

Serial Number 1940/52.



## THE SURVEY REGULATIONS 1940.

GALWAY, Governor-General.

### ORDER IN COUNCIL.

At the Government House at Wellington, this 20th day of March, 1940.

Present :

HIS EXCELLENCY THE GOVERNOR-GENERAL IN COUNCIL.

PURSUANT to the Surveyors Act, 1938, and on the recommendation of the Survey Board established by that Act, and acting by and with the advice and consent of the Executive Council, His Excellency the Governor-General doth hereby make the following regulations.

### REGULATIONS.

#### REGULATION 1.—PRELIMINARY.

- (1) These regulations may be cited as the Survey Regulations 1940.
- (2) In these regulations, if not inconsistent with the context,—
  - “Surveyor-General” means the Surveyor-General appointed under the Land Act, 1924 :
  - “Chief Surveyor” means a Chief Surveyor appointed under the Land Act, 1924 :
  - “Surveyor” means a person registered as a surveyor under the Surveyors Act, 1938 :
  - “Survey” means any survey required or made under any Act relating to or affecting title to land, whether such title is in fee-simple or in any lesser interest :
  - “Plan” includes all plans resulting from any survey :
  - “Board” means the Survey Board constituted under the Surveyors Act, 1938.
- (3) For purposes of general interpretation hereof these regulations shall be deemed to be made under the Surveyors Act, 1938.

#### REGULATION 2.—SURVEYOR TO COMPLY WITH DEPARTMENTAL RULES.

A surveyor effecting any survey under these regulations shall comply with all departmental rules and directions issued by the Surveyor-General supplementary to these regulations and not contrary thereto and shall conform to accepted good survey practice where procedure is not laid down by these regulations.

## REGULATION 3.—SURVEYOR TO COMPLY WITH REQUISITION.

On receipt of a requisition from the Chief Surveyor to amend a survey or plan or to supply information concerning it which is not contained in the field notes or shown on the plan, and which in the opinion of the Chief Surveyor is necessary to complete the plan or survey in terms of these regulations, the surveyor concerned shall promptly comply with the requisition.

## REGULATION 4.—DISPUTES TO BE SETTLED BY SURVEYOR-GENERAL.

In the event of a dispute arising between the Chief Surveyor and a surveyor as to whether any survey made under these regulations has been properly effected, the matter may be referred to the Surveyor-General, who shall inquire into it, and his finding shall be communicated to the Chief Surveyor and the surveyor and shall be final and binding on both parties.

## REGULATION 5.—INFORMATION TO BE OBTAINED.

Before making any survey, the surveyor shall obtain all requisite information respecting the subject land and adjacent lands in the offices of the District Land Registrar and Chief Surveyor of the district in which the land is situated.

For this purpose original plans, block sheets and index maps, field-books, and traverse-books are open to surveyors and professional draughtsmen, without fee, during office hours and under the supervision of the officer having charge of these records.

The information so obtained must be used only for the purpose of effecting surveys under these regulations, and no surveyor shall use such information or permit such information to be used so as to infringe the copyright of the Crown or of any other person.

## REGULATION 6.—DUTY OF SURVEYOR.

(1) It shall be the duty of every surveyor making surveys under these regulations to study the interests of the State in all his operations, and to supply to the District Land Registrar and Chief Surveyor all information obtained by him relating to the survey that will aid in securing accuracy and completeness in the title to the land.

(2) Surveyors shall report to the Chief Surveyor all disturbance or likelihood of disturbance to trigonometrical stations and standard survey marks; and surveyors engaged on Government work shall renew or repair any such stations and marks or report their inability to do so.

(3) Surveys shall be executed by a surveyor holding a practising certificate as required by the Surveyors Act, 1938, and plans shall bear his signature.

(4) Surveys shall be carried out with instruments and measuring-bands of such type and in such adjustment as will readily attain the standards of accuracy hereinafter defined.

## REGULATION 7.—FIELD NOTES.

(1) The field notes of a survey shall be a record of all observations and measurements made by the surveyor and of his pegs or other marks made on the ground which are required by these regulations for the purpose of marking on the ground and delineating on the plan the land surveyed.

(2) Field notes shall be neatly and clearly recorded in hard black pencil, in such a way that any surveyor or competent draughtsman may draw a correct plan of the survey.

(3) Field notes shall be recorded in a book of regulation size or on approved loose leaves.

(4) Field-books will be issued on request to the surveyor by the Chief Surveyor, who shall give a number to each field-book issued and enter it in a Register of Field-books.

(5) Loose leaves similarly issued shall, on receipt by the Chief Surveyor, be assigned a number and entered in the register, and when sufficient leaves have been received they shall be bound into field-book form.

(6) The original pencil notes shall not be obliterated, inked over, or erased. Every alteration made by the surveyor shall be clearly written, and erroneous entries shall be crossed out.

(7) The first page of each survey in a field-book shall contain the title of the survey, with particulars of the district, block, town, or other reference as will sufficiently identify the parcel surveyed, the date of commencement of the survey, and signature of surveyor. Each page shall be initiated by the surveyor and dated.

(8) In each book a comparison of the measuring-bands used with the standard band, or a copy of such comparison, shall appear so that the correct standard length of the measurements made may be derived.

(9) The field notes of each survey are to accompany the plan of the survey when this is being lodged for examination with the Chief Surveyor or District Land Registrar.

## REGULATION 8.—BEARINGS.

(1) Bearings shall in every case be measured in degrees, minutes, and seconds of arc in sexagesimal measurement, commencing at 0°, the north point of the true meridian of the initial station of the circuit, and thence through east, south, and west in that order, returning to the north point at 360°.

(2) Bearings shall be measured with a theodolite, all readings being recorded and means deduced. Corrections for origin and closure on check bearings are to be applied and the deduced bearing shown in the field-book. For computations and plan the seconds of the deduced bearing may be rounded off in accordance with the following table:—

Rural Surveys.		Town Surveys.	
	To nearest		To nearest
4 chains or under	.. 1 00	3 chains or under	.. 1 00
4 to 10 chains	.. 0 30	3 to 5 chains	.. 0 30
10 to 25 chains	.. 0 15	5 to 10 chains	.. 0 15
25 to 50 chains	.. 0 10	10 to 20 chains	.. 0 10
Over 50 chains	.. 0 5	Over 20 chains	.. 0 5

## REGULATION 9.—ANGLES OF TRIANGLE.

(1) The summation of the observed angles of any triangle shall not differ from 180° by more than 12 seconds.

(2) Wherever possible, a point should not depend upon a single triangle only.

(3) Vertical angles for the determination of heights shall be observed at each station occupied.

## REGULATION 10.—ORIGIN OF VALUES AND BEARING.

(1) The origin of values and bearings shall be obtained by traverse or through well-conditioned triangle to the triangulation system, to the standard survey if such exists or to prior surveys approved under these or former survey regulations.

(2) Where the origin of values and bearings is obtained from the standard survey, at least two adjacent lines of the standard survey shall be observed for origin of bearing, and the co-ordinate values of the survey shall depend on the retraverse of at least one line of the standard survey.

(3) Where possible, surveys shall be laid off from the lines of the standard survey. If such is not possible, the surveyor shall disclose on the plan his reason for departing from the standard lines.

(4) Where the origin of values and bearings is obtained from prior surveys, the reliability of marks used shall be proved by agreement between at least three such adjacent marks, wherever possible.

## REGULATION 11.—CHECK BEARINGS.

(1) Where a traverse through dense bush consists of more than twenty lines, check bearings shall be observed to stations of the traverse from some well-established point. The number of stations between such check bearings will depend upon the nature of the country and length of traverse-lines, but check bearings should be observed at approximately every twentieth station where lines are short—that is, averaging up to 5 chains. Where lines average more than 5 chains, or where due to the nature of the country difficulty is experienced in obtaining accurate angular observations of the traverse-lines, check bearings shall be observed at approximately every tenth station. Stellar or solar azimuths may be used for checking purposes when other means are impracticable.

(2) Where lines are in excess of 100 chains, check bearings shall be applied to the stations at both ends of such lines.

(3) In country other than bush, check bearings shall be observed to approximately every tenth station, except when lines average more than 10 chains, when check bearings should be observed at stations not more than 100 chains apart. The nature and location of check bearings will always depend upon the circumstances of the particular case, and must be governed by the nature of the country, the length of the lines, and the visibility at the time of observation.

## REGULATION 12.—LINEAR AND ANGULAR CLOSURES.

(1) The surveyor shall use such measures and equipment as will ensure that no line as measured and shown shall depart from the true standard length by more than that shown in the following table:—

Length of Line.				Town Surveys.	Rural Surveys.			
					Easy.	Hilly.	Rough.	
Chains.				Links.	Links.	Links.	Links.	
Under 3	..	..	..	0-10	0-10	0-15	0-20	
3 to 13	..	..	..	0-15	0-20	0-30	0-40	
13 to 30	..	..	..	0-25	0-30	0-40	0-50	
30 to 50	..	..	..	0-35	0-40	0-50	0-70	
50 to 80	..	..	..	0-45	0-50	0-70	0-90	

(2) The surveyor shall use such instruments and methods as will ensure that the bearing of any line as shown on plan shall not depart from the true bearing expressed in terms of the origin of the survey by more than that shown in the following table:—

Length of Line.				Town Surveys.	Rural Surveys.					
					Open.			Bush.		
					Easy.	Hilly.	Rough.	Easy.	Hilly.	Rough.
Chains.										
Under 4	..	..	..	1 00	1 30	2 00	2 30	2 00	2 30	3 00
4 to 10	..	..	..	0 45	1 00	1 20	1 40	1 20	1 40	2 00
10 to 25	..	..	..	0 30	0 45	1 00	1 15	0 45	1 00	1 15
Over 25	..	..	..	0 20	0 30	0 40	0 50	0 30	0 40	0 50

## REGULATION 13.—BOUNDARIES TO BE PEGGED.

(1) Subject to clause (5) of Regulation 15 hereof, all boundaries shall be pegged at every angle. Straight boundary-lines must be cleared where necessary and distinctly marked by pegs at intervals not exceeding 30 chains, which, however, may be varied to suit the conformation of the country. Advantage should be taken of the most prominent and favourable positions on the line for the pegging, so that the direction may be seen from peg to peg.

(2) In bush country where complete chainage of the boundary is not necessary, then, subject to the approval of the Chief Surveyor, only such cutting of the line will be required as will ensure adjoining pegs being visible from each other, but it must be sufficient to enable the distances of such pegs along the line to be arrived at to show approximately on the plan the position of the pegs. Under all circumstances the lines must be cut for a distance of at least 5 chains from the boundary corners at each end to such a position that the boundary may be readily ranged and the distance to the peg determined for noting on the plan.

(3) Every boundary-peg shall be connected to a traverse mark or a witness mark situated at a distance of not more than 2 chains therefrom, but such witness mark shall not be itself a boundary corner peg. Such traverse pegs or witness marks shall be driven flush with the ground to avoid confusion.

## REGULATION 14.—OFFSETS.

(1) Offsets to natural boundaries shall be measured at intervals sufficient to delineate correctly and accurately such boundaries, but no such offset shall exceed 3 chains in length.

(2) Where the nature of the boundary is such that it may not be actually traversed, offsets shall be measured to such points on the boundary as will correctly define the boundary-line, but no such offset shall exceed 3 chains in length.

## REGULATION 15.—BOUNDARY MARKS.

(1) All boundary-pegs are to be of sawn or split and dressed heart of totara, kowhai, jarrah, blue-gum, puriri, hinau, macrocarpa, or such other durable timber as may be permitted by the Chief Surveyor in special cases. The dimensions shall not be less than 2½ in. by 2½ in.,



or if unprocureable 3 in. by 2 in., and 21 in. in length, with top neatly chamfered. Pegs shall be driven vertically not less than 18 in. into the ground, the top finishing approximately 3 in. above the ground. In all circumstances the peg shall be firmly placed, and where necessary the length increased to obtain the required stability.

(2) All boundary-pegs shall be branded with the broad-arrow, with the number of the parcel facing towards the parcel, and, in the case of frontage-pegs, with the letter R facing the road.

(3) In bush, all boundary-pegs at prominent corners shall have an iron pin 15 in. long and  $\frac{1}{4}$  in. in diameter driven on the northern side.

(4) Where, as in cities, pegs cannot be driven, iron bolts or iron spikes  $\frac{1}{2}$  in. in diameter and 12 in. in length are to be used in place of pegs.

(5) Wherever possible, boundary-pegs must be inserted on the boundary; but in the case of stone or rubble walls and suchlike obstacles pegs may be placed close to and at stated distances from the true boundary.

(6) In open country, trenches or lockspits 4 ft. long, 12 in. wide, and 10 in. deep, commencing 2 ft. from the peg, and indicating the line of the boundaries, shall be dug at all prominent corners of boundaries.

(7) All pegs split in driving must be replaced.

#### REGULATION 16.—TRAVERSE AND WITNESS MARKS.

(1) Traverse marks and witness marks are to be placed in positions free from disturbance so far as such may be reasonably inferred.

(2) Traverse or witness stations that are not boundary marks shall be marked by iron spikes of not less than  $\frac{1}{2}$  in. diameter or  $\frac{1}{2}$  in. square, 9 in. in length, or galvanized water-pipe of not less than  $\frac{1}{2}$  in. internal diameter, 18 in. in length.

(3) Wooden pegs, 15 in. long, of cross-section and material as hereinbefore provided, may be used as traverse or witness marks in cases where the use of iron marks would be inexpedient. The traverse or witness point, which shall be as near as possible to the centre of the peg, shall be marked by a substantial copper tack.

(4) Traverse and witness marks shall be driven vertically flush with the ground, but where there is any danger of disturbance by cultivation, road formation or maintenance, malicious interference, or destruction by fire shall be driven 6 in. below the surface.

(5) Where there is danger of striking underground services, or in paved footways, streets, or roads, the length of the traverse or witness mark may be reduced.

(6) Where necessary, the length of the traverse or witness mark shall be increased to provide a reliable and stable position.

#### REGULATION 17.—CURVED BOUNDARIES.

Boundaries defined by curves shall be marked on the ground by pegs or other accepted marks on the curve in such manner that the offset from the middle of the chord between adjacent ground marks shall not exceed 1 link, nor shall the said ground marks be at greater intervals than 1 chain apart.

#### REGULATION 18.—PERMANENT REFERENCE MARKS.

(1) All surveys shall be connected to at least two permanent reference marks in such a manner that no angle or corner peg on any boundary shall be distant more than 30 chains in rural surveys and 20 chains in town surveys from two such marks, the distance being

(2) For the purpose of this regulation the term "permanent reference marks" shall mean—

(a) Trigonometrical stations;

(b) Standard survey block or tube;

(c) An iron tube of not less than  $\frac{1}{2}$  in. internal diameter and 18 in. long driven at least 18 in. into the ground, of sufficient stability to guarantee permanence;

(d) An iron bolt, spike, or pin securely cemented into the mother rock or into a boulder or masonry of more than 5 cubic yards in content;

(e) Such other mark as the Chief Surveyor, having regard to its permanence and definiteness, may accept.

(3) These reference marks are to be placed in positions free from disturbance, so far as may be reasonably inferred, and may be traverse stations not serving as boundary marks.

(4) On new roads (in other than in dense bush) the traverse-lines should be run parallel to the roadside and off the formation. Some of the traverse stations shall be permanent marks. Where there is doubt as to the permanency of marks which are traverse stations, special marks shall be inserted in line with the traverse-line produced, if necessary, or in line with a triangulation station or other permanent mark.

They shall be placed not more than 30 chains apart. Wherever possible they shall be so sited that the adjoining reference marks are reciprocally intervisible.

(5) In new roads through dense bush where of necessity the traverse-line will follow the graded line, the permanent marks are to be offsetted from the traverse-lines.

(6) On formed roads of regular width the traverse-line shall be, wherever practicable, parallel to the side lines and off the formation, and some of the stations permanently marked with permanent marks inserted as in the case of new roads.

(7) In the case of traverses along river-beds or similar places where the stations are liable to be obliterated by erosion or siltation, permanent marks shall be inserted and connected to in positions free from disturbance at distances not exceeding 40 chains apart measured along the traverse-lines.

#### REGULATION 19.—HANGING TRAVERSES.

Hanging traverse-lines will not be accepted except in cases where it is not possible to obtain a closed circuit, and in such cases all lines and angles shall be measured twice, using, wherever possible, methods for the second measurement differing from those first used. Single lines tying in important corners in boundaries, more especially in high-priced town properties, shall be similarly treated or tied in by measured distances or by bearing from other points. These check measurements and observations shall in all cases be recorded in the field notes, but need not appear on the plans.

#### REGULATION 20.—TRAVERSE COMPUTATIONS.

(1) All traverses are to be computed and co-ordinated in terms of the meridian and perpendicular of the initial station of the meridional circuit, and, where necessary, the co-ordinates are to be adjusted to conform to the projection laid down for that circuit.

(2) These co-ordinates shall be computed in the case of rural surveys to the nearest one-tenth of a link, and in the case of town surveys to the nearest one-hundredth of a link. The first station of a traverse shall be a survey mark, the co-ordinated position of which is well established, and the closure of other points on the traverse with well-established marks or with the initial point after completing the traverse circuit shall not exceed the limits set out in the following table :—

Length of Circuit.	Town Surveys.	Rural Surveys.			
		Easy.	Hilly.	Rough.	
Chains.	Links.	Links.	Links.	Links.	
Under 4 .. .. .	0-15	0-20	0-30	0-35	
4 to 10 .. .. .	0-30	0-40	0-50	0-70	
10 to 40 .. .. .	0-50	0-70	0-90	1-20	
40 to 80 .. .. .	0-75	1-00	1-30	1-70	
For each 40 over 80, add .. .. .	0-20	0-25	0-35	0-40	

#### REGULATION 21.—ELIMINATION OF CLOSE.

In new traverses forming a complete surround or traverses connecting two standard blocks or two triangulation stations where these have been adjusted to conform with the "geodetic triangulation," the closing error is to be eliminated by the Bowditch rule, by distributing the closing error according to the following :—

"As the total length of the traverse is to the length of each line, so is the whole error in latitude or departure to the correction of the corresponding latitude or departure, each correction being so applied as to diminish the whole error in latitude or departure."

#### REGULATION 22.—TRAVERSE SHEETS.

The tabulation of the co-ordinates of the traverse shall be shown on traverse sheets of approved form, with the authority for initial values shown by reference to traverse-book folio and line, or triangulation plan. All traverse stations other than ranging or line pegs shall be included, and where a boundary is traversed by lines not actually on the boundary, co-ordinates of all boundary marks shall also be shown, except where the traverse is parallel to the boundary throughout. The traverse sheet shall show a sufficient title to identify it with the survey to which it relates, the number and pages of the field-book in which the measurements are recorded, and shall be signed by the surveyor, and shall accompany the plan when this is lodged for examination.

#### REGULATION 23.—COMPUTATION OF TRIANGLES AND AZIMUTHS.

Where connecting triangles have been observed or where azimuths have been determined astronomically, the necessary computations shall be shown on approved forms, which shall accompany the plan.

#### REGULATION 24.—COMPUTATION OF AREAS.

(1) Areas of parcels and severed parts, which shall be allotted separate lot numbers, shall be accurately computed, and to avoid fractional quantities the computed area may be rounded off in rural areas by dropping not more than  $\frac{1}{16}$  per cent. or 1 perch in each 10 acres.

(2) Where the area is bounded by irregular lines, such as streams, fixed by offsets from the traverse-lines, a planimeter may be used for obtaining the area lying between the traverse-line and the boundary, or where the boundary consists of a large number of sides the planimeter may be used to obtain the areas of small parts, provided that at least 80 per cent. of the total area is computed mathematically.

(3) In the case of lands being taken for roads, railways, or other purpose through other lands, the area of each portion being part of a title, or for which the District Land Registrar might, without further survey, rightfully issue a title, shall be mathematically computed: Provided that, with the permission of the Chief Surveyor, small areas of little value may be determined by approved graphic methods.

#### REGULATION 25.—PLAN FORMS AND SCALES.

(1) All plans shall be drawn in a neat and workmanlike manner on mounted drawing-paper of the best quality measuring 30 in. by 30 in. or 20 in. by 20 in.

(2) The following scales shall be used on survey plans :—

Area.	Chains to an Inch.
1 to 10 perches .. .. .	Not less than $\frac{1}{2}$ .
10 to 20 perches .. .. .	Not less than 1.
20 perches to 1 acre .. .. .	1 to 2.
1 acre to 10 acres .. .. .	3 to 5.
10 acres to 50 acres .. .. .	5 to 10.
50 acres or more .. .. .	10.

(3) Scales smaller than 10 chains to 1 in. may be used only with the permission of the Chief Surveyor.

(4) In special cases where details are numerous a larger scale than prescribed may be used.

(5) In every case where intricate detail cannot otherwise be clearly shown a diagram shall be drawn, not necessarily to scale.

#### REGULATION 26.—PLOTING.

(1) All plans shall be accurately plotted. Except in the case of railway land plans, or by express permission of the Chief Surveyor, all plans shall be plotted with the meridian parallel with the edge of the paper and the north point upwards.

(2) Meridian and perpendicular plotting-lines shall be drawn in blue colour, and where the scale is not larger than 10 chains to 1 in. these are to be at even multiple distances of 50 chains or 100 chains from the circuit initial; in larger scales the lines shall be at even distances of 10 chains, 5 chains, or chains, according to scale. At least two meridian and two perpendicular lines shall be shown on the plan and each such line shall show the value in terms of the circuit initial.

(3) These lines shall be used for setting off the boundary and traverse stations from their computed co-ordinates. A protractor may be used for filling in topographical detail.

#### REGULATION 27.—COLOURING ON PLANS.

(1) Artists' colours of the best permanent quality, in cake or moist form, shall be used. Liquid or waterproof inks, with the exception of indian ink, shall not be used.

(2) The distinguishing colours to be used on a plan are set out in the following schedule :—

Feature.	Colour.
Legal public road or street ..	Burnt sienna.
Road or street to be dedicated ..	Red wash.
Land to be taken for road or public purpose ..	Alternating washes of blue, sepia, and orange.
Closed roads ..	Green wash.
Easements and rights-of-way ..	Red wash.
Railways ..	Purple wash.
Riverbank, coast, and other reserves ..	Red wash, reduced to broad marginal band if extensive.
Crown and Native land ..	Red border.
Land under Land Transfer Act ..	Green border.
Areas permanently under water ..	Blue wash or broad marginal band of blue.
Bush- and scrub-covered areas ..	Green wash or broad marginal band with black symbol, but on Land Transfer plans black symbol alone.
Ground relief ..	Grey or sepia shading or form or contour lines in burnt sienna.
Swamp ..	Blue dotted line with symbol.

(3) In addition to the colour notation as set out above, the purpose and nature of all areas shall be written on the plan.

(4) The plan of the area forming the subject of the survey shall show this area and each subdivision or severed portion thereof, bordered or coloured with the appropriate distinguishing colour prescribed for that particular class of survey.

#### REGULATION 28.—SYMBOLS FOR SURVEY MARKS.

(1) Survey marks or stations shall be shown on the plan as follows :—

- (a) New peg, by small red circle.
- (b) Old peg when adopted but not found, by small black circle.
- (c) Old peg found, by small black circle filled solid whether or not measurements were made thereto.
- (d) Old peg found and renewed, by red circle enclosing a black circle filled solid.
- (e) Iron tube, by two small concentric blue circles.
- (f) Iron spike or pin, by small blue circle.
- (g) Old mark found and renewed, by the symbol for the new mark enclosing the symbol for the old mark filled solid.
- (h) New peg and pin together, by red circle enclosing small blue circle.
- (j) Post, by small solid black square.
- (k) Concrete peg, by a small yellow circle.
- (l) Old iron tube adopted but not found, by two concentric black circles.
- (m) Old iron tube found, by two concentric blue circles, the inner one being filled solid.
- (n) Third order, minor, connecting triangle station or standard block, by two concentric red circles.
- (o) First-order or second-order station, by three concentric red circles.

(2) Where one of the above marks cannot be inserted, it shall be shown on the plan by a small red cross with particulars of the marking, such as "A on rock," &c.

(3) Traverse and triangulation stations shall have their distinguishing numbers or names shown, except that in the case of long traverses where the stations are numbered consecutively it shall be sufficient to show as many numbers as will enable the number of every station to be readily determined.

#### REGULATION 29.—CONVENTIONAL SIGNS.

The conventional signs or symbols used on survey plans are to be in accordance with accepted survey practice. Care must be taken to see that their use does not obliterate or confuse any more essential detail of the plan.

#### REGULATION 30.—LINES ON PLAN.

(1) All traverse, boundary, and bearing lines on the plan shall be shown in firm lines in accordance with the following schedule :—

Type of Line.	Colour of Line.	Colour of Distance.	Colour of Bearing.
Measured and observed ..	Red ..	Red ..	Blue.
Observed only ..	Blue ..	..	Blue.
Observed, with distance calculated ..	Blue ..	Black ..	Blue.
Measured offsets and offset intervals ..	Red ..	Red ..	..
Ranged ..	Red ..	Black ..	Black.
Calculated ..	Black ..	Black ..	Black.
Adopted ..	Black ..	Black ..	Black.
Natural water feature boundary ..	Blue ..	..	..
Irregular boundary other than water feature ..	Black ..	..	..

(2) When boundary-lines are adopted from prior surveys it will not be necessary to show the traverse details upon which such lines depend, but a reference to the plan from which they are adopted shall be shown.

(3) As far as practicable, distances and bearings shall be written along the line or as close thereto as possible. In special cases only may these particulars be written in tabular form on the plan.

(4) Boundary distances shall be shown boldly and clearly. If this is not possible, the symbol "bdy" shall be written alongside the distance.

#### REGULATION 31.—TITLE AND DETAILS OF PLAN.

(a) *Title.*—The title of the survey shall state the correct appellation of the land to be dealt with and shall be clearly printed in black in the appropriate position on the plan. The reference to the certificate of title affected shall also be shown.

The correct title reference of all sections and lots abutting on the area comprised in the survey shall be shown. Where closed roads have not been assigned section numbers, they shall be shown and marked "closed road."

(b) *Districts and District Boundaries.*—The names of the land district, local-body district, survey block and district, and registration district or Native block shall be shown in black together with the title on the plan.

When the survey comprises an area located in two or more districts, the names of such districts and their boundaries, in pecked line, shall in addition be shown on the face of the plan in the distinguishing colours herein provided :—

Land district ..	Black.
Local-body district ..	Cadmium red.
Survey block and district ..	Ultramarine.
Registration district ..	Burnt sienna.
Native block ..	Yellow.



The numbers of the sections or lots of the survey district, registration district, or Native block shall be shown in the same distinguishing colour as the name.

The numbers and boundaries of the lots of a previous Land Transfer plan shall be shown in neutral colour when required for title purposes.

(c) *Plan References.*—All reference-plan numbers shall be shown on the face of the plan in their correct relation to the lots or original sections affected, and shall be prefixed by the appropriate letters set out in the third column of the following schedule, and the letters and numbers shall be of the colour prescribed in the second column of the schedule :—

Type of Plan.	Colour.	Letters.
Crown and statutory	.. Blue	.. S.O.
Native .. ..	.. Red	.. N.L.
Land Transfer .. ..	.. Green	.. D.P. or L.T.*
Mining .. ..	.. Yellow	.. M.

(d) *Field Notes, Scale, and Consents.*—The plan shall refer to the field notes of the survey by the number and the page of the field-book.

The scale of the plan shall be shown on the plan.

The plan shall bear all consents and endorsements required under the provisions of any statute applicable to the survey, and shall be verified by the surveyor by a certificate or declaration to the effect that the surveys have been personally executed by him and that these regulations have been complied with, and such other particulars as are set out in the appropriate form of verification in the Appendix hereto.

(e) *Plan Details (Areas, Distances, and Easements).*—The plan of the area forming the subject of the survey shall show the area bordered with the appropriate colour hereinbefore prescribed for that particular class of survey, and each subdivision or severed portion shall likewise be bordered in the same colour with, in the case of regular boundaries, the distances and bearings of each boundary whether of the whole or any part written in figures. The area of each part in acres, rods, and perches shall be written as nearly centrally as may be, and the total area of each subdivision shown. The positions of all easements are to be shown, and where rights-of-way have been or are to be created the sites should be coloured in a red wash, different rights created by the easement being clearly indicated.

(f) *Details of Occupation.*—Buildings with their eaves or projecting portions abutting on, overlapping, or closely approaching the boundaries shall be accurately fixed and their position in relation to the boundary clearly specified and delineated on the plan. When the wall of a building or structure is erected on or adjoining a boundary, and such wall is used as a party wall or party-wall rights thereto have been created by grant or prescription, the wall must be described as a party wall on the plan, and the position of the boundary in relation to the wall must be shown by diagrams, illustrating any change or changes in the thickness of such wall.

The position of the boundary relative to the occupation shall be shown, and the nature, description, and age of the feature or occupation shall be stated.

(g) *Miscellaneous Details.*—Swamps, terraces, or irregular fences are inadmissible as boundaries unless they are reduced to right lines: Provided that nothing in this paragraph shall be deemed to authorize

\* The symbol D.P. denotes a plan deposited by the District Land Registrar, and the symbol L.T. denotes a plan which has not been deposited by the District Land Registrar.

a surveyor to lay down a boundary elsewhere than upon the existing line of such boundary, or where the evidence available is insufficient to enable him with certainty to delineate the line of a boundary, to excuse him from supplying to the District Land Registrar or Chief Surveyor all information known to him relating to the premises.

The nominal and occupied widths of all roads and streets adjoining or within the area under survey, together with the names of such streets, shall be shown on the plan.

In preparing plans (other than for the Defence Department), no reference whatever must be made therein to forts or any works of defence.

#### REGULATION 32.—MEASUREMENTS.

The actual measurements found to exist on the ground shall be shown on the plan, notwithstanding that such measurements may not agree with those previously recorded.

Where the definite location of a boundary is indeterminate owing to the absence of evidence supplied by approved Crown land surveys or undisputed occupation of the requisite age, sufficient measurements must be made of the adjoining properties to establish the fact that no encroachment is made upon the land of the adjoining titles.

#### REGULATION 33.—PLANS THE PROPERTY OF CROWN.

A plan received by the District Land Registrar or Chief Surveyor from a surveyor or other person for examination shall be held on behalf of the surveyor and be deemed to remain constructively in the surveyor's possession until the completion of examination, and the surveyor may, prior to the commencement of the examination of the plan as to survey, notify the Chief Surveyor that the examination is not to be completed.

#### AMENDMENT TO SURVEY REGULATIONS AS FROM 12th MAY, 1941: REGULATION 35 (G) (4)

The Public Works Department has advised that, under existing conditions, it is not possible for the Public Works Department to examine all land plans as laid down in Regulation 35 (g) (4) of the Survey Regulations.

In future it has been decided that the prior approval of land plans by the District Engineer be limited to the following:—

(a) All land plans prepared on instructions from District Engineers; and

(b) All land plans for local bodies of new main highways or deviations of existing main highways.

The numbers of the sections or lots of the survey district, registration district, or Native block shall be shown in the same distinguishing colour as the name.

The numbers and boundaries of the lots of a previous Land Transfer plan shall be shown in neutral colour when required for title purposes.

(c) *Plan References.*—All reference-plan numbers shall be shown on the face of the plan in their correct relation to the lots or original sections affected, and shall be prefixed by the appropriate letters set out in the third column of the following schedule, and the letters and numbers shall be of the colour prescribed in the second column of the schedule :—

Type of Plan.	Colour.	Letters.
Crown and statutory	.. Blue	.. S.O.
Native .. ..	.. Red	.. N.L.
Land Transfer ..	.. Green	.. D.P. or L.T.*
Mining .. ..	.. Yellow	.. M.

(d) *Field Notes, Scale, and Consents.*—The plan shall refer to the field notes of the survey by the number and the page of the field-book.

The scale of the plan shall be shown on the plan.

The plan shall bear all consents and endorsements required under the provisions of any statute applicable to the survey, and shall be verified by the surveyor by a certificate or declaration to the effect that the surveys have been personally executed by him and that these regulations have been complied with, and such other particulars as are set out in the appropriate form of verification in the Appendix hereto.

(e) *Plan Details (Areas, Distances, and Easements).*—The plan of the area forming the subject of the survey shall show the area bordered with the appropriate colour hereinbefore prescribed for that particular class of survey, and each subdivision or severed portion shall likewise be bordered in the same colour with the distances and bearings of the boundaries of the area, and any part written in figures shall be written in figures, and the area of each subdivision shall be shown, and where the area is divided into sites should be coloured, and the easement being clearly shown.

(f) *Details of Occupied Portions.*—The plan shall show the portions abutting on, or adjacent to, the survey, and shall be accurately fixed, and the position of each building or structure is clearly specified and the wall is used as a party wall on the plan, and the thickness of such wall must be shown by diagonal lines.

The position of the wall, and the nature, shall be stated.

(g) *Miscellaneous Details.*—The plan shall be inadmissible as boundary plan unless it is provided that nothing in

\* The symbol D.P. denotes a plan which is a duplicate of a plan which

a surveyor to lay down a boundary elsewhere than upon the existing line of such boundary, or where the evidence available is insufficient to enable him with certainty to delineate the line of a boundary, to excuse him from supplying to the District Land Registrar or Chief Surveyor all information known to him relating to the premises.

The nominal and occupied widths of all roads and streets adjoining or within the area under survey, together with the names of such streets, shall be shown on the plan.

In preparing plans (other than for the Defence Department), no reference whatever must be made therein to forts or any works of defence.

#### REGULATION 32.—MEASUREMENTS.

The actual measurements found to exist on the ground shall be shown on the plan, notwithstanding that such measurements may not agree with those previously recorded.

Where the definite location of a boundary is indeterminate owing to the absence of evidence supplied by approved Crown land surveys or undisputed occupation of the requisite age, sufficient measurements must be made of the adjoining properties to establish the fact that no encroachment is made upon the land of the adjoining titles.

#### REGULATION 33.—PLANS THE PROPERTY OF CROWN.

A plan received by the District Land Registrar or Chief Surveyor from a surveyor or other person for examination shall be held on behalf of the surveyor and be deemed to remain constructively in the surveyor's possession until the completion of examination, and the surveyor may, prior to the commencement of the examination of the plan as to survey, notify the Chief Surveyor that the examination is not to be completed without the surveyor's consent.

Upon completion of examination the plan becomes the property of the Crown.

#### REGULATION 34.—PLANS TO BE LODGED.

Plans lodged with the Chief Surveyor or District Land Registrar for examination shall be in good order and condition, and the Chief Surveyor or District Land Registrar may refuse to receive any plan which has been damaged by folding or in any way which impairs its legibility or permanence.

#### REGULATION 35.—LAND PLANS.

In the case of land required for public purposes, including land to be taken for road and railway purposes, the following clauses, in addition to those contained in Regulations 1 to 34, shall be observed :—

(a) *Survey.*—(1) The surveyor shall peg the intersection of the boundaries of the land to be taken with all existing title, section, or subdivisional boundaries, irrespective of ownership, in such a manner that a separate title for each portion taken can issue.

(2) Where the intersection mark is likely to be disturbed or to be inaccessible during construction, when the land survey is carried out prior to the construction, reference marks shall be placed on the extension of the intersection lines.

(3) In the case of railway surveys the surveyor shall adhere to the centre-line pegs of the engineering survey and shall as far as possible adhere to the intersection pegs of the engineering survey. Where



discrepancies are found in the pegging of tangent or of intersection pegs on the engineering survey, the surveyor shall peg new tangent and intersection pegs from which the original tangent and intersection pegs shall be fixed by traverse.

(4) The provisions of Regulation 18 shall apply to road and railway surveys, the interval between reference marks being in accordance with the interval prescribed for town surveys.

The surveyor shall set out the railway curves in the same manner as the curves for the engineering survey.

(b) *Plans and Plotting.*—(1) All railway land plans shall be drawn on a scale of 3 chains to 1 in. on the best-quality mounted drawing-paper 30 in. square.

(2) They shall be plotted irrespective of the north point from left to right, advancing in accordance with the engineering-survey chainage, each sheet commencing and ending, if possible, at a mile peg.

(3) The engineering-survey chainage shall be shown in red and each chain peg marked and each tenth numbered, discrepancies found in the engineering survey being shown as long or short chains.

(4) The relationship between the two surveys from the commencing-point shall be shown every half mile.

(5) Where, on account of a defective original survey or of deviations subsequently decided on, the length of the engineering survey is incorrect, there shall also be shown on each sheet, at every 10 chains, the correct mileage from the commencing-point.

(6) Separate land plans shall show all of the land taken from contiguous land in the one ownership. This is not necessary when the plan comprises several sheets.

(7) Separate land plans shall be prepared when a proposal involves several types of public work.

(c) *Colouring, Descriptions, and Areas of Land taken.*—(1) Areas taken for road or railway from each ownership shall be distinctly coloured in the wash colours prescribed in Regulation 27, and such colours shall be shown along the boundaries affected.

(2) Severed areas shall be coloured lightly and bordered in a deeper shade of the same colour as that used for other areas taken from the same title, section, or subdivision.

(3) The title description and area of each such portion taken shall be shown on the plan in such a manner that, if necessary, the District Land Registrar can issue a separate title for the portion.

(4) All land taken shall be described in accordance with the appellation of the land at the time of the survey.

Crown land applied for any public purpose shall be described as "Crown land."

(d) *Road, Railway, and Stream Crossings.*—(1) All roads crossing railways that are to be left open to the public shall be coloured burnt sienna.

(2) If any part of a road crossed by a railway is to be closed to the use of the public and occupied exclusively by the railway, the portion to be closed shall be coloured green and bordered in a deeper shade of the same colour.

(3) No private crossings on railways shall be shown or coloured in any way.

(4) Where a road or railway crosses a stream, the stream-bed crossed shall be shown as land to be taken and coloured accordingly.

(e) *Roads to be closed.*—Closed roads shall be coloured green, and when fronting more than one property—that is, contiguous land in the one ownership—shall be subdivided so as to allow of the inclusion of such separate areas in adjoining properties.

(f) *Ownership and Occupation.*—Land plans shall show the names of owners and occupiers, together with the title reference of the area or areas affected. The names of Native owners need not be shown, the words "Native owners" being sufficient.

(g) *Procedure.*—(1) Two tracing-cloth or photostat copies, correctly coloured, of all land plans shall be prepared, photostat copies to be clear and readable.

(2) No reference shall be made on land plans to the Act under which the land is to be taken.

(3) In drawing up the schedule of land to be taken for road and road to be closed, all areas in one title shall be grouped together and all areas in one ownership shown consecutively.

(4) All land plans with their relative documents, excepting railway land plans, which shall be forwarded to the Head Office of the Public Works Department, shall be referred to the District Engineer of the Public Works Department for his approval prior to submission to the Chief Surveyor. Subject always to appropriation of funds by Parliament, on receipt of the plans or part thereof by the Public Works Department a progress payment of 50 per cent. of the value of the work done will be made; and after the whole of the plans have been approved by the Public Works Department and by the Chief Surveyor the final payment will be made.

#### REGULATION 36.—NATIVE PLANS.

In the case of plans for purposes of the Native Land Act, the following clauses in addition to those contained in Regulations 1 to 34, shall be observed:—

(1) The boundary of the area forming the subject of the survey is to be shown by a marginal border of a tint of red colour.

(2) The position of all remarkable hills, ridges, pas, eelweirs, graves, cultivations, tracks, battlefields, villages, rahu, and boundary marks within the area shall be shown on the plan in correct relation to the boundaries, and the aboriginal names of these features shall also be given as far as possible. The courses of rivers and streams, margins of swamps, lake coast-lines, bush, and other natural or artificial feature shall be correctly delineated upon the plan.

(3) Legal public roads intersecting or abutting on the area are to be shown coloured burnt sienna, and unsurveyed formed roads are to be surveyed and shown, but not coloured. Road-lines constituted by the Native Land Court are to be shown by pink colour.

(4) The plan is to be on best-quality mounted drawing-paper of a size of 30 in. square or 20 in. square, except that, with special permission of the Chief Surveyor in writing, a size larger than 30 in. square may be permitted.

(5) A copy of the plan, on mounted tracing-cloth, omitting all survey detail except boundary distances, is to accompany the plan, and on this the area and its abutments shall be so placed as to allow of a marginal area of at least 100 square inches being available for Court notes.

(6) When an original area is found on partition to be more or less than as stated either on account of defective prior survey or otherwise, the areas of the new partitions shall be adjusted *pro rata* in every case unless the Court directs otherwise.

#### REGULATION 37.—LAND TRANSFER PLANS.

(1) All Land Transfer plans shall show the title references of the land to be dealt with and all abutting lands, together with the numbers of deposited plans affected and adjoining.

(2) The plan shall be signed by the registered proprietor or other person affected, as the case may require, or by his lawfully authorized attorney or agent. The plan shall be lodged with the District Land Registrar, but shall not be deposited by him until it has been approved as to the survey by the Chief Surveyor.

#### REGULATION 38.—REDEFINITION SURVEYS.

Where a surveyor carries out a survey redefining the boundaries of land, a plan of which is not required to be deposited by the provisions of the foregoing regulations, field notes of such a survey, duly certified, shall nevertheless be deposited with the Chief Surveyor for record.

### APPENDIX.

#### (REGULATION 31.)

##### CERTIFICATE BY SURVEYOR.

I, A. B., of [Place of abode], registered surveyor and the holder of an annual practising certificate, hereby certify that this plan has been made from surveys executed by me, that both plan and survey are correct, and have been made in accordance with the regulations under the Surveyors Act, 1938.

Dated at ....., this ..... day of ....., 19..

A. B.,  
Registered Surveyor.

##### STATUTORY DECLARATION VERIFYING PLAN.

##### (Land Transfer Plans.)

I, A. B., of [Place of abode], registered surveyor and the holder of an annual practising certificate, do solemnly and sincerely declare that this plan has been made from surveys executed by me, that both plan and survey are correct, and have been made in accordance with the regulations under the Surveyors Act, 1938.

And I make this solemn declaration conscientiously believing the same to be true, and by virtue of the Justices of the Peace Act, 1927.

A. B.,  
Registered Surveyor.

Declared at ....., this ..... day of ....., 19.., before me—

Justice of the Peace  
(or Solicitor, or Notary Public).

C. A. JEFFERY,  
Clerk of the Executive Council.

Issued under the authority of the Regulations Act, 1936.

Date of notification in *Gazette*: 4th day of April, 1940.

These regulations are administered in the Department of Lands and Survey.

By Authority: E. V. PAUL, Government Printer, Wellington.—1940.

Price 9d.

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