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## CHAPTER XIX

### MAPPING

#### Topographical Map Series- 1: 50,000


#### Field Verification

#### 19.1 Documents sent to the field:

1:50,000 map series is prepared in head office by the Topographical Mapping Branch from the plotting done by Photogrammetric Branch using aerial photographs and the following documents pertaining to each of these sheets will be sent to field by Mapping Office.

- (19) Field Guide Sheet 'A' (Printed Map)
- (ii) Field Guide Sheet 'B' (Printed Map)
- (iii) Field Guide Sheet 'C1' (Printed Map)
- (iv) Field Guide Sheet 'C2' (Printed Map)
- (v) Tracing showing edging of adjoining sheets which has been finalised the field verification.

#### 19.2 Duties of the Surveyor:

- (a) The field guide sheets mentioned in DSR 19.1 should be used for the functions as follows :-
  - (i) Field Guide Sheet 'A' – Information about the data that has to be reported after the field verification should be marked on this guide. This may be done with a pencil.
  - (ii) Field Guide Sheet 'B'- Names of Provinces, Districts, Divisional Secretary Divisions, Grama Niladhari Divisions, Villages, Municipal & Urban Councils together with their boundaries except the boundaries of Grama Niladhari Divisions & villages and the other names of places. To show boundary discrepancies in M.C., U.C. etc. Can be used Field Guide 'A' to copy these details.
  - (iii) Field Guide Sheet 'C1' – Roads & Railways should be verified and if any deviation is detected it should be shown in this guide. The details can be copied from Field Guide 'A'.
  - (iv) Field Guide Sheet 'C2' – If any other information (except details reported as para ( ii) & (iii) above ) is detected, it may be inserted on this guide. The details can be copied from Field Guide 'A'.
- (b) **Insertion of new details :-**
  - (i) If any information shown in map is not found in the field then that should be deleted.
  - (ii) If any amendment has to be shown only of a part of a feature, amendment relevant to which point from which point should be marked with the sign “”
  - (iii) If new details inserted (Roads, Water features) by using GPS then data should be sent to the Head Office. These details should be inserted in the relevant guide sheets.

- (iv). 'Legend' may be prepared giving reference to lines, colours & symbols whatsoever used by the Surveyor to show the amendments. As this is very important you have to give special attention to this.
- (v). The English names used for buildings, villages and other description should be obtained from the relevant organizations and submit a list of such names prepared in the order of reference numbers. Special care should be given for spelling of names in this case.

### **19.3 Description of Water Features.**

- (a.) These features should be shown on Field Guide Sheet C2 & to differentiate each other as described below:
  - (i) Double line stream. (50m width and above)
  - (ii) Single line stream. (below 50m width)
  - (iii) Double line Irrigation Channel. (50m width and above)
  - (iv) Single line Irrigation Channel. (below 50m width)
  - (v) Bund along a Channel.
  - (vi) Stream crossing one over the other. (illustrate clearly)
  - (vii) Tank / Reservoir (F.S.L. and its value should be given)
  - (viii) Tank Bund.
  - (ix) Tank abandoned.
  - (x) Bund abandoned.
  - (xi) Anicut.
  - (xii) Spill.
  - (xiii) Sluice.
  - (xiv) Water Fall.
  - (xv) (Under ground) water tunnel.
  - (xvi) Water hole.
  - (xvii) Springs / Hot water springs.
  - (xviii) Saltern.
  - (xix) Prawn / Fish Cultivation.
  - (xx) Lagoon.
- (b) Hanging stream should be verified in field and shown connected properly, to a main stream.
- (c) In case of Water Course (connection is not visible) label it accordingly.
- (d) Names of all water features should be given legibly.

### **19.4 Roads**

- (a) All roads should be classified as DSR 19.16 (v)

- (b) Features associated with Roads.
- (i) Bridge
  - (ii) Culvert
  - (iii) Protected Railway Crossing
  - (iv) Unprotected Railway Crossing
  - (v) Over Pass
  - (vi) Over Head Bridge
  - (vii) Suspension Bridge
  - (viii) Tunnel
  - (ix) Foot Bridge
  - (x) Cutting along the road (more than 3 metres)
  - (xi) Filling of low land along the road (more than 3 meters)
  - (xii) Causeway
  - (xiii) Ford
  - (xiv) Ferry
  - (xv) Bus Stand
  - (xvi) Bus Depot
  - (xvii) Km posts with their values (Only for AA, AB AC & B Roads). If no Km posts or any discrepancy in numbering is found then those things should be reported.
  - (xviii) Other important details
  - (xix) Flyover
- (c) Ferry & Ford should be shown properly and label them accordingly.
- (d) The names of the first important place, junction, bazaar or town (Road objectives) formed on the adjoining sheet along roads A, B and C, and these distances from the edge of the sheet should be given.
- (e) Hanging roads should be connected to the road network. Footpath connecting the two areas together or connecting to A, B, C, & D roads should be shown.

### 19.5 Railways

- (a) Railways should be shown on Field Guide 'C1' and should be classified as mentioned below.
- (i) Triple Railway Line
  - (ii) Double Railway Line
  - (iii) Single Railway Line
- (b) The following descriptions relevant to the railways if available should be given.
- (i) Railway Station
  - (ii) Train Halt
  - (iii) Bridge
  - (iv) Culvert

- (v) Overhead Bridge
- (vi) Tunnel
- (vii) Cutting
- (viii) Filling/Embankment
- (ix) Railway Yard

(c) The name of the first railway station found on the adjoining sheet along a railway track and the distance (in kms) to it from the edge of the sheet should be given.

## 19.6 Land Use

(a) Land use Should be shown on Field Guide 'C2' should be classified as follows.

(i)	Paddy	-	P
(ii)	Tea	-	T
(iii)	Rubber	-	R
(iv)	Cocount	-	C
(v)	Marsh	-	Msh
(vi)	Sand	-	Snd
(vii)	Mangrove	-	Mngr
(viii)	Scrub (Low jungle)	-	Scr
(ix)	Forest (High Jungle)	-	F
(x)	Chena	-	Ch
(xi)	Grassland	-	Gr
(xii)	Park	-	Park
(xiii)	Play Ground	-	PG
(xiv)	Garden	-	G
(xv)	Rock	-	Rk
(xvi)	Cemetery	-	Cem
(xvii)	Clearings	-	Cl
(xviii)	Barren Land	-	BL

(b) Vegetation which are not categorized under the above, they should be shown as OP(Other Plantation) with the vegetation type. If there is mixed vegetation, show the name of the main type.

(c) Vegetation boundaries should be shown clearly to differentiate each type.

(d) The boundaries & names of Sanctuaries, Mahaweli Zones, National Parks & Forest Reservations should be given.

## 19.7 Buildings

(a) Buildings should be shown on Field Guide 'C2'. All important buildings which are shown in built up areas in a town/a village (schools, religious places,

hospitals, institutions of Govt./Co-op/Board) should be named to identify them clearly.

- (b) When naming buildings the official name used should be given in English. If there is a problem to find out the name in English, it could be given in Sinhalese. If sufficient space is not available to write the name of a building, give them in the outer margins of the sheet and reference made accordingly.
- (c) If there abbreviations for buildings, they should be indicated. Ex. Cooperative Wholesale Establishment (C.W.E.)
- (d) When buildings are in clusters, name the important building with an arrow.
- (e) Historical sites should be shown with their names. In case of Ruins, it should be mentioned.
- (f) The following building should be shown & named.
  - (i) Post Office
  - (ii) Sub Post Office
  - (iii) Bank
  - (iv) Govt. Hospital
  - (v) Private Hospital
  - (vi) Dispensary
  - (vii) Rest House
  - (viii) Tourist Hotel
  - (ix) Restaurant
  - (x) Police Station
  - (xi) Temple
  - (xii) Church
  - (xiii) Mosque
  - (xiv) Kovil
  - (xv) Filling Station
  - (xvi) School
  - (xvii) University
  - (xviii) Factory

### **19.8 Administrative Boundaries & Names**

- (a) Administrative boundaries & name should be shown on Field Guide Sheet 'B'. Amendments to the boundaries and their names of provinces, districts, DS divisions, M.C., U.C. & G.N. Divisions should be shown clearly. Underline only GN names in green colour if added any.
- (b) When the administrative boundary is amended and thereby smaller division is formed such division also should be named.

- (c) If village names are added newly they should be underlined in black.
- (d) Other important places especially towns, junctions etc. should be named.
- (e) All estate names should be indicated. The division names of estates need not be written.
- (f) All names should be written in English. Always give the official name used by the respective institutions and ensure correct spellings. Deleted all irrelevant names, already shown on the guide or amend them suitably if the placement is not proper.
- (g) If any other information which are not mentioned under para 19.5 to 19.8(f) above should be shown in legible and intelligible manner.
- (h) Edges of the field sheet where amendments have shown should be compared with the edge of the adjoining sheet using the tracings of all sheets edges already supplied to you and note any discrepancy.

**19.9** If any special things has to be mentioned then should prepare a report. All guide sheets, reports, etc., should be signed by Surveyor.

**19.10** All four field guides completed, all data & all relevant documents should be signed by surveyor & hand over to Supervising Officer for checking.

#### **19.11 Duties of Supervising Officer**

- (a) Before assigning the tasks to the Surveyor, ensure that all the required documents have been received. When the surveyor has completed his tasks verify as to whether the surveyor has carried out all instructions mentioned in this guideline. If there are any omissions or mistakes, please get them corrected by the surveyor.
- (b) The completed all Guide Sheets should be checked & compared with adjoining sheet edges provided by the tracings and also with those of adjoining sheets which have already been sent to the field. If there are any discrepancies the surveyor should be instructed to verify again to ascertain the accuracy. If the details in adjoining sheets need to be amended, they should also be reported.
- (c) Also verify and certify the digital data.
- (d) If the surveyor has carried out his duties correctly, the relevant documents with the certification of Supervising Officer should be handed over to the District Superintendent by placing his/her name, signature and date in all documents.



**19.12 Duties of District Superintendent :-**

Originals of all the documents that are to be sent to the Head Office should be checked and forwarded with his/her certification to the Superintendent of Surveys (Map Publications) without delay.

**The Topographical Maps Series –1: 10,000****Field Verification****19.13 The documents sent to the field:-**

The following documents and digital data are sent to the field for the verification of every sheet of this series of maps compiled from aerial photographs in the Topographical Mapping section in the Head Office

- (i) Field Guide “A”
- (ii) Contour Sheet (This could be used when inserting streams, lakes and reservoirs in the sheet and could also be used for marking of the Administrative Boundaries.)
- (iii) The tracing consisting of names and boundaries of the administrative divisions (Scale of one mile to an inch or 1:50,000 – this could be used when inserting boundaries and names of administrative divisions in the sheet)
- (iv) The tracing or the computer printed sheet at the scale of 1:10,000 prepared using the 16 chain RDs or FVPs at 1:63,360 and details of sanctuaries and reserved areas.
- (v) The list of Village names categorized under the D.S. Divisions and G.N. Divisions – This could be used when inserting names in the sheet.
- (vi) A list of questions pertaining to the mistakes arisen when checking the plotting sheet, Only a few omissions and mistakes may have been indicated here. In addition to them the Surveyor should report any other amendment that is observed in the field.
- (vii) Digital data in the format of dxf./dwg.

**19.14 Duties of the Surveyor:-**

- (i) Special attention should be paid to the instructions given under the “Field Verification” in these guidelines when obtaining information from the field and inserting them. In addition to them any other special features that are observed should also be reported.

- (ii) When hanging features such as roads or streams are connected or new features are inserted. Use the GPS method or use the details in the existing plans, and report them.
- (iii) When inserting features without positional accuracy (i.e. without surveying or extracting from existing plans) those cases should be reported.
- (iv) Information gathered after field verification should be inserted in guide sheet "A". Ensure to maintain the same scale of the map when inserting the details.
- (v) If any feature or details observed which are not in the guide sheet "A", they should be marked.
- (vi) If any feature in the guide sheet "A" is not observed in the field, it should also be reported.
- (vii) If any feature in the guide sheet "A" differs from what is actually observed in the field, it should be corrected and reported.
- (viii) When reporting only a section of any linear feature, please indicate the relevant section by marking "Q" symbol at the starting point as well as at the end point.
- (ix) An appropriate legend should be used in the same guide sheet to describe lines, symbols and names.

### 19.15 Description of water features

Water features identified in the Topographical Mapping Section have been indicated in guide sheet 'A'. Their accuracy should be checked and if there are any changes in water features, they should be reported

- (a) The Water Features should be classified as follows.
  - (i) Streams:-  
If the width is more than 10 metres, it should be shown as double line feature according to the scale. When naming streams mention the present name used. If different names are used for the same stream at different places, they should be shown with a "Q" symbol.
  - (ii) Irrigation Channels:-  
The drainage features constructed to supply water for agricultural purposes. The natural streams and the irrigation channels should clearly be shown separately.
  - (iii) Canals:-  
The drainage features which have been constructed to supply water for non-agricultural purposes. Natural streams and Canals should be shown separately.

- (iv) Tank/Reservoir:-  
Mention the names. Full Spill Level (FSL) should be shown as the boundary of the Tank /Reservoir, and it should be given in metres.
  - (v) Abandoned Tank:-  
Name as “Abandoned Tank” here.
  - (vi) Water Hole
  - (vii) Pond, Lake
  - (viii) Dam, Bund
  - (ix) Sluice
  - (x) Spill
  - (xi) Anicut
  - (xii) Water Fall
  - (xiii) Springs / Hot water springs
  - (xiv) Water Tunnel
  - (xv) Pipe Line
  - (xvi) Well
  - (xvii) Tube Well
  - (xviii) Lagoon
  - (xvix) Bay
  - (xx) Harbour
  - (xxi) Fishery Harbour
  - (xxii) Aquatic Farm (prawn / fish)
  - (xxiii) Salt Pan
  - (xxiv) Mangrove
  - (xxv) Marsh
  - (xxvi) Islands
- (b) If a water feature crosses another water feature, explain the position of its crossing point.
- (c) Indicate the connection of the hanging streams in the guide sheet “A” with other streams. Verify as to whether such connections tally with contour formations given in the contour sheet.

### 19.16 Roads:-

- i. If there are any hanging road segments, show their connection with the road network.
- ii. Insert the roads that are not in the Guide Sheet.
- iii. When inserting the roads under construction please mention the estimated duration for the completion of such roads.
- iv. When marking the proposed roads, indicate as to whether the required lands have been acquired.
- v. The accuracy of the road classification should be verified and at the same time the unidentified roads should also be classified.

Only the roads maintained by Road development Authority (RDA) are considered as main roads. They should be shown along with the Route Nos. on

the km posts (Expressway, A, B, AA, AB). Importance of the road, travelling distance, places connected to the road, description of cultivation and buildings on either side of the road, availability/ unavailability of public transport facilities should be taken into consideration to classify C and D roads. Foot paths should be indicated as “E” roads.

When in doubt with regard to the classification indicate the starting point and end point and give a description (eg. 2.5-metre wide tar road, gravel road, etc.)

- vi. Along A,B, & C roads, mention the distance from the sheet edge to the nearest town, bazaar, junction or important place of the next sheet with the name.
- vii. Indicate the details of any of the following features related to the roads:
  - (a). Bridges
  - (b). Culverts (Mention the No.)
  - (c). Foot Bridge
  - (d). Suspension Bridge
  - (e). Protected Level Crossing
  - (f). Over Pass
  - (g). Over Head Bridge
  - (h). Tunnel
  - (i). Cuttings along the road (more than 3 metres)
  - (j). Filling of low land along the road (more than 3 metres)
  - (k). Causeway
  - (l). Ford
  - (m). Ferry
  - (n). Main bus stand
  - (o). Bus Depot
  - (p). km posts with their values

### 19.17 Railways:-

The positional accuracy of railway tracks mentioned in the Guide Sheet “A” should be verified and if there are any amendments to be made, they should also be reported. The name used for the immediate railway station / train halt which is in the adjoining sheet should be mentioned along with the distance in Kms to one decimal point at the sheet edge.(neat line)

Indicate any of the following features related to the railway tracks.

- (a). Railway Station
- (b). Train halt
- (c). Railway yard
- (d). Bridge
- (e). Culvert
- (f). Over head bridge
- (g). Tunnel
- (h). Cuttings along the railway track (more than 3 metres)
- (i). Filling of low land along the railway track (more than 3 metres)

### 19.18 Land Use:-

- (a) The accuracy of the land use indicated in Guide Sheet “A” should be verified and if amendments need to be made, they should also be reported.

The cultivation or the cultivations should be shown at the places indicated as “PI”

Mention a description of play ground, parks, cemeteries (if available, include names) quarries and gravel pit etc.

The names and boundaries of reserved areas (Such as sanctuaries, forest reserves, archaeological reserves etc.) should be indicated.

Indicate industrial zones, Trade zones and Farms.

### 19.19 Buildings:-

(a) The following buildings among other buildings in Guide Sheet “C” should be identified in the field and named while inserting all relevant buildings in the sheet

- (i) Buddhist Monasteries (Viharayas) and Temples
- (ii) Churches
- (iii) Mosques
- (iv) Hindu Kovils
- (v) Schools
- (vi) Technical Colleges
- (vii) Higher Educational Institutions
- (viii) Hospitals/ Government Dispensaries
- (ix) Government Establishments
- (x) Banks, Corporations, and Statutory Bodies
- (xi) Police stations, Police check points
- (xii) Courts
- (xiii) Tourist Hotels, Holiday Houses, Rest Houses
- (xiv) Filling Stations
- (xv) Factories (indicate together with the names as “Tea Factory, Rubber Factory, Garment Factory” etc.)
- (xvi) Places of Historical importance (if these remain as ruins, please indicate)
- (xvii) Airport, Helicopter Pad
- (xviii) Post Offices, Sub post offices, Agency post offices
- (xix) Housing Schemes
- (xx) Libraries
- (xxi) Community Halls
- (xxii) Agrarian Services Centers
- (xxiii) Power Stations, Sub power stations.
- (xxiv) Television/ Radio/Telephone Transmission Towers
- (xxv) Light House

- (a) Any other important building (depending on the importance in the area concerned)

- (b) Insert any other buildings which come under above classification but have not been shown in Guide Sheet “A”
- (c) When naming the buildings, their official names used by the respective organizations should be indicated.
- (d) If there is no space to indicate any name in the appropriate place, please indicate such a place by a number, while giving the relevant details in the margin of the sheet with the same number.
- (e) When there are a number of named buildings in close proximity, please indicate a few important buildings, selecting only prominent ones according to the height.

#### **19.20 High Tension Electric Lines:-**

Only the lines with voltage 33,000 V or more should be indicated along with the transformers.

#### **19.21 Administrative boundaries and names :-**

- (a) Boundaries and names of Provinces, Districts, D.S Divisions, G.N Divisions should be mentioned. In addition, the names of villages and other places (Areas smaller than villages, Bazaars, Junctions, Towns etc.) should also be mentioned at the most appropriate place while indicating ‘GN’ at the end of the names of G.N Divisions and underlining the village names.
- (b) The tracing showing the administrative boundaries provided by the Head Office, the list of village names, copy of the contour sheet and the tracing consisting F.V.P details could be used for this purpose. It should be understood that all the names in fifth column of the list of village names are not village names.
- (c) If the Administrative Boundaries have changed, the copies of relevant Gazette Notifications should also be forwarded.
- (d) The boundaries and names of Municipal Councils, Urban Councils, and Mahaweli Zones should also be inserted.
- (e) The names of estates should be mentioned at appropriate places. When indicating the names of Estates, the Division name of the Estate should be mentioned under the name of the main Estate.
- (f) After inserting the relevant details in the Guide Sheet, comparison should be made with the adjoining sheet edges of the sheet or with the adjoining sheet edges provided by separate tracings and also with the adjoining sheets which have already been sent to the field. If any discrepancy is found, it should be checked again. Ensure the accuracy of the Guide sheet and report to amend the adjoining sheet wherever necessary.

- (g) Besides, correct the features and other details in the adjoining sheet edge, and send that also.

### 19.22 Computer Related Activities:-

- (a) Use the 'Layer Management Guide' to insert the details collected at the Field verification into the digital file.

The necessary layers should be created in order to insert the details which are not mentioned therein.

Layers should be named in such a way so as to clearly identify the layers used to enter new streams and new roads found at the field verification.

Eg:- For new water features – STRMF  
For new main roads – MNRDF

- (b) If any classification of a description that has already been carried out has to be changed that should be inserted in the respective layer.

The features which are to be removed that are not in the field should be inserted in relevant layer.

Eg. :- If any water feature to be removed – STRMD  
If any path to be removed – FTPHD

- (c) If several names are used for the sections of a tank or a double line water feature such sections should be separated clearly. The lines used for such separations should be included in the STRMV / TANKV layer.

**19.23** After completing tasks assigned above, the following documents should be forwarded to the Supervising Officer concerned in order to dispatch them to the Head Office having putting the Surveyor's name, signature and date in the following (a), (i) and (j) documents.

- (a) Field Guide 'A'
- (b) Digital Data
- (c) Contour Sheet.
- (d) All tracings of adjoining sheet edges
- (e) Tracing of Administrative Boundaries
- (f) The sheet consisting of F.V.P. details and details of reserved areas.
- (g) List of village names
- (h) The list of questions sent by the Topographical Mapping Section.
- (i) The answers to the questions raised by the Topographical Mapping Section and the Surveyor's report consisting of answers and the Surveyor's report with his observations.
- (j) The list of names in English language used for buildings, villages and other features.

**19.24 Duties of Supervising Officer:-**

- (a) See DSR 19.11(a)
- (b) The completed Guide 'A' should be compared with adjoining sheet edges provided by the tracings and also with those of adjoining sheets which have already been sent to the field. If there are any discrepancies the surveyor should be instructed to verify again to ascertain the accuracy. If the details in adjoining sheets need to be amended, they should also be reported.
- (c) See DSR 19.11(c)
- (d) If the surveyor has carried out his duties correctly, the relevant documents with the certification of Supervising Officer should be handed over to the District Superintendent by placing his/her name, signature and date only in the documents mentioned under (a), (i) and (j).

**19.25 Duties of District Superintendent:-**

See DSR 19.12.

**Ground Control Surveys For Photogrammetry**

**19.26** The establishment of good ground control is an extremely important aspect of any overall Photogrammetric mapping operation. The accuracy of a finished map can be no better than the ground control upon which it is based.

**19.27** As soon as Superintendent of Surveys (Geodetic) identifies the required Ground Control Points (GCP) the location diagrams of the GCP with photo photographs indicating the required accuracy of the GCP will be sent to the District Superintendent in order to carry out the survey of GCPs.

Location diagram: Location of the GCP marked on the tracing paper sketched from the 1 inch to 1 mile or 1:50,000 scale topographic map

**19.28** Acceptable ground control points must satisfy two requirements:

They must be sharp, well defined, and positively identified on all photos.

They must lie in favourable locations in the photographs.

**19.29** Ground Control Points should be selected after careful study of the photos. The study should include the use of a stereoscope to ensure a clear stereoscopic view of all points selected. This is important because many of the subsequent Photogrammetric measurements will be made stereoscopically.



**19.30** Images for horizontal control have slightly different requirements than images for vertical control, because images of horizontal control points must be very sharp and well defined horizontally while images for vertical control need not be as sharp and well defined horizontally. However, the selected vertical points should be well defined vertically.

Well Defined Points for Horizontal Controls: The selected features should be within the circle marked on the photograph. It is advisable to use symmetrical features. Some features commonly satisfactory for horizontal control are Intersections of Roads, Manhole Covers, Small lone Bushes, Corner of Buildings, Fence Corners, Intersections of Rail Roads or Watercourses, etc. Care must be exercised to ensure that control points do not fall in shadowed areas on some photos, especially for points common in two adjacent strips, which are flown at different days.

Well Defined Points for Vertical Controls: Best vertical control points are small flat or slightly crowned areas. The small areas should have some natural features nearby, such as trees or rocks, which help to strengthen stereoscopic depth perception. Large open areas such as the tops of grassy hills or open fields should be avoided, if possible, because of the difficulties they cause in stereoscopic depth perception. Intersections of roads, small patches of grass, small bare spots, etc., make excellent vertical control points.

**19.31** Some times it is difficult to find features equally suitable for horizontal and vertical control points. Horizontal control points should have proper size and contrast with background, while vertical control points should be located on a flat area with good photographic texture. Consequently two points may be selected next to each other, one for horizontal and other for vertical.

**19.32** To avoid any uncertainty regarding the identification of the selected control points by Photogrammetric technicians a large-scale sketch (Photogrammetric Sketch) should be made, showing the exact location of the point with the surrounding details as seen on the photograph. The orientation of the sketch relative to the photograph should be given. In addition it is essential to prick a selected point on the photograph using a needle. Surveyor's sketch should also be prepared (see annexure 1) in order to use when the need arises for re-measurement of the selected points.

**19.33** It is advised to connect all points and adjust in one net. GPS may also be used with the assistance of the Superintendent of Surveys (Geodetic).

**19.34** After completing the work the District Superintendent should forward computed coordinates, pricked photographs, photogrammetric sketch and surveyor's sketch to Superintendent of Air Surveys.

## Annex 1

## GROUND CONTROL DATA FORM

1.Point No. : 81/F/A

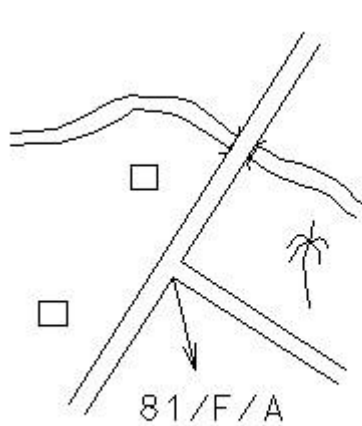
4.Division : Homagama

2.1:50,000 sheet No : 66

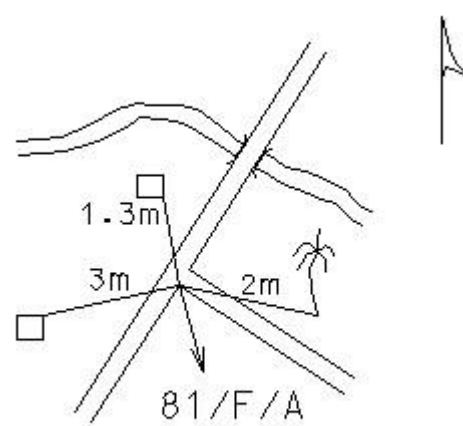
5.District : Colombo

3.Pricked photo No. : 99 .1/23

6.Name of the Surveyor : M.D.Silva



Photogrammetric Sketch



Surveyor's Sketch

7.Coordinates: i. North(m) :125452.000

ii. East(m) :452367.564

iii.Height(m) :25.65

8.Description of Point: Intersection of Road and Path

9. i. Method of Surveys :Theodolite Traversing

ii. F.B. No. :FLD 100

iii. Date of Survey :2000.05.05

10.i. Method of heighting :Sprit Leveling

ii. L.B. No. :FLD/L/200

iii.Date of heighting :2000.05.08

Govt. Surveyor:

Date:

Checked by:

Asst.S.S

Date :

Passed by:

S.S

District:

**CORRECTION SLIP**

**CORRECTION SLIP**