

FORM 504
Rev. Dec. 1933

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT									
Topographic Sheet No. 1-5276									
									
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G Games this such									
State Connecticut									
LOCALITY									
Long Island Sound									
Madison and Clinton									
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193 6									
CHIEF OF PARTY									
Thos. B. Reed									

U. S. GOVERNMENT PRINTING OFFICE: 1934

applied to Chart Correction 216 Sept. 30, 1937. H.EMac Swen

TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No.

REGISTER NO. T-5276

StateConnecticut
General localityLong Island Sound
Locality Madison and Clinton Photos October 12, 1933 and Nov. 4, 1933.
Scale 1:10,000 Date of Entrey Compilation September, October, 1936.
Vessel Field Party No. 16, New London, Conn.
Chief of party. Thos. B. Reed
Surveyed by See data in descriptive report
Inked by Thos. B. Reed
Heights in feet aboveto ground to tops of trees
Contour, Approximate contour, Form line intervalfeet
Instructions datedAugust 24
Remarks: Compiled on scale of 1:10,000.

PHOTO TOPOGRAPHIC SHEET NO. T-5276

Photos Nos. Date Time

V37 to V45 (880 G-8) October 12, 1933 11:00 A.M.

M219 to M243 November 4, 1933 11:30 A.M.

Projection by L. E. Marsh May, 1935.
" verified by L. B. Walker May, 1935.

Triangulation Stations plotted by L. E. Marsh May, 1935

Triangulation Stations
verified by Charles More May, 1935

Smooth Redial Plot by L. E. Marsh June, 1935

Field Inspection by Party of G. C. Mattison Sept., 1934 Additional field inspection by Thos. B. Reed Oct., 1936

Detail inked by Thos. B. Reed Sept. and Oct., 1936.

STATISTICS

200 meters wide)

Area of detail inked (land area)

Length of shore line (more than 200 meters from nearest shore)

Length of shore line (streams less than

13.6 sq. stat. mi.

DATUM: North American, 1927.

REFERENCE STATION: HAMMONASSET, 1932 Lat. 41° 14: 55.667" (1717.3m.) Long.72° 32: 40.454" (941.9 m.)

DESCRIPTIVE REPORT

to accompany

Photo Topographic Sheet No. T-5276.

Vicinity of Madison and Clinton, Connecticut.

Thos. B. Reed, Chief of Party.

DATE OF INSTRUCTIONS: Aug. 24, 1936, also previous instructions to G. C. Mattison.

DATE OF SURVEY:

November 1933, with revision by Field Party to October 1936.

GENERAL INFORMATION:

Photographs: This sheet was compiled from part of one flight of 1:10,000 scale five lens aerial photographs taken by the Army Air Corps on November 4, 1933 with Model T-3A camera No. AC 31-78. The flight was designated 880-14 and the photographs were numbered M-219 to M-243. The camera had a focal length of 6 inches and the photographs were taken from a height of approximately 5,000 feet.

Nine single lens photographs, Nos. V-37 (880 G-8) to V-45 (880 G-8) were also taken in the vicinity of Clinton Harbor on October 12, 1933 by the Army Air Corps.

The stage of the tide at 11:30 A.M. on November 4, 1933 when the five lens photos were taken was 5.3 feet. (computed from the Tide Tables).

The Stage of the tide at 11:00 A.M. on October 12, 1933 when the single lens photos were taken was 1.7 feet. (Computed from the Tide Tables).

General Description: This sheet comprises the coastal area in the vicinity of the towns of Madison and Clinton, the boundary line between the two towns being the Hammonasset River.

This region is mostly rural except in the immedaite vicinity of the business sections of the two towns, and along the beaches where there are a considerable number of summer homes and beach resorts.

The land in the immediate vicinity of the coast is low and broken by a considerable number of marshes, especially in the vicinity of Clinton Harbor. Inland from the coast the land is rolling and wooded, except where the woods have been cleared for small farms and residential sections. Most beaches are sand with some small rocky areas as shown.

The sheet includes Clinton Harbor which is a small boat harbor of no commercial importance. To the westward of Clinton Harbor is the Hammonasset State Park, a beach resort maintained by the State of Connecticut as one of a system of State Parks. The

large buildings near the beach are bath houses and other state buildings. All are low (one story) buildings.

One steam railroad crosses the sheet. This is the Shore Line Division of the New York, New Haven and Hartford Rail Road and is double tracked entirely across the sheet with several side tracks in the vicinity of the towns as shown.

The principal highway on the sheet is the Boston Post Road (U. S. Highway No. 1). This is the main highway between New York and Boston and carries a very large amount of traffic.

CONTROL:

Sources; lst Order Triangulation by C. D. Meany, 1932.

2nd and 3rd Order Triangulation by G.C. Mattison, 1933 &34.

(Several triangulation stations dated 1882 on the sheet were relocated in 1933 and 34 by G. C. Mattison).

Errors: No errors were found in control stations.

Other Sources of Control: No control, other than that mentioned above was used in the compilation of this sheet.

COMPILATION:

Method: The usual five lens radial line method of plotting was used in the compilation of this sheet. The radial plot was completed by personnel of the party of G. C. Mattison in 1935 and appears to have been very accurately accomplished, although it was found necessary to add a considerable number of additional points, especially in the hilly regions and at the western end of the sheet where the photographs were badly off scale. A number of off-lying rocks which do not show on the photographs were cut in by sextant.

Adjustments of plot: No unusual adjustments of plot were found necessary.

INTERPRETATION:

In general, no difficulty was experienced in interpreting the detail from the photos except in a few places where buildings and other minor details were obscured by trees. This area was inspected by me several times during the progress of the compilation and it is believed that no detail of any importance has been omitted from the sheet.

The high water line, as sketched on the field prints by the field inspection party, was drawn on the sheet. Low water line was obtained from the single lens photos and from estimation by observation of the beach at low tide. It is believed that in no case is the low water line drawn too far off-shore and that in most cases it is fairly correct. The beach line westward from Hammonasset State Park to the western limit of the sheet was observed by me at approximately meanwhow water and the distance between high and low water lines could be estimated fairly accurately.

Off-lying rocks in the area covered by the single lens photos were taken from the photographs and from notes by the field inspection party. As the single lens photos were taken at a much lower tide than the five lens, most off-lying rocks show on the single lens photos. The five lens photos however were taken at nearly high tide and it was necessary to locate a considerable number of off-lying rocks in the western half of the sheet by sextant cuts from shore.

Sextant cuts for the location of off-lying rocks were obtained near low tide on October 27, 1936 and are recorded on the backs of Field Prints Nos. M-228B, M-227B, M-226B and M-224B. These cuts were used to supplement data from the photos for the interpretation and location of off-lying rocks and other detail. These rocks will be discussed further under the heading "Comparison with Other Surveys".

The stereoscope was used, where necessary for defining buildings. However the shape and size of some buildings on the sheet may be slightly in error due to being partly obscured by trees or hard to pick on the wing prints.

It is difficult to differentiate in this area between rural and urban sections and the two towns, although having considerable population, have no regular system of street layout from which the buildings could be omitted. Therefore all buildings that could be seen on the photographs were shown on the sheet.

The large number of small drainage ditches in all the marshy areas were dug to drain the marshes for mosquito control.

CONVENTIONAL TOPOGRAPHIC SYMBOLS:

Only graphic symbols, approved by the Board of Surveys and Maps were used, except as follows:

The symbol ((2,2)) was used to designate brush. An attempt was made, by useing this symbol in conjunction with the tree symbol to show the density of woods and brush in the various areas. Deciduous trees predominate in this area. There are a few scattered pines in some sections of deciduous woods but they are not of sufficient numbers to use the symbol for evergreen trees.

Cultivated fields were left blank, otherwise all areas were filled in with symbols. Paved roads are shown by a full double line and private or dirt roads by a Broken double line. Very poor roads or trails are indicated by a single dashed line. Fences were indicated by lines of short dashes. At the eastern part of the sheet the roadbed of an abandoned trolly line from which the rails have been removed is indicated by a line of long dashes and a note on the overlay.

INFORMATION FROM OTHER SOURCES:

Data on bridges shown on the overlay sheet was obtained from the U. S. Engineers.

Two town maps showing Madison and Clinton are forwarded with the sheet. These were used for names of streets and roads and were the only local maps obtainable in that locality. The map of the town of Madison was traced by personnel of the party of G. C. Mattison, as an extra print of the map was not available.

GEOGRAPHIC NAMES:

Names of geographic features were obtained from Chart No. 216 and from the town maps.

New Names: "Webster Point" This name is shown on the town map of Madison and also on the U. S. G. S. Quadrangle.

"Clinton Beach" Name obtained from town map of Clinton; also verified by local residents.

"Hammock River" Name obtained from town map of Clinton; also verified by local residents.

Conflicting Names:

"Cedar Island" This feature is known locally by this name instead of Sandy Pt. Island as shown on Chart No. 216. The name "Cedar Island" was obtained from local residents by the field inspection party. I also verified this name from the officer in charge of the Hammonasset State Park. I was told that the name Sandy Pt. Island has not been used for many years.

"Tuxis Pond" This feature is known locally as Tuxis Pond instead of Tucks Pond as shown on Chart No. 216. The error probably originated with a mis-spelling of the name on Sheet No. T-1551b as it is noted that Tuxis Island is also named incorrectly on T-1551b.

COMPARISON WITH OTHER SURVEYS:

Junctions: This sheet makes a satisfactory junction on the west with Sheet No. T-5275 and on the east with Sheet No. Cliffsymbol T-5081. Sheet No. T-5275 shows a cliff symbol along the beach to removed the junction; this symbol was not continued on Sheet T-5276 as the from T-5275 beach along this area was considered neither high or steep enough to be shown as a cliff.

Comparison with Plane Table Sheet No. T-1551b (1884).

A comparison of the two sheets shows a remarkably

small change in the high water line in the 50 years between the two surveys. The maximum change noted is the point about 1 male northeast of Tuxis Island where the high water line hes receded about 50 meters. The positions of such offlying rocks as are shown on the old sheet check very close to those shown on the compilation.

While a number of improvements, roads, etc. have been added since the old survey, a considerable amount of the interior topographic detail remains about the same as at the time of the old survey. In general, the position of such roads, fences, etc. as are common to both sheets agree quite well and it is believed that a detailed discussion of differences between the two sheets would serve no useful purpose.

Comparison with Plane Table Sheet No. T-1551a (1883).

The largest difference noted in the high water line of the compilation and the above sheet is the area to the westward of West Rook where the high water line has receded about 150 meters. The shore line of the eastern end of Cedar Island has changed about 25 meters. At Clinton Beach, near the eastern limit of the sheet, the beach has washed away and the high water line receded about 40 meters. Probably the considerable number of small jetties that have been built along the beaches in this region will prevent much beach erosion in the future.

Comparison with Chart No. 216.

Except for off-lying rocks this subject is covered by the comparison with the two plane table sheets above.

Off-lying rocks: Near the western limit of the compilation and 400 meters off shore the chart shows three rocks, while only 2 are shown on the compilation. At the time of obtaining sextant cuts on off-lying rocks in this vicinity, it was thought that the eastermost of these two rocks was the one shown on Topo Sheet No. 1551b and that the other rock came outside the limits of the compilation and no cuts were taken on the westermost rock. However this rock appears as a faint dark shadow on several photos and the cuts check the position from T-1551b. The eastermost of the two rocks is charted about 20 meters too far north.

Other off-lying rocks between the above two and Tuxis Island agree closely with those charted. About 200 meters ESE of the eastern end of Tuxis Island a small rock, bare 1 foot at M. L.W. was located by sextant cuts. This rock falls in a depth of 15 feet on the chart and should be charted. None of the rocks of the long reef shown on the chart as a row of five rock awash symbols immediately to the northeast of the above rock shows at M. L. W. although small breakers were noted in this region and it is believed some of these rocks are covered less than a foot at M. L. W.

The chart shows a group of three rocks awash in Lat. 41° 16.1', Long. 72° 35.8'. One rock of this group is bare 1 foot

at high water. Three additional rooks awash were also lacated in this vitinity. The group of three rocks in Lat. 41° 16.0'. Long. 72° 35.7' agree closely with those charted. There are four rocks in this group but the inner two were so close together that they were shown as one rock awash symbol on the compilation.

In Lat. 41° 16.1', Long. 72° 35.1' there is a group of rocks, bare 3 feet at M. L. W. which are not shown on the chart. This group is charted as a shoal but should be changed to a rock awash symbol. Another rock awash not shown on the chart was located in Lat. 41° 16.2', Long. 72° 35.1'. The positions of off-lying rocks in the vicinity of Clinton Harbor were obtained from the single lens photos and agree quite well with the positions of the rocks charted. No data on the height of these rocks was_ obtained. The rock about 600 meters NE of West Rock, which is shown as bare at high water on T-1551a and on the chart could not be seen with binoculars from the top of a high sand dune on Harmonasset Point at about half tide although the black buoy near it could be plainly seen. The rock about 350 meters north of West Rock was bare about 2 feet and I believe covers at high tide. although it was difficult to judge the height from that distance. I was told by the Commanding Officer of the Lighthouse Tender Hawthorne, who has charge of aids to navigation in that area that the rock 600 meters NE of West Rock bares at somewhat less than half tide, and that he believed the rock 350 meters north of West Rock is covered at high water. Both rocks are shown by awash symbols on the compilation.

T1551a

LANDMARKS:

On account of the many high trees and hilly nature of this region it is very difficult to tell from shore what, if any, objects show prominantly from offshore. There are no objects in the area covered by this sheet with sufficient elevation to be definitely prominent at sea from all directions.

However, as there are no landmarks of any kind shown on Chart no. 216 the following objects are being reported on form 567:

TOWER, Church -- This is the tower on the Cong. Church in Madison. The church stands on a hill and is completely surrounded by high trees so that only the tower shows about 20 feet above the tops of the trees. Plainly visible from seaward to the south; probably not visable to the southeastward.

SPIRE, Church -- This is the Cong. Church in Clinton. Stands on a slight elevation and the spire can be seen from Clinton Harbor but is not easily identified among trees and other buildings. Probably not visible outside of Clinton Harbor.

FLAGPOLES (two) -- These are two white flagpoles about a mile apart on the beach southeast of Madison. Flagpoles rise from the ground in front of houses on the beach and can be seen from close inshore. Poles are about 40 and 60 feet high.

Of course the most prominent objects seen from seaward in this region are the large number of houses along the

beaches. The large bath houses on the beach at Hammonasset State Park are easily identified. These are all only one story buildings however.

RECOMMENDATION FOR FURTHER SURVEYS:

This compilation is believed to have a probable error of not more than 3 meters in position of well defined detail of importance for charting purposes and of 8 meters for other detail.

To the best of my knowledge this compilation is complete in all detail of importance for charting purposes within the accuracy stated above and as mentioned in the foregoing report, and no further surveys are required.

Respectfully submitted,

Thos. B. Reed,

Lieut., C. & G. Survey,

Chief of Party.

	GEOGRAPHIC NAMES Survey No. 75276 Name on Survey A B C D E F G H K										
	Name on Survey	A	¥0. \ QC	C Or	D	E O	F	G	H	/ K	
Ī	Neck River			1		5		41			1
*	Tuxis Island .	V		1							2
	Madisoir	V		1							3
	Webster Point			1		/					4
	Hammonasset Beach	1		1							5
	Hammonasset State Bork										6
37	Hommonasset Pt.	~									7
	Clinton Harbor	/		1			-				8
	Hammock Pt.	/		~							9
	Kelsey Pt	~		1							10
	Stone Island Reef.	1							**		11
	Clinton Beach	Oran Bush			~	~	-				12
	· Clinton	~		V							13
	Hammock River				~	~					14
	Hammonasset River .	✓		V	7	_ \					15
	Boulder Lake										16
	Upper Mill Pond										17
	Mill Pond			. 7 1							18
	Max Rock West Rock	~		11.5							19
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REVIEW OF AIR PHOTO COMPILATION T-5276 Scale 1:10,000

There are no recent graphic control surveys in this area.

Comparison with Previous Topographic Surveys

T-80 (1838), 1:10,000 T-82 (1838), 1:10,000

Changes have been so extensive that no detailed discussion is necessary. The compilation is complete and adequate to supersede the sections of T-80 and T-82 which it covers except for the breaker shown on T-80 at lat. 41° 15.05′, long. 72° 30.9′. This breaker falls on the edge of Stone Reef, shown on chart 216.

T-155la (1883), 1:10,000

Only the western end of T-1551a at Clinton Harbor is within the area of this compilation.

The agreement in location of unchanged detail between T-155la and this compilation is very good.

There have been many changes in shoreline and in interior details.

T-1551a shows a hachured line around the inner edge of the marshes. Examination of the photographs shows that the hachured line on T-1551a is used as a general symbol to define the limits of the marshes. On this compilation these limits are defined by the marsh symbol and in general agree closely with the limits on T-1551a. The photographs show several places where the banks are steep enough to warrant addition of short sections of hachured line but the general use of the line as on the old survey is not warranted. The amount of work required to go through the photos and add the hachures in the relatively few places where they are warranted is not in proportion to their importance and the compilation has not been changed.

See page 6, paragraph marked T-155la for a discussion of two rocks north and northeast of West Rock.

The reef at West Rock is shown slightly different on this compilation. The compilation delineation is accepted after examination of the photographs. This statement applies to Stone Reef.

The compilation is complete and adequate to supersede the section of T-155la which it covers except for the group of sunken rocks on T-155la at lat. 41° 15.4', long. 72° 30.6' and except for form lines. The rocks cannot be seen on the photos and are not on this compilation but are not disproved and should be continued on the charts.

T-1551b (1884), 1:10,000

The eastern half of T-1551b is within the limits of this compilation.

The same statements apply to T-155lb as to T-155la above regarding agreement in position of unchanged detail, changes, and the use of hachures.

This compilation is complete and adequate to supersede the section of T-1551b which it covers except for form lines on T-1551b.

This compilation has located all rocks shown in this area on T-1551b and a number of additional rocks.

T-1440 (1877), 1:5,000 - Combined hydrographic and topographic survey

Only a small section of T-1440 falls within the area of this compilation at Sauls Point.

The compilation is adequate to supersede the section of T-1440 which it covers except for the location of a group of rocks, N. x E. of Stone Reef at lat. 41° 15.4', long. 72° 30.8'.

Comparison with Previous Hydrographic Surveys

There are no recent hydrographic surveys of this area.

Comparison with Chart 216

A detailed comparison of the present survey shows many changes inshore, most of which are man made changes since the last survey.

The rocks on chart 216, which fall within the limits of the present survey, and which are circled in red on the section of chart 216 attached hereto, are not shown on the present survey but should be retained on the chart until a hydrographic survey of this area has been accomplished. The rock North of Toxis Island is shown in its correct lacation on this compilation (7-5276)

Additional rocks over those on the chart, No. 216, are located on the present survey.

A thorough discussion of the rocks on chart 216 is made on pages 5 and 6 of this descriptive report and further discussed under the comparison between the present survey and previous topographic surveys in this review.

General

The control for this compilation is adequate and well distributed over the entire survey.

Geographic positions were furnished for recoverable stations.

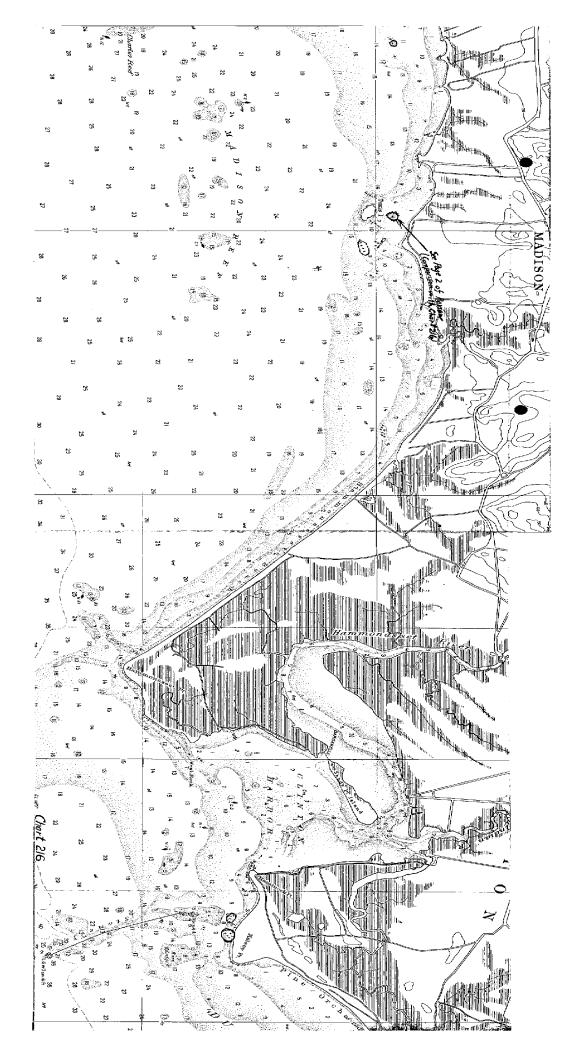
A hydrographic survey is necessary in this area to furnish complete information regarding rocks.

The field inspection of this compilation was very thorough and the descriptive report very complete.

The drafting was, in general, very good. The conventional sign for deciduous trees was too heavy.

Chas. R. Bush J.

Nov. 23, 1936.



REVIEW OF AIR PHOTO COMPILATION NO. T-5276

Chief of Party: Thos. B. Reed

Compiled by: Thos. B. Reed

Project: Coast of Connecticut

Instructions dated: Aug. 24, 1936

1. The charts of this area have been examined and topographic information necessary to bring the charts up to date is shown on this compilation. (Par. 16a, b,c,d,e,g and i; 26; and 64)

Yes

-2. Change in position, or non-existence of wharfs, lights, and other topographic detail of particular importance to navigation which affect the chart, is discussed in the descriptive report. (Par. 26; and 66 g,n)

aeY

3. Ground surveys by plane table, sextant, or theodolite have been used to supplement the photographic plot where necessary to obtain complete information, and all such surveys are discussed in the descriptive report. (Par. 65; and 66 d.e)

Yes

- 4. Blue-prints and maps from other sources which were transmitted by the field party contain sufficient control for their application to the charts. (Par. 28)

 The two town maps transmitted with the sheet were used for
- 5. Differences between this compilation and contemporary plane table and hydrographic surveys have been examined and rectified in the field before forwarding the compilations to the office and are discussed in the descriptive report.

Yes

obtaining names only.

6. The control and adjustment of the photo plot are discussed in the descriptive report. Unusual condenses and justments are descriptive report. Unusual condenses are descriptive and blanks of the unexperience of the photo plot are discussed in the descriptive report. (Par. 12b; 44; and 66 c,h,i)

Yes

7. High water line on marshy and mangrove coast is clear and adequate for chart compilation. (Par. 16a, 43, and 44)

Yes, except in a few places where indefinite shore line is shown by a broken line.

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Refer also to the pamphlet "Notes on the Compilation of Planimetric Line Maps from Five Lens Air Photographs."

8. The representation of low water lines, reefs, coral reefs and rocks, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41)

Yes

9. Recoverable objects have been located and described on Form 524 in accordance with circular 30, 1933, circular letter of March 3, 1933, and circular 31, 1934. (Par. 29, 30, and 57)

Yes

10. A list of landmarks was furnished on Form 567 and instructions in the Director's letter of July 16, 1934, Landmarks for Charts, complied with. (Par. 16d, e; and 60)

Yes

11. All bridges shown on the compilation are accompanied by a note stating whether fixed or draw, clearance, and width of draw if a draw bridge. Additional information of importance to navigation is given in the descriptive report. (Par. 16c)

Yes

12. Geographic names are shown on the overlay tracing. The accepted local usage of new names has been determined and they are listed in the report, together with a general statement as to source of information and a specific statement when advisable. Complete discussion of place names differing from the charts and from the U. S. G. S. Quadrangles is given in the descriptive report, together with reasons for recommendations made. (Par. 64, and 66k)

Yes

13. The geographic datum of the compilation is N. A. 1927 and the reference station is correctly noted.

Yes

14. Junctions with adjoining compilations have been examined and are in agreement. (Par. 66j)

Yes

- 15. The drafting is satisfactory and particular attention has been given the following:
 - 1. Standard symbols authorized by the Board of Surveys and Maps have been used throughout except as noted in the report.
 - 2. The degrees and minutes of Latitude and Longitude are correctly marked.

- All station points are exactly marked by fine black dots.
- 4. Closely spaced lines are drawn sharp and clear for printing.
- 5. Topographic symbols for similar features are of uniform weight.
- 6. All drawing has been retouched where partially rubbed off.
- 7. Buildings are drawn with clear straight lines and square corners where such is the case on the ground.

(Par. 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48)

- 16. No additional surveying is recommended at this time.
- 17. Remarks: Several yellowish stains have appeared on the celluloid within the past two weeks for which I am unable to account as there have been no erasures in these areas and they have not been in contact with any celluloid ink. The stains are practically all in wooded areas and appear to be gradually getting worse.
- 18. Examined and approved;

Thos. B. Reed Chief of Party

19. Remarks after review in office:

Reviewed in office by: Char. R. Bush

J. Dush J 7.9. Emline

Examained and approved:

Chief, Section of Field Records

Chief. Division of Charts

Chief, Section of Field Work

Chief, Division of Hydrography and Topography.