CourseNo: PLANA6330_001_2013_3

Meeting Location: AVERY HALL 115

Meeting Time: F 09:00A-11:00A

Instructor Information: Graham L Trelstad

Course Objectives

Human settlements are created and communities structured mostly by private individuals or firms constructing buildings on parcels -- as long as the sites are accessible, somehow related to nodes of other urban activity, and equipped with support services. In the United States, this practice has been called "site planning" or "subdivision" and has created millions of houses and thousands of commercial centers around all American metropolitan areas and cities since World War II. The results have been roundly criticized from an urbanistic point of view; however, the public preference is still strongly in favor of this type of development. We should be able to do this job well, and seek methods through which a better environment, at affordable costs, can be built. The specific techniques that planners and developers can employ toward achieving good site development are discussed, and a reasonable degree of skill in application is expected to be obtained by the students. The course could also be called "municipal engineering," although it has a wider perspective than is usually understood by that technical term. To take specific physical actions alone is not enough -- they also need to be understood in terms of their effectiveness and efficiency. Their relationship to neighboring units and the community at large are important as well. The specific objectives of the course are: -- to offer the students adequate knowledge as to what actually exists, can happen, and is likely to occur in the physical urban environment (as well as on specific sites); -- to describe the process through which new land is transformed into habitable districts; -- to give the students a full understanding of what services and actions are desirable or required, and what they do; and -- to provide most of the necessary tools that will enable planners/designers and developers to operate constructively and professionally in their fields (and to judge when the need for assistance

by specialist arises). B. Scope of the Course The overall purpose of physical planning and site development is to achieve a livable and healthful urban environment, which becomes built gradually by private and public actions. Significant control can be provided and guidance achieved through regulations and the construction and management of public works and service systems -- mostly as a responsibility of public bodies. Private development will actually build the communities, and draw upon the communal services, which may or may not be available (or quite often may not be available at a sufficiently high quality and quantity). In the latter cases, developers themselves can or must build the infrastructure. In all instances, the public and private sectors should be cognizant of cost effectiveness and the long range implications of current decisions. The character of the built environment ranges from the highest density commercial core to houses on large lots in exurbia. Much is deliberately planned and built as projects, other development happens in an uncoordinated fashion -- a sequence of actions by individuals not connected by any plan. Infrastructure (i.e., support systems) provides access, circulation, utilities, supply and waste removal systems, telecommunications, and other basic amenities. Human life and well-being still depend on the natural environment, and advantage can be taken of various beneficial conditions of nature. But frequently -- while one should never sin against Mother Nature (she always gets even) -- specific modifications and improvements are necessary to overcome hostile characteristics, particularly those exacerbated by thoughtlessness or selfish actions. The latter condition is made particularly serious due to high densities and large population aggregations that require massive volumes of supply and generate huge amounts of waste. Practically all urban needs have to be supplied "artificially." For example, elaborate mobility systems and services have to be constructed and operated to allow urban operations beyond the pre-industrial walking scale. Managerial and regulatory systems affect properties and attempt to control their use. Every site, even a difficult one, can be developed, generally speaking. In many instances, however, the costs to the owner and the community can become exorbitant, and cost-effectiveness is always a fundamental concern. While the need for some sort of utility services has existed ever since the first settlements, modern systems are almost invariably less than a century old. Our society has developed an acute sense of the environment, and is facing today a major rebuilding task of obsolescent facilities. Private developers, whatever their own attitudes may be, are asked to participate in these efforts. This charge or challenge extends much beyond getting a project built cheaply and quickly. The professional planner is involved in several different

capacities in the development process. Planners can represent: the public sector in guiding and reviewing development applications; the private sector in formulating site plans and preparing technical studies; or the not-for-profit/community sector in providing guidance to community groups in their consideration of future development. This course will provide a broad-based understanding of the multiple issues at play in site design, which will later be enhanced by professional practice and observation. From this course, the student should be comfortable performing certain design studies, arriving at various layouts and design, and completing several types of calculations and estimates. The student should also be able to grasp the consequences of various actions, to gauge what can and cannot be done effectively, and to be able to communicate with technical experts.

Student Requirements Each student is expected to assimilate the available knowledge and experience at a level required of a professional planner. Specifically, the course requirements are: -- Design layouts for two commercial, two residential, and one mixed-use project through weekly design exercises. -- Preparation of a written site analysis and development feasibility report. -- Attendance at at least one Planning Board meeting and a written summary of the proceedings and your observations. -- Observation of at least one suburban community and written and graphic summary of the patterns of development. -- Attendance and participation in class. -- Final examination (open notebooks). Weekly assignments are listed in the Course Outline, below, in the week in which they are assigned. Assignments are due by the end of the next lecture. Additional information on assignments is provided in CourseWorks. Reading Assignments The principal textbooks for the course are Planning and Urban Design Standards (PUDS) by the American Planning Association (Wiley, 2006), Land Development Handbook, 2nd ed. (LDH) by The Dewberry Companies (McGraw-Hill, 1996), and The Subdivision and Site Plan Handbook (SSPH) by D. Listokin and C. Walker (Rutgers, 1989). These books are available at the Reserve Desk in Avery Library (and LDH is available as an e-book) and copies of PUDS and LDH have been ordered at the Columbia Bookstore. Sadly, SSPH is out-of-print at this time. Both PUDS and LDH are quite expensive but either would serve as a good desk reference now and in the future. PUDS may have broader applicability to the planner and to planning practice than LDH. As you will quickly see, PUDS is an excellent source for quick reference. The articles are short and often-times primarily graphic in nature. PUDS will provide you with grounding in the issues, but not

necessarily in-depth information. LDH, on the other hand, is highly technical and goes into exhaustive detail on engineering principles. (Its perspective on certain planning issues, especially as they apply in the northeastern United States, is questionable and will be the subject of discussion in lecture). I have assigned readings from each book to allow you to get the overall picture from PUDS, to explore more detailed information in LDH, and to prompt you to compare the different perspectives of the writers. The readings from LDH assigned for the class on "Engineered Systems" will apply to our discussions and your assignments for several classes. You may consider spreading those reading assignments across several weeks if necessary. I do not expect that you will commit to memory all of the detailed formulae and specifications contained in LDH. I do expect that you will browse through this material to familiarize yourself with the general nature of the subject matter such that you have an overall appreciation for the issues at hand. You will not be tested on specific methods of calculation or on numeric values or standards from the readings. Those values or calculations that you will be required to know will be discussed in lecture. SSPH deserves reading as it provides a general overview of the site plan and subdivision design from the perspective of regulation and process as the planner understands it. It is, perhaps, a good hybrid of the basic level of information provided in PUDS with the more detailed information in LDH. Other reading assignments are given to explore the evolving practice of site planning, especially in suburban and rural areas. Kevin Lynch and Gary Hack's Site Planning (MIT Press, 1984) is a classic work in the literature and should be read. Two books, in particular, provide excellent coverage of site planning and design in rural areas: Rural by Design (APA Planners Press, 1994) and Conservation Design for Subdivisions (Island Press, 1996) both by R. Arendt. Copies of each of these books are on Reserve in Avery Library and have been ordered at the bookstore. Conservation Design is available as an e-book. Additional readings have been noted in the course outline for your further consideration. While I strongly encourage you to at least peruse these works, I do not expect you to read every single page I have assigned. Let your level of curiosity dictate your reading list. From time to time I will provide guidance on what I feel to be the most valuable or interesting reading for each upcoming lecture.