sewerage, central heating and bath or showers. Nearly 70 percent have hot water supply. However, in rural areas, utilities are in much poorer condition. Sixty percent of the apartments of the State housing stock in rural areas do not have water pipes, 68 percent are lacking in sewers, and 64 percent do not have central heating. The utilities for the privately owned homes are in even poorer shape.

Town Design. There are some variations in the new town design in the U.S.S.R., depending on the type of industry that provides the new town job base, town size, the date the town was built, and its location. However, the design framework is basically the same. The basic residential unit for town planning is the micro-rayon, or superblock. Depending upon the size of city, each micro-rayon may have 6,000 to 12,000 residents. For the large cities, several residential neighborhoods are clustered around a residential district, which may have from 25,000 to 80,000 residents. Both neighborhoods and districts have their own service centers. The micro-rayons are clustered around a neighborhood school and convenience shopping; the district center may have a high school and more specialized services. These districts are clustered around the town center.

Typically, if heavy industry is involved, industry is separated from the residential part of the city by a large buffer, since a pollution control by dilution policy is followed. For academic communities such as Akademgorodok, the Siberian Branch of the National Academy of Sciences is integrated closely with residential development. Similarly, the
scientific town of Puschino outside of Moscow has the research facilities within walking distance of residential areas (see Figure 4).

5. Some Overall Observations on Soviet Community Development.

The facts alone are not enough to provide an understanding of Soviet housing and community development. Thus, this section contains a few personal observations about the qualitative aspects of Soviet housing and community development, based upon seven trips to that country and a review of the literature.

Design Quality. The most comfortable and attractive new towns that I viewed on the seven trips to the U.S.S.R. were two academic communities, Dubna, a scientific city north of Moscow; (see Figure 5) and Akademgorodok, the home of the Siberia Academy of Science near Novosibirsk. Both had excellent landscaping, modest densities (including single family housing), and easy accessibility to open space and the place of work by foot or bicycle. However, at least one residential area which I saw in October, 1987, trip to Akademgorodok consisted of disappointing high density large panel buildings typical of developments throughout the U.S.S.R.

Another interesting new town is award-winning Lazdina, near the Lithuanian town of Vilnius. It had a diversity of buildings in height and attractive site design. This community of 45,000 is on a hill overlooking Vilnius and is only 10 minutes away from the industrial area through a greenbelt, escaping the conformity of so many Soviet towns.
1. Scientists' Club with 1000 seat conference hall.
2. Administration building.
3. 300,000 volume library.
4. Cultural center with an 800 seat hall.
5. 250 guest hotel with restaurant for 100.
6. Shopping center (department store, clothing store, services, food store, cafeteria).
7. Cafe for 50 patrons.
8. Wide screen movie theatre.
9. Clinic, pharmacy.
10. Aeroflot agency.
11. Flower store with three attendants.
12. Educational facilities of the university.

Plan of the shopping center.

Another delightful community is the Soviet farm village of Salaspils outside of Riga, Latvia. This small town had predominately townhouses with beautifully designed furniture inside, well-landscaped commons and gardens, and a strong sense of community. The farm manager had a book of Jackie Kennedy on his shelf, symbolic of the fact that American culture had penetrated all over the Soviet Union.

On the other end of the attractiveness spectrum were the industrial towns of Mezhdurichinsk (80,000 population), near coal deposits in the Kutznets basin, and Bratsk, built around a paper pulp plant on the reservoir made by the Bratsk dam north of Lake Baikal. In Bratsk the more exciting hilly locations were overlooked for the site of the town, the trees were all removed, and a uninteresting standard group of high-rises was built. This served the pragmatic interest of the paper pulp industry but ignored the exciting potential of the terrain and landscaping.

Housing Quality. There has been a significant improvement in the quality and attractiveness of Soviet housing observed during the past 12 years. The new Soviet housing complexes in Moscow and Kiev viewed by U.S. delegations in 1985 were better built and more colorful that those viewed in prior years.

Nonetheless, there are many remaining problems with Soviet housing stemming from the highly centralized system and virtual monopoly on housing by the State and large cities. Recently, a prominent Soviet admitted that with the mass construction of housing the U.S.S.R. is far from finished with monotonous and drabness of construction, low quality
FIGURE 6. This view of housing in Togliatti could be in any new development in the USSR, reflecting a lack of interest and diversity in Soviet housing construction. A major priority is to improve design quality in the coming years.

Photo by the author in 1975
of amenities and lack of urban services. He felt that a main shortcoming of community development revolves around the standard designs for housing, which are widely used in the U.S.S.R. He wrote that many of the prototype designs are characterized by low quality planning and architecture, have caused difficulties in construction, and have raised costs.48

**Historic Preservation.** One of the glories of Soviet planning is its historic preservation. The quality of craftsmanship and pride in detail in restoration and preservation work was apparent in the rebuilt grand buildings of Leningrad and the Palace of Peter the Great outside of Leningrad, which had been virtually destroyed by World War II; the historic town of Zuzdal with its many historic churches, now serving as a major tourist center; the beautiful Moslem architecture of ancient Samarkand; the beautiful and classic architecture from the 1920s and 1930s in the center of Yerevan, Armenia; the restoration of the Kremlin Palace and churches within the Kremlin walls in Moscow; and the preservation of the buildings in the core cities of Tallin (Estonia), Riga (Latvia), and Vilnius (Lithuania).

**Services and Amenities.** Although conditions are improving, shopping and other services in small communities and suburban areas are often considerably behind large central areas of large cities. This is one of the reasons that there is such a strong desire to migrate to larger cities, and within those cities, the most desirable locations are within the central area of the city.
Landscaping in Soviet housing complexes, even the most modern ones, is often deficient. A Soviet expert in Leningrad said that the landscaping budget is always the first to be cut so that more buildings can be built. There is a problem also with maintenance by the large organizations that maintain the groups of residential properties.

Social Factors. One of the achievements of Soviet housing is the relative lack of racial and ethnic segregation in newly developed areas. In the new towns that I visited, it was also difficult to discern the differences between housing for the elite and housing for the workers. Henry Morton writes that often the Soviet upper middle class and workers living in communal apartments may be in the same building.49

However, there is some difference in housing within the city because of the tendency of various ministries to cluster their own employees in certain areas, which may have desirable access to central city amenities and transportation. Less privileged workers live in the outer suburbs with poor shopping and other services.50

Further, on a national scale, the controls over population movement to large cities may have the unintended effect of creating both a more and a less privileged class, depending on the accident of birth. David Shipler writes that to move horizontally in the U.S.S.R. is to move vertically. Thus, there is a constant pressure to move to the large cities, within which one has access to the best educational institutions, jobs, services and culture.51 In outlying areas, individuals may not fulfill their full potential because they have been assigned by the State to