Form 60

Third LIGHTHOUSE DISTRICT

Department of Commerce and Labor

LIGHTHOUSE SERVICE

DESCRIPTION

OF

Burlington Breakwater N. Extension Pierhead North End.

LIGHT STATION

State: Vermont

June 26, 1913

INSTRUCTIONS

This form is to be filled out for new stations as established, and for present stations which have not heretofore been described. When changes are made at existing stations affecting the description previously given, pages containing the revised data should be promptly forwarded. The use of this form should be limited to stations having keepers.

BUREAU OF LIGHTHOUSES,
Washington, April, 1911.

DESCRIPTION OF LIGHT STATION.

1. By whom described F. A. Loring, Lieut., date June 26 1913

STATION.

2. Name of station, Burlington Breakwater N. Extension Pierhead North End.

3. Characteristic of light, fixed red.

4. Geographical position of light: Latitude 44 ° 28' 48"; longitude, 73 ° 13' 45".

5. Location, On north end of north extension pierhead.

PREMISES.

6. Origin of title to site of station (public land, purchase, lease, military or naval reservation),

7. Date of reservation, deed, lease, or permission to occupy,

8. Area of the entire site, ...; (*b*) area inclosed, ...; (*c*) type of fence, no fence

9. Distance of tower from nearest high-water mark, On shore, surrounded by water

10. Wharf or landing on premises, Landing Excluded on east side.

11. Means by which the light station may be reached and distance to nearest post office or town, with name, Light Station reached by boat from Burlington Vt. Distance to post office ½ mile

12. Tower or other means used for supporting the lantern and apparatus, white wooden tower

13. Number of separate lights, one

14. When first built or established, 1857

DESCRIPTION OF LIGHT STATION.

PREMISES—Continued.

15. When last thoroughly rebuilt, repaired, or renovated, ...

16. Height of focal plane of lantern above mean high water (on sea and gulf coasts) or mean lake level on northern lakes and rivers, 21

17. Background of the lighthouse, upon which it is projected, as seen from seaward, City of Burlington.

18. Color of tower, and how produced, painted white

19. Tower—Connected with keeper's dwelling, and how; or detached, and dwelling

20. Purpose of aid—Seacoast, lake coast, bay, harbor, channel, or range; for general or local navigation, Harbor Light; local navigation

21. Materials of which the tower is built, wood

22. Kind of stairway and steps, wood

23. Size of glass for glazing tower windows, 10x12 windows

24. Number of windows in tower, and size of sash, —

25. Number and size of doors, 1⅞" Sutton door 2'-7" x 6'-6"

26. General remarks upon tower and site, White wooden tower on square timber and stone crib foundation.

LANTERN AND LANTERN FIXTURES.

27. Order or class of lantern, ...

28. Polygonal with number of sides, or cylindrical with diameter, hexagonal skirted - 3'4"

29. Vertical or helical bars, vertical; height glazed, 2'-2 3/8"

30. Number of plates in height, one; in each side, one

31. Thickness and size of plates, 1/4" x 24" w x 36 1/2" h.

32. Unglazed side of lantern in plates and degrees of arc, none;

between what bearings (true and from seaward), ...

33. Materials of which the lantern is constructed, cast iron frame

34. Roof, tin

LANTERN AND LANTERN FIXTURES—Continued.

35. Ventilator ball, none

36. Lightning-conductor spindle, none

37. Balustrade and outside gallery, none

38. Lantern doors, and how fitted, none

39. Floor of lantern—Of what materials, none

40. Watch-room door leading into lantern, and how fitted, none

VENTILATORS.

41. In parapet, wall, or lower part of lantern, none

42. Lantern ladders for cleaning plate glass, outside,

43. Curtain hooks inside of lantern—How fitted,

WATCH ROOM.

44. How fitted, none

45. Bell wires, speaking tubes, or telephones for calling relief keepers—Kind, none

46. Where led,

ILLUMINATING APPARATUS, ETC.

47 Kind of apparatus, 5 day Lens Lantern; intensity in English candles,

48. Name of maker, Barbier Benard and Turenne; year made,

49. Marks and number on apparatus, none

50. Order of apparatus, ; inside diameter (inscribed circle, tangent to glass) of central drum, 11 4/5"

51. **If the apparatus is a parabolic mirror,** state (*a*) diameter of opening, ; (*b*) depth of mirror, ; (*c*) its focal length, ; (*d*) material of which it is made,

52. **If revolving,** time of revolution,

53. **If fixed,** or fixed varied by flashes, state arc of each fixed part in degrees, 360°

ILLUMINATING APPARATUS, ETC.—Continued.

54. Number of panels in the lens apparatus, 4

55. Number of flash panels, —; arc of each, in degrees, —

56. Number of elements in each panel of central drum of lens, 1

57. Number of prisms in each panel *above* central drum of lens, 3

58. Number of prisms in each panel *below* central drum of lens, 3

59. How are the flashes produced—By the whole apparatus revolving —; by revolving belt only —; if by panels or vertical elements revolving outside of fixed lens, state the number of such panels, —

60. **If by vertical elements,** state (*a*) the number in each panel, ; and (*b*) the number of elements of fixed lens covered by the panel,

61. **If light is occulting,** state (*a*) the characteristic,

(*b*) Between what time limits may characteristic be varied without structural changes in mechanism?

(*c*) Are eclipses produced by sleeve, revolving screens, or valve (if gaslight)?

(*d*) Size of sleeve and amplitude of movement,

(*e*) Axis of rotation of screens, horizontal or vertical, ; (*f*) relation of axis to vertical axis of illuminating apparatus,

(*g*) Do the screens revolve as parts, or independently, of illuminating apparatus?

(*h*) If about vertical axis, how many in circumference, ; (*i*) time required for complete revolution, ; (*j*) form, ;

(*k*) how mounted (see Questions 62–65), ;

(*l*) if actuated by clockwork, state order and maker, ;

(*m*) date made,

If occultation is effected by valve, state (*n*) name of maker, :

(*o*) pattern, ;

(*p*) does it operate reliably?

62. **If revolving,** does the apparatus revolve on a chariot, mercury float, or balls?

63. **If a chariot,** describe it and state the number and size of each pattern of wheels in it,

ILLUMINATING APPARATUS, ETC.—Continued.

64. **If on mercury float,** give (*a*) inside diameter of trough, ...; (*b*) inside depth of trough, ... ; (*c*) outside diameter of float, ...; (*d*) depth of float, ...; (*e*) weight of mercury required, in pounds, ... ; (*f*) how often mercury is renewed? .....

65. **If on balls,** (*a*) describe the construction of the ball-raceways, whether they are flat surface or semicircular or V grooves, ...

(*b*) state number of balls, ...; (*c*) diameter of balls, ...

66. Clock cord or chain, kind, ...; size, ...; length, ...; how led, ...; diam. and length of clock drum, ...

67. Length and inside dimensions of drop tube or weight box, ...; clock weight, ... pounds.

68. Length of time clock will run after one winding, ...

69. Does clock drive apparatus while being rewound? .....

70. How is the machinery protected? .....

71. How regulated? .....

.....

.....

72. Describe the pedestal, ...

73. Lens protector—Is there one? .....; kind, ...

74. Draft tube leading into ventilator ball—Of what material, diameter, and how fitted and connected with damper tube when in place, ...

.....

75. **If colored light,** (*a*) how is the color produced? ruby chimney

(*b*) state where colored glass is attached, if to illuminating apparatus or to lantern, ...

illuminating apparatus

76. If colored glass is inside of illuminating apparatus, describe its form, ruby chimney .....

77. Red sectors—Between what bearings, true (from seaward), ...

.....

LAMPS, BURNERS, ETC.

78. Description of lamp: (*a*) give order, 5 Bay Lens Lantern (*b*) kind of illuminant, oil

(*c*) intensity in English candles, ...

If oil, or oil vapor:

(*a*) number of wicks, or mantels, to burner, one;

(*b*) diameter of outside wick, 1 1/4; (*c*) diameter of mantel, —;

(*d*) if more than one mantel, also diameter of circumscribing circle, ...

If gaslight:

(*e*) state kind, ...; (*f*) number of burners, if more than one burner in group, ...; (*g*) kind of burner, ...;

(*h*) candlepower per burner, ...; (*i*) total candlepower of group, ...;

(*j*) consumption of gas per burner per hour, ... cubic feet;

(*k*) total consumption per hour, ... cubic feet; (*l*) how is gas obtained?

.....

If gas is generated at station:

(*m*) describe generator, ...;

(*n*) state name of maker, ...;

(*o*) date of pattern, ...; (*p*) maximum capacity per hour, ... cubic feet.

If compressed gas is used:

(*q*) describe container and give number in service, ...; spare .....;

(*r*) capacity, ... cubic feet of free gas; (*s*) to what pressure charged, ... lbs.; (*t*) how is supply renewed? .....;

(*u*) if by substitution of full for empty container, at what intervals? .....

.....

79. Number of spare lamps at station, ...

80. Number of spare lamp burners at station, ...

CLOSETS IN TOWER.

81. How fitted and used, Service closet in tower; forming the lantern support

OIL HOUSE OR ROOM.

82. Describe (*a*) where placed and how fitted, none

(*b*) inside dimensions, ____; (*c*) materials of which built, ____;

(*d*) capacity in 5-gallon cans, ____;

CLOSETS AND STOREROOMS.

83. Where placed, how fitted and used, closet in tower, used for storage of lamps and tanks.

84. Damp or dry, suited or unsuited to the purpose for which they were designed, suited for purpose designed.

FOG SIGNAL.

85. Kind and character of apparatus, none

86. How much time is required to sound the signal? ____; how long may the signal sound its characteristic with the quantity of air stored under pressure? ____

87. Characteristic:

If whistle, trumpet, or siren:				If bell:			
Blast ____ sec.	Silent ____ sec.	Blast ____ sec.	Silent ____ sec.	____ strokes	Silent ____ sec.	____ strokes	Silent ____ sec.

88. What parts of the fog-signal machinery are in duplicate? ____

89. Location, with reference to lighthouse, to a particular danger or channel, or to the special object for which established, ____

90. Distance and direction, true, from lighthouse, ____

91. Water supply for it, ____

92. How is it reached from the lighthouse? ____

FOG SIGNAL—Continued.

93. Description of fog-signal building or buildings, ...

.....

.....

.....

94. **If a bell,** state (*a*) weight, ... lbs.; (*b*) metal, ...; (*c*) diameter, ...; (*d*) height, ...; (*e*) if struck by clockwork, state time it will run with one winding, ...; (*f*) maker and date, ...

.....

95. **If a steam signal,** describe boiler: (*a*) type, ...; (*b*) length, ...; (*c*) diameter, ...; (*d*) horsepower, ...; (*e*) maker and date, ...

.....

(*f*) Is there a heater? .....; what kind? .....; what size? .....; how much does its use reduce the time of starting the fog signal? .....

96. **If a steam engine is used:** (*a*) kind, ...; (*b*) number of revolutions per minute, ...; (*c*) diameter of cylinder, ...; (*d*) stroke of piston, ...; (*e*) horsepower, ...; (*f*) maker and date, ...

.....

97. **If internal combustion engines are used:** (*a*) kind of engine, ...;

(*b*) maker, ...;

(*c*) date, ...; (*d*) nominal size, ...; (*e*) horse power, ...;

(*f*) fuel used, ...; (*g*) how started, ...;

(*h*) kind of compressor, ...; (*i*) maker and date, ...

.....

State if compressor is on same bed and geared with engine, or separate and belt-driven, ...

.....

Describe compressor machinery, ...

.....

FOG SIGNAL—Continued.

98. **If whistle, trumpet, or siren,** pressure at which blown, ...

99. Diameter of whistle, ...; height, ...; distance between orifice and edge of whistle, ...; single tone, ...; chime, ...

100. **If disk or cylindrical siren,** .....; diameter of revolving part, ...; when made, ...; by whom made, ...; number, width, and length of ports, ...; revolutions per minute, ...; type of governor, ...; condition of revolving part, ...

.....

101. **If Daboll trumpet:** Class, ...; reed: length, ...; breadth, ...; thickness at base, ...; thickness at tip, ...

102. **If trumpet:** Length, ...; diameters, ...; material, ...

103. Timing device, ...

104. Height of whistle or trumpet above mean high water, ...

105. Direction, *true*, in which trumpet points, ...

DWELLINGS FOR KEEPERS.

106. Location with reference to lighthouse tower, none

107. Coloring, ...

108. Materials of which built, ...

109. Number of rooms in each dwelling, ...

110. Number of keepers and assistants to each dwelling, ...

111. Outhouses, ...

112. Coloring, ...

113. Paths or walks on the premises, ...

114. Area susceptible of profitable cultivation, ...

115. Area cultivated or prepared for cultivation, ...

DESCRIPTION OF LIGHT STATION.

DWELLINGS FOR KEEPERS—Continued.

116. Character of adjacent surrounding country—Soil, sandy, clay, marsh, swamp, wood, fast ground, or shifting sands, ...

117. Furnish following data for stoves, kitchen sink, sink pump, and lamps in quarters:

ARTICLES.	KEEPER.	1ST ASSISTANT KEEPER.	2D ASSISTANT KEEPER.	3D ASSISTANT KEEPER.
Stove, maker,				
Stove, size,				
Sink, maker,				
Sink, size,				
Pump, maker,				
Pump, size,				
LAMPS. (Give name, number, and make of all lamps in such set of quarters.)				

WATER FOR FOG SIGNAL, DRINKING, ETC.

118. How procured, none

119. Quality, ...

120. Quantity ample or not for the station at all seasons of the year, ...

121. Liable or not to be injured by the inroads of storm tides and seas, ...

.....

122. If rain water in tanks or cisterns, what precautions have been taken to insure its purity? .....

.....

123. Capacity of tanks or cisterns, and where placed, ...

124. Tanks or cisterns—Of what material made, ...

WATER FOR FOG SIGNAL, DRINKING, ETC.—Continued.

125. Is there a distilling apparatus at the station? .....

Name of maker and date, ...;

capacity, ...; when installed, ...; condition, ...;

efficiency, ...

126. If from a well, describe and give depth, ...

127. Diameter, ...; lined or not, ...

128. Water obtained by pump or bucket, ...

129. Distance from keeper's dwelling, ...

HEALTHFULNESS OF STATION.

130. General opinion in regard to the healthfulness of the light station and vicinity, ...

.....

131. Diseases—What are most prevalent at the station and in the vicinity? .....

132. Do they prevail at particular seasons of the year, or not? .....

133. Are there any local causes, such as swamps, marshes, etc., in the immediate vicinity of the lighthouse which are likely to be the cause of these diseases? .....

.....

134. Would draining or other artificial means employed on the lighthouse premises be likely to improve the sanitary condition of the light station? .....

BOATS.

135. Furnish following data for each boat at station: none

Number.	Type.	Length.	Width.	When Built.	Date Received at Station.	Is Boat Fitted with Sails?	Suited to Work Performed.

BOATS—Continued.

136. **If power boat,** kind of engine, ...; horsepower, ...;

maker of engine, shop number, and date, ...

(*a*) type, size, number, and maker's name of spare coil, ...

....

(*b*) type, size, number, and maker's name of magneto, ...

....

(*c*) type and number of batteries, ...

(*d*) propeller wheel, diameter, ...; pitch, ...

137. Where are boats kept at station? ....

LANDING, WHARF, BOATHOUSE, AND ROAD TO THE LIGHTHOUSE.

138. Description, ...Landing ladder fastened to crib....

....

....

139. Distance and direction of landing from lighthouse, ...

....

140. Hoisting engine, what kind?....;

diameter of cylinder, ...; number of revolutions per minute, ...;

stroke, ...; kind of boiler, ...;

maker and date, ...

141. General Remarks: ....

....

....

....

....