Building the River: An Introduction to Urban Design in Savannah, Georgia

Christian Dagg
Auburn University

Recommended Citation
http://pdxscholar.library.pdx.edu/arch_design/19

This Article is brought to you for free and open access. It has been accepted for inclusion in Proceedings of the 18th National Conference on the Beginning Design Student by an authorized administrator of PDXScholar. For more information, please contact pdxscholar@pdx.edu.
Building the River: An Introduction to Urban Design in Savannah, Georgia

Christian Dagg
Auburn University

The contrast between particular and universal, between individual and collective, emerges from the city and from its construction, its architecture... It manifests itself in different ways: in the relationship between the public and private sphere, between public and private buildings, between the rational design of urban architecture and the values of locus or place. —Aldo Rossi

This paper discusses one strategy for exposing architecture students to beginning questions in urban design and how this exposure can be structured within the design studio. Focusing on the city of Savannah, Georgia, the study of urban morphology and resultant building typologies are a basis for the studio research and design proposals completed in the spring of 2001 at Auburn University in Alabama. The studio was co-taught with Brian Mackay-Lyons, who has established his own Architecture and Urban Design practice in Nova Scotia. Mackay-Lyons' practice served as a backdrop for the studio through an emphasis on contextual research, through the sequence of design exercises and finally through the products of the studio. This studio served as a precedent for teaching the conceptualization of the contemporary southern waterfront city at the level of both urban design and architecture.

By focusing on a limited cross section of the city, perpendicular to the waterfront, Savannah’s local and idealized conditions are revealed. One ward of the original urban plan was utilized as a site in order to discover localized typological and morphological variations reflected upon this ideal order. Additionally, a length of the waterfront was utilized as a site to take full advantage of the unique conditions of Savannah’s orientation, climate and topography. Eventually, the studio identified five distinctive site types, and more importantly ten distinct street types, out of a total of sixteen project sites. A series of emergent conventions arose out of the interaction between the distinct sites that allowed not just for the consideration of a “redeveloped” Savannah, but also provided the space for speculation about the possibility of an ideal city type appropriate for any waterfront condition. This possibility was encouraged by historical research that revealed that the initial necessity of the Savannah ward soon became irrelevant as the social structure of the ward changed and the historical core disintegrated. The incomplete formation of this ideal urban form left the studio with the liberating possibilities of invention through modern design propositions.

Several pedagogical questions arise at this moment. This appears to be the description of a fourth year housing studio that one would find at almost any school of architecture. The studio consisted of both third and fourth year students and fit into the curriculum at the same time that other studios where dealing with urban sites and the question of housing. The difference should really be understood as the one between Urban Architecture, the insertion of a singular proposal into an urban site, and Urban Design, a proposal for the space between two or more developing buildings. Students were simply confronted with a topographic condition and prescribed block dimensions, the rest of the context developed in the midst of group discussions. Design presentations became negotiation sessions where students confronted their neighbors, sought out uniformity between the projects, and in several cases reconfigured the streets and spaces between their projects. Alleyways turned into shared green space and the slow ceremonial streets between the squares became envisioned as a pedestrian means of traversing the city. Additionally, height and priority was given to certain corner conditions, and many students began to understand the importance of providing good, generic city fabric as a part of their proposals.

The studio was broken down into a series of five exercises, coordinated with Brian MacKay-Lyons’ visits to Alabama. The exercises in chronological order were: Urban Analysis, the design of the Ideal House, Aggregation of the Ideal House, the establishment of Studio Rules for the design of the Ward and finally the development of a Wall Section. Within these steps certain lessons and issues of the discipline of architecture were covered, such as historical precedent, typology, the generation of architectural form as an additive or subtractive strategy, and contextual response. Only during the last step, when students were asked to design at the scale of the detail, were regional factors considered. The detail served as a device to be critical of earlier assumptions or solutions that concerned site, topography, orientation, climate, and material sustainability.

Brian MacKay-Lyons’ practice and teaching were an important framework for the formation of the entire studio in three ways. His appreciation of regionally available building technology, the use of three “house typologies” in the configuration of his own residential designs and his insistence on high density, low rise, zero lot line urban development all contributed to the formation of the studio requirements. MacKay-Lyons has been practicing in Nova Scotia, the island province of Canada, since 1985 and teaching in Halifax for just as long. When inserted into a place like Savannah where one free standing house covers two lots, where building technology relied upon
shipments from England, and housing types change within the same block, MacKay-Lyons' practice offers up a profound critical stance.

Like many architects before him, Brian MacKay-Lyons considers the problem of the house to be synonymous with the problem of the city. His practice helped demonstrate that connection between the large scale questions of urban design and their small scale constituent elements. To paraphrase Aldo Rossi, there has never been a city without housing, and when there is more than one house there is the anticipation of a city. One of the most inspirational images for MacKay-Lyons has always been the engraving of the Habitation at Port Royal from 1604-05. It shows the establishment of one of the earliest settlements in North America. Within the square courtyard configuration of buildings are all of the requirements for life in this isolated setting: barracks, a forge, dining quarters, cannon platforms, as well as a cemetery and gardens outside the protective wall. In many ways it is an image rich in meaning. It makes the connection between the house and the city, it is an image of collective enterprise and singular architectural form, it represents architecture as both protective and self-sufficient, and it is also typological, a courtyard building with outbuildings.

Within this image MacKay-Lyons found the incentive to begin practicing architecture primarily through residential designs, and in particular through three house typologies, the Barn, the Shed and the Cottage. The essential distinction between the three types is through the building's relationship with the landscape, which then inspires its interior spatial configuration. The Barn type responds to flat or hilltop sites that then encourages a centralized house configuration. It is the large open central space with smaller rooms at the end of the house or along the edges. A series of houses parallel to the grade of a site establish the Cottage type. These houses offer up a viewing platform to the sea, and by their orientation protect one side of the house from the winds coming off the ocean. As opposed to the centralized house, this type strings every room along the datum of the contour or seacoast and produces a distinct linear configuration. The third type is the cross-grain shed type. These houses operate perpendicular to the slope of the site. They are also linear in their configuration, but instead of offering every room in the house equal views of the exterior; this type relies upon a sequence of spaces ending in a gathering area with a preferred view of landscape. The insistence on typological manipulation as a means of formal invention, as inspired by MacKay-Lyons' practice, became one important design tool in the studio.

An argument could be made that building types are directly linked to available building technology. Brian MacKay-Lyons is equally concerned with local traditions, available material and how climate affects the use of these materials in each of his projects. His personal struggle with architecture has been shaped by his need to reconcile the canons of modern architecture with local traditions. During the organized studio visit to the city of Savannah we traveled across the city through the squares, identifying recurring house types, studying the ward, observing the confusion with which residential buildings faced the squares. We traveled back through the city through the alleys observing the servants quarters turned into student apartments, the stables turned into condominiums, and outbuildings converted into complete homes. It was here in the alleyways that we discovered architecture of ingenuity, invention and authenticity found nowhere else in Savannah.

Finally, Brian Mackay-Lyons' urban projects conform to a severe strategy of "high density, low rise, mixed use, zero lot line development." This strategy is uniform through each of his urban projects to date. He summarizes it best when he states "Consistent with an emphasis on modest means and the development of grammar, it is the focus on the value of the urban fabric and the ordinary that helps create memorable democratic places." The formation of the studio project required a density of housing that left no alternative but zero lot line development. Students were forced to look to their neighbors in order to share spaces or bound street space. Eventually, these three ideas had a significant influence on the students through the problem statements, presentation comments, and the visit to the site.

The first step of the studio was Urban Analysis. Military considerations, the ownership of land, and Savannah's cultural umbilical cord to England all influenced the shape of early Savannah. The historical analysis charted the growth of the ward pattern from the original six wards laid out during Oglethorpe's supervision until the existing twenty-four wards.

Fig. 1. Savannah 1856
that extended from the riverfront. It was at this point that the common lands of the original charter were exhausted. Additionally the students made maps of existing green spaces, street names, square names, and current institutional buildings. Another group of students created graphic timelines of Savannah's history and measured drawings of Savannah's "primitive hut", the original house type placed in the first ward. Through these group exercises, students had a clear working knowledge of the city within two weeks.

Without describing the complete history of Savannah, there are several historical conditions, discovered through the Urban Analysis, that give light to the development of this Southern city. Savannah itself was established in 1732, the last capital of the British colonies in America. There were four conditions that made Georgia a unique British colony. It was to defend Carolina from the Spanish in Florida, it would be made up primarily of England's poor and foreign Protestants, it would be in the hands of twenty one British trustees for twenty one years, and it would be an important node for trade with England. There were three results from these ideas. First, the establishment of an urban grid based on the form of military encampments. Second, there were restrictions on the ability to own land that perpetuated the use of this unique city grid for twenty-one years. Third, that England became an immediate source of wealth and cultural influence once restrictions on land ownership were lifted.

In 1732, James Oglethorpe was placed in charge of this venture, mostly because of his military experience. It appears that Oglethorpe had laid out the plan of the original blocks, or "wards" as they are known, before he arrived in Georgia. It is important to note that the ward layout resembles military encampments developed and utilized by English tacticians for hundreds of years. Oglethorpe's plan calls for a centralized square, to the east and west of the square are four "trust" lots for public buildings and to the north and south by four tythings. Each tything was then divided into ten lots measuring sixty by ninety feet given to the original colonists. The military arrangement of this layout is quite clear. Each lot belonged to a family, therefore it was assumed that there were ten men in each tything who were prepared to bear arms, they reported to the tythingman who then reported to the Constable of the Ward. Forty men were then easily mobilized within the square of each ward in defense of attacks from the Spanish forces in Florida. In addition to marching grounds, the squares also provided a defensible haven from attackers for livestock and other settlers who might not be living directly in Savannah.

In terms of urban design, it was very clear what types of buildings should go on the "trust" lots of the wards. A church, an infirmary, a "House for Newcomers" and the Town House occupied these sites in the first ward.

In 1750, many of the restrictions that had confined Georgia's economic prosperity were lifted. Up until this time the private ownership of land was not allowed. Colonists could not mortgage their land, or sell it to another settler; and only a son could only inherit the land. The inability to accumulate land or to use slaves in order to work larger farms, which was illegal, certainly stunted the development of Savannah as an economic force in the early southern colonies. However in 1750 all this changed. Slavery, rice, indigo as well as additional settlers soon migrated from South Carolina into Savannah. As private farms got larger outside of the city, the rich rice planters and shipping merchants became the most powerful members of Savannah society. The "trust" lots that had once been for public buildings only, soon became preferred real estate for the wealthy classes to build their homes. As Savannah exists today, the important institutional building facing the square have given way to row houses that preference different streets even in the same block, or large mansions imported from England.

Despite this focus on the ideal city grid of Savannah, the river and topography played equally important roles in the shape of this city. The city is only ten miles from the ocean, adjacent to the Savannah River; and forty feet above the level of the water. The areas east and west of the original six wards were actually unoccupiable marshland. These areas would later become the rail yards. The forty foot change in elevation at the river's edge required a crane that raised goods from the river to the bluff. The wards started far enough back from the bluff to allow an area to work and unload the ships. Today this area is known as the Factor's walk, a zone of irregularly shaped warehouse buildings that are four stories tall along the water and two stories tall when seen from the city. Another decision made early in Savannah's history was the location of the cemetery and common grazing lands. Originally placed far away from the city, today the cemetery is surrounded by apartments and the grazing common is known as Forsyth.
Park, a beautiful urban park.

In addition to land ownership, the argument has been made that building typology and vernacular materials constitute an important part of the consideration of any urban design proposal. Savannah is occupied by row houses, side porch shotguns, and a number of freestanding English mansions. Savannah’s affinity for English furniture, fine art and architecture lasted well into the nineteenth century. Some of the more elaborate architectural works of the early 1800’s were literally carved in London and shipped stone by stone on a boat and assembled in Savannah. In terms of local building technologies, the earliest Savannah homes were simple two room houses. Wood construction was preferred until trade routes with England supplied bricks and stone to the city. In the meantime, tabby, a material made of lime and oyster shells was utilized as a building covering and floor material similar to concrete. Finally, the Factor’s walk area is built of ballast stones. These stones cover the ground, build up the retaining walls against the bluff and sometimes make up the buildings along the river. These stones were carried over from England on ships that brought manufactured items for sale in Savannah. The lightweight items and the ballast were unloaded along the riverfront, and then the same ships loaded up with raw material to be brought back to the mills and manufacturing facilities in England.

The most unique aspect of the city continues to be the squares of downtown, generated from an ideal principle, but one that developed into a city with unrealized possibilities for understanding a city of landscapes as opposed to a city of streets. If nothing else, students could begin to see the richness of history and intention located in something as simple as the plan for one city ward.

After the historical and morphological study of Savannah, the next exercise focused on the design of an ideal urban house. Students utilized their knowledge of the house types and block types identified in Steven Holl’s Rural and Urban House Types, published in 1983, as well as house types specific to Savannah. The basic house type gave way to a series of manipulations and elaboration. The other important aspect of this exercise was that it brought the issue of designing dignified, domestic interiors to the foreground, as well as the necessity of thinking about interior and exterior as a reciprocal act in design.

Site selection was also made at this point. The original Savannah ward provided twelve sites. Four sites measuring 300’ x 90’ that faced major east-west streets, four sites of the same size that had a corner in the square, and the four “trust” lots measuring 200’ x 60’. Four additional sites were selected along the length of the river. Students randomly selected their site. The third exercise was to aggregate fifty units, previously designed as the ideal urban house, onto their site. Students began to design with no indication of the context except an understanding of dimensional adjacencies. The reconciliation between the scale of the unit and the scale of the block quickly became the main source of design friction.

The fourth exercise was the establishment of studio rules. It was the period when the emergent conventions of the overall urban design were established. Height restrictions, setbacks, the dimension of sidewalks and the identification of street types all contributed to the socialization of each design proposal. It was the period of time when the initial design proposals became calibrated and fine tuned in relation to the other projects. The students began to realize that not all of the urban design problems could be solved by architecture and the discussion of a landscape strategy also became a part of the project.

As mentioned earlier, there were essentially five different sites given to the students out of seventeen possible building sites. The ability to distinguish the different sites was made possible through the identification of ten distinct street types. The two primary streets are the north-south and east-west Square streets. These streets run directly into the landscaped squares at the center of each ward. The main difference in these streets is not just their orientation but also the fact that the north-south streets end in important institutional buildings along the river’s edge. The east-west streets traverse one street before encountering the next square and terminate in the open space of the rail yards. A current example of a north-south square street is Bull Street that terminates in the City Hall building at the river. East-west square streets are exemplified by St. Julian Street and President Street. The only other street oriented north-south is the Ward dividing street, a fifty foot wide road for efficient circulation through the city. A ward-dividing street today would be Drayton Street that terminates in the Cotton Exchange building.

Each ward is bounded by the high speed Bay Street to the north, the site of lawyer’s offices and institutional facilities, and to the south by the commercial street, Broughton Street. These street types alternate as they move through the city, between the purely commercial streets lined with shops to more ceremonial streets, lined with trees. Along the north and south edge of the square is the street type that provides a beautiful approach to the square when one is on foot. By car, these streets are not very convenient, as they are not...
through streets and insist on turning the squares into automobile rotaries. (insert Figure 4 here) Fig. 4. Final Model.

There are several minor street types worthy of identification. Each block is separated by alleyways, intended to be used as a practical way of removing garbage and other unwanted material from the lots. These alleyways are rather narrow and not well paved. Around each square is a one-lane street that splits the north-south street traffic and directs them around the square. Along the river's edge is the Esplanade, a green space separating the warehouses from the water. Finally, the buildings located on the bluff can be accessed from either forty feet above river level or residents can descend stairs to the submerged alley inside the bluff. This area provides Savannah with one of its most memorable images of small, suspended pedestrian bridges reaching over the Factor's walk on their way to the upper levels of the warehouse building across the gap.

Within this seemingly simply urban grid there exist a rich mix of widths, speeds and focus for the street types. The sites then responded to a combination of as many as five street types around their periphery. The student projects began to respond to this mix in terms of massing, circulation, and elevation composition. Mezzanines, courtyards, and light atriums also started to develop as a response to the site and context. Additionally, the alleyways and the east-west square streets were seen as sites for collaboration between the students. The alleyways disappeared and became shared green space between several projects. The space between the "trust" lots became seen as a green boulevard connecting the squares across the city from east to west. There seems to be little blocking this gesture, as the only real barrier is the ward dividing street running north and south.

In the end, the value of this studio was more in the questions students were able to articulate then their final product. By focusing on the constituent elements of a high density, low rise, zero lot line sense of urbanism, one will inevitably deal with the smaller elements that make up our cities. Typological consistency and locally available building technology are the building blocks of cities. It also encourages a design process where students are able to look beyond their own project and begin negotiating with other designers for the betterment of shared space between proposals. Savannah's idealized urban grid and its current formal confusion provided a compelling site for an introduction to the discourse surrounding urban design principles today.

Students

Notes
2 Ibid., 70.
5 Ibid., 75.
6 Ibid.
8 Ibid.
9 Ibid., 35.
10 Ibid.
11 Ibid., 27.

Bibliography


