

I. THE FORT

1. CONTEMPORARY DESCRIPTIONS OF THE FORT

Early on the second day (February 19, 1736) of Frederica's beginning, Oglethorpe and his men "traced out a Fort with 4 Bastions by cutting up the Turf from the Ground, dug enough of the Ditch & raised enough of the Rampart for a Sample for the men to work upon."¹⁴¹ The fort was "in the Front of the said Town, commanding the River both ways, where the Town Guard was kept, which was built large enough upon Occasion to contain the Inhabitants of the said Town",¹⁴² who numbered at least 116 souls in the early days.¹⁴³ Within little more than a month, this fort was defensible. The indication is that in its first form, the fortification was entirely of earth, without any palisade or other timberwork whatsoever. But as time went by and the essentials were taken care of, additional strength was added.

From eyewitness and other descriptions, this fort appears to have been

¹⁴¹ Collections of the Georgia Historical Society (Savannah, 1840-1916), III, 15 (hereafter cited as Collections); see also Francis Moore, "Voyage to Georgia Begun in the Year 1735", in Collections, I, 109.

¹⁴² Colonial Records of the State of Georgia (Atlanta, 1904-1916; and MS. Volumes), XXXIX, 488. Hereafter cited as CR 39488.

¹⁴³ Margaret Davis Cate, "Fort Frederica and the Battle of Bloody Marsh", Georgia Historical Quarterly, XXVII, no. 2, 117. Cited hereafter as "Cate".

conventional in design: a square with four regular bastions surrounded by a dry ditch and palisaded covert way. Within the earth walls were at least two large buildings. Philip Delegal, one of the military men associated with the early history of the settlement, furnished one of the most detailed descriptions of the fort in his deposition at London (1739): in 1736, stated Delegal, a “Fort was built at Frederica, consisting of a strong Mud Wall, with Frizes [fraises] all round, a Square with four regular Bastions, and a Spur-Work towards the river, and a dry Fosse palisadoed on the Outside, and stockaded in the Inside, defended by Cannon, and other Ordinance

[sic].”¹⁴⁴ Samuel Augspourguer (Auspourget), surveyor employed in building the fort, made a similar deposition, in which he mentions specifically the existence of a covert way: “in the Year One thousand seven hundred and thirty-six, he [Augspourguer] built the Fort At Frederica, to which there is four Bastions, a Ditch palisadoed, and a covered Way defended by fifteen Pieces of Cannon . . .”¹⁴⁵ Charles Dempsey, Oglethorpe’s well qualified commission, told the gentlemen in London that “at Frederica there is another Fort built with four regular Bastions, and a dry Ditch palisadoed on the Out-side, and stockaded in the Inside, both which were erected and mounted with Ordinance [sic], before this Deponent left Georgia . . .”¹⁴⁶ Another record, summarizing the progress of fortification work in Georgia prior to 1737, mentions “One at Frederica, with Four regular Bastions, and a Spur-work towards the river, and several Pieces of Cannon were mounted on it.”¹⁴⁷ Capt. William Thompson wrote to the Earl of Egmont that “Col. Oglethorpe has now render’d the Fort of Frederica very strong, with a ditch, rampier [rampart], parapet and Bastions, and there was only remaining to finish the Platforms for Canon.”¹⁴⁸

Not all descriptions of the fort are enthusiastic. A Frederica landholder named Carteret reported in 1741 that “Frederica Fort contains about 200 Men in garrison, but is ill mounted with Canon . . .”¹⁴⁹ Thomas Stephens, a disturber, was quoted as saying that “the Forts we brag of are pitiful things not worth the mentioning. . . . Frederica

¹⁴⁴ CR 39/473.

¹⁴⁵ CR39/479.

¹⁴⁶ CR 39/483.

¹⁴⁷ CR 3/388.

¹⁴⁸ CR 5/558.

¹⁴⁹ CR 5/499.

Fort is only some boards set up Musket proof with a ditch about it . . .”¹⁵⁰ About this same time (1739), the Earl of Egmont had occasion to talk with Charles Dempsey about the condition of Georgia’s forts. “After dinner I met Capt Demsey,” wrote Egmont, “and told him Sr Robt Walpole said publicly in the house of Commons that there had not yet been a shovel of Earth dug towards building Forts in Georgia. The Capt swore G--- d--- him, what did he mean to say so? That Fort Frederica is so strong it can’t be taken without Canon, having bastions, covert way, palisadoes & ditch, and when he was there, 20 cannon mounted.”¹⁵¹

One valuable eyewitness description of the fort came from the pen of Edward Kimber, a traveler to Frederica late in 1742 or early in 1743: “The Town is defended by a pretty strong Fort, of Tappy,¹⁵² which has several 18 Pounders mounted on a Ravelin in its Front and commands the River both upwards and downwards; and is surrounded by a quadrangular Rampart, with 4 Bastions, of Earth, well stockaded and turfed, and a palisadoed Ditch, which include also the King’s Storehouses, (in which are kept the Arsenal, the Court of Justice, and Chapel) two large and spacious Buildings of Brick and Timber: On the Rampart are mounted a considerable Quantity of Ordnance of several Sizes. The Town is surrounded by a Rampart, with Flankers, of the same Thickness with that round the Fort”¹⁵³

Doubtless there are other descriptions of the fort, buried in the mass of sources relating to Frederica. Those cited above will suffice for the purpose of the present study.

2. NOTES ON THE CITADEL SITE

On the east bank of the Frederica river stands a one-story masonry ruin popularly called “the fort” or “the citadel” (marked A in plate 21). The river bank rises here some 8 feet above the marsh level. In the yellow sand of this bluff or bank may be seen various interesting strata, including some humus layers, as well as apparent floor

¹⁵⁰ CR 5/308

¹⁵¹ CR 5/144

¹⁵² This casual reference to a tabby fort is difficult to accept literally. Evidently this observer, who was not an experienced military man familiar with military nomenclature, saw the masonry buildings within the earth fortification as a “Fort of Tappy”. For a definition of tabby, see post pp. 179-180, n. 200.

¹⁵³ [Edward Kimber,] “Itinerant Observations in America”, in London Magazine (1745-1746). Reprinted in Collections, IV. See p. 4. Kimber’s observations were written early in 1743. Cited hereafter as “Observations.”

levels.

The “citadel” is a rectangular structure approximately 20 by 50 feet. Its foundations and walls are of tabby, consistent with other ruins in the vicinity. Height of the “citadel” is about 12 feet from foundation to top. The floor level is several feet below the level of the bluff. There are three rooms, the two larger almost identical, each ceiled with a round arch of brick, and the soffit of the arch at right angles to the length of the building. The third room is a small one, now ceilingless, at the north end of the structure.

By 1900 the south, west and north walls of the building, together with the south arch, had fallen. Almost the only parts of the ruin standing above the foundations were the east wall and the north arch.¹⁵⁴ In 1904 the fallen walls were reconstructed,¹⁵⁵ the workmen using as much as possible of the old masonry. To rebuild the south arch, however, new brick was used, and the method of laying was not entirely in accord with the style of the north arch.

It has not been possible to determine whether the structure originally was higher than its present single story. During the reconstruction, the walls were crowned with merlons of Portland cement containing an oyster shell aggregate (rather poorly resembling tabby), but it is doubtful that these merlons are historically accurate. Their design is inconsistent with 18^{t h} century principles. Perhaps they were based upon the obviously inaccurate sketches that appeared in Harper’s Weekly or Lossing’s Pictorial Field-Book of the Revolution (see post, bibliography.)

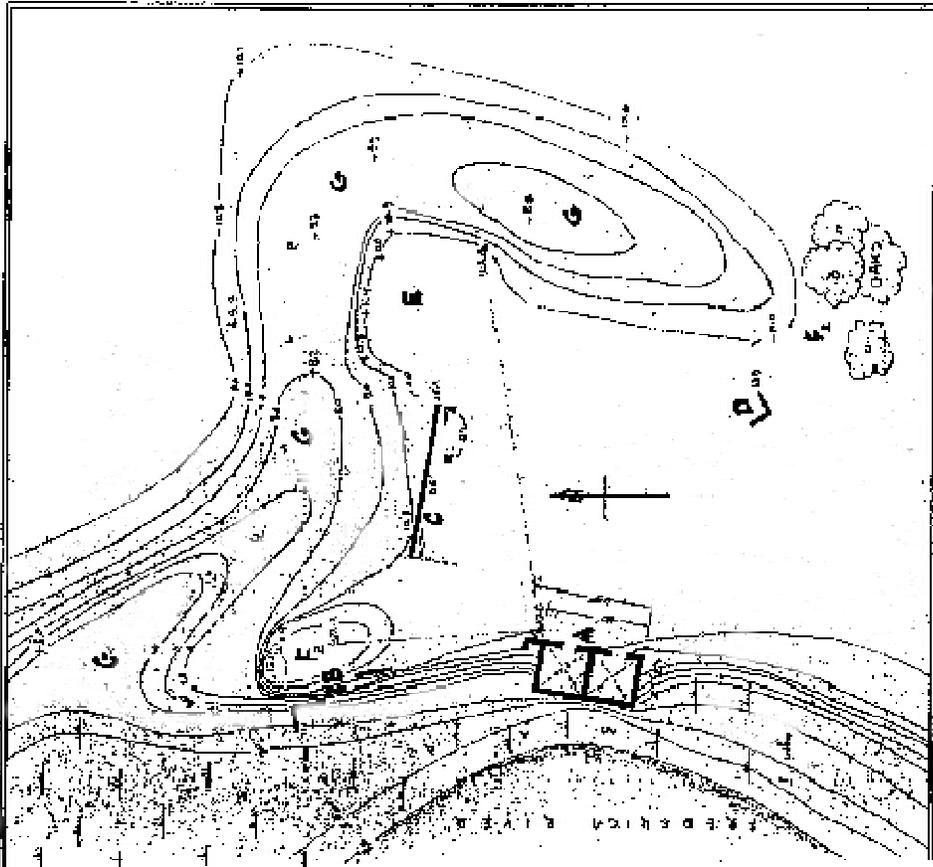
About 100 feet north of the “Citadel” (Ruin A) in an eroded portion of the river bank, are tabby ruins (B) of a building that appears to have been similar in dimension and plan to Ruin A. The base of this foundation seems to be at higher elevation than that of Ruin A. Little of the building remains except lower portions of the east wall and fragmentary ground floor levels, partially protected by an accumulation of humus. Several partition foundations are displaced, and a section of the north foundation is also moved slightly from its original location by erosion.

1) See the accompanying photographs, plate 19.

2) S. Price Gilbert, “The Part Played by the Colonial Dames in Establishing the Fort Frederica National Monument,” Georgia Historical Quarterly, XXVII, no. 2, 177.

21.

SKETCH OF CITADEL SITE



KEY

- Masonry ruins
- A Citadel, tabby, with brick arches
- B Foundations, wall, tabby, part displaced
- C Foundations, tabby
- D Foundations, tabby
- E Earth mounds, best in conformation
- F Earth mounds
- G Continuous depression, near conformation

SCALE: 1 inch = 50 feet



This sketch should be regarded merely as a notation on the relationship of masonry ruins and ground conformations. Contours shown are approximate only.

Based on survey notes compiled in the field by C.R. Vinton, J.C. Harrington & L.G. Murray in the 1940's

Other masonry ruins (C and D) are found within a 150-foot area east of Ruin A. Ruin C, a tabby foundation, shows approximately 50 feet northeast of Ruin A, and extends eastward for a distance of about 60 feet. Probing revealed the existence of underlying masonry which might be west and south walls for Ruin C.

About 130 feet south of Ruin C is Ruin D, the corner foundation of another tabby building.

Earthwork remains in the citadel area are not extensive, and a most careful observation of the site was necessary to discover what may be significant topography. Just north of Ruin B on the river bank, a swale or depression (G) opens into the marsh. This swale extends landward in a southeasterly direction for about 100 feet, where it angles to the northeast, circles a mound (E) about 200 feet east of Ruin B, and runs some 200 feet south until it becomes lost in an oak grove near the existing road. The grove appears to be a small mound (F₁).

The theory may be advanced that this running depression is an indication of the course of the fort moat. Its directions conform satisfactorily. But the first definite sign that the depression is significant develops at the point 200 feet east of Ruin B, where the swale circles toward the south. Here there is a well defined mound (E) that shows the figure of a bastion. Curtain angles and shoulders of the bastion, if such it be, are clear, though the salient is partly effaced. A shed now stands upon the crest of this mound.

Southward from Mound E, the careful observer can trace a fairly definite ridge which may be the east rampart of the fort. The depression (G) and the ridge terminate at Mound F₁ in approximately the right location for identification as the southeast bastion.

Highest elevation of earth at the site is a third mound (F₂) adjacent to Ruin B. This mound is considerably eroded, but is in a location justifiable as the northwest bastion of the fort.

Lacking a detailed topographical survey of the vicinity, we cannot at present fully interpret these conformations, nor can we determine accurately the dimensions of the fortification which the contours may indicate. For purposes of discussion, however, we assume that the exterior side of Fort Frederica (*i.e.*, the distance from the point of one bastion to the point of another) was between 250 and 300 feet (see plate 23). If our assumption is even approximately correct, it appears that river erosion has destroyed

the western front and part of the south front of the earth fort.

In a hypothetical plan of Fort Frederica, (plate 23) we have shown existing masonry ruins in certain relationship to the walls of the fort. Ruin A has been interpreted as a gate to the fort, Ruins B and C have been identified with the two 20-by 60-foot storehouses said to have been constructed within the fort walls, and Ruin D as a small magazine in the gorge of the southeast bastion. Archeological exploration is necessary to clarify the relationship of the masonry buildings to the trace of the fort.

While this hypothetical plan of the fort conforms generally to contemporary descriptions of the work, it has raised almost as many questions as it has answered. Ruin A (the “citadel”) stands in such a position that it must have some relation to a fort entrance. Yet, to have been a gate, Ruin A must almost certainly have had its north arch open like a passage. Due to the 1904 reconstruction, it is difficult to determine whether this arch was actually open. Even if this center room were a passage, its east doorway (seemingly original construction) is too narrow (5 feet) to be a standard gate opening.

Unfortunately, Ruin A does not clearly resemble any part of an 18th century fort, except possibly a gate with guardrooms (see plate 34) or a magazine. For the latter purpose, the arches were dangerously thin for “bombproof” construction (see plate 38), even though they were well protected by earth.

The problem of identifying the masonry ruins is further complicated by the fact that they do not appear consistent with the buildings shown inside the fort by Miller’s plan.¹⁵⁶ And while the plan dimensions of Ruins B and C conform reasonably well to specifications given in the records for the King’s Storehouses, yet their tabby masonry does not jibe with the description that the buildings were of “Brick and Timber.”¹⁵⁷ Further, there is considerable doubt that Ruin B, tentatively located in the gorge of the northwest bastion, would be a three-story structure. Being in the gorge, it would probably be a low magazine. Perhaps the companion structure to Ruin C exists under ground, undiscovered, some 100 feet south of, and parallel to Ruin C.

¹ Joshua Miller, “Plan of the Town of Frederica on the Island of St. Simon” [1796] (plate 9). For background data on this resurvey, see Jones, “Dead Towns of Georgia,” Collections, IV, 132-133. Cited hereafter as Jones.

² “Observations,” 4.

Specific dimensions for the Frederica fort are not given in available records.¹⁵⁸ At present, the single plan representing the fort in any detail is the Miller “Plan of the “Town of Frederica”, made about 1796.¹⁵⁹ While it is obvious that Miller’s drawing of the fort is a conventional representation, there may be some meat to his suggestion that the curtains of the work were 90 feet long. On the other hand, the 90-foot dimension is too small to include existing ruins at the fort site.

It is, of course, entirely possible that one or more of the tabby ruins at the fort site is a later intrusion.

3. 18TH CENTURY FORTIFICATION

Oglethorpe was acquainted with the maxims of fortification as adapted by the English from the famous French engineer Sabastien le Prestre Vauban, since he claimed familiarity with the master’s principles in building the town walls.¹⁶⁰

Most “textbook” forts, based on European practices, were much larger than was practicable for colonial frontier fortification. John Müller, one of England’s foremost military engineers, set forth the following dogma in 1746: “Forts are most commonly made square . . . at least, when the pass they are to guard, is of any consequence, or the place may easily be approached; the sides of this square are 100 toises [i.e., 100 fathoms or 600 feet] the perpendicular 10, and the faces 25; the ditch about this fort may be from 10 to 12 toises; the parapet is to be made of turf, and fraised, and the ditch palisaded when dry/ There may be made a covert-way about this fort, or else a row of palisades might be placed on the outside of the ditch.”¹⁶¹

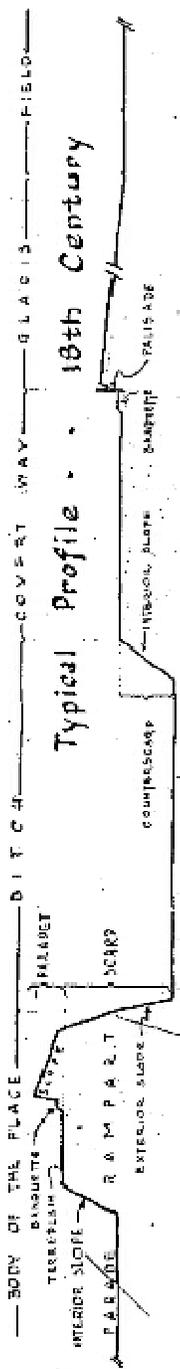
The following comparative dimensions may be useful in studying the design of Frederica’s fort.
(next page after plate)

² Several contemporary plans of Frederica were made. It may be possible to locate them. For leads mentioning such maps, see: CR 1/425, 438; 2/313, 5/69, 279, 552-553; 22/279.

³ “Plan of the Town of Frederica on the Island of St. Simon,” cited above, n. 16. Miller’s instructions were to lay off the town as nearly as practicable according to the original plan.

⁴ CR 22, part 2/288-289.

⁵ John Müller, A Treatise containing the Elementary Part of Fortification. (London 1746), 197-198. Hereafter cited as Elements.



Method of Design: Draw a square. Exterior Side AB is 42 fathoms (252 feet). Bisect AB, draw Perpendicular CD 5 fathoms (1/4 of Exterior Side). Draw Lines of Defense ADG, BDF. Set off Bastion Faces AE, BH 12 fathoms (1/3 of Exterior Side) from point E describe arc through H. marking point G in line ADG. From point H describe arc through E, marking point F in line BDF. AEFGBH is trace, or outline of the front. Draw lines parallel to trace, 5 fathoms in. Parapet: Draw lines parallel to trace, 2 1/2 fathoms in.

Banquette (finishing step): Draw lines parallel to parapet, 4 feet in.

Ditch: Describe arcs of 6 fathom radius from A and B. Touch arcs with lines from E and H.

Covered Way: Lines MM' parallel to counterscarp, 4 fathoms out. O is reentering angle of covered way.

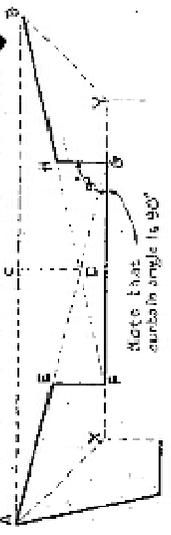
Place of Arms: At reentering angle O, set off 10 fathoms on OM at each side, P and Q. From P and Q draw arcs with 15-fathom radius to intersect at R. PRQ is Place of Arms.

Traverse: 2 1/2 or 3 fathoms broad, perpendicular to counterscarp at extremities of Place of Arms. Passage around traverse is 8 or 8 feet wide.

Ravelin: At reentering angle S of counterscarp, erect capital ST, 12 fathoms, perpendicular to the curtain. Set off 6 fathoms along the counterscarp for

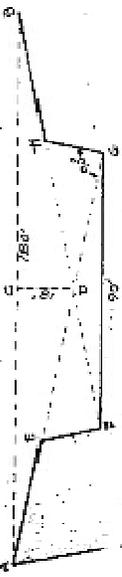
semi-circles SU, SV perpendicular to curtain, erect 4-fathom flanks UW, VX. UW, XV forms ravelin. Ravelin ditch has radius of 7 of 2 1/2 fathoms and is parallel to faces of the ravelin.

Italian-Spanish - 16th Century



A E F G H B - Bastioned Front. AB - Exterior Side. XY - Interior Side. X A E E - Half Bastion. ADG, BDF - Lines of Defense. U, V - Flank Angles. H, G - Demi-Corner Charges.

Clairac - 17th Century



Perpendicular CD = 1/2 of Exterior Side AB. Faces AE, BH each = 1/4 of AB. Flanks EF, HG are at right angles to Lines of Defense.

Fort St. Simons, Georgia



An irregular fortification a variation of Vauban's method.

Drawn by Geo. B. Kelly, 1875, 1878-1879, 1881-1882, 1883-1884, 1885-1886, 1887-1888, 1889-1890, 1891-1892, 1893-1894, 1895-1896, 1897-1898, 1899-1900, 1901-1902, 1903-1904, 1905-1906, 1907-1908, 1909-1910, 1911-1912, 1913-1914, 1915-1916, 1917-1918, 1919-1920, 1921-1922, 1923-1924, 1925-1926, 1927-1928, 1929-1930, 1931-1932, 1933-1934, 1935-1936, 1937-1938, 1939-1940, 1941-1942, 1943-1944, 1945-1946, 1947-1948, 1949-1950, 1951-1952, 1953-1954, 1955-1956, 1957-1958, 1959-1960, 1961-1962, 1963-1964, 1965-1966, 1967-1968, 1969-1970, 1971-1972, 1973-1974, 1975-1976, 1977-1978, 1979-1980, 1981-1982, 1983-1984, 1985-1986, 1987-1988, 1989-1990, 1991-1992, 1993-1994, 1995-1996, 1997-1998, 1999-2000, 2001-2002, 2003-2004, 2005-2006, 2007-2008, 2009-2010, 2011-2012, 2013-2014, 2015-2016, 2017-2018, 2019-2020, 2021-2022, 2023-2024, 2025-2026, 2027-2028, 2029-2030, 2031-2032, 2033-2034, 2035-2036, 2037-2038, 2039-2040, 2041-2042, 2043-2044, 2045-2046, 2047-2048, 2049-2050, 2051-2052, 2053-2054, 2055-2056, 2057-2058, 2059-2060, 2061-2062, 2063-2064, 2065-2066, 2067-2068, 2069-2070, 2071-2072, 2073-2074, 2075-2076, 2077-2078, 2079-2080, 2081-2082, 2083-2084, 2085-2086, 2087-2088, 2089-2090, 2091-2092, 2093-2094, 2095-2096, 2097-2098, 2099-2100, 2101-2102, 2103-2104, 2105-2106, 2107-2108, 2109-2110, 2111-2112, 2113-2114, 2115-2116, 2117-2118, 2119-2120, 2121-2122, 2123-2124, 2125-2126, 2127-2128, 2129-2130, 2131-2132, 2133-2134, 2135-2136, 2137-2138, 2139-2140, 2141-2142, 2143-2144, 2145-2146, 2147-2148, 2149-2150, 2151-2152, 2153-2154, 2155-2156, 2157-2158, 2159-2160, 2161-2162, 2163-2164, 2165-2166, 2167-2168, 2169-2170, 2171-2172, 2173-2174, 2175-2176, 2177-2178, 2179-2180, 2181-2182, 2183-2184, 2185-2186, 2187-2188, 2189-2190, 2191-2192, 2193-2194, 2195-2196, 2197-2198, 2199-2200, 2201-2202, 2203-2204, 2205-2206, 2207-2208, 2209-2210, 2211-2212, 2213-2214, 2215-2216, 2217-2218, 2219-2220, 2221-2222, 2223-2224, 2225-2226, 2227-2228, 2229-2230, 2231-2232, 2233-2234, 2235-2236, 2237-2238, 2239-2240, 2241-2242, 2243-2244, 2245-2246, 2247-2248, 2249-2250, 2251-2252, 2253-2254, 2255-2256, 2257-2258, 2259-2260, 2261-2262, 2263-2264, 2265-2266, 2267-2268, 2269-2270, 2271-2272, 2273-2274, 2275-2276, 2277-2278, 2279-2280, 2281-2282, 2283-2284, 2285-2286, 2287-2288, 2289-2290, 2291-2292, 2293-2294, 2295-2296, 2297-2298, 2299-2300, 2301-2302, 2303-2304, 2305-2306, 2307-2308, 2309-2310, 2311-2312, 2313-2314, 2315-2316, 2317-2318, 2319-2320, 2321-2322, 2323-2324, 2325-2326, 2327-2328, 2329-2330, 2331-2332, 2333-2334, 2335-2336, 2337-2338, 2339-2340, 2341-2342, 2343-2344, 2345-2346, 2347-2348, 2349-2350, 2351-2352, 2353-2354, 2355-2356, 2357-2358, 2359-2360, 2361-2362, 2363-2364, 2365-2366, 2367-2368, 2369-2370, 2371-2372, 2373-2374, 2375-2376, 2377-2378, 2379-2380, 2381-2382, 2383-2384, 2385-2386, 2387-2388, 2389-2390, 2391-2392, 2393-2394, 2395-2396, 2397-2398, 2399-2400, 2401-2402, 2403-2404, 2405-2406, 2407-2408, 2409-2410, 2411-2412, 2413-2414, 2415-2416, 2417-2418, 2419-2420, 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2603-2604, 2605-2606, 2607-2608, 2609-2610, 2611-2612, 2613-2614, 2615-2616, 2617-2618, 2619-2620, 2621-2622, 2623-2624, 2625-2626, 2627-2628, 2629-2630, 2631-2632, 2633-2634, 2635-2636, 2637-2638, 2639-2640, 2641-2642, 2643-2644, 2645-2646, 2647-2648, 2649-2650, 2651-2652, 2653-2654, 2655-2656, 2657-2658, 2659-2660, 2661-2662, 2663-2664, 2665-2666, 2667-2668, 2669-2670, 2671-2672, 2673-2674, 2675-2676, 2677-2678, 2679-2680, 2681-2682, 2683-2684, 2685-2686, 2687-2688, 2689-2690, 2691-2692, 2693-2694, 2695-2696, 2697-2698, 2699-2700, 2701-2702, 2703-2704, 2705-2706, 2707-2708, 2709-2710, 2711-2712, 2713-2714, 2715-2716, 2717-2718, 2719-2720, 2721-2722, 2723-2724, 2725-2726, 2727-2728, 2729-2730, 2731-2732, 2733-2734, 2735-2736, 2737-2738, 2739-2740, 2741-2742, 2743-2744, 2745-2746, 2747-2748, 2749-2750, 2751-2752, 2753-2754, 2755-2756, 2757-2758, 2759-2760, 2761-2762, 2763-2764, 2765-2766, 2767-2768, 2769-2770, 2771-2772, 2773-2774, 2775-2776, 2777-2778, 2779-2780, 2781-2782, 2783-2784, 2785-2786, 2787-2788, 2789-2790, 2791-2792, 2793-2794, 2795-2796, 2797-2798, 2799-2800, 2801-2802, 2803-2804, 2805-2806, 2807-2808, 2809-2810, 2811-2812, 2813-2814, 2815-2816, 2817-2818, 2819-2820, 2821-2822, 2823-2824, 2825-2826, 2827-2828, 2829-2830, 2831-2832, 2833-2834, 2835-2836, 2837-2838, 2839-2840, 2841-2842, 2843-2844, 2845-2846, 2847-2848, 2849-2850, 2851-2852, 2853-2854, 2855-2856, 2857-2858, 2859-2860, 2861-2862, 2863-2864, 2865-2866, 2867-2868, 2869-2870, 2871-2872, 2873-2874, 2875-2876, 2877-2878, 2879-2880, 2881-2882, 2883-2884, 2885-2886, 2887-2888, 2889-2890, 2891-2892, 2893-2894, 2895-2896, 2897-2898, 2899-2900, 2901-2902, 2903-2904, 2905-2906, 2907-2908, 2909-2910, 2911-2912, 2913-2914, 2915-2916, 2917-2918, 2919-2920, 2921-2922, 2923-2924, 2925-2926, 2927-2928, 2929-2930, 2931-2932, 2933-2934, 2935-2936, 2937-2938, 2939-2940, 2941-2942, 2943-2944, 2945-2946, 2947-2948, 2949-2950, 2951-2952, 2953-2954, 2955-2956, 2957-2958, 2959-2960, 2961-2962, 2963-2964, 2965-2966, 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3695-3696, 3697-3698, 3699-3700, 3701-3702, 3703-3704, 3705-3706, 3707-3708, 3709-3710, 3711-3712, 3713-3714, 3715-3716, 3717-3718, 3719-3720, 3721-3722, 3723-3724, 3725-3726, 3727-3728, 3729-3730, 3731-3732, 3733-3734, 3735-3736, 3737-3738, 3739-3740, 3741-3742, 3743-3744, 3745-3746, 3747-3748, 3749-3750, 3751-3752, 3753-3754, 3755-3756, 3757-3758, 3759-3760, 3761-3762, 3763-3764, 3765-3766, 3767-3768, 3769-3770, 3771-3772, 3773-3774, 3775-3776, 3777-3778, 3779-3780, 3781-3782, 3783-3784, 3785-3786, 3787-3788, 3789-3790, 3791-3792, 3793-3794, 3795-3796, 3797-3798, 3799-3800, 3801-3802, 3803-3804, 3805-3806, 3807-3808, 3809-3810, 3811-3812, 3813-3814, 3815-3816, 3817-3818, 3819-3820, 3821-3822, 3823-3824, 3825-3826, 3827-3828, 3829-3830, 3831-3832, 3833-3834, 3835-3836, 3837-3838, 3839-3840, 3841-3842, 3843-3844, 3845-3846, 3847-3848, 3849-3850, 3851-3852, 3853-3854, 3855-3856, 3857-3858, 3859-3860, 3861-3862, 3863-386

Dimensions of 18th Century Fortification Parts

fortification part	standard dimensions (feet)		Frederica dimensions (feet)		
	1	2	3	4	5
	field fort ¹⁶²	Redoubt ²²	smallperma nent fort ¹⁶³	Fredericarecords ¹⁶⁴	Hypotheiti calbasedo nifieldnote s ¹⁶⁵
exterior side	186	-	480	130?	252
Perpendicular	24	-	60	-	30
bastion face	60	-	132	20?	72
bastion flank	18	-	-	-	25
Curtain	67	-	210	90	107
rampart base	30	18	30	12?	24-30
rampart height	6+	3	10	10?	8
parapet base	15	9	18	12?	15
parapet height	6	5	6	-	6
ditch width	36	24	36	10?	36
ditch depth	6+	8	15	-	6
covert way	24	-	24	-	24
Stockade	-	-	-	12?	8
Palisade	6	-	6	-	6
banquette base	4	-	4	-	4
banquette height	1 ½	-	1 ½	-	1 ½

⁵ [Anonymous,] The New method of Fortification (London 1748), 103, 105-106, 154, 168-169, 172-173. Cited hereafter as New Method.

⁶ Elements, 26-28, 146, 198, 206-207, 227; New Method, 80, 103, 145, 147, 150, 153, 168, 173.

⁷ “Plan of the Town of Frederica”; CR 22/289; 35/357; “Observations,” 4-5.

⁸ Element , 24 ff., 206, Basic dimensions for column 5 were computed from field observations at the site. For application of these dimensions, see plate 23. See also plate 22, showing the Clairac trace, which would provide a smaller bastion area; and Müller, The Field Engineer of M. le Chevalier de Clairac (London, 1760), 37. This work is cited hereafter as Clairac. See also plate 36, p. 264. in Clairac. This plate is evidently applicable in some measure to the design of Fort St. Simons (our plate 8).

The fathom or toise (6 feet) was the standard unit of measure in 18th century fortification layout. In computing key dimensions such as perpendicular and face, it was customary to drop fractions. Thus the perpendicular in column 5 (1/8th of 42 fathoms) is 7 fathoms, not 5 ¼ fathoms. (See Elements, 29).

Berm	3	-	3	-	3
place of arms demigorge	60	-	-	-	60
Face	90	-	-	-	90
Traverse	-	-	15 x width of cov. way x glacis height		
Ravelin Capital	72	-	-	-	72
Demigorge	36	-	-	-	36
Flank	24	-	-	-	24
Ditch	15	-	-	-	15
capital of ravelin without flank	½ length of curtain; flanks drawn to bastion shoulders				
bridge width	-	10	-	-	10
gate width	-	-	8	-	8
gate height	-	-	8	-	8

Plate 22 furnishes detailed notes on fortification design according to Vauban's First Method (presumably that used by Oglethorpe) as well as other well known systems.¹⁶⁶ Basic dimensions for any bastioned fortification were 1) the exterior side, or the distance from the point of one bastion to the next; 2) the perpendicular, a geometrical line bisecting the exterior side, measuring (for a square fort) one eighth of the exterior side and determining the position of the line of defense;¹⁶⁷ and 3) the face of the bastion, which for a square fort was two sevenths of the exterior side.

Lacking contemporary plans of Fort Frederica, of course we do not know to what degree its design varied from the Vauban method. But plate 8 (Fort St. Simons) and plate 22 (showing a simplified trace of St. Simons) may prove useful for interpreting certain archeological discoveries that may be made at Fort Frederica.

4. RAMPARTS

In 18th century lexicography, a rampart "is an elevation of earth raised along the faces of any work, of 10 or 15 feet high, to cover the inner part of that work against the

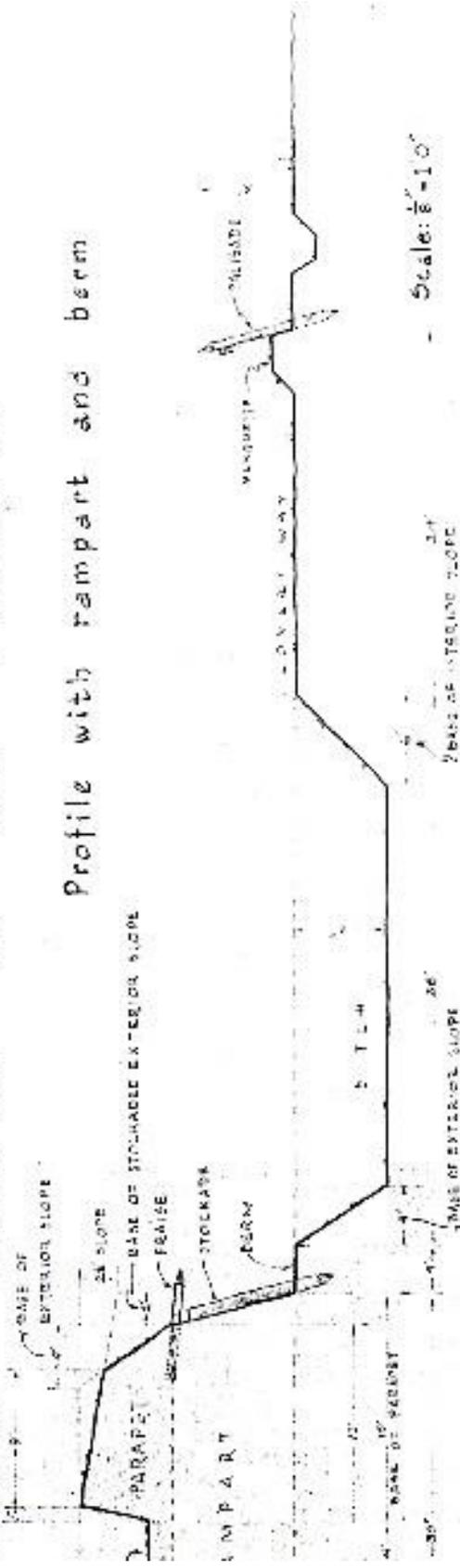
⁸ Based on Elements, 24-30, 42-43; New Method, 105, 108-109, 131-132, 172-173; Cf. Clairac, 37.

⁹ The "line of defense", first defined by Antoine de Ville in his work on fortification published in 1628, and its relationship to the flank (EF) of the bastion became of primary importance in the development of the various fortification "systems". The line of defense (AG) actually represented part of the sector of fire from defenders' guns mounted in the flank of the bastion; or in 18th century terminology, it was the line "represented by the discharge of the small shout, which uncovers the face of one bastion by razing [grazing] it." (New Method, 78.) See also post, n. 51.

Plate 24 - Hypothetical Profile of Fort Frederica

HETICAL PROFILES OF FORT FREDERICA

Profile with rampart and berm



Profile of Work without rampart

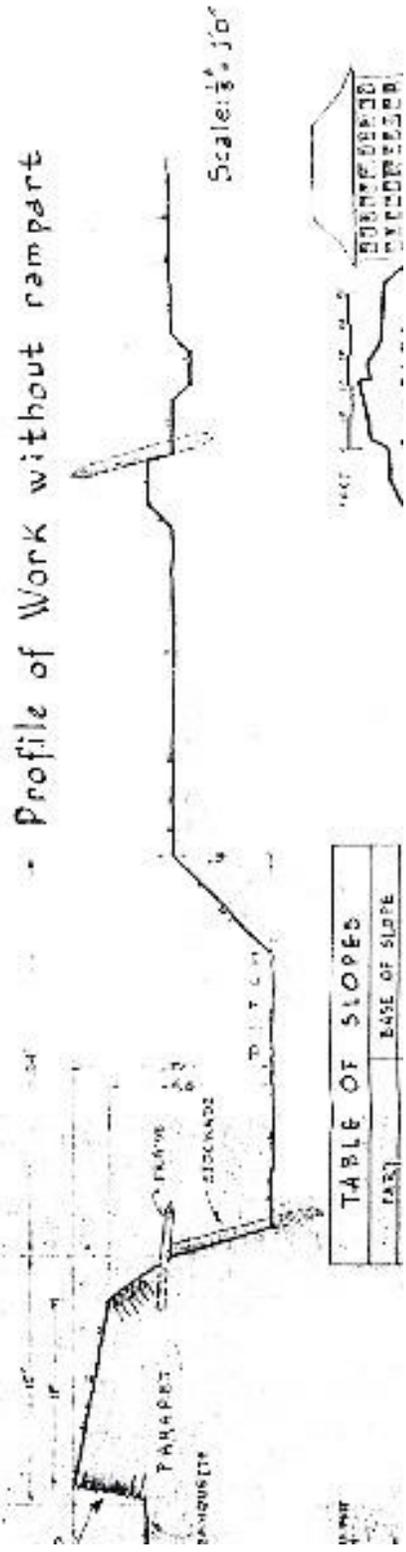


TABLE OF SLOPES	
PAS	BASE OF SLOPE

fire of an enemy.”¹⁶⁸ The rampart was “the principal Piece of a Fortification; and therefore the Rampart ought to be higher and broader than any of the rest of the Parts.”¹⁶⁹ On the basis of Vauban’s general rule that each work in a fortification should be at least 6 feet higher than the one before it, the height of the Frederica rampart should be 6 feet or more above the field. Since height of the rampart was measured from the bottom of the ditch, a ditch 6 feet deep plus a rampart 6 feet above the field would provide a total rampart height of 12 feet.¹⁷⁰

For a small fort, thickness of the rampart at its base was usually 30 feet. At the top, the breadth was somewhat less, due to necessary sloping or grading of the construction. The inside or parade slope of the rampart approximated 45° , the natural slope of the earth used in construction.¹⁷¹

Exterior slope (the batter of the curtain) was $2/3$ of the height. Thus, in a rampart 6 feet above the field, when the base was 30 feet, the crown would measure 24 feet or

¹¹ Elements, 229.

¹² New Method, 146 ff. Though it was common practice to erect the “body or inner works of fortifications higher than the outworks in order to command enemy works in the field surrounding the fort, some engineers did not consider it essential to do so. True, the higher works were not so easily enfiladed by enemy ricochet batteries, but if all the works were of the same height, the interior ones could not be destroyed until the outworks were taken. Ricochet was “a kind of firing, with a small quantity of powder, by giving the gun an elevation of 10 or 12 degrees” in such a way that the shot cleared the parapet and struck the flank of the defending battery of guns to dismount them. (Elements, 47.)

¹³ Elements, 46,48, Cf. post n. 71. An interesting series of profiles is to be found in Clairac, pl. 36, p. 264.

¹⁴ New Method, 147-148; Elements, 48. Müller, A Treatise Containing the Practical Part of Fortification (London 1755), p. vi, suggests that the proper slope in a given locality should be determined by building a sample embankment 10 or 12 feet high. After a year’s exposure to the elements, the earth in this embankment will form its natural slope, and that angle or slope may then be taken as a guide for future construction.

In coastal Georgia, where the earth was sandy and it was difficult to obtain a steep slope without revetments, several methods appear to have been used. At Frederica, the fort curtain was stockaded and the town walls had wharf-like revetments. At Fort St. Andrews on Cumberland Island, where the ground was loose sand, in order to construct parapets “they used the same Method to support it as Caesar mentions in the Wars of Gaul, laying Trees and Earth alternately, the Trees preventing the Sand from falling, and the Sand the Wood from Fire.” (Collections, I, 126-127.) At Fort William on the south point of Cumberland, by 1743 a regular pentagon fort was built, “the Rampart twelve Foot high, and about fifteen Foot thick, of Sand, supported by [logs or] Puncheons.” [Edward Kimber,] Journal of a Late Expedition to the Gates of St. Augustine (Boston 1935), 8-9, f.n.) At Savannah, the soil being “a meer Sand, to make this keep in a breast work,” the engineer “was obliged to have the outside Talus [slope] faced with Pine Saplins set in the ground and inclined their tops in form with Talus of the Scarp . . .” (CR 39/453.) In other words, the saplings formed a revetment to hold the sand of the earthwork in a fairly steep slope.

less, depending upon the angles of the interior and exterior slopes. However, when walls or revetments were used to hold the earth in place, Vauban customarily made the slope of such a wall 1/5 of the height. Müller thought 1/6 was sufficient.¹⁷²

In view of the relatively small size of Fort Frederica, there is some question whether the fortification actually boasted a rampart as such or whether the wall consisted only of a parapet or breastwork some 6 feet high with a narrow ditch around (see plate 24). We incline toward the breastwork idea. Yet Oglethorpe himself, whether in loose expression or no, reported that “we . . . raised enough of the Rampart for a Sample for the men to work upon.”¹⁷³ Moore mentioned “the ramparts raised with green sod”,¹⁷⁴ and Capt. William Thompson, a military eyewitness, evidently told Egmont that the fort has a “ditch, rampier [rampart], parapet and Bastions . . .”¹⁷⁵ Kimber described “a quadrangular Rampart . . . of Earth, well stockaded and turfed . . .”¹⁷⁶

Descriptions of Fort Frederica thus conform closely to 18th century standards as given by Müller: “The ramparts and parapets . . . are commonly made of turf, and the outside of the parapet fraised; that is a row of palisades are placed in about the middle of the slope, in an horizontal manner, the points declining rather a little downwards . . .”¹⁷⁷ Additional details of construction, as given in an 18th century textbook, are illuminating: “To every Foot of Earth, where the rampart is raised, two Branches of Willow are to be set no bigger than a Man’s Thumb: Besides that, the Earth is to be so hard rammed down, that it may sink four or five Inches, and that there remain not above seven or eight. Lastly, You ought to soe with Hay-Seed and Weeds upon the outside in every Row, to the end the Earth may intermix with the Roots . . . When you plant Trees upon the Rampart, it is a great Ornament in Time of Peace, and a good Provision in Time of War. There are some Engineers that do not like this Advice; for they say that the Wind makes such a Noise, when the Branches hit one against another, that the Men can hardly hear one another: Besides that, it is a great Hindrance to the Centinel,

¹³ New Method, 147, 168-169; Elements, 229

¹⁴ Collections, III, 15.

¹⁵ Collections, I, 114.

¹⁶ CR 5/558.

¹⁷ “Observations,” 4.

¹⁸ Elements, 197.

which is a Consideration not altogether to be rejected.”¹⁷⁸

5. PARAPETS

“Parapet, is a part of the rampart of a work, of 18 or 20 feet broad, and raised 6 or 7 feet above the rest of the rampart; it serves to cover the troops, placed there to defend the work, against the fire of the enemy.”¹⁷⁹ For a redoubt, the parapet might be only 9 or 10 feet thick at its base, and 5 to 7 feet high, depending upon the type of banquette or firing step.¹⁸⁰ According to Frederica records, the thickness of the fort rampart [parapet?] was equal to the thickness of the town breastwork, and Verelst made a long range recording from London that the town “Breast Work above the Timber will be 12 feet thick with Earth.”¹⁸¹ At least 12 feet might be accepted as the minimum thickness of the town breastwork, since a military man said he “judged [them] strong enough to be Proof against Eighteen-Pound Shot . . .”¹⁸²

For the present purpose it may be assumed that Frederica parapets were probably at least 15 feet thick at the base (see plate 24). Fifteen feet was minimum standard thickness; 18, as recommended by Vauban, was preferred.¹⁸³ For illustration we may say that measurements of a 6-foot-high parapet would be 15 feet at the base; the exterior slope had a base 2/3 of its height, or about 30°; the interior slope would be much steeper, having a base of only one foot. The crown of the parapet, then was 11 feet or less in breadth. The slope of the crown toward the field was 1/6 of the base, so that the outer face of a 15-foot parapet was 2 ½ feet lower than the inner fact. The

¹⁷ New Method, 148. Moore (Collections, I, 116) said that some oaks were left standing inside the fort.

¹⁸ Elements, 227.

¹⁹ New Method, 168.

²⁰ CR 35/357; see also “Observations,” 4. cf. CR 22/288-289.

²¹ Jones, 120, citing Capt. MacClellan’s statement in 1743. New Method, 185, gives penetrating power of various 18th century projectiles: At 600 feet, a 33-pounder would penetrate 12 feet or more of earth, depending upon the solidity of the work. “Poor and hungry” earth might be pierced as much as 24 feet. At 400 feet, a 48-pounder went through 20 feet of earth. A 24-pounder entered 12 feet of earth at 300-foot range, and at 200 feet, a 12-pounder went 7 feet into a good parapet. The source gives no data on 18-pounders.

¹⁹ New Method, 48, 49, 145, 173; Elements, 27. A parapet wider than 24 feet hindered vision toward the outworks; one less than 18 feet “cannot long resist the Force of the great Shot, which would soon level it with the Earth . . .” (New Method, 145, 185.) Clermont (ibid., 145) specified that the parapet should be 1/3 the base of the rampart, but obviously this principle would not apply in a small fortification.

resultant slope toward the field enabled the musketeer to command a clear view of the sector beyond the ditch in front of him. Like the rampart, the parapet was turfed.¹⁸⁴

6. BANQUETTES (FIRING STEPS)

“Banquette, is a kind of step made on the rampart of a work near the parapet, for the troops to stand upon in order to fire over the parapet; it is generally three feet high and as many broad, and 4 ½ feet lower than the parapet.”¹⁸⁵ In this definition, Müller has left little room for misinterpretation. However, it might be added that width of the step could be two, three, or four feet, and sometimes there were two firing steps – one for short and one for tall soldiers! In the latter case, each step was about two feet broad. The first level was a foot above the rampart and the second six inches higher, “So that every one may have a View from the Parapet, and Discharge at his Ease.”

Banquettes were made of earth, and had an interior slope of about 45° or less.¹⁸⁶

7. FRAISES

“Fraise, a kind of stakes or palisades placed horizontally on the outward slope of a rampart made of turf, to prevent the work being taken by surprise.”¹⁸⁷ Elsewhere Lexicographer Müller elaborates on the definition by explaining that the “points” of the fraises inclined slightly downward toward the field so “that the grenades or fireworks thrown upon them, may roll down into the ditch . . .” Fraises were about 7 or 8 feet long, and about half their length was laid into the earth of the rampart at a point slightly below the base of the parapet.¹⁸⁸ The protruding “points” were doubtless sharpened as in a typical palisade. (See plate 24.)

²⁵ “If you would line the Parapet,” reads an old text, “it must be allowed a little sloping, that the Soldiers may have the better Footing. The best Lining of Parapets is with Turf. As for the Earth or Mould which you are to make use of in erecting a Parapet, it is very requisite to mix it with Withy [willow] Twigs, or Brambles, and to sow it with any Weeds that take a deep Root, to bind the Earth together, so that the Cannon may not easily crumble it down . . .” (New Method, 145.)

²⁶ Elements, 211.

²⁷ New Method, 146. In the 18th century Cubo redoubt at St. Augustine, banquettes were made of palmetto logs. See Castillo de San Marcos plan file, serial no. 108, measured drawings of the Cubo Redoubt excavations.

²⁸ Elements, 221.

²⁹ Elements, 197; New Method, 77.

8. BASTIONS

“Bastions, is a part of the inner enclosure of a fortification; making an angle toward the field, and consists of two faces, two flanks, and an opening towards the center of the place called the gorge.”¹⁸⁹

The bastions of Fort Frederica might have measured 72 feet on the face and 25 feet on the flank.¹⁹⁰ The bastion representations on the 1796 Miller plan seem to be conventional, rather than to scale, since they show unusually small bastions – too small even for the Clairac style trace shown in plate 22. In our hypothetical plan of the Frederica fort (plate 23), the bastion angles conform fairly well to the specified angles for square forts.¹⁹¹ Small variations are to be expected: “As for the Angle of the

²⁶ Elements, 210. It is interesting to trace the development of these angles. According to data compiled by Dr. Hans Huth (“Fort Marion as an Architectural Structure” (Washington, 1942),

²⁷ See ante, p, 129.

¹⁹¹ See New Method, 131-132:

	Standard	Frederica (hypothetical)
Angle of the bastion	63° 00'	63°
Angle of the curtain	98° 30'	96°
Angle of defense	81° 30'	83°
Angle of the front.....	112° 30'	109°
Angle of the angle.....	67° 30'	71°

It is interesting to trace the development of these angles. According to date compiled by Dr. Hans Huth (“Fort Marion as an Architectural Structure” (Washington, 1942), 17th century Italian-Spanish practice, as exemplified in Castillo de San Marcos (Fort Marion) and other similar Spanish colonial forts, made the angle of the curtain (EFG) a right angle, thus rendering the angle of the flank (EFB) an oblique angle. This 90° curtain angle is a mark of 16th century fortification built in the so called “new Italian” school. However, experience showed that soldiers fired most effectively when their target was directly in front of them – not at an angle. Said Clairac: soldiers “generally fire without aim, and directly before them.” (Clairac, 3.) As late as the early 1800’s instructions to Spanish soldiery of St. Augustine deplored this tendency to fire without aiming, and exhorted the musketeers to stand up bravely on the firing step long enough to draw a bead on the target. In order to utilize this human nature to best advantage, during the course of the 17th century, the bastion angles were modified. Count Pagan in 1645 established the angle of the flank (EFB) as 90°; that is, the bastion flank was drawn at right angles to the line of defense. While most 18th century engineers held to the desirability of retaining this maxim as a “true position” for the flanks, yet they regarded those flanks as being “too much exposed, and too easily ruined by the enemy’s counter-batteries . . .” (Elements, 134.) As a consequence, the 90° angle of the flank (EFB) was modified to 81°30’, and the angle of the curtain (EFG) became 98°. in the textbooks. Actually, as one anonymous author pointed out, “it depends upon the Knowledge of the Engineer to make the Flanks, so that they may form a good Angle of the Bastion, according to which almost all the rest take their Measures . But to

Bastion, and all the rest, it is impossible to know what their overtures are, in regard they are not always the same . . .”¹⁹²

9. GUNS AND EMBRASURES

“Embrasures, are openings made in the flanks of a fortification or in the breastwork of a battery, of about 2 ½ feet within, 8 or 9 without, and 3 from the bottom, for the guns to enter partly, and to fire through.”¹⁹³

Guns at Frederica during the decade of the 1730’s apparently numbered between 15 and 20 pieces, and Habersham’s report in 1763 stated that the “Fort mounted (at least there are embrasures for) 20 Guns besides a battery to defend the Channel below of twelve, 12 pounders now removed to Cockspur . . .” Habersham further indicated that few of the Frederica guns were serviceable, and recommended that “a few Hand 6 pounders” be supplied, “together with round and double headed shot for the several

Calibres, and all implements for Actual Service.”¹⁹⁴ Of all the cannon once at Frederica a single 12-pounder now remains at the fort site.¹⁹⁵

speak the Truth, we ought to believe, that this Angle, whether right, acute, or obtuse, ought never to trouble our Thoughts, provided it be not less than sixty Degrees, nor much more than 100 . . .” (New Method, 131, 136.) See also Elements, 24 ff.; New Method, 87, 131 ff.; Clairac, 37.

²⁷ New Method, 131. See note above. The curtain angle (EFG) should not be less than 90° nor more than 110°. Further, the bastion face (AE) was seldom, if ever, less than one half the length of the curtain. (New Method, 87, 88.)

In summary, key to any variation in bastion design was probably in the angle of defense (EFB), or, as it was sometimes termed, angle of the flank, for many engineers held to the older idea of making this angle a right angle instead of the 81°30’ specified here. (See New Method, 134 ff.) Many engineers, protected the bastion flanks by retiring them behind orillons or “ears”. See Elements, 30 ff., for explanation of orillon construction. used for larger fortifications.

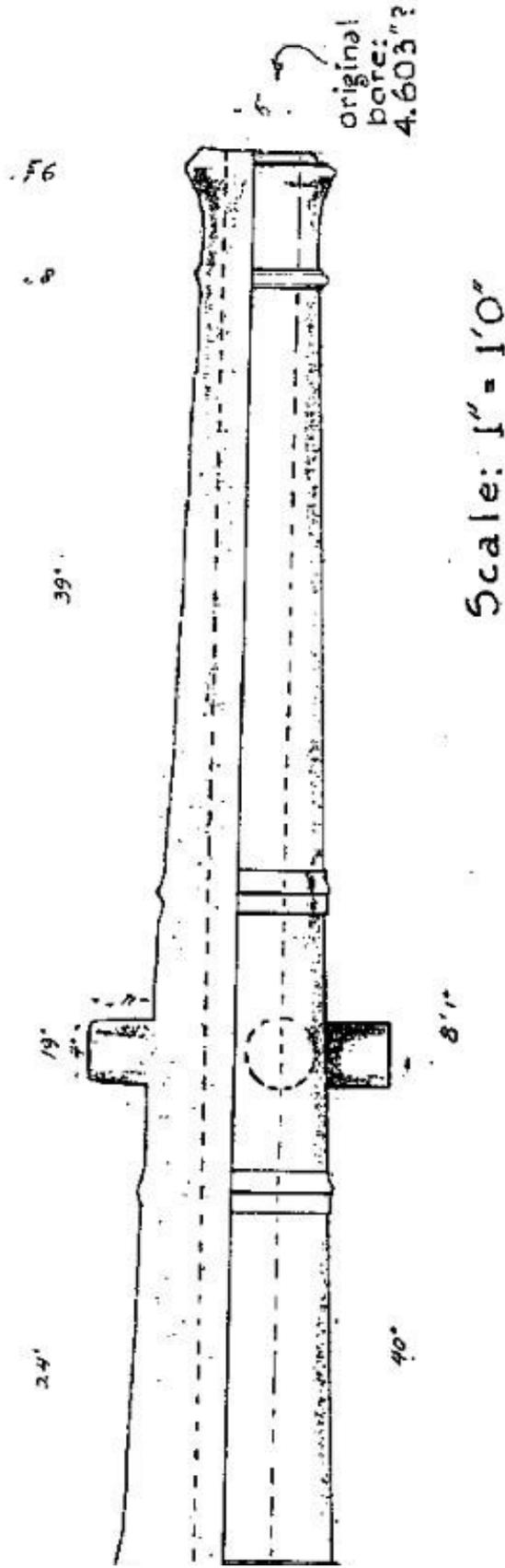
²⁸ Elements, 218.

²⁹ Collections, VI, 13; see also CR 3/388; 5/144, 252, 499; 21/115-116;39/473, 479, 483. In 1755 Governor Reynolds wrote that at Frederica “there still remains 20 pieces [sic] of Cannon, some of them 19 Pounders, but all are spoilt for want of Care; the rest of the Guns were removed to Savannah...and are also ruined by lying many years in the Sand without vents [vent covers] or Tompions.” (CR 27/148.) Mrs. Cate has found (Cate MS., 67-68). That in 1762 some of the guns were removed and mounted at Fort George, on Cockspur Island near Savannah, and at the outbreak of the Revolution the Savannah Council of Safety ordered all military stores at Frederica secured in a place of safety. Most of them were evidently taken to Sunbury and went into Fort Morris. One, used a salute gun at Himesville, burst. Another is at the Augusta home of C. C. Jones, Jr. The Fort Morris guns were sent to the Chicago Exposition of 1893 and never returned.

³⁰ See plate 25.

25.

IRON 12-POUNDER AT FREDERICA



lies atop the 'Citadel' at Frederica. Oxidization is severe. There are no identifying marks.

In small forts it was customary to mount guns only in the bastions, the most effective locations for defense. Such was the case at Castillo de San Marcos at St. Augustine during the early period of its construction, before the terreplein was sufficiently advanced to support artillery. And in the earlier wooden forts at Spanish St. Augustine, the majority of the defending ordnance was emplaced in bastions, or on cavaliers (raised platforms) within the walls.

Two difficult questions arise in connection with the armament of Frederica. If we accept the hypothetical dimensions for the fort, there was hardly room in the bastion to mount much more than a pair of guns. While in plate 23 we have shown six embrasures to the bastion, still the maximum width within the bastion from shoulder to shoulder is less than 40 feet – hardly sufficient for more than a couple of standard-sized gun platforms. On the other hand, there is not much indication that guns could have been mounted along the curtains, because the rampart is too narrow.

These questions can be brushed aside with the suggestion that the fort had no rampart, but consisted simply of a breastwork or parapet wall (see plate 24, “Work without rampart”). Lacking a rampart, our hypothetical plan becomes everywhere more roomy, and cannon could have been emplaced anywhere along the walls without difficulty.

The existence of gun platforms at the fort is specified, but the type is not clearly indicated.¹⁹⁶ Moore, however, indicated standard construction: “platforms of two inch planks laid for the cannon upon the bastions”.¹⁹⁷ A gun platform was “a floor made of strong planks, laid upon joists, on a battery, to place the guns or mortars upon, in order to prevent the wheels or mortar-bed from sinking in the ground.”¹⁹⁸ Such platforms were about 9 feet wide and 18 feet long, with a rise of 9 inches from fore to rear to help check recoil. To insure accuracy in laying the gun, it was the universal custom to level platforms with the long mason’s level. Chalk marks on the planking at each wheel and at the trail or “hind part” of the gun carriage insured a precise return to the aiming point.¹⁹⁹

²⁸ CR 5/558.

²⁹ Collections, I, 129.

³⁰ Elements, 228.

³¹ Maximum axletree length of an English field piece of the period was 76 inches; that of a garrison carriage only 57 inches.

If this conventional type of platform were not practicable within the relatively narrow confines of the Frederica bastions, possible the entire terreplein of the bastions was floored.²⁰⁰

In some fortifications, platforms were raised to within two feet of the parapet crown, with the requisite slopes and ramps to haul the guns into position on the platform. (See plate 8, “Plan of the Redoubt”, which shows swivel guns mounted similarly en barbette.) It might also be mentioned that if the bastions were full (i.e., filled in) and of any height, ramps of more gradual slope than that of the rampart would be found leading from the parade into the gorge of each bastion. Hurtors, 6-inch square timbers, were laid before all gun carriage wheels to prevent the wheels from damaging the parapet.²⁰¹

A variation of barbette emplacement was used by the school of “modern engineers” frowned upon by John Müller. These men, wrote Müller, “when they build any fort or battery near the sea or navigable rivers . . . make a parapet of three feet high only, in order to fire the guns en barbet; the reason they give for this practice is, that they may point the guns which way they please, either down the river, to prevent the ships from approaching, destroy them when they are opposite, or firing after them in case they should pass.”²⁰² Müller claimed the practice had obvious disadvantages due to its lack of protection for the gun crews.

10. DITCH

“Ditch, is a large deep trench made round each work, and the earth dug out of it, serves to raise the rampart and parapet.”²⁰³

From archeological excavation which should reveal the width and depth of the Fort Frederica ditch, it may be possible to determine accurately both horizontal and vertical

Length of an 18-pounder field piece was 10 feet. However, platforms would vary in dimensions to fit the particular guns used; e.g., some of the newer 24-pounders were made so much lighter than the older style that their recoil ran them completely off an 18-foot platform. See Müller, A Treatise of Artillery (London 1750), 160, 183, 231, 234.

³⁴ The ravelin at Fort William on Cumberland Island was reported to have a pair of 18-pounders mounted “upon curious moving Platforms [similar to Gribeauval type seacoast gun carriages?], that they can bring to bear any Way . . .” ([Kimber,] Journal of a Late Expedition to the Gates of St. Augustine, 8-9, f.n.)

³⁵ Clairac, 226; Elements, 223.

³⁶ Elements, 206.

³⁷ Elements, 217.

dimensions of the fort ramparts and parapets. As a point of departure in explaining the nature of a fortification ditch or moat, we have shown the Frederica moat in plates 23 and 24 about 36 feet wide and 6 feet deep.²⁰⁴

Most small fortifications had wet moats, since they were deemed better protection than dry moats. On the other hand, large forts were often built with dry mats to facilitate disposition of the defending troops.²⁰⁵ Apparently Fort Frederica had a dry moat,²⁰⁶ which probably meant that excavation was not deeper than 6 feet, since the water table was reported to be “about six feet under the surface of the Land”.²⁰⁷

Slope of the moat banks probably approached the natural or 45° angle, and these slopes were most likely lined with turf. It is probable, but not certain, that the stockade facing of the rampart started at the base of the ditch, so that the slope of the ditch below the rampart had the same batter or slope as the rampart itself. In some cases, where the earth of the rampart went to considerable height above the ditch, and was not held by a revetment, a berm 4 or 5 feet broad was left at the foot of the rampart “to prevent the Earth from falling into the Moat.”²⁰⁸

11. COVERT WAY

“Covert-way, is a space five or six toises²⁰⁹ broad, going quite round the works of a fortification, and is adjoining to the counterscarp of the ditches, covered by a parapet 7 ½ feet high, terminating in an easy slope [glacis] towards the field, at a distance of 20 toises.”²¹⁰ While 24 feet is specified for the breadth of the covert way in a field fort, a 30-foot width was conceded to be better – wide enough to accommodate the “great Guns and Men”, yet not so wide that it needed a higher parapet to give cover from enemy

³⁶ Most textbook dimensions, however, specify 36 feet wide by 15 feet deep, though outworks such as redoubts might have ditches only 24 feet wide by 8 feet deep. Cf. sources cited ante, notes 22, 23. Obviously, small frontier forts had moats nowhere approaching the grandiose dimensions specified for the larger European fortifications, where a moat would be as much as 96 feet wide and 20 feet or so deep. Castillo de San Marcos at St. Augustine has a moat constructed on a radius of about 40 feet, and the height of the counterscarp is from 8 to 12 feet.

³⁷ New Method, 151.

³⁸ CR 39/473, 483; but cf. CR 22, Pt. 2/288, and Collections, I, 257.

³⁹ CR 1/446.

⁴⁰ New Method, 69; cf. id., 153.

⁴¹ A toise is a fathom, or 6 feet.

⁴² Elements, 214.

guns.²¹¹

Designing a covert way was simple, and the method for a small square fort is shown in plate 22.²¹² At every re-entering angle²¹³ of the counterscarp (the moat wall), a place of arms was laid out, where troops could muster to organize a maneuver. As with the covert way, this area was more or less standard in dimensions, and could be laid out in several ways, depending upon the shape and size of the fortification.

Wherever the faces of the place of arms crossed the covert way, traverses were built (plate 22). A traverse was a parapet as high as the crown of the glacis, 18 feet thick, and built across the length of the covert way to prevent enfilading fire.²¹⁴ Traverse length was the same as the breadth of the covert way, so to get around the traverse, the engineers cut a passage some 6 or 8 feet wide in the glacis. Traverses were also usually built at every salient angle of the bastions and outworks, though we have not shown them in such locations in our plates due to the relatively small proportions of the hypothetical design. To determine the location for such traverses, however, the engineer “produced” or extended the face of the bastion. Where that line crossed the covert way was the proper location, and the traverse was made the same thickness as the bastion parapet.

The covert way was one of the most important parts of the fortification: “taking the covert-way,” stated Müller, “when it is in a good condition and well defended, is generally the most bloody action of the siege.”²¹⁵

In order for the defenders assembled in the place of arms to march into the field, there were one or two sally ports, 10 or 12 feet wide, through the glacis. In siege time these ports were shut with barriers or gates (plate 27).

12. PALISADES

It is evident from the Georgia records that there is a definite distinction between

³⁸ New Method, 103, 154; Elements, 45, 48. In some cases the covert way was lower than ground level, in order to save the labor and expense of raising the rampart to greater height.

³⁹ Based on Elements, 42; the data following on places of arms and traverses comes from id., 42 ff., and New Method, 105-106.

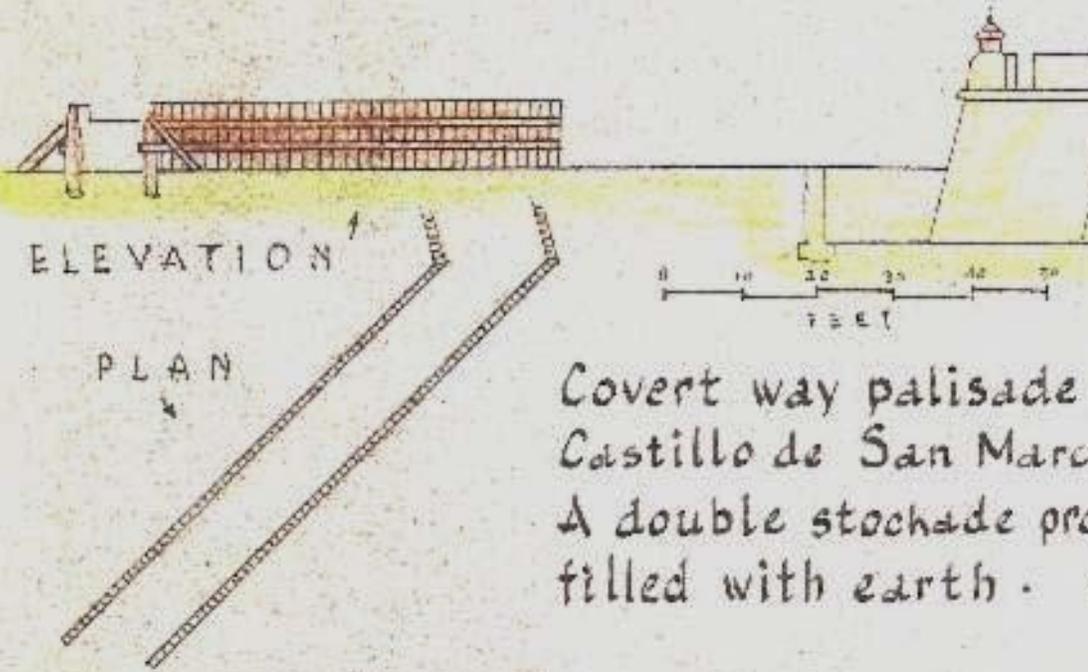
⁴² “Re-entering angle,” wrote Müller (Elements, 229), “is that which turns its point towards the center of the place.”

⁴³ See Elements, 24-30, 42-43, for constructional details; also see id., 231. In plates 22 and 23 we have used a 15-foot thickness for the traverses, since the fort parapets hypothetically measure only 15 feet in breadth.

⁴⁴ Elements, 41-42.

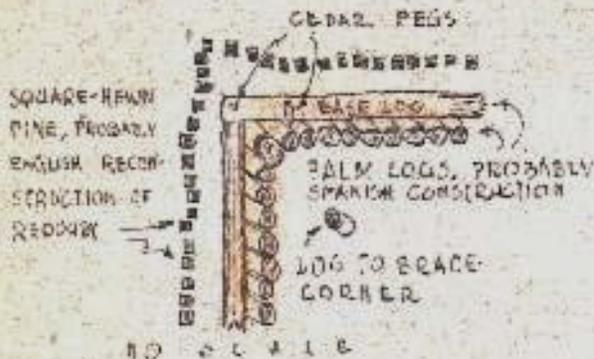
26.

18th CENTURY PALISADES . .



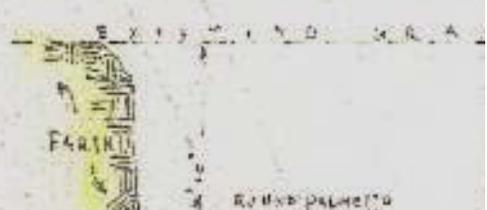
Covert way palisade
 Castillo de San Marco
 A double stochade pro
 filled with earth . .

Cubo Redoubt, St. Augustine Defense



TYPICAL CROSS SECTION OF PALISADE REM

PLAN OF



“palisade” and “stockade”. Unfortunately, that distinction has not come down to us very clearly. We have not discovered the word “stockade” in any available 18th century military work, yet there is remarkable unanimity among the Frederica observers in describing the fort ditch as “palisadoed on the Out-side, and stockaded in the Inside”.²¹⁶ One modern authority defines a stockade as a tight fence set in the ground, inclined to the front and used as a rampart.²¹⁷ Merriam-Webster hints that a stockade was a tight fence serving in the nature of a rampart, usually with loopholes, whereas the palisade was used more or less as a simple barrier. Palisades were not necessarily tight fences; Müller defines “Palissades” as “a kind of stakes made of strong split wood of about 9 feet long, fixed 3 feet deep in the ground in rows about 6 inches asunder . . .” He says further that “they are placed in the covert-way at 3 feet from, and parallel to the parapet or ridge of the glacis, to secure it from being surprised.”²¹⁸ One of Müller’s contemporaries specified that palisades were 5 to 7 feet high (i.e., 5 to 7 feet above the field), fixed before fortresses, curtains, ramparts and “Glaces”. Some of them were armed with two or three iron points.²¹⁹ Palisades could be either vertical or inclined. Nor was it necessary to make them of “split wood”. At least some of the palisades in the defenses at St. Augustine consisted of palm logs, though there is some indication that the covert way palisade at the Castillo was square-hewn timber, and square-hewn pine was found in excavation of the palisaded Cubo Redoubt in one of the 18th century St. Augustine defense lines.²²⁰

The stockade at Frederica was almost certainly part of the rampart, since it was erected to protect the earthwork – “to prevent our Enemies turning up the green sod”.²²¹ Inasmuch as the rampart was fraised, it seems likely that the wooden stockade or revetment extended upward only to the base of the parapet, where the fraises overhung

⁴⁵ CR 39/483; also see CR 5/144; 39/473; “Observations,” 4.

⁴⁶ Max B. Garber, A Modern Military Dictionary (Washington, D.C., 1936).

⁴⁷ Elements, 227. See also Clairac, pl. 36; and our plate 22 (profile).

⁴⁸ New Method, 80, 152.

⁴⁹ See plate 26, nos. 1 and 2.

⁵⁰ Collections, I, 129. “Green sod”, freshly cut, and not firmly rooted to the soil beneath, was liable to quick destruction from enemy batteries throwing bombs or heavy shot that drove seven or eight feet into the parapets. See ante, n. 42. The Frederica stockade, according to Moore (Collections, I, 129), was of cedar: “Mr. Oglethorpe had the works round the fort frased or palisaded with cedar posts, to prevent our enemies turning up the green sod.”



18th CENTURY PALISADES-- 2

Archeological excavations on the line of the Augustine town wall extending west from the (revealed the remnants of early 18th century (eations. This photograph shows the remains c

the ditch.²²² (See plate 24). The slope of this stockade is a question to be settled, but it was probably 1/5 of the height.²²³

The palisade “on the Out-side” probably had the same relative location as a glacis; at least such is the indication from the fact that no observer mentioned a glacis at Fort Frederica, yet a covert way did exist.²²⁴

The obvious interpretation is that the “cover” for the covert way was the palisade. It was good practice to place “a row of palisades . . . on the outside of the ditch”,²²⁵ though in most cases such a palisade was used to strengthen the glacis, and was located at the foot of the interior slope of the glacis. Length of a palisade post was the same as the height of the glacis (7 ½ feet), with the banquette buying the lower 3 feet so that the visible height of the palisade from the inside would be 4 ½ feet. (It should be noted that this 3-foot-high banquette is not necessarily consistent with the 1 ½ foot banquette standard for the interior works.) Palisades were sometimes placed in the middle of a dry ditch to prevent mining and surprise.²²⁶

In plate 23, we have shown a symmetrical covert way palisade entirely around the fort. But it is problematical whether the palisade included the water sector (since the fort fronted on a marshy waterfront), or whether there may have been even a variation in the symmetry of design as appears to have been the case at Fort St. Simons, which was in a relatively similar location near the water’s edge. (See plate 8.)

13. GATES AND BRIDGES

Fort Frederica was in the nature of a citadel, and citadels usually had two gates – one for communication with the town, and the other toward the field. Into the first gate the garrison would retire after the town capitulated; through the other gate could come reinforcements, in case the town were captured.²²⁷ Though Frederica was a small fort and the available records mention no fort gate at all, it is likely that there were at least two gates (perhaps three, as we shall point out later) in the covert way palisade,

⁴⁶ Cf., Müller, Practical Fortification, 136.

⁴⁷ See ante, p. 123.

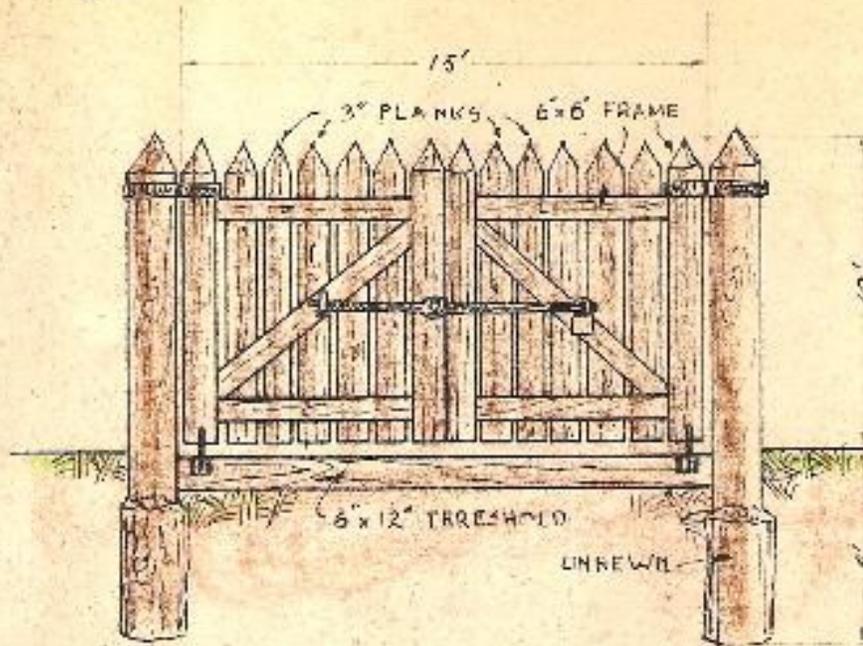
⁴⁸ CR 39/479.

⁴⁹ Elements, 198; cf. New Method, 227. See also our plate 22, profile.

⁵⁰ Elements, plate X, and 197.

⁵¹ Elements, 191.

27.

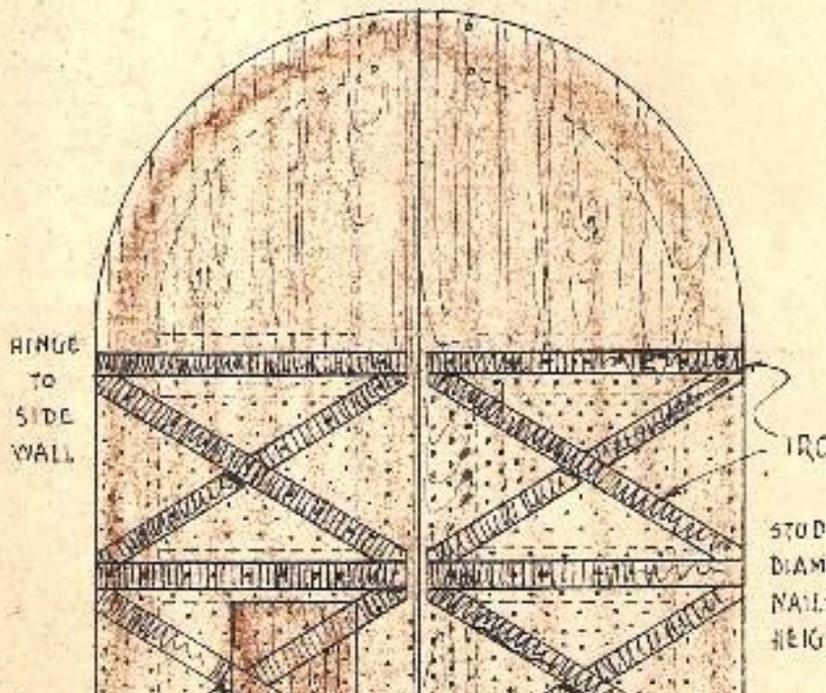


Barrier Gate

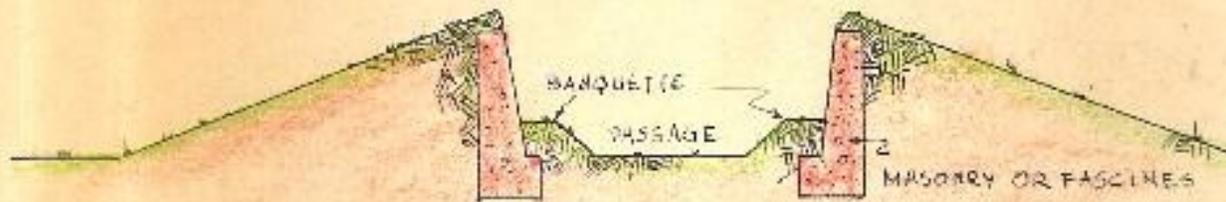
for Covert Way Passages (interior elevation)

(Practical Fortification, pl. XV, fig. 5, pp. 205-206.

For locking bar, cf. U.S.E. Fort Jefferson, Plan 74-E7.

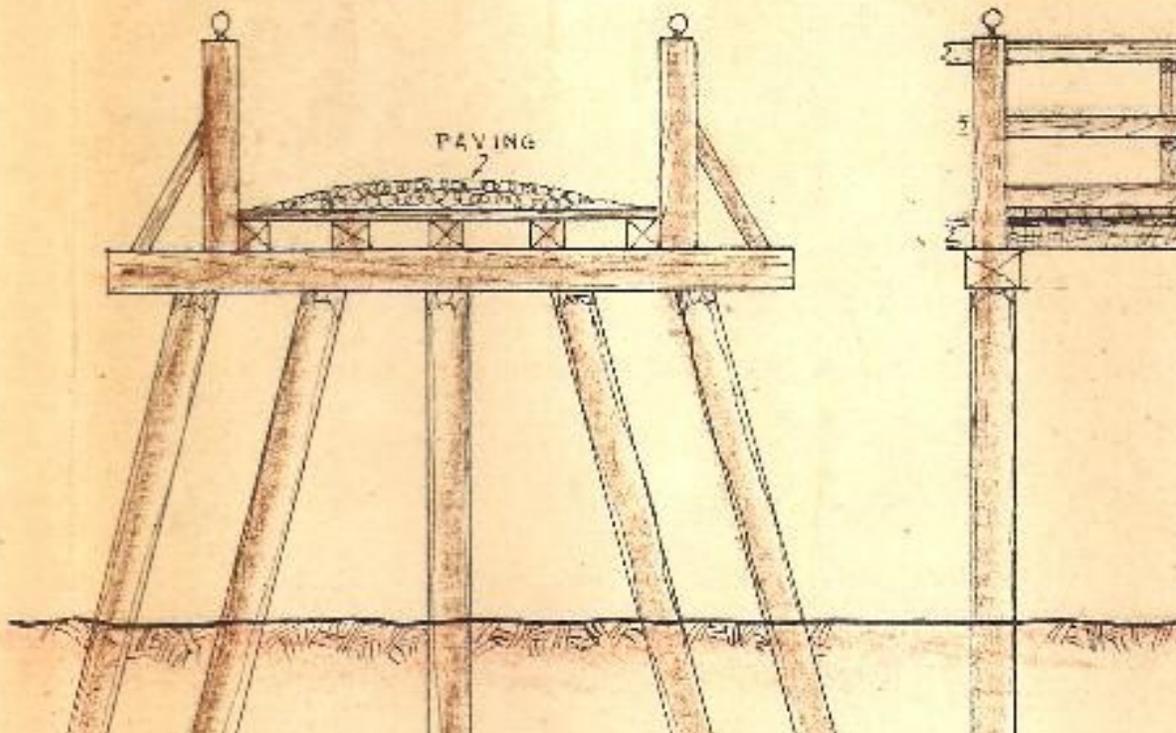


GATES AND BRIDGES



Caponier

for communication with outwork across
dry ditch. (*Practical Fortification, pl. XI.*)



one toward the town and the other toward the water, protected by the “Spur-Work towards the River.” The gate to the fort itself was usually placed in the middle of the curtain, where it could be defended from the flanks of two adjacent bastions. At Frederica, we are inclined to believe that the main gate was in the west curtain, protected by the spurwork or ravelin.

Since Fort Frederica was small, all gates were most likely the barrier type (see plate 27). Dimensions would hardly be less than 7 to 8 feet wide and 8 or 9 feet high (conventional sally port size), nor more than 14 feet wide by 10 feet high.

In plate 23 we have shown three gates in the covert way palisade. One is at the ravelin, and one in each of the places of arms behind the junction of the town wall with the covert way. These locations conform closely to placement of the gates at Castillo de San Marcos.

We have also shown Ruin A as part of the main entrance feature to the fort. As was emphasized previously, Ruin A does not fit this picture perfectly, especially since its central doorway is smaller than called for by 18th century gate construction. Likewise it is uncertain that the central arch of Ruin A was a passage instead of a room as it is now.

Plate 27 shows typical barrier gate construction. The gate was locked by means of an iron bar turning about a bolt secured to one of the doors. When one end of the bar was raised, the other end turned down, permitting the doors to be opened. In locking the gate, one end of the bar was caught by an iron hook; the other end was fastened with a padlock. Preferred material for the gate was oak. Large stones or similar buffers were laid at the foot of the side posts “to hinder the Carts from spoiling the Wall.”²²⁸

In the case of a covered gateway such as an arched passage, one of the large doors (plate 27) had a wicket (small door) “to pass through, when there is any danger of surprise, and in the morning before the party of men, that is sent out to reconnoiter and see whether any enemy appears, is returned . . .”²²⁹ Specifications call for covering the outside of the doors with iron bars to a height of 8 feet. Between the bars diamond-headed nails were driven into the planks “to prevent their being cut open”. Above 8

⁴⁹ New Method, 165. See also Practical Fortification, 205-206, plate XV, fig 4, 5; New Method, 164-165.

⁵⁰ Practical Fortification, 206.

feet, the doors were left plain, “because there is no danger of cutting it there.”

The passage across the dry fort moat may have been in the nature of a caponier (plate 27) – a 100 or 12-foot wide communicating passage covered on each side by parapets, which sloped like a glacis.²³⁰

Or there may have been a bridge (plate 27) across the moat. Such a bridge would be from 10 to 14 feet wide, with a rise in the middle or at the counterscarp end so that “the Foot of the Gate may not be discovered.”²³¹ Piers for this bridge could be either wood or masonry, but planks and rails were always of wood so that the bridge might easily be dismantled or destroyed in case of attack.

When the bridge was unprotected by outworks, as may have been the case at Frederica, it was customary to make the bridge comparatively wide and build a guardhouse at its counterscarp end. A variation would call for a guardhouse within the fort ramparts (Ruin A may perhaps be identified as such), and a sentry box or two at the head of the bridge.²³²

14. SENTRY BOXES AND BOGHOUSES

Sentry boxes were made of wood and were light enough to be moveable. They were either square or pentagonal, with sides 4 feet long by 6 feet high, excluding the roof. Timbers at the base projected about a foot each way to make a good broad foundation to prevent wind from overturning the box. These projections also made it easy to stake down the box. There were loopholes 4 inches wide by 8 inches high 4 ½ feet up on each side of the box.

The square box was used when the sentry had only one or two places to watch, such as at a site near the governor’s house, the powder magazine, storehouse, or such. On the ramparts, where the field of vision had to be broader, the pentagonal box was preferable. Sentry boxes atop the fort were not, by the 18th century, located at the salient angles of bastions for here they served as landmarks for the enemy. The 18th century engineer put them “upon the middle of the parapets of the faces; and wooden

⁵⁰ Elements, 213.

⁵¹ New Method, 166.

⁵² New Method, 167,169; Practical Fortification, 180-182, 191-197, 205-206, plate XV. It seems unlikely that Frederica had a drawbridge. However, general information on drawbridges is readily available in Crowe, “Drawbridge Study” (National Park Service, 1940).

steps are made to get up, or slopes are sometimes cut into the parapet for that purpose . . .”²³³

Boghouses (privies) were located over water, whenever possible. Otherwise they were put “on the curtain, where a passage is cut through the parapet; and supported with braces against the wall, so as to hand over the ditch: but care must be taken, not to place them too near the sally-ports, otherwise, they will make the passage disagreeable.”²³⁴

15. POWDER MAGAZINE

Under one of the fort bastions a powder magazine was built of heavy timber, and covered with several feet of earth²³⁵ for bombproofing. Probably this magazine was located in one of the northern bastions, since it was conventional practice to build the magazine with the door facing the south, “in order to render the magazine as light as can be, and that the wind blowing in may be dry and warm.”²³⁶ Ordinarily, powder magazines were built of stone, with bombproof arches, but there is no indication that the early magazine in the Frederica citadel was of masonry. There is, however, a distinct possibility that a masonry magazine inside the fort was built later. If so, either Ruin B or D might have some association.

Magazines (plate 38) had air holes for cross-ventilation, and these holes were either screened or covered with iron plates containing ventilating holes small enough to prevent the entrance of animals (loosed by the enemy) which might have fire tied to their tails.

There was at least 8 feet of headroom in a magazine before the floor was laid. Then, to eliminate dampness as much as possible, the floor was built up 2 feet from the ground, leaving 6 feet of headroom when it was completed. The method of laying the floor: “beams are laid long-ways, and to prevent these beams from being soon rotten, large stones are , , , laid under them, these beams are 8 to 9 inches square, or rather 10 high and 8 broad, which is better, and 18 inches distant from each other; their interval is filled with dry sea coals [mineral coal], or chips of dry stones, then over these beams

⁵¹ Practical Fortification, 207-208.

⁵² Ibid., 208.

⁵³ Collections, I, 134, 135.

⁵⁴ Practical Fortification, 218.

are others laid cross-ways, of 4 inches broad, and 5 high, which are covered with two inch planks.”
237

French custom built magazine doors double, that is, with one door opening on the outside of the magazine, and the other opening into the structure, both locked by a strong double lock. Evidently the English seldom used the double doors, being satisfied with a single door “built in so slight a manner,” wrote Müller disapprovingly, “that it would be an easy matter to destroy them.”²³⁸

In storing gunpowder, there had to be room enough to shift the barrels as necessary to keep their contents in good condition. Barrels could be piled six deep, but only “in case of necessity, because when they lie so much on each other, it is very troublesome to remove them, and change their position, which ought to be done once a year at least [some authors maintained the barrels had to be changed every three months]; otherwise the salt petre, being the heaviest ingredient, will descend into the lower part of the barrel, and the powder above will lose much of its goodness; but to prevent the barrels from rolling [they were laid on their sides], when some are taken off, two wooden posts are erected, of about 4 or 5 inches square, between every 10 or 12 barrels, by this means they may be piled up as high as you please, or taken off without any danger.”²³⁹

16. STOREHOUSES AND OTHER FORT BUILDINGS

Within the fort were two 20- by 60-foot, three-story buildings of brick-and-timber. Moore described the beginning of one of them in 1736: “Within the fort a very large and convenient storehouse, sixty foot in front, and to be three stories high, was begun, with a cellar of the same size underneath, and one story already raised above ground.” A short time later – so short a time that it could not yet have become one of the tall brick-and-timber structures – Moore’s storehouse was flat roofed and covered with boards. “This,” wrote Moore, “was . . . to be laid over with turpentine, and above that a composition of tar and sand, the boards were already laid, but the tar and other things were not come from Carolina . . .”²⁴⁰

⁵⁵ Ibid.

⁵⁶ Id., 219; also see 218.

⁵⁷ Id., 219.

⁵⁸ Collections, I, 114, 134, 139; also “Observations”, 4: “The Town is defended by . . . a Fort . . . surrounded by a . . .

Rampart . . . and a Ditch which include also the Kings’ Storehouses, (in which are kept the Arsenal, the Court of Justice, and

One of the storehouses was apparently called the “Chapel”, though only a portion of the building was set aside for that purpose.²⁴¹

Late in 1738, Oglethorpe wrote: “The Men Servants . . . are now sawing Timber for the Church or rather Chappel at Frederica, which I have agreed to have built. The whole Building will be Sixty foot long by twenty foot wide, three Stories, the two Lower most Cellars and Rooms for Provisions, Books, &ca: and the Uppermost a Chappel.”²⁴²

By January of 1739, the building was framed and the bricks were burnt.²⁴³ The Trustees wanted in this chapel “no Pews but for the Minister and Magistracy, and the rest to be Benches as is at Tunbridge Chappel, which will be more capacious and less Subject to Disputes for Places.”²⁴⁴

The 1796 Miller plan indicates two tall structures within the fort walls, either surrounded by or connected with a tall palisade or fence.²⁴⁵ No specific data on this fence have been located, unless it be one obscure reference to the sum of 10£ paid “Mr. Carteret for Cedar Posts for fencing in the Storehouse”. The Trustees raised the question why their own timber was not cut, and their own Servants not employed in making the posts.²⁴⁶ It is not certain that the storehouse cited here was one of the structures inside the fort. It was customary to wall in town storehouses.

Storehouses (see plate 37) held various kinds of ammunition, guns, and, if necessary, cables, anchors, timber and so on for ship repair. On the ground floor may have been arched or fairly open rooms for easy air circulation, and here were stored the guns, gun carriages, tumbrels, ammunition wagons, mortars and mortar beds, blacksmith forges, carpenter shop and wheelwright shop,²⁴⁷ as well as storage space for

Chapel) two large and spacious Buildings of Brick and Timer . . .” See also Jones, 125, who quotes the London Magazine, v. XVI, 484: “the Fort, besides other Buildings has two large Magazines, three Stories high, and sixty Feet long . . .”

⁵⁷ During 1736 the “Boards and Frames of two Houses for the Fort” were readied. (CR 32/506.) Possibly the reference is to the storehouses.

⁵⁸ CR 22/360.

⁵⁹ CR 5/96.

⁶⁰ CR30/87. See also CR 5/190, 348. For added cost and materials data, see CR 2/309, 311; 3/140, 213, 330. For construction of similar (?) churches elsewhere in Georgia, see CR 2/481.

⁶¹ Plate 9.

⁶² CR 2/310.

⁶³ According to Moore, construction of a forge inside the fort and a wheelwright’s shop in an unspecified location early

iron and wood. On the next floor would be located the armory, and space for small irons, cordage, pontoons and other items light enough to be moved easily.

Location of storehouses depended upon the local situation. General rules were that they be separate from other buildings to reduce the fire hazard, close to the water if stores were to be brought by sea, near to the ramparts if their stores were to be used on the ramparts in case of a siege.

Müller gives the following constructional specifications: the wall should be 18 inches thick, with pilasters 15 feet distant from each other. Pilasters were 2 feet broad with a 9-inch projection. Gateways were to be 10 feet wide. Arches of the inside wall were 8 feet wide, with piers 8 feet high (from base to spring).²⁴⁸

Inside the fort was a well, said to have supplied “tolerable good water, and in plenty.” Likewise the fort contained a smith’s forge. Another essential early building was an oven for baking bread.²⁴⁹ It is not certain that the oven was inside the fort, but it was conventional practice to construct “ovens to bake the bread” in a bastion. As in the case of a powder magazine similarly located, there would be a passage from the center of the gorge toward the salient of the bastion. Rooms would branch off the passageway, and from each room there would be a chimney or airhole “coming out within the bastion”.²⁵⁰ There were perhaps other small buildings inside the fort. Moore specifically mentions “a lodgment bomb-proof in the hollow of another of the bastions”, which may perhaps be identified with either Ruin B or D.²⁵¹

17. THE “SPUR-WORK”

From the scanty evidence at hand, it is difficult to determine the exact nature of what observers during the 1730’s called the “Spur-Work toward the River”,²⁵² forming

occupied the attention of Frederica’s workmen. See Collection, I, 134-135, 139.

⁵⁹ Practical Fortification, 214, 226-229.

⁶⁰ Collections, I, 129-130, 134-135.

⁶¹ Practical Fortification, 182-183.

⁶² Collections, I, 135; Jones, 125; also see CR 2/343-344 (which may relate to Fort St. Simons rather than Frederica).

⁶³ CR 39/473. Moore (Collections, I, 114) mentioned “a battery of cannon mounted, which commanded the river” – a description which may or may not refer to the spur. Later he makes specific reference to Oglethorpe’s taking “in a piece of marsh ground which lay before the fort, with a work called the spur, the cannon in which are upon a level with the water’s edge, and make it impossible for any boat or ship to come up or down the river without being torn to pieces.” (Collections, I, 129.)

an outwork of Fort Frederica. To Kimber, a later observer, the spur appeared as a ravelin mounting “several” 18-pounders in front of the fort.²⁵³ Lacking description of this work, we have drawn a ravelin in our hypothetical plan of the fort (plate 23).

No definition for “spur-work” appears in 18th century texts, but Merriam-Webster indicates that one type of spur was a tower or blockhouse forming a salient in the outworks before the port or gate of a fortification. Thomas Spalding, who remembered the fort as it appeared during the early 1800’s, wrote that “A water battery separated it [the fort] from the river.”²⁵⁴ Mrs. Margaret Davis Cate expressed the opinion that the “fort” or “citadel”, which remains today on the river front, was the spur.²⁵⁵

The spur might well have been in the nature of a detached redoubt, a work defined by Müller as “made at some distance from the covert-way, much in the same manner as ravelin with flanks”;²⁵⁶ or it might have been similar to an “arrow”, a “work placed at the salient angles of the glacis and consists of two parapets, each 40 toises long; this work has a communication with covert-way of about 24 or 30 feet broad, called caponier, and a ditch before it of 5 or 6 toises.”²⁵⁷

The “arrow” came to a point like an arrow, and had no flanks. Such works were placed beyond the palisade or glacis “in order to occupy some spot of ground which might be advantageous to the besiegers . . .”²⁵⁸

Apparently the work was in a strategic location to function as a shore battery. If the fortification were like a detached redoubt, conventional construction called for connecting it with the covert way by means of a caponier – a passage about 10 feet wide, protected by a glacis-like parapet on either side.

Another type of caponier that might well be called a spur consisted of a single parapet raised at the entrance to the ditch. It was a rudimentary ravelin, and small guns could be mounted behind it.²⁵⁹

⁶² “Observations,” 4.

⁶³ Collections, I, 257.

⁶⁴ Cate, 119. See also Jones, 62.

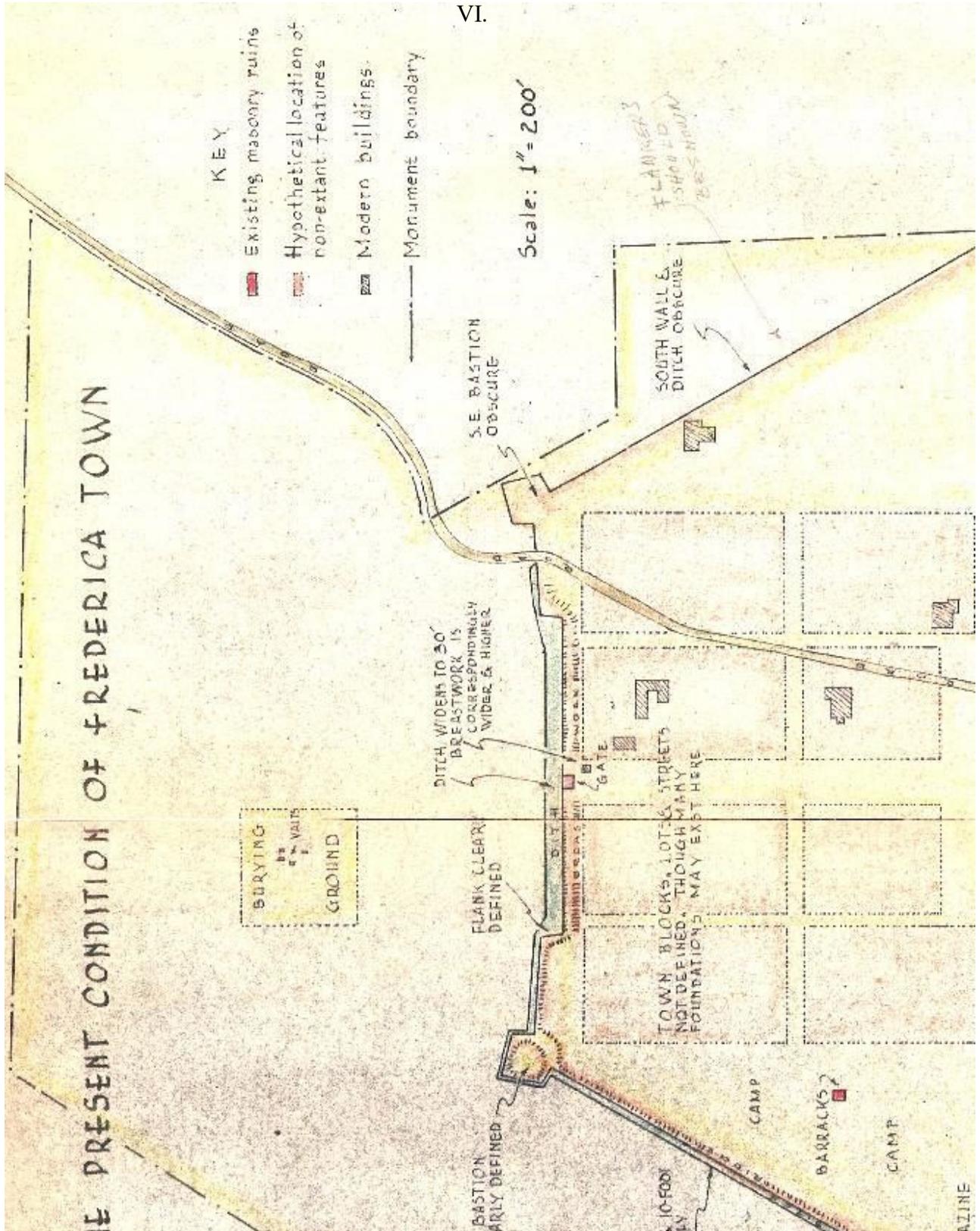
⁶⁵ Elements, 217.

⁶⁶ Id., 209 and plate V. For caponier, see our plate 27.

⁶⁷ Elements, 44 and plate V.

⁶⁸ Id., 213. This is not the type caponier illustrated in our plate 27.

Plate 28 - Notes on Present Condition of Frederica Town



VI. THE TOWN

1. TOWN WALLS

On December 29, 1739, Oglethorpe wrote the Trustees: “The Forts that I built were run to ruin, being mostly of earth, having no means to repair them, and having also orders not to fortify . . . [After hostilities with Spain began, however, Oglethorpe continued,] I therefore began to fortify Frederica and inclose the whole Town, in which there are some very good Houses. It is half an Hexagon, with two Bastions, and two half Bastions and Towers after Monsieur Vauban’s method upon the point of each Bastion. The Walls are of Earth faced with Timber, 10 foot high, in the lowest place and in the highest 13, and ye Timbers from 5 Inches to 12 Inches thick. There is a wet Ditch 10 foot wide, and so laid out that if We had an allowance for it I can by widening the Ditch double ye thickness of the Wall, and make a covered way.²⁶⁰ I hope in three months it will be entirely finished, and in that time not only to fortify here, but to repair the Forts on Amelia and Saint Andrews. The Expence of these small above mentioned Works (wch. Is all that I can now make,) will not be great, Frederica will come with £500, St. Andrews £400 and Amelia £100.”²⁶¹

The most detailed description of the town works came from the pen of Edward Kimber about 1743: “The Town is surrounded by a Rampart, with Flankers, of the same Thickness with that round the Fort, in Form of a Pentagon, and a dry Ditch; and since the famous Attempt of the Spaniards, in July 1742, at the N.E. and S.E. Angles are erected two strong cover’s pentagonal Bastions capable of containing 100 Men each, to scour the Flanks with Small Arms, and defended by a Number of Cannon; At their Tops are Look-Outs, which command the View of the Country and the River for many Miles: The Roofs are shingled, but so contriv’d as to be easily clear’d away, if incommodious in the Defence of the Towers. The whole Circumference of the Town is about a Mile and a Half, including, within the Fortifications, the Camp for General Oglethorpe’s Regiment, at the North Side of the Town; the Parades on the West, and a small Wood to

³⁰⁰ Müller perhaps had places like Frederica in mind when he wrote: “In new places built abroad [in the colonies] . . . the fortification often consists of the town-wall, and ditch only . . . “(Practical Fortification, 212.

³⁰¹ CR 22, [part 2/288-238](#). Oglethorpe had previously written (Nov. 16, 1739): “I am fortifying the Town of Frederica and hope I shall be repaid the Expences; from whom I do not know, yet I could not think of leaving a Number of good houses and Merchants Goods, and which was more valuable, the Lives of Men, Woman and Children, in an open Town at the Mercy of every Party, and the Inhabitants obliged either to fly to a Fort and leave their Effects, or suffer with them.” (CR 30/202.)

the South, which is left for Conveniency of Fuel and Pasture, and is an excellent Blind to the Enemy in Case of an Attack; in it is a small Magazine of Powder.”²⁶²

Capt. John MacClellan, who left Georgia in January 1743, described the work as in progress with “great numbers of Men . . . employed in compleating the Fortifications at Frederica, the Walls whereof are judged strong enough to be proof against Eighteen-Pound Shot . . . “ The Captain further reported that the two towers were capable of holding 100 mean each, and were designed to protect the flanks by means of smallarms.²⁶³

In London late in 1741, Verelst, evidently taking the information from Georgia correspondence, reported: “The General has also carried on the Fortifications at Frederica so that the Fort is pretty near inclosed, the Works are 12 feet high besides the Breast Work and all round faced with stout Timbers 12 feet long secured with Land Types like a Wharf, & back’d with Earth insomuch, That the Breast Work above the Timber will be 12 feet thick with Earth.”²⁶⁴

A pair of Georgia traders, come to England on business in 1747, wrote the London Magazine that Frederica had “a handsome Tower over the Gateway of twenty Feet square; That there are two Bastion Towers, of two storied each, in the Hollow of the Bastions, defended on the Outside with thick Earth-works, and capable of lodging great Numbers of Soldiers, the two long Sides being nearly fifty Feet, and the short Sides twenty-five . . .”²⁶⁵

A cursory examination of the town fortifications now existing at Frederica (see plate 28) reveals that the line of the wet ditch on the north and east sides of the town is well preserved, though perhaps somewhat modified for the practical present day purpose of keeping it open for drainage. The south and west walls and their

⁶⁴ “Observations,” 4-5.

⁶⁵ MacClellan’s description is quoted in Jones, 119-120.

⁶⁶ CR 35/357-358.

⁶⁷ Jones, 126, quoting London Magazine, XYI, 484. When in 1755 William Gerard de Brahm, Surveyor General of the Province, was directed by the governor to draw plans for the refortification of Frederica, his plans evidently followed the original lines of the fortifications closely enough to be of value in confirming the dimensions of those original works. The town fortification in Brahm’s plan was “to be one half an Hexagon i.e. of three Poligons 960 ft. each, with two Whole and two Demi Bastions towards the land, two Demi Bastions and a Cittadel toward the River . . .” (Cate MS., 65, citing Jones’ History of Georgia, I, 507.) See also CR 3/402; 5/396, 498. Brahm’s plan is illustrated in plate 29, no. 1 (?)

accompanying features, however, seem to be obscured.

At the northwest angle of the town wall, near the marsh, indication of a half bastion seems reasonably clear, and at the northeast angle a bastion appears in exceptionally good definition, in spite of the intrusion of a narrow unpaved road.

In the east wall, the most spectacular of all the town wall ruins, the entire central portion of the wall appears to have been set back toward the town to provide a pair of flanks or “flankers” in the over-long curtains (see plate 29, no.3). Midway of the east curtain is evidence of a tabby foundation that may have some relation to the town gate installation.

The southeast bastion appears as a mound of earth, with some modification in adjacent walls due to paved road intrusion. The site of the southwest bastion has not been carefully inspected. We are not certain that it is included in the monument boundary. The “Point Battery”, some distance to the south of Frederica, is not within the monument bounds.

In Miller’s “Plan of the Town of Frederica” (plate 9), no side of the polygon appears equal. At present there is no way to tell whether this fact is due to a faulty layout by Oglethorpe’s engineers²⁶⁶ or to the possibility that Miller had difficulty locating the key points of the deteriorated fortifications. It is, however, apparent that the interior sides of the half hexagon were intended to be, at least on paper, 960 feet.²⁶⁷ Miller’s map shows the hexagon diameter (the west or long side of the half hexagon) as 1820 feet, just 100 feet short of the 1920 (2 x 960) feet that geometrically it should be; the east side measures 950 feet, and the north and south sides respectively 1000 and 990 feet, whereas each of these sides should be 960 feet.²⁶⁸

To demonstrate the laying out of the work (plate 29, nos. 2, 3) we have assumed

⁶⁵ Which was entirely possible, depending largely upon the method used for tracing the oines on the terrain. See Practical Fortification, 157 ff.

⁶⁶ This dimension was specified by Brahm. (See ante, n. 125.) Curtains were not usually made shorter than 360 feet nor longer than 600 feet, so that the line of defense would not exceed 750 (125 fathoms), “because a Musquet can carry no farther to do Execution.” (New Method, 88.) A musket ordinarily carried about 120 fathoms (720 feet), or 900 feet if it were charged double. It could kill a man at 300 yards. At close range, musket fire would penetrate a 3-inch plank. (New Method, 186.) An exception to length of the curtain occurred “where the front lies near a great river, and can hardly be attacked on that side, there they [thr curtains] are often made longer.” (Elements, 75.)

⁶⁷ Cf. Joshua Miller, “800 Acres Including Town and Commons of Frederica” (1796), our plate 39.

960 feet to be the intended length of the interior side. As pointed out, minor variation in the actual field work of laying out the fortifications might be expected.

Oglethorpe's casual reference to "Monsieur Vauban's method" probably signifies the so called "Second Method" of the French master. Vauban's Second Method was "adapted to the fortifying of places built already; for which reason he begins his construction inwards and fortifies outwards, contrary to his other methods, as being more convenient for that purpose."²⁶⁹

The elements of the method are worked out in plate 29, no. 2. We have shown no moat in this plate, but a standard moat would be 6 fathoms broad at the salient angles of the bastions.²⁷⁰

Since the Frederica curtains were so long that a musketball would not carry effectively from one bastion to the next, the east curtain, if not the others, was Plate 29 modified in line with Vauban's Third Method by introducing flanks, resulting in a trace similar to the one illustrated in plate 29, no. 3. It does not appear that the town ditch was ever excavated to the conventional width.

Laying out the bastions after Vauban's precepts (plate 33, no. 1) shows a structure with a salient angle of 90° , a face of 70 feet, flank of 36, and a width from shoulder to shoulder of 98 feet. Since one description of the bastions indicates that parapets existed,²⁷¹ if we allow a 12-foot breastwork, the space clear within the bastion remains 67 feet on the faces, and 27 feet in the flanks from shoulder to interior side (*i.e.*, the line of the curtain). Within this clear area, the towers erected "in the Hollow of the Bastions", which had "two long Sides being nearly fifty Feet and the short Sides twenty-five"²⁷² fit remarkably well.

Observation of present remains at the site of the northeast bastion shows encouraging similarity to the hypothetical layout described above. Measurement from shoulder to shoulder of the existing earthwork is about 80 feet; flanks are between 40 and 50 feet. Faces are only 45 feet, and are at an obtuse angle, whereas the conventional bastion face should be about 70 feet long, and the angle 90° . However,

⁷¹ See Elements, 51-52.

⁷² Ibid., 52 and plate VIII.

⁷³ Jones, 126, quoting London Magazine, XVI, 484.

⁷⁴ Ibid.

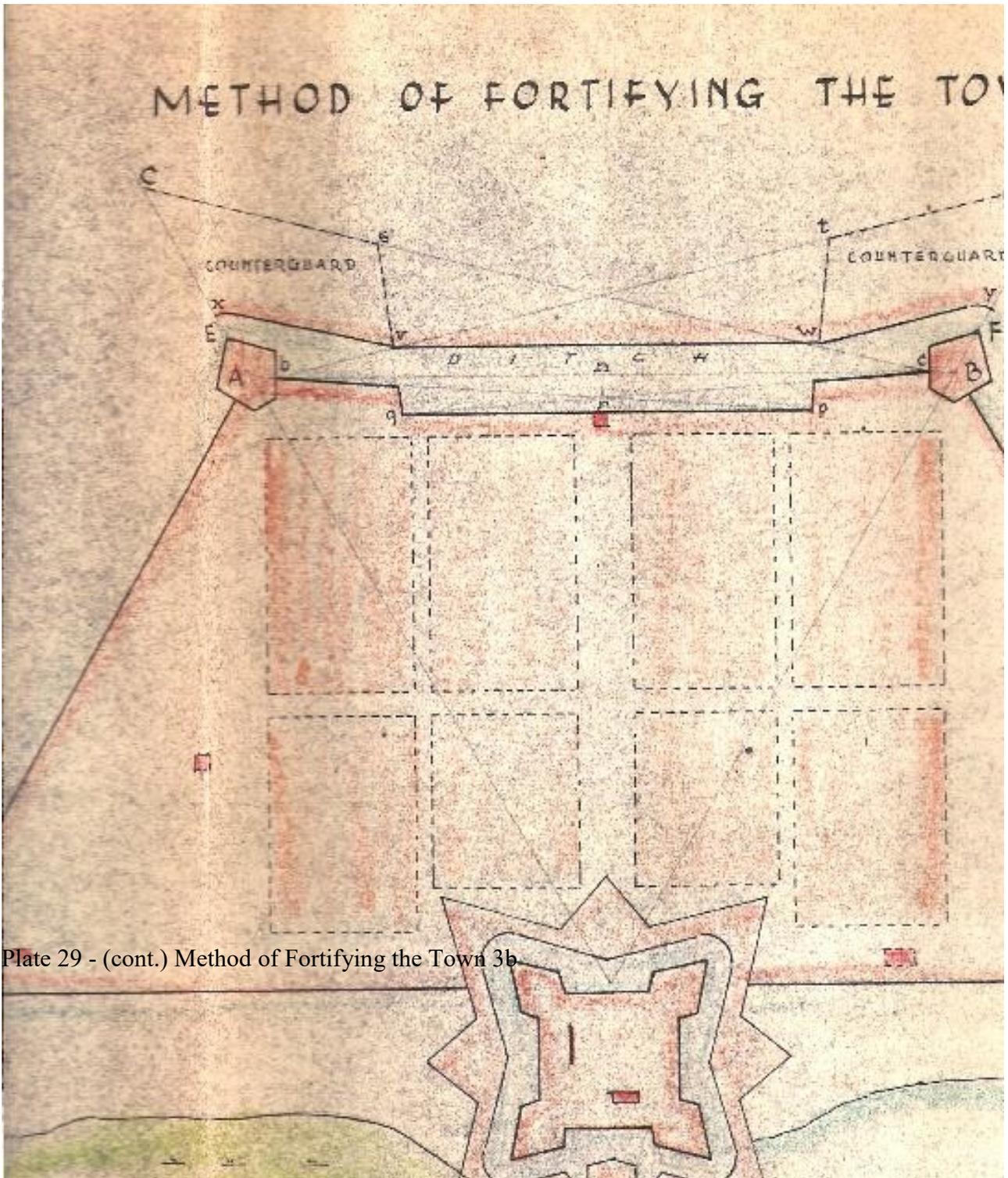
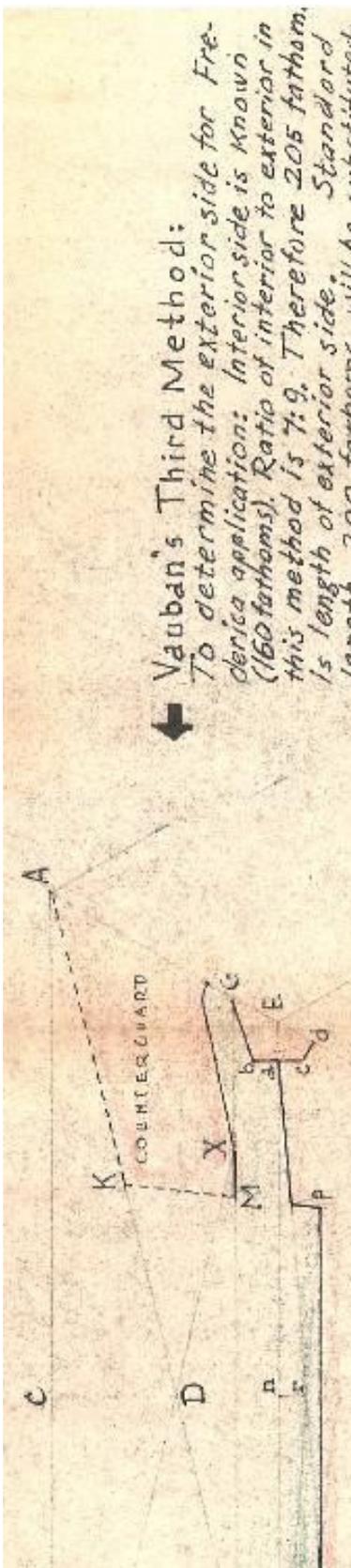


Plate 29 - (cont.) Method of Fortifying the Town 3b



Method, adapted to hexagon

Vauban's Third Method:

To determine the exterior side for Frederica application: Interior side is known (160 fathoms). Ratio of interior to exterior in this method is 7:9. Therefore 205 fathoms is length of exterior side. Standard length, 200 fathoms, will be substituted. Standard perpendicular, 25 fathoms.

Draw hexagon with exterior sides of 200 fathoms. AB = one exterior side. Drop perpendicular CD 25 fathoms. Draw lines of defense and set off 60 fathoms as counter-guard faces AK, BL. From L draw arc to intersect K, M. From K, intersect L, N. BLN and AKM are faces and flanks of counter-guards. Draw line MN parallel to AB. On MN, mark intersections (G, H) with capitals (FB, EA). Points G, H, locate salient angles of bastions. Draw EF parallel to GH, 9 fathoms in. E and F are centers of bastion towers. On EF set off 7 fathoms to "a" for semi-gorge. Through "a", perpendicular to EF, draw bastion flank be; ac, 4 fathoms, ab, 5 fathoms. Gbcd forms half bastion.

Ditch is 6 fathoms before salients G, H. Set off 10 fathoms from counter-guard flank M toward G, and from flank N toward H, to establish points X, Y. Lines from ditch arcs at G, H through Y, M, X form the counterscarp, or ditch outline. For "flankers," produce perpendicular

Ditch, Vauban's Second Method: 10 fathoms toward field from EF, along the FD. C, D are salient angles of counter-bastions. From C, D, draw lines of Dc to curtain angles. Set off 56 fathoms for faces of counter-guards. (Counter-drawn here only to determine the ditch. Frederica shows no evidence of any arcs.) From shoulder "s" of counter-scribe arc to intersect line of defense from t, describe arc through s, u. Ditch faces and flanks of counter-guards before bastions is 6 fathoms. Draw up from ditch arcs (x, y) to touch v, w, counter-guard flanks. Connect v and w to AB; xvwy is counterscarp or out-

BASTIONS

this discrepancy might be accounted for in part by later disturbance or erosion, since the ditch around this bastion is wet, with water draining towards the river.

3. BREASTWORKS AND DITCH

It is a fundamental principle in fortification that the dimensions of a raised earthwork are dependent upon the extent of excavation for the ditch in front of it. Therefore, when Oglethorpe stated positively that “There is a wet Ditch 10 foot wide”²⁷³ it meant that the earthwork thrown up behind the ditch contained exactly the cubic yardage dug from the ditch. The ditch was wet, so it was at least 6 feet²⁷⁴ and possibly 8 or more feet deep. The excavation would therefore permit construction of a breastwork approximately 6 feet high and 15 feet broad at the base, with a slope on

the crown of about 1/6, or 2 feet. (See plate 30.) The face of this parapet, including the height from the bottom of the ditch, would be 10 ½ feet. According to Oglethorpe, the “Walls are of Earth faced with Timber, 10 foot high, in the lowest place and in the highest 13 . . .”²⁷⁵ In rear of the parapet there was probably a conventional banquette or firing step, a platform of earth 4 feet broad and 1 ½ feet high.

In its simplest form, it seems likely that the town wall consisted essentially of this breastwork or parapet – not a rampart, as Kimber loosely termed it, though it is true that part of the east wall ruins do suggest fairly extensive construction. The town earthworks have been referred to variously as “Walls”, “Works”, and “Breast Work”.²⁷⁶ Miller’s “Plan of the Town” calls them “Parrapets”. Oglethorpe himself called them “Walls”.

Oglethorpe’s dimensions as given above jibe very well with the remains of Frederica’s north wall, where the existing ditch (judged to have been relatively undisturbed) is about 10 feet wide and some 5 or 6 feet deep, with a 2- or 3-foot high bank on the south side where the parapet should be. But the east ditch (plate 31) as it exists today is in some parts 30 feet or more wide and the earth ridge on its west bank

⁷⁵ CR 22, part 2/288. See Practical Fortification, part III, for 18th century method of estimating amounts of materials required in fort construction.

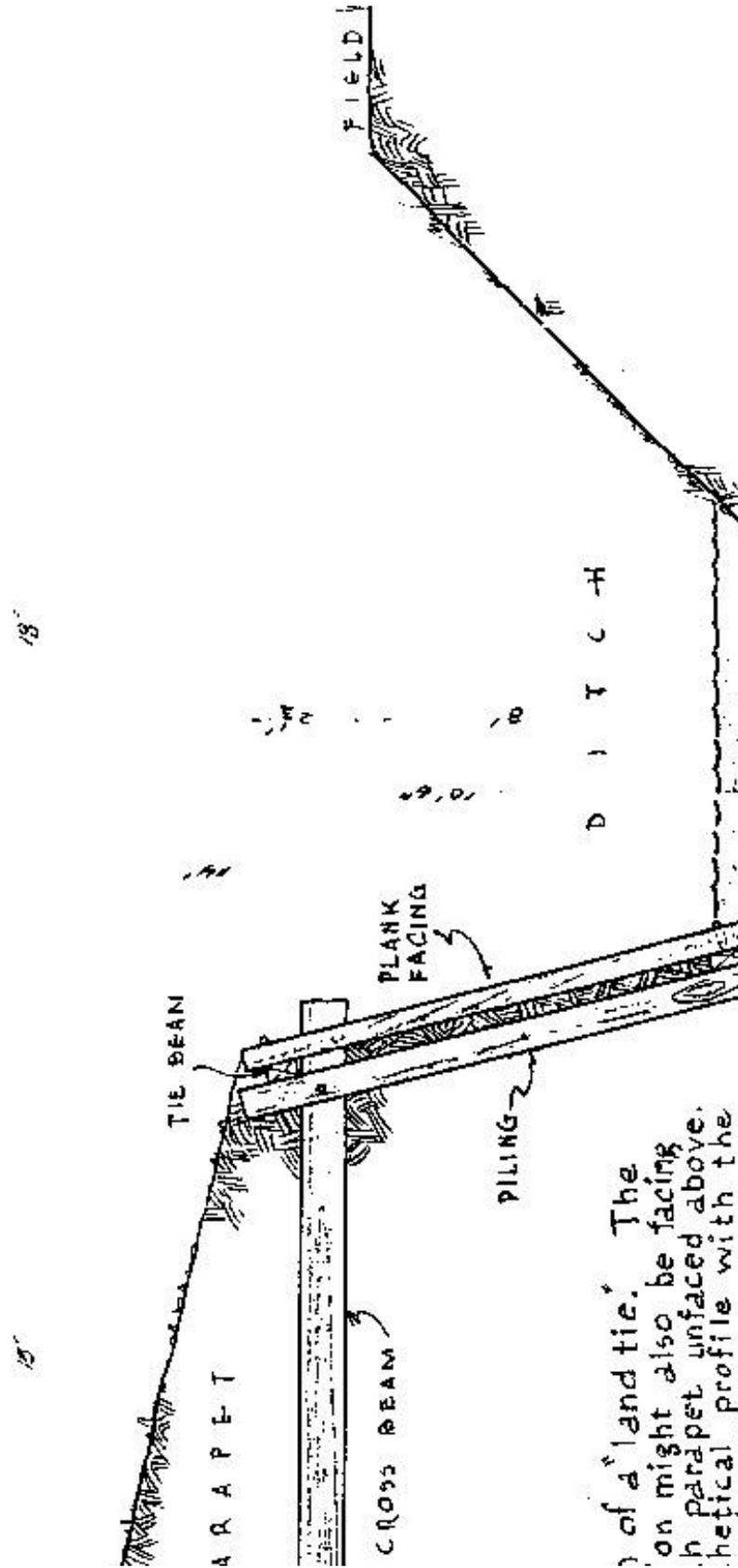
⁷⁶ CR 1/446.

⁷⁷ CR 22, part 2/288. Cf. Elements, 207: “the adding 10 or 12 feet of earth only to the [stone] wall . . . sufficient to protect the troops [from flying stone fragments] . . .”

⁷⁸ “Observations,” 4; CR 22, part 2/288, 289; 35/357, 358.

30.

HETICAL PROFILE OF TOWN BREASTWORK



of a land tie. The
 on might also be facing
 in parapet unfaced above.
 hetical profile with the

Plate 31 - The Old Moat



is corresponding broad. Since the 10-foot ditch was admittedly a temporary expedient,²⁷⁷ it appears that additional work as planned was actually done on the east front, which, containing the land gate, was the main front. Further, it was not conventional practice for the ditch to parallel the faces and flanks of the bastion in the way that is evident at the northeast bastion. The narrow ditch remains at Frederica doubtless represent the primary stage of construction in a job that was never completed according to plan, and the existence of a wider ditch on the east front is most likely evidence that work was under way to standardize the lines of the ditch.²⁷⁸ There is a distinct possibility that excavation of the eastern wall will reveal the existence of a low rampart in addition to the conventional parapet.

Little evidence remains of the west or long wall of the town along the waterfront. Our examination so far has not been close enough to determine whether any walls exist there, or even whether serious erosion has taken place. Neither do we know whether the marsh was regarded as sufficient barrier, eliminating the need for a waterfront wall. Nor is it clear where this wall, if such there were, joined the citadel. One of Miller's plans shows it connected to the fort opposite the face of the eastern bastions; his other plan at smaller scale brings it to the western bastions.²⁷⁹ We have been no more consistent in our plates. Plate 28 shows the west wall running east of the fort; plates 23 and 29 show it in other locations.

The timber facing of this town wall may have been in the nature of a palisade, but from the descriptions given, it seems to have been of entirely different construction. Oglethorpe described the work as "of Earth faced with Timber 10 foot high, in the lowest place and in the highest 13, and ye Timbers from 5 Inches to 12 Inches thick."²⁸⁰ Verelst, though not an eyewitness, must have had an authentic basis for his statement that the works were "all round faced with stout Timbers 12 feet long secured

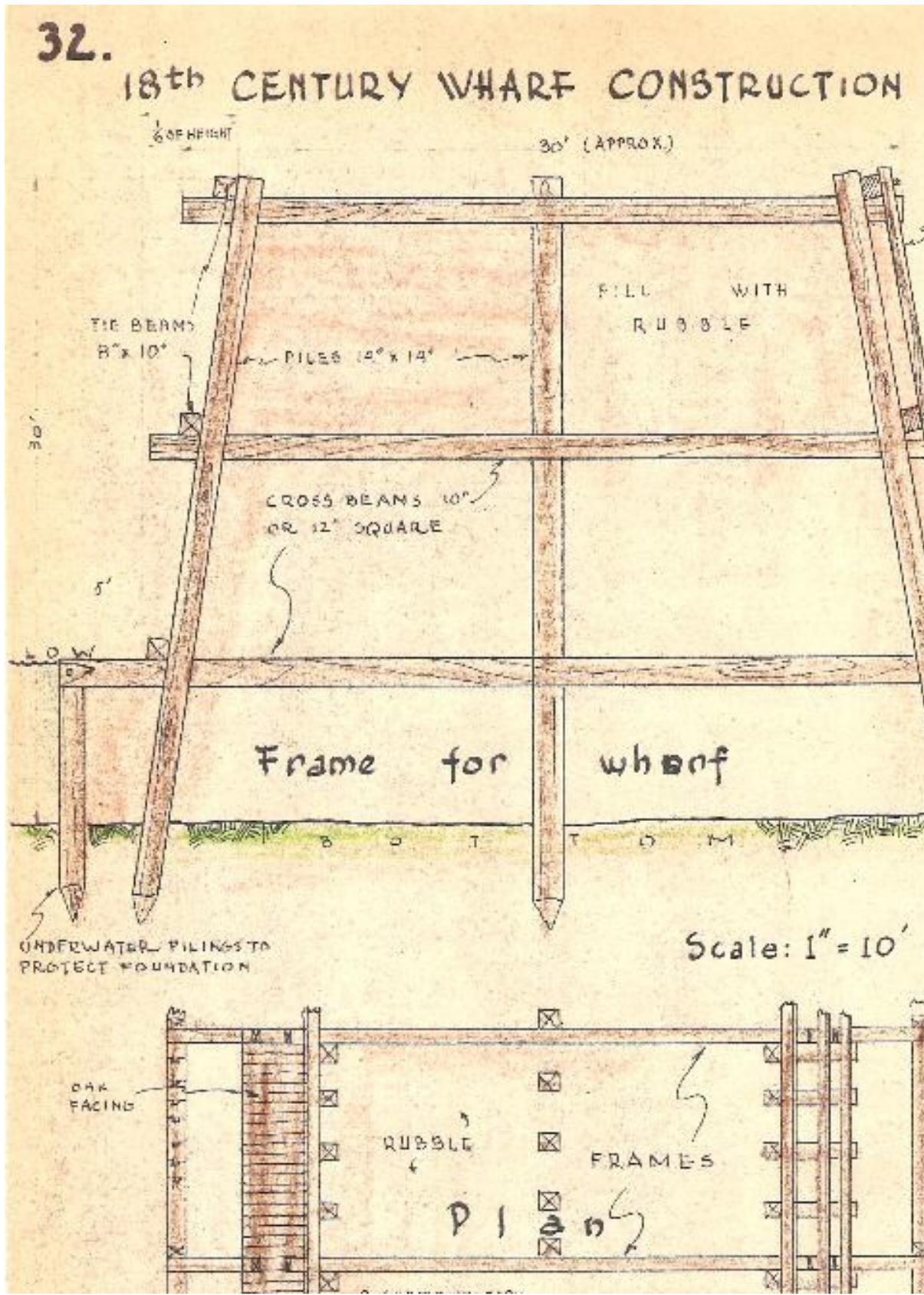
⁷⁸ Oglethorpe proposed to wide it, thicken the wall and make a covert way. (CR 22, part 2/289.) CF. plate 24, "Profile of Fort King George", with 10-foot ditch.

⁷⁹ Cf. CR 5/499: in 1741 a Frederica landholder stated that "the works . . . which are design'd to inclose the whole Town, are poor and unfinish'd." Cf. ante, p. 91

⁸⁰ See plat 9, Miller's "Plan of the Town of Frederica", and plate 39, "Town and Commons of Frederica".

⁸¹ CR22, part 2/288-289.

Plate 32 - 18th Century Wharf Construction



with Land Tyes like a Wharf, & back'd with Earth insomuch, That the Breast Work above the Timber will be 12 feet thick with Earth.”²⁸¹ It is Verelst who has thus given the key to what is probably the type construction used (see plates 30 and 32).

An ordinary land tie is a tie rod or chain used to connect a retaining wall to an anchor plate embedded in the earth behind it, so that the wall will not be forced outward.²⁸² In 18th century pier or wharf construction of wood, where the interior of the pier was to be filled with rubble, the major members of the pier were piling 14 inches square. (Plate 32.) This piling was not laid down in palisade fashion. Rather, three piles were driven, one on each side of the proposed pier, and one in the middle. These piles were bound together as a frame with 10-inch cross beams, so that the frame actually made a cross-section of the pier. Each frame was connected to its neighbor with 8- by 10-inch tie beams. Vertical timber facing was secured to the tie beams with treenails to form the sides of the wharf. Additional piling reinforced the structure, then the interior of the wharf was filled with rubble.²⁸³

2. TOWER BASTIONS

Unusual features of the Frederica fortifications were the tower bastions built in the northeast and southeast angles. In principle, these bastions were identical with the tower bastions to be found in most U. S. 19th century coastal fortifications. The standard tower bastion of Vauban's Second Method was a two-storied masonry structure containing a magazine in its center, casemates (gunrooms) for cannon in the lower story, and embrasures for cannon on its terreplein or roof.²⁸⁴ (Plate 33, no. 1.)

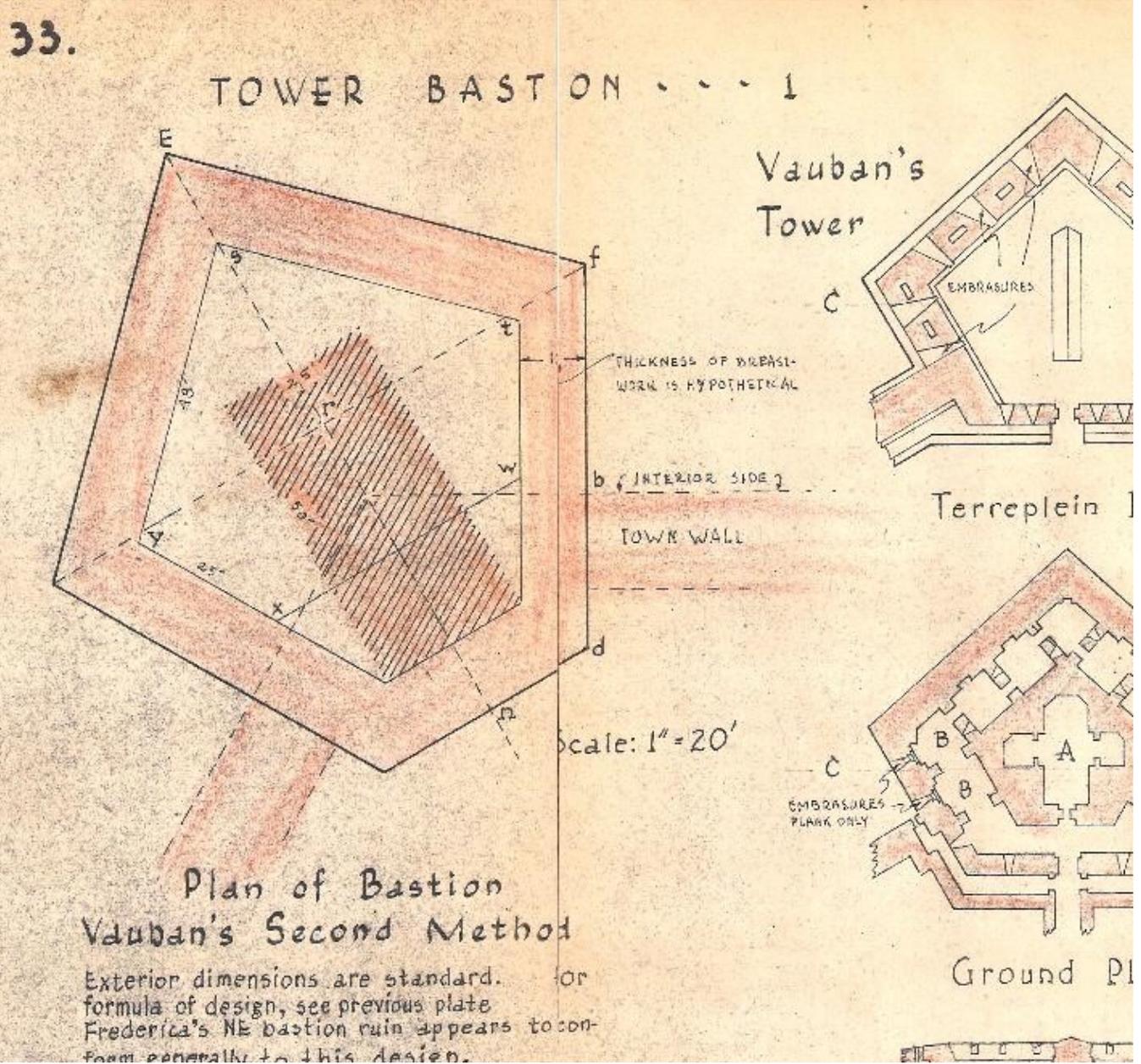
Contemporary descriptions of the Frederica towers reveal them as a frontier

⁸³ CR 35/357.

⁸⁴ Merriam-Webster.,

⁸⁵ Practical Fortification, xvii, 284-286, plate XXV, fig 2.

⁸⁶ Müller describes the tower bastion as having “underneath a magazine in the form of a cross; all round this magazine are casemats, or cellars to hold both men and guns; those in the flanks have each an embrasure which opens into the ditch, and those in the faces have embrasures so as to fire out of one into the other when taken by the enemy; and above is a parapet of 12 feet thick with embrasures . . .” (see plate 33, no. 1) Müller seriously questioned their efficiency: “As these towers are almost a solid bulk of masonry; they must be of great expence, though their resistance can be but little; for it has been found by experience, that the casemats are but of little use, because as soon as they have fired once or twice, the smoak will oblige the defenders to leave them, notwithstanding their smoak-holes.” (Elements, 86, plate XI.) Such was the disadvantage of black powder.

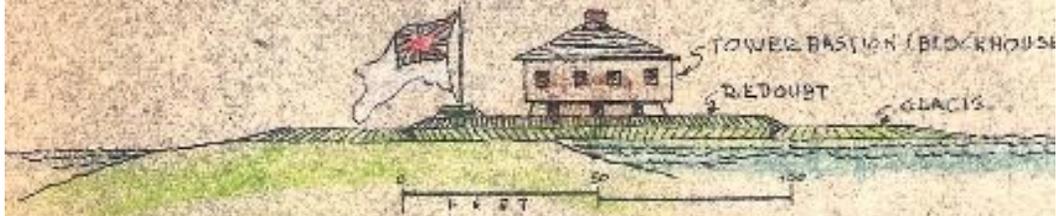


33.

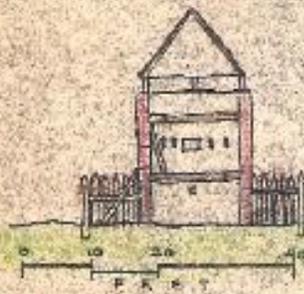
TOWER BASTION



Brahm's plan for a "blockhouse in a redoubt" at Cockspur Island



Brahm's plan of Fort George, Cockspur Island, a "Tower Bastion" in an earth redoubt faced with logs



Section of Span Fort Picolata on St. Johns River, sho

adaptation somewhat similar to a blockhouse: “at the N. E. and S. E. Angles are erected two strong cover’d pentagonal Bastions, capable of containing 100 Men each, to scour the Flanks with Small Arms, and defended by a Number of Cannon: At their Tops are Lookouts which command the View of the Country and the River for many Miles: The Roofs are shingled, but so contriv’d as to be easily clear’d away, if incommodious in the Defence of the Towers.”²⁸⁵ These towers were “of two stories each, in the Hollow of the Bastions, defended on the Outside with thick Earth-works and capable of lodging great Numbers of Soldiers, the two long Sides being nearly fifty Feet, and the short Sides twenty-five . . .”²⁸⁶ A further lead on the structures comes from the pen of an engineer assigned to strengthen the defenses of Savannah. The Governor improved the Savannah fortifications, wrote this engineer, by adding wooden Tours [tower] Bastionees [author’s note: “Copied from the wooden Tour’s Bastionee’s executed and erected in the Bastion of Frederica.”] To each Bastion one of which was placed in the angle of each Gorge to serve as Cavaliere’s convertes [covered cavaliers], with strong in their first Storied for Cannons of twelve pounders to range and command the Country.”²⁸⁷

From this evidence, it would appear that the Frederica tower bastion consisted of a quadrangular (that it was pentagonal is a remote possibility) wooden structure similar in external appearance to later Fort George on Cockspur Island (see plate 33, no. 2); the structure was erected in the hollow of the bastion, with the 12-foot bastion parapet protecting the lower portion of the tower walls. Whether cannon were emplaced within the tower, or at parapet embrasures outside the tower is not clear (see plate 33, no. 1, for hypothetical relationship of tower to bastion). The ground floor probably contained a small magazine. The second floor or terreplein was covered with a light shingle roof. The walls of the second floor may have extended upward only 4 ½ feet the height of a standard parapet above a firing step. However, drawings of Fort George show walls

⁸⁷ “Observations,” 4. Kimber also furnishes the following note on shingles: “Shingles are split out of many Sorts of Wood, in the Shape of Tiles, which, when they have been some Time expos’d to the Weather, appear of the Colour of Slate, and have a very pretty Look; the Houses in America are mostly shingled.” See Elements, 206-207, for discussion of the advantages of covering batteries with planks or canvas.

⁸⁸ Jones, 126, quoting London Magazine, XVI, 484.

⁸⁹ CR 39/453.

constructed up to the roof plate.²⁸⁸

Miller's maps indicate that there were towers at each angle of the town walls but this representation seems to be at variance with the records.

5. THE TOWN GATES

"The Town has two Gates," wrote Kimber in 1743, "call'd the Land-port and the Water-port; next to the latter of which is the Guardhouse . . ." ²⁸⁹ According to Miller's plans, the "Gate & bridge" were located in the center of the eastern town wall, and possibly the foundations remain there still. The center location was standard.²⁹⁰ Miller does not show a "Water-port", which was probably a simple barrier gate (see plate 27) in the west wall of the town between the guardhouse and wharf.²⁹¹

Another eyewitness description specifies "a handsome Tower over the Gateway of twenty Feet square . . ." ²⁹² This reference is doubtless to the gate in the east wall.

Town gates were made variously. (See plate 34.) Sometimes they were nothing more than an open passage cut through the rampart, shut with a strong wooden gate, or with a drawbridge. Sometimes the passage was arched or covered, with a guardhouse built inside and a drawbridge, or gate, or both, on the outside.²⁹³ The outside front was usually ornamented with pilasters and a pediment, with such decoration depending chiefly on the engineer's taste in architecture. A more or less typical gate might have a passage 10 feet wide, covered above by an arch. At the inside entrance would be a guardroom for soldiers on one side and a room for officers on the other.²⁹⁴

In such a building, each room had a window in front (*i.e.*, facing the town, 2 ½ feet from the ground, 3 feet wide, and 6 feet high; for, says Müller, "it is a general custom

⁸⁹ Cf., Moncrief, "Plan of Fort Picalata on St. John's River" [1765], reproduced in V. E. Chatelain, The Defenses of Spanish Florida (Washington, D.C., 1941), map 15. It is reproduced here in plate 33, no. 2.

⁹⁰ "Observations," 5.

⁹¹ New Method, 164.

⁹² For description of barrier gates, see ante, p. 140. The term "gate" applies loosely to all constructional features of an entrance, as well as specifically to the actual closure such as the doors.

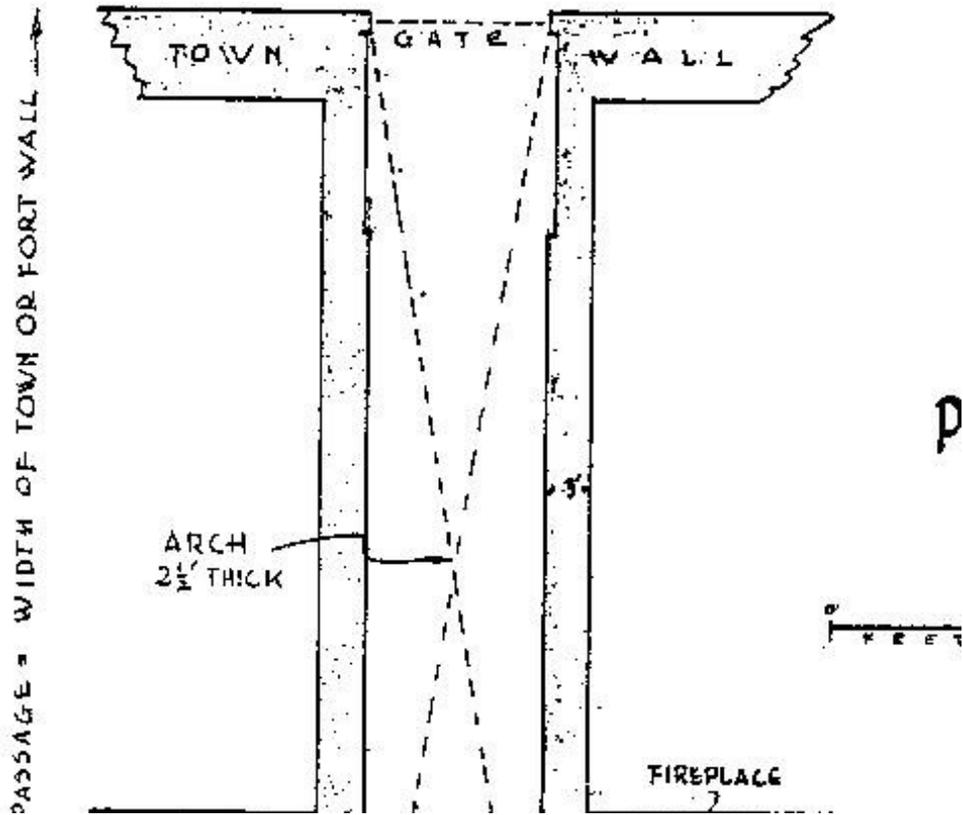
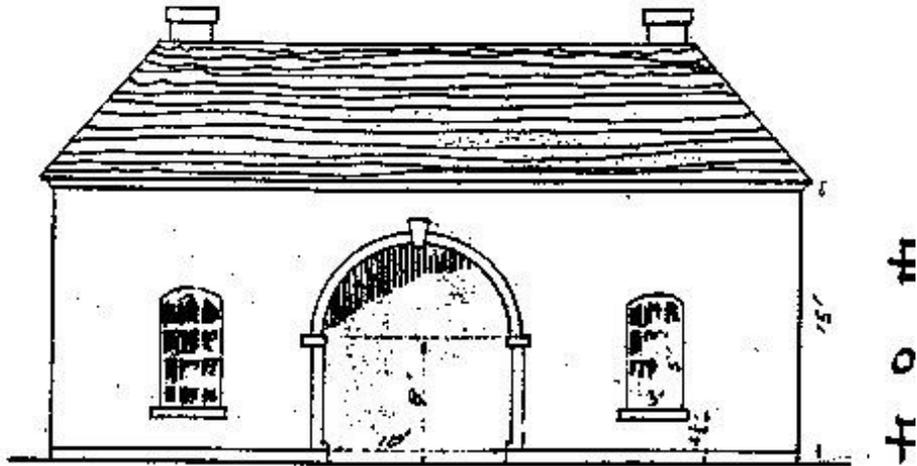
⁹³ Jones, 126, quoting London Magazine, XVI, 484.

⁹⁴ See ante, pp. 139-141, for other details of standard gate construction.

⁹⁵ Müller specified 12- by 12-foot rooms, but obviously rooms of this size would be too expansive for a 20-foot square building. Neither is it certain that the Frederica gate was of masonry, as town gates usually were.

34.

SMALL 18th CENTURY GATE FOR TOWN OR FORT



in all buildings to make the windows on the ground floor twice as high as they are broad . . .” Chimneys in the rooms were 4 feet wide and a foot deep, “half of which is taken out of the thickness of the wall, and the other projects into the room, and is supported by piers of a foot thick . . .” Doors were 3 by 7 feet.

The building Müller describes was 15 feet high to the roof line.²⁹⁵ The walls supporting the arch were 8 feet high. Near the foundation they were 3 feet thick, but there was a slope to their outer face so that they measured only 2 ½ feet. Guardroom walls were 2 feet thick.

In decorating the town gate, Müller specified that “The Pediment ought to be ornamented either with the king’s arms, or with military ensigns, and above the gate under the arch, which joins the piers, the arms of the city, or else, of some particular person of note, who has mostly contributed to the building of the place.”²⁹⁶

6. GUARDHOUSE

According to Miller’s “Plan for Frederica” (plate 9), the guardhouse was located about 80 feet west of the southwest town lot (no. 42). Its foundation may still exist. It was evidently a square or rectangular building about 50 feet on a side, with a chimney on the north wall. Elevation was about 25 feet to the roof line, and there was a gable or hip roof. It is doubtful, however, that the Miller representation is entirely dependable.

Little contemporary information about the guardhouse is available, beyond the statement that it was “an handsome building of Brick”, having “underneath it the Prison for Malefactors”.²⁹⁷

Guardhouses were usually located in the town square,²⁹⁸ and since the area east of the citadel and west of the town lots corresponds roughly to a town square, the location of the Frederica guardhouse was more or less conventional

Eighteenth century guardhouses (see plate 35) were not noted for comfort. True,

⁹² Practical Fortification, 191-192.

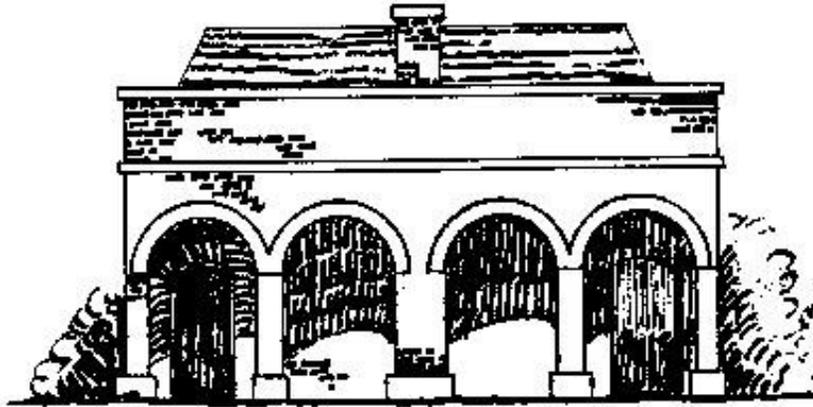
⁹³ Id., 194. The above notes on town gates are based on material in Practical Fortification, 180-182, 191-197, 205-206; Elements, 191; New Method, 164-167. In these sources are also found detailed data on proportions for pilasters and buttresses, together with various types of gate and bridge building (See ante, p. 141, for general information on bridges). General drawbridge data in summary form is available in Crowe, “Drawbridge Study”.

⁹⁴ “Observations,” 5. See also CR 36/454. Cf. the representation in plate 39.

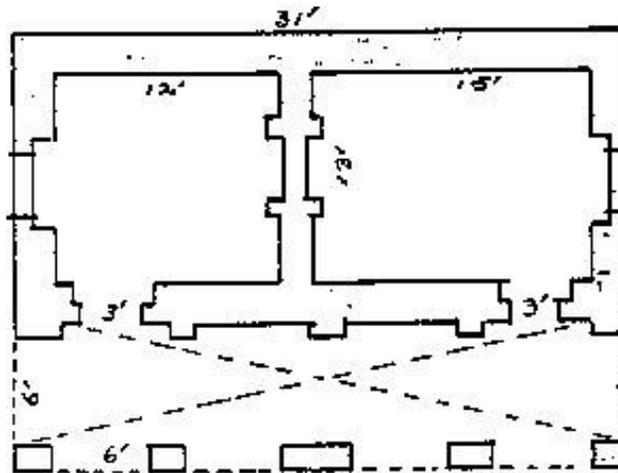
⁹⁵ Practical Fortification, 209.

35.

AN 18th CENTURY GUARDHOUSE



Front Elevation



they usually had at least one or two fireplaces, but sleeping facilities for the soldiers ordinarily consisted of “a little Theatre [platform] of Wood all along, about three Feet high from the Ground, and seven or eight Feet broad, for the Soldiers toile upon.”²⁹⁹

7. BARRACKS

Miller’s plan of Frederica (plate 9) shows the barrack building fronting on a northern extension of the north-south street through the town, some 25 feet from the northern boundary of lots 38 and 39. He represents the structure as a rectangular building 70 by 90 feet, with the long side east and west, though most contemporary descriptions agree that the building was 90 feet square. It was built of tabby.³⁰⁰ A two-story portion of the walls stands today, and conformation of the surrounding ground suggests that extensive foundations may remain underground.

Early in 1742, Oglethorpe wrote that the “. . . Barracks are built with Lyme and mortar and are 90 feet Square . . . now finished except the flooring the Officer’s Rooms.”³⁰¹ From another source comes the notation that the structure was topped by a cypress shingle roof.³⁰² Extensive repairs seem to have been made during the 1760’s.³⁰³ The building was more than a barracks: at least in 1743 it served as a hospital and quarters for the Spanish prisoners of war.³⁰⁴ Most of the British troops at the time were quartered in camp facilities erected round about the barrack building, or elsewhere.³⁰⁵ Barracks (plate 37) were usually built near the rampart of a work, so that the soldiers might have easy access to the defenses in case of an alarm. There was plenty of open space before them so that the troops might be drawn up and exercised. And in time of war, this relative isolation made it easier to organize detachments “more privately” for various enterprises.

⁹⁵ New Method, 163.

⁹⁶ “Observations,” 5; Jones, 125-126, citing London Magazine, XVI, 484; CR 35/438, 358; 36/107.

⁹⁷ CR 35/438.

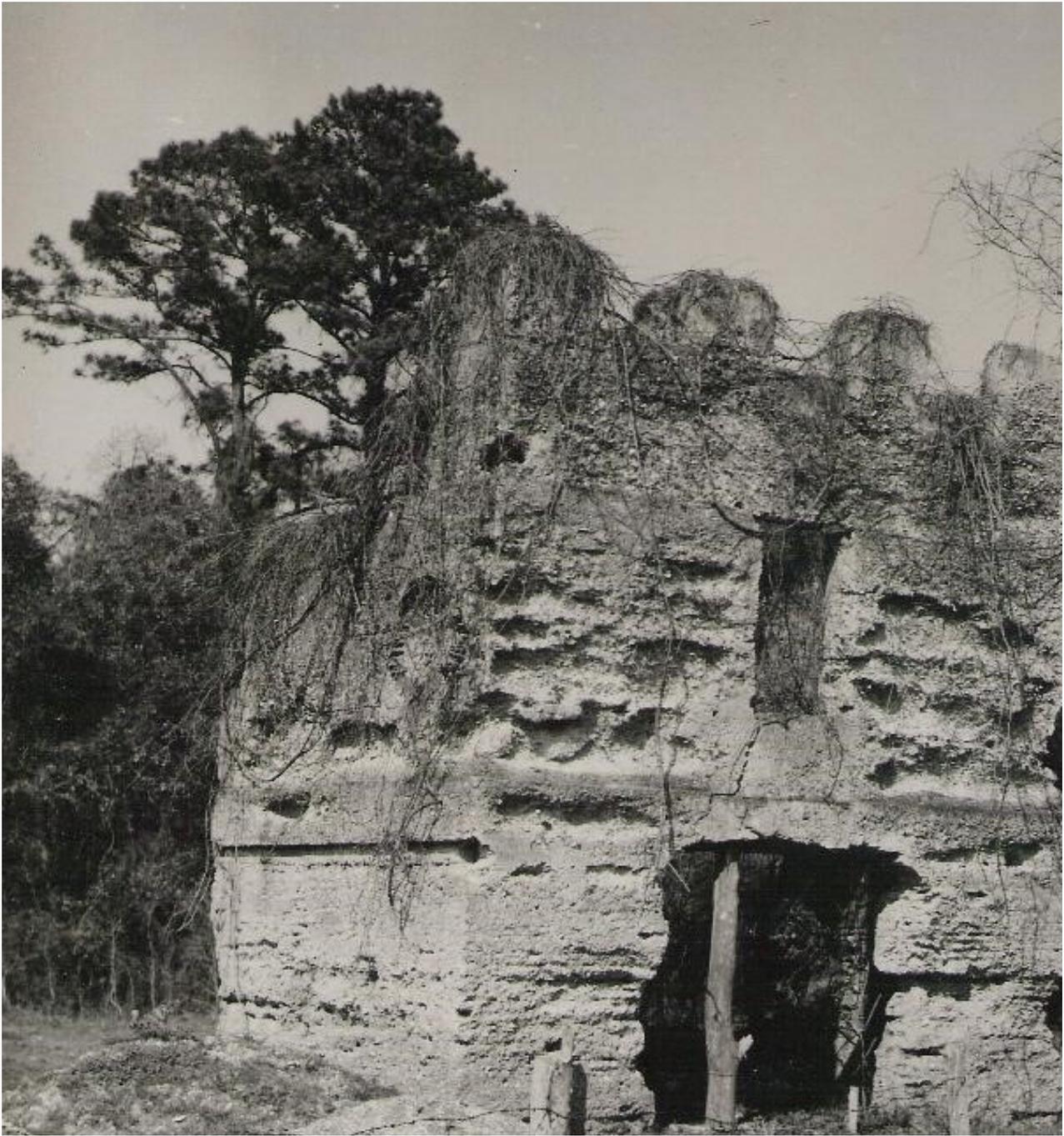
⁹⁸ Jones, 126, quoting London Magazine, XVI, 484.

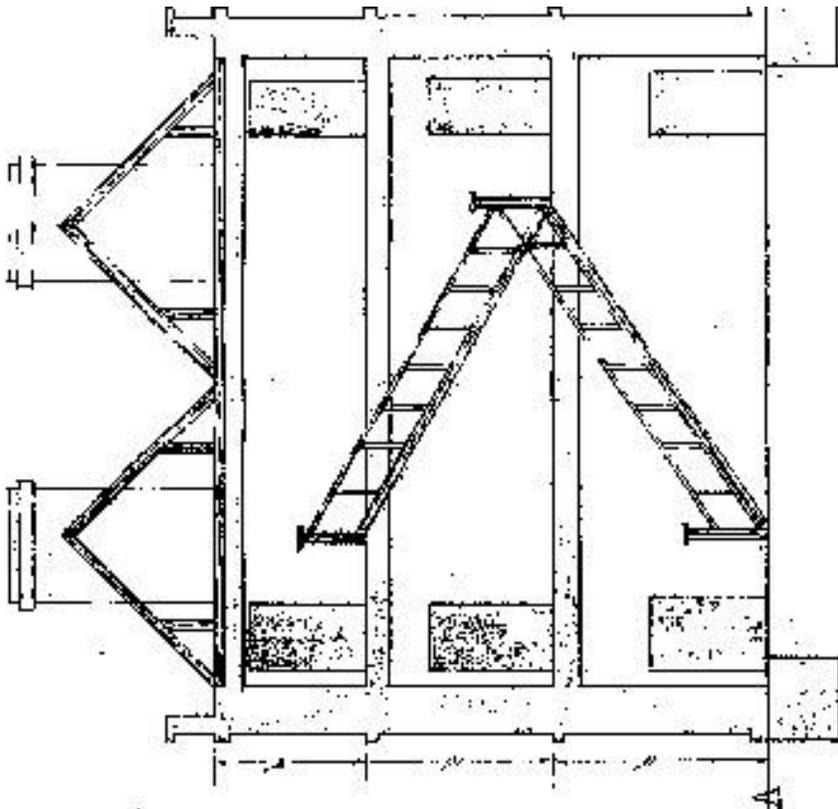
⁹⁹ CR 14/182, 204, 225, 243; 18/640-645.

¹⁰⁰ “Observations”.

¹⁰¹ See post, p. 168.

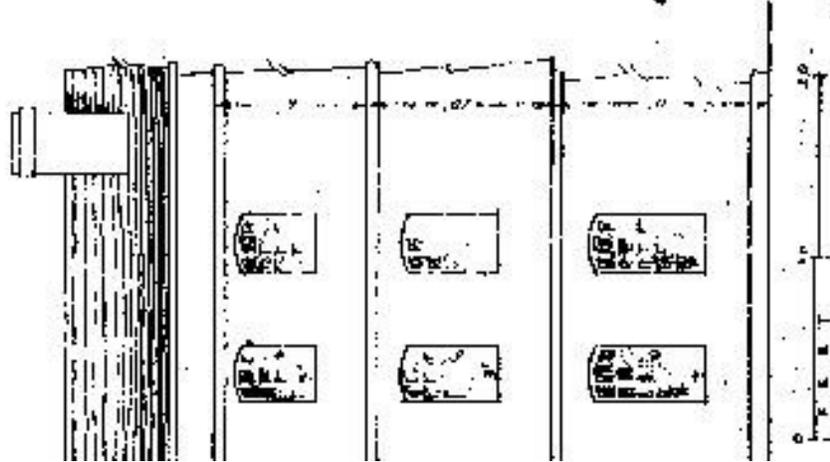
Plate 36 - Barrack Ruins





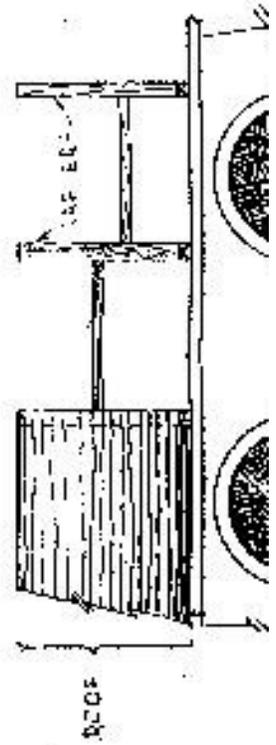
18th CENTURY
BARRACKS &
STOREHOUSE

↙ Elevation of
front section.

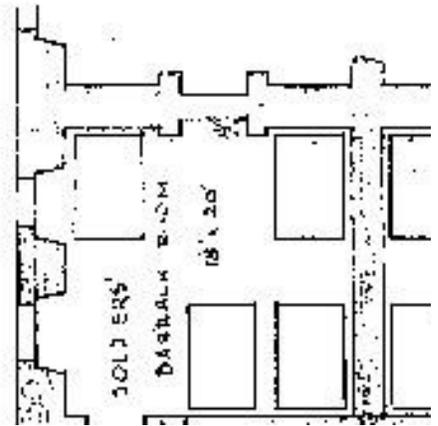


↙ Portion of Plan

Section of Barracks



Military Store-
house, partial



As important as anything was the principle that the troops should be kept separate from the townspeople, “with whom they do not always agree.”

Barracks were also thought to contribute to the morale of the troops and townspeople alike by doing away with the necessity of quartering the troops on the town, or the discomforts of camp establishments.
306

Barrack buildings were generally three or four stories high. Sometimes they had piazzas, which were an advantage in bad weather. At the ends of the buildings were “pavilions” (semi-detached units) for the officers. “Between every two rooms in the front” wrote Müller, “is an entry of 8 feet wide, with doors to the four contiguous room, and a stair-case leading to the upper stories; as to the bigness of the rooms, Mr. Vauban made them 22 feet long, and 18 broad, in order to hold four beds each; I have seen some large enough to hold six beds, and with two chimneys in them; there were three men to each bed, which is the custom in all the French garrisons, because it is supposed, that one of the three is always upon duty, so that there is never but two in one bed at a time.”³⁰⁷ At Woolwich, said Müller, the barrack rooms were 16 feet square, with 3 beds to a room to accommodate 6 soldiers. But on that basis, too large a building was required to quarter a whole regiment, so Müller specified a plan containing rooms 18 by 20 feet, with 4 beds to the room. In this plan the ground story was 11 feet high, the second story 10 feet and the top story 8 feet. The outside wall was two feet thick; the partitions, a brick and a half (about 18 inches). Outside doors were 3 ½ by 7 feet; inner doors 3 by 6 ½; windows were 3 by 6 feet on the ground floor, 3 by 5 on the second floor, and 3 by 4 on the third. Fireplaces were standard at 4 feet wide and 18 inches deep. They projected partly into the room.

Corner quarters were designed for officers. Each had an entry 6 feet wide, with a staircase and a 5-by 6-foot closet at the opposite end. Sometimes there were kitchens and cellars under the “officers’ houses”, but in soldiers’ barracks there was “no occasion to make either kitchen or cellars. . .”

The staircases generally went straight up from one floor to another; though there might be a turn halfway at a landing. The roof was divided into two ridges because “it is both customary, and more convenient, than if it was continued, which would make it

⁹⁶ Practical Fortification, 214, 222.

⁹⁷ Id., 223.

too high, and requiring longer timbers, makes it more expensive.”³⁰⁸

Hospitals were usually separate buildings, and it is most likely that the use of the barracks at Frederica for hospital purposes developed out of the exigency of the moment. The hospital in a fort might be beneath one of the bastions. In a town, it was located “in some bye place or other, so as to be separate from the inhabitants, and noise of the workmen, especially near a brook or river, in case there is any that passes through the town.”³⁰⁹

Size of the hospital was regulated by the number of troops to be handled in time of siege. Out of 25 men, usually one or more was sick, depending upon the healthfulness of the fort location. Frederica was reported to have been an exceptionally healthful situation.³¹⁰ The main part of a hospital consisted of a long room,³¹¹ with perhaps another above it. Each room was 42 feet wide and would accommodate four rows of beds; or the dimension could be halved, providing 20 or 21 feet for two rows of beds. Each bed was 4 feet wide, 6 ½ feet long. Space between beds was four feet. In addition to these wards, there were quarters for doctors, attendants, nurses and servants, a kitchen, a laundry, and a yard for drying linen. Plans of hospitals were various, so it would have been no great task to adapt the barrack building for the purpose.³¹²

8. THE CAMP

On Miller’s map (plate 9) are shown the “Camp” buildings, 48 separate structures laid out in fairly regular pattern between the town lots and the north wall, to east, north and west of the barracks.³¹³ “The Camp is also divided into several Streets,” wrote

⁹⁸ Id., 223-225.

⁹⁹ Id., 214; see also 182

¹⁰⁰ Cf. CR 5/1170, where the Widow Germain reported that “the Country is healthy, in so much that she is the only widow of
101 families in Frederiaca.”

¹⁰⁴ Adds Müller: “I had forgot that there is often a chapel built at one end of the great room, to perform divine service, and then there are two rooms above one another, the upper one has a gallery looking into it, for the sick to sit in without being obliged to come downstairs.” (Practical Fortification, 226.)

¹⁰⁵ Id., 225-226.

¹⁰⁶ Mrs. Cate points out: “surely that small settlement was not the camp which contained the Regiment after Fort Saint Simons was destroyed and which contained the streets named after the officer, etc....I believe all the references to this date after the Spanish Invasion, when the Regiment was stationed at Frederica. Too, tradition – though I am the last person to ‘bank’ on

Kimber, “distinguish’d by the Names of the Captains of the several Companies of the Regiment; and the Huts are built generally of Clapboards and Palmetto’s, and are each of them capable to contain a Family, or Half a Dozen single Men.”³¹⁴

The “Huts” or “Cleft Board Houses” were built originally to house the two companies stationed at Frederica, and on the basis of 30 houses for each company of 100 men, “with their Wives and Children and Officers”, as specified in the record, there would have been about 60 houses in the Frederica “Camp”. The cost was £5 sterling for each house.³¹⁵

9. TOWN MAGAZINES

(See plate 38.) Near the northwest angle of the town wall, Miller’s map (plate 0) shows a “Magazine”, a rectangular structure some 30 feet on a side and about 25 feet from ground level to roof plate.³¹⁶ A hip or gable roof is drawn in dotted lines. It appears that this building was the “Bomb Magazine” near the barracks, which blew up on March 22, 1943, though with little damage.³¹⁷ As with other permanent buildings in Frederica, its foundations should be discoverable.

Another powder magazine was built in a small, partially cleared wood south of the town.³¹⁸

Both these magazines were satisfactorily located according to 18th century rules, insofar as they were away from other building, fairly close to the rampart where they might be needed, and away from gate.³¹⁹

tradition – has placed that camp in the area which we now call West Point, just north of Frederica.” (Cate to Vinten, Sept. 28, 1944.) In this connection, the “Plan of the Town of Frederica” in Jones, Collections, IV, facing p. 45, may have some significance. The provenance of this plan is not know. Possibly Miller’s map shows a camp layout that existed prior to 1742; after that date, another camp may have been constructed outside the town walls. See also ante, p. 150.

¹⁰⁷ “Observations”, 6.

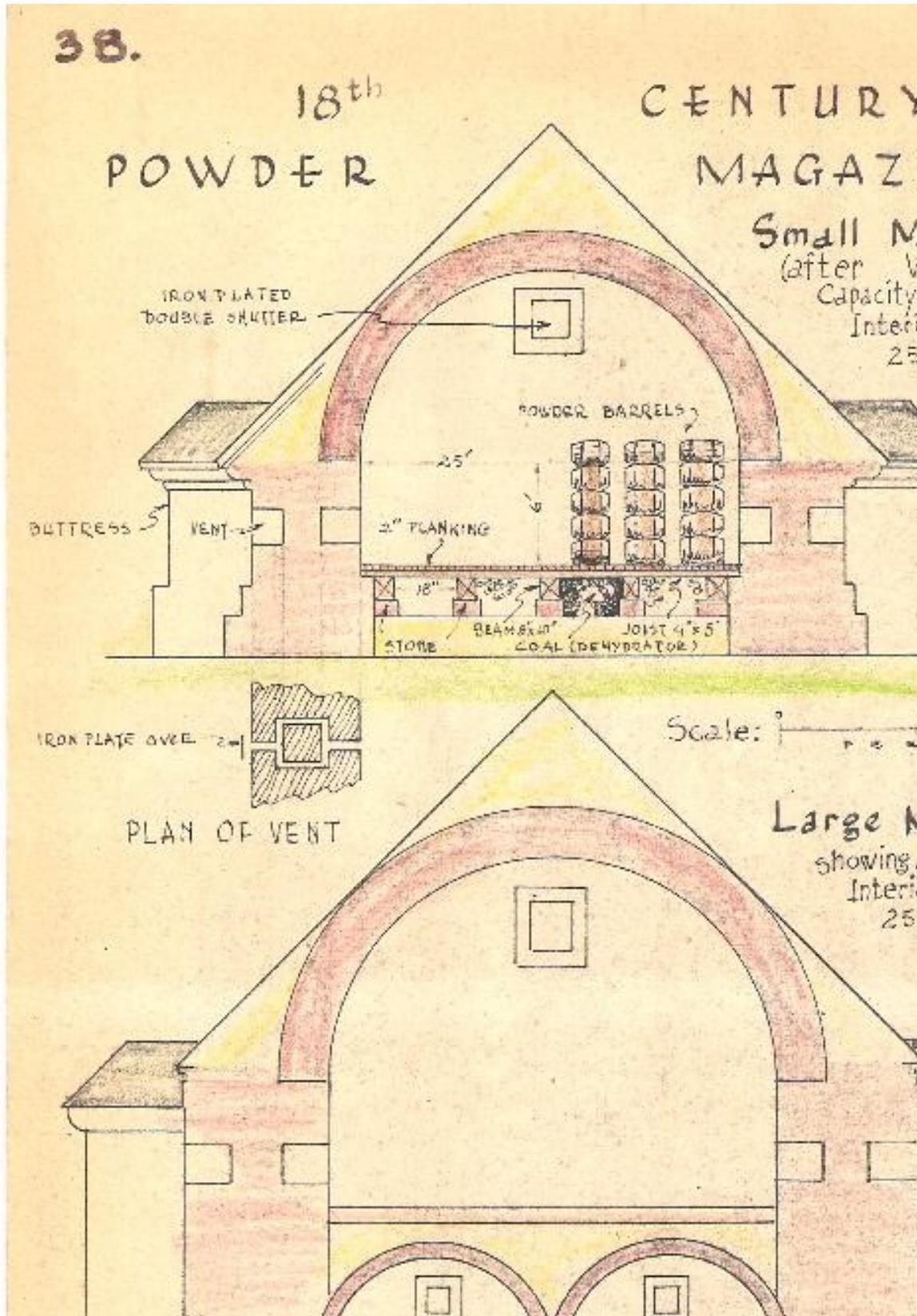
¹⁰⁸ Jones, 126, citing London Magazine, XVI, 484. CR 33/90-91, 119.

¹⁰⁹ Cf. Miller’s “Town and Commons of Frederica” (plate 39), which appears to show a doorway in the west elevation.

¹¹⁰ “Observations,” 5.

¹¹¹ Id., 5,6.

¹¹² Practical Fortification, 213-214; for specifications in masonry construction, see id., pp 216 ff. For general remarks on magazine constructions, see ante, pp. 142-144. For other magazines (storehouses) in the town, see post, p. 178-179.



10. ESPLANADE

On Miller's plan (plate 9), the "Parade" is a 120- by 400 foot area west of the "Camp" and parallel with the west wall of the town. It seems possible, however, from Kimber's statement that there were "Parades of the West" of the town, that even a larger portion of the area west of the town lots may have been available as parade ground or esplanade, which was nothing more than a cleared section between town and citadel.

Says Müller: "An Open space, of some hundred yards broad, should be left between the works of the citadel and the town, called an Esplanade; which serves chiefly to draw up the troops or garison [sic], to muster and exercise them there; as likewise to prevent any hidden approach that might be carried on from the town against the citadel."³²⁰

The area between town lots and citadel at Frederica conforms well to this specification; at least plate 9 shows a space of over 200 feet between the lots and the fort. It is evident that the space was left intentionally, since town blocks to north and south of the citadel were extended farther toward the river bank.³²¹

11. WHARF

There is indication of considerable erosion on the east river bank, and it is reasonably certain that the wharf site has disappeared. Virtually no description of the wharf is available. We may deduce from the few notes we have that it was located on the shore opposite the guardhouse and the western gate in the town wall. (See plate 29, no. 2.) In fact, the location of the wharf may have dictated the location of the gate. Another suggestion of wharf location is found later in John Perkins' petition to build his lumber yard between the guardhouse and the shore. Presumably he selected the site on account of the proximity of docking facilities. By that time, the wharf was probably in fair condition, since it had been repaired about 1748.³²²

This wharf was not necessarily long.

Oglethorpe once reported that a vessel could

¹⁰⁹ "Observations," 5; Elements, 189; cf. New Method, 75.

¹¹⁰ Cf. post, p. 179.

¹¹¹ CR 8/15; 36/455.

ride “in three fathom water within ten yards of ye Fort walls.”³²³ Wharf construction may have been similar to that of more or less permanent quays,³²⁴ or entirely of piling (see plate 27). Describing harbor facilities generally at Frederica, Kimber observed that “a Branch of the famous River Alatamaha forms a Kind of a By before the Town, and is navigable for Vessels of the largest Burden, which may lie along the Wharf in a secure and safe Harbour; and may, upon Occasion, haul up to careen and refit, the Bottom being a soft cozy Clay, intermix’d with small Sand and Shells.”³²⁵

12. THE TOWN PLAN

“Frederica [wrote Moore in 1736] is situated in the island of St. Simons, in the middle of an Indian field, where our people found thirty or forty acres of land cleared by them. The ground is about nine or ten foot above high water mark, and level for about a mile into the island; the bank is steep to the river, which is here narrow but deep and makes an elbow, so that the fort commands two reaches. The woods on the other side of this branch of the Alatamaha are about three miles distance. All that three miles is a plain marsh, which by small banks might easily be made meadow: when I was upon it, it was so hard that a horse might gallop, but most part of it is flooded at very high tides. The open ground on which the town stands, is bounded by a little wood to the east, on the other side of which is a large Savannah of above two hundred acres, where there is fine food for cattle. To the South, is a little wood of red bay trees, live oaks, and other useful timber, which is reserved for the public service. In the fort also are some fine large oaks preserved for shade. To the north are woods, where the people have leave to cut for fire and building, for all that side is intended to be cleared. To the west is the river, and the marshes beyond it as I said before. The soil is rich sand mixed with garden mould, the marshes are clay. In all places where they have tried, they find fresh water within nine foot of the surface. The grass in the Indian old field was good to cut into turf which was useful in sodding the fort.”³²⁶

Miller’s “Plan of the Town” (plate 9) shows Frederica laid out in a rectangle, divided by streets into 16 blocks. The blocks were divided into 60- by 90-foot lots. From

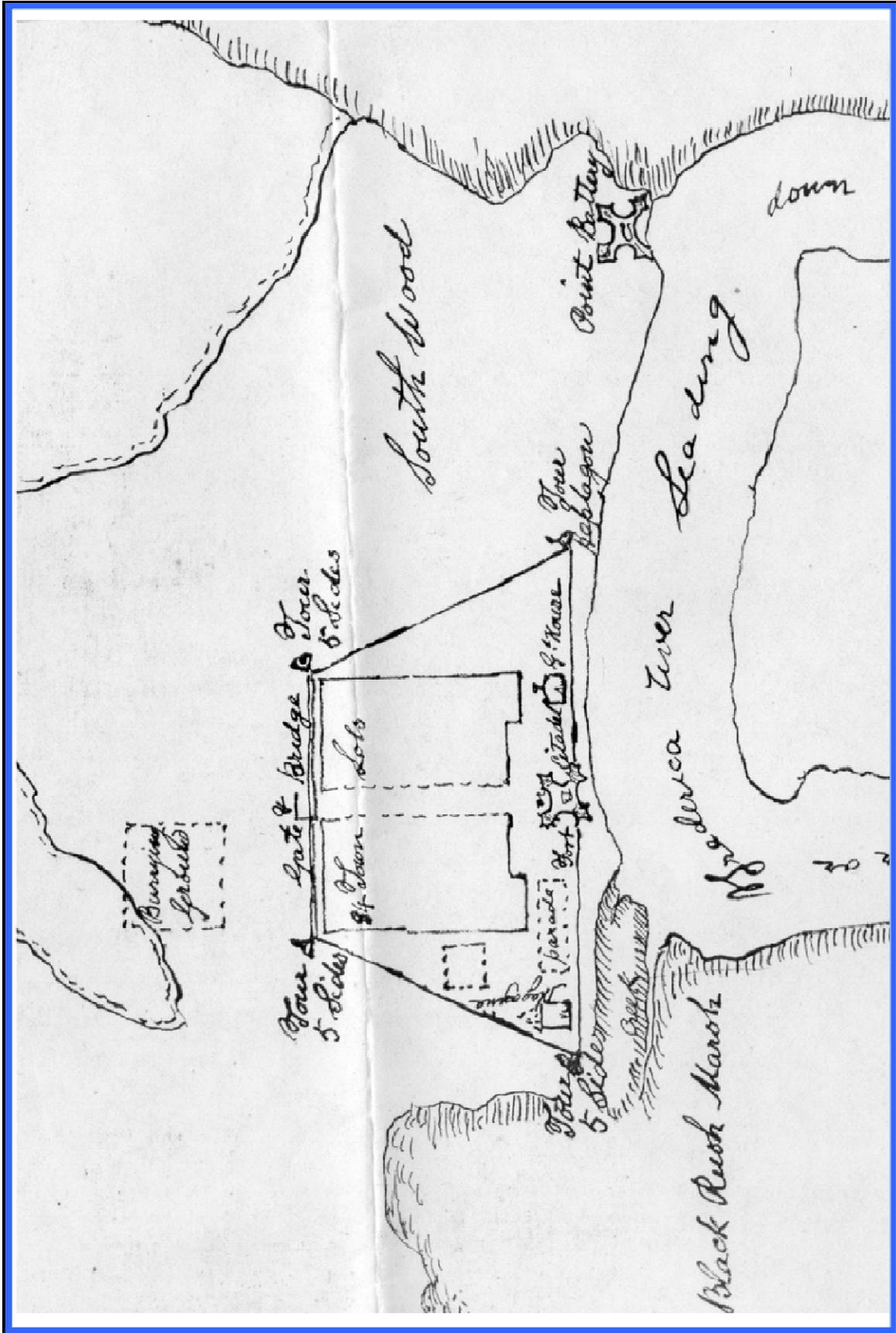
¹¹⁴ Collections, III, 19.

¹¹⁵ See ante, p. 158, and plate 32.

¹¹⁶ “Observations,” 3-4.

¹¹⁷ Collections, I, 115-116.

Plate 39 - Miller's "Town and Commons of Frederica"



citadel to town gate, through the center of the town, ran Broad Street,³²⁷ 82 feet wide,³²⁸ dividing the town into “North division” and “South division”, or north and south “Tything Wards”.³²⁹ There were six other east-west streets, the two widest ones being 23 feet, two 17 feet, and two 14 feet broad. There was a single north-south street some 32 feet wide. Along the sides of these streets, orange trees were planted, “which, in some Time,” wrote Kimber in 1743, “will have a very pretty Effect on the View, and will render the Town pleasingly shady.”³³⁰

This regular layout was no doubt the result of military knowledge Oglethorpe and his engineers possessed. Town planning, especially in relation to the methods for fortifying towns, occupied space in almost every textbook on fortification.

The usual town plan called first of all for a town square, on which, or surrounding which, could be built the governor’s house, church, guardhouse and other important public structures, including the town wells. Storehouses and magazines might be built in the gorges of the bastions. Principal streets ran from the square to the town gates, to the ramparts, and to the citadel or harbor. Cross streets were to be parallel, and all buildings at right angles to these streets. Main streets were 36 feet wide, so that three carriages could pass abreast, and other streets were from 18 to 24 feet wide.

The distance from street to street, according to Vauban, should be three houses wide, but Müller specified a greater distance of about 144 feet, especially in “new places built abroad, in plantations where there is sufficient room, and where the fortification often consists of the town-wall, and ditch only . . .” In such cases, said Müller, “I would make the intervals between the streets greater than what we have represented here in this plan,³³¹ as likewise all the bye streets about 30 feet wide: For

£ CR 9/316; Cate, 118, citing the Georgia Gazette, Oct. 26, 1768. The street was usually referred to as the “high” or “main” street.

£ Cf. post, p. 179.

£ Cate, 118. Incidentally, Moore (Collections, I, 114) stated that the lots fronting the river were only 30 by 60 feet. See post, p. 179.

£ “Observations,” 6. Kimber added this footnote: “The inhabitants begin to plant this charming Fruit [the orange] very much, and, ‘tis to be hop’d, will banish their numerous Peach Trees to their Country Settlements, which are Nurseries of Muskettos, and other Vermin.” Today, Georgia is noted for its peaches! Cf. Spalding’s description of the town, Collections, I, 272-273.

£ See his plate XVI, in Practical fortification.

nothing contributes more to the wholesomness [sic] of the place, as well as agreeableness, than fine large streets, and great openings behind the houses, planted with trees, especially in warm climates; besides, all the shops to work in, should be built there, and no other ought to be permitted in front of the streets, than those for the selling goods . . .” In Europe, where outworks were extensive, Müller continued, house crowding was more or less necessary, but the engineer who laid out Halifax, Nova Scotia, made a mistake in building the streets so close to each other. “It was said,” argued Müller from his far vantage, “the few people that went there, were not sufficient to clear a larger spot of ground; but in answer to this, I say, they need not clear more ground at first than to build upon; and leave the openings behind, for another opportunity, when they have more time; by doing this, the wood left may serve for timber to built out-houses, and the branches for fewel to burn, when perhaps, they must go far for it, and are exposed to the insults of the Indians at the same time.”³³²

The “small wood to the South” of Frederica served the latter purpose for Oglethorpe’s establishment; the growth was “left for Conveniency of Fuel and Pasture” and was also said to be “an excellent Blind to the Enemy in case of an Attack . . .” though it was “so far clear’d, as to discover the Approach of an Enemy at a great Distance . . .”³³³

The location of the fort or citadel in relation to the layout of the town conforms perfectly with 18th century rules. A citadel was a fort or small fortification of four, five or six sides, joined to a town for one or more of several reasons. Citadels were commonly built in newly conquered country, or where the loyalty of the inhabitants was somewhat suspect. In such cases the citadel served “to keep them in awe, and prevent all attempts they may make to shake off their dependency; as likewise to secure the garrison from their treachery . . .” And (as seems to have been the particular case at Frederica) citadels were built to secure the town against the enemy, when for various reasons it was not possible to fortify the town itself. Citadels were located at commanding sites – on high ground, if possible, to command the entire town; or near the waterway by which enemy approach might be expected. In relation to town streets, the citadel location was such that all the main streets lay open to fire from the fort, “to

¹¹⁷ Practical Fortification, 212-213. Pensacola, Fla., developed from a typical 18th century British town plan.

¹¹⁸ “Observations,” 5-6.

prevent the approach of an enemy . . . after the town is taken” as well as to disperse “the mob that might rise and flock together in time of a sedition . . .”³³⁴

13. TOWN LOTS AND PRIVATE BUILDINGS

To each freeholder at Frederica 50 acres of land were promised, the settler agreeing to clear and cultivate the land, build houses and necessary defenses. The following extracts from the “Rules for the year 1735” show quite clearly the status, the privileges and the obligations of the Frederica settler:

“The Trustees intend this year to lay out a county, and build a new town in Georgia.

“They will give to such persons as they send upon the charity, To every man, a watch-coat; a musket and bayonet; a hatchet; a hammer; a handsaw; a shod shovel or spade; a broad hoe; a narrow hoe; a gimlet; a drawing knife; an iron pot, and a pair of pot-hooks; a frying pan; and a public grindstone to each ward or village . . .”

“The said persons are to enter into the following covenants before their embarkation, viz

“That for the first twelve months from landing in the said Province of Georgia they will work and labor in clearing their lands, making habitations and necessary defences, and in all other works for the common good and public weal of the said colony; at such times, in such manner, and according to such plan and directions as shall be given.

“And that they, from and after the expiration of the said last mentioned twelve months, will, during the two succeeding years, abide, settle, and inhabit in the said Province of Georgia, and cultivate the lands which shall be to them and their heirs male severally allotted and given, by all such ways and means, as according to their several abilities and skills they shall be best able and capable. And such persons are to be settled in the said colony, either in new towns, or new villages. Those in the towns will have each of them a lot of sixty feet in front, and ninety feet in depth, whereon they are to build an house, and as much land in the country, as in the whole shall make up fifty acres.

“Those in the villages will have each of them a lot of fifty acres, which is to lie all together, and they are to build their house upon it.

“All lots are granted in tail male, and descent to the heirs male of their bodies

¹¹⁸ Elements, 187-18-, 214.

forever. And in case of failure of heirs male to revert to the Trust, to be granted again to such persons, as the common council of the Trustees shall think most for the advantage of the colony; and they will have a special regard to the daughters of freeholders who have made improvements on their lots, not already provided for, by having married, or marrying persons in possessions, or entitled to lands in the Province of Georgia, in possession, or remainder.

“All lots are to be preserved separate and undivided, and cannot be united, in order to keep up a number of men equal to the number of lots, for the better defence and support of the colony . . .”

“If any of the land so granted shall not be planted, cleared or fenced with a worm fence or pales six feet high, during the space of ten years from the date of the grant; then every part thereof not planted, cleared, or fenced as aforesaid, shall belong to the Trust, and the grant, as to such parts shall be void.

“There is reserved for the support of the colony, a rent-charge forever of two shillings sterling money for each fifty acres; the payment of which is not to commence until ten years after the grant.

“The wives of the freeholders, in case they should survive their husbands, are, during their lives, entitled to the mansion house and one half of the lands improved by their husbands; that is to say, inclosed with a fence of six feet high . . .”³³⁵

At the beginning of the settlement, temporary shelters were put up. Oglethorpe himself reported: “We immediately got up a house and thatched it with Palmettoes, dug a Cellar, traced out a Fort with 4 Bastions by cutting up the Turf from the ground, dug enough of the Ditch & raised enough of the Rampart for a Sample for the Men to work upon.”³³⁶ Francis Moore, Recorder of Frederica, with the obvious interest of a man to whom this was adventure, wrote a more detailed account: the General set all hands to work; the tall grass growing upon the bluff was burned off, and a booth marked out “to hold the stores, digging the ground three foot deep, and throwing up the earth on each side by way of bank, raised a roof upon crutches with ridgepole and rafter, nailing

¹²³ Collections, I, 80-83. No map showing 18th century grants outside the Town of Frederica is available, with the possible exception of the “Plan of the Town of Frederica” (Collections, IV, facing p. 45). Though the origin of this plan is unknown, it purports to show land divisions on St. Simons Island.

¹²⁴ CR 21/75.

small poles across, and thatching the whole with palmetto leaves . . . Mr. Oglethorpe afterwards laid out several booths without digging under ground, which were also covered with palmetto leaves, to lodge the families of the colony in when they should come up; each of these booths were between thirty and forty foot long, and upwards of twenty foot wide.”³³⁷

Moore went on: “The town was building, the streets were all laid out, the main street that went from the front into the country, was twenty-five yards wide. Each freeholder had sixty foot in front by ninety foot in depth, up the high street, for their house and garden; but those which fronted the river had but thirty foot in front by sixty foot in depth. Each family had a bower of palmetto leaves, finished upon the back street in their own lands; the side towards the front street was set out for their houses. These palmetto bowers were very convenient shelters, being tight in the hardest rains; they were about twenty foot long, and fourteen foot wide, and in regular rows, looked very pretty, the palmetto leaves lying smooth and handsome, and of a good color. The whole appeared something like a camp; for the bowers looked like tents, only being large, and covered with palmetto leaves instead of canvass. There were three large tents two belonging to Mr. Oglethorpe, and one to Mr. Horton, pitched upon the parade near the river.”³³⁸ Oglethorpe reported the digging of two wells, and a corn house and horse stables existed.³³⁹

Gradually permanent houses appeared on the town lots. Some were “built entirely of Brick, some of Brick and Wood, some few of Tappy-Work; but most of the meaner sort, of Wood only.”³⁴⁰ Many of these building foundations should remain. A careful

¹²⁴ Collections, I, 108-109.

¹²⁵ Id., 114. See also CR 21/103.

¹²⁶ CR 35/22; Collections, I, 135, 139. A fence around the town was started, but never finished.

¹²⁷ “Observations,” 6. Spalding gives a detailed description of tabby in Collections, I, 273 n.: “Tabby (not tappy, as some have named it) is a mixture of lime, sand, and shells, or lime, sand and gravel, or lime, sand and stones, in equal proportions, with an equal proportion of water to mix the mass. This mass, well mixed together, is placed between two boards, kept apart by wooden plugs, with double heads, of a length proportionate to the thickness of the intended wall. These planks or boards may run all around your building, rising about one foot at a time. When your tabby mass, being placed between these planks, and settled down with a spade or rammer, has two or three days to harden, the planks are taken away by drawing out the plugs. You may generally with safety go with this wall two rounds or feet a week in the summer, covering over your work in stormy or rainy weather. The task I have required in this work is thirty cubic feet per day, to mix the material, fill in, and settle down,

study of the records should reveal many details on ownership of property within the town, as well as more or less detailed descriptions of the improvements on the property. But for the present purpose, we shall attempt to furnish only a general description derived from the more easily available sources.

There is an indication that the north division, that is, the area north of Broad Street, was settled first. In fact, there seems to be some question as to whether the south half of the town was ever entirely cleared and settled. Malcontents claimed that not more than 50 lots had houses by 1740, and population did not exceed 120 civilians.³⁴¹

One of the most meaningful descriptions of conditions at Frederica is to be found in the impersonal language of an official report on the state of the "Province of Georgia" in 1740: "Below the Town of Darien is the Town of Frederica, where there is a strong Fort, and Store Houses; many good Buildings in the Town; some of which are Brick. There is a Meadow adjoining that is ditched in, of about 320 Acres of which there is good Hay made. The People have not planted much there this Year, occasioned by the War, so near their doors; and being chiefly Tradesmen, who make more by working, or selling to the Camp, than they can by Planting. There are some little Villages upon the Island of Saint Simons, and some very Handsome Houses built by the Officers of the Regiment, and there has been Potherbs, Pulse, and Fruit produced upon the Island, of great use towards supplying the Town and Garrison: But Corn, Beer and Meat they have from Elsewhere."³⁴² In this single paragraph is apparent the nature of the town in its heyday, as well as an indication of why Frederica later died.

As to the types of buildings and improvements made on the various town lots

within the plank moulds. This is about equal, in quantity of wall, to six hundred common bricks, the laying of which alone, exclusive of the cost of the bricks, would be quite equal to the mixing and placing the tabby wall, moving the boxes, &c &c. Nor is there any comparison in beauty or durability between a brick wall and a tabby wall so constructed after time has been given for cementing the matter. The whole becomes a mass of stone almost imperishable under the operations of time, and only to be re-dissolved by fire . . . This was the material which General Oglethorpe employed in all his civil and military works . . ."

¹²⁷ CR 24/266-267; Jones, 94-95, quoting Tailfer, Anderson and Douglas, A True and Historical Narrative of the Colony of Georgia in America. Cf. CR 5/529. Accurate representations of true conditions should be obtainable from various plans of the town or of individual lots sent to England during the 1730's and 1740's. For notice of several such plans, see ante, n. 18.

¹²⁸ CF 35/311-312.

perhaps the following data will suffice for a general picture: One of the earliest records of improvements is found in Elisha Dobree's letter to the Trustees on December 17, 1736. "I have a Small house with a Brick Chimney built on my Town Lot which is Fenced with Palisades & Clapboards well dengd [dunged] & now every way fit for the Propagation of all Fine plants . . ." ³⁴³ Harry Buckley reported to Oglethorpe: ". . . I have Fenc'd in my Town Lott & built a Clapboard Hutt upon it . . ." ³⁴⁴ Late in 1737 Thomas Hird wrote Oglethorpe that several people were busy building houses and others were improving their lots. The brickmakers, wrote Hird, "are Constantly making bricks of a much better Composition than formerly . . ." ³⁴⁵ In the same year, Dr. Thomas Hawkins gave a fairly detailed report on constructional progress: "Of Buildings, I am sorry I cannot give a Better account than that one Sinclare formerly a Servant to Mr. Houston at Savannah has Built a small Timber house of saw'd work. Will: Moor Tanner is about Building and fitting up Conveniences for his Trade. Henry Michel a Duch Servant of their Honours and Henry Myers a Duch Freholder have Built them houses of Squar'd Timber Loggs and I have Finish'd my house At my own Expence in great measure, and added half as much more in Length the Brickmakers have about 40000 Bricks of good Clay." Dr. Hawkins further said that 21 people cleared and planted their "home Acres last Season", and a half dozen had cleared, fenced, and planted "their 5 Acres". ³⁴⁶

By 1739 Thomas Upton had received a part payment for sale of his house and land for the use of the minister at Frederica. Upton had evidently built "convenient Housing", and had cleared and planted some of his ground. But he had grown discouraged, and decided to leave Frederica. ³⁴⁷

Even before 1740, Frederica had grown to the extent that three "Publickhouses" existed. These establishments were probably taverns, rather than simple lodging houses. The proprietor of one was Samuel Davison, and it is his complaint that furnishes the information: "In June last [1739] the Magistrates finding that the Town

¹²⁹ CR 21/283.

¹³⁰ CR 22/14.

¹³¹ CR 22/21-22

¹³² CR 22/16-17. See also Collections, I, 135.

¹³³ CR 2/309; 4/166.; for further data on the minister's house and church land., see CR 2/200, 259-260; 3/213; and others.

began to be Populous, thought it necessary to Licence another Publickhouse (one not being sufficient) & in regard to May [sic] Family they Licensed me, but the Doctr. [Hawkins?] & his wife daily threatens to pull me down & in Spight to me has Licenced another Publick house . . .”³⁴⁸

A few years later, the Widow Germain of Frederica appeared before the Trustees in London to tell the gentlemen, among other things, that Frederica was a “healthy” place; she was only widow amongst 60 families there. She had a house and garden, evidently on a town lot. The garden was enclosed and cultivated and sale of her greens profited her to the extent of 40 shillings. The Widow further said that “the timber fell’d on the land, the grain raised, and other produce of the peoples labour, are carry’d to the Publick Store, and the people have credit thereon for the same: for otherwise, there is no shipping or trade comes to the town, and they should not know what to do with their goods; That the timber thus fell’d, and made into scantlings planks & clapboard, was emply’d (that excepted used by themselves in building their hutts and fencing) by Mr. Oglethorpe’s command in Public works.”³⁴⁹

One of the big difficulties appeared to be finding the labor needed to improve the land. John Terry, Recorder at Frederica in 1742, wrote the Trustees explaining the situation in some detail. One practice, he said, was to hire soldiers to do the labor, if a military company was available. But not many of the settlers had the requisite money to hire such labor. In some cases, it was evident that Oglethorpe himself helped in various ways: “its true that Genl. Oglethorpe did Spare me men from the Kings works to build me My house,” wrote Terry, “there being here Neither houses nor Lodging to be had. And when my house, & Outhouses &ca. will be finished, wch. I hope will be In a very few days, then all my works & Clearing will be at an End my Cash Being quite Exhausted, Consequently Incapable to proceed without the help of Servants & that of a little Money . . . its true Great many Have build [sic] Little hutts on their Lotts but as for improvvements they Can Make None for want of Servants wch is a Genl. Tye to all our hands and what Stops Clearing & planting . . .”³⁵⁰ Terry’s “very Good house & out houses”, in which he proposed to live as soon as they were finished, were “two very

¹³¹ CR 22, part 2/353.

¹³² CR 5/170.

¹³³ CR 23/356.

sort Miles” out of town. Oglethorpe had favored Terry with “Many Gratificatons”, including “2 Men’s Labour for 30 Days, 5000 Shingles to Cover my house, the Carriage of 7 or 800 Bushells of Lime & Oyster shells, the Loan of a Little Money And Many Other things Worthy of Acknoledgmt.”³⁵¹ Terry asked the Trustees a few years later for two town lots – one for himself and the other for a relative living with him. Wrote John: “. . . I intend to build Good Brick or Tappy [sic] house on them . . . [If] the place called the South wood wch is a piece [sic] of Ground Laid out for a part of the Town and Not yet Granted, be Agree[ble] to Yr. Pleasure”, continued the writer, “I should be glad to have the two first Lotts Next to the Guard house, for I am in Great want of a Lott And house in town . . .”³⁵² Another petitioner for land near the guardhouse was John Perkins. He asked for 100 feet along the bluff between the guardhouse and the river bank to build a lumber yard. Perkins’ petition was granted, but it is uncertain whether his lumber yard was ever built.³⁵³

There is an interesting parallel to modern contracting work in the example of Thomas Sumner. Sumner was a carpenter. By 1743 he had built a pair of “good Houses” on his town lots. He asked the Trustees for a permit to sell his property so that he could “take up others with an intent to build upon and improve the same, Which will be Advantage to the Town, as some are willing to buy Houses ready built, but do not care to build themselves . . .”³⁵⁴ Incidentally, the sawpit at Frederica, manned by the “Trust servants”, who were “so expert as to saw 120 foot a day”, evidently furnished timber for most of the public buildings, and very likely for many of the private homes.³⁵⁵

During the score of years after 1740, there seem to have been miscellaneous improvements, such as Alexander Heron’s purchase of lots in Frederica, whereon he “built a very good house and made Gardens planted a large quantity of Orange and other Trees and many other improvements to a considerable value . . .”³⁵⁶

In the records, lots are usually identified by the name of the contemporary or the

³⁵¹ CT 23/361; see also 1/501-502.

³⁵² CR 24/266/267.

³⁵³ CF 8/15.

³⁵⁴ CR 1/422.

³⁵⁵ CR 5/348.

³⁵⁶ CR 25/490

previous owner (such as “John Mason’s lot”, or “the lot of Mrs. Bosomworth”), or by a title explaining its use, as in the case of the “Butcher’s Lot”, the “Old Barrack Lot”, and such. Occasionally a lot is identified more exactly, as “Number three on the North side of broad Street”, which belonged to John Calwell, Oglethorpe’s “Surveyor Gunner”, who served as the General’s engineer in the 1740 expedition against St. Augustine; or Lot 2, 1st Tything, lower New Ward, sold by Samuel Clee to John Lawrence.³⁵⁷

14. AGRICULTURE

In 1741 Oglethorpe wrote the Trustees: “The Town contains _____ [sic] of Freeholders & there is more likelihood of planting upon this Island than there has hitherto been, being about One hundred & Fifty Acres already Planted besides 40 Acres of clear Meadow enclosed for Hay, & some Teams of Oxen and Horses, besides a great many rideing Horses most of E’m taken from the Spaniards.” Oglethorpe significantly continued: “The Desertion of the People I have been obliged to remedy by filling up the Lots in the enclosed form and thereby keep up the Guard Dutys & Improvements. I shall think this Province is likelier to Succeed than ever and to become a strong Frontier”³⁵⁸

Lt. Col. Alexander Heron, of Oglethorpe’s regiment, stated to the Trustees “That the Land of the said Island [St. Simons] has a mixture of sand in it, but is fertile enough. That he has been at Virginia, South and North Carolina, and Other Parts of America, and that he has seen at Frederica on St Simon’s Island as good Indian Corn Pease Beans Cabbages Turnips Carrots Onions and Other Garden Stuff as at any of the former Places, And that the Soil is good for any sort of Garden Stuff. That Soldiers by their Planting have made three times more than their Pay on One or two Acres of Land. That five Acres of his own were cultivated by the labour of One Man (a soldier) two or three days in the Week. That Daniel Mackullan and Archibald Wright two of the Soldiers have together rais’d about fifty pounds Value a Year on their Plantation by

¹³⁴ CR 1/496; 2/480; 8/19; 9/316; 10/79; 24/174. For other general notes on town lots and other ownership in the vicinity, see among others CR 1/423-424; 2/198, 233, 488; 5/190, 525; 7/770 (a grant on the East Marsh about four miles from Frederica at a place called the “lime Kilns”).

¹³⁵ CR 23/23. See also CR 5/507. The “Plan of the Town of Frederica” (Collections, IV, facing p. 45) may be an agricultural layout.

joint labour, Poultry and Other things included. That he has often seen Capt. Carr's Plantation,³⁵⁹ and never saw so fine a One in all Virginia That William Ruff, Who lives at the said Plantation, produced last Year a barrel of Tobacco as good as any in Virginia, Which was purchas'd for the Regiment That Widows among these Palatines [a small German village on St. Simons] have supported themselves and Families on their Plantations, but that he do's not know any except them who support themselves only by planting. That there are considerable Numbers of Cattle Hogs and Poultry, and great plenty of Bees on the Island, and he has seen Walker's hives of them which are very numerous. That the water of the Island is very good, is about six feet under the surface of the Land and is not at all brackish, and that the town of Frederica is supplied from two wells."³⁶⁰

Capt. George Dunbar of the same regiment, went even further than Heron; "the Land of St. Simon's", said he, "is as good as any in North America." Capt. Dunbar said that "all sorts" or garden stuff, "particularly Asparagus" grew all year round "without Dugging the Lands." The settlers grafted European vines on the wild vines, and Dunbar thought that wine, silk, oil and cotton had possibilities in future development of the island. On Oglethorpe's farm, Dunbar remarked that he had seen "very good European Wheat"; and in his own garden at Frederica in one year he had 100 bushels of peaches and nectarines.³⁶¹

Sam Davison, one of the town innkeepers, raised 60 bushels of corn, 50 or potatoes, and 8 or peas on 6 ¼ acres he had cleared and fenced.³⁶² Archer Wright, resident 6 years at Frederica as a soldier, said: "the Lands mends every year by turning, especially if dress'd with Oyster Shells." Incidentally, during his Georgia stay, Wright had made 100 bushels of lime from oyster shells.³⁶³

Not all the colonists had such happy experiences, however. Sam Perkins gave a sad but interesting account: ". . . I have also done my endeavour in Planting, and was one of the first ten that Petitioned to have a Tything run out together, in order to make

¹³⁵ The site of present Brunswick. (Cate, 125.)

¹³⁶ CR 1/446.

¹³⁷ CR 1/446-447.

¹³⁸ CF 22, part 2/354.

¹³⁹ CR 1/448-449.

a fence round the whole, which was granted, and when we had bestow'd upwards of four Months hard labour upon it, and the fence near finish'd we were alarm'd the Spaniards were coming upon us, which occasion'd Mr. Horton (our then Governour) to give Orders that not a Man among us, shou'd go out of sight of the town, which Order we readily Obey'd, by which reason all that labour was lost, and no consideration has been made for it -- before the next planting season I had Improv'd my self in the Knowledge of lands, and found that there are good and bad here as well as in other parts, and that I had not above one Acker [sic] upon my great Lott that would answer planting, upon which, I intirely Clear'd my five acker Lott which prov'd to be better Land, and I fenced and planted, as much as my self and Man could manage, and so have continued every Year And am now leaving a Crop upon the Ground of several kinds, As well as Orange trees, Peach trees &c. I had also rais'd me a very good Stock of Hoggs, but after the fortifications round the town were begun, an Order was Issued by his Excellency, that no hoggs should be kept in the town, upon which I sent mine to my little Plantation, but after they had been there about six Months, they by change stray'd to town, and before I had notice given me, there 3 sows big with pig, and 3 Barrones Shott, by one of your Honours Servants, the rest I gott home, tho a Servant of the Genlls. Was sent to Shoot them as I was getting them into my Yard, and all my other Hoggs which were out in the Woods, are all kill'd since the Soldiers came to be in this town, which has made an end of that sort of Stock . . .”³⁶⁴

Furthermore, some of the settlers maintained that “the land will bear only 3 crops of Indian Corn . . .” After that, it was barren.³⁶⁵ Yet, “Pot-herbs, Pulse, and Fruit” sufficient to supply both town and garrison were grown near Frederica, and the people of Frederica early began “to malt and to brew”. The wives of soldiers spun the cotton of the area into yarn which they knitted into stockings.³⁶⁶

Among the exotic plants introduced were 6,000 mulberry trees that Oglethorpe bought for distribution amongst the Frederica inhabitants and their neighbors. Dr. Hawkins had two ornamental hedges of pomegranates on his property at Frederica.³⁶⁷

¹³⁷ CR 23/26-27. The town fence was never finished. Cf. Collections, I, 135.

¹³⁸ CF 5/524-525.

¹³⁹ Jones, 96, citing An Impartial Enquiry, 251-252.

¹⁴⁰ CR 2/390; 22, part 2/453.

One unusual grant of land was the 300 acre tract made over in trust to several Frederica citizens, “to be cultivated in order to raise a Maintenance for a Minister at Frederica and for other Religious Uses”; and to the minister himself a 5 acre lot was to be granted. The lot was to be fenced and cleared by the “Trustees Servants appointed to cultivate the three hundred Acres for Religious Uses at Frederica.”³⁶⁸

15. THE CEMETERY

The “Burying Ground” is shown on the Miller map as an area about 100 years square, some 100 yards northeast of the town gate and beyond the town wall.³⁶⁹ Here Charles Wesley preached the first funeral at Frederica, and John Wesley himself later ministered at many such ceremonies.³⁷⁰ It is apparent that in colonial days, the oak grove, the shrubs, vines and Spanish moss that shade the cemetery ruins today did not exist. “To the East. . .” wrote Kimber, the town “has a very extensive Savannah (wherein is the Burial Place). . .”³⁷¹ Today, beneath the gloom of the trees, there remain only four raised burial tombs and a sizable vault of brick and tabby (see plate 40).

16. THE MILITARY ROAD AND OGLETHORPE’S FARM

Traces of the military road connecting Frederica with Fort St. Simons, and along which the Battle of Bloody Marsh occurred, still exist. Through the extensive savannah east of Frederica this road was cut “to the other Side of the Island, which [i.e., the road] is bounded by Woods, save here and there some opening Glades into the Neighboring Savannah’s and Marshes, which much elucidate the Pleasure of looking. Down this Road are several very commodious Plantations . . . Preeminently appears Mr. Oglethorpe’s Settlement, which, at a Distance, looks like a neat Country Village, where the Consequences of all the various Industries of an European Farm are seen. . . .”³⁷²

Oglethorpe’s establishment was regarded more or less as a model farm; “if I Mistake not Genl. Oglethorpe’s farm is worth all the rest . . .” wrote John Terry in

¹³⁹ CR 2/200, 260.

¹⁴⁰ “Town and Commons of Frederica”, plate 39.

¹⁴¹ Cate, 120.

¹⁴² “Observations,” 5.

¹⁴³ Ibid.

Plate 40 - Tombs in the "Burying Ground"



1742.³⁷³ The “cottage” which was the General’s residence was a one-and-a-half of two-storied structure.

³⁷⁴ Thomas Spalding, who later lived on the Oglethorpe property, described it: A little south of Frederica, the military road “entered a prairie of a mile over. Upon the shore of that prairie, just where the road entered the wood, General Oglethorpe established his own homestead. It consisted of a cottage, a garden, and an orchard for oranges, figs and grapes. The house was overshadowed by oaks of every variety. It looked westward across the prairie (the common pasturage of the town’s herds), upon the entrenched town and fort, and upon the white houses, which had risen up as by the enchanter’s will. . . . And what though in time the spoiler came? The hand of unjust power first tore the soldier from his embattled hall; fire fell upon his dwelling, when there was none to arrest its force; and the smouldering ruin and the ivied wall are all that remain to where General Oglethorpe lived, or how he labored . . .

“This cottage, and fifty acres of land attached to it, was all the landed domain General Oglethorpe reserved to Himself,³⁷⁵ and after the General went to England, it became the property of my father; so that I am only describing a scene, traveled over by infant footsteps, and stamped upon my earliest recollections. After the Revolutionary war, the buildings being destroyed, my father sold this little property. But the oaks were only cut down within four or five years past,³⁷⁶ and the elder people of St. Simon’s yet feel as it if were sacrilege, and mourn their fall.”³⁷⁷

A monument erected in 1933 today marks the site of Oglethorpe’s “cottage”.³⁷⁸

¹⁴⁴ CR 23/356.

¹⁴⁵ Cate, 130.

¹⁴⁶ Mrs. Cate adds the following information: “‘the farm,’ which is generally called ‘Oglethorpe’s farm’, was a very large area. Spalding asked for 50A. of it, Raymond Demere asked for 5 A. of ‘the farm’, and elsewhere it is called the farm. . . The 50A. which James Spalding received was the only 50 A. grant he had in St. James Parish, for I looked it up when I was in Atlanta last. Thomas Spalding, the son of James, makes it plain that this is where he was born and spent his youth.” (Cate to Vinten, Sept. 28, 1944.)

¹⁴⁷ Spalding dated his manuscript March 20, 1840, which would indicate that the oaks were felled about 1835.

¹⁴⁸ Collections, I, 273-274.

¹⁴⁹ There has been some controversy over the location. For a study of Oglethorpe’s property on St. Simons, see Georgia Historical Quarterly, XX, 239 ff. Mrs. Margaret Davis Cate, who is responsible for the location of the monument, has amassed an impressive amount of documentation for the site. She sketches the justification for the site in her Sept. 28, 1944 letter, cited above.

