on the soil of the bed of the body of water a character distinct from that of its banks, in vegetation, as well as in the nature of the soil itself.

   NOTE: For purpose of these specifications, the following are all defined by their apparent high water marks:
-    Coastline (Tidal)
-    River Double Line
-    Lake
-    Reservoir

Island features in rivers/streams and lakes which are not covered by water and are greater than 1 millimetre (map scale) in length on longest side will be captured to scale. Sand/gravel in rivers/streams and lakes which are not covered by water (date of photography) and are greater than 1 millimetres (map scale) in width and 5 millimetres (map scale) in length will be captured to scale.

Sand / gravel in rivers / streams and lakes which are not covered by water (date of photography) and are greater than 20 metres in width and 75 metres in length will be captured to scale.

The lake feature code will be used for any natural, permanent body of water having a longest side greater than 25 metres.

The reservoir feature code will be used for any body of water having a longest side greater than 25 metres.

Ministry of Environment, Lands and Parks official toponymy sheets will be used to ensure that all named creeks are captured.

Feature ArrowHead. For clarification, the arrow head is to be placed where split streams occur (on the lesser stream).

Feature Sinkhole. For clarification, this arrow head is to be attached to hanging drainage to show the direction of flow and to clarify the stream's termination.

When lake polygons, coastline, double sided rivers are closed with a double sided river, node the left and right river banks to the lake, coastline, and double sided river. To close double sided rivers flowing into a lake or ocean continue the left bank and code as a construction line.
To close double sided rivers flowing out of a lake continue the right bank and code as a construction line. When a double sided river meets another double sided river, close the lesser feature as left bank; show the closing line of the lesser feature and the corresponding major river line as construction (similar to a double sided river flowing into lake).
When a double sided river branches into two or more double sided rivers forming a delta as it joins a lake or an ocean, the land masses between the branches are coded as islands.
The island line which is coincident with the lake will be primary and the lake and river-left bank will be construction.

Duplicate swamps as trees when next to clearing. Do not duplicate swamp as trees when next to trees. See fig.II.2.6

Major dams will be captured by showing a dam top and a dam base when visible. Both the dam top and the dam base will be captured as closed polygons with the dam top taking precedence. In the event that the dam base is partially visible the dam top outline will be duplicated at the appropriate water level to provide a closed polygon for the dam base. Roads that traverse the dam top will be captured as road (gravel - 1 lane) at all times.

Spillways - Roads crossing spillways will be shown as a bridge to scale. Spillway bridges are not shown on the representational file.

Coastal (Tidal) – When a tidal situation occurs, the apparent high water mark will be captured as "Coastline". Only named features, i.e., islands, beaches, will be captured below the high water mark. The intent is to capture only the apparent high water mark in tidal areas.

When a dry river bed/oxbow which is not subject to annual flooding joins a double line river, the junction is to be closed using a solid visible line (left or right bank). The dry river bed is to captured as a closed polygon.

If an oxbow has water in it and not joined to a double sided river then capture as a lake. If the oxbow has water in it and is joined to a double side river at one end, capture as part of the river. If the oxbow is dry then capture as a dry river bed.

Either definite or intermittent drainage may have portions classified as indefinite in limited situations when the water course is obscured by vegetation, shadow, etc. A definite stream cannot flow into an intermittent stream.

When there is a series of lakes separated by beaver dams, code each lake separately creating closed polygons by duplicating the beaver dam only if the lake elevation is differences are greater than 5 metres. If the lake elevation is less than 5 metres code the entire body of water as one lake. In this case the beaver dam will run across the lake. This is probably the more common case since the beaver dams are seldom more than 1 to 2 metres high. For beaver dams across rivers the left and right river banks are shown.

Beaver dams as well as other dams are to be digitized as the primary feature over lake edges. The right side of the dam is to be the downstream side.

When a dam has a coincident side to the hydrographic feature such as a lake or coastline, the construction lake or coastline is to be manually added to the DEM as a hydrographic breakline to ensure the breakline polygon closes.

Vancouver Island and the Queen Charlotte Islands (2 main islands) are to be coded as coastline. All other islands are to be coded as islands.

Dugouts are not a valid feature for data capture. If a dugout has a longest dimension over 25 metres than capture it as a lake.

Sand is not captured on glaciers even if the NTS 1:50 000 shows sand on them.

For large icefields that have a number of glaciers coming off them, capture the whole feature as a glacier if possible. If the plotter operator sees it as more than one distinct feature than it may be captured as such. The glacier would than be the main feature with the icefield as construction with the dividing line determined by the operator.

Marshes can occur above and below the high water mark or both. Capture each as separate features duplicating the lake line as marsh when they are coincident.

Swamps cannot occur inside lakes. This would imply trees inside the lake. This condition can only occur in inundated land.

Rapids to scale are to be noded to the left and right river bank. When there is a sandbar along one side of the bank, the rapids are to go through the sandbar (noded) and end at the bank.

Intermittent rivers can flow out of intermittent lakes.

Sinkholes are not to be used at the ends of river / stream features when they enter glaciers or icefields. The stream should terminate with a node at the glacier / icefield edge. If a major stream or named stream flows through a glacier, the stream must be shown to be continuous, with a construction line.

Snow that is intermittent (melts at some point during the year) should not be captured. Creeks and rivers should be connected through these areas as definite features.
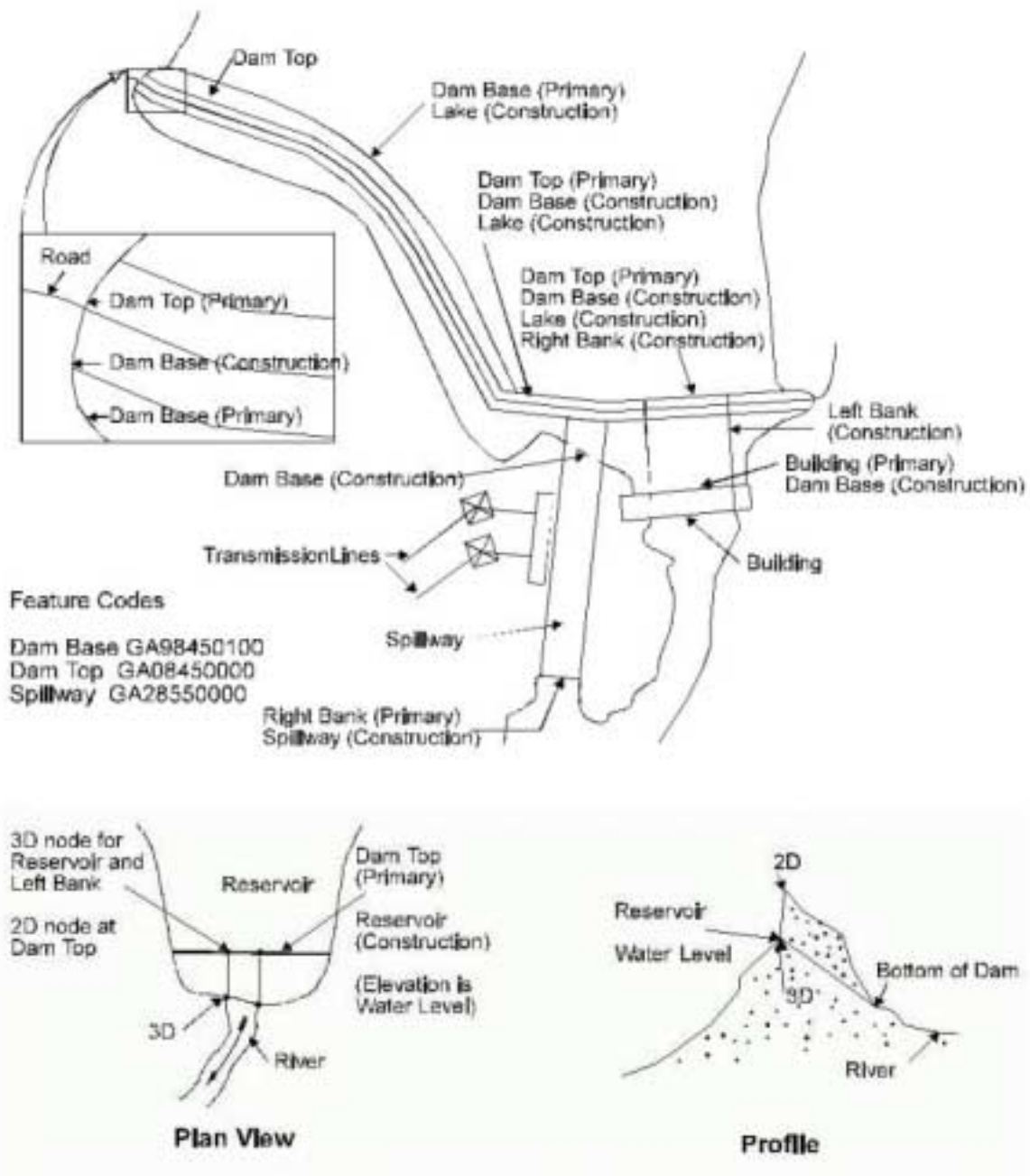
Figure II.2.1
Sample Diagram Illustrating Digitizing Conventions as Applied to the Mica Dam
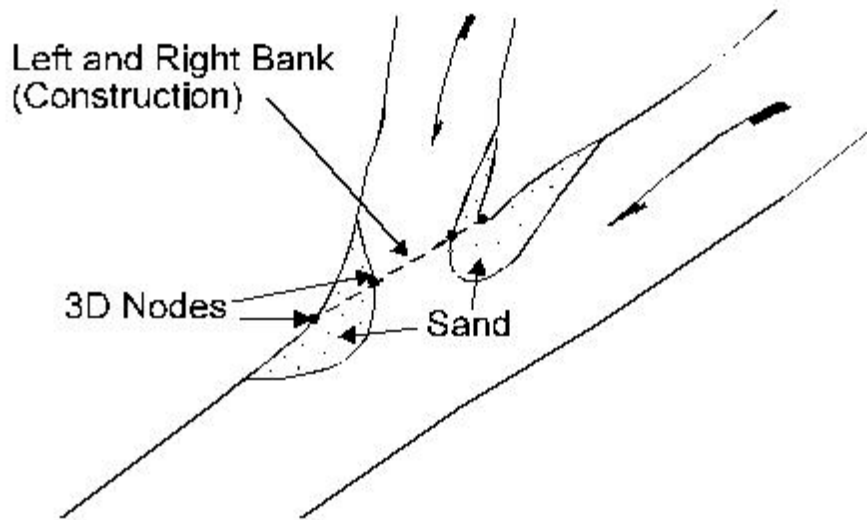
Figure II.2.2

When a double line river flows into another double line river, they will be closed with construction lines. In the case where there are sand bars at the junction, the construction lines that closes the river should go straight from bank to bank noding down to the sand bar as opposed to duplicating the sand bar with the construction line.
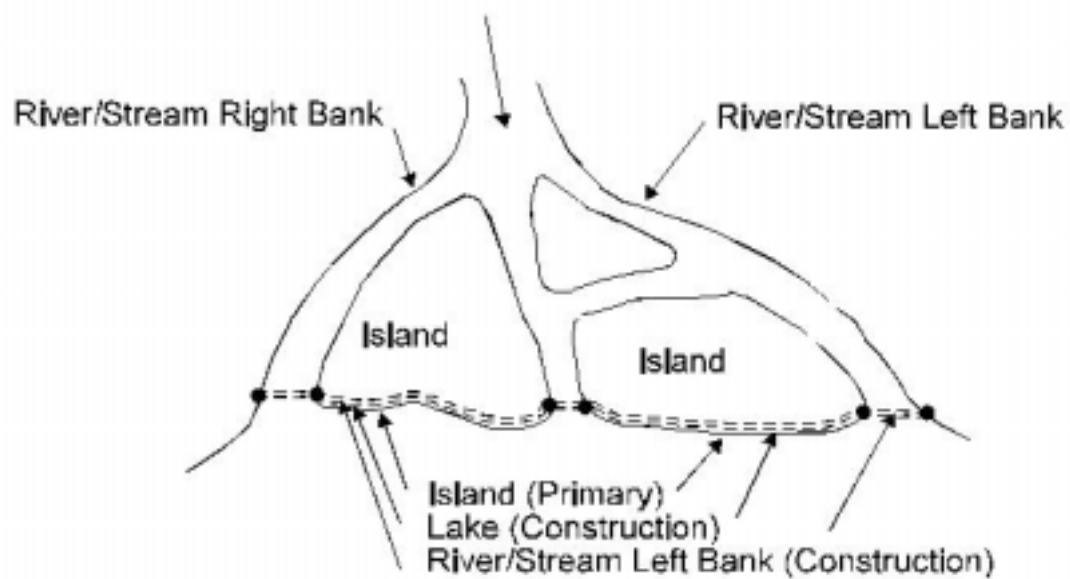
Figure II.2.3

When a double line river branches into two or more double line rivers forming a delta as it joins a lake or an ocean, code the land mass between the branches as islands. This will simplify the procedure of closing the branches. In this case, the island line which is coincident with the lake will be primary and the lake and left bank will be construction.
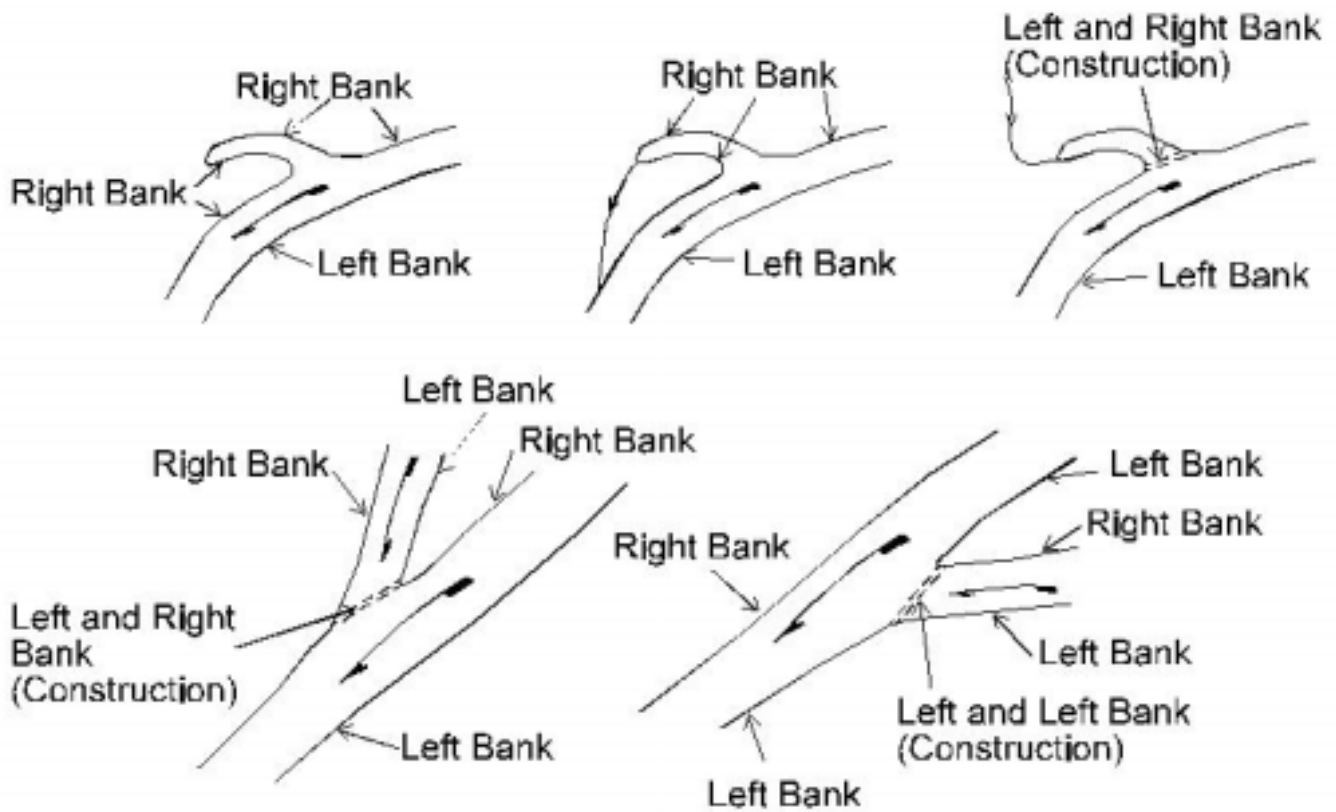
Figure II.2.4
When a double line river flows into another double line river, they will both be closed with construction lines (similar to double line river and lake). The lesser of the two rivers will be closed using the left bank (construction line) and the main river will be closed either left or right bank depending on which bank is to be closed.
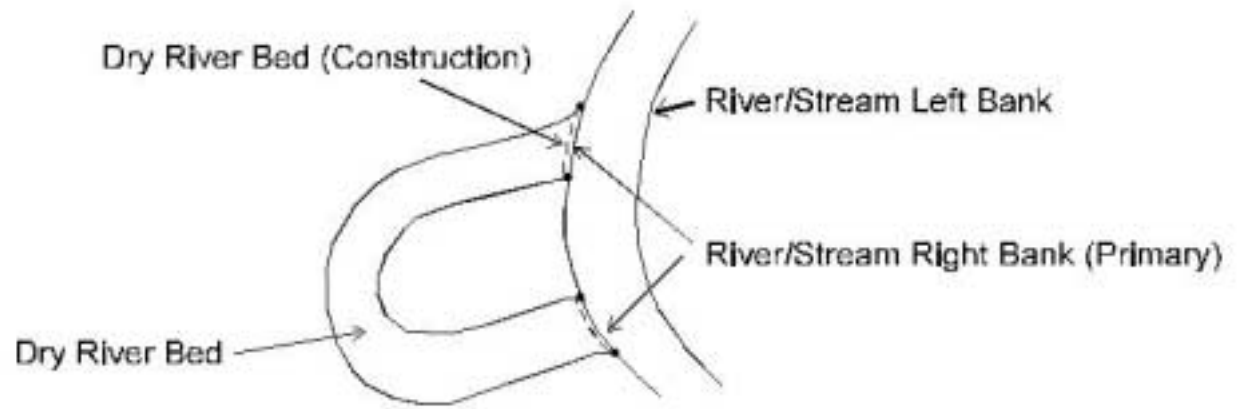
Figure II.2.5
When a dry river bed which is not subject to annual flooding (i.e., due to debris build up, etc.) joins a double line river, the junction is to be closed off using a solid visible (primary) line.
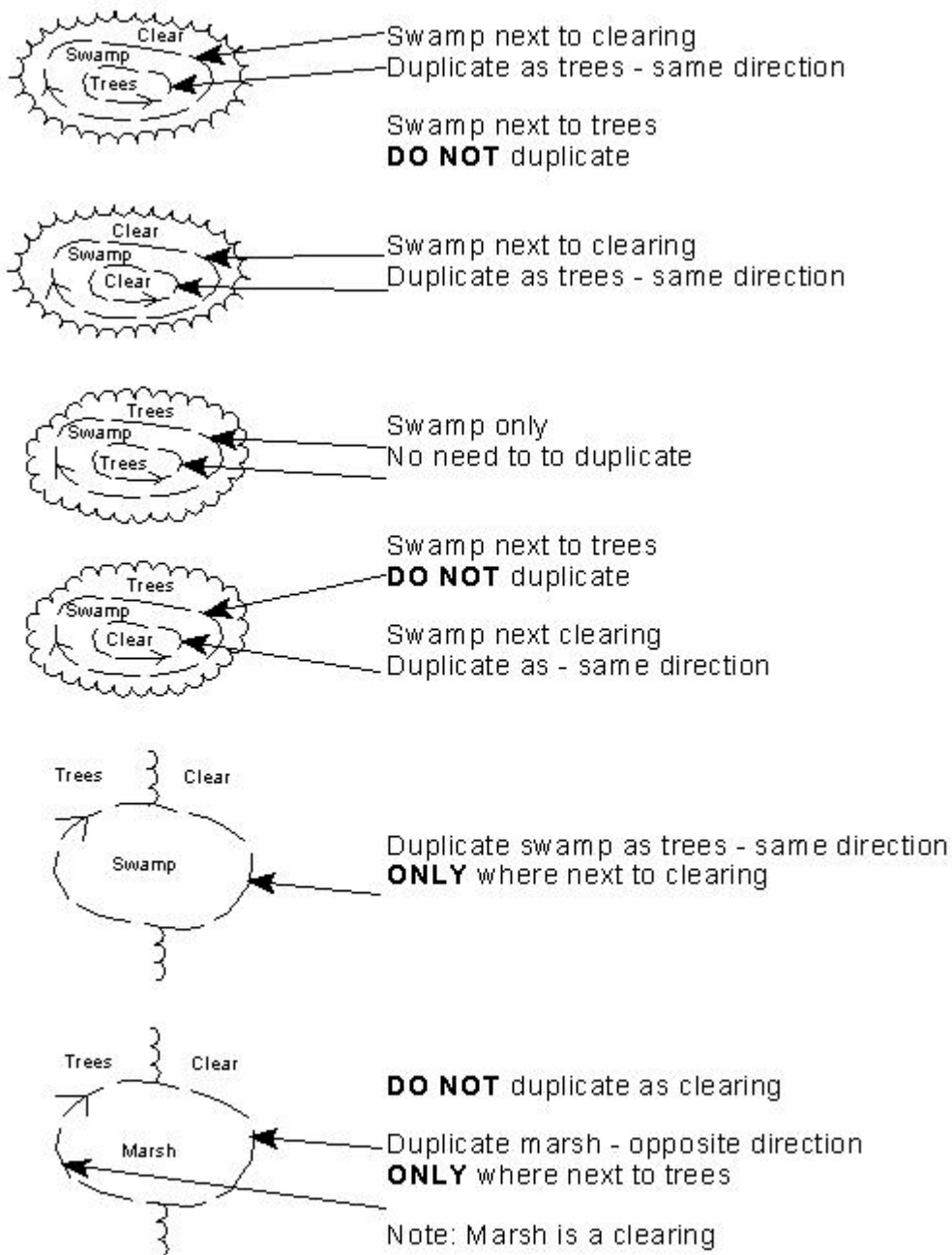
Figure II.2.6
Sample Diagram Illustrating Swamp / Wooded Area Digitizing Conventions.
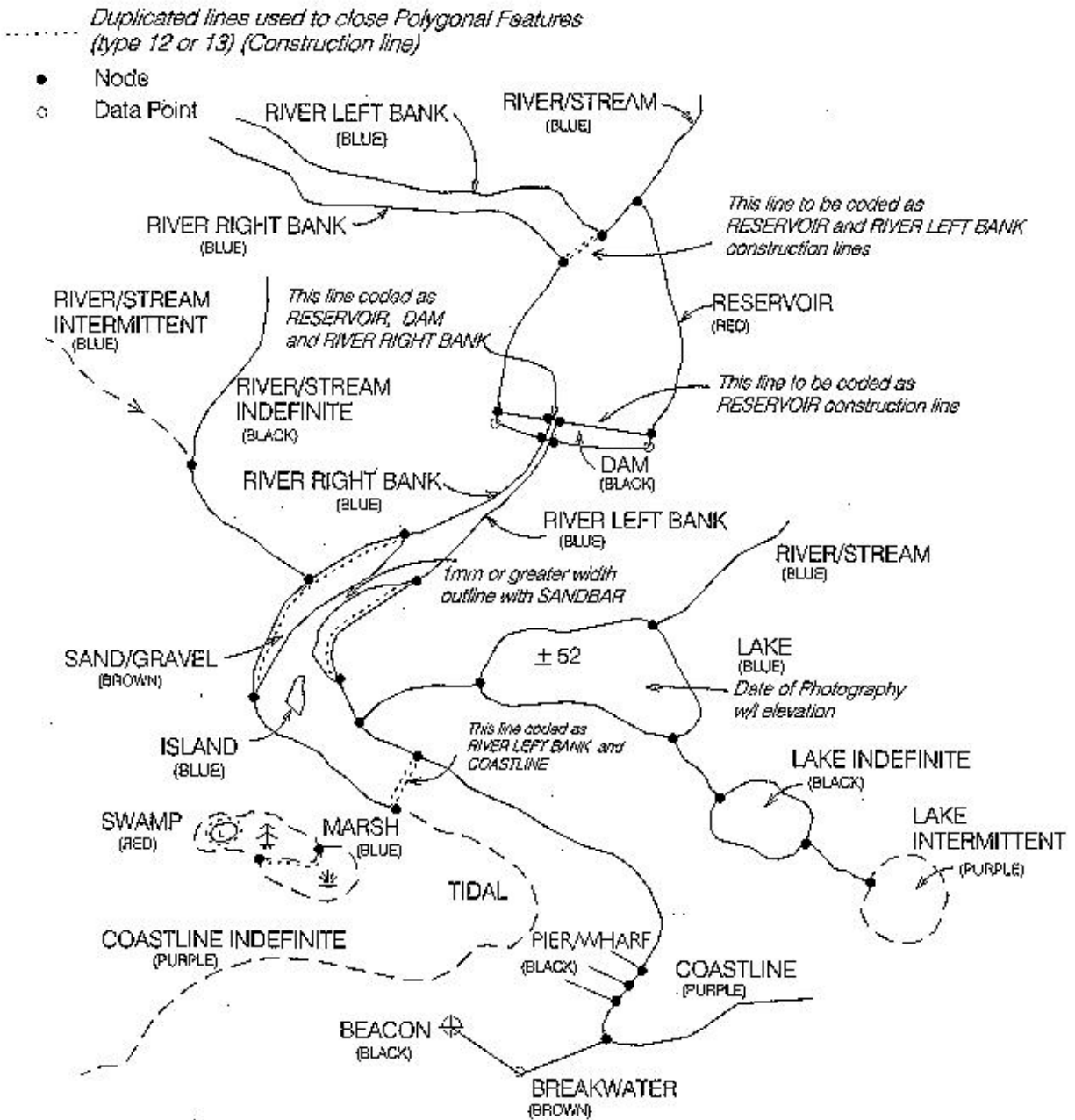
Figure II.2.7
Sample Diagram Illustrating Digitizing Conventions for Hydrographic and Related Features
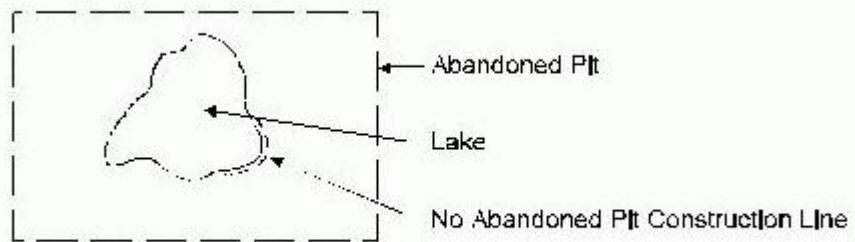
Figure II.2.8
Lakes that fall inside a designated area are not to be duplicated as construction line designated areas.

2.3.3 Remarks - Hypsographic, Landform, and Related Features

Positional File

(a) Map relief will be collected in the form of a Digital Elevation Model of sufficient quality and quantity to meet the accuracy standards as laid out in this manual.

Piles will be outlined and labelled if they meet minimum size criteria. DEM data will not be collected and they will not be contoured. They will be treated as a DEM area of exclusion.

Active pits, open pit mines, and quarries will be outlined and labelled if they meet minimum size criteria. DEM data, excepting breaklines, will be collected, but they will not be contoured. They will be treated as a DEM area of exclusion.

Pits or quarries that are obviously abandoned will be collected in the DEM and contoured.

DEM points will be collected over swamps and marshes but not over lakes.

Unless specified otherwise, map relief will be shown by a 1 metre and 0.5 metre contour interval interpolated from Digital Elevation Model data using interpolation software approved by the Branch.

Depression contours are to be shown in both the Positional (POS) and the Representational (REP) files. Depressions falling on a sheet edge will continue to be shown as depressions if the DEM which extends beyond the map sheet boundary can confirm this.

Areas obscured by cloud will be captured from alternate photography.

The DEM should be captured in one direction only, i.e., from the bottom to the top of the model.

Spot heights are distinct points of measured height. In flat areas a minimum of one spot height every 1000m is required. Spot heights shall be displayed to the closest metre. Spot heights are not required on bridges; however, they may be shown at road and cutline intersections.

DEM points are not captured on dam faces.

DEM points in non permanent snow reflect the true ground elevation.

Out-wash plains which are formed at the bottom of moraines are included as part of the moraine.

Representational File

(a)   Notes following refer to the Representational file contours only. Contours supplied at Positional file stage are raw contours, supplied for Branch checking functions only. These are generated and annotated directly by the contouring program without further enhancement.

The turning point of contours that define drainage channels will be consistent in depicting the correct shape of the valley or ravine of the channel, and in reflecting the proper slope of the drain.

Index contours will be coded at every fifth contour beginning from zero based on mean sea level.

Intermediate contours are the contours between the index contours.
 Indefinite contours (intermediate or index) are coded where the ground cannot be accurately interpreted, i.e. glaciers, icefield, shadow areas, and stereo dead zones (DEM spacing may be decreased to 200 metres if necessary).

Depression contours are coded to depict natural and man made depressions. Depression contours are to be shown in both the Positional and the Representational files. Depressions falling on a sheet edge will continue to be shown as depressions if the DEM which extends beyond the map sheet boundary can confirm this.

Contour values shall read Uphill. Contours shall be broken for the insertion of the numbers. Care will be taken to ensure that the map retains good cartographic legibility. Contour numbers shall be positioned in such a way as to produce a ladder like effect. The ladders will be positioned so that they do not conflict with drainage features. The maximum separation between these contour number ladders shall be 200 millimetres (at map scale). Every index contour will be labelled along each ladder subject to the following:

Contour numbers will be placed so that they do not conflict with other detail. Detail will not be broken to accommodate contour numbers.

Contour numbers will be placed so that they do not conflict with other detail. Detail will not be broken to accommodate contour numbers.

Where the separation between index contours is less than 5 millimetres (at map scale), only even numbered index contours shall be numbered.

Intermediate contours and isolations shall be numbered in flat areas to ensure positive
     identification.

(I)   Contour numbers generated by a contour interpolation package will be acceptable on the verification plot. Spot heights are required where generated contour lines do not adequately express the character of the terrain, (i.e. mountain peaks, islands, road intersections, cutline intersections, etc.).
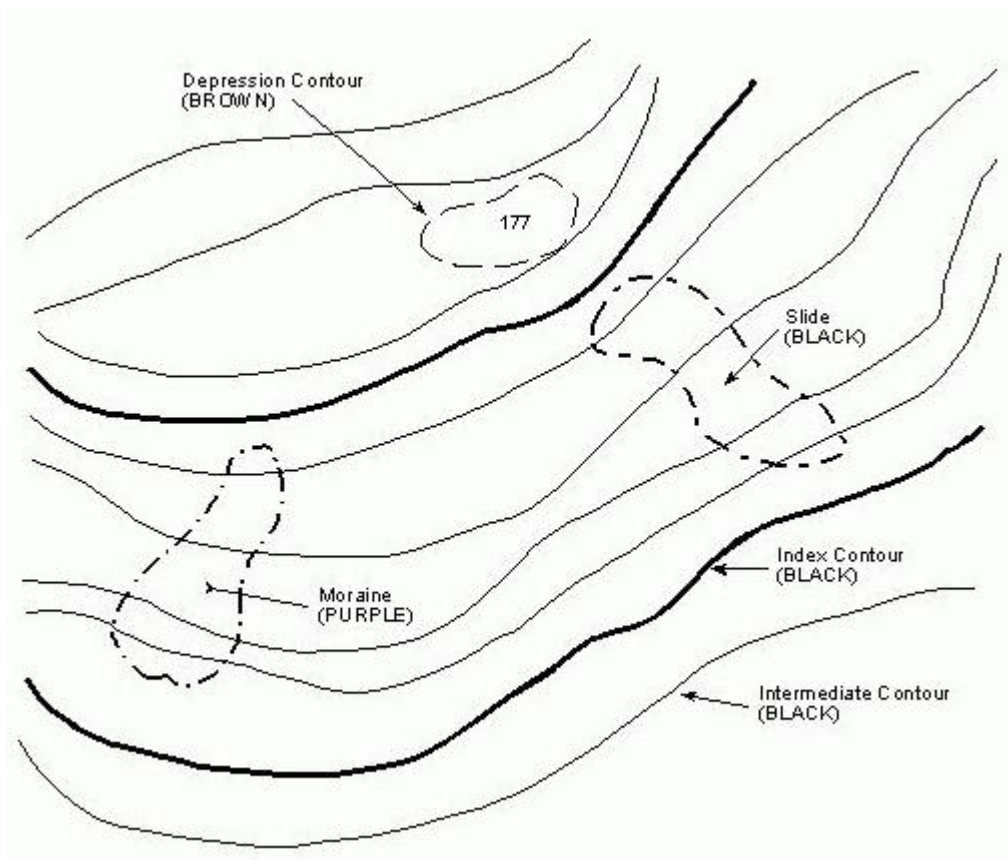
Figure II.2.2

Sample Diagram Illustrating Digitizing Conventions for Hypsographic, Landform, and Related Features.

2.3.4   Remarks - Land Cover and Related Features

The intent is to show all areas of wood areas that have a crown closure of 6% or greater and cover an area greater than 1.0 hectare. Areas that are evenly distributed with wooded area polygons may be grouped together if they cover 60% of the total area in question.
Wooded area boundaries along rightofways (i.e., Roads, Transmission lines, etc.) will not be captured unless the rightofway is 40m or greater in width.
Naturally occurring or man-made clearings of 1.0 hectares or greater that are enclosed within wooded area as defined above will be shown as "holes" in the wooded area polygon, i.e., the lines bounding the non-wooded area are coded as wooded area features with the forest to the right of the line and the clearing to the left of the line.

Particular care will be taken to show the true shape of non-wooded areas in extensive wooded areas.

Forestry cut blocks which do not show obvious signs of substantial regeneration (2 metres or more) will be shown as non-wooded areas. Scrub and sparse trees of less than 6% coverage will be shown as non-wooded areas.

Where land cover features and any other features are contiguous, the land cover feature will not be shown in the Representational File. The land cover polygon will be closed in the Positional file by exact numeric copy of the contiguous feature. The Right Hand rule must be adhered to.

Areas of standing dead trees (burnt or diseased) are captured as wooded areas. Areas of fallen dead trees are captured as non-wooded areas.

Wooded areas that meet the above requirements are shown in lava beds.

Nurseries, orchards and vineyards are not captures as wooded areas. When they fall within or beside a wooded area they are treated as sepatate polygons.

The intent is to show all wooded areas that are greater than 1 hectare in size and more than 60% crown closure. Treed areas that satisfy the above criteria are considered significant land cover and must be shown even within built up areas.

When pit and orchard lines are coincident, the pit is compiled as the primary feature and the orchard as a secondary construction feature.

- DUPLICATED LINES USED TO CLOSE POLYGONAL FEATURES (TYPE IS 12 OR 13)
- NODE
- DATA POINT

GREEN

WOODED AREA

ORCHARD
(GREEN)

LAKE

WOODED AREA TYPE
IS LINE CODE

RIVER / STREAM
(BLUE)

THIS LINE IS CODED RIVER & WOODED AREA
WOODED AREA TYPE IS LINE CODE

CLEARING
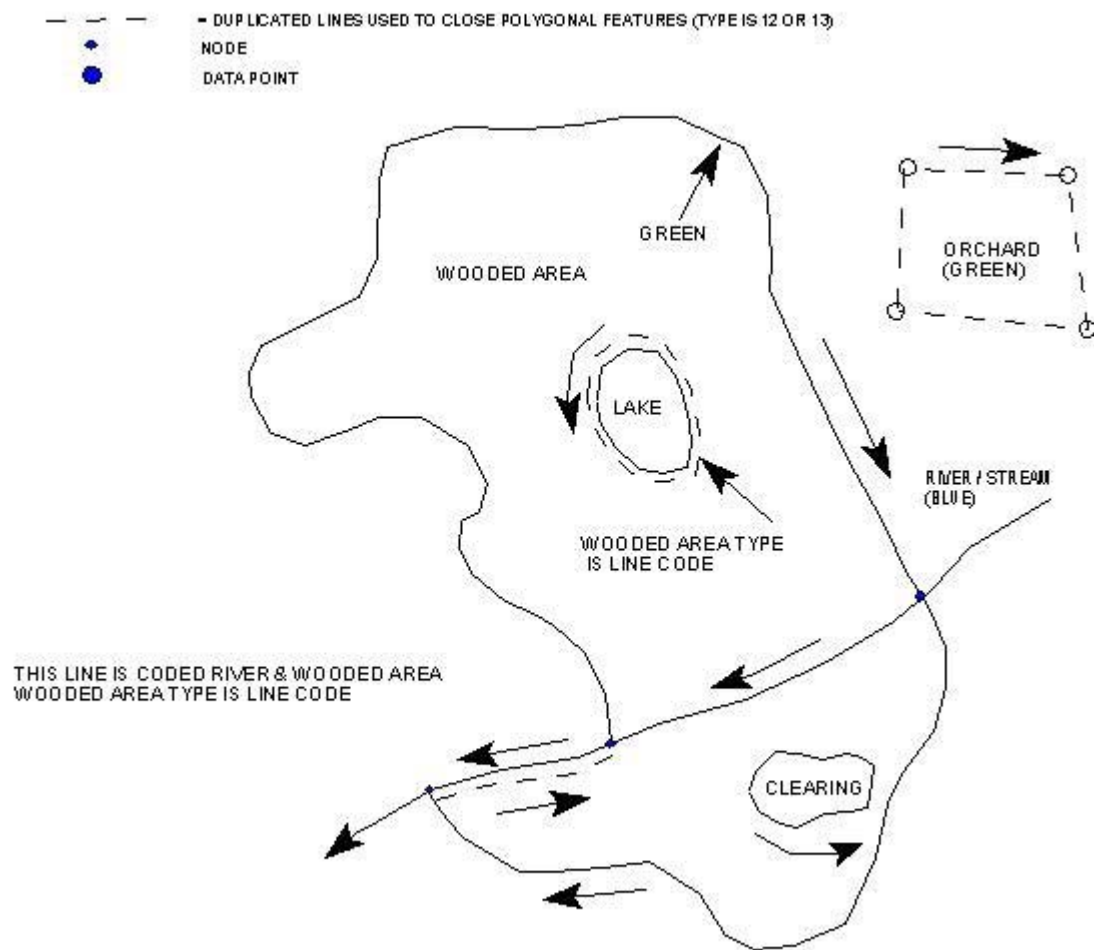
Figure II.2.3
Sample Diagram Illustrating Digitizing Conventions for Land Cover and Related Features.

2.3.5   Remarks - Landmark and Related Features

All buildings with one side greater than 30m or an area larger than 900 square metres shall be captured to scale using the right hand rule. Buildings less than 900 square metres in area shall be symbolized and will be oriented to their true ground position. Building dimensions shall be determined by the outline of their roofs, including attached garages, and multilevel parking.

Only major transmission lines shall be captured. This feature shall be captured as a set of connecting points, captured at individual towers, if visible. Transmission towers will not be plotted at representational stage. Height of towers will be recorded as an attribute if they are over 30 metres and can be measured.

Area outlines shall be captured as a set of connecting points along the perimeter of the feature.

All area features must be closed explicitly with right hand rule.

The duplicate lines generated by closing features must be identical for processing MOEP format data. Only the highest in the representational display hierarchy will be coded as visible, all other duplicate lines will be coded as invisible (in the MOEP transfer format use the constructions feature types 12 and 13).

Area features need not be closed at map sheet boundaries, but where a feature meets a sheet edge, the node describing the end of that feature on the boundary must be numerically identical to the starting point of that feature on the adjoining sheet. This rule will apply to all features.

Non-permanent features such as lumber, cranes, etc. will not be shown in areas identified by an area outline.

Schools, churches, hospitals and refinery buildings that are obvious landmark features shall be captured, even if they are within an area outline or built-up area.

An area will be designated as built-up if it consists of an area approximately equal to 10 full city blocks, or 25 hectares.

(g)   Homes in a Trailer Park will be captured at Pos stage but only an approximate number will be shown in the Rep file. When Trailer Parks are part of a built-up area the homes will not be captured.
Use the pier/wharf classification with the generic text "Sea Plane Base" to capture seaplane bases.

The hierarchy of coincident designated areas will be alphabetic as listed in the specification.

Abandoned open pit mines should be captured using the abandoned pit feature code. DEM points should be collected in this area and contours should be shown.

For pipelines that use bridges to cross rivers or gullies, stop the pipeline and join to the bridge, start the pipeline again at the end of the bridge. Do not duplicate the bridge for the pipeline. The bridge becomes part of the pipeline network.

Fences are captured on the ground and are noded either 2D or 3D with crossing features. Fences are captured similar to transmission lines, i.e., if the fence is straight, a point at the beginning and a point at the end is sufficient. Fences are only captured when they are clearly visible. Fences along roads may not be captured.

Placer mines are captured using the same feature code as Mine."OpenPit". Placer mine text is placed in the toponymy overlay as referenced by the 1:50 000 map sheet.

Borrow pits are coded as Pit"Abandoned". Note: borrow pits may contain lakes.

Pipelines are captured as continuous features across a map sheet. Pipelines are coded as construction when they are coincident with other features such as roads and streams. Pipelines are coded as primary when they are coincident with wooded areas or other designated areas. Pipelines may not be continuous when crossing areas such as built-up areas where exact position is determined.

Residential complexes greater than 900 square metres in area that are 15 metres or less in height (e.g., town house complexes. Row housing, small apartment complexes) are not considered significant landmark features. Consequently, they need not be captured within built-up areas. However, residential complexes greater than 900 square metres in area that are more than 15 metres height are to be considered significant landmark features and so must be captured within built-up areas.

The intent is to show all wooded areas that are greater than 1 hectare in size and more than 60% crown closure. Treed areas that satisfy the above criteria are considered significant land cover features and must be shown even within built-up areas.

When pit and orchard lines are coincident, the pit is compiled as the primary feature and the orchard as a secondary construction feature.
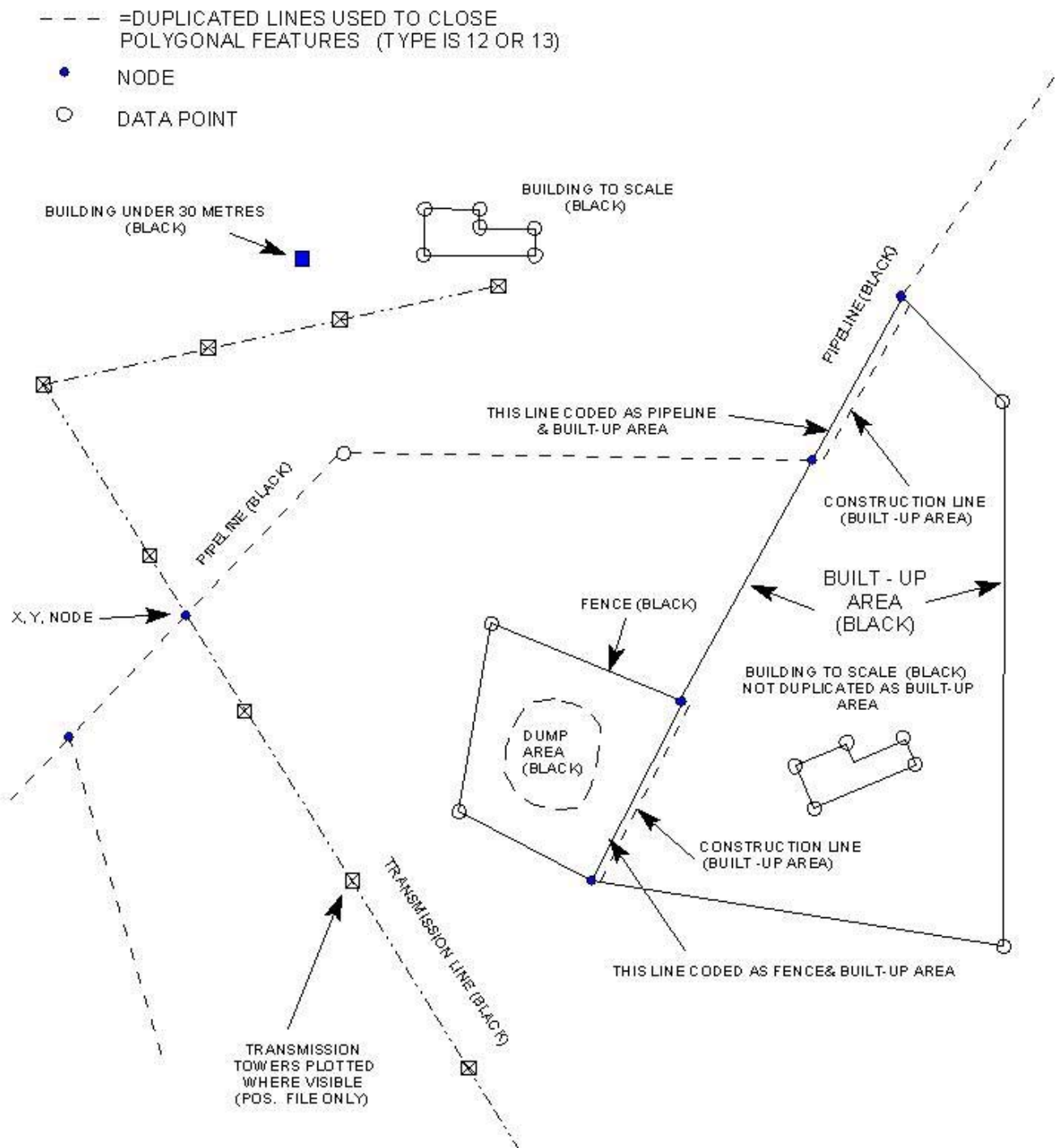
Figure II.2.4
Sample Diagram Illustrating Digitizing Conventions for Landmark and Related Features

2.3.6   Remarks - Text Features

Text information shall be positioned to ensure clarity of feature presentation on the final cartographic separations and to enhance clarity of feature recognition.

Text information shall be positioned in such a way that it does not conflict with any other map features.

Generic names only will be added at the data capture stage. All text used to clarify the verification plots will be placed in the non-positional file and will not appear in the positional file (i.e. Scree, Glacier).

Additional information concerning Toponymy is provided in the appendices.

2.3.7 Remarks - Transportation and Related Features

The intention is to show all roads, access roads and railways.

These features shall be captured as a single line defining the apparent centreline of the feature and will reflect all horizontal and vertical deflections required to meet the horizontal and vertical accuracy specifications.

All 6 lane roads and divided roads separated by more than 50 metres (centreline to centreline) shall be captured as single lines defining the apparent centre line of each roadway. Thus the two roadways will be digitized separately.

Bridges, trestles, tunnels and snowsheds will be captured to scale, regardless of size, as single lines defining the apparent centreline. The width of bridges and trestles will be recorded in the 05 record for that feature. Do not duplicate these features as roads or railways.

The line which defines a cut or fill is not a closed polygon. This line is captured on the high side of the feature and must follow the right hand rule. The digitizing direction of the line is important because the ticks that are patterned at the representational plot stage are on the right side of the line and must point to the low side of the feature.

Cutlines are not duplicated when they are coincident with roads or streams.

When a cutline continues through a wooded area into anon-wooded area it is shown as a continuous feature when it is clearly visible in the non-wooded area and cannot be identified as another feature.

The Prince Rupert to Port Hardy and the Prince Rupert to Skagway ferry routes are not captured.

Driveways and lanes that are over 400m in length are captured as either a gravel road or a rough road.

When roads occur on dykes, capture the dyke as the primary feature and the road as the secondary construction feature.

One lane on / off ramps on major highways and freeways are coded as Road."Paved"."1"."Undivided" DA25100180.

Where major highways are divided and opposing lanes of traffic are separated by less than 50 metres but are at different elevations, the opposing lanes of traffic must be captured as separate features to properly capture the difference in elevation. (e.g., for a 4 lane divided highway capture as two 2 lane one way road features).
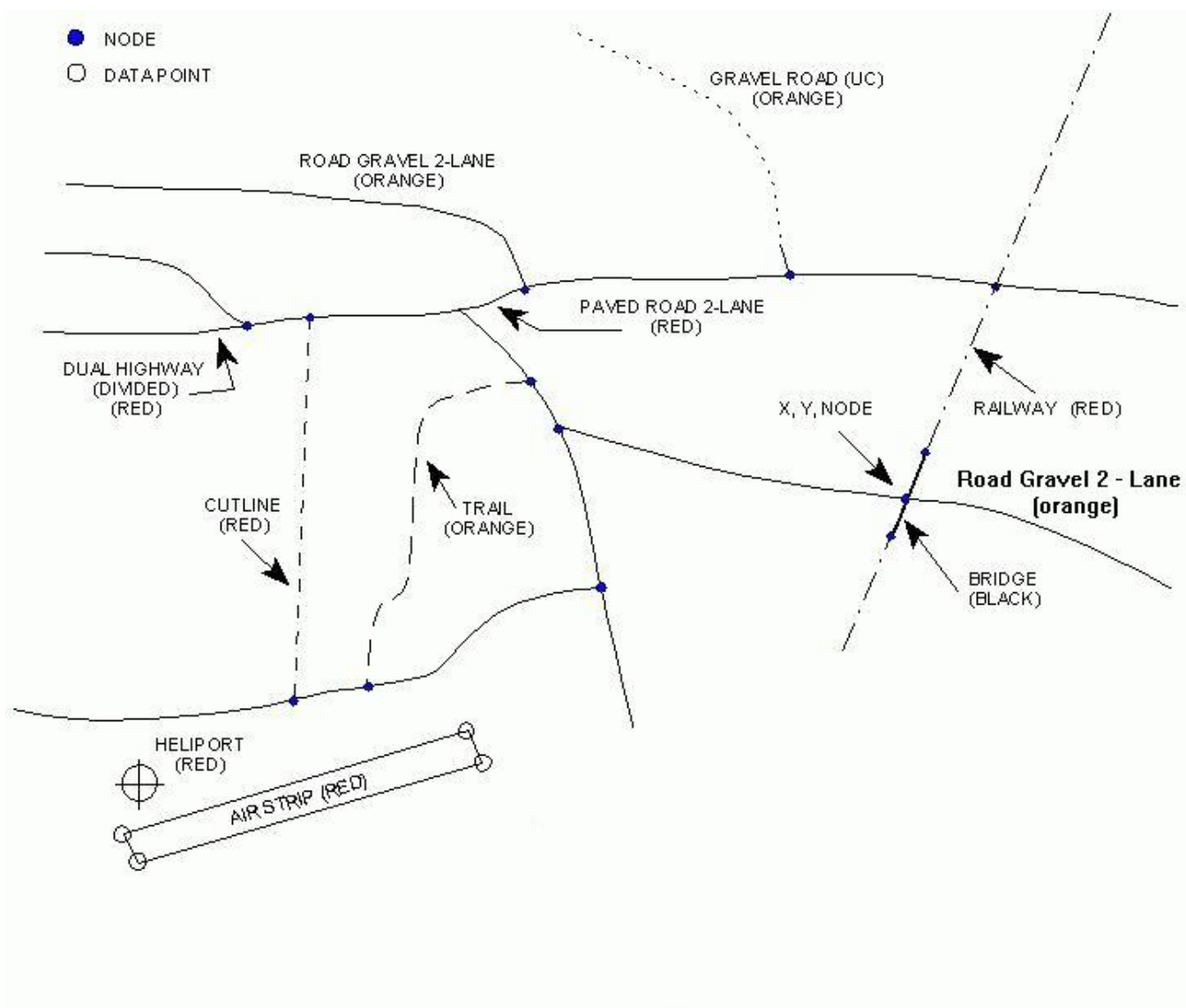
Figure II.2.5
Sample Diagram Illustrating Digitizing Conventions for Transportation and Related Features

2.4 - Detailed Specifications
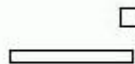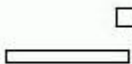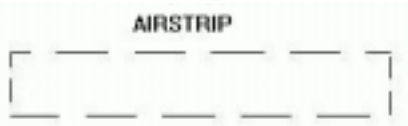
A
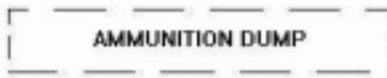
Subclass: **AerialCableway**	CQ00300000	02
Definition: A transportation device for freight or passangers consisting of a carrier and a cable supported by towers.		
Positional Verification	Cartographic Representation	
0.25mm width line	0.35mm width solid line	
	CABLEWAY	
plot colour BLACK	MOEP font 31 UPPER CASE text	
Remarks: • Captured to scale in the positional file. • Identification coded as Text.type"Transportation" in the non-positional file.		
DEM N		

Subclass: Airfield	AQ00450000	02

Definition: A tract of land set apart for the arrival, departure, movement and servicing of aircraft. Airfields usually have defined legal limits and services offered are substantially less than at an airport.

Positional Verification	Cartographic Representation
0.25mm width solid line	0.20mm width solid line 3.0mm length dash 1.5mm between dashes AIRFIELD
plot colour RED	MOEP font 31 UPPER CASE text

Remarks:

- Captured to scale in the positional file.
- Identification coded as Text.type"Transportation" in the non-positional file.

DEM N

Subclass: Airfield/Airstrip(Abandoned)	AQ00550001	02

Definition: A tract of land set apart for the arrival, departure, movement and servicing of aircraft. Airfields usually have defined legal limits. Airstrips are single runways, usually of gravel construction. This feature is no longer maintained for aviation purposes.

Positional Verification	Cartographic Representation
0.25mm width line	0.20mm width solid line 3.0mm length dash 1.5mm between dashes AIRFIELD
plot colour BLACK	MOEP font 31 UPPER CASE text

Remarks:

- Captured to scale in the positional file.
- Identification coded as Text.type"Transportation" in the non-positional file.

DEM N

Subclass: Airport	AQ00500000	02
Definition: A tract of land set apart for the arrival, departure, movement and servicing of aircraft: licensed by Transport Canada, having paved and lighted runways, and operationg a control tower.		
Positional Verification	Cartographic Representation	
0.25mm width line plot colour RED	0.25mm width line	
Remarks: • Capture to scale in the positional file.		
DEM N		
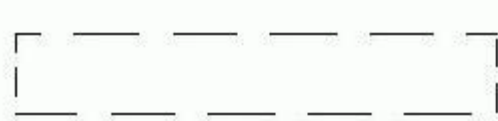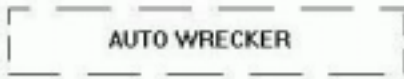
Subclass: Airstrip	AQ00550000	02
Definition: A tract of land, consisting of a single runway, usually of gravel construction, set apart for the arrival, departure and movement of aircraft.		
Positional Verification	Cartographic Representation	
0.25mm width line plot colour RED	0.20mm width solid line 3.0mm length dash 1.5mm between dashes AIRSTRIP MOEP font 31 UPPER CASE text	
Remarks: • Captured to scale in the positional file. • Identification coded as Text.type"Landmark" in the non-positional file.		
DEM N		

Subclass: AmmunitionDump	AJ00650000	02/03

Definition: A military installation used for the storage of explosives and other volatile materials, normally fenced and having a legal boundary.

Positional Verification	Cartographic Representation
0.20mm width solid line	0.20mm width solid line
3.0mm length dash	3.0mm length dash
1.5mm between dashes	1.5mm between dashes
	AMMUNITION DUMP
plot colour BLACK	MOEP font 31 UPPER CASE text

Remarks:

- 1 hectare minimum
- Capture to scale in the positional file
- Identification coded as Text.type"Landmark" in the non-positional file

DEM N
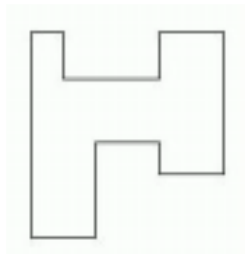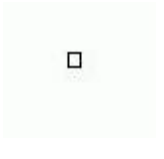
Subclass: AreaofExclusion	HC900000000	02/03

Definition: An area outline in the DEM within which contours will not be interpolated.

Positional Verification	Cartographic Representation
approx. 0.5mm dots	
centre to centre - 1.5mm	NOT SHOWN
plot colour RED	

Remarks:

- Area exempt from contour interpolation
- Capture to scale in the positional file.
- Not included in the representational file.

DEM Y

Subclass: AreaofIndefiniteContours	HC90000100	02/03
Definition: An area in the DEM which is outlined in such a manner that contours which are interpolated within its boundary will be depicted as indefinite.		

Positional Verification	Cartographic Representation
approx. 0.5mm dots centre to centre - 1.5mm plot colour RED	NOT SHOWN

Remarks:
• Captured in the DEM file. • Not included in the representational file.

DEM Y

Subclass: Arrowhead	GE90200110	01
Definition: Hydrographic directional symbol		

Positional Verification	Cartographic Representation
0.25mm width solid line each leg of arrowhead 1.5mm in length 45º Angle > plot colour BLUE	0.25mm width solid line each leg of arrowhead 1.5mm in length 45º Angle >

Remarks:
• For clarification, the arrowhead is to be placed where split streams occur (on the lesser stream). • Although depicted on the varification plot this feature is not included in the positional data file • Capture in the non-positional file

DEM N

Subclass: AutoWrecker	AB33850110	02/03
Definition: An area set aside for the disposal of recycling of derelict automobiles.		

Positional Verification	Cartographic Representation
0.25mm width line	0.25mm width line
3.9mm dash	3.9mm dash
1.5mm between dashes	1.5mm between dashes
	AUTO WRECKER
plot colour BLACK	MOEP font 31 UPPER CASE text

Remarks:

- 1 hectare minimum
- Capture to scale in the positionnal file
- Identification coded as Text.type"Landmark" in the non-positional file

DEM N

B

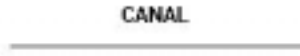| Subclass: Barn	(to scale)		BA01540000	02
(Symbolized)			BA90000000	01
Definition: A large utility building on a fearm complex.				
Positional Verification			Cartographic Representation	
To Scale	Symbolized	To Scale	Symbolized	
0.25mm width solid line	0.25mm width solid line	0.25mm width solid line	0.25mm width solid line	
	0.8mm open square		0.8mm filled square	
plot colour BLACK				

Remarks:

• Capture to scale in the positional file using the right hand rule when one side is > 30m. or the total area is > 900 sq. m.
• Capture as a point in the positional file oriented to the true ground position when total area is < 900 sq. m. with no sides > 30m.
• Determine building dimensions by the outline of the roofs, including attached garages and multilevel parking.

DEM N

Subclass: Beacon	CQ01850000	01
Definition: A non-lighted structure erected near a shore to guide mariners.		
Positional Verification	Cartographic Representation	
0.20mm width line 1.0mm radius open circle 1.5mm cross plot colour BLACK	0.25mm width line 1.0mm radius circle lower left quadrant filled upper right quadrant filled	
Remarks: • Capture in the positional file.		
DEM N		

Subclass: BeaverDam	GA08450110	02/03
Definition: A dam of logs, branches, twigs and mud constructed by beavers.		
Positional Verification	Cartographic Representation	
0.25mm width solid line plot colour BLACK	0.25mm width solid line 0.20mm width cross line 1.0mm cross MOEP font 31 UPPER CASE text	
Remarks: • Capture to scale in the positional file at the lake level • Minimum length 50 metres • Line is upstream • Low side right side		
DEM Y		
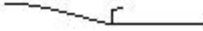
Subclass: BreakLine.type"Hydrographic"	HA90200130	02/03
Definition: Natural hydrographic breaklines such as rivers		

Positional Verification	Cartographic Representation
0.25mm width solid line _____ plot colour BLUE	NOT SHOWN
Remarks: • Capture in the DEM data file • Not included in the representational file	
DEM Y	
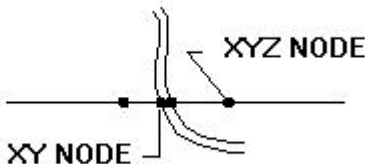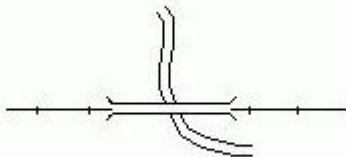
Subclass: BreakLine.type"Hypsographic"	HA90200120	02/03
Definition: Natural non-hydrographic breaklines such as cliffs		

Positional Verification	Cartographic Representation
0.25mm width solid line _____ plot colour PURPLE	NOT SHOWN
Remarks: • Capture in the DEM data file • Not included in the representational file	
DEM Y	
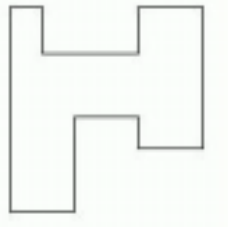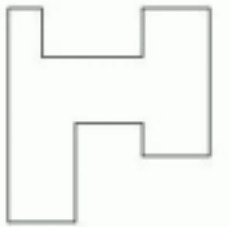
Subclass: BreakLine.type"Round"	HA90200110	02/03
Definition: A rounded breakline causes a smoother but still well defined deflection to the interpolated contour		

Positional Verification	Cartographic Representation
0.25mm width solid line ——————— plot colour BROWN	NOT SHOWN

Remarks:
• Captured in the DEM data file. • Not included in the representational file

DEM Y
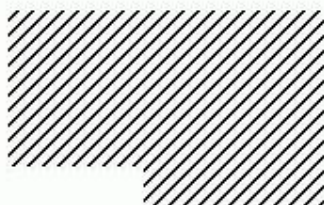
Subclass: BreakLine.type"Sharp"	HA90200000	02/03
Definition: A sharp breakline causes a definite pointed character to the interpolated contour		

Positional Verification	Cartographic Representation
0.25mm width solid line ——————— plot colour BLACK	NOT SHOWN

Remarks:
• Captured in the DEM data file. • Not included in the representational file

DEM Y
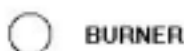
Subclass: BreakLine.type"Transportation&OtherManMade"	HA90200140	02/03

*Definition:*Man madebreaklines in the topography such as roads and railways*.*

Positional Verification	Cartographic Representation
0.25mm width solid line plot colour ORANGE	NOT SHOWN

Remarks:

- Captured in the DEM data file.
- Not included in the representational file

DEM Y

Subclass: Breakwater (to scale)		GE03050110	02/03
(symbolized)		GE03050120	01

Definition: A structure for breaking the force of waves to protect a beach, harbour, or other waterfront facility

Positional Verification		Cartographic Representation	
To Scale	Symbolized	To Scale	Symbolized
0.25mm width line	0.25mm width solid line 2.5mm length line	0.35mm width solid line	0.35mm width solid line 2.5mm length line
plot colour BROWN	130º angle 1.5mm length line plot colour BROWN		130º angle 1.5mm length line

Remarks:

- 50m. length minimum
- Capture as closed polygon if over 20m. width
- Capture in the positional file

DEM N

Subclass: Bridge	DD93250000	03
Definition: A structure erected along a travelled route to span a depression or obstacle		

Positional Verification	Cartographic Representation
0.25mm width solid line plot colour BLACK	BRIDGE DECK 1.6mm minimum width 0.8mm wide 0.35mm width solid line LINE TERMINATOR 0.7mm length 0.35mm line width 45º angle

Remarks:

- Capture to scale in the positional file as a single line defining the apparent centre line
- More than 40m. in length plot to scale
- Capture width as type 05
- Do not duplicate this feature as a road or railway

DEM N
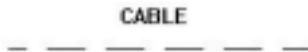
Subclass: Building	(to scale)	BR90000000	02
(symbolized)		BR90000110	01

Definition: A generic term for any permanent walled and roofed construction

Positional Verification		Cartographic Representation	
TO SCALE	SYMBOLIZED	TO SCALE	SYMBOLIZED
0.25mm width line	0.25mm width line	0.25mm width solid line	0.25mm width line
	0.8mm open square		0.8mm filled square
	□		■
plot colour BLACK MOEP font 31 UPPER CASE text		MOEP font 31 UPPER CASE text	

Remarks:

• Capture to scale in the positional file using the right hand rule when one side is > 30m. or the total area is > 900 sq. m.

• Capture as a point in the positional file oriented to the true ground position when total area is < 900 sq. m. with no sides > 30m.

• Determine building dimensions by the outline of the roofs, including attached garages and multilevel parking.

DEM N

Subclass: BuiltupArea	AR03400000	03

Definition: An area in which the buildings are so densely situated that for cartographic clarity a tint or hatching is used to indicate the extent of the area

Positional Verification	Cartographic Representation
0.25mm width solid line	0.20mm width solid line 1.5mm pattern delta 45⁰ angle
plot colour BLACK	

Remarks:

- Built-up areas are to be coded as primary feature over designated areas
- 25 hectare minimum or 10 normal city blocks
- Capture to scale in the positional file

DEM N

Subclass: Burner	CG03550000	01

Definition: A permanent structure used for the disposal of waste wood products by burning

Positional Verification	Cartographic Representation
0.25mm width solid line 1.0mm radius open circle	0.25mm width solid line 1.0mm radius open circle
◯ BURNER	◯ BURNER
plot colour BLACK MOEP font 31 UPPER CASE text	MOEP font 31 UPPER CASE text

Remarks:

- Capture as a point symbol in the positional file
- Identification coded as Text.type"Landmark" in the non-positional file

DEM N
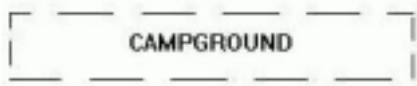
C

Subclass: Cable		EA03800000	02
Definition: An insulated wire used for conducting an electrical current, e.g., television, telephone, or submarine telegraph or telephone			
Positional Verification	Cartographic Representation		
0.25mm width line	0.20mm width solid line		
3.0mm dash	5.0mm dash		
1.5mm between dashes	1.0mm between dashes		
	CABLE		
plot colour BLACK	MOEP font 31 UPPER CASE text		
Remarks: • 100m. minimum • Captured to scale in the positional file • Identification coded as Text.type"Landmark" in the non-positional file			
DEM N			
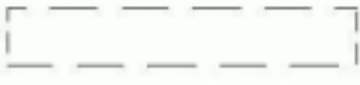
Subclass: CadastralPoint.status"PermanentlyMarked"	FD90500000	01

Definition: A marked point, surveyed or derived, of known geographic coordinates.

Positional Verification	Cartographic Representation
0.25mm width solid line	0.35mm width solid line
	2.0mm line length each side of diamond
	0.25mm diameter dot
plot colour BLACK	MOEP font 31 UPPER CASE text

Remarks:

- Placed in the non-positional file

DEM N

Subclass: CampgroundCampsite	AL03900000	02/03

Definition: A parcel or tract of land developed for tents and/or trailers to serve as temporary residences for the public.

Positional Verification	Cartographic Representation
3.0mm dash 1.5mm between dashes	3.0mm dash 1.5mm between dashes
	CAMPGROUND
plot colour BLACK	MOEP font 31 UPPER CASE text

Remarks:

- 1 hectare minimum
- Capture to scale in the opsitional file
- Identification coded as Text.type "Landmark" in the non-positional file

DEM N
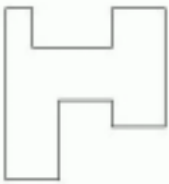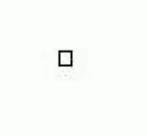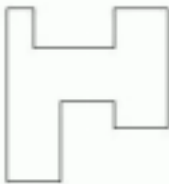
Subclass: Canal		GA03950000	02/03
Definition: An artificial inland watercourse, larger than a ditch, used: a) to serve as a navigable waterway, b) to serve as a water supply in arid areas.			
Positional Verification	Cartographic Representation		
0.25mm width solid line	TO SCALE 0.25mm width solid line 0.5mm between lines CANAL MOEP font 31 UPPER CASE text		
Remarks: • Capture as centred single line when 20m. or less • Capture to scale in the positional file • Identification coded as Text.type"Hydrographic" in the non-positional file			
DEM Y			
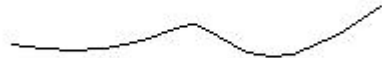
Subclass: Canal.type"LeftBank"	GA90001110	02/03

Definition: an artificial inland watercourse, larger than a ditch, used: a) to serve as a navigable waterway, b) to serve as a water supply in arid areas. Flowing in a downhill direction the water exists to the right of the left bank.

Positional Verification	Cartographic Representation
0.25mm width solid line plot colour BLUE	0.25mm width solid line

Remarks:

- Greater than 20m. width.
- Capture to scale in the positional file

DEM Y

Subclass: Canal.type"RightBank"	GA90001120	02/03

Definition: an artificial inland watercourse, larger than a ditch, used: a) to serve as a navigable waterway, b) to serve as a water supply in arid areas. Flowing in a downhill direction the water exists to the left of the right bank.

Positional Verification	Cartographic Representation
0.25mm width solid line plot colour BLUE	0.25mm width solid line

Remarks:

- Greater than 20m. width.
- Capture to scale in the positional file

DEM N

Subclass: Cemetary	AM04560000	02/03
Definition: A burial place or burial ground		
Positional Verification	Cartographic Representation	
0.25mm width line	0.35mm width solid line	
plot colour BLACK	MOEP font 31 UPPER CASE text	
Remarks: • 1 hectare minimum • Capture to scale in the opsitional file • Identification coded as Text.type "Landmark" in the non-positional file		
DEM N		

Subclass: Church	(to scale)		BM05300000	02
(symbolized)			BM91100000	01
Definition: Church, Mosque, Synagogue, Temple - A building of worship.				

Positional Verification		Cartographic Representation	
TO SCALE	SYMBOLIZED	TO SCALE	SYMBOLIZED
0.25mm width solid line	0.25mm width solid line	0.25mm width solid line	0.25mm width solid line
	0.8mm open square		0.8mm filled square
plot colour BLACK MOEP font 31 UPPER CASE text		MOEP font 31 UPPER CASE text	

Remarks:

• Capture to scale in the positional file using the right hand rule when one side is > 30m. or the total area is > 900 sq. m.

• Capture as a point in the positional file oriented to the true ground position when total area is < 900 sq. m. with no sides > 30m.

• Determine building dimensions by the outline of the roofs, including attached garages and multilevel parking. Place building type identification as generic text, size determined by building size.

DEM N
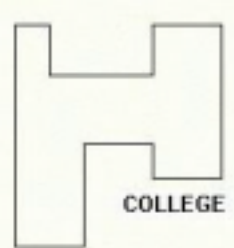
Subclass: CityHall	(to scale)		BF05550000	02
(symbolized)			BF91200000	01
Definition: The chief administrative building of a city.				

Positional Verification		Cartographic Representation	
TO SCALE	SYMBOLIZED	TO SCALE	SYMBOLIZED
0.25mm width solid line	0.25mm width solid line 0.8mm open square	0.25mm width solid line	0.25mm width solid line 0.8mm filled square
plot colour BLACK			

Remarks:

• Capture to scale in the positional file using the right hand rule when one side is > 30m. or the total area is > 900 sq. m.

• Capture as a point in the positional file oriented to the true ground position when total area is < 900 sq. m. with no sides > 30m.

• Determine building dimensions by the outline of the roofs, including attached garages and multilevel parking.

DEM N

Subclass: Cliff/Scarp	HB05650000	03
Definition: 1) A cliff is a perpindicular or nearly perpindicular rock face 2) A scarp is a line of cliffs		

Positional Verification	Cartographic Representation
0.25mm width solid line plot colour PURPLE	0.25mm width solid line variable tick length 1.5mm between ticks CLIFF / SCARP MOEP font 31 UPPER CASE text

Remarks:

- Capture only sterio dead zones due to vertical relief
- Capture to scale in the positional file
- Identification coded as Text.type"Landform" in the non-positional file

DEM Y

Subclass: Coastline Geometric representation Qualifier: Definite	GG05800000	03
Definition: The shoreline of an ocean at high water mark.		

Positional Verification	Cartographic Representation
0.25mm width solid line plot colour PURPLE	0.35mm width solid line

Remarks:

- Capture in the positional file with land to the right
- Tidal high water mark that is visible on the aerial photography
- The apparent high water mark of body of water is where the presence and action of the water are so common odn usual as to mark on the soil of the bed of the body of water a character distinct from that of its banks, in vegetation and in the nature of the soil itself.

DEM Y

Subclass: Coastline Geometric representation Qualifier: Indefinite	GG05800130	03

Definition: The shoreline of an ocean at high water mark.		

Positional Verification	Cartographic Representation
0.25mm width solid line	0.35mm width solid line
3.0mm dash	20.mm dash
1.5mm between dashes	1.0mm between dashes
plot colour PURPLE	

Remarks:

- Capture in the positional file with land to the right
- Tidal high water mark that is visible on the aerial photography
- The apparent high water mark of body of water is where the presence and action of the water are so common odn usual as to mark on the soil of the bed of the body of water a character distinct from that of its banks, in vegetation and in the nature of the soil itself.

DEM Y
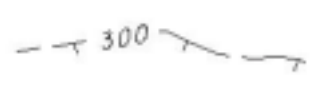
Subclass: College	(to scale)	BE05900000		02
(symbolized)		BE90800000		03
Definition: An institution for post-secondary instruction in a professional, vocational, or technical field.				

Positional Verification			Cartographic Representation	
TO SCALE	SYMBOLIZED	TO SCALE	SYMBOLIZED	
0.25mm width solid line	0.25mm width solid line	0.25mm width solid line	0.25mm width solid line	
	0.8mm open square		0.8mm filled square	
plot colour BLACK MOEP font 31 UPPER CASE text		MOEP font 31 UPPER CASE text		

Remarks:

- Capture to scale in the positional file using the right hand rule when one side is > 30m. or the total area is > 900 sq. m.
- Capture as a point in the positional file oriented to the true ground position when total area is < 900 sq. m. with no sides > 30m.
- Determine building dimensions by the outline of the roofs, including attached garages and multilevel parking. Place building type identification as Text.type"Landmark", size determined by building size.

DEM N

Subclass: CommunicationsBuilding (symbolized)	BC29250000	01
Definition: An enclosure that houses electronic equipment ised in tetecomminications.		

Positional Verification	Cartographic Representation
SYMBOLIZED 0.25mm width solid line 0.8mm open square □ plot colour BLACK	SYMBOLIZED 0.25mm width solid line 0.8mm filled square ■

Remarks: Capture as a point in the positional file when the total area is less than 900 sq. m. with no sides greater than 30m.

DEM N

Subclass: Contour.type"Index"	HA90000000	03
Definition: A line on a map or chart connecting an infinite number of points having the same elevation. This contour line is accentuated by a heavier line weight to distinguish it from intermediate contours.		

Positional Verification	Cartographic Representation
0.25mm width line plot colour BLACK	0.35mm width solid line ~ 300 MOEP font 32 (sloped) text

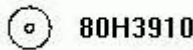| Remarks:

• Generated in the raw contour file
• Identification coded as Text.type"HypsographicContourNumbers" in the representational file |
|---|

DEM N

Subclass: Contour.type"Index".option:Depression"	HA90000130	03

Definition: A line on a map or chart connecting an infinite number of points having the same elevation. This contour line is accentuated by a heavier line weight to distinguish it from intermediate contours. This is a closed contour around a depression from which ther is no surface drainage*.

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 2.0mmdash 1.0mm between dashes	0.25mm width solid line 1.0mm tick 10.0mm between ticks
plot colour BLACK	MOEP font 32 (sloped) text

Remarks:

Minimum two ticks
• Depression contours are to be shown in both the raw contour and representational files
• Depressions falling on a sheet edge will continue to be shown as depressions if the DEM which extends beyond the map sheet boundary can confirm this.
• Identification coded as Text.type"HypsographicContourNumbers" in the representational file.

DEM N

Subclass: Contour.type"Index".option:"DepressionIndefinite"	HA90000140	03

Definition: A line on a map or chart connecting an infinite number of points having the same elevation. This contour line is accentuated by a heavier line weight to distinguish it from intermediate contours.

Positional Verification	Cartographic Representation
0.25mm width line 1.0mm dash 1.0mm between dashes — 300	0.25mm width solid line 1.0mm tick 10.0mm between ticks 1.0mm between dashes — 300
plot colour BLACK	MOEP font 32 (sloped) text

Remarks:

- Minimum two ticks
- Depression contours are to be shown in both the raw contour and representational files
- Depressions falling on a sheet edge will continue to be shown as depressions if the DEM which extends beyond the map sheet boundary can confirm this.
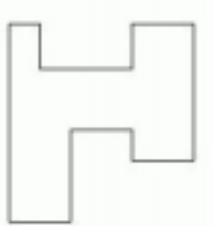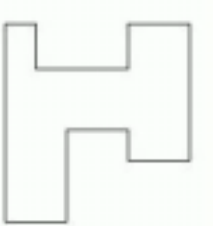- Identification coded as Text.type"HypsographicContourNumbers" in the representational file.

DEM N

Subclass: Contour.type"Index".option:"Indefinite"	HA90000110	03

Definition: A line on a map or chart connecting an infinite number of points having the same elevation. This contour line is accentuated by a heavier line weight to distinguish it from intermediate contours.

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes plot colour BLACK	0.25mm width line 20.0mm dash 10.0mm between dashes — 300 MOEP font 32 (sloped) text

Remarks:

• Generated in the raw contour file
• Identification coded as Text.type"HypsographicContourNumbers" in the representational file

DEM N

Subclass: Contour.type"Intermediate"	HA90001000	03

Definition: A line on a map or chart connecting an infinite number of points having the same elevation. This contour is drawn between index contours.

Positional Verification	Cartographic Representation
0.25mm width solid line plot colour BROWN	0.20mm width solid line

Remarks:

• Generated in the raw contour file

DEM N

Subclass: Contour.type"Intermediate".option:"Depression"	HA90001130	03

Definition: A line on a map or chart connecting an infinite number of points having the same elevation. This contour is drawn between index contours.

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 2.0mm dash 1.0mm between dashes	0.20mm width solid line 1.0mm tick 10.0mm between ticks
plot colour BROWN	

Remarks:

- Minimum two ticks
- Depression contours are to be shown in both the raw contour and representational files
- Depressions falling on a sheet edge will continue to be shown as depressions if the DEM which extends beyond the map sheet boundary can confirm this.

DEM N

Subclass: Contour.type"Intermediate".option:"DepressionIndefinite"	HA90001140	03

Definition: A line on a map or chart connecting an infinite number of points having the same elevation. This contour is drawn between index contours.

Positional Verification	Cartographic Representation
0.25mm width line 1.0mm dash 1.0mm between dashes	0.20mm width solid line 1.0mm tick 10.0mm between ticks 20.0mm dash
plot colour BROWN	1.0mm between dashes

Remarks:

- Minimum two ticks
- Depression contours are to be shown in both the raw contour and representational files
- Depressions falling on a sheet edge will continue to be shown as depressions if the DEM which extends beyond the map sheet boundary can confirm this.

DEM N

Subclass: Contour.type"Intermediate".option:"Indefinite"	HA90001110	03

Definition: A line on a map or chart connecting an infinite number of points having the same elevation. This contour is drawn between index contours.

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes plot colour BROWN	0.20mm width solid line 20.0mm between ticks 1.0mm between dashes

Remarks:

- Generated in the raw contour file

DEM N

Subclass: ControlPoint.type"Horizontal".status"PerminanentlyMarked"	FB18450000	01

Definition: A surveyed and marked point of known latitudes and longitude. (may include elevation)

Positional Verification	Cartographic Representation
0.25mm width line Triangle 4.0mm on each side 0.5mm dot in centre 97H2710 plot colour BLACK 1.8mm MOEP font 31 UPPER CASE text	0.25mm width line Triangle 2.0mm on each side 0.5mm dot in centre 79H2710 MOEP font 31 UPPER CASE text

Remarks:

- Capture in the positional file
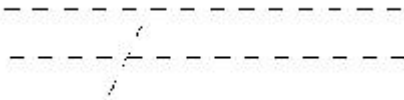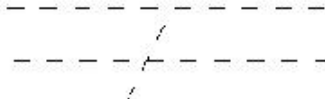- Identification coded as Text.type"AerialTriangulation" in the non-positional file

DEM Y

Subclass: ControlPoint.type"Vertical".status"PerminanentlyMarked"	FB18650000	01

Definition: A surveyed and marked point of known elevation.		

Positional Verification	Cartographic Representation
0.25mm width line 2.5mm diameter open circle 0.5mm dot 80H3910 plot colour BLACK 1.5mm MOEP font 31 text	0.25mm width line 2.5mm diameter open circle 0.5mm dot 80H3910 MOEP font 31 text

Remarks:
• Capture in the positional file • Identification coded as Text.type"AerialTriangulation" in the non-positional file

DEM Y

Subclass:Conveyor	CQ06400000	02/03

Definition: A mechanical apparatus used to carry materials by means of a moving belt.		

Positional Verification	Cartographic Representation
0.25mm width solidline plot colour BLACK	0.35mm width solid line Conveyor MOEP font 31 UPPER CASE text

Remarks:
• Capture to scale in the positional file • Identification coded as Text.type"Landmark" in the non-positional file

DEM N

Subclass: Courthouse	(to scale)	BF07550000	02
(symbolized)		BF91300000	01
Definition: A building in which courts of law are regularly convened.			

Positional Verification		Cartographic Representation	
TO SCALE	SYMBOLIZED	TO SCALE	SYMBOLIZED
0.25mm width solid line	0.25mm width solid line	0.25mm width solid line	0.25mm width solid line
	0.8mm open square		0.8mm filled square
	□		■
plot colour BLACK			

Remarks:

• Capture to scale in the positional file using the right hand rule when any one side is >30m or the total area is >900 sq. m.

• Capture as a point in the positional file oriented to the true ground position when total area is<900 sq. m. with no sides >30m

• Determine building dimension by the outline of their roofs, including attached garages and multilevel larking.

DEM N

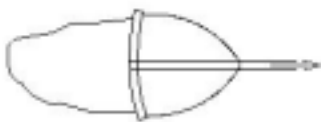| *Subclass:* Crane.type"Permanent"	CG07600000	01
Definition: A fixed mechanical device used to lift heavy objects		
Positional Verification	Cartographic Representation	
0.25mm width line 0.8mm open square □ plot colour BLACK	0.25mm width solid line 0.8mm filled square ■ MOEP font 31 UPPER CASE text	
Remarks: • Capture as a point feature in the positional file		
DEM N		

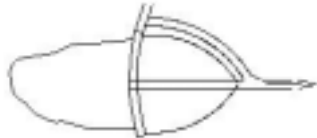| *Subclass:* CustomsOffice (to scale)		BF01850000	02
(symbolized		BF90100000	01
Definition: A structure near or at an international boundary where tracellers are inspected.			
Positional Verification		Cartographic Representation	
TO SCALE 0.25mm width solid line plot colour BLACK	0.25mm width solid line 0.8mm open square □	TO SCALE 0.25mm width solid line MOEP font 31 UPPER CASE text	0.25mm width solid line 0.8mm filled square ■
Remarks: • Capture to scale in the positional file using the right hand rule when any one side is >30m or the total area is >900 sq. m. • Capture as a point in the positional file oriented to the true ground position when total area is<900 sq. m. with no sides >30m • Determine building dimension by the outline of their roofs, including attached garages and multilevel larking.			
DEM N			

Subclass: CutEarthwork	DD08350000	02/03
Definition: A surface excavation made so that a uniform grade can be maintained on a road or railway.		

Positional Verification	Cartographic Representation
0.25mm width solid line plot colour RED	0.20mm width solid line 1.25mm ticks 1.5mm between ticks

Remarks:

- 400m. minimum
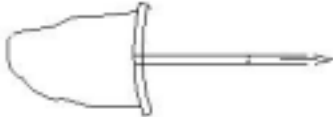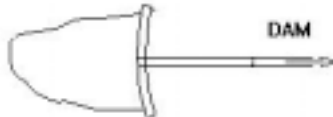- 20m. vertical accuracy
- Capture in the positional file

DEM Y

Subclass: CutLineSeismicLine	JA08400000	02/03
Definition: A line cut through a forest area to facilitate a cadastral or seismic survey or to create a firebreak		

Positional Verification	Cartographic Representation
0.25mm width line 1.0mm dash 1.0mm between dashes plot colour BLACK	0.25mm width solid line 2.0mm dash 1.0mm between dashes

Remarks:

- 400m. minimum
- 20m. vertical accuracy
- Capture in the positional file

DEM N

D

Subclass: Dam	*(symbolized)*	GA98450000	01
Definition: A barrier built across a watercourse or waterbody to control the water flow.			
Positional Verification		Cartographic Representation	
SYMBOLIZED 0.25mm width solid line plot colour BLACK		SYMBOLIZED 0.50mm width solid line 6.0mm line 0.5mm tick MOEP font 31 UPPER CASE text	
Remarks: • 100m. length maximum data point captured at centre of dam in positional file • see Part II 2.3.2 Additional Remarks - Hydrographic and Related Features • Identification coded as Text.type"Hydrographic" in the non-positional file			
DEM N			

Subclass: DamSection"Base"	GA98450100	02/03
Definition: A barrier built across watercourse or waterbody to control water flow. The base is the lower part, bottom, or foundation of the dam.		

Positional Verification	Cartographic Representation
0.25mm width solid line	0.25mm width solid line
	DAM
plot colour BLACK	MOEP font 31 UPPER CASE text

Remarks:

- Major dams only
- Capture dam base when visible
- Capture as closed polygon in the positional file
- Include the coincident lake construction line in the DEM as a primary hydrographic breakline
- see Part II 2.3.2 Additional Remarks - Hydrographic and Related Features
- Identification coded as Text.type"Hydrographic" in the non-positional file

DEM N

*Subclass:*Dam.section"Spillway/Penstock"	GA28550000	02/03

Definition: A barrier built across watercourse or waterbody to control water flow. A spillway is a passage allowing surplus water to run over or around an obstruction such as a dam. A penstock is a conduit that carries water to the turbine in a power generating station*.*

Positional Verification	Cartographic Representation
0.25mm width solid line	0.50mm width solid line
plot colour BLACK	MOEP font 31 UPPER CASE text

Remarks:

- 100m. minimum length
- If under 20m. width capture as single line in the positional file
- If over 20m. in width capture as closed polygon in the positional file
- see Part II 2.3.2 Additional Remarks - Hydrographic and Related Features
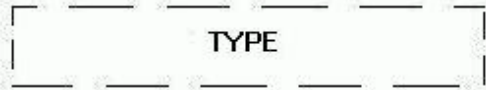- Identification coded as Text.type"Hydrographic" in the non-positional file

DEM N

Subclass: Dam.section"Top"	GA08450000	02/03

Definition: A barrier built across watercourse or waterbody to control water flow. When captured to scale, the area located at the top of the dam.

Positional Verification	Cartographic Representation
TO SCALE	TO SCALE
0.25mm width solid line	0.50mm width solid line
plot colour BLACK	MOEP font 31 UPPER CASE text

Remarks:

- 100m. length minimum closed polygon captured in the positional file
- see Part II 2.3.2 Additional Remarks - Hydrographic and Related Features
- Identification coded as Text.type"Hydrographic" in the non-positional file

DEM N

Subclass: DEMPoint.type"Definite"	HA90100000	01

Definition: A point collected photogrammetrically from a stationary measuring device and captured specifically to represent the topographic surface shape in explicit x, y and z values.

Positional Verification	Cartographic Representation
0.25mm width solid line	
^	NOT SHOWN
plot colour BLACK	

Remarks:

- Capture as a point feature in the DEM file
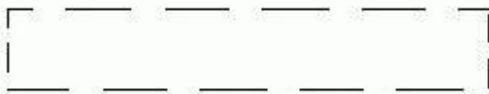- Not included in the representational file

DEM Y

Subclass: DEMPoint.type"Check"	HA90400000	01
Definition: A point that is collected photogrammetrically to check the accuracy of the digital elevation model.		

Positional Verification	Cartographic Representation
0.25mm width solid line ^ plot colour PURPLE	NOT SHOWN

Remarks:

- Capture as a point feature in the DEM file
- Not included in the representational file

DEM N

Subclass: DEMPoint.type"Indefinite"	HA90100110	01
Definition: A point that is collected photogrammetrically from a stationary measuring device and captured specifically to represent the topographic surface shape in explicit x, y and z values. It is used in areas where the surface is obscured by ground cover, or photogrammetric anomalies such as :stereo dead" areas or "sunspots".		

Positional Verification	Cartographic Representation
0.25mm width solid line ^ plot colour BROWN	NOT SHOWN

Remarks:

- Capture as a point feature in the DEM file
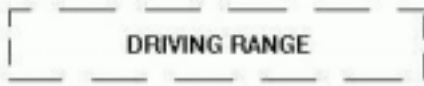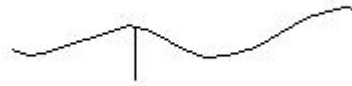- Not included in the representational file

DEM Y

Subclass: DEMPoint.type"Interpolated"	HA90300000	01
Definition: An unsampled spotheight, explicit in x, y and z, generated arithmetically from the values of surrounding directly sampled points.		

Positional Verification	Cartographic Representation
0.25mm width solid line ^ plot colour RED	NOT SHOWN

Remarks:

- Capture as a point feature in the DEM file

- Not included in the representational file

DEM Y

Subclass: DesignatedArea	AS90000000	02/03
Definition: An area dedicated to a particular use or purpose.		

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes plot colour BLACK	0.25mm width line 3.0mm dash 1.5mm between dashes TYPE MOEP font 31 UPPER CASE text

Remarks:

- 1 hectare minimum
- Captured to scale in the positional file
- Identification coded as Text.type"Landmark" in the non-positional file
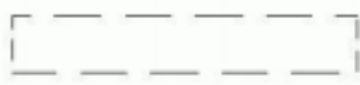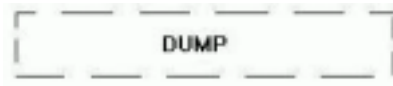- For hierarchy see Part II Section 2.3.5(j)

DEM N

Subclass: Ditch	GA08800110	02/03

Definition: A man-made trench in the earth used for drainage or irrigation.	

Positional Verification	Cartographic Representation
0.25mm width solid line plot colour BLUE	0.25mm width solid line

Remarks:

- This feature must be continuous over 200m
- Ditches shall be captured if they form part of the main drainage system
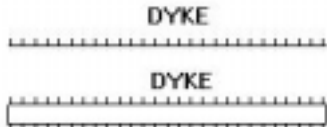- Captured in the positional file

DEM Y

Subclass: DriveinTheatre	AL09000000	02/03

Definition: An open air facility which allows patrons to view motion pictures while seated in vehicles	

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes plot colour BLACK	0.25mm width line 3.0mm dash 1.5mm between dashes DRIVEIN THEATRE MOEP font 31 UPPER CASE text

Remarks:

1 hectare minimum
Captured to scale in the positional file
Identification coded as Text.type"Landmark" in the non-positional file

DEM N

Subclass: DrivingRange	AL23300120	02/03
Definition: A facility for practising the driving of golf balls.		

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes 	0.25mm width line 3.0mm dash 1.5mm between dashes
plot colour BLACK	MOEP font 31 UPPER CASE text

Remarks:

- 1 hectare minimum
- Captured to scale in the positional file
- Identification coded as Text.type"Landmark" in the non-positional file
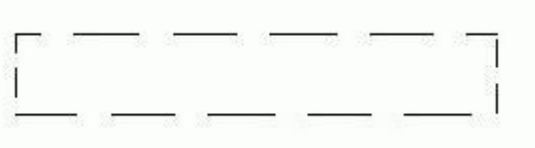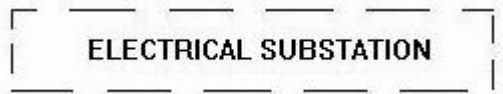
DEM N

Subclass: DryDock	CG09100000	02/03
Definition: An enclosure from which the water can be removed to facilitate the repair and maintenance of ships		

Positional Verification	Cartographic Representation
0.25mm width solid line plot colour BLACK	0.25mm width solid line

Remarks:

- Minimum length 50 metres
- Captured in the opsitional file as a closed polygon when over 20 metres in width
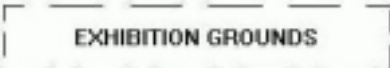
DEM N

Subclass: Dump	AP09200000	02/03

Definition: An area set aside for the disposal of garbage and other refuse.

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes	0.25mm width line 3.0mm dash 1.5mm between dashes DUMP
plot colour BLACK	MOEP font 31 UPPER CASE text

Remarks:

- 1 hectare minimum
- Captured to scale in the opsitional file
- Identification coded as Text.type"Landmark" in the non-positional file

DEM N

Subclass: Dyke	GE09400000	02/03

Definition: An embankment built to restrict the flow of water or other liquids.

Positional Verification	Cartographic Representation
0.25mm width solid line	0.25mm width solid line 1.0mm ticks DYKE DYKE 1.5mm between ticks
plot colour BROWN	MOEP font 31 UPPER CASE text

Remarks:

- 100m minimum
- Line - high side
- Ticks - low side
- Low side is right side
- Width 50m. or greater, capture in the positional file to scale as closed polygon and show symbol on both sides
- Identification coded as Text.type"Hydrographic" in the non-positional file

DEM Y
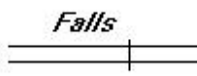
E

Subclass: ElectricalSubstationComplex		AG09850000	02/03
Definition: A subsidiary power facility in which electrical current is transformed for local distribution.			
Positional Verification		Cartographic Representation	
0.25mm width line 3.0mm dash 1.5mm between dashes plot colour BLACK		0.25mm width line 3.0mm dash 1.5mm between dashes ELECTRICAL SUBSTATION MOEP font 31 UPPER CASE text	
Remarks: • 1 hectare minimum • Captured to scale in the positional file • Identification coded as Text.type"Landmark" in the non-positional file			
DEM N			

Subclass: Esker	HB10200000	02/03
Definition: A narrow, sinuous, steep-sided ridge composed of sand or gravel deposited by a glacial stream*.*		

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 0.5mm dot 2.0mm from dash end to dot centre plot colour PURPLE	0.25mm width solid line 0.75mm tick above and below line ESKER 1.0mm between ticks MOEP font 31 UPPER CASE text

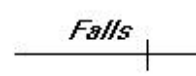| *Remarks:*

• 200m. minimum length
• Captured in the positional file
• Identification coded as Text.type"Landform" in the non-positional file |
|---|
| DEM Y |
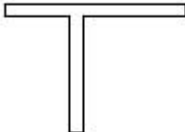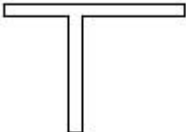
Subclass: ExhibitionGrounds	AL10250000	02/03
Definition: A public area containing permanent buildings for amusement and display purposes.		

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes plot colour BLACK	0.25mm width line 3.0mm dash 1.5mm between dashes EXHIBITION GROUNDS MOEP font 31 UPPER CASE text

Remarks: • 1 hectare minimum • Captured to scale in the positional file • Identification coded as Text.type"Landmark" in the non-positional file
DEM N

F
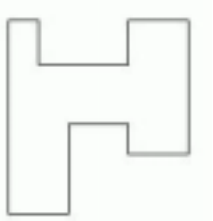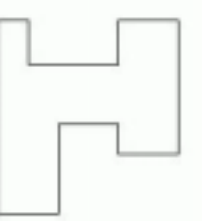
Subclass: Falls	(to scale)	GA10450000	02/03
(symbolized)		GA90002110	01
Definition: The water in a watercourse that follows a perpindicular or very steep descent.			

Positional Verification		Cartographic Representation	
TO SCALE	SYMBOLIZED	TO SCALE	SYMBOLIZED
0.25mm width solid line solid line	0.25mm width	0.20mm width solid line solid lineperpindicular to lengthwater feature	0.20mm width 3.0mm line
		Line extends 1.0mm beyond double line river banks.	
plot colour BLUE		MOEP font 32 (sloped) text	
Remarks: • Straight line between double line river banks • Symbolized - Point feature • Single line river - point shows centre (intersection) • Captured in the positional file • Identification coded as Text.type"Hydrographic" in the non-positional file • Note: Associated text is sloped e.g. *Falls*			
DEM N			

Subclass: Fence	CR10750000	02

Definition: A barrier made of wire, rails, slats or other relatively light materials used to enclose or divide an area.

Positional Verification	Cartographic Representation
0.25mm width solid line plot colour BLACK	0.25mm width solid line 1.5mm cross 15.0mm between crosses

Remarks:

- Continuous over 400m minimum
- Captured in the positional file

DEM N
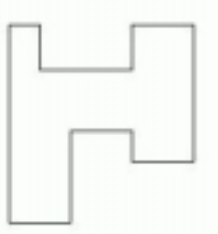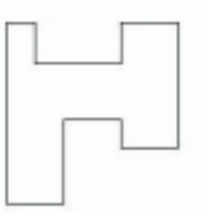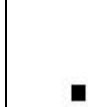
Subclass: FerryDock	CQ08850130	02/03

Definition: A structure buiolt along or into a waterway from the shoreline, used for mooring vessels when loading or unloading passangers and/or vehicles.

Positional Verification	Cartographic Representation
0.25mm width solid line plot colour BLACK	0.25mm width solid line

Remarks:

- Captired to scale in the positional file

DEM N
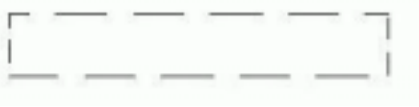
Subclass: FerryRoute	AQ10800000	02
Definition: The water route a ferry follows when transporting vehicles and /or passangers.		
Positional Verification	Cartographic Representation	
0.25mm width line 0.3mm dash 1.5mm between dashes _ __ __ __ __ __	0.25mm width line **FERRY** _ __ __ __ __ __	
plot colour RED	MOEP font 31 UPPER CASE text	
Remarks: • Captured to scale in the positional file • minimum distance 10km. • Identification cided as Text.type"Transportation" in the non-positional file		
DEM N		
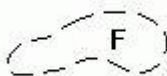
Subclass: FerryTerminal (Building) (to scale)	BQ30750140	02
(symbolized)	BQ90750140	01

Definition: A place where passangers gather to be transported by ferry across a body of water.

Positional Verification		Cartographic Representation	
TO SCALE	SYMBOLIZED	TO SCALE	SYMBOLIZED
0.25mm width solid line	0.25mm width solid line 0.8mm open square	0.25mm width solid line	0.25mm width solid line 0.8mm filled square
plot colour BLACK			

Remarks:

• Capture as a point feature then the total area is less than 900 sq. m. with no sides greater than 30m.
• Capture buildings only not area
• Captured in the positional file
• When parking area is over 1 hectare, add as DesignatedArea and add label "PARKING LOT" as Text.type"Landmark" in the positional file

DEM N

Subclass: FillEmbankment	DD09950000	02/03

Definition: A portion of a road or railway that has been built-up with earth or other materials to maintain a uniform grade.

Positional Verification	Cartographic Representation
0.25mm width solid line plot colour BROWN	0.25mm width solid line 1.25mm width solid line 1.5mm between ticks

Remarks:

- 100m. length minimum
- Not a closed polygon
- Line-high side
- Ticks-low side (right side)
- Captured in the positional file

DEM Y
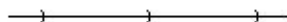
Subclass: FireLookoutTower	BF10950120	01

Definition: A high structure from which the outbreak of forest fires can be detected and reported.

Positional Verification	Cartographic Representation
0.25mm width line 2.0mm square plot colour BLACK	0.25mm width line 2.0mm square **FIRE LOOKOUT**

Remarks:

- When over 30 metres tall, height is captured as an attribute (MOEP type 05)
- Captured as a point feature in the positional file
- Identification coded as Text.type"Landmark" in the non-positional file

DEM N

Subclass: FireStation	(to scale)		BF11000000	02
	(symbolized)		BF90200000	01
Definition: A building housing fire-fighting equipment.				

Positional Verification		Cartographic Representation	
TO SCALE	SYMBOLIZED	TO SCALE	SYMBOLIZED
0.25mm width solid line	0.25mm width solid line 0.8mm open square	0.25mm width solid line	0.25mm width solid line 0.8mm filled square
plot colour BLACK			

Remarks:

• Capture to scale in the positional file using the right hand rule when one side is > 30m. or the total area is > 900 sq. m.
• Capture as a point in the positional file oriented to the true ground position when total area is < 900 sq. m. with no sides > 30m.
• Determine building dimensions by the outline of their roofs, including attached garages and multilevel parking.

DEM N

Subclass: FishHatchery	AF11150000	02/03
Definition: A facility used for the spawning of fish.		

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes plot colour BLACK	0.20mm width line 3.0mm dash 1.5mm between dashes MOEP font 31 UPPER CASE text

Remarks:

- 1 hectare minimum
- Captured to scale in the positional file
- Identification coded as Text.type"Landmark" in the non-positional file

DEM N

Subclass: FloodedLand.type"Inundated" (area outline)	GB11350110	02/03
(area symbol)	GB90000000	01

Definition: An area that is seasonally or temporarily covered by water because the natural drainage has been interupted or obstructed.

Positional Verification		Cartographic Representation	
AREA OUTLINE	AREA SYMBOL	AREA OUTLINE	AREA SYMBOL
0.25mm width line 3.0mm dash	MOEP font 31 U/C "F"	0.20mm width solid line	0.20mm width line
1.5mm between dashes			1.0mm between lines
		1.0mm to 5.0mm dashes	
			1.0mm between dashes
plot colour BLUE			

Remarks:

- Area oitline - Longest dimension over 100m.
- Captured to scale in the positional file
- Area Symbol - Point feature - point indicates the inside of the polygonal feature and is indicated in the non-positional file

DEM Y

Subclass: FlowArrow	GE90200000	01/02
Definition: A symbol used to clarify the direction of flow on a double line stream when the information is not evident from the map relief.		

Positional Verification	Cartographic Representation
0.25mm width solid line	0.25mm width solid line 3.0mm filled head and tail
plot colour BLUE	MOEP font 31 UPPER CASE text

Remarks: • Used to clarify flow direction on rivers • NOTE: This feature is shown on the verification plot and representational hard copy only It is coded in the non-positional file • Although depicted on the verification plot this feature is NOT INCLUDED in the positional file

DEM N

Subclass: Flume	GA11500000	02/03
Definition: An inclined, man-made, open channel used to convey water for other than drainage purposes.		

Positional Verification	Cartographic Representation
0.25mm width solid line	0.25mm width solid line 2.0mm symbol 15.0mm between symbols symbol is made up of a 0.6mm straight line with a 0.7mm 45º angled line at each end
plot colour BLACK	

Remarks: • Minimum length 100 metres • Captured in the positional file

DEM N
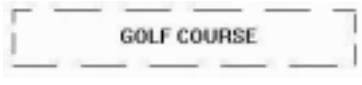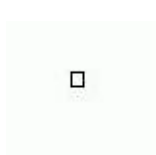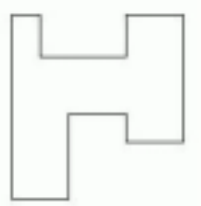
Subclass: FootBridge	DD93100000	02/03
Definition: A bridge for pedestrians		
Positional Verification	Cartographic Representation	
0.25mm width solid line 0.5mm radius filled circle plot colour BLACK	0.35mm width solid line Line Terminator 0.7mm 45º angled from each end	
Remarks: • Captured to scale in the positional file • Plotted to scale when more than 40 metres in length		
DEM N		

G

Subclass: GasWell	CG12150000	01
Definition: A shaft or hole in the earth to extract gas.		
Positional Verification	Cartographic Representation	
0.25mm width line 2.0mm square 0.5mm radius circle plot colour BLACK	0.25mm width line 2.0mm square 0.5mm radius circle	
Remarks: • Capture to scale in the positional file		
DEM N		
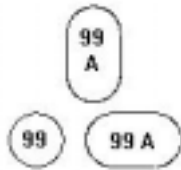
Subclass: Glacier	GD12300000	02/03
Definition: A mass of perminant snow and ice defined by literal limits which is typically flowing in a particular direction.		
Positional Verification	Cartographic Representation	
SYMBOLIZED 0.25mm width line 1.0mm dash 1.0mm between dashes plot colour BLUE	SYMBOLIZED 0.25mm width line 3.0mm dash 1.5mm between dashes *Glacier* MOEP font 32 (sloped) text	
Remarks: • Minimum 100 hectares unless named • Capture to scale in the positional file • Identification coded as Text.type"Hydrographic" in the non-positional file • Glacier in DEM as AreaofIndefiniteContour only (not as a breakline).		
DEM Y		

Subclass: GolfCourse	AL12350000	02/03
Definition: An area designated for the game of golf.		
Positional Verification	Cartographic Representation	
0.25mm width line 3.0mm dash 1.5mm between dashes plot colour BLACK	0.25mm width line 3.0mm dash 1.5mm between dashes GOLF COURSE MOEP font 31 UPPER CASE text	
Remarks: • 1 hectare minimum • Captured to scale in the positional file • dentification coded as Text.type"Landmark" in the non-positional file		
DEM N		

| *Subclass:* Greenhouse | (to Scale*)* | BA12800000 | 02 |
| | (symbolized) | BA90100000 | 01 |

Definition: A tranparent or opaque enclosure used for the cultivation or protection of plants

Positional Verification		Cartographic Representation	
TO SCALE	SYMBOLIZED	TO SCALE	SYMBOLIZED
0.25mm width solid line	0.25mm width solid line	0.25mm width solid line	0.25mm width solid line
	0.8mm open square		0.8mm filled square
plot colour BLACK			

Remarks:

• Capture to scale in the positional file using the right hand rule when one side is > 30m. or the total area is > 900 sq. m.
• Capture as a point in the positional file oriented to the true ground position when total area is < 900 sq. m. with no sides > 30m.
• Determine building dimensions by the outline of their roofs, including attached garages and multilevel parking.

DEM N

H

Subclass: Helipad	AQ13450000	01
Definition: A land aerodrome designed to be used by helicopters.		
Positional Verification	Cartographic Representation	
0.25mm width solid line 3.5mm circle radius plot colour RED	0.35mm width solid line 3.5mm circle radius 2.5mm "H" height 	
Remarks: • Captured as a point feature in the positional file		
DEM N		

Subclass: HighwayID.type"Number"	Undefined
HighwayID.type"SymbolCircle"	Undefined
HighwayID.type"SumbolOval"	Undefined
Definition:	
Positional Verification	Cartographic Representation
NOT SHOWN	0.25mm width solid line 3.5mm circle radius 2.5mm text height MOEP font 31 UPPER CASE text
Remarks: • This feature is added at the representational file creation stage	
DEM N	

Subclass: Hospital	(to scale)	BH13950000	02
	(symbolized)	BH90300000	01

Definition: A facility providing medical care.			

Positional Verification		Cartographic Representation	
TO SCALE 0.25mm width solid line MOEP font 31 UPPER CASE text plot colour BLACK	0.25mm width solid line 0.8mm open square 	0.25mm width solid line MOEP font 31 UPPER CASE text	0.25mm width solid line 0.8mm filled square

Remarks:

• Capture to scale in the positional file using the right hand rule when one side is > 30m. or the total area is > 900 sq. m.
• Capture as a point in the positional file oriented to the true ground position when total area is < 900 sq. m. with no sides > 30m.
• Determine building dimensions by the outline of their roofs, including attached garages and multilevel parking.

DEM N

I

Subclass: IceField		GD14450000	02/03
Definition: A general designation for ice caps or other extensive and irregular areas of permanent snow and ice.			

Positional Verification	Cartographic Representation
0.25mm width solid line 3.0mm dash 1.5mm between dashes	0.20mm width solid line 3.0mm dash 1.5mm between dashes
plot colour BROWN	MOEP font 32 (sloped) text

Remarks:

- Minimum 100 hectares unless named
- Capture to scale in the positional file
- Identification coded as Text.type"Hydrographic" in the non-positional file
- Added to DEM as AreaofIndefiniteContour only (not as a breakline).

DEM Y
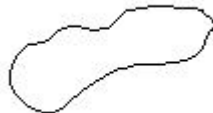
Subclass:Island	(to scale)	GE14850000	02/03
	(symbolized)	GE94850000	01

Definition: A land mass completely surrounded by water

Positional Verification		Cartographic Representation	
TO SCALE	SYMBOLIZED	TO SCALE	SYMBOLIZED
0.25mm width solid line	0.25mm width solid line 2.0mm tick length	0.25mm width solid line	0.25mm width solid line 2.0mm tick length
	+		+
plot colour BLUE			

Remarks:

- To scale - Longest dimension is over 200 metres
- This feature feature is not duplicated as a lake boundary
- Symbolized - Point feature
- No dimension over 200 metres
- The cross is aligned with the sheet edge and captured at a 0º angle
- All named islands and rocks will be captured
- If not visible on the photograph, enter as Island - Position approximate
- Captured in the positional file

DEM Y
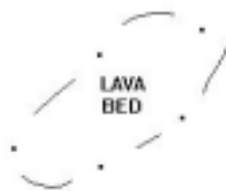
*Subclass:*Island *Geometric.Representational.Qualifier*: Position approximate	GE94850100	01
Definition: A land mass completely surrounded by water. Named islands and rocks not visible on the photograph.		

Positional Verification	Cartographic Representation
0.25mm width solid line 2.0mm cross + POSITION APPROXIMATE plot colour PURPLE	0.25mm width solid line 2.0mm cross + POSITION APPROXIMATE MOEP font 31 UPPER CASE text

Remarks:

• Approximate position to be established from 1:50 000 NTS published hardcopy and converted to NAD83,

• Captured as a point feature in the positional file

• Identification coded as Text.type"Hydrographic" in the non-positional file

DEM N
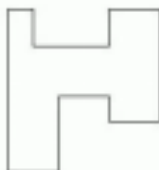
L

*Subclass:*Lake *Geometric.Representational.Qualifier:*Definite	GB15300000	02/03
Definition: A body of fresh water that is completely surrounded by land.		
Positional Verification	Cartographic Representation	
0.25mm width solid line plot colour BLUE	0.50mm width solid line	
Remarks: • Longest dimension is over 25 metres. • The apparent high water mark of the bodt of water is where the presence and action of the water is so common and usual as to mark the soil of the bed of the body of water a character distinct from that of its banks, in vegetation and in the nature of the soil itself • Captured to scale in the positional file		
DEM Y		
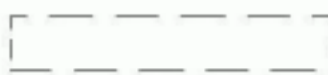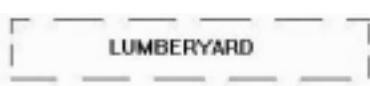
*Subclass:*Lake *Geometric.Representational.Qualifier:*Indefinite	GB15300130	02/03
Definition: A body of fresh water that is completely surrounded by land		
Positional Verification	Cartographic Representation	
0.25mm width line plot colour BLACK	0.35mm width line 20.0mm dash 1.0mm between dashes	
Remarks: • Longest dimension is over 25 metres. • "Indefinite" - Obscured on the aerial photography • The apparent high water mark of the bodt of water is where the presence and action of the water is so common and usual as to mark the soil of the bed of the body of water a character distinct from that of its banks, in vegetation and in the nature of the soil itself • Captured to scale in the positional file		
DEM Y		

*Subclass:*Lake.type"Intermittent"	GB15300140	02/03
Definition: A fresh waterbody that is normally dry at sometime during the year.		
Positional Verification	Cartographic Representation	
0.25mm width line 3.0mm dash 1.5mm between dashes plot colour PURPLE	0.25mm width line 20.0mm dash 1.0mm between dashes	
Remarks: • Longest dimension is over 25 metres. • The apparent high water mark of the bodt of water is where the presence and action of the water is so common and usual as to mark the soil of the bed of the body of water a character distinct from that of its banks, in vegetation and in the nature of the soil itself • Captured to scale in the positional file		
DEM Y		
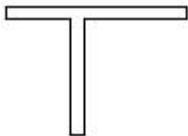
*Subclass:*LavaBed	HB15850000	02/03
Definition: An area where molten rock has flowed from a volcano or fissure and cooled to form solidified rock.		

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 0.5mm dot plot colour PURPLE	0.25mm width line 1.5mm dash 1.5mm between dashes LAVA BED MOEP font 31 UPPER CASE text

Remarks:

- Longest dimension greater than 200 metres
- Captured to scale in the positional file
- Identification coded as Text.type"Landform" in the non-positional file

DEM Y

| *Subclass:*Library | (to scale*)* | BE16200000 | 02 |
| | (symbolized) | BE90700000 | 01 |

Definition: A facility in which literary, musical, artistic, or reference materials as books, manuscripts, recordings, or films are kept for use but not for sale.

Positional Verification		Cartographic Representation	
TO SCALE	SYMBOLIZED	TO SCALE	SYMBOLIZED
0.25mm width solid line	0.25mm width solid line 0.8mm open square	0.25mm width solid line	0.25mm width solid line 0.8mm filled square
plot colour BLACK			

Remarks:

• Capture to scale in the positional file using the right hand rule when one side is > 30m. or the total area is > 900 sq. m.

• Capture as a point in the positional file oriented to the true ground position when total area is < 900 sq. m. with no sides > 30m.

• Determine building dimensions by the outline of their roofs, including attached garages and multilevel parking.

DEM N

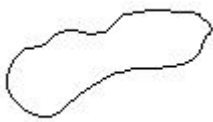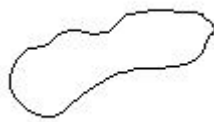| *Subclass:*Lighthouse	CQ16350000	01

Definition: A lighted structure erected near the shore to provide mariners with visual navigation reference.

Positional Verification	Cartographic Representation
SYMBOLIZED 0.25mm width solid line 1.0mm radius open circle 2.0mm length line plot colour BLACK	SYMBOLIZED 0.25mm width solid line 1.0mm radius open circle six filled triangles radiate 2.75mm from centre of circle

Remarks:

- Captured as a point feature in the positional file

DEM N
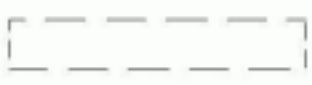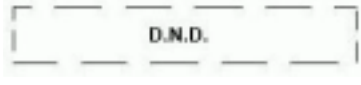
*Subclass:*Lumber Yard	AB33850140	02/03

Definition: An enclosure used to store lumber products.

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes plot colour BLACK	0.25mm width line 3.0mm dash 1.5mm between dashes LUMBERYARD MOEP font 31 UPPER CASE text

Remarks:

- 1 hectare minimum
- Captured to scale in the positional file
- Identification coded as Text.type"Landmark" in the non-positional file

DEM N

M

Subclass: MarinaDock	CQ08850160	02/03
Definition: A marina is a complex for mooring and servicing pleasure boats.		

Positional Verification	Cartographic Representation
0.25mm width solid line	0.25mm width solid line
plot colour BLACK	MOEP font 31 UPPER CASE text

Remarks:

- Capture main dick as MarinaDock if 50 metres minimum length
- Capture as closed polygon if 20 metres in width or greater
- May have Piers/Wharfs attached to main dock
- Captured to scale in the positional file
- Identification coded as Text.type"Landmark"in the non-positional file

DEM N

Subclass:Marsh	(area outline)	GC17100000	02/03
(area symbol)		GC90100000	01

Definition: A water-saturated, poorly drained, treeless area intermittently or perminantly water covered, having cattailed, rushes or grass-like vegetation.

Positional Verification		Cartographic Representation	
AREA OUTLINE AREA SYMBOL		AREA OUTLINE	AREA SYMBOL
0.25mm width line "M" text 3.0mm dash 1.5mm between dashes		0.25mm width line 1.0mm dash 1.5mm between dashes	0.20mm width upper lines 0.35mm width base lines
plot colour BLUE			

Remarks:

- Area Outline - Longest dimension over 75 metres captured to scale in the positional file
- Area Symbol - Point feature captured in the non-positional file
- Indicates point inside area outline
- Capture above or below high water mark
- Indicate lake and /or river edge with construction line when coincident

DEM Y

Subclass:MilitaryEstablishment	AJ01650000	02/03

Definition: An area owned and operated by the department of National Defence to facilitate military activities.

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes	0.25mm width line 3.0mm dash 1.5mm between dashes
plot colour BLACK	MOEP font 31 UPPER CASE text

Remarks:

- 1 hectare minimum
- Captured to scale in the positional file
- Identification coded as Text.type "Landmark" in the non-positional file

DEM N

*Subclass:*Mine	AG17750000	02/03

Definition: An excavation, tunnel or area from which mineral substances are extracted.

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes	0.25mm width line 3.0mm dash 1.5mm between dashes
	MINE
plot colour BLACK	MOEP font 31 UPPER CASE text

Remarks:

- 1 hectare minimum
- Captured to scale in the positional file
- Identification coded as Text.type "Landmark" in the non-positional file
- A dashed box 1 hectare in size will be shown when below minimum size

DEM N

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*Subclass:*Mine.type"OpenPit"	AG17600000	02/03

Definition: An excavation from which mineral substances are taken. Generally larger than a quarry.

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes	0.25mm width line 1.0mm tick length 0.20mm tick width 1.5mm between dashes
	OPEN PIT MINE
plot colour BLACK	MOEP font 31 UPPER CASE text

Remarks:

- 1 hectare minimum
- Captured to scale in the positional file
- Identification coded as Text.type "Landmark" in the non-positional file
- Feature included in the DEM as AreaofExclusion

DEM Y

*Subclass:*Moraine	HB18700000	02/03
Definition: A mound, ridge or other accumulation of glacial debris appearing in a variety of topographic landforms, deposited by direct action of glacial ice.		

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash .05mm dot 2.0mm from dash end to dot centre plot colour PURPLE	0.25mm width line 1.5mmdash 1.5mm between dashes MORAINE MOEP font 31 UPPER CASE text

Remarks:
• Longest dimension greater than 200 metres • Captured to scale in the positional file • Identification coded as Text.type"Landform" in the non-positional file

DEM Y
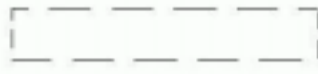
*Subclass:*MountainPeak	HB18800000	01
Definition: The summit (highest point) of a mountain: especially the summit of a conspicuously precipitous mountain*.*		

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm cross + 2353 plot colour RED	0.25mm width line 3.0mm cross + 2353 1.4mm text MOEP font 31 text

Remarks:
• Named mountain peaks only • Captured as a point feature in the positional file • Elevation coded as Text.typ"Hypsographic" in the non-positional file

DEM Y

N
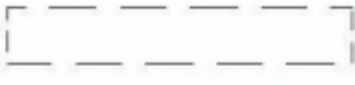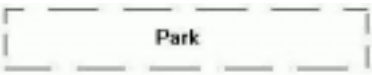
Subclass: Nursery	JB19150000	02/03
Definition: A place where shrubs, flowers, trees etc. are propogated for transplanting or for sesding and grafting.		

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.0mm between dashes plot colour GREEN	0.20mm width line 3.0mm dash 1.5mm between dashes NURSERY MOEP font 31 UPPER CASE text

Remarks: • 1 hectare minimum • Captured to scale in the positional file • Identification coded as Text.type"Landmark" in the non-positional file

DEM N

O

*Subclass:*OilWell	CG19600000	01
Definition: A shaft or hole sunk into the earth to extract oil.		
Positional Verification	Cartographic Representation	
0.25mm width line 2.0mm open square 0.5mm radius circle plot colour BLACK	0.25mm width line 2.0mm open square 0.5mm radius circle	
Remarks: • Capture as a point feature in the positional file		
DEM N		
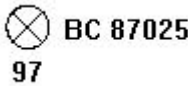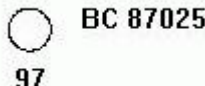
*Subclass:*Orchard	JB19650000	02/03
Definition: A plantation of fruit or nut bearing trees.		

Positional Verification	Cartographic Representation
0.25mm width solid line 3/0mm dash 1.5mm between dashes plot colour BLACK	0.25mm width solid line 3.0mm dash 1.5mm between dashes MOEP font 31 UPPER CASE text

Remarks:

- 1 hectare minimum
- Captured to scale in the positional file
- Identification coded as Text.type"Landmark" in the non-positional file

DEM N

P

*Subclass:*ParkPicnicArea	AL20150000	02/03
Definition: An area set aside for the daytime convenience of travellers		

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes	0.25mm width line 3.0mm dash 1.5mm between dashes
plot colour BLACK	MOEP font 31 UPPER CASE text

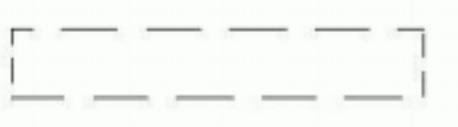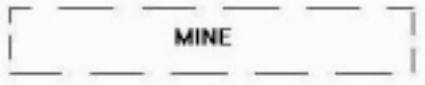| *Remarks:*

• 1 hectare minimum
• Captured to scale in the positional file
• Identification coded as Text.type"Landmark" in the non-positional file |
|---|
| DEM N |

Subclass:Penitentiary	(to scale)		BF20950000	02
	(symbolized)		BF90400000	01

Definition: A facility in which offenders against the law are confined.

Positional Verification		Cartographic Representation	
0.25mm width solid line	0.25mm width solid line 0.8mm open square	0.25mm width solid line	0.25mm width solid line 0.8mm filled square
plot colour BLACK MOEP font 31 UPPER CASE text		MOEP font 31 UPPER CASE text	

Remarks:

• Capture to scale in the positional file using the right hand rule when one side is > 30m. or the total area is > 900 sq. m.

• Capture as a point in the positional file oriented to the true ground position when total area is < 900 sq. m. with no sides > 30m.

• Determine building dimensions by the outline of their roofs, including attached garages and multilevel parking.

• Place building identification as Text.type"Landmark" in the non-positional file, size determined by building size

DEM N

Subclass:PhotoCentre	FD21100000	01
Definition: A symbol on a map indicating the centre of an aerial photograph.		

Positional Verification	Cartographic Representation
0.25mm width line 1.25mm radius circle ⊗ BC 87025 97 plot colour BLACK	0.25mm width line 1.25mm radius circle ◯ BC 87025 97 MOEP font 32 (sloped) text (1.4mm, 1.8mm)

Remarks:

- Capture as a point feature in the non-positional file
- Identification coded as Text.type"AerialTriangulation" in the non-positional file
- Roll number is places just inside the sheet edge horizontal to the photo centre
- The text is sloped

DEM N
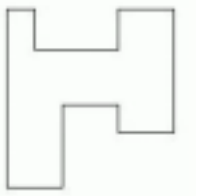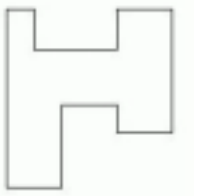
Subclass:Pier/Wharf)	(to scale)	CQ21250000	02
	(symbolized	CQ90000120	01
Definition: A structure built on a waterway used to moor vessels when loading or unloading cargo and/or passangers			

Positional Verification		Cartographic Representation	
TO SCALE	SYMBOLIZED	TO SCALE	SYMBOLIZED
0.25mm width solid line	0.25mm width solid line	0.25mm width solid line	0.25mm width solid line 2.5mm line length
plot colour BLACK			

Remarks:

- Capture to scale in the positional file when over 50 metres in length
- Capture as a closed polygon when over 20 metres in width
- Capture in the positional file as a point at feature intersection with shoreline when less than 50 metres in length
- Use this feature to capture sea plane bases including the text "Sea Plane Base" as Text.type "Landmark" in the non-positional file

DEM N
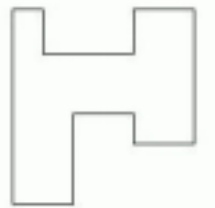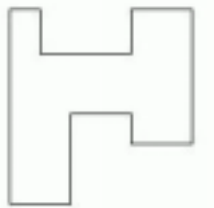
*Subclass:*Pile	AG21275000	02/03
Definition: A quantity of things heaped together into a mound.		

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes plot colour BLACK	0.20mm width line 3.0mm dash 1.5mm between dashes PILE MOEP font 31 UPPER CASE text

Remarks:

- Minimum area 1 hectare
- Captured to scale in the positional file
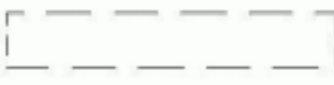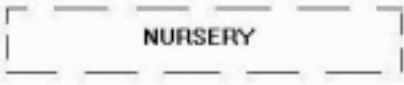- Identification coded as Text.type"Landmark" in the non-positional file
- In the DEM as AreaofExclusion only (not as a man-made breakline)

DEM Y

Subclass:Pipeline	EA21400000	02
Definition: A cylindrical conduit used to convey liquids or gasses		
Positional Verification	Cartographic Representation	
0.25mm width line 1.0mm dash 1.0mm between dashes plot colour BLACK	0.25mm width line 1.5mm "P" height 30.0mm between "P"s MOEP font 31 UPPER CASE text	
Remarks: • Continuous over 4 kilometres minimum • Symbol "P" is not placed over tower • Captured in the positional file		
DEM N		

_Subclass:_Pit.type"Abandoned"	AG21550001	02/03
Definition: An excavation from which sand or gravel has been removed (e.g., borrow pit) No longer used for original purpose.		

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes plot colour BLACK	0.25mm width line 3.0mm dash 1.5mm between dashes 1.0mm tick length 0.20mm tick width 1.5mm betweeen ticks ABANDONED PIT MOEP font 31 UPPER CASE text

Remarks:

- 1 hectare minimum
- Captured to scale in the positional file
- Identification coded as Text.type"Landmark" in the non-positional file
- Designated area and associated buildings to be shown as individual features
- Included in the DEM as Areaof Exclusion

DEM Y

*Subclass:*Pit.type"GravelSand"	AG21550000	02/03
Definition: An excavation from which sand or gravel has been removed .		

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes	0.25mm width line 1.0mm tick length 0.20mm tick width 1.5mm betweeen ticks
	PIT
plot colour BLACK	MOEP font 31 UPPER CASE text

Remarks:

- 1 hectare minimum
- Captured to scale in the positional file
- Identification coded as Text.type"Landmark" in the non-positional file
- Designated area and associated buildings to be shown as individual features
- Included in the DEM as Areaof Exclusion

DEM Y

*Subclass:*PoliceStation)		(to scale	BF22000000	02
		(symbolized)	BF90500000	01

Definition: A facility housing the law enforcement agencies for a particular jurisdiction.

Positional Verification		Cartographic Representation	
TO SCALE 0.25mm width solid line plot colour BLACK	SYMBOLIZED 0.25mm width solid line 0.8mm open square □	TO SCALE 0.25mm width solid line	SYMBOLIZED 0.25mm width solid line 0.8mm filled square ■

Remarks:

• Capture to scale in the positional file using the right hand rule when one side is > 30m. or the total area is > 900 sq. m.

• Capture as a point in the positional file oriented to the true ground position when total area is < 900 sq. m. with no sides > 30m.

• Determine building dimensions by the outline of their roofs, including attached garages and multilevel parking.

DEM N

Subclass:PostOffice		(to scale)	BF22250000	02
		(symbolized)	BF90600000	01

Definition: A local branch of the national postal system which handles the mail for a particular area.

Positional Verification		Cartographic Representation	
TO SCALE	SYMBOLIZED	TO SCALE	SYMBOLIZED
0.25mm width solid line	0.25mm width solid line	0.25mm width solid line	0.25mm width solid line
	0.8mm open square		0.8mm filled square
plot colour BLACK			

Remarks:

• Capture to scale in the positional file using the right hand rule when one side is > 30m. or the total area is > 900 sq. m.

• Capture as a point in the positional file oriented to the true ground position when total area is < 900 sq. m. with no sides > 30m.

• Determine building dimensions by the outline of their roofs, including attached garages and multilevel parking.

DEM N

Q

Subclass:Quarry	GB22500000	02/03
Definition: An excavation created by removal of stone by blasting or cutting.		

Positional Verification	Cartographic Representation
0.25mm width solid line	0.35mm width solid line
plot colour BLACK	MOEP font 31 UPPER CASE text

Remarks:

- 1 hectare minimum
- Captured to scale in the positional file
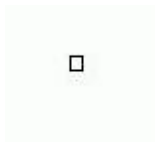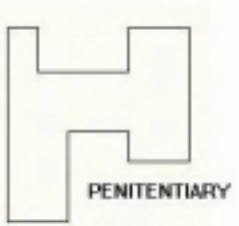- Identification coded as Text.type"Landmark" in the non-positional file
- Included in the DEM as Areaof Exclusion

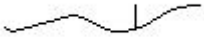DEM Y
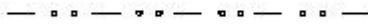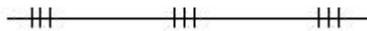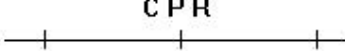
R

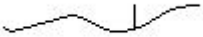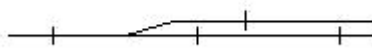| *Subclass:*RaceTrack	AL22650000	02/03
Definition: A hard or loose - surfaced route on which sporting activities take place.		
Positional Verification	Cartographic Representation	
0.25mm width solid line plot colour BLACK	0.25mm width solid line 0.50mm between lines RACE TRACK MOEP font 31 UPPER CASE text	
Remarks: • Captured to scale in the positional file • Identification coded as Text.type"Landmark" in the non-positional file		
DEM N		
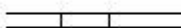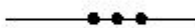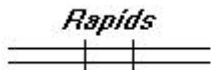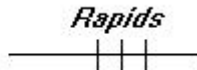
*Subclass:*RailLine.type"AbandonedTrack"	DE22950001	02/03
*Definition:*A roadbed with rails fixed to ties providing a track for the movement of trains and other equipment. No longer used.		
Positional Verification	Cartographic Representation	
0.25mm width line plot colour BLACK	0.25mm width line 13.0mm dash 2.0mm between dashes 1.0mm tick above and below line	
Remarks: • Captured to scale in the positional file		
DEM Y		

*Subclass:*RailLine.type"DoubleTrack"	DE22850000	02/03
Definition: A roadbed with rails fixed to ties providing a track for the movement of trains and other equipment. A double track has two closely parallel rail lines on the same roadbed.		

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 2.0mm dash 1.0mm between dashes plot colour RED	0.25mm width solid line 1.0mm tick above and below line 1.0mm between ticks 15.0mm between tick groups MOEP font 31 UPPER CASE text

Remarks:

- Captured to scale in the positional file
- Identification coded as Text.type"Transportation" in the non-positional file

DEM Y

Subclass: RailLine.type"MultipleTrack"	DE22900000	02/03
Definition: A roadbed with rails fixed to ties providing a track for the movement of trains and other equipment. A multiple track has more than two rail lines on the same roadbed.		

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 0.5mm dot 2.0mm from dash end to dot centre 2.0mm between dots plot colour RED	0.25mm width solid line 1.0mm tick above and below line 1.0mm between ticks 15.0mm between tick groups MOEP font 31 UPPER CASE text

Remarks:

- Captured to scale in the positional file

DEM Y

Subclass: RailLine.type"SingleTrack"	DE22950000	02/03

Definition: A roadbed with rails fixed to ties providing a track for the movement of trains and other equipment. A single track has one set of rails on the roadbed.

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 0.5mm dot 2.0mm from dash end to dot centre	0.25mm width solid line 1.0mm tick above and below line 15.0mm between ticks
plot colour RED	MOEP font 31 UPPER CASE text

Remarks:

- Captured to scale in the positional file
- Identification coded as Text.type"Transportation" in the non-positional file

DEM Y

Subclass: RailLine.type"Spur"	DE28850000	02/03

Definition: A short length of reilway track leading from the main line.

Positional Verification	Cartographic Representation
0.25mm width solid line 3.0mm dash 0.5mm dot 2.0mm from dash end to dot centre	.25mm width solid line 1.0mm tick above and below line 15.0mm between ticks 1.5mm between lines
plot colour RED	

Remarks:

- Captured to scale in the positional file

DEM Y
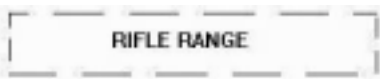
Subclass: Rapids	(to scale)	GA23500000	02
(symbolized)		GA23500110	01

Definition: A fast flowing section of a watercourse or waterbody, generally with exposed rocks and boulders.

Positional Verification		Cartographic Representation	
TO SCALE	SYMBOLIZED	TO SCALE	SYMBOLIZED
0.25mm width line	0.5mm dots	0.25mm width line	0.25mm width line
		Line extends 1.0mm beyond stream banks	3.5mm line perpindicular to stream
plot colour BLUE		MOEP font 32 (sloped) text	

Remarks:

- To sacle - Captured on double line rivers only
- Straight lines are perpindicular to river banks
- Symbolized - Point feature Captured on single line rivers only
- Point placed at the beginning and end of rapids
- Captured in the positional file
- Identification coded as Text.type"Hydrographic" in the non-positional file
- Note: Associated text is sloped e.g. "Rapids"

DEM N

Subclass: Reservoir *Geometric Representation Qualifier:* Definite	GB24300000	02/03
Definition: An artificial basin where water is collected and kept*.*		
Positional Verification	Cartographic Representation	
0.25mm width solid line plot colour RED	0.35mm width solid line *Reservoir* MOEP font 32 (sloped) text	
Remarks: • Longest dimension over 25 metres • Captured in the positional file • Identification coded as Text.type"Hydrographic" in the non-positional file • NOTE - text is sloped. e.g., "Reservoir"		
DEM Y		

Subclass: Reservoir Geometric Representation Qualifier: Indefinite	GB90100000	02/03
Definition: An artificial basin where water is collected and kept*.*		
Positional Verification	Cartographic Representation	
0.25mm width solid line 3.0mm dash 1.5mm between dashes plot colour RED	0.35mm width solid line 20.0mm dash 1.0mm between dashes *Reservoir* MOEP font 32 (sloped) text	
Remarks: • Longest dimension over 25 metres • The apparent high water mark of the body of water is where the presence and action of the water are so common and usual as to mark the soil of the bed of the body of water a character distinct from that of ist banks, in vegetation and in the nature of the soil itself. • Captured to scale in the positional file • Identification coded as Text.type"Hydrographic" in the non-positional file		
DEM Y		

Subclass: Reservoir.type"Intermittent"	GB90100110	02/03
Definition: An artificial basin where water is collected and kept. Usually dry at sometime during the year.		

Positional Verification	Cartographic Representation
0.5mm dot	0.35mm width line
	20.0mm dash
	1.0mm between dashed
	Reservoir
plot colour RED	MOEP font 32 (sloped) text

Remarks:

• Longest dimension over 25 metres
• The apparent high water mark of the body of water is where the presence and action of the water are so common and usual as to mark the soil of the bed of the body of water a character distinct from that of ist banks, in vegetation and in the nature of the soil itself.
• Captured to scale in the positional file
• Identification coded as Text.type"Hydrographic" in the non-positional file

DEM Y

Subclass: Reservoir.type"ProposedMaxResLevel"	GB90100120	02/03
Definition: An artificial basin where water is collected and kept. This feature delineates the proposed maximum reservoir level.		

Positional Verification	Cartographic Representation
0.5mm dot	0.35mm width line
	20.0mm dash
	1.0mm between dashes
	Reservoir
plot colour RED	MOEP font 32 (sloped) text

Remarks:

• Longest dimension over 25 metres
• The apparent high water mark of the body of water is where the presence and action of the water are so common and usual as to mark the soil of the bed of the body of water a character distinct from that of ist banks, in vegetation and in the nature of the soil itself.
• Captured to scale in the positional file
• Identification coded as Text.type"Hydrographic" in the non-positional file

DEM Y

Subclass: RifleRange	AL23300140	02/03
Definition: A facility designed for target shooting with rifles.		
Positional Verification	Cartographic Representation	
0.25mm width line 3.0mm dash 1.5mm between dashes plot colour BLACK	0.25mm width line 3.0mm dash 1.5mm between dashes RIFLE RANGE MOEP font 31 UPPER CASE text	
Remarks: • 1 hectare minimum • Captured to scale in the positional file • Identification coded as Text.type"Landmark" in the non-positional file		
DEM N		

Subclass: River/Stream Representation Qualifier: Definite	Geometric	GA24850000	02/03

Definition: The course followed by the natural flow of water on the earth's surface, draining in an area or body of water.

Positional Verification	Cartographic Representation
0.25mm width solid line	0.35mm width solid line

plot colour BLUE

Remarks:

- Captured in the positional file
- Line is captured at the centerline of the feature
- "Definite" - Not obscured on the aerial photograph
- Maximum width 20 metres
- If over 20 metres in width capture as River/Stream.type"LeftBank" or River/stream.type"RightBank"
- River/Streams shall be shown as continuous, even flowing through lake features that are below the minimum size specifications, or throurh swamp or marsh areas
- Hanging drainage will be avoided when possible
- Definite or intermittent drainages may have portions classified as definite in limited situations when the water course is obscured
- A definite stream cannot flow into an intermittent stream
- If an oxbow has water in it and not joined to a double sided river then capture as a lake
- If an oxbow has water in it and is joined to a double sided river at one end, capture as pert of the river
- If the oxbow is dry capture as dry river bed
- Definite and internittent drainages may have portions classified as indefinite in limited situations where the water course is obscured by vegetation, shadow, etc.
- A definite stream cannot flow into an intermittent stream

DEM Y

Subclass: River/Stream Representation Qualifier: Indefinite	Geometric	GA24850140	02/03

Definition: The course followed by the natural flow of water on the earth's surface, draining in an area or body of water*.*

Positional Verification	Cartographic Representation
0.25mm width solid line	0.35mm width line 20.0mm dash 1.0mm between dashes
plot colour BLACK	MOEP font 31 UPPER CASE text

Remarks:

- Captured in the positional file
- Line is captured at the centerline of the feature
- "Indefinite" - Obscured on the aerial photograph
- Maximum width 20 metres
- if over 20 metres in width capture as River/Stream.type"LeftBank" or River/stream.type"RightBank"
- River/Streams shall be shown as continuous, even flowing through lake features that are below the minimum size specifications, or throurh swamp or marsh areas
- Hanging drainage will be avoided when possible
- Definite or intermittent drainages may have portions classified as definite in limited situations when the water course is obscured
- A definite stream cannot flow into an intermittent stream
- Definite and internittent drainages may have portions classified as indefinite in limited situations where the water course is obscured by vegetation, shadow, etc.
- A definite stream cannot flow into an intermittent stream

DEM Y

Subclass: River/Stream.type"Dry"	GA24850130	02/03

Definition: The course followed by the natural flow of water on the earth's surface, draining in an area or body of water.

Positional Verification	Cartographic Representation
0.25mm width line 1.5mm dash 1.5mm between dashes – – – – – – – – – – – – – – plot colour BLUE	0.25mm width line 5.0mm dash 1.0mm between dashes — — — — — — — — — —

Remarks:

• Captured in the positional file

• Maximum width 20 metres

• Capture as closed polygon

• River/Streams shall be shown as continuous, even flowing through lake features that are below the minimum size specifications, or throurh swamp or marsh areas

• Hanging drainage will be avoided when possible

• Definite or intermittent drainages may have portions classified as definite in limited situations when the water course is obscured

• A definite stream cannot flow into an intermittent stream

• When a dry river bed/oxbow which is not subject to annual flooding joins a double line river, the junction is to be closed using a solid visible l(left or right bank). The dry ricer bed is captured as a closed polygon

• If an oxbow is dry then capture as dry river bed.

DEM Y

Subclass: River/Stream.type"LeftBank"	GA90000110	02/03

Definition: The course followed by the natural flow of water on the earth's surface, draining in an area or body of water. A definite watercourse of sufficient width to delineate separate banks. "Left-Bank" indicates the left shoreline heading downstream

Positional Verification	Cartographic Representation
0.25mm width solid line	0.35mm width solid line
plot colour BLUE	

Remarks:

- Captured in the positional file
- Maximum width 20 metres
- River/Streams shall be shown as continuous, even flowing through lake features that are below the minimum size specifications, or throurh swamp or marsh areas
- Hanging drainage will be avoided when possible
- Definite or intermittent drainages may have portions classified as definite in limited situations when the water course is obscured
- The apparent high water mark of the body of water is where the presence and action of the water are so common and usual as to mark the soil of the bed of the body of water a character distinct from that of its banks, in vegetation and in the nature of the soil itself.
- When a dry river bed/oxbow which is not subject to annual flooding joins a double line river, the junction is to be closed using a solid visible l(left or right bank).
- If an oxbow has water in it and is joined to a double sided river at one end, capture as pert of the river

DEM Y

Subclass: River/Stream.type"Intermittent"	GA24850150	02/03
Definition: The course followed by the natural flow of water on the earth's surface, draining in an area or body of water. A definite watercourse that is usually dry, depending upon the season and precipitation.		

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes – – – – – – – – – – – – – plot colour BLUE	0.25mm width line 1.5mm dash 2.0mm short dash 1.0mm between dashes ————— – – – —————

Remarks:

- Captured in the positional file
- Line is captured at the centerline of the feature
- Maximum width 20 metres
- If over 20 metres in width capture as River/Stream.type"LeftBank" or River/stream.type"RightBank"
- River/Streams shall be shown as continuous, even flowing through lake features that are below the minimum size specifications, or throurh swamp or marsh areas
- Hanging drainage will be avoided when possible
- Definite or intermittent drainages may have portions classified as definite in limited situations when the water course is obscured
- A definite stream cannot flow into an intermittent stream
- Definite and internittent drainages may have portions classified as indefinite in limited situations where the water course is obscured by vegetation, shadow, etc.
- A definite stream cannot flow into an intermittent stream

DEM Y

Subclass: River/Stream.type"RightBank"	GA90000120	02/03
Definition: The course followed by the natural flow of water on the earth's surface, draining in an area or body of water. A definite watercourse of sufficient width to delineate separate banks. "Right-Bank" indicates the right shoreline heading downstream		

Positional Verification	Cartographic Representation
0.25mm width solid line plot colour BLUE	0.35mm width solid line

Remarks:

- Captured in the positional file
- Maximum width 20 metres
- River/Streams shall be shown as continuous, even flowing through lake features that are below the minimum size specifications, or throurh swamp or marsh areas
- Hanging drainage will be avoided when possible
- Definite or intermittent drainages may have portions classified as definite in limited situations when the water course is obscured
- The apparent high water mark of the body of water is where the presence and action of the water are so common and usual as to mark the soil of the bed of the body of water a character distinct from that of its banks, in vegetation and in the nature of the soil itself.
- When a dry river bed/oxbow which is not subject to annual flooding joins a double line river, the junction is to be closed using a solid visible l(left or right bank).
- If an oxbow has water in it and is joined to a double sided river at one end, capture as pert of the river

DEM Y

Subclass: Road.surface"Loose".lanes"1".type"Undivided"	DA25000110	02/03

Definition: A specially prepared route on land for the movement of vehicles (other than railway vehicles) from place to place. A 1 lane road with surface of aggrigate, soil or clay.

Positional Verification	Cartographic Representation

0.25mm width line
3.0mm dash
1.5mm between dashes
 	
   —— —— —— —— —— —— ——
 	
 plot colour ORANGE
	0.20mm width line
	5.0mm dash
	1.0mm between dashes
	0.5mm between lines
	
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	MOEP font 31 UPPER CASE text

Remarks:

- Cart track, Access road, gravel driveway over 400 metres
- Captured in the positional file

DEM Y
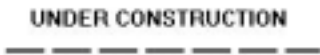
Subclass: Road.surface"Loose".lanes"1".type"Undivided".status"U/C"	DA25000160	02/03

Definition: A specially prepared route on land for the movement of vehicles (other than railway vehicles) from place to place. A 1 lane road with surface of aggrigate, soil or clay that is under construction at time of data capture.

Positional Verification	Cartographic Representation

0.25mm width line
3.0mm dash
2.0mm dash
1.0mm between dashes
 	
  – – – – – – – – – – – – –
 	
plot colour ORANGE
	0.20mm width line
	5.0mm dash
	1.0mm between dashes
	0.5mm between lines
	
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	MOEP font 31 UPPER CASE text

Remarks:

- Captured in the positional file

DEM Y

Subclass: Road.surface"Loose".lanes"2".type"Undivided"	DA25000120	02/03
Definition: A specially prepared route on land for the movement of vehicles (other than railway vehicles) from place to place. A 2 lane road with surface of aggrigate, soil or clay.		

Positional Verification	Cartographic Representation
0.25mm width solid line	0.20mm width solid line 10.0mm dash 1.0mm between dashes 0.5mm between lines
plot colour ORANGE	MOEP font 31 UPPER CASE text

Remarks: • All weather, 1 lane each way • Captured in the positional file

DEM Y
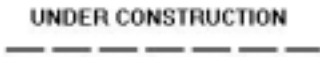
Subclass: Road.surface"Loose".lanes"2".type"Undivided".status"U/C"	DA25000170	02/03
Definition: A specially prepared route on land for the movement of vehicles (other than railway vehicles) from place to place. A 1 lane road with surface of aggrigate, soil or clay that is under construction at time of data capture*.*		

Positional Verification	Cartographic Representation
0.5mm dots b d ● ● ● b d ● ● b d ● ● b d ● ● b d ● ● b d ● ● plot colour ORANGE	0.20mm width line 5.0mm dash 1.0mm between dashes **UNDER CONSTRUCTION** ━ ━ ━ ━ ━ ━ ━ MOEP font 31 UPPER CASE text

Remarks: • All weather • 1 lane each way • Captured in the positional file • Identification coded as Text.type"Transportation" in the non-positional file

DEM Y

Subclass: Road.surface"Paved".lanes"1".type"Undivided"	DA25100180	02/03
Definition: A specially prepared route on land for the movement of vehicles (other than railway vehicles) from place to place. A 1 lane road with surface of concrete, asphalt or tar-gravel.		

Positional Verification	Cartographic Representation
0.25mm width solid line ——————— plot colour RED	0.20mm width solid line 0.5mm between lines ═══════════

Remarks: • Captured in the positional file

DEM Y

Subclass: Road.surface"Paved".lanes"1".type"Undivided".status"U/C"	DA25100320	02/03

Definition: A specially prepared route on land for the movement of vehicles (other than railway vehicles) from place to place. A 1 lane road with surface of concrete, asphalt or tar-gravel that is under construction at time of data capture.

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes —— —— —— —— —— —— —— plot colour RED	0.20mm width line 5.0mm dash 1.0mm between dashes 0.5mm between lines UNDER CONSTRUCTION —— —— —— —— —— —— —— MOEP font 31 UPPER CASE text

Remarks:

- Captured in the positional file
- Identification coded as Text.type"Transportation" in the non-positional file

DEM Y

Subclass: Road.surface"Paved".lanes"2".type"Divided"	DA25050180	02/03

Definition: A specially prepared route on land for the movement of vehicles (other than railway vehicles) from place to place. A 2 lane road with surface of concrete, asphalt or tar-gravel.

Positional Verification	Cartographic Representation
0.25mm width solid line ———————— plot colour RED	0.20mm width solid line 0.5mm between lines ════════════ MOEP font 31 UPPER CASE text

Remarks:

- 1 lane each way
- Captured in the positional file
- Identification coded as Text.type"Transportation" in the non-posiional file
- Lane separation must not exceed 50 metres
- NOTE: This classification may be used for "undivided" 2 lane roads

DEM N

Subclass: Road.surface"Paved".lanes"2".type"Divided".status"U/C"	DA25050310	02/03
Definition: A specially prepared route on land for the movement of vehicles (other than railway vehicles) from place to place. A 2 lane road with surface of concrete, asphalt or tat-gravel that is under construction at time of capture.		

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes —— —— —— —— —— —— —— plot colour RED	0.20mm width line 5.0mm dash 1.0mm between dashes UNDER CONSTRUCTION —— —— —— —— —— —— —— 0.5mm between lines MOEP font 31 UPPER CASE text

Remarks:

- 1 lane each way
- Captured in the positional file
- Identification coded as Text.type"Transportation" in the non-positional file
- Lane separation must m=not exceed 50 metres
- NOTE: This classification may be used for "undivided" 2 lane roads

DEM Y

Subclass: Road.surface"Paved".lanes"2".lanedir"OneWay"	DA25100190	02/03

Definition: A specially prepared route on land for the movement of vehicles (other than railway vehicles) from place to place. A 2 lane road with surface of concrete, asphalt or tar-gravel.

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash .05mm dot — ·· — ·· — ·· — ·· — 2.0mm from dash end to dot centre 2.0mm between dots plot colour BROWN	0.20mm width solid line 0.5mm between lines ════════════

Remarks:

- 2 lanes one way
- Captured in the positional file

DEM Y

Subclass: Road.surface"Paved".lanes"2".lanedir"OneWay".status"U/C"	DA25100330	02/03

Definition: A specially prepared route on land for the movement of vehicles (other than railway vehicles) from place to place. A 2 lane   unidirectional road with a surface of concrete, asphalt or tar-gravel that is under construction at time of data capture.

Positional Verification	Cartographic Representation
0.5mm dot ··· plot colour BROWN	0.20mm width line 5.0mm dash 1.0mm between dashes UNDER CONSTRUCTION — — — — — — — 0.5mm between lines MOEP font 31 UPPER CASE text

Remarks:

- 2 lane one way
- Captured in the positional file
- Identification coded as Text.type"Transportation" in the non-positional file

DEM Y

Subclass: Road.surface"Paved".lanes"3".type"Undivided"	DA25100200	02/03

Definition: A specially prepared route on land for the movement of vehicles (other than railway vehicles) from place to place. A 3 lane road with surface of concrete, asphalt or tat-gravel.

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes plot colour PURPLE	0.25mm width solid line 1.0mm between lines

Remarks:

- Typically 3 lanes one way
- Captured in the positional file

DEM Y

Subclass: Road.surface"Paved".lanes"3".type"Undivided".status"U/C"	DA25100340	02/03

Definition: A specially prepared route on land for the movement of vehicles (other than railway vehicles) from place to place. A 3 lane road with a surface of concrete, asphalt or tar-gravel that is under construction at time of capture.

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 2.0mm dash 1.0mm between dashes plot colour PURPLE	0.25mm width line 5.0mm dash 1.0mm between dashes **UNDER CONSTRUCTION** 1.0mm between lines MOEP font 31 UPPER CASE text

Remarks:

- Typically 3 lanes one way
- Captured in the positional file
- Identification coded as Text.type"Transportation" in the non-positional file

DEM Y

Subclass: Road.surface"Paved".lanes"4".type"Divided"	DA25050190	02/03
Definition: A specially prepared route on land for the movement of vehicles (other than railway vehicles) from place to place. A 4 lane road where the lanes of traffic moving in opposite directions are separated by an obstruction and with a surface of concrete, asphalt or tar-gravel that is under construction at time of data capture.		

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 0.5mm dot 2.0mm from dash end to dot centre 2.0mm between dots plot colour PURPLE	0.25mm width line 0.6mm between dashes 0.6mm between lines

Remarks:

- 2 lanes each way.
- Separation not more than 50 metres
- Captured in the positional file
- Identification coded as Text.type"Transportation" in the non-positional file

DEM Y
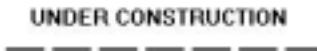
Subclass: Road.surface"Paved".lanes"4".type"Divided".statue"U/C"	DA25050320	02/03

Definition: A specially prepared route on land for the movement of vehicles (other than railway vehicles) from place to place. A 4 lane road where the lanes of traffic moving in opposite directions are separated by an obstruction and with a surface of concrete, asphalt or tar-gravel that is under construction at time of data capture.

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 2.0mm dot _ _ _ _ _ _ _ _ _ _ _ _ _ 1.0mm between dashes plot colour PURPLE	0.25mm width line 5.0mm dash 1.0mm between dashes UNDER CONSTRUCTION ═══════════════ 0.6mm between lines MOEP font 31 UPPER CASE text

Remarks:

- 2 lanes each way.
- Separation not more than 50 metres
- Captured in the positional file
- Identification coded as Text.type"Transportation" in the non-positional file

DEM Y

*Subclass:*Road.surface"Paved".lanes"4".type"Undivided"	DA25100210	02/03

Definition: A specially prepared route on land for the movement of vehicles (other than railway vehicles) from place to place. A 4 lane road where the lanes of traffic moving in opposite directions are not separated by an obstruction with a surface of concrete, asphalt or tar-gravel.

Positional Verification	Cartographic Representation
0.25mm width line 1.5mm dash 1.5mm between dashes _ _ _ _ _ _ _ _ _ _ _ _ _ plot colour PURPLE	0.25mm width solid line 1.0mm between lines ═══════════════

Remarks:

- 2 lanes each way
- Not divided
- Captured in the positional file

DEM Y

Subclass: Road.surface"Paved".lanes"4".type"Divided".status"U/C"	DA25100350	02/03

Definition: A specially prepared route on land for the movement of vehicles (other than railway vehicles) from place to place. A 4 lane road where the lanes of traffic moving in opposite directions are not separated by an obstruction with a surface of concrete, asphalt or tar-gravel that is under construction at time of capture.

Positional Verification	Cartographic Representation
0.5mm dot bd●●●bd●●bd●●bd●●bd●●bd●●bd●●bd●●bd●●bd●● plot colour PURPLE	0.25mm width line 5.0mm dash 1.0mm between dashes UNDER CONSTRUCTION — — — — — — — 1.0mm between lines MOEP font 31 UPPER CASE text

Remarks:

2 lanes each way
Not divided
Captured in the positional file
Identification coded as Text.type"Transportation" in the non-positional file

DEM Y

*Subclass:*Road.surface"Paved".lanes"6".type"Divided"	DA25050200	02/03
Definition: A specially prepared route on land for the movement of vehicles (other than railway vehicles) from place to place. A 6 lane road where the lanes of traffic moving in opposite directions are separated by an obstruction with a surface of concrete, asphalt or tar-gravel.		

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 0.5mm dot — · · — · · — · · — · · — 2.0mm from dash end to dot centre 2.0mm between dots plot colour GREEN	0.25mm width line 0.75mm between lines

Remarks: • 3 lanes each way • Separation not lmore than 50 metres • Captured in the positional file

DEM Y

Subclass: Road.surface"Paved".lanes"6".type"Divided".status"U/C"	DA25050330	02/03

Definition: A specially prepared route on land for the movement of vehicles (other than railway vehicles) from place to place. A 6 lane road where the lanes of traffic moving in opposite directions are separated by an obstruction with a surface of concrete, asphalt or tar-gravel that is under construction at time of capture

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 2.0mm dash —— —— —— —— —— —— —— 1.0mm between dashes plot colour GREEN	0.25mm width line 5.0mm dash 1.0mm between dashes 0.75mm between lines UNDER CONSTRUCTION — — — — — — — MOEP font 31 UPPER CASE text

Remarks:

- 3 lanes each way
- Separation not lmore than 50 metres
- Captured in the positional file
- Identification coded as Text.type "Transportation" in the non-positional file

DEM Y
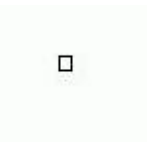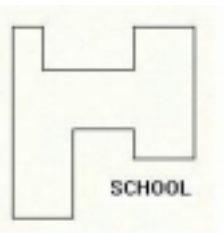
Subclass: Road.surface"Paved".lanes"6".type"Undivided"	DA25100220	02/03

Definition: A specially prepared route on land for the movement of vehicles (other than railway vehicles) from place to place. A 6 lane road where the lanes of traffic moving in opposite directions are not separated by an obstruction with a surface of concrete, asphalt or tar-gravel.

Positional Verification	Cartographic Representation
0.25mm width line 1.5mm dash 1.5mm between dashes _ _ _ _ _ _ _ _ _ _ _ _ _ _ plot colour GREEN	0.25mm width solid line 1.25mm between lines ══════════════════

Remarks:

- 3 lanes each way
- Not divided
- Captured in the positional file

DEM Y

Subclass: Road.surface"Paved".lanes"6".type"Divided".status"U/C"	DA25100360	02/03
Definition: A specially prepared route on land for the movement of vehicles (other than railway vehicles) from place to place. A 6 lane road where the lanes of traffic moving in opposite directions are not separated by an obstruction with a surface of concrete, asphalt or tar-gravel that is under construction at time of capture.		

Positional Verification	Cartographic Representation
0.5mm dot	0.25mm width line
	5.0mm dash
	1.0mm between dashes
	UNDER CONSTRUCTION
bd●●●bd●●bd●●●bd●●bd●●●	══ ══ ══ ══ ══ ══ ══
	1.25mm between lines
plot colour GREEN	MOEP font 31 UPPER CASE text

Remarks:
• 3 lanes each way   • Not divided   • Captured in the positional file   • Identification coded as Text.type"Transportation" in the non-positional file
DEM Y

*Subclass:*Road.surface"Rough"	DA25150000	02/03
Definition: A specially prepared route on land for the movement of vehicles (other than railway vehicles) from place to place. An unimproved route (logging or secondary road) (4-wheel drive only)		

Positional Verification	Cartographic Representation
0.25mm width line 1.5mm dash 1.5mm between dashes plot colour ORANGE	0.25mm width line 5.0mm dash 1.0mm between dashes

Remarks:

- Logging road (secondary)
- 4-wheel drive only
- 400 metres minimum
- Captured in the positional file

DEM Y

S
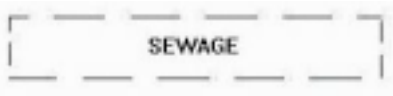
*Subclass:*Sand/GravelBar (area outline*)*	GE25850000	02/03
(area symbol)	GE90100000	01
Definition: An area of sand or gravel projecting into or protruding from a body of water.		

Positional Verification	Cartographic Representation
AREA OUTLINE AREA SYMBOL 0.25mm width solid line text "SB" plot colour BROWN	AREA OUTLINE AREA SYMBOL 0.20mm width line random fill or 1.5mm dash 1.5mm between dashes area outline feature 0.25mm dots

Remarks:

- Must be at least 75 metres in length and 20 metres in width and not covered by water (date of photopraphy)
- Captured to scale in the positional file
- The area symbol is included in the non-positional file

DEM Y

219

Subclass:School	(to scale)	BE26000000	02
(symbolized)		BE90900000	01

Definition: An institution for primaty or secondary education.

Positional Verification		Cartographic Representation	
TO SCALE	SYMBOLIZED	TO SCALE	SYMBOLIZED
0.25mm width solid line	0.25mm width solid line	0.25mm width solid line	0.25mm width solid line
	0.8mm open square		0.8mm filled square
MOEP font 31 UPPER CASE text			
plot colour BLACK		MOEP font 31 UPPER CASE text	

Remarks:

- Capture to scale in the positional file using the right hand rule when one side is > 30m. or the total area is > 900 sq. m.
- Capture as a point in the positional file oriented to the true ground position when total area is < 900 sq. m. with no sides > 30m.
- Determine building dimensions by the outline of their roofs, including attached garages and multilevel parking.
- Place building identification as Text.type"Landmark" in the non-positional file, size determined by building size

DEM N

*Subclass:*Scree	HB26150000	02/03
Definition: A sloping mass of debris consisting of stones and rock fragments located at the foot of a cliff or steep rocky face.		

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 0.5mm between dashes	0.25mm width line 1.5mm dash 1.5mm between dashes
2.0mm from dash end to dot centre plot colour PURPLE	MOEP font 31 UPPER CASE text

Remarks:

- Longest dimension 600 metres
- Captured to scaler in the positional file
- Identification coded as Text.type"Landform" in the non-positional file

DEM N

*Subclass:*SeaWall	GE26250000	02/03
Definition: A wall built to prevent toe encroachment of sea water on land.		

Positional Verification	Cartographic Representation
0.25mm width solid line	0.25mm width solid line 1.25mm filled triangle 4.0mm between triangles
plot colour BLACK	

Remarks:

Minimum length 100 metres
Line-low side
Triangles - high side (right side)
Captured in the positional file

DEM Y

Subclass:SettlingPond	EA26700110	02/03

Definition: An area containing the liquid waste from an industrial complex.

Positional Verification	Cartographic Representation
0.25mm width solid line	0.25mm width solid line
	SETTLING POND
plot colour BLACK	MOEP font 31 UPPER CASE text

Remarks:

- 1 hectare minimum
- Captired to scale in the positional file
- Identification coded as Text.type"Landmark" in the non-positional file

DEM Y

Subclass:SewageTreatmentArea	AP26750000	02/03

Definition: An area where sewage is stored and/or processed.

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes	0.25mm width line 3.0mm dash 1.5mm between dashes
	SEWAGE
plot colour BLACK	MOEP font 31 UPPER CASE text

Remarks:

- 1 hectare minimum
- Captired to scale in the positional file
- Identification coded as Text.type"Landmark" in the non-positional file

DEM N

Subclass:Silo	(symbolized)	BA90000110	01

Definition: An upright cylindrical structure used for storing silage.

Positional Verification	Cartographic Representation
0.25mm width solid line 0.8mm open square	0.25mm width solid line 0.8mm filled square
□	■
plot colour BLACK	MOEP font 31 UPPER CASE text

Remarks:

• Captured as a point feature in the positional file when the total area is less than 900 sq. metres with no sides greater than 30 metres.

DEM N

Subclass:Sinkhole	HB27550000	01

Definition: Disappearing stream. A natural funnel shaped depression with underground drainage*.*

Positional Verification	Cartographic Representation
0.25mm width solid line 1.5mm line segment 30º angle	0.25mm width solid line 1.5mm line segment 30º angle
>	>
plot colour RED	

Remarks:

• Used to terminate hanging or disappearing
drainage
• This arrowhead is attached to hanging drainage to show the direction of flow and clarify the stream's termoination
• Captured as a point feature in the positional file

DEM N
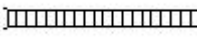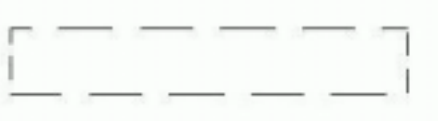
*Subclass:*SkiJump	CL27750000	02/03
Definition: A ramp-like structure built on the side of a hill or mountain for the sport of ski-jumping.		

Positional Verification	Cartographic Representation
0.25mm width solid line **SKI JUMP** MOEP font 31 UPPER CASE text plot colour BLACK	0.25mm width solid line **SKI LIFT** MOEP font 31 UPPER CASE text

Remarks:

- Minimum length 50 metres
- Captured to scale in the positional file
- Identification coded as Text.type"Landform" in the non-positional file

DEM N
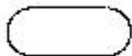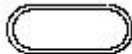
*Subclass:*SkiLift	CL27800000	02/03
Definition: A cable device for transporting skiers up a hill.		

Positional Verification	Cartographic Representation
0.25mm width solid line plot colour BLACK	0.25mm width solid line 0.5mm fadius filled circle 30.0mm between circles **SKI LIFT** MOEP font 31 UPPER CASE text

Remarks:

- Captured in the positional file
- Identification coded as Text.type"Landmark" in the non-positional file

DEM N

Subclass:Slide	(area outline)	HB27900000	02/03
(area symbol)		HB90000000	01

Definition: A landform feature consisting of debris resulting from a sudden descent of a mass of earth or rock.

Positional Verification		Cartographic Representation	
AREA OUTLINE	AREA SYMBOL	AREA OUTLINE	AREA SYMBOL
0.25mm width line 3.0mm dash	7.0mm arrow 3.0mm "S" height	0.20mm width line 1.5mm dash	7.0mm arrow 3.0mm "S" height
0.5mm dot		1.5mm between dashes	
2.0mm from dash end to dot centre			
	MOEP font 31 UPPER CASE text		MOEP font 31 UPPER CASE text
plot colour BLACK			

Remarks:

- Area Outline - Longest dimension over 200 metres
- Captured to scale in the positional file
- AreaSymbol - Point feature
- Arrow to show slide direction
- Area symbol is captured in the non-positional file

DEM Y

*Subclass:*SmokestackChimney	CG28300000	01

Definition: An upright flue through which combustion gasses and smoke are discharged into the air.

Positional Verification	Cartographic Representation
0.25mm width solid line 1.0mm radius circle ○ plot colour BLACK	0.25mm width solid line 1.0mm radius circle ○ Chimney MOEP font 31 UPPER CASE text

Remarks:

- When over 30 metres tall the height is captured as an attribute (MOEP type 05)
- Captured as a point feature in the positional file
- Identification coded as Text.type"Landmark" in the non-positional file

DEM N

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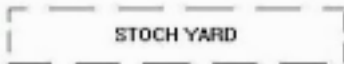
*Subclass:*Snowshed	DD283500000	02/03

Definition: A roofed structure built over a road or railway in mountainous areas to prevent snowslides from blocking a travelled route.

Positional Verification	Cartographic Representation
0.25mm width solid line 1.5mm filled dot •————————•———————— plot colour BLACK	SNOWSHED TERMINATOR 0.25mm width solid line 0.25mm width solid line 1.6mm line length 0.7mm line at each end [ⅢⅢⅢⅢⅢⅢⅢ] 1.6mm betweem lines 45º angle

Remarks:

- Captured to scale in the positional file as a single line defining the apparent centre line
- More than 40 metres in length plot to scale
- Do not duplicate this feature as a road or railway

DEM N

*Subclass:*SportsField	AL21900000	02/03

Definition: A hard or loose-surfaced area which sporting events take place.

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes plot colour BLACK	0.25mm width line 3.0mm dash 1.5mm between dashes MOEP font 31 UPPER CASE text

Remarks:

- 1 hectare minimum
- Capture to scale in the positional file
- Identification coded as Text.type"Landmark" in the non-positional file

DEM N

*Subclass:*SportTrack	AL22650110	02/03

Definition: A track which is used for human competition as opposed to one used for racing horses, automobile, etc.

Positional Verification	Cartographic Representation
0.25mm width line plot colour BLACK	0.25mm width line 0.50mm between lines SPORT TRACK MOEP font 31 UPPER CASE text

Remarks:

- Captured to scale in the positional file
- Identification coded as Text.type"Landmark" in the non-positional file

DEM N

Subclass:SpotHeight	HA28700000	01
Definition: A point on the map for which the elevation above sea level has been determined photogrammetrically.		

Positional Verification	Cartographic Representation
0.25mm width line + *318* plot colour BLACK	0.25mm width line 0.5mm diametre dot • *318* 1.4mm text height MOEP font 32 (sloped) text

Remarks:

• Spot heights are discrete and distinct points of measured height
• In flat areas a minimum of one spot height every 1000 metres is required
• Spot heights shall be displayed to the nearest metre
• Captured as a point in the positional file
• Identification coded as Text.type"Hypsographic" in the non-positional file.

DEM Y
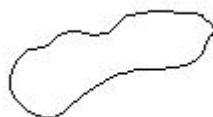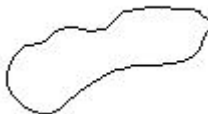
Subclass:Spring	GF28750000	01
Definition: A place where water flows naturally from the ground.		

Positional Verification	Cartographic Representation
NOT SHOWN	0.7mm radius filled circle

Remarks:

• This feature is not captured as part of the positional file
• It is added to the Toponymy layer from the 1:50 000 NTS published map
• The tail is downstream

DEM N

Subclass:StockYard	AB33850150	02/03

Definition: A holding area for livestock.

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes	0.20mm width line 3.0mm dash 1.5mm between dashes
	STOCH YARD
plot colour BLACK	MOEP font 31 UPPER CASE text

Remarks:

- 1 hectare minimum
- Capture to scale in the positional file
- Identification coded as Text.type"Landmark" in the non-positional file

DEM N

Subclass:Swamp	(area outline)	GC30050000	02/03
(area symbol)		GC90200000	01

Definition: A water-saturated area, intermittently or perminantly covered with water, having shrubs

Positional Verification		Cartographic Representation	
AREA OUTLINE	AREA SYMBOL	AREA OUTLINE	AREA SYMBOL
0.25mm width line	"S" text	0.25mm width line	0.20mm width upper lines
3.0mm dash		1.5mm dash	0.35mm width base lines
1.5mm between dashes			
S			
		1.5mm between dashes MOEP font 31 UPPER CASE text	
plot colour RED			

Remarks:

- Area Outline - 1 hectare minimum
- Captured in the positional file
- Area Symbol - Point feature
- Captured as a point feature in the non-positional file
- Duplicate swamps as trees when next to clearing
- Do not duplicate swamp as trees when next to trees

DEM Y
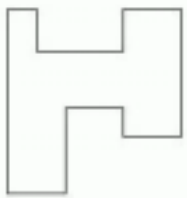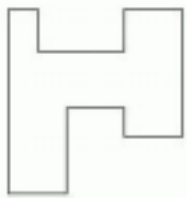
T

*Subclass:*TailingArea	AP30300000	02/03
Definition: An area containing the solid waste material prodiced in the minimg and milling of ore.		
Positional Verification	Cartographic Representation	
0.25mm width line 3.0mm dash 1.5mm between dashes plot colour BLACK	0.25mm width solid line 1.0mm tick length 0.20mm tick width 1.5mm between ticks TAILING AREA MOEP font 31 UPPER CASE text	
Remarks: • 1 hectare minimum • Captured to scale in the positional file • Identification coded as Text.type"Landmark" in the non-positional file • Tailing pile or area are the same		
DEM N		

Subclass:TailingPond	AP90300100	02/03

Definition: A hydrologic feature used to separate, collect, ir filter waste material from an industrial complex.

Positional Verification	Cartographic Representation
0.25mm width solid line	0.35mm width solid line
plot colour BLACK	

Remarks:

- Longest dimension over 25 metres
- Captured to scale in the positional file

DEM Y

*Subclass:*Tank	(to scale)	EA30400000	02/03
(symbolized)		EA90000000	01

Definition: A cylindrical receptical used for storage*.*

Positional Verification		Cartographic Representation	
TO SCALE	SYMBOLIZED	TO SCALE	SYMBOLIZED
0.25mm width solid line	0.7mm radius filled circle	0.20mm width solid line	0.7mm radius filled circle
	•		•
		TANK	
plot colour BLACK		MOEP font 31 UPPER CASE text	

Remarks:

- To Scale - Area lerger than 900 sq. metres
- Captured in the positional file
- Symbolized - Area less than 900 sq. metres
- Captured in the positional file
- Identification coded as Text.type"Landmark" in the non-positional file

DEM N
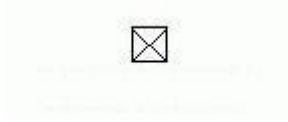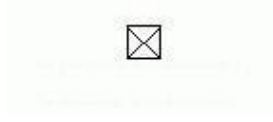
*Subclass:*Text.type"AerialTriangulation"	KC90000000	06
*Subclass:*Text.type"Generic"	KC91000000	06
*Subclass:*Text.type"Hydrographic"	KB14250000	06
*Subclass:*Text.type"HypsographicContourNumbers"	KC14300130	06
Subclass: Text.type"HypsographicExcludingContourNumbers"	KC14300000	06
Subclass:Text.type"Landcover"	KC14300310	06
Subclass:Text.type"Landform"	KC14300320	06
Subclass:Text.type"Landmark"	KC90200000	06
Subclass:Text.type"Toponymy"	KC90300000	06
Subclass:Text.type"Transportation"	KC90100000	06

Definition: Feature associated identification text	
Positional Verification	Cartographic Representation
0.25mm width solid line Text Sample *Text Sample* plot colour BLACK	MOEP font 31 text Text Sample MOEP font 32 text *Text Sample*

Remarks:

- Text feature
- Note: No text in included in the positional file
- Required text that is captured at the positional stage is shown in the detailed sprcifications examples

DEM N

*Subclass:*TollGate	(to scale)	DD31000000	02/03
(symbolized)		DD91000000	01

Definition: A barrier and/or booth on a transportation route at which a used fee is charged

Positional Verification		Cartographic Representation	
TO SCALE	SYMBOLIZED	TO SCALE	SYMBOLIZED
0.25mm width solid line	0.25mm width solid line 0.8mm open square	0.25mm width solid line	0.25mm width solid line 0.8mm filled square
plot colour BLACK			

Remarks:

• Capture to scale in the positional file using the right hand rule when one side is > 30m. or the total area is > 900 sq. m.
• Capture as a point in the positional file oriented to the true ground position when total area is < 900 sq. m. with no sides > 30m.
• Determine building dimensions by the outline of their roofs, including attached garages and multilevel parking.

DEM N

*Subclass:*Tower.type"Microwave"	CC31150110	01

Definition: A high structure that receives and transmits microwave communication signals.

Positional Verification	Cartographic Representation
0.25mm width solid line 2.0mm square	0.25mm width solid line 2.0mm square MICROWAVE
plot colour BLACK	MOEP font 31 UPPER CASE text

Remarks:

• When over 30 meters tall, height is captured as an attribute (MOEP type 05)
• Captured as a point feature in the positional file
• Identification coded as Text.type"Landmarl" in the non-positional file

DEM N
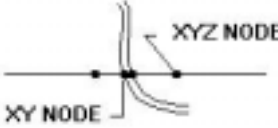
*Subclass:*Tower.type"Transmission"	CC90000000	01
Definition: A high structure supporting a transmission line built to provide clearance above the surrounding objects or features.		
Positional Verification	Cartographic Representation	
0.25mm width solid line 2.0mm square ⊠ plot colour BLACK	NOT SHOWN	
Remarks: • When over 30 meters tall, height is captured as an attribute (MOEP type 05) • Transmission towers are not plotted at the representational stage • Captured to scale in the positional file		
DEM N		
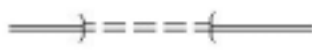
*Subclass:*Tower.type"Unspecified"	CC31150000	01
Definition: A high structure built to provide clearance above surrounding objects or features.		
Positional Verification	Cartographic Representation	
0.25mm width solid line 2.0mm square ⊠ plot colour BLACK	0.25mm width solid line 2.0mm square ⊠ MOEP font 31 UPPER CASE text	
Remarks: • When over 30 metres tall, height is captured as an attribute (MOEP type 05) • Captured as a point feature in the positional file.		
DEM N		

*Subclass:*Trail	DD31700000	02/03

Definition: A narrow path or route, not wide enough fot the passage of a four wheeled vehicle, suitable for hiking or cycling. Park paths and boardwalks are considered trails.

Positional Verification	Cartographic Representation
0.25mm width line1.5mm dash 1.5mm between dashes – – – – – – – – – – – – – – plot colour BROWN	0.25mm width line 2.0mm dash 1.0mm between dashes – – – – – – – – – – – – – –

Remarks: • Minimum length 400 metres • Named features only • Captured in the positional file

DEM Y

*Subclass:*TrailerPark	AN31950000	02/03
Definition: An area dedicated to semi-perminant placement of mobile homes.		

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 1.5mm between dashes plot colour BLACK	0.25mm width line 3.0mm dash 1.5mm between dashes TRAILER PARK MOEP font 31 UPPER CASE text

Remarks: • Trailer homes will be shown as symbolized buildings except when part of a built-up area • All homes will be captured and included in the positional file but only an appropriate number will be included in the representatyional file • Captured to scale in the positional file • Identification coded as Text.type"Landmark" in the non-positional file

DEM N

_Subclass:_TransmissionLine	EA16400120	02

Definition: Primary - one or more cables for communications or power transmission.

Positional Verification	Cartographic Representation
0.25mm width line 3.0mm dash 0.5mm dot 2.0mm between dash end and dot centre 2.0mm between dots plot colour BLACK	0.20mm width line 0.5mm radius filled circle 3.0mm between circles

Remarks:

- Continuous over 4 kilometres minimum
- Capture transmission line at tower base
- No intermediate points captured between tower bases
- Captured in the positional file.

DEM N

Subclass:Trestle	DD93200000	02/03
Definition: A braced framework erected along a travelled route to span a depression or opstacle.		

Positional Verification	Cartographic Representation
0.25mm width solid line plot colour BLACK	0.35mm width line TRESTLE DECK - 0.8mm between lines TERMINATORS - 0.7mm line at ends 45º angle MOEP font 31 UPPER CASE text

Remarks:

- Captured to scale in the positional file as a single line defining the apparent centre line
- More than 40 metres in length plot to scale
- Capture width as type 05
- Do not duplicate this feature as a road or railway

DEM N

*Subclass:*Tunnel	DD93220000	02/03

Definition: A subterranian passageway providing a route for roads, rail, and/or pedestrian traffic.

Positional Verification	Cartographic Representation
0.25mm width solid line XYZ NODE plot colour BLACK	TUNNEL 0.25mm width line 2.0mm dash 1.0mm between dashes 0.8mm between dashes TERMINATOR 0.35mm width line 0.7mm line at 45º angle to 1.6mm line perpindicular to tunnel

Remarks:

- Captured to scale in the positional file
- dentification coded as Text.type"Transportation" in the non-positional file

DEM N

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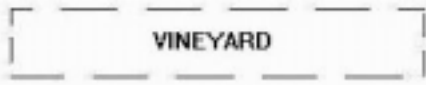
*Subclass:*Turntable	DD32300000	01
Definition: A railed platform used to turn locomotives.		

Positional Verification	Cartographic Representation
0.25mm width line 1.0mm readius open circle plot colour BLACK	0.25mm width line 1.0mm radius open circle TURNTABLE MOEP font 31 UPPER CASE text

Remarks:

- Captured in the positional file
- Identification coded as Text.type"Transportation" in the non-positional file

DEM N

U

Subclass:University	(to scale)		BE32400000	02
(symbolized)			BE91000000	01
Definition: An institution fot the highest level of learning, study, and research, and empowered to grant degrees.				

Positional Verification		Cartographic Representation	
TO SCALE 0.25mm width solid line	SYMBOLIZED 0.25mm width solid line 0.8mm open square	TO SCALE 0.25mm width solid line	SYMBOLIZED 0.25mm width solid line 0.8mm filled square
MOEP font 31 UPPER CASE text plot colour BLACK		MOEP font 31 UPPER CASE text	

Remarks:

Capture to scale in the positional file using the right hand rule when one side is > 30m. or the total area is > 900 sq. m.

Capture as a point in the positional file oriented to the true ground position when total area is < 900 sq. m. with no sides > 30m.

Determine building dimensions by the outline of their roofs, including attached garages and multilevel parking.

Place buildinf type identification as Text.type "Landmark" in the non-positional file, size determined by building size

DEM N

V

Subclass:Vineyard	JB32800000	02/03
Definition: A plantation of grapevines.		
Positional Verification	**Cartographic Representation**	
0.25mm width solid line 1.5mm dash 1.5mm between dashes plot colour BLACK	0.25mm width solid line 3.0mm dash 1.5mm between dashes VINEYARD MOEP font 31 UPPER CASE text	
Remarks: • Minimum 1 hectare • Captured to scale in the positional file • Identification coded as Text.type"Landmark" in the non-positional file		
DEM N		
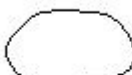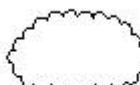
Subclass:VolcanicCrater	HB07650130	02
Definition: A bowl - shaped depression at the summit of or around the orifice of a volcano cone, hill.		
Positional Verification	**Cartographic Representation**	
3.0mm dash 1.5mm between dashes plot colour BLACK	0.20mm width tick 1.0mm tick length 1.5mm between dashes VOLCANIC CRATER MOEP font 31 UPPER CASE text	
Remarks: • Minimum 1 hectare • Captured to scale in the positional file • Identification coded as Text.type"Landmark" in the non-positional file		
DEM Y		

W
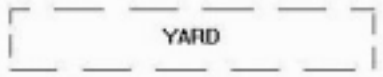
Subclass:Wall.type"Retaining"	DD24600000	02/03
Definition: A vertical structure constructed to enclose or divide an area.		

Positional Verification	Cartographic Representation
0.25mm width solid line	0.25mm width solid line
	1.25mm filled triangles
	4.0mm between triangles
plot colour BROWN	

Remarks:
• Minimum length 100 metres • Line - Low side • Captured to scale in the positional file

DEM Y

Subclass:WaterLevel(Dateof Photography)	HA33100000	01

Definition: The height above mean sea level of a water surface.

Positional Verification	Cartographic Representation
0.25mm width solid line	0.25mm width solid line
+ 320	± 320
plot colour BLACK	MOEP font 32 UPPER CASE text

Remarks:

- Lakes with shortest side over 300 metres require a water level
- Capture as a point feature in the positional file
- dentification coded as Text,.type"Hydrographic" in the non-positional file

DEM N
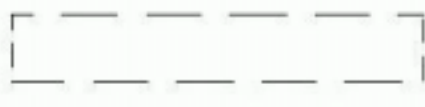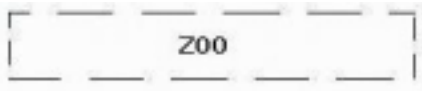
Subclass:WeighScale(building) (to scale)		CG33250000	02/03
(symbolized)		CG33250100	01

Definition: A facility dedicated to the weighing of commercial vehicles.

Positional Verification		Cartographic Representation	
TO SCALE 0.25mm width solid line	SYMBOLIZED 0.25mm width solid line 0/8mm open square	TO SCALE 0.25mm width solid line	SYMBOLIZED 0.25mm width solid line 0.8mm filled square
 plot colour BLACK	□		■

Remarks:

- Capture to scale in the positional file using the right hand rule when one side is > 30m. or the total area is > 900 sq. m.
- Capture as a point in the positional file oriented to the true ground position when total area is < 900 sq. m. with no sides > 30m.
- Determine building dimensions by the outline of their roofs, including attached garages and multilevel parking.

DEM N

*Subclass:*Wooded Area	JA33750000	02/03
Definition: A land area which is at least six (6) percent covered with trees that are two (2) metres or more in height.		

Positional Verification	Cartographic Representation
0.25mm width solid line	0.25mm width solid line 1.0mm scallop
plot colour GREEN	MOEP font 31 UPPER CASE text

Remarks:

- Capture to scale in the positional file
- minimum area 1 hectare
- Vertical accuracy 20 metres
- The intent is to show all wooded areas that have a crown closure of 6% or greater and cover an area greater than 1.0 hectare
- Areas that are evenly distributed with wooded area polygons may be grouped together if they cover 60% of the total area in question
- Wooded area boundaries along rightofways (i.e., Roads, Transmission lines etc.) will not be captured unless the rightofway is 40 metrws or greater in width
- Naturally occurring or man-made lcearings of 0.1 hectares or greater that are enclosed within wooded areas as defined above will be shown as "holes" in the wooded area polygon, i.e. the lines bounding the non-wooded area are coded as wooded area features with the forest to the right of the line and the clearing to the left of the line
- Particular care will be taken to show the true shape of the non-wooded areas in extensive wooded areas
- Forestry cut blocks which do not show obvious signs of substantial regeneration (2 metres or more) will be shown as non-wooded areas
- Scrub and sparse trees of less than 6% coverage will be shown as non-wooded areas

DEM N

Y

Subclass: Yard		AB33850000	02/03
Definition: An enclosure whithin which materials may be stored.			
Positional Verification		Cartographic Representation	
0.25mm width line 1.5mm dash 1.5mm between dashes plot colour BLACK		0.20mm width line 3/0mm dash 1.5mm between dashes YARD MOEP font 31 UPPER CASE text	
Remarks: • Minimum area 1 hectare • Captured to scale in the positional file • Identification coded as Text.type"Landmark" in the non-positional file			
DEM N			

Z

Subclass:Zoo	AL33900000	02/03
Definition: A park (zoological garden) or area where animals are kept for study and display		

Positional Verification	Cartographic Representation
0.25mm width line 1.5mm dash 1.5mm between dashes plot colour BLACK	0.25mm width line 3.0mm dash 1.5mm between dashes ZOO MOEP font 31 UPPER CASE text
Remarks: • Minimum area 1 hectare • Captured to scale in the positional file • Identification coded as Text.type"Landmark" in the non-positional file	
DEM N	

PART III Detailed Business Object Specifications

Detailed Business Object Specifications

The 1: 20 000 Baseline datasets contain spacial and feature aidentification elements only. No associated textual database information.Appendices

PART IV Appendices

Appendix A - Deliverables

A.1 Data Capture Deliverables

Positional File
1-2400 foot, 1/2 inch, magnetic tapes containing files, i.e.

Data File 1	Digital Elevation Model
Data File 2	Raw Contour File
Data File 3	Non-Positional File
Data File 4	Planimetric Positional File

  Verification Plots:
- one DEM plot on paper
- one colour planimetric only plot on paper
- one contour plot on paper - brown contours with black indexes
- one combined planimetric and contour plot in colour on paper
- one polygon closure plot on paper
- one Branch approved node checking plot on paper
- one colour planimetric copy for classification (check plot copy)

Model set up records for all models covering the sheet.

Data Capture prints and diapositives for all models covering the sheet.

Sheet sign-off record indicating quality control procedures completed.

Quality Assurance check statistics and related information.

Quality Assurance plots.

Toponymy overlay and contour enhancement for representational file processing.

A.2 Cartographic Enhancement Deliverables

Representational File

1 magnetic tape, 2400 ft, 1/2 inch, containing two files.
    File 1   Planimetry, toponymy, other text and surround
    File 2   Contours, contour numbers

1 colour coded check plot on paper, produced directly from the IGDS Representation tape for inspection.
Plot   Planimetry, text, surround contours and contour numbers

2 monochrome mylar final plots
Plot 1   Black liquid ink plot - Planimetry, text and partial surround
Plot 2   Black liquid ink plot - Contours and contour numbers

The map sheet docket containing all information relative to the production of the Position and Representation files.

A.3 Edit Notations

A standard set of edit notation based on the Federal system will be used based on a combination of colours, symbology and text as shown below. This system will be used by all editors in order that there will be no ambiguity as to the meaning of any edit notation.

Symbology

^	=	Add
X	=	delete
AMC	=	Amend Code
AME	=	Amend Elevation
AMO	=	Amend Orientation
AMP	=	Amend Position of Feature
AMR	=	Amend to Read
Tu	=	Touch up
Colour		
RED	=	Positional Contractor Quality Check
ORANGE	=	Representational Contractor Quality Check
PURPLE	=	Branch Quality Audit

A.4 Procedures for Marking Contractor Toponymy Submissions

1. All Branch markings and corrections will be done in PURPLE as indicated in the edit notation colours.

2. Omitted names will be placed by Branch inspectors, as they should appear in the Representation submission.

3. The placement of names that require moving will be indicated with a line, this line will roughly indicate the beginning and end of a word with ticks.

4. The first letter of words to be placed will generally be bottom left justified. If proper name placement is dependent on the accurate placement of the end of a word, the last letter of the word will be printed indicating right justification.

5. Name placement in linear lake and wide doubleline river features will be indicated with a line having centre justification.

6. The moving of spot heights for clarity and to avoid conflict will be indicated with a line (see 3 above) and will be arrowed from the current position to the new position.

7. Text to be deleted will be crossed out with an X as indicated in the edit notation symbology.

8. Each contour label in a set of contour elevations will be indicated with a pair of ticks.

A.5 General Deliverables

Contractors will submit Operating Procedures for Branch approval that will include the following:

- production diagram
- resume of all production personnel
- photogrammetric equipment annual calibration reports
- quality assurance procedures

Appendix B Representation File Editing Guidelines (Cartographic Enhancement)

Appendix B - Cartographic Enhancement

B.1 General

These guidelines apply to the production of the Representational file and the map separations listed in Part I, Section 3.5.

Notwithstanding any instructions given here, all edits of the Representational File will conform to good cartographic practices.

B.2 Hierarchical Order for Feature Positioning

The Representational File will be edited in such a manner that the final product is cartographically acceptable. Every effort will be made to avoid conflict of data, with the restriction that survey data, survey control monuments, etc., will not be positionally edited.

These features are listed in the hierarchical order that will dictate precedence in feature positioning on the Representational File. (See B.4)

The following general rules for placement of symbology will further clarify this procedure.

B.2.1   Point Symbol (other than survey control)
These symbols should not normally be moved, unless there is no other choice

B.2.2   Linear Symbology
May be moved from the actual location, or if two features at the same level on the hierarchy conflict, they may be moved relative to each other equally from the actual position.

B.2.3   Area Symbology
Those features which define an area may have one or more sides adjusted for clarity.

B.2.4   Textual Information
Text, such as cultural, topographic and hydrographic are the most flexible features for re-positioning.

B.3 Specific Editing Situations

All features including contours will be removed from inside primary and secondary road number symbols.

All features including contours will be removed from inside utility symbols.

Hydrography, and where applicable, roads and railways will be removed from between the two sides of a bridge symbol or feature.

Area symbols such as marsh and swamp may be scaled by a factor of 0.75 to permit placement within the feature boundary. If the scaled symbol cannot be placed inside the feature, it will be placed adjacent to the feature.

B.4 Representational Hierarchy
1. Lakes and intermittent lakes.
2. Major rivers and streams.
3. Other streams.
4. Railroads and roads, cutlines.
5. Other hydrography (marshes, swamps) See B.4.1 other features.
6. Buildings and built-up areas.
7. Other cultural detail.
8. Tree line.

B.4.1   Hierarchy of Other Features
1. Glaciers
2. Icefields
3. Moraine
4. Scree
5. Marsh
6. Swamp

B.5 Basic Lettering Standards

B.5.1   Lettering Style
LEROY (Font 31,33 = Vertical, Font 32,34 = Italic)

B.5.2   Range of Text Sizes to be Used (Generic text)

These text sizes are to be used with the generic text, such as rapids, falls, scree, moraine, pit, etc.

LEROY
        60 WT 0 = 1.4mm
80 WT 1 = 1.8mm
100 WT 1 = 2.2mm

B.5.3   Basic Lettering Guidelines
!   Text associated with symbolized features other than hydrographic features will be capitals only.
!   Text associated with natural symbolized hydrographic features will be U/L Italic as Rapids.
The type size of labels may vary depending on the size of the area of length of feature.
!   Labels will be in full, space permitting. However, abbreviations will be accepted if doing so keeps the label within the feature, when specifications require it.
Labels should read from the bottom of the sheet where possible. When the angle of inclination of the linear feature, i.e. conveyor, increases the text will be placed above the feature (when practical) reading from either side of the sheet.
Do not place text so that it appears over vertical.

B.6 Guidelines Regarding Text Placement

Labels along linear features, i.e. CONVEYOR, will be placed above and parallel to the feature where possible. Labels parallel to the neat line with one end of the word immediately adjacent to the central area of the feature.

Labels inside features, i.e. POOL, will be parallel to the bottom side (relative to the neat line) of the feature.

Labels of large irregular area outlines, i.e. PIT, STORAGE AREA, will be parallel to neat line, and, where practical, within the area outline.

Labels outside features, i.e. LOOKOUTS, will be parallel to the neat line.

Railway names will be shown unabbreviated once per map sheet where possible, up to a maximum of 50mm spacing between consecutive words in the name. Abbreviations (e.g. BCR, CPR, etc.) will be used where space does not permit use of the full name, and must be shown twice for railways extending over 250mm on the map sheet.

Appendix C Geographical Nomenclature (Toponymy)

Appendix C - Geographical Nomenclature (Toponymy)

The purpose of nomenclature is to orient the map user to a specific area of interest. Text size selection of named features will vary in relation to the significance of a feature on each individual map sheet, except those with set text sizes, e.g. railway points (station).

Official names of all Municipalities, unincorporated communities, water and land features, and railways including station names will be shown. Current toponymy will be supplied by the Geographic Data BC. All official highway route numbers will be shown. This information is available from the Geographic Data BC.

C.1 Range of Text Sizes to be Used (Toponymy)

LEROY		WT.	LINE WIDTH
60	= 1.4mm	0	0.2mm
80	= 1.8mm	1	0.25mm
100	= 2.2mm	1	0.35mm
120	= 2.6mm	2	0.50mm
140	= 3.1mm	2	0.50mm
175	= 3.7mm	3	0.70mm
200	= 4.3mm	3	0.70mm
240	= 5.2mm	4	1.00mm
290	= 6.3mm	4	1.00mm
350	= 7.7mm	4	1.00mm

Toponymy Letter Spacing Guide

100/120   2.0mm

140 Small   4.0mm

140 Medium   5.0mm

140 Large   6.0mm

175 Small   8.0mm

175 Medium   11.0mm

200 Medium   11.0mm

200 Large   12.0mm

240 Small   15.0mm

240 Medium   20.0mm

240 Large   25.0mm

240 Ex Large   30.0mm

290   35.0mm

(Scale Approximate)

C.2 -   Guidelines for Land Features

C.2.1   Land Features

Lettering of land features will be vertical in capitals unless otherwise specified. All text sizes are shown as Leroy Template numbers. (See Section B.5).

Large Area Land Features

RIDGE, GULCH, FLATS, CANYON   120, 140 (LEROY)
BLUFF   100, 120 (LEROY)

Mountain Range Names

Area Involved   WHOLE SHEET   200 (LEROY)
                  HALF SHEET   175 (LEROY)
                  MINIMUM   140 (LEROY)

Mountains Peaks

MOUNT, MOUNTAIN, PEAK *(abbreviate to MT and MTN)*   *120* (LEROY)

The guidelines for applications for nomenclature to mountain ranges:
When a range is generally in ridge or spline form then the name will be placed along the backbone or height of land. When mountain range consists of several individual summits over a broad area with no clearly defined centre line, and then name placement will be centralized in area involved and parallel to the bottom neat line.

C.2.2 - Cities, Towns, Villages, Settlements, Localities, Railway Points, Post Offices

All of these will be in capitals except for Railway Points, which will be in upper and lower case.

Measured in Square Kilometres:
  0 - 5,   120 (LEROY)   (Railway Points Max 120)
  5 - 10,   140 (LEROY)   (Localities Max 140)
  10 - 15,   175 (LEROY)
  15 - 25,   240 (LEROY)
  25 -   240 (LEROY)

City, town and village names will be positioned within the populated areas when space permits. The text will be positioned to avoid clash with planimetric map detail. This can usually be accomplished by positioning the label over parks, playing fields, storage areas, and hatched areas where no significant detail will be obstructed.

NOTE: Where the railway point (station), Post Offices name is the same as the Municipality or unincorporated community name in which it is situated, the point (station), Post Offices name will not be shown.

C.2.3   Airports (Airfields, Airstrips)

Labelled 120 LEROY for single strip (capitals)
Labelled 140 LEROY for multiple strips (capitals)

C.2.4   Boundary Names

ALBERTA, ALASKA (USA), WASHINGTON (USA), YUKON TERRITORY (capitals)

Labelled 120 LEROY (capitals)

C.2.5   Land Features Within Water Areas

Large land area features, i.e. islands, peninsulas, etc. use same guide as given for water features, (see C.3.4) Small islands 0 - 10 square kilometres use U/L 60, 120 LEROY.

NOTE: Text size will vary depending on density of detail and/or Toponymy in immediate area.

POINT NAMES	120 LEROY
ROCK, ISLET	100 LEROY
ISLETS	100, 120 LEROY

C.3 - Guidelines for Nomenclature of Water Features

Water features, i.e. pond, lake, etc., are labelled in sloped (italic) lettering.

C.3.1   Coastal Features

Open ended coastal drainage feature, i.e. passage, channel, strait. When entire feature appears on map, mark each end; create the centre line through the feature, divide in thirds and place name as per guidelines for creeks and rivers. When only a portion of feature appears on sheet, create centre line from mapped end of feature to neatline and divide this length in thirds.

C.3.2   Closed Ended Water Features

(i.e. *COVE, ARM, SOUND, INLET, HARBOUR, BAY*)

When length of feature is more than 3 times the width then place name as per guidelines for open ended waterways, i.e. inlets, arms, harbours. When the feature is more regular than the 3 to 1 ratio, then the name will be placed centrally parallel to the bottom neat line.

C.3.3   Guidelines for Application fo Nomenclature to Drainage

1.   All named rivers (double-line and single-line) will be capitals.

2.   Creeks are labelled in U/L lettering, regardless whether single or double line.

C.3.4   Text Size Selection Relative to Water Feature Area

General guidelines for text size selection relative to water features in terms of area involved.

At Map Scale: 1:20 000

0	-	100 Hectares	120 LEROY U/L
100	-	800 Hectares	140 LEROY CAPS
800	-	1/16 SHEET AREA	175 LEROY CAPS
1/16	-	1/4 SHEET AREA	200 LEROY CAPS
1/4	-	1/2 SHEET AREA	240 LEROY CAPS
2	-	ENTIRE SHEET AREA	290 LEROY CAPS

Optimum name placement will be within the feature; either straddling the main centre line of an elongated lake or parallel to the neat line centrally located when space permits.

C.3.5   General Guidelines fot Text Size Selection Relative to Water Features in Term of Length Involved

Rivers and creeks length of feature at map scale.

0	-	1000m	= 100 LEROY
1000	-	2000m	= 120 LEROY
2000	-	4000m	= 140 LEROY
4000	-	6000m	= 175 LEROY
6000	-	8000m	= 200 LEROY
8000m	-	m	= 240 LEROY

C.3.6   Name Placement Relative to Creek, River and Other Fresh Water Irregular Drainage Patterns

Name placement will be above the feature relative to the bottom of the sheet, unless minimal length of feature appearing on sheet and lettering size required make it prohibitive, or when dense planimetric detail above feature makes name positioning impractical.

Then, placing the name under the feature can be considered.

Measure the length of the feature and divide it in thirds. The name will be placed generally centred over the first third mark, and the River (Creek) word will be centred over the second third mark. When planimetric or draining detail conflict at this positioning, attempt to alleviate by moving names closer together, not further apart.

The optimum space between the feature and the bottom of the words is 1/2 to 1 1/2 times the selected text height.

NOTE: Abbreviations will be accepted when length of feature is insufficient to apply label according to specification guidelines. Instances may occur when adherence to specification guidelines may prove unfeasible due to conflict with significant detail. In these cases, abbreviations of creek, lake or river should be the first option considered.

Appendix D Surround Information

Appendix D - Surround Information

D.1 Cartographic Separations

Any or all of the following hard copy cartographic separations may be specified for each project. These plotted separations will be used to produce the map layers and combinations as required.

Separation 1 - Master Surround and Legend Information
Separation 2 - Planimetry (Drainage, Cultural, Toponomy)
Separation 3 - Contours
Separation 7 - Orthophoto

D.2 Master Surround

D.2.1   Master Surround

The Master Surround provides the standard border for 1:1 000/1:500 map sheets produced in accordance with the British Columbia Geographic System of Mapping.

Within the surround area, data pertinent to the specific map sheet (variable data) and data specific to the project as a whole (non-variable data) is displayed to assist the map user.

The non-variable data is stored in IGDS Design file format within the Branch's Intergraph environment.

All data is positioned within the file in relation to the fixed origin located beyond the bottom-left corner. This data constitutes the Master Surround. Copies of the Master Surround data are available through the Branch upon request.

D.2.2   Variable Data includes:

a) Sheet number
b) Adjoining sheet number
c) Magnetic declination data
d) UTM zone number
e) Type of data available in digital format
f) Photo scale, date flown and year of map production

This data is placed into the respective data field during Representation File Processing. Those items listed at a - e inclusive, are placed by a software subroutine invoked by keying in the Map sheet Number. Item f is keyed in individually.

All other variable data is to appear in the Planimetric Representation file.

D.2.3   Non-Variable Data includes:

I)   Standard map sheet border
        ii) Scale bar and representation fraction
        iii) Map projection and geodetic datum note
        iv) B.C. Government logo
        v)   Contour information and note<R>Re: Datum for elevation
        vi) Legend
        vii) Data fields at fixed distance from the origin and is an integral part of the Master Surround data file.

D.3 Legend

The legend provides samples of the symbology used to depict those details most commonly occurring on the 1:1 000/1:500 mapping produced under Municipal GIS initiative.

Appendix E Dictionary of Abbreviations

E.1 - Feature/Map Element Abbreviations

A

Abandoned	Aband
Alaska	ALAS
Alberta	ALTA
Anchorage	Anch
Approximate	Approx

B

Bay	B
Bench Mark	BM
Block	Blk
Boundary	Bdy
Breakwater	Bkwr
British Columbia Geographic System	BCGS
British Columbia Hydro and Power Authority Railway	BCH&PAR
British Columbia Hydro Power Authority	BCH&PA
British Columbia Railway	BCR
British Columbia Telephone	BCTel
British Columbia	BC
Brook	Br
Building	Bldg
Burlington Northern Railway	BNR

C

Canadian Council on Surveying and Mapping	CCSM
Canadian Forces Base	CFB
Canadian National Railways	CNR
Canadian Pacific Railway	CPR
Channel	Chan
Coal Lease	CLease
Coal Licence	CL
Coast Meridian	CM
Construction	Constr
Cove	C
Creek	Cr
Crown Grant	CG

D

Department of National Defence	DND
Department of Transport	DOT
District	Dist
District Lot (vertical)	L

E

East	E
East of Coast Meridian	ECM
Entrance	Ent
Esquimalt and Nanaimo Railway	E&NR
Example	eg
Explanatory	Ex

F

Foot, Feet	ft

G

Glacier   Gl
Government   Govt
Group   Gp
Gulf   Gl

H

Harbour   Hr
Head, Headland   Hd
Height   Ht
High Water   HW
Highway   Hwy

I

Idaho   ID
Indian Affairs Surveys Records   IASR
Indian Reserve   IR
Inlet   In
International Boundary   Int Bdy
Islands   Is
Island   I
Islet, Islets   It, Its
InterGraph Display Systems   IGDS

J

Junction   Jct

K

Kilometre   km

L

Lagoon   Lag
Lake, Lakes   L, Ls
Land Title Office   LTO
Landing   Ldg
Latitude   Lat
Longitude   Long
Low Water   LW

M

Mineral Claim   MC
Metre   m
Monument   Mon
Mount   Mt
Mountain, Mountains   Mtn, Mtns
Montana   MONT
Municipality   Mun

N

Narrows   Nrs
National   NAT
Natural (gas)   Nat
North   N
North American Datum 1927   NAD/27
North American Datum 1983   NAD/83
Northwest Territories   NWT
Number   N°

P

Passage   Pass
Peak   Pk
Peninsula   Pen
Plan Number (Land Title Office)   Pl
Point   Pt
Provincial   Prov

R
   Railway   Rly
   Range (Township Range) (vertical)   Rg
   Reef, Reefs   Rf, Rfs
   Reference   Ref
   Regional Surveyor British Columbia   RSBC
   Reserve   Res
   Right of Way   R/W
   River   R
   Road, Roadstead   Rd
   Rock, Rocky   Rk
   Rocks   Rks
S
   Saint   St
   School   Sch
   Section   Sec
   Sketch   Sk
   Sound   Sd
   South   S
   Sports Field   SpFld
   Station   Sta
   Statutory Right of Way   SR/W
   Strait   Str
   Street   St
   Sub Lot   SL
   Suburban   Sub

T
   Township   Tp

U

   United States, United States of America   USA
   Universal Transverse Mercator   UTM
W
   Washington   WASH
   West   W
   West of Coast Meridian   WCM
Y
   Yukon Territory   YT

Appendix F IGDS Level/Colour Guidelines

Appendix F – IGDS Level/Colour Guidelines

F.1 Feature Code - Feature Name - Level/Colour Correlation

All digital data provided under this specification is uniquely identified by a feature object name that can be correlated to a feature code. Graphic display systems such as Intergraph do not allow for the inclusion of a unique alphanumeric code without the attachment of an external database. To provide feature uniqueness within such an environment, features have been assigned a combination of IGDS level (layer) and colour. This table lists the features by feature code and provides guidelines for level placement and colour assignment.

Feature Code	Feature Name	IGDS Level / Colour	
A			
AB33850000	Yard	1	16
AB33850110	AutoWrecker	1	30
AB33850140	LumberYard	1	31
AB33850150	StockYard	1	32
AF11150000	FishHatchery	1	9
AG09850000	ElectricalSubstationComplex	1	27
AG17600000	Mine.type"OpenPit"	1	22
AG17750000	Mine	1	12
AG20850000	PeatCutting	1	50
AG21275000	Pile	1	23
AG21550000	Pit.type"GravelSand"	1	21
AG21550001	Pit.type"Abandoned"	1	24
AJ00650000	AmmunitionDump	1	2
AJ01650000	MilitaryEstablishment	1	11
AL03900000	CampgroundCampsite	1	3
AL09000000	DriveinTheatre	1	6
AL10250000	ExhibitionGrounds	1	8
AL12350000	GolfCourse	1	10
AL20150000	Park/PicnicArea	1	33
AL21900000	SportsField	1	15
AL22650000	RaceTrack	1	19
AL22650110	SportTrack	1	20
AL23300120	DrivingRange	1	5
AL23300140	RifleRange	1	13
AL33900000	Zoo	1	18
AM04560000	Cemetary	1	4
AN31950000	TrailerPark	1	17
AP09200000	Dump	1	7
AP26750000	SewageTreatmentArea	1	14
AP30300000	TailingArea	1	26
AP90300100	TailingPond	40	13
AQ00450000	AirField	3	2
AQ00500000	Airport	3	1
AQ00550000	Airstrip	3	3
AQ00550001	Airport.status"Abandoned"	3	5
AQ10800000	FerryRoute	12	11
AQ13451000	Helipad	3	12
AR03400000	BuiltupArea	5	1
AS90000000	DesignatedArea	1	1

Feature Code	Feature Name	IGDS Level / Colour	

B

BA01450000	Barn(to scale)	7	3
BA12800000	Greenhouse(to scale)	7	36
BA90000000	Barn(symbolized)	7	4
BA90000110	Silo (symbol)	7	5
BA90100000	Greenhouse (symbol)	7	37
BC29250000	CommunicationsBuilding (symbol)	7	6
BE05900000	College (to scale)	7	23
BE16200000	Library (to scale)	7	21
BE26000000	School (to scale)	7	25
BE32400000	University (to scale)	7	27
BE90700000	Library (symbolized)	7	22
BE90800000	College (symbolized)	7	24
BE90900000	School (symbolized)	7	26
BE91000000	University (symbolized)	7	28
BF01850000	CustomsOffice	7	9
BF05550000	CityHall	7	31
BF07550000	Courthouse	7	33
BF10950120	FireLookoutTower(symbol)	26	20
BF11000000	FireStation	7	11
BF20950000	Penitentiary	7	15
BF22000000	PoliceStation	7	17
BF22250000	PostOffice	7	19
BF90100000	CustomsOffice(symbolized)	7	10
BF90200000	FireStation(symbolized)	7	12
BF90400000	Penitentiary(symbolized)	7	16
BF90500000	PoliceStation(symbolized)	7	18
BF90600000	PostOffice(symbolized)	7	20
BF91200000	CityHall(symbolized)	7	32
BF91300000	Courthouse(symbolized)	7	34
BH13950000	Hospital	7	13
BH90300000	Hospital(symbolized)	7	14
BM03500000	Church(to scale)	7	29
BM91100000	Church(symbolized)	7	30
BQ30750140	FerryTerminal	7	47
BQ90750140	FerryTerminal(symbolized)	7	48
BR90000000	Building	7	2
BR90000110	Building (symbol)	7	1

Feature Code	Feature Name	IGDS Level / Colour	

C

Feature Code	Feature Name	IGDS Level / Colour	
CC31150000	Tower.type"Unspecified"	26	16
CC31150110	Tower.type"Microwave"	26	19
CC90000000	Tower.type"Transmission"	26	2
CG03550000	Burner	7	44
CG07600000	Crane.type"Permanent"	7	49
CG09100000	Drydock	12	23
CG12150000	Well.type"Gas"	26	34
CG19600000	Well.type"Oil"	26	3
CG28300000	SmokestackChimney	7	43
CG33250000	WeighScale	7	50
CG33250100	WeighScale(symbolized)	7	51
CL27750000	SkiJump	7	45
CL27800000	SkiLift	26	7
CQ00300000	AerialCableway	19	4
CQ01850000	Beacon	12	9
CQ06400000	Conveyor	1	28
CQ08850130	FerryDock	12	10
CQ08850160	MarinaYaghtClub	12	15
CQ16350000	Lighthouse	12	8
CQ21250000	Pier/Wharf	12	6
CQ90000120	Pier/Wharf(symblized)	12	3
CR10750000	Fence	26	8

Feature Code	Feature Name	IGDS Level / Colour	
DA25000110	Road.surface"Loose".lanes"1".type"Undivided"	17	7
DA25000120	Road.surface"Loose".lanes"2".type"Undivided"	17	6
DA25000160	Road.surface"Loose".lanes"1".type"Undivided".status"U/C"	17	17
DA25000170	Road.surface"Loose".lanes"2".type"Undivided".status"U/C"	17	16
DA25050180	Road.surface"Paved".lanes"2".type"Divided"	17	5
DA25050190	Road.surface"Paved".lanes"4".type"Divided"	17	3
DA25050200	Road.surface"Paved".lanes"6".type"Divided"	17	1
DA25050310	Road.surface"Paved".lanes"2".type"Divided".status"U/C"	17	15
DA25050320	Road.surface"Paved".lanes"4".type"Divided.status"U/C"	17	13
DA25050330	Road.surface"Paved".lanes"6".type"Divided".status"U/C"	17	11
DA25100180	Road.surface"Paved".lanes"1".type"Undivided"	17	26
DA25100190	Road.surface"Paved".lanes"2".lanedir"OneWay"	17	23
DA25100200	Road.surface"Paved".lanes"3".type"Undivided"	17	21
DA25100210	Road.surface"Paved".lanes"4".type"Undivided"	17	4
DA25100220	Road.surface"Paved".lanes"6".type"Undivided"	17	2
DA25100320	Road.surface"Paved".lanes"1".type"Undivided".status"U/C"	17	27
DA25100330	Road.surface"Paved".lanes"2".lanedir"OneWay".status"U/C"	17	24
DA25100340	Road.surface"Paved".lanes"3".type"Undivided".status"U/C"	17	22
DA25100350	Road.surface"Paved".lanes"4".type"Undivided".status"U/C"	17	14
DA25100360	Road.surface"Paved".lanes"6".type"Undivided".status"U/C"	17	12
DA25150000	Road.surface"Rough"	17	25
DD08350000	CutEarthwork	17	18
DD09950000	FillEmbankment	17	19
DD24600000	Wall.type"Retaining"	17	7
DD28350000	Snowshed	20	6
DD31000000	TollGate	7	17
DD31700000	Trail	17	8
DD32300000	Turntable	21	8
DD91000000	TollGate (symbol)	7	52
DD93100000	FootBridge	19	3
DD93200000	Trestle	20	2
DD93220000	Tunnel	20	4
DD93250000	Bridge	19	2
DE22850000	RailLine.type"DoubleTrack"	21	2
DE22900000	RailLine.type"MultipleTrack"	21	1
DE22950000	RailLine.type"SingleTrack"	21	3
DE22950001	RailLine.type"AbandonedTrack"	21	5
DF28850000	RailLine.type"Spur"	21	4

Feature Code	Feature Name	IGDS Level / Colour	

E

EA03800000	Cable	26	6
EA16400120	TransmissionLine	26	4
EA21400000	Pipeline	26	1
EA26700100	SettlingPond	40	15
EA30400000	Tank	26	9
EA90000000	Tank(symbolized)	26	10

F

FB18450000	ControlPoint.type"Horizontal".status"PermanentlyMarked"	35	2
FB18650000	ControlPoint.type"Vertical".status"PermanentlyMarked"	35	4
FD21100000	PhotoCentre	35	1
FD90500000	CadastralPoint.status"PermanentlyMarked"	35	10

Feature Code	Feature Name	IGDS Level / Colour	

G

GA03950000	Canal	39	11
GA08450000	Dam.section"Top"	26	12
GA08450110	BeaverDam	26	13
GA08800110	Ditch	39	8
GA10450000	Falls	39	13
GA11500000	Flume	39	19
GA23500000	Rapids	39	15
GA23500110	Rapids (symbol)	39	14
GA24850000	River/Stream "Definite"	39	1
GA24850130	River/Stream.type"Dry"	43	3
GA24850140	River/Stream "Indefinite"	39	2
GA24850150	River/Stream.type"Intermittent"	39	3
GA28550000	Dam.section"Spillway/Penstock"	26	18
GA90000110	River/Stream.type"LeftBank"	39	6
GA90000120	River/Stream.type"RightBank"	39	7
GA90001110	Canal.type"LeftBank"	39	9
GA90001120	Canal.type"RightBank"	39	10
GA90002110	Falls (symbol)	39	12
GA98450000	Dam (symbol)	26	11
GA98450100	Dam.section"Base"	26	17
GB11350110	FloodedLand.type"Inundated"(area outline)	41	1
GB15300000	Lake "Definite"	40	3
GB15300130	Lake "Indefinite"	40	4
GB15300140	Lake.type"Intermittent"	40	5
GB22500000	Quarry	1	25
GB24300000	Reservoir"Definite"	40	8
GB90000000	FloodedLand.type"Inundated" (area symbol)	41	4
GB90100000	Reservoir"Indefinite"	40	9
GB90100110	Reservoir.type"Intermittent"	40	10
GB90100120	Reservoir.type"ProposedMaxResLevel"	40	14
GC17100000	Marsh (area outline)	41	2
GC30050000	Swamp (area outline)	41	3
GC90100000	Marsh (area symbol)	41	5
GC90200000	Swamp (area symbol)	41	6
GD12300000	Glacier	42	2
GD14450000	IceField	42	1
GE03050110	Breakwater	12	4
GE03050120	Breakwater(symbolized)	12	1
GE09400000	Dyke	26	14
GE14850000	Island	40	7

Feature Code	Feature Name	IGDS Level / Colour	
G			
GE25850000	Sand/GravelBar (area outline)	43	4
GE26250000	SeaWall	12	16
GE90100000	Sand/GravelBar (area symbol)	43	5
GE90200000	FlowArrow	39	16
GE90200110	Arrowhead	39	20
GE94850000	Island (symbolized)	40	11
GE94850100	Island "Position Approximate"	40	16
GF28750000	Spring (symbol)	39	23
GG05800000	Coastline"Definite"	43	1
GG95800130	Coastline" Indefinite"	43	2

H

Feature Code	Feature Name	IGDS Level / Colour	
HA28700000	SpotHeight	49	1
HA33100000	WaterLevel(DateofPhotography)	44	1
HA90000000	Contour.type"Index"	47	1
HA90000110	Contour.type"Index".option"Indefinite"	47	2
HA90000130	Contour.type"Index".option"Depression"	47	3
HA90000140	Contour.type"Index".option"DepressionIndefinite"	47	4
HA90001000	Contour.type"Intermediate"	47	5
HA90001110	Contour.type"Intermediate".option"Indefinite"	47	6
HA90001130	Contour.type"Intermediate".option"Depression"	47	7
HA90001140	Contour.type"Intermediate".option"DepressionIndefinite"	47	8
HA90100000	DEMPoint.type"Definite"	51	1
HA90100110	DEMPoint.type"Indefinite"	51	2
HA90200000	BreakLine.type"Sharp"	51	5
HA90200110	BreakLine.type"Round"	51	6
HA90200120	BreakLine.type"Hypsographic"	51	15
HA90200130	BreakLine.type"Hydrographic"	51	16
HA90200140	BreakLine.type"TransportationandOtherManMade"	51	17
HA90300000	DEMPoint.type"Interpolated"	51	3
HA90400000	DEMPoint.type"Check"	51	11
HB05650000	Cliff/Scarp	48	5
HB07650130	VolcanicCrater	48	8
HB10200000	Esker	48	3
HB15850000	LavaBed	48	9
HB18700000	Moraine	48	2
HB18800000	MountainPeak	48	7
HB26150000	Scree	48	4
HB27550000	Sinkhole	39	21
HB27900000	Slide (area outline)	48	1
HB90000000	Slide (area symbol)	48	6
HC90000000	AreaofExclusion	51	10
HC90000100	AreaofIndefiniteContours	51	12

J

Feature Code	Feature Name		
JA08400000	CutlineSeismicLine	17	9
JA33750000	WoodedArea	52	1
JB19150000	Nursery	53	1
JB19650000	Orchard	53	2
JB32800000	Vineyard	53	3

K

Feature Code	Feature Name		
KB14250000	Text.type"Hydrographic"	44	2
KC14300000	Text.type"HypsographicExcludingContourNumbers"	49	2
KC14300130	Text.type"HypsographicContourNumbers"	49	3
KC14300310	Text type"LandCover"	4	1
KC14300320	Text type"LandForm"	4	2
KC90000000	Text.type"AerialTriangulation"	35	12
KC90100000	Text.type"Transportation"	23	1
KC90200000	Text.type"Landmark"	23	2
KC90300000	Text type"Toponymy"	8	1
KC91000000	Text.type"Generic"	55	1

U

Feature Code	Feature Name		
UNDEFINED	HighwayID.type"Numbers"	8	6
UNDEFINED	HighwayID.type"SymbolOval"	8	3
UNDEFINED	HighwayID.type"SymbolCircle"	8	2

F.2 Feature Name - Feature Code - Level/Colour Correlation

All digital data provided under this specification is uniquely identified by a feature object name that can be correlated to a feature code. Graphic display systems such as Intergraph do not allow for the inclusion of a unique alphanumeric code without the attachment of an external database. To provide feature uniqueness within such an environment, features have been assigned a combination of IGDS level (layer) and colour. This table lists the features by feature name and provides guidelines for level placement and colour assignment.

Feature Name	Feature Code	IGDS Level/ Colour	
A			
AerialCableway	CQ00300000	19	4
AirField/Airstrip(Abandoned)	AQ00550001	3	5
AirField	AQ00450000	3	2
Airport	AQ00500000	3	1
Airstrip	AQ00550000	3	3
AmmunitionDump	AJ00650000	1	2
AreaofExclusion	HC90000000	51	10
AreaofIndefiniteContours	HC90000100	51	12
Arrowhead	GE90200110	39	20
AutoWrecker	AB33850110	1	30
B			
Barn	BA01450000	7	3
Barn(symbolized)	BA90000000	7	4
Beacon(symbol)	CQ01850000	12	9
BeaverDam	GA08450110	26	13
BreakLine.type"Hydrographic"	HA90200130	51	16
BreakLine.type"Hypsographic"	HA90200120	51	15
BreakLine.type"Round"	HA90200110	51	6
BreakLine.type"Sharp"	HA90200000	51	5
BreakLine.type"TransportationandOtherManMade"	HA90200140	51	17
Breakwater	GE03050110	12	4
Breakwater(symbolized)	GE03050120	12	1
Bridge	DD93250000	19	2
Building	BR90000000	7	2
Building(symbol)	BR90000110	7	1
BuiltupArea	AR03400000	5	1
Burner	CG03550000	7	44

Feature Name	Feature Code	IGDS Level/ Colour	
C			
Cable.type"Insulated"	EA03800000	26	6
CadastralPoint.status"PermanentlyMarked"(symbol)	FD90500000	35	10
CampgroundCampsite	AL03900000	1	3
Canal.type"LeftBank"	GA90001110	39	9
Canal.type"RightBank"	GA90001120	39	10
Canal	GA03950000	39	11
Cemetery	AM04560000	1	4
Church	BM05300000	7	29
Church(symbolized)	BM91100000	7	30
CityHall(symbolized)	BF91200000	7	32
CityHall	BF05550000	7	31
CliffScarp	HB05650000	48	5
CoastlineGeometricRepQualifier:Definite	GG05800000	43	1
CoastlineGeometricRepQualifier:Indefinite	GG95800130	43	2
College	BE05900000	7	23
College(symbolized)	BE90800000	7	24
CommunicationsBuilding	BC99250000	7	7
CommunicationsBuilding(symbol)	BC29250000	7	6
Contour.type"Index"	HA90000000	47	1
Contour.type"Index".option"Depression"	HA90000130	47	3
Contour.type"Index".option"DepressionIndefinite"	HA90000140	47	4
Contour.type"Index".option"Indefinite"	HA90000110	47	2
Contour.type"Intermediate"	HA90001000	47	5
Contour.type"Intermediate".option"Depression"	HA90001130	47	7
Contour.type"Intermediate".option"DepressionIndefinite"	HA90001140	47	8
Contour.type"Intermediate".option"Indefinite"	HA90001110	47	6
ControlPoint.type"Horizontal".status"PermanentlyMarked"(symbol)	FB18450000	35	2
ControlPoint.type"Vertical".status"PermanentlyMarked"(symbol)	FB18650000	35	4
Conveyor	CQ06400000	1	28
Courthouse	BF07550000	7	33
Courthouse(symbolized)	BF91300000	7	34
Crane.type"Permanent"	CG07610000	1	102
CustomsOffice	BF01850000	7	9
CutEarthwork	DD08350000	17	18
CustomsOffice(symbolized)	BF90100000	7	10
CutlineSeismicLine	JA08400000	17	9

Feature Name	Feature Code	IGDS Level/ Colour	
D			
Dam(symbol)	GA98450000	26	11
Dam.section"Base"	GA98450100	26	17
Dam.section"Spillway/Penstock"	GA28550000	26	18
Dam.section"Top"	GA08450000	26	12
DEMPoint.type"Definite"	HA90100000	51	1
DEMPoint.type"Check"	HA90400000	51	11
DEMPoint.type"Indefinite"(symbol)	HA90100110	51	2
DEMPoint.type"Interpolated"	HA901300000	51	3
DesignatedArea	AS90000000	1	1
Ditch	GA08800110	39	8
DriveinTheatre	AL09000000	1	6
DrivingRange	AL23300120	1	5
Drydock	CG09100000	12	23
Dump	AP09200000	1	7
Dyke	GE09400000	26	14
E			
ElectricalSubstationComplex	AG09850000	1	27
Esker	HB10200000	48	3
ExhibitionGrounds	AL10250000	1	8
F			
Falls(symbol)	GA90002110	39	12
Falls	GA10450000	39	13
Fence	CR10750000	26	8
FerryDock	CQ08850130	12	10
FerryRoute	AQ10800000	12	11
FerryTerminal	BQ30750140	7	47
FerryTerminal(symbolized)	BQ90750140	7	48
FillEmbankment	DD09950000	17	19
FireLookoutTower	BF10951120	26	60
FireStation	BF11000000	7	11
FireStation(symbolized)	BF90200000	7	12
FishHatchery	AF11150000	1	9
FloodedLand.type"Inundated"(area outline)	GB11350110	41	1
FloodedLand.type"Inundated"(area symbol)	GB90000000	41	4
FlowArrow	GE90200000	39	16
Flume	GA11500000	39	19
FootBridge	DD93100000	19	3
G			
GasWell	CG12150000	26	21
Glacier	GD12300000	42	2
GolfCourse	AL12350000	1	10
Greenhouse	BA12800000	7	36
Greenhouse(symbol)	BA90100000	7	37

Feature Name	Feature Code	IGDS Level/ Colour	
H			
Helipad	AQ13451000	3	12
HighwayID.type"Numbers"	UNDEFINED	8	6
HighwayID.type"SymbolCircle"	UNDEFINED	8	2
HighwayID.type"SymbolOval"	UNDEFINED	8	3
Hospital	BH13950000	7	13
Hospital(symbolized)	BH90300000	7	14
I			
IceField	GD14450000	42	1
Island	GE14850000	40	7
Island(symbolized)	GE94850000	40	11
Island "Position Approximate"	GE94850100	40	16
L			
Lake "Definite"	GB15300000	40	3
Lake "Indefinite"	GB15300130	40	4
Lake.type"Intermittent"	GB15300140	40	5
LavaBed	HB15850000	48	9
Library(symbolized)	BE90700000	7	22
Library	BE16200000	7	21
Lighthouse(symbolized)	CQ16350000	12	8
LumberYard	AB33850140	1	31
M			
MarinaYaghtClub	CQ08850160	12	15
MarshInWater(area outline)	GC17100110	41	9
Marsh(area symbol)	GC90100000	41	5
MilitaryEstablishment	AJ01650000	1	11
Mine.type"OpenPit"	AG17600000	1	22
Mine	AG17750000	1	12
Moraine	HB18700000	48	2
MountainPeak	HB18800000	48	7
N			
Nursery	JB19150000	53	1
O			
OilWell	GC19600000	26	3
Orchard	JB19650000	53	2

Feature Name	Feature Code	IGDS Level/ Colour	
P			
Park/PicnicArea	AL20150000	1	33
Penitentiary	BF20950000	7	15
Penitentiary(symbolized)	BF90400000	7	16
PhotoCentre(symbol)	FD21100000	35	1
Pier/Wharf (symbolized)	CQ90000120	12	3
Pier/Wharf	CQ21250000	12	6
Pile.type"RawMaterial"	AG21275000	1	23
Pipeline	EA21400000	26	1
Pit.type"Abandoned"	AG21550001	1	24
Pit.type"GravelSand"	AG21550000	1	21
PoliceStation(symbolized)	BF90500000	7	18
PoliceStation	BF22000000	7	17
PostOffice	BF22250000	7	19
PostOffice(symbolized)	BF90600000	7	20
Q			
Quarry	GB22500000	1	25

Feature Name	Feature Code	IGDS Level/ Colour	
R			
RaceTrack	AL22650000	1	19
RailLine.type"AbandonedTrack"	DE22950001	21	5
RailLine.type"DoubleTrack"	DE22850000	21	2
RailLine.type"MultipleTrack"	DE22900000	21	1
RailLine.type"SingleTrack"	DE22950000	21	3
RailLine.type"Spur"	DF28850000	21	4
Rapids	GA23500000	39	15
Rapids(symbol)	GA23500110	39	14
Reservoir "Definite"	GB24300000	40	8
Reservoir "Indefinite"	GB90100000	40	9
Reservoir.type"Intermittent"	GB90100110	40	10
Reservoir.type"ProposedMaxResLevel"	GB90100120	40	14
RifleRange	AL23300140	1	13
River/Stream.type"LeftBank"	GA90000110	39	6
River/Stream "Definite"	GA24850000	39	1
River/StreamGeometricRepQualifier:Indefinite	GA24850140	39	2
River/Stream.type"Dry"	GA24850130	43	3
River/Stream.type"Intermittent"	GA24850150	39	3
River/Stream.type"RightBank"	GA90000120	39	7
Road.surface"Loose".lanes"1".type"Undivided"	DA25000110	17	7
Road.surface"Loose".lanes"1".type"Undivided".status"U/C"	DA25000160	17	51
Road.surface"Loose".lanes"2".type"Undivided"	DA25000120	17	6
Road.surface"Loose".lanes"2".type"Undivided".status"U/C"	DA25000170	17	16
Road.surface"Paved".lanes"1".type"Undivided"	DA25100180	17	26
Road.surface"Paved".lanes"1".type"Undivided".status"U/C"	DA25100320	17	27
Road.surface"Paved".lanes"2".type"Divided"	DA25050180	17	5
Road.surface"Paved".lanes"2".type"Divided".status"U/C'	DA25050310	17	15
Road.surface"Paved".lanes"2".lanedir"OneWay"	DA25100190	17	23
Road.surface"Paved".lanes"2".lanedir"OneWay".status"U/C"	DA25100330	17	24
Road.surface"Paved".lanes"3".type"Undivided"	DA25100200	17	21
Road.surface"Paved".lanes"3".type"Undivided".status"U/C"	DA25100340	17	22
Road.surface"Paved".lanes"4".type"Divided"	DA25050190	17	3
Road.surface"Paved".lanes"4".type"Divided.status"U/C"	DA25050320	17	14
Road.surface"Paved".lanes"4".type"Undivided"	DA25100210	17	4
Road.surface"Paved".lanes"4".type"Undivided".status"U/C"	DA25100350	17	13
Road.surface"Paved".lanes"6".type"Divided"	DA25050200	17	1
Road.surface"Paved".lanes"6".type"Divided".status"U/C"	DA25050330	17	11
Road.surface"Paved".lanes"6".type"Undivided"	DA25100220	17	2
Road.surface"Paved".lanes"6".type"Undivided".status"U/C"	DA25100360	17	12
Road.surface"Rough"	DA25150000	17	25

Feature Name	Feature Code	IGDS Level/ Colour	
S			
Sand/GravelBar(area outline)	GE25850000	43	4
Sand/GravelBar(area symbol)	GE90100000	43	5
School	BE26000000	7	25
School(symbolized)	BE90900000	7	26
Scree	HB26150000	48	4
SeaWall	GE26250000	12	16
SettlingPond	EA26700100	40	15
SewageTreatmentArea	AP26750000	1	14
Silo(symbol)	BA90000110	7	5
Sinkhole	HB27550000	39	21
SkiJump	CL27750000	7	45
SkiLift	CL27800000	26	7
Slide(area outline)	HB27900000	48	
Slide(area symbol)	HB90000000	48	6
SmokestackChimney	CG28300000	7	43
Snowshed	DD28350000	20	6
SportsField	AL21900000	1	15
SportTrack	AL22650110	1	20
SpotHeight(symbol)	HA28700000	49	1
Spring	GF28750000	39	23
StockYard	AB33850150	1	32
Swamp(area outline)	GC30050000	41	3
Swamp(area symbol)	GC90200000	41	6

Feature Name	Feature Code	IGDS Level/ Colour	
T			
TailingArea	AP30300000	1	26
TailingPond	AP90300100	40	13
Tank	EA30400000	26	9
Tank(symbol)	EA90000000	26	10
Text.type"AerialTriangulation"	KC90000000	35	12
Text.type"Cadastral"	KC90400000	35	1
Text.type"Generic"	KC91000000	55	1
Text.type"Hydrographic"	KB14250000	44	3
Text.type"HypsographicContourNumbers"	KC14300130	49	3
Text.type"HypsographicExcludingContourNumbers"	KC14300000	49	2
Text.type"LandCover"	KC14300310	4	1
Text.type"Landmark"	KC90200000	23	2
Text.type"Toponymy"	KC90300000	8	1
Text.type"Transportation"	KC90100000	23	1
TollGate	DD31000000	7	46
TollGate(symbol)	DD91000000	7	52
Tower.type"Microwave"	CC31150110	26	19
Tower.type"Unspecified"	CC31150000	26	16
Tower"Transmission"	CC90000000	26	2
Trail	DD31700000	17	8
TrailerPark	AN31950000	1	17
TransmissionLine	EA16400120	26	4
Trestle	DD93200000	20	2
Tunnel	DD93220000	20	4
Turntable	DD3230000	21	8
U			
University	BE32400000	7	27
University(symbolized)	BE91000000	7	28
V			
Vineyard	JB32800000	53	3
VolcanicCrater	HB07650130	48	8
W			
Wall.type"Retaining"	DD24600000	17	20
WaterLevel(DateofPhotography)(symbol)	HA33100000	44	1
WeighScale	CG33250000	7	50
WeighScale(symbolized)	CG33250100	7	51
WoodedArea	JA33750000	52	1
Y			
Yard	AB33850000	1	16
Z			
Zoo	AL33900000	1	18

F.3 - Level/Colour Correlation - Feature Name - Feature Code

All digital data provided under this specification is uniquely identified by a feature object name that can be correlated to a feature code. Graphic display systems such as Intergraph do not allow for the inclusion of a unique alphanumeric code without the attachment of an external database. To provide feature uniqueness within such an environment, features have been assigned a combination of IGDS level (layer) and colour. This table lists the features by IGDS level and colour for each feature name and code.

Level	Colour	Feature Name	Feature Code
1	1	DesignatedArea	AS90000000
1	2	AmmunitionDump	AJ00650000
1	3	CampgroundCampsite	AL03900000
1	4	Cemetery	AM04560000
1	5	DrivingRange	AL23300120
1	6	DriveinTheatre	AL09000000
1	7	Dump	AP09200000
1	8	ExhibitionGrounds	AL10250000
1	9	FishHatchery	AF11150000
1	10	GolfCourse	AL12350000
1	11	MilitaryEstablishment	AJ01650000
1	12	Mine	AG17750000
1	13	RifleRange	AL23300140
1	14	SewageTreatmentArea	AP26750000
1	15	SportsField	AL21900000
1	16	Yard	AB33850000
1	17	TrailerPark	AN31950000
1	18	Zoo	AL33900000
1	19	RaceTrack	AL22650000
1	20	SportTrack	AL22650110
1	21	Pit.type"GravelSand"	AG21550000
1	22	Mine.type"OpenPit"	AG17600000
1	23	Pile.type"RawMaterial"	AG21275000
1	24	Pit.type"Abandoned"	AG21550001
1	25	Quarry	GB22500000
1	26	TailingArea	AP30300000
1	27	ElectricalSubstationComplex	AG09850000
1	28	Conveyor	CQ06400000
1	30	AutoWrecker	AB33850110
1	31	LumberYard	AB33850140
1	32	StockYard	AB33850150
		3	
3	1	Airport	AQ00500000
3	2	AirField	AQ00450000
3	3	Airstrip	AQ00550000
3	4	Helipad	AQ13450000
3	5	Airport.status"Abandoned"	AQ00550001
		4	
4	1	Text.type"LandCover"	KC14300310
4	2	Text.type"LandForm"	KC14300320

Level	Colour	Feature Name	Feature Code
		5	
5	1	BuiltupArea	AR03400000
		7	
7	1	Building(symbol)	BR90000110
7	2	Building	BR90000000
7	3	Barn	BA01450000
7	4	Barn(symbol)	BA90000000
7	5	Silo(symbol)	BA90000110
7	6	CommunicationsBuilding(symbol)	BC29250000
7	9	CustomsOffice	BF01850000
7	11	FireStation	BF11000000
7	12	FireStation(symbol)	BF90200000
7	13	Hospital	BH13950000
7	14	Hospital(symbol)	BF90300000
7	15	Penitentiary	BF20950000
7	16	Penitentiary(symbol)	BF90400000
7	17	PoliceStation	BF22000000
7	18	PoliceStation(symbol)	BF90500000
7	19	PostOffice	BF22250000
7	20	PostOffice(symbol)	BF90600000
7	21	Library	BE16200000
7	22	Library(symbol)	BE90700000
7	23	College	BE05900000
7	24	College(symbolized)	BE90800000
7	25	School	BE26000000
7	26	School(symbolized)	BE90900000
7	27	University	BE32400000
7	28	University(symbolized)	BE91000000
7	29	Church	BM03500000
7	30	Church(symbolized)	BM91100000
7	31	CityHall	BF05550000
7	32	CityHall(symbolized)	BF91200000
7	33	Courthouse	BF07550000
7	34	Courthouse(symbolized)	BF91300000
7	36	Greenhouse	BA12800000
7	37	Greenhouse(symbol)	BA90100000
7	43	SmokestackChimney	CG28300000
7	44	Burner	CG03550000
7	45	SkiJump	CL27750000
7	46	TollGate	DD31000000
7	47	FerryTerminal	BQ30750140
7	48	FerryTerminal(symbolized)	BQ90750140
7	49	Crane.type"Permanent"(symbol)	CG07600000
7	50	WeighScale	CG33250000
7	51	WeighScale(symbolized)	CG22350100
7	52	TollGate(symbol)	DD91000000

Level	Colour	Feature Name	Feature Code
		8	
8	1	Text.type"Toponymy"	KC90300000
8	2	HighwayID.type"SymbolCircle"	UNDEFINED
8	3	HighwayID.type"SymbolOval"	UNDEFINED
8	6	HighwayID.type"Numbers"	UNDEFINED
		12	
12	1	Breakwater(symbolized)	GE03050120
12	3	Pier/Wharf(symbolized)	CQ90000120
12	4	Breakwater	GE03050110
12	6	Pier/Wharf	CQ21250000
12	7	Drydock	CG09100000
12	9	Beacon	CQ01850000
12	8	Lighthouse(symbolized)	CQ16350000
12	10	FerryDock	CQ08850130
12	11	FerryRoute	AQ10800000
12	15	MarinaYaghtClub	CQ08850160
12	16	SeaWall	GE26250000
		17	
17	1	Road.surface"Paved".lanes"6".type"Divided"	DA25050200
17	2	Road.surface"Paved".lanes"6".type"Undivided"	DA25100220
17	3	Road.surface"Paved".lanes"4".type"Divided"	DA25050190
17	4	Road.surface"Paved".lanes"4".type"Undivided"	DA25100210
17	5	Road.surface"Paved".lanes"2".type"Divided"	DA25050180
17	6	Road.surface"Loose".lanes"2".type"Undivided"	DA25000120
17	7	Road.surface"Loose".lanes"1".type"Undivided"	DA25000110
17	8	Trail	DD31700000
17	9	CutlineSeismicLine	JA08400000
17	11	Road.surface"Paved".lanes"6".type"Divided".status"U/C"	DA25050330
17	12	Road.surface"Paved".lanes"6".type"Undivided".status"U/C"	DA25100360
17	13	Road.surface"Paved".lanes"4".type"Undivided".status"U/C"	DA25100350
17	14	Road.surface"Paved".lanes"4".type"Divided.status"U/C"	DA25050320
17	15	Road.surface"Paved".lanes"2".type"Divided".status"U/C'	DA25050310
17	16	Road.surface"Gravel".lanes"2".type"Undivided".status"U/C"	DA25000170
17	17	Road.surface"Gravel".lanes"1".type"Undivided".status"U/C"	DA25000160
17	18	CutEarthwork	DD08350000
17	19	FillEmbankment	DD09950000
17	20	Wall.type"Retaining"	DD24600000
17	21	Road.surface"Paved".lanes"3".type"Undivided"	DA25100200
17	22	Road.surface"Paved".lanes"3".type"Undivided".status"U/C"	DA25100340
17	23	Road.surface"Paved".lanes"2".lanedir"OneWay"	DA25100190
17	24	Road.surface"Paved".lanes"2".lanedir"OneWay".status"U/C"	DA25100330
17	25	Road.surface"Rough"	DA25150000
17	26	Road.surface"Paved".lanes"1".type"Undivided"	DA25100180
17	27	Road.surface"Paved".lanes"1".type"Undivided".status"U/C"	DA25100320
		19	
19	2	Bridge	DD93250000
19	3	FootBridge	DD93100000
19	4	AerialCableway	CQ00300000

Level	Colour	Feature Name	Feature Code
		20	
20	2	Trestle	DD93200000
20	4	Tunnel	DD93220000
20	6	Snowshed	DD28350000
		21	
21	1	RailLine.type"MultipleTrack"	DE22900000
21	2	RailLine.type"DoubleTrack"	DE22850000
21	3	RailLine.type"SingleTrack"	DE22950000
21	4	RailLine.type"Spur"	DF28850000
21	5	RailLine.type"AbandonedTrack"	DE22950001
21	8	RailwayTurntable	DD32300000
21	9	RailwayBumper(symbol)	DD25650000
21	11	RailwayScale(symbol)	DD91650000
21	12	RailLine.status"StreetCar".type"SingleTrack"	DE22950160
21	13	RailwaySwitch(symbol)	DD30200000
		23	
23	1	Text.type"Transportation"	KC90100000
23	2	Text.type"Landmark"	KC90200000
		26	
26	1	Pipeline	EA21400000
26	2	Tower.type"Transmission"	CC90000000
26	3	OilWell	CG19600000
26	4	TransmissionLine	EA16400120
26	6	Cable	EA03800000
26	7	SkiLift	CL27800000
26	8	Fence	CR10750000
26	9	Tank	EA30400000
26	10	Tank(symbol)	EA90000000
26	11	Dam(symbol)	GA98450000
26	12	Dam.section"Top"	GA08450000
26	13	BeaverDam	GA08450110
26	14	Dyke	GE09400000
26	16	Tower.type"Unspecified"	CC31150000
26	17	Dam.section"Base"	GA98450100
26	18	Dam.section"Spillway/Penstock"	GA28550000
26	19	Tower.type"Microwave"	CC31150110
26	20	FireLookoutTower	BF10950120
26	21	GasWell	CG12150000
		35	
35	1	PhotoCentre(symbol)	FD21100000
35	2	ControlPoint.type"Horizontal".status"PermanentlyMarked"(symbol)	FB18450000
35	4	ControlPoint.type"Vertical".status"PermanentlyMarked"(symbol)	FB18650000
35	10	CadastralPoint.status"PermanentlyMarked"(symbol)	FD90500000
35	12	Text.type"AerialTriangulation"	KC90000000
		39	
39	1	River/Stream"Definite"	GA24850000
39	2	River/Stream"Indefinite"	GA24850140
39	3	River/Stream.type"Intermittent"	GA24850150

Level	Colour	Feature Name	Feature Code
39	6	River/Stream.type"LeftBank"	GA90000110
39	7	River/Stream.type"RightBank"	GA90000120
39	8	Ditch	GA08800110
39	9	Canal.type"LeftBank"	GA90001110
39	10	Canal.type"RightBank"	GA90001120
39	11	Canal	GA03950000
39	12	Falls(symbol)	GA90002110
39	13	Falls	GA10450000
39	14	Rapids(symbol)	GA23500110
39	15	Rapids	GA23500000
39	16	FlowArrow	GE90200000
39	19	Flume	GA11500000
39	20	Arrowhead(symbol)	GE90200110
39	21	Sinkhole	HB27550000
39	23	Spring	GF28750000
		40	
40	3	Lake"Definite"	GB15300000
40	4	Lake"Indefinite"	GB15300130
40	5	Lake.type"Intermittent"	GB15300140
40	7	Island	GE14850000
40	8	Reservoir"Definite"	GB24300000
40	9	Reservoir"Indefinite"	GB90100000
40	10	Reservoir.type"Intermittent"	GB90100110
40	11	Island(symbol)	GE94850000
40	13	TailingPond	AP90300100
40	14	Reservoir.type"ProposedMaxResLevel"	GB90100120
40	15	SettlingPond	EA26700100
40	16	Island"Position Approximate"	GE94850100
		41	
41	1	FloodedLand.type"Inundated"(area outline)	GB11350110
41	2	Marsh(area outline)	GC17100000
41	3	Swamp(area outline)	GC30050000
41	4	FloodedLand.type"Inundated"(area symbol)	GB90000000
41	5	Marsh(area symbol)	GC90100000
41	6	Swamp(area symbol)	GC90200000
		42	
42	1	IceField	GD14450000
42	2	Glacier	GD12300000
		43	
43	1	Coastline"Definite"	GG05800000
43	2	Coastline"Indefinite"	GG95800130
43	3	River/Stream.type"Dry"	GA24850130
43	4	Sand/GravelBar(area outline)	GE25850000
43	5	Sand/GravelBar(area symbol)	GE90100000
		44	
44	1	WaterLevel(DateofPhotography)	HA33100000
44	2	Text.type"Hydrographic"	KB14250000
		47	
47	1	Contour.type"Index"	HA90000000

Level	Colour	Feature Name	Feature Code
47	2	Contour.type"Index".option"Indefinite"	HA90000110
47	3	Contour.type"Index".option"Depression"	HA90000130
47	4	Contour.type"Index".option"DepressionIndefinite"	HA90000140
47	5	Contour.type"Intermediate"	HA90001000
47	6	Contour.type"Intermediate".option"Indefinite"	HA90001110
47	7	Contour.type"Intermediate".option"Depression"	HA90001130
47	8	Contour.type"Intermediate".option"DepressionIndefinite"	HA90001140
		48	
48	1	Slide(area outline)	HB27900000
48	2	Moraine	HB18700000
48	3	Esker	HB10200000
48	4	Scree	HB26150000
48	5	CliffScarp	HB05650000
48	6	Slide(area symbol)	HB90000000
48	7	MountainPeak(symbol)	HB18800000
48	8	VolcanicCrater	HB07650130
48	9	LavaBed	HB15850000
		49	
49	1	SpotHeight	HA28700000
49	2	Text.type"HypsographicExcludingContourNumbers"	KC14300000
49	3	Text.type"HypsographicContourNumbers"	KC14300130
		51	
51	1	DEMPoint.type"Definite"	HA90100000
51	2	DEMPoint.type"Indefinite"	HA90100110
51	3	DEMPoint.type"Interpolated"	HA90300000
51	5	BreakLine.type"Sharp"	HA90200000
51	6	BreakLine.type"Round"	HA90200110
51	10	AreaofExclusion	HC90000000
51	11	DEMPoint.type"Check"	HA90400000
51	12	AreaofIndefiniteContours	HC90000100
51	15	BreakLine.type"Hypsographic"	HA90200120
51	16	BreakLine.type"Hydrographic"	HA90200130
51	17	BreakLine.type"TransportationandOtherManMade"	HA90200140
		52	
52	1	WoodedArea	JA33750000
		53	
53	1	Nursery	JB19150000
53	2	Orchard	JB19650000
53	3	Vineyard	JB32800000
		55	
55	1	Text.type"Generic"	KC91000000

Appendix G Feature Name / Positional File Correlation

Appendix G - Feature Name / Positional File Correlation

Feature	Pos - Planimetric	Code	Non - Positional	Code	DEM	Code	Raw Contour	Code
AerialCableway	✓	CQ00300000	✓	Text KC90100000				
AirField	✓	AQ00450000	✓	Text KC90100000				
Airfield/Airstrip.status "Abandoned"	✓	AQ00550001	✓	Text KC90100000				
Airport	✓	AQ00500000						
Airstrip	✓	AQ0550000	✓	Text KC90100000				
AmmunitionDump	✓	AJ00650000	✓	Text KC90100000				
AreaofExclusion					✓	HC90000000		
AreaofIndefiniteContours					✓	HC90000100		
Arrowhead			✓	GE90200110				
AutoWrecker	✓	AB33850110	✓	Text KD90200000				
Barn	✓	BA01450000						
Barn (symbol)	✓	BA90000000						
Beacon	✓	CQ01850000						
BeaverDam	✓	GA08450110			✓	Breakline HA90200130		
BreakLine.type"Hydrographic"					✓	HA90200130		
BreakLine.type"Hypsographic"					✓	HA90200120		
BreakLine.type"Round"					✓	HA90200110		
BreakLine.type"Sharp"					✓	HA90200000		
BreakLine.type"TransportationandOtherMandMade"					✓	HA90200140		
Breakwater	✓	GE03050110						
Breakwater (symbol)	✓	GE03050120						
Bridge	✓	DD93250000						
Building (symbol)	✓	BR90000110						
Building (to scale)	✓	BR90000000						
BuiltupArea	✓	AR03400000						
Burner	✓	CG03550000	✓	text KC90200000				
Cable.type"Insulated"	✓	EA03800000	✓	text KC90200000				
CadastralPoint.status "Permantently Marked"			✓	FD90500000				
CampgroundCampsite	✓	AL03900000	✓	text KC90200000				
Canal	✓	GA03950000	✓	text	✓	Breakline HA90200130		
Canal.type"LeftBank"	✓	GA90001110			✓	Breakline HA90200130		

Feature		Code		Text		Line		Code
Canal.type"RightBank"	✓	GA90001120			✓	Breakline HA90200130		
Cemtary	✓	AM04560000	✓	text KC90200000				
Church (symbol)	✓	BM91100000	✓	text KC90200000				
CityHall	✓	BF05550000						
CityHall (symbol)	✓	BF91200000						
CliffScarp	✓	HB05650000	✓	KC14300320	✓	Breakline HA90200120		
Coastline Geo Rep Qual: Definite	✓	GG05800000			✓	Breakline HA90200130		
Coastline Geo Rep Qual: Indefinite	✓	GG95800130			✓	Breakline HA90200130		
College	✓	BE05900000						
College (symboll)	✓	BE90800000						
CommunicationsBuilding (symbol)	✓	BC29250000						
Contour.type"Index"							✓	HA90000000
Contour.type"Index".option ."Depression"							✓	HA90000130
Contour.type"Index".option. "DepressionIndefinite"							✓	HA90000140
Contour.type"Index" .option"Indefinite"							✓	HA90000110
Contour.type"Intermediate"							✓	HA90001000
Contour.type"Intermediate" .option"Depression"							✓	HA90001130
Contour.type"Intermediate" .option"DepressionIndefinite"							✓	HA90001140
Contour.type"Intermediate" .option"Indefinite"							✓	HA90001110
ControlPoint.type"Horizontal". status"PermanentlyMarked"	✓	FB18450000	✓	text KC90000000	✓	DEM Point HA90100000		
ControlPoint.type"Vertical". status"PermanentlyMarked"	✓	FB18650000	✓	text KC90000000	✓	DEM Point HA90100000		
Conveyor	✓	CQ6400000	✓	text KC90000000				
Courthouse	✓	BF07550000						
Courthouse (symbol)	✓	BF91300000						
Crane.type"permanent"	✓	CG07600000						
CustomsOffice	✓	BF01850000						
CustomsOffice (symbol)	✓	BF90100000						
CutEarthwork	✓	DD08350000			✓	Breakline HA90200140		
CutlineSeismicLine	✓	JA08400000						
Dam (symbol)	✓	GA98450000	✓	text KB14250000				
Dam.section"Base"	✓	GA98450100	✓	text KB14250000				
Dam.section"Spillway"	✓	GA28550000	✓	text KB14250000				

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Feature						
Dam.section"Top"	✓	GA08450000	✓	text KB14250000		
DEMPoint.type"Check"					✓	HA90400000
DEMPoint.type"Definite"					✓	HA90100000
DEMPoint.type"Indefinite"					✓	HA90200110
DEMPoint.type"Interpolated"					✓	HA90300000
DesignatedArea	✓	AS90000000	✓	text KC90200000		
Ditch	✓	GA08800110			✓	Breakline HA90200130
DriveinTheatre	✓	AL09000000	✓	text KC90200000		
DrivingRange	✓	AL23300120	✓	text KC90200000		
DryDock	✓	CQ09100000				
Dump	✓	AP09200000	✓	text KC90200000		
Dyke	✓	GE09400000	✓	text KB14250000	✓	Breakline HA90200130
ElectricalSubstationComplex	✓	AG09850000	✓	text KC90200000		
Esker	✓	HB10200000	✓	text KC14300320	✓	Breakline HA90200120
ExhibitionGrounds	✓	AL10250000	✓	text KC90200000		
Falls (symbol)	✓	GA90002110	✓	text KB14250000		
Falls (to scale	✓	GA10450000	✓	text KB14250000		
Fence	✓	CR10750000				
FerryDock	✓	CQ08850130				
FerryRoute	✓	AQ10800000	✓	text KC90100000		
FerryTerminal	✓	BQ30750140				
FerryTerminal (symbol)	✓	BQ90750140	✓	text KC90200000		
FillEmbankment	✓	DD09950000			✓	Breakline HA90200140
FireLookoutTower	✓	BF10950120	✓	text KC90200000		
FireStation	✓	BF1100000				
FireStation (symbol)	✓	BF90200000				
FishHatchery	✓	AF11150000	✓	text KC90200000		
FloodedLand.type"inundated"	✓	GB11350110	✓	area symbol GB90000000	✓	Breakline HA90200130
Flow Arrow				GE90200000		
Flume	✓	GA11500000				

Name		Code					
FootBridge	✔	DD93100000					
GaasWell	✔	CG12150000					
Glacier	✔	GD12300000	✔	text KB14250000	✔	Area of Indef Cont HC90000100		
GolfCourse	✔	AL12350000	✔	text KB14250000				
Greenhouse (symbol)	✔	BA90100000					
Greenhouse (to sacle)	✔	BA12800000					
Helipad	✔	AQ13450000					
HighwayID.type"Numbers"							
HighwayID.type"SymbolCircle"							
HighwayID.type"SymbolOval"							
Hospital	✔	BH13950000	✔	text KC90200000				
Hoslital (symbol)	✔	BH90300000	✔	text KC90200000				
IceField	✔	GD14450000	✔	text KB14250000	✔	Area of Indef Cont HC90000100		
Island Geo Rep Qual: Position Approximate	✔	GE94850100	✔	text KB14250000				
Island	✔	GE14850000			✔	Breakline HA90200130		
Island (symbol)	✔	GE94850000			✔	Breakline HA90100000		
Lake Geo Rep Qual: Definite	✔	GB15300000			✔	Breakline HA90200130		
Lake Geo Rep Qual: Indefinite	✔	GB15300130			✔	Breakline HA90200130		
Lake type"Intermittent"	✔	GB15300140			✔	Breakline HA90200130		
LavaBed	✔	HB15850000	✔	text KC14300320	✔	Breakline HA90200120		
Library	✔	BE16200000					
Library (symbol)	✔	BE90700000					
Lighthouse (symbol)	✔	CQ16350000					
LunberYard	✔	AB33850140	✔	text KC90200000				
Marina/Dock	✔	CQ08850160	✔	text KC90200000				
Marsh (area outline)	✔	GC17100000	✔	area symbol GC90100000	✔	Breakline HA90200130		
MilitaryEstablishment	✔	AL01650000	✔	text KC90200000				
Mine	✔	AG17750000	✔	text KC90200000				

Feature		Code		Text		Type		
Mine.type"OpenPit"	✔	AG17600000	✔	text KC90200000	✔	Area of Exclusion HC90000000		
Moraine	✔	HB18700000	✔	text KC90200000	✔	Breakline HA90200120		
MountainPeak	✔	HB18800000			✔	DEM Point HA90100000		
Nursery	✔	JB19150000	✔	text KC90200000				
OilWell	✔	CG19600000						
Orchard	✔	JB19650000	✔	text KC90200000				
Park/PicnicArea	✔	AL20150000	✔	text KC90200000				
Penitentiary	✔	BF20950000	✔	text KC90200000				
Penitentiary (symbol)	✔	BF90400000						
PhotoCentre	✔	FD21100000	✔	text KC9000000				
Pier	✔	CQ21250000						
Pier (symbol)	✔	CQ90000120						
Pile	✔	AG21275000	✔	text KC9020000	✔	Area of Exclusion HC90000000		
Pipeline	✔	EA21400000						
Pit.type"Abandoned"	✔	AG21550001	✔	text KC9020000	✔	Breakline HA90200140		
Pit.type"GravelSand"	✔	AG215560000	✔	text KC9020000	✔	Area of Exclusion HC90000000		
PoliceStation	✔	BF22000000						
PloiceStation (symbol)	✔	BF90500000						
PostOffice	✔	BF22250000						
PostOffice (symbol)	✔	BF90600000						
Quarry.type"dry"	✔	AG22450000	✔	text KC9020000	✔	Area of Exclusion HC90000000		
RaceTrack	✔	AL22650000	✔	text KC9020000				
RailLine.type"AbandonedTrack"	✔	DE22950001			✔	Breakline HA90200140		
RailLine.type"DoubleTrack"	✔	DE22850000	✔	text KC9010000	✔	Breakline HA90200140		
RailLine.type"MultipleTrack"	✔	DE22900000	✔	text KC9010000	✔	Breakline HA90200140		
RailLine.type"SingleTrack"	✔	DE22950000	✔	text KC9010000	✔	Breakline HA90200140		

RailLine.type"Spur"	✔	DF28850000			✔	Breakline HA90200140
Rapids (symbol)	✔	GA23500110	✔	text KB14250000		
Rapids (to scale)	✔	GA23500000	✔	text KB14250000		
Reservoir Geo Rep Qual: Definite	✔	GB24300000	✔	text KB14250000	✔	Breakline HA90200130
Reservoir Geo Rep Qual: Indefinite	✔	GB90100000	✔	text KB14250000	✔	Breakline HA90200130
Reservoir.type"Intermittent"	✔	GB90100110	✔	text KB14250000	✔	Breakline HA90200130
Reservoir.type "ProposedMaxResLevel"	✔	GB90100120	✔	text KB14250000	✔	Breakline HA90200130
RifleRange	✔	AI23300140	✔	text KC90200000		
River/Stream Geo Rep Qual: Definite	✔	GA24850000			✔	Breakline HA90200130
River/Stream Geo Rep Qual: Indefinite	✔	GA24850140			✔	Breakline HA90200130
River/Stream.type"Dry"	✔	GA24850130			✔	Breakline HA90200130
River/Stream.type"Intermittent"	✔	GA24850150			✔	Breakline HA90200130
River/Stream.type"LeftBank"	✔	GA90000110			✔	Breakline HA90200130
River/Stream.type"RightBank"	✔	GA90000120			✔	Breakline HA90200130
Road.surface"Gravel" .lanes"1Lane"	✔	DA25000110			✔	Breakline HA90200140
Road.surface"Gravel" .lanes"1Lane" .status"U/C"	✔	DA25000160	✔	text KC90100000	✔	Breakline HA90200140
Road.surface"Gravel" .lanes"2Lane"	✔	DA25000120			✔	Breakline HA90200140
Road.surface"Paved" .lanes"2Lane" .status"U/C"	✔	DA25000170	✔	text KC90100000	✔	Breakline HA90200140
Road.surface"Paved" .lanes"2Lane"	✔	DA25050180			✔	Breakline HA90200140
Road.surface"Paved" .lanes"2Lanes".lanedir"OneWay"	✔	DA25100190			✔	Breakline HA90200140
Road.surface"Paved".lanes"2Lanes". lanedir"OneWay".status"U/C"	✔	DA25100330	✔	text KC90100000	✔	Breakline HA90200140
Road.surface"Paved".lanes"2Lanes". lanedir.status"U/C"	✔	DA25050310	✔	text KC90100000	✔	Breakline HA90200140
Road.surface"Paved".lanes"3Lanes"	✔	DA25100200			✔	Breakline HA90200140

Road.surface"Paved".lanes"3Lanes".status"U/C"	✔	DA25100340	✔	text KC90100000	✔	Breakline HA90200140	
Road.surface"Paved".sep"Divided".lanes"4Lane"	✔	DA25050190			✔	Breakline HA90200140	
Road.surface"Paved".sep"Divided".lanes"4Lane".status"U/C"	✔	DA25050320	✔	text KC90100000	✔	Breakline HA90200140	
Road.surface"Paved".sep"Divided".lanes"6Lane"	✔	DA25050200			✔	Breakline HA90200140	
Road.surface"Paved".sep"Divided".lanes"6Lane".status"U/C"	✔	DA25050330	✔	text KC90100000	✔	Breakline HA90200140	
Road.surface"Paved".sep"Undivided".lanes"4Lane	✔	DA25100210			✔	Breakline HA90200140	
Road.surface"Paved".sep"Undivided".lanes"4Lane".status"U/C"	✔	DA25100350	✔	text KC90100000	✔	Breakline HA90200140	
Road.surface"Paved".sep"Undivided".lanes"6Lane"	✔	DA25100220			✔	Breakline HA90200140	
Road.surface"Paved".sep"Undivided".lanes"6Lane".status"U/C"	✔	DA25100360	✔	text KC90100000	✔	Breakline HA90200140	
Road.surface"Rough"	✔	DA25150000			✔	Breakline HA90200140	
Sand/GravelBar (area outline)	✔	GE25850000	✔	area symbol GE90100000	✔	Breakline HA90200130	
School	✔	BE26000000	✔	text KC90200000			
School (symbol)	✔	BE90900000					
Scree	✔	HB26150000	✔	text KC14300320			
SeaWall	✔	GE26250000	✔	text KB14250000			
SettlingPond	✔	AP30300100	✔	text KC90200000	✔	Breakline HA90200130	
SewageTreatmentArea	✔	AP26750100	✔	text KC90200000			
Sile (symbol)	✔	BA90000110					
Sinkhole	✔	HB27550000					
SkiJump	✔	CL27750000	✔	text KC90200000			
SkiLift	✔	CL27800000	✔	text KC90200000			
Slide (area outline)	✔	HB27900000	✔	area symbol HB90000000	✔	Breakline HA90200120	
SmokestackChimney (symbol)	✔	CG28300000	✔	text KC90200000			
Snowshed	✔	DD28350000					
SportsField	✔	AL21900000	✔	text KC90200000			

SportTrack	✓	AL22650110	✓	text KC90200000			
SpotHeight			✓	text KC90300000	✓	DEM Point HA90100000	
Spring							
StockYard	✓	AB33850150	✓	text KC90200000			
Swamp (area outline)	✓	GC30030000	✓	text KC90200000	✓	Breakline HA90200130	
TailingArea	✓	AP30300000	✓	text KC90200000			
TailingPond	✓	AP90300100			✓	Breakline HA90200130	
Tank (symbol)	✓	EA90000000					
Tank (to scale)	✓	EA30400000	✓	text KC90200000			
Text.type"AerialTriangulation"			✓	text KC90000000			
Text.type"Hydrographic"			✓	text KB14250000			
Text.type"Hypsographic ContourNumbers"							
Text.type"HypsographicExcluding ContourNumbers"			✓	text KC14300000			
Text.type"LandCover"			✓	text KC14300310			
Text.type"LandForm"			✓	text KC14300320			
Text.type"LandMark"			✓	text KC90200000			
Text.type"Toponymy"			✓	text KC90300000			
Text.type"Transportation"			✓	text KC90100000			
TollGate (symbol)	✓	DD91000000					
TollGate (to scale)	✓	DD31000000					
Tower.type"Microwave"	✓	CC31150110	✓	text KC90200000			
Tower.type"Transmission"	✓	CC90000000					
Tower.type"Unspecified"	✓	CC31150000					
Trail	✓	DD31700000			✓	Breakline HA90200140	
TrailerPark	✓	AN31950000	✓	text KC90200000			
TransmissionLine	✓	EA16400120					
Trestle	✓	DD93200000					
Tunnel	✓	DD93220000					

Turntable	✔	DD32300000	✔	text KC90100000			
University	✔	BE32400000	✔	text KC90200000			
University (symbol)	✔	BE91000000					
Vineyard	✔	JB32800000	✔	text KC90200000			
VolcanicCrater	✔	HB079650130	✔	text KC14300320	✔	Breakline HA90200120	
Wall.type"Retaining"	✔	DD24600000			✔	Breakline HA90200140	
WaterLevel(DateofPhotography)	✔	HA33100000	✔	text KB14250000			
WeighScale	✔	CG33250000					
WeighScale (symbol)	✔	CG33250100					
WoodedArea	✔	JA33750000					
Yard	✔	AB33900000	✔	text KC90200000			
Zoo	✔	AL33900000	✔	text KC90200000			