

# *Town Planning in Frontier America*

JOHN REPS

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## PREFACE

This book is based closely on my longer and more complete study of city planning in the United States, *The Making of Urban America*, published in 1965. It is an attempt to make available to a wider audience the material first presented in that volume, which, because of its size and cost, was necessarily limited to an edition of modest numbers. The tradition of American urban planning is a long and interesting one and deserves to be more widely understood and appreciated. I hope that this version of the history of an important aspect of our country's development will prove as attractive to the general reader as my earlier effort apparently did to more specialized scholars.

I have limited the scope of this work to an examination of city plans prepared before the middle of the 19th century, beginning with the first permanent European settlement in 1565 at St. Augustine. In order to make this narrative as compact as possible I have selected for review and discussion only the more important events of urban planning. The reader who wishes additional information for the period covered or material on the later history of planned city development to the beginning of the modern era may wish to explore my earlier and longer study and to consult its more detailed bibliography.

This volume incorporates new material discovered since the publication of its parent book. Much of the original text has been rewritten or rearranged. In this task I have had the benefit of comments, suggestions, and reviews stimulated by *The Making of Urban America*. Many of these have proved helpful to me in editing some of the earlier material, in correcting errors, and in modifying my first interpretations. I wish to express my gratitude to those who have contributed in this way to the present study as well as to thank again those individuals and institutions who aided my original research.

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## ***I • Introduction***

From the beginning of American settlement the planning of towns played an important role in the development of colonial empires by the European powers contending for the prize of the New World. Whether as market centers, bases for exploration and exploitation of natural resources, military camps for the subjugation of a region, ports for fishing and trade, or havens from the religious persecutions of Europe, the founding of towns occupied a key position in colonial policy.

The forms these towns took varied with the purposes of settlement and the skills of their founders. Although in Europe most urban growth occurred by gradual extensions and enlargements of long-established towns and cities, the towns of America were planned on virgin land. Their original plans, aside from their intrinsic interest, furnish valuable clues to the character of frontier life and the development of distinctive American urban patterns.

The first settlers brought with them concepts of towns and cities derived from European experience. These ideas of the proper patterns of streets, building sites, and open spaces and the institutional arrangements of land tenure were transplanted to an environment that differed sharply from Europe. Here was a vast continent stretching almost endlessly, where land was the most abundant of all resources. Certainly no shortage of building sites compelled settlers to cluster closely together in nucleated settlement patterns. Town life became the basis of colonial development for two reasons: it afforded the best protection against possible hostile attack, and it represented a continuation of the established system of living with which most colonists were familiar.

By the beginning of the 17th century each of the European colonizing powers had accumulated a substantial body of domestic experience in the design of towns, both in the creation of entirely new communities and, more commonly, in the extension or improvement of older settlements. During the years of active exploration and colonization in the New World, additional urban planning projects were carried out in the Old. This quite substantial body of urban planning theory and practice was thus available for application on the American continent.

Physical environment, isolation, and inadequate resources all acted in different ways to prevent wholesale transplanting to the colonies of the newer techniques of city design which had evolved in Europe. The North Atlantic proved a formidable barrier, permitting only the barest of essentials to be sent to frontier outposts clinging precariously to the outer rim of the continent. A harsh environment and a hostile

native population forced settlers to concentrate on those aspects of settlement which ensured mere survival and precluded much attention to many amenities of life, let alone more sophisticated approaches to settlement forms.

On the few occasions where elaborate urban forms were prescribed by some official in the comfortable surroundings of a European city, they were soon abandoned as impractical and beyond the limited resources of an infant colony struggling to maintain life itself. Thus the intricate instructions for city planning in New Amsterdam in 1624 drawn up in Holland had to be scrapped almost immediately. Only toward the end of the 17th century can one find examples of successful implementation of city plans that went beyond a tiny cluster of houses on a network of gridiron streets.

With the gradual easing of the Indian menace, the establishment of craft industry, and the development of regular trade with the mother countries, life became less bleak and attention could be diverted from activities aimed at survival and devoted to those aspects of settlement providing greater comfort and enjoyment. Among those was the planning of new towns in more sophisticated patterns and the extension or rearrangement of older communities on more spacious and attractive lines. At this stage of colonial development we can discern the influence of European ideas of city planning, modified to fit the environmental circumstances of America and further limited by the skills of technicians and the still restricted resources of colonial society.

The European city planning tradition on which our own was based exhibited a rich variety of elements and influences. A brief summary of this background of European planning is helpful for an understanding of how American city forms gradually emerged and in what ways they resembled and differed from their European counterparts. A number of distinct influences can be identified.

There was a series of architectural works dealing in part with the principles of planning, urban reconstruction, the extensions of towns, and the design of new cities. Of these the writings of Alberti and Palladio exerted the greatest influence on their contemporaries. Similar in many respects but forming a separate category were the various ideal city proposals put forward by utopian philosophers, economic reformers, and military engineers.

The European tradition also included a number of new towns, completely preplanned and built largely as designed. While most of these dated from the late middle ages, many came into existence during the Renaissance and Baroque periods just before or during the era of American colonization. Urban extension projects for most of the major cities of Europe also provided experience in large-scale plan-



ning and construction and furnished possible examples for colonial urban growth.

An important aspect of European planning which had a major influence in many New World towns was the development of residential squares and public piazzas or *places*. Not so extensive in scale as new towns or additions to existing cities, the squares nevertheless provided a sense of geometric order in urban communities which had grown slowly and irregularly.

Finally, the European tradition included a history of evolution in garden and park design, which in turn strongly influenced the layout of cities and especially the alignment of major streets and boulevards. The similarity in both scale and form between the gardens of Versailles and the plan of Washington, D.C., was no mere coincidence.

We now turn to an examination of these several related aspects of the European planning tradition.

### *The Theoretical Basis for European Town Planning*

The Renaissance in Europe witnessed the publication of numerous books on architectural theory and practice. Most of these works contained at least some reference to the ideal layout of cities. In this, Renaissance authors followed the model of Vitruvius, who wrote in the first century B.C. and whose rediscovery in the 15th century stimulated a long series of similar theoretical works.

The first important treatise of this type to appear was Leon Battista Alberti's *De Re Aedificatoria*, published posthumously in 1485. He was one of the acknowledged masters of the early Renaissance, having designed important buildings in Mantua, Rimini, Florence, and other Italian cities. Alberti, like Vitruvius, began by considering the ideal site for cities, then turned to such matters as the shape of towns, their walls and fortifications, and water supply. He gave particular attention to the system of streets and open spaces. For large and important towns Alberti felt the streets should be wide and straight. Smaller and less fortified towns should be planned with winding streets to increase their beauty and to give the impression of greater size. He singled out other streets leading to public places as requiring special architectural treatment for the buildings along their path. He advocated the development of piazzas and recreational areas for each district of the city. Finally, he suggested that certain industrial activities, offensive because of odor or noise, be prohibited from towns altogether and that the various crafts and industries be grouped together in districts set aside for that purpose.

A century later, in 1570, Andrea Palladio published a similar



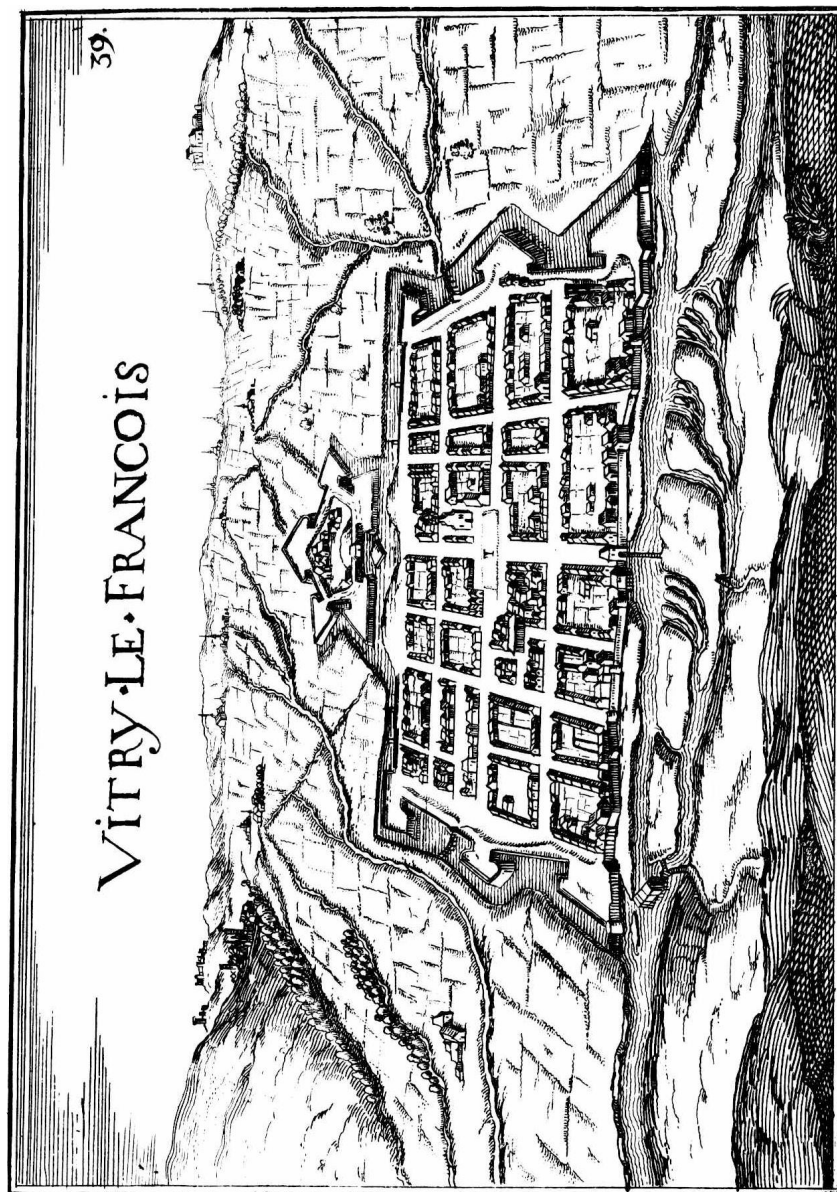
work. His *I Quattro Libri dell' Architettura* bulged with sumptuous views and plans of magnificent palaces and public buildings. The relative simplicity and restraint of Alberti's day had given way to the elaborate devices of the Baroque. Palladio's chief concern lay in the city as a visual experience. Mundane problems of water supply and sewage disposal he dismissed in a few short lines. Broad streets lined with imposing buildings leading to great squares embellished with fountains and statues are admiringly described. The image of the Baroque city of pomp and pageant appears in these pages—and it soon began to take shape as powerful princes, both secular and spiritual, began to remake European cities into these new patterns.

Every European country produced architectural theoreticians of the Vitruvian mold, although the Italians remained best known. The works of both Alberti and Palladio were translated into other languages, and these books and others of similar character exerted a powerful influence on the design of new towns, urban extension projects, the layout of squares and plazas, and the character of new streets and boulevards.

The theoretical basis for town planning also became a major consideration of military engineers. The introduction of gunpowder into Europe in the 14th century made traditional types of fortification obsolete. Castle walls which had served so well as a defense against more primitive weapons now were vulnerable to the breaching fire from cannon. Clearly some way was needed to keep artillery at bay. The method finally devised involved the construction of various types of outworks, either as separate strongpoints or as projections from the main wall. These outworks or bastions were usually flat, thus presenting a small target area, and so laid out that the flanks of salients received protection from adjoining points.

Such new methods of fortifying cities gave rise to a host of theories and proposals. Francesco Martini was one of the earliest and most prolific theoreticians, the designer of several ideal military city plans dating from the late 15th century. It was not long before these theories were given practical application. One of the first towns of this type was Vitry-le-François, designed in 1545, by order of Francis I, by the Italian engineer Hieronimo Marino for a site on the Marne River in eastern France (Fig. 1). Here a gridiron street system was employed within the fortified perimeter. At the center of the town the designer placed an open space at the intersection of the four main streets which served as both market square and military mustering ground.

A somewhat later and quite different plan resulted from the studies of Vincenzo Scamozzi for Palma Nova, built in 1593 as a military



*Figure 1. View of Vitry-le-François, France: 1634*



Figure 2. Plan of Palma Nova, Italy: 1598

strongpoint north of Venice (Fig. 2). Here the walls and bastions enclosed a nine-sided town with a system of radial streets focusing on a great central place, hexagonal in shape, in the middle of which stood the tower or keep. Six subsidiary squares midway between the center and the perimeter provided open spaces for the several quarters of the town, and smaller squares before the gates and the bastions also appear.

Another group of treatises influenced the layout of cities. These were works dealing with the art of castrametation, that is, the design of military camps. Castrametation books were based largely on Roman writings. Niccolo Machiavelli's *Arte della Guerra*, which appeared in 1521, was one of the earliest of a long list of such works. Most of them contained illustrations and diagrams of camp layouts, and there are certain similarities between some of these illustrations and the plans used in a few American colonial settlements.

Other theoretical sources for Renaissance town planning came from the utopian philosophers, chiefly Thomas More, Tomasso Campanella, Eximenic, Johann Valentin Andreae, and Francis Bacon. The utopian tradition, as well as the word itself, began with More. His *Utopia* appeared in 1516 and described an imaginary island containing fifty-four cities, each the center of a little city-state. Amaurot, the capital, like the others was limited in size to 6,000 families. More's cities had three-story row houses "so uniform, that a whole side of a street looks like one house." Each city contained four neighborhoods grouped around market squares. Like Alberti, More suggested that offensive uses be banned from the city proper and located nearby in the countryside.

The contribution to European town planning by these utopian writers cannot be precisely measured. Their direct effects were negligible. Indeed the authors themselves scarcely hoped for practical results; the descriptions of communities in their writings were intended primarily to lend an air of realism to programs for social and political reform. Indirectly, however, these writers may well have stimulated further thinking about the function of cities and how they could be planned.

### *New Cities for a New Era*

Completely new towns built on virgin sites and completed within a brief span of years were also part of the European planning tradition. Many of these date from the 13th century, when wholesale town planning took place in southwestern France by both the French and the English and, to a lesser extent, in northern Spain and in England and Wales. These so-called *bastide* communities were small,

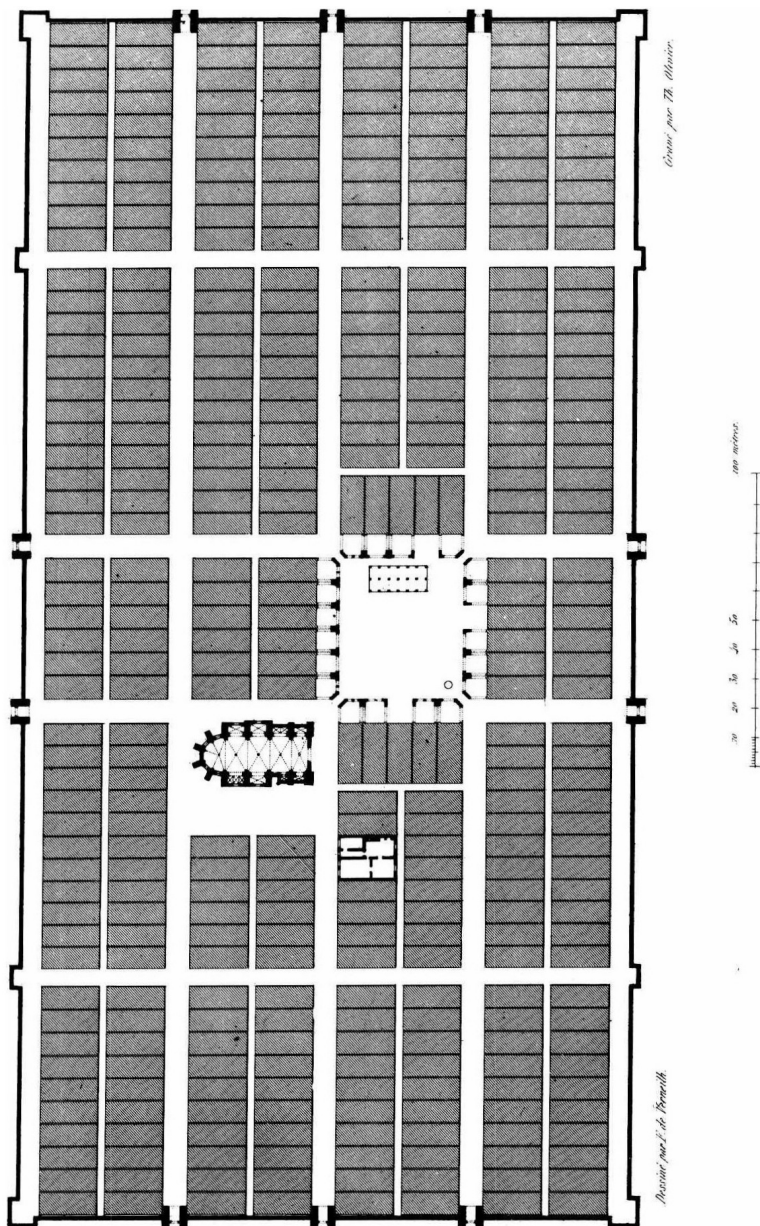
more or less rectilinear in outline, and generally exhibited a checker-board or gridiron street pattern, often modified somewhat to conform to irregularities of the site.

The best known of the French *bastides* is Monpazier (Fig. 3). It is a model of geometric precision, although there are subtle differences in the size of its blocks and the manner in which individual lots are arranged. Other *bastides* of this region show some of the influences of topography in their modifications of strict rectilinear order to fit sites of restricted area or with steep slopes. At least one American town partly resembled these 13th-century French settlements. Detroit, founded in 1701, had the same tight organization of gridiron streets within a limited perimeter. Its planner, Cadillac, was born in one of the *bastides*, spent his youth in another, and took his name from still a third. This suggests a direct connection between the plan forms of southwestern France and the original design of Detroit, although no documentary proof of this has been discovered.

In Britain the planned towns of this period include a number of settlements established by Edward I who had previously been responsible for the founding of many *bastides* in the English possessions in southwestern France, including Monpazier. They include Flint, Carnarvon, and Conway in Wales, and Hull and Winchelsea in England. Even earlier, dating from 1220, was the new cathedral town of Salisbury. All of these communities have a rectangular plan with straight streets intersecting at right angles.

Immediately before the period of English colonization in America the history of these settlements appeared in William Camden's *Britannia*. This volume was first published in 1586 and was reissued in many editions during the following decade. Drawings of these English planned towns were made available with the publication in 1611 of John Speed's great atlas of the country, *The Theatre of the Empire of Great Britain*. Englishmen active in American colonization and in the planned settlement of Northern Ireland at the beginning of the 17th century thus had been reminded of their own town planning tradition. First in Ireland and then in America these models were drawn on in the planning of new communities beyond the shores of the mother country.

Other likely sources of inspiration for those who sought to create towns and cities in North America were the new communities of the Renaissance. Most of these, like Vitry-le-François and Palma Nova, possessed some military significance, but a number of them were designed on a more lavish scale to serve as regional capitals. The new town of Nancy, planned in 1588 by the Italian Ciconi, sprang



*Figure 3. Plan of Monpezier, France: 1284*

into existence adjacent to the older settlement of the same name.

Nearby, also in eastern France, Charles of Gonzaga founded in 1608 one of the most elaborate of Baroque new towns. This was Charleville, whose plan incorporated virtually all of the devices of formal planning advocated by the architectural theorists of the time (Fig. 4). Generally rectangular in its street pattern, the plan included several squares and *places* where minor streets terminated. The noble ducal palace fronted the central square, which was surrounded by continuous buildings with uniform façades rising above arcaded side-walks. Three major streets, one from the river and two from land gates standing behind the moat and surrounding fortifications, led directly to this central *place*. A fourth street from the western gate ended at the rear of the palace. No more consistent expression of Palladian principles can be found. The clear differentiation of major and minor streets, the subsidiary squares, the Place Ducale, the careful attention

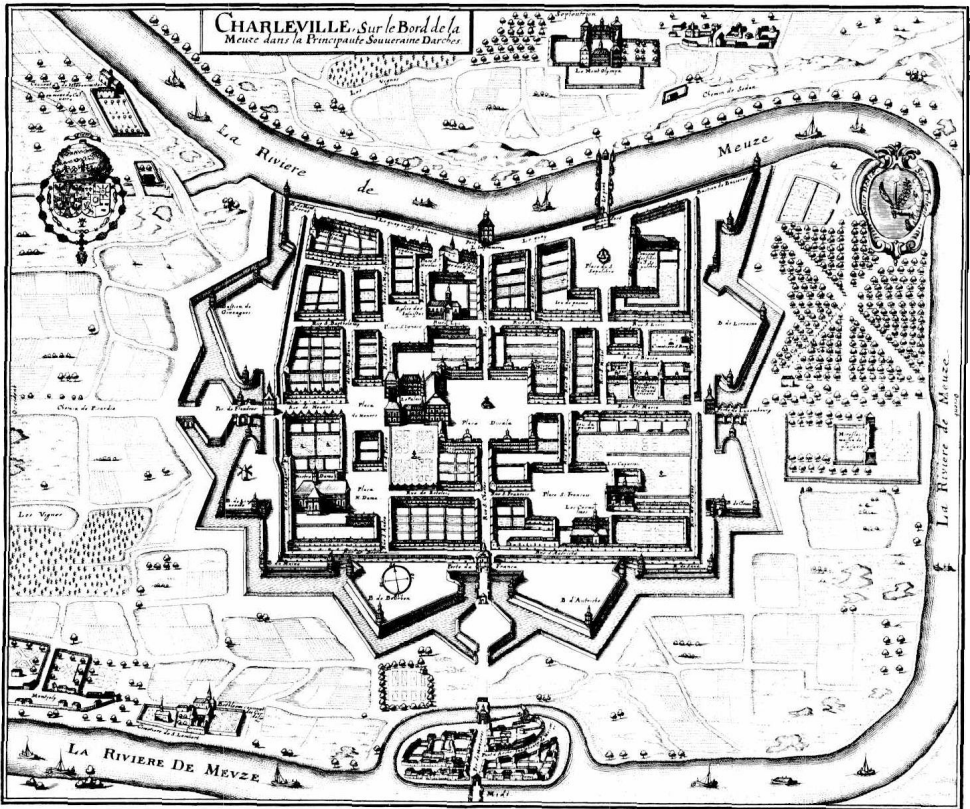


Figure 4. Plan of Charleville, France: 1656



to street façades, and the skillful placement of important buildings on axis with approaching streets, all demonstrate an understanding of the principles of Baroque town planning.

The one new town in Spain that undoubtedly influenced subsequent colonization efforts dates from 1492, the very year that Spanish exploration led to the discovery of a new and unsuspected continent. Ferdinand and Isabella, by their marriage in 1469, brought together the separate kingdoms of Aragon, Castile, and Leon. When Columbus departed on his first voyage the new Spanish nation was engaged in the last efforts to drive the Moors from the Iberian peninsula. Near Granada, the remaining Moorish stronghold, the Spanish rulers established the siege town of Santa Fé (Fig. 5). More than a temporary camp, the town even then had the appearance of a permanent community, and its plan remains little changed in the almost five centuries that have intervened.



*Figure 5. Vertical Aerial View of Santa Fé, Spain: 1958*

Santa Fé, in its scale and regular street plan, follows the familiar *bastide* pattern. The central square differs somewhat in form from that of Monpazier and the other *bastides*. On one side it is bordered by the main street of the town running from gate to gate. A short cross street enters the sides of the square near their midpoints, thus conforming in part to the canons of Renaissance planning. Here at Santa Fé may be the genesis of the remarkable Laws of the Indies that were to guide the planning of hundreds of Spanish colonial towns during the coming centuries. The close royal connection with Santa Fé and the planning of a number of colonial towns during the remaining years of the king and queen suggest that the Spanish-American towns owe their form in part to this specialized military community.

In turning to England we are struck by the almost complete absence of new town planning at the time such activities were at their height in France and also, in a more limited way, in the Low Countries, where such new communities as Philippeville, Willemstad, Coeworden, Naarden, Elburg, and Klundert had been established. The Renaissance came to insular England later than to other European countries, and its effect on town planning was rather different. Yet in the 17th century two examples, widely separated in space, scale, and design, must be mentioned. The first occurred early and resulted in the creation of several small new towns in northern Ireland. The second resulted from the famous London fire of 1666 and consisted of no less than eight separate plans for rebuilding the city. These were essentially new town schemes and properly belong in the group of plans we have been describing.

The province of Ulster in northern Ireland came under the jurisdiction of the English Crown at the beginning of the 17th century following the flight of the Irish earls. Their lands were declared forfeit and were disposed of by the Crown to the Irish Society, a colonizing company created by the common council of the City of London. In turn the society reached agreements with certain of the London companies for the settlement and development of designated portions of the area, retaining as its own responsibility the building of the towns of Derry and Coleraine.

Both plans date from about 1611 and are similar in that each had a gridiron layout with straight streets crossing at right angles. Each had a central square. That of Coleraine was about twice as long as it was broad and the streets entering the narrow sides intersected the square at the midpoints of the sides. Londonderry had a more regular design (Fig. 6). Its central square had sides of equal length, and all four streets providing access to the square entered at the midpoints of its sides. Uniform rows of attached houses lined the four approach