

# ACSA COLLABORATIVE PRACTICE AWARDS

## RETOOLING THE HEART OF THE CITY: CORNWALL, ONTARIO, CANADA

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### ABSTRACT

Cornwall is a mid-size city with a population of 47,000 along the St. Lawrence Seaway in eastern Ontario, Canada. Founded as an agricultural town in the 18th century, Cornwall later attracted industries such as textile manufacturing, which contributed to its gradual prosperity and population growth. In the mid-20th century, Cornwall underwent a transition. Traditional industries moved overseas to countries with low wages and residents who made downtown their homes moved to the suburbs, along with the activities whose vitality had depended on their presence.

Efforts have been made to reintroduce activities to the core to make it a vibrant and livable place, but these efforts have had marginal success. Under these circumstances, the Revitalization Committee invited students of a McGill University School of Architecture to assist them in preparing plans to enhance the heart of Cornwall. During the Fall term, as part of the Housing Project I studio, the class researched the existing conditions and developed several master plan options. After the urban design was completed, each student chose one block and continued their designs in detail. Blocks were reexamined, new infill housing was designed, transportation network was improved and commercial streets were enhanced.

### DATA COLLECTION AND SITE ANALYSIS

Before the site planning began, the students engaged in data collection and site analysis. Each student studied one of the following topics: land use, circulation, building conditions and type of occupancy, zoning by law and building codes. The

findings enabled the students to understand crucial impediments that prevented the development of downtown. The data and its analysis also enabled the students to articulate their own design proposals.

Students realized that the crucial problems that currently prevent the development of downtown Cornwall are: Inefficient land use; Stagnant commercial district; Wasted land in the waterfront; Congested transportation and inadequate parking spaces.

### URBAN PERSPECTIVES

Based on the information gained from the site analysis, the students formed three groups to begin site planning. The objective in this step was to improve the existing conditions of transportation, zoning, commercial district and overall appearance of the built environment; develop new affordable housing to attract people back to live in the city core and to develop new public buildings to create new activities. The following proposal was prepared by one of the teams: Encourage Mix of Residential and Commercial Uses, Create Architectural Coherence, Introduce new infill housing, Improve the Overall Appearance

The selected strategies were: **To develop the waterfront:** Two residential blocks and a hotel were proposed on the waterfront. In order to respect the existing urban features, the new road system on the waterfront will follow the current layout of the network in the city core. A pedestrian street will also be added along the riverbank to attract more people. **To redesign a typical block:** The current problems of the block configuration are land inefficiency and the unattractive appearance of the

built environment. The proposed plan includes the subdivision of the existing blocks to increase density and improve the conditions of green spaces and parking facilities. **To rehabilitate Pitt Street:** Pitt Street, the downtown main commercial artery, is one of the most important features of the master plan. New public buildings such as a museum: gallery will be added; the streetscape will be improved by landscape design and building renovation. Also, zoning will be adjusted to meet the requirements of the newly added buildings. **To improve circulation and parking:** The proposed plan attempts to change the existing circulation network because most of the streets in the downtown area are one-way, which limits future development. In addition, more off-street parking spaces will be provided to reduce the burden on the main commercial street and also to improve the streetscape.

### DETAILED DESIGN

After the master plan for the core was prepared by the teams, each student chose one block to continue their proposed plans in detail. Much attention was paid to the rearrangement of the blocks and infill housing design in this step. The following proposal was prepared by one of the students.

The way chosen to arrange the housing within a block was to put the units along its edge and to have easy access from the streets. A new road bisects the block, creating two independent segments, each of which can have several housing arrangements, such as U type or L type. An "L" type road is added to divide it into two unequal parts. This way of subdivision can be used in the block, which has several types of housing in different cost ranges, which also meets the residents' requirement of separation. The third strategy provides the opportunity to maximize the dwelling density in a certain area; therefore, adequate parking and green space can be offered.

### SITE PLAN

Based on the proposed design concept, the existing block was subdivided to increase dwelling density. The first step of this plan was to add an L-shape road, which together with the existing road in the south offers the opportunity for the later housing development. In order to coordinate with the existing urban pattern and to create a high-quality built environment, a five-storey apartment building was proposed on the main street

to emphasize the urban feature. Rowhouses were arranged in the inner part to avoid noise from the main street. Since it is a high-density as well as a low-cost housing project, solving the conflict between adequate parking and the number of houses was crucial. This plan offers several solutions to meet the parking needs without increasing the unit cost. (Fig. 1)

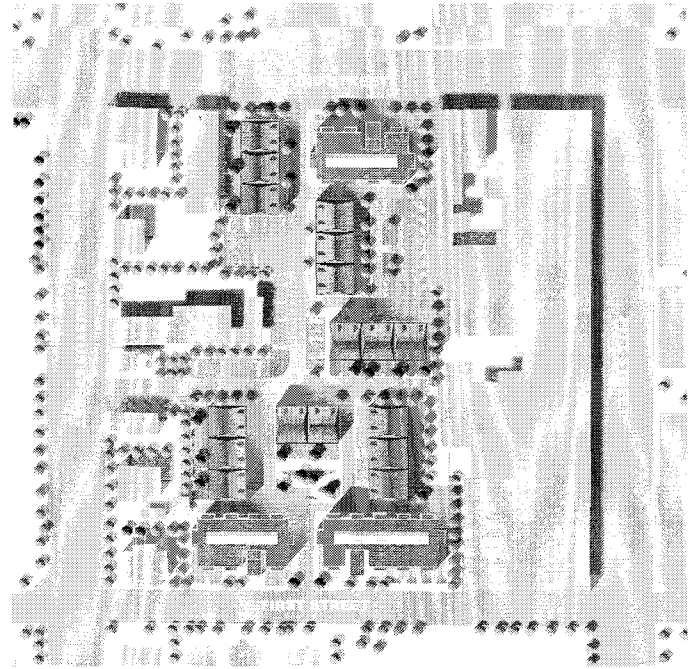


Fig. 1. Site plan.

### APARTMENT BUILDING DESIGN

Located between First and Second streets and west of the main commercial street, the target homebuyers of this apartment building are senior citizens living with or without their families, and young people who cannot afford a single family home. There are 40 units in this building, ranging from one to three bedrooms, which can meet various requirements of different types of families. Being housing student, the designer paid much attention to reducing the construction cost. In this case, all types of units were designed efficiently without wasted space.

The facade design is an attempt to change the monotonous appearance of affordable housing without increasing cost. Contrastive building materials, recessed balconies and exposure of columns emphasize the uniqueness of this building. In order to coordinate with Cornwall's existing urban features, bricks and concrete were chosen as the main building materials. (Fig. 2)



*Fig. 2. Apartment building, southwest view.*