

UJ UNIT 2 – Quarter 2: Assignment 5 13-22 May 2015

OPEN BUILDING INTENSIVE WITH PROF. KENDALL:

HOW TO DESIGN OPEN BUILDINGS: STUDIO AT DENVER AND MTECH2 SITE APPLICATIONS

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INTRODUCTION TO PROF. STEPHEN KENDALL

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Professor Kendall is a registered architect whose academic and research career spans more than 35 years. He has a professional degree from the University of Cincinnati, a Masters of Architecture and Urban Design from Washington University in St. Louis, and a PhD in Design Theory and Methods from the Massachusetts Institute of Technology.

Dr. Kendall has taught architectural design and urban design studios, and courses in building technology and design theory at all levels of professional curricula in several universities in the US, as well as in Taiwan, Italy, Indonesia, South Africa, Japan and China. He has experience in guiding professional, post professional and PhD studies at US and several foreign universities.

His research focuses on both architectural pedagogy and open building. The former springs from a recognition of challenges to the profession as we guide transformation of the built environment under conditions of change and distributed design. Preparing students with useful attitudes, skills and knowledge to enable them to contribute to the improvement of the built field, given these forces, is the goal of his studies of methods in teaching design.

His research in open building encompasses studies of new organizational and design methods, new logistics and new technology needed to make buildings more adaptable and thus more sustainable. His work focuses primarily on housing and health care architecture, facing a convergence of three dominant characteristics of the contemporary urban environment. First is the increasing size of buildings, sometimes serving thousands. Second is the dynamics of the living environment, the workplace and the marketplace where use is increasingly varied and changing. Third is the availability of, and demand for, an increasing array of equipment and facilities serving the inhabitant user.

He has written more than 30 papers and book chapters; is the co-author of a book (*Residential Open Building*), and many technical reports (recently also for the US Government Defense Health Agency), and has conducted many funded research projects. He has guest edited a number of journals and is on the editorial board of *Open House International* and *Frontiers of Architectural Research*. He lectures widely to university and professional audiences around the world. He is joint coordinator of the CIB Commission W104 Open Building Implementation (www.open-building.org).

INTRODUCTION AND STRUCTURE TO UNIT 2 ASSIGNMENT 5: OPEN BUILDING INTENSIVE



SHELL/INFILL Row-House Scheme
(Kendall student work)



Mass-housing upgrading - Voorburg, NL (photos by Kendall)

Open Building is about distributed control of environmental decision-making. It is also about change. Healthy environments are never finished. Time enters. Like living organisms, living environments replenish themselves part by part. In that process, who decides about what, when? **THESE ARE THE CENTRAL QUESTIONS OF OPEN BUILDING.** Some decisions have to be shared (we live with other people after all and share SOME values and environmental aspirations!). Other decisions have to be personal (we are individuals, too, with our own motivations and dreams and possibilities!) So open building architecture shows the imprint of both. If not, we make prisons (devoid of individual freedom) or anarchy (everyone for themselves). Neither extreme is desirable. So we need architectural knowledge and architectural skills to help find a balance! It is not something for engineers to do, nor policy makers. It is an architectural task! Is the façade completely determined by the community, or can each occupant decide part of it? Is everything (EVERYTHING) behind my front door my own decision, or...?

During his time with UJ_UNIT2 at FADA, UJ Prof. Kendall will present a series of “warming up exercises.” The unit will be divided into two groups of students: One focused on OB for row-house typology and the tissue model suited to this building type, with commercial space on the street level; the other group focused on restructuring an existing building type to make it into a capacious base building(s), in the context of the tissue model that is congruent with each building type. Prof. Kendall describes the process as follows:

“A TISSUE MODEL captures the main characteristics of a residential district – the interweaving of open space and built form, as well as functions. When we recognize a neighborhood or district as having a distinct, recognizable character, we say that it is representative of a particular TISSUE TYPE. For example, the main residential areas of Melville represent one tissue model, while the main shopping street of Melville represents another model. We understand this intuitively when we walk around there. We recognize “themes” and “variations;” we also recognize “non-thematic” aspects (unusual spaces or built forms).

It’s interesting to note that functions (e.g. dwelling, working, shopping, schools, clinics, churches, etc) can happen in both “thematic” and “non-thematic” built form. We can find a beauty salon in what is normally considered a house; or a building normally considered a school (possibly a non-thematic built form) can be occupied by a medical clinic.

One of the main differences in tissue models will be the question of FRONT and BACK. Row House Tissues have fronts and backs by nature of their typology, with the only real question being if there is an “alley” (small public space) giving access to the back. For the Hostel type, the front/back situation will have too be identified as well as how public/private outdoor space works and how the blocks may be accessed.

Another difference in tissue models will be building types. For example, single family detached houses are a “type” quite distinct from row-houses, or walk-up apartment buildings.

A third difference will be the dimensions of the open spaces and variations in those dimensions, as well as building heights. Some tissues have absolute height limits, some allow variation with limits.

A TISSUE MODEL is represented in diagrams. The model will indicate what variations are possible – e.g. whether all buildings must meet a “build-to” line along a street, or whether different interventions by different architects can vary in their position relative to the street edge.

We can, after studying a district, represent its TISSUE MODEL as an abstraction of its characteristics. We can also, in planning a new district, determine a TISSUE MODEL to be implemented to guide new development. When that TISSUE MODEL is applied to the particular site, it becomes a TISSUE PLAN. It is then used to guide the individual interventions by different architects designing buildings there. The “rules” or “themes” embodied in the TISSUE PLAN are what make that tissue identifiable, distinct...what gives that district its character.

For the row-house group, row-house base buildings developed by Prof. Kendall's previous students will be used to kick-start the process; the students will explore these base buildings – and their possible variations – for their usefulness in the given tissue. The students would then be introduced to the idea of plan variants and sub-variants (e.g. kitchens in different places, and for each, different layouts); façade variants (what is base building and what is fit-out); how to handle MEP (mechanical, electrical, plumbing); how to handle entrances from the street given commercial space on the ground level of row-houses; and how to consider extensions (either front or back or both, depending on the constraints imposed. Usually I would argue for building very close to the front property line (say 2-3 meters), but leave a larger “margin” for subsequent expansion in the back yard. So – narrow and deep plots). We would include consideration of climate, orientation, social structure of households, assumptions of incremental improvement of income and social stability, etc. Students' input on all of these assumptions will be very important.

For the “reactivation of existing building stock” group, the students will be introduced to basic principles of reactivation. I've done this previously by having students run through “editing” exercises, in which they “sweep” through a building editing (removing) as little as possible to get the most sensible variations in unit sizes and layouts, circulation systems, etc; then “sweep” through again, editing (removing) more and exploring what capacity is offered, etc. This can happen a couple of times until they develop a level of understanding of the process. Doing the editing requires simultaneous knowledge of basic ways to handle MEP, building circulation and facades.

I intend to introduce basic concepts of capacity, alternative ways to handle MEP, building circulation, and facades to both groups at the beginning. On the last day, the two groups of students will show their capacity studies, perhaps with rough physical models and of course drawings.

After the initial 2 weeks, the schemes developed are NOT FINAL PROPOSALS, because the tissue plan and building sites have yet to be developed – in which each student will know exactly the site conditions they will work with. These “warming up” exercises will however have prepared the students to do more specific and detailed proposals, once they have been given (or chosen) specific plots.

After I leave, the students will make TISSUE PLAN decisions, then decide how to divide up the site so each student has enough to work on. Someone (or a team) has to take responsibility for the public space design. At the end, they will be able to show a village as the result of many interventions – coherent variation at several levels!”

MTECH2 SITE/PROJECT APPLICATIONS

In Quarter 2, MTECH2 students will be asked to pay particular attention to levels of the built environment as well as to detect the methods of negotiation that happen in a selected area of study – as well as how that negotiation is facilitated (or maybe in some places, hindered) by the spatial and structural qualities of the area. You are asked to reflect on the lower levels of the environment, which are under the direct control of groups or individuals and reflect on the concepts of levels and agency.

You will be asked to develop a broad interpretation of Open Building – Open Thinking/Open Design/Open City, Permanent/Temporary, Long Life/Short Life, Higher Level/Lower Level, Shared/Individual, Entangled/Disentangled, Interconnected/Independent, Control/Chance, Planned/Unplanned. Again, this relates strongly to facilitating agency in the built environment.

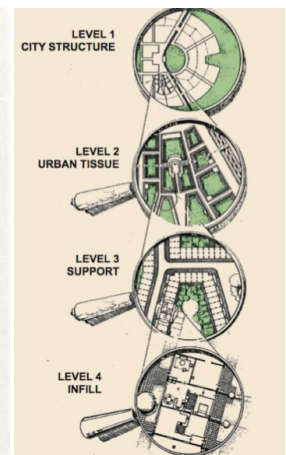
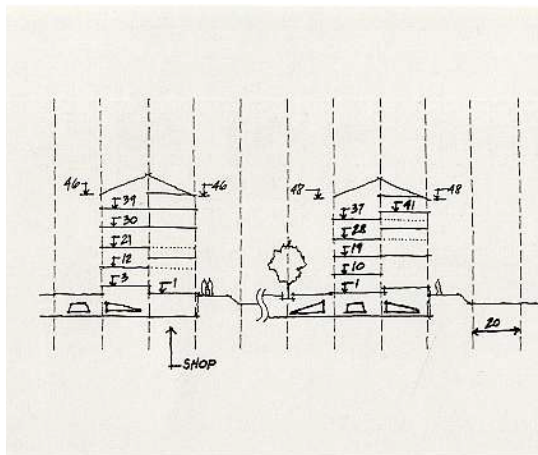
Quarter 2 will be see UJ UNIT2 engaging in collaborations with the FADA architecture STUDIO AT DENVER initiative, with an international visiting professor, but also strongly linking up with other design departments within FADA in a community engagement project. MTECH2 students will be involved in a manner that strengthens their understanding of process and allows them to apply these concepts in their own project sites. The studio leaders will advise on when these overlaps are to happen.

At the end of Quarter 2, you will not only have deepened your understanding of concepts and applications of Open Building through tools used in achieving Open Building (working with Tissue Models and designing Supports), but you will also have become more competent in neighbourhood analysis (with an Open Building perspective), documentation, representation and urban design.

WORKING WITH TISSUE MODELS

“I have the personal experience of feeling effective in teaching with the tissue concept, and students often comment that the associated ideas enable them to make new connections between history, theory, decision making and practice, not to mention help in developing a critical stance in relation to design.”

TEACHING WITH TISSUES: OBSERVATIONS AND REFLECTIONS
OPEN HOUSE INTERNATIONAL VOL. 9 NO. 4. 1984



From Habraken, *The Grunsfeld Variations*, A Report on the Thematic Development of an Urban Tissue, MIT

From Frans van der Werf

A TISSUE MODEL is a set of documents showing basic principles (Themes) of a neighborhood. Like any model, it is not wholly site specific – it is an abstraction. A TISSUE MODEL documents (and even allows us to calculate quantities) the spaces and built areas of a part of town that we want to have a certain character – to let us say “OH, I know where I am!! Its THAT neighborhood!” (A TM defines the characteristics of a neighborhood – this means that a city will likely have different TM’s, one for each neighborhood, but certainly these different TM’s can share certain features and are in any case, organized in the higher level URBAN STRUCTURE).

A TISSUE MODEL shows the thematic (typical) position of built form and open space. We usually need several documents, each showing some aspect: for example, one document can show the typical or thematic cross section thru the tissue (- like above - showing building height and separation, how high the first floor is above the sidewalk, or if there is a front yard or back yard and the maximum and minimum dimensions of those spaces); another document shows the placement of thematic (regular and recurring) open spaces (like main streets and secondary streets at some distance from each other). Some documents are "overlays" used to show where functions may be placed "thematically" in relation to the BUILT ZONES or OPEN ZONES (e.g. where there is "open" space, various "functions" might go there (e.g. car storage, recreation space, gardens, etc).

In addition, a TM will assume certain basic building types as thematic (for example, town/row houses; or 4 story walk-up apartments with some ground accessed units; or high rise elevator buildings with double-loaded corridors (or single-loaded gallery corridors).

NON-THEMATIC buildings (special buildings for schools, churches, hospitals, theaters, sports buildings, shopping centers) may be given other “rules” for placement or relationships to other TM elements. On the other hand, some of these functions may want to be placed in THEMATIC BUILDINGS. In this case, these “functions” can be notated in the TM documents showing where functions may go in the TM’s thematic built form and open space (for example, a main street where ground floors are usually shops, but on other “side” streets these are not allowed).

When a TM is applied to a specific site, it has to be transformed in one way or another to fit the particular physical characteristics of that place – a river, a highway, a built-up area to be maintained. (e.g. a TM will probably be somewhat warped, cut off, bent to fit, but not so much that its Thematic characteristics are lost). In other words, a TISSUE MODEL - when applied to a real place (when it becomes a TISSUE PLAN - or URBAN DESIGN) notates what is agreed upon as the "characteristics" of that neighborhood that will last for a long time. It is basically a set of clearly notated rules (themes) that don't require ad-hoc negotiation and explanation.

With this TISSUE PLAN, each land developer (and her architect) knows what the rules of the game are in the parcel of land they will develop (or redevelop). They know in what ways their building will share properties, dimensions, public/private hierarchies of space, entry types, and even materials palette with their neighbors. They know the constraints on their freedom to design, and also their opportunities and possibilities.

WORKING WITH SUPPORTS / BASE BUILDINGS

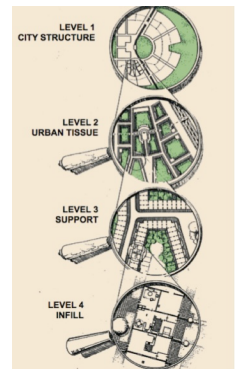
“As a pedagogic approach, the idea of SUPPORTS is exceptionally useful. It contributes theory and method, and provides a conceptual basis for students to explore in connected ways a wide range of issues germane to housing and building; from building technology to the organization of decision-making; from questions to formal design starting points to computer aided design. It also allows students to address the tired dictate that form somehow follows immediately from function, by asking for attention to the idea of change of function over time.”



Papendrecht, Molenvliet by Frans van Der Werf
(photo by Kendall)



Courtyard in the Molenvliet project



Frans van Der Werf

A BASE BUILDING is architecture with capacity – capacity to be inhabited by different people who can decide how they want to use and lay out their space in the building. BASE BUILDINGS combine stability and change.

A BASE BUILDING is a constant and, in multi-family buildings, is what all occupants share. This is a very important task for an architect. What they design has to be sustainable (energy effective), adaptable and lovable all at the same time. Not a passing whim of fancy design in style at the time, but something enduring. Timeless.

The TISSUE MODEL and its PLAN notates Themes at the urban design level and offers possibilities (and rules) for variation among the buildings and spaces that make the plan real – over time. The BASE BUILDING gives the architectural (building) Theme and offers opportunities for variations at the fit-out level – over time.

The FIT-OUT or infill is what can be decided by the inhabitant in their territory. What exactly is the territory of each inhabitant? What is the architectural manifestation of this territorial claim? What are the signs of territory? And inhabitants change during the life of the base building – a small family becomes larger, or a larger family becomes smaller; or a family with few resources comes to have more resources. Does the inhabitants' territory enlarge or shrink, or only change its lay out within a fixed territory? Or families' move out and new families come in.

The base building will probably last a long time, so it makes sense to invest it with durability and long-term return on investment in mind. The fit-out can be more changeable, but will still probably last 20 years or so before being completely transformed. The fit-out will not depend only on technical performance, but also on user preferences, which are not only (but may include) technical and cost issues!

There are many interesting technical issues in base building design. Aside from the basic architectural/spatial question of the building type (row house, walk-up, elevator/corridor building), there are three other important questions: 1) which part of the façade belongs to the base building level, and which to the fit-out; 2) where should the base building MEP systems go (mechanical, electrical and plumbing) to enable variable layouts of spaces in which the kitchens and bathrooms are not rigidly fixed in place, size or quality, and most important, what is the capacity for floor plan variations? Are all units the same size, but able to be laid-out differently (some with the kitchen in the front, some in the back, for example); or can unit sizes vary in the same building floor plate? Can the same building have two-floor units as well as single-level units; can you have a rental unit + your own space in the same sq. meter area that the next-door neighbor is using for their single-family house? These are architectural and technical issues combined!

THE DENVER CONTEXT : AN EDUCATIONAL EXPERIMENT



Assignment no. 4 has introduced the students to the Denver site through a desk-top study using the data generated through the **STUDIO AT DENVER** projects and provided by the coordinators. This study will be followed by the first site visit by the group and some of the lecturers. In a way, this has reversed the process usually followed in studio, where the students have generally been asked to visit and familiarise themselves with the site at the very beginning of the process, and before any decisions are taken. In Assignment 5, we have challenged the students to make some decisions regarding the site before having walked the site or immersed themselves in the local conditions. This “experiment” is intended to raise some questions, and in the process maybe discover alternative ways of practice, through an immersion in urban forms, developing skills in design, density, form, scale, services, materials, technology, prior to an actual neighbourhood immersion exercise later in the project. The developed forms will be re-assessed and refined based on a more in depth understanding of context.

To achieve these aims, the focus will be on the existing hostel blocks as sites for future multi-family developments, as well as on two strips identified on the edge of the informal area to be used for family row housing: “We have identified the 'gateway street' called Plantatie road. It in our opinion the most promising site for radical redevelopment and comprises of multiple near-demolished buildings and plinths squatted in various ways. But with good starting points for mixed use, street oriented architecture and housing.” (Eric Wright, **STUDIO AT DENVER** coordinator, email communication).

As we do not have the detailed drawings of the hostels, we will be using the basic spatial typology (public circulation type), number of floors, floor plate depth, floor-to-floor dimensions and construction type for the exercise. The general location for the two interventions and general tissue characteristics of each are needed for the 2-week intensive assignments – the themes of which will be continued till the end of Quarter 2.

In dialogue with the **STUDIO AT DENVER** coordinators regarding this approach it is evident that the studio has a particular approach to this aspect: “In our approach this top-down would need to include spatial development frameworks, development plans, NUSP reports etc. If we are able to quantify and summarise the province's/city's stance on the site this will inform the formulation of design proposals to be both radical and realistic as an interpretation/response to local government intentions.”

There is also a concern from the coordinators with regards to looking: “...too heavily to the physical aspects of context. The [later] immersive process will call for cultural and social sensitivities. We suggest including time frames for (*limited*) *transformation* immediate, medium term and long term strategies/goals.” The brief for Assignment 5 is deliberate in its carefully structured process to enable the achievement of a balance between the physical and the socio-cultural conditions – however it also acknowledges that built form – carefully considered – may facilitate and support socio-cultural process. UJ_UNIT2 hopes to engage in a meaningful debate with the **STUDIO AT DENVER** intentions, listed as follows (as received from the studio coordinators):

- develop a collaborative design 'handbook': a catalogue of typologies of dwellings in informal settlements with related strategies for improvement through self-build, co-ops, CBOs, local Government assistance, infrastructure etc.
- form a critical investigation into current upper strategies for informal settlement upgrading
- critique the recently-developed NUSP course on in situ-upgrading
- unpack and test the chapters related to the social and physical upgrades possible in the area by NUSP's definitions
- emergent definitions from the co-production of strategies through site work

THE PROCESS AND TIME FRAMES

This 6-week exploration of Open Building with Prof. Kendall is in three components:

Q2 WEEK 2 13-17 April

Q2 WEEK 3 20-24 April

This two-week workshop focuses on introducing students to the step-by-step methods needed to design an open building. The workshop consists of lectures, discussions and “warming-up” design exercises. We won't design whole buildings or complete projects but will help you get ready for that task in the weeks following this two-week introduction. Referring to real world examples, enrollees learn both the theory underlying open building, and the design and building methods available to implement open building projects. How to think about CAPACITY of certain building types and how to deal with trade-offs when designing for change are dealt with, among other things, in the lectures and design exercises.

Lecture topics include:

- a. Theory of Open Building and its implications
- b. Open Building projects from around the world
- c. How to design an open building – Capacity analysis

- d. How to build a base building – exemplary technical solutions
- e. How to devise, deliver and install fit-out – exemplary technical solutions

The days are structured as follows:

- Monday 13 April 09.00-11.00 General introductions
- Monday 13 April 11.00-13.00 Kendall lecture (open)
- Monday 13 April 14.00-16.00 Student exhibition and presentations on Denver Assignment 4
- Monday 13 April 16.00-17.00 MTEch 2 presentations of individual sites
- Tuesday 14 April 09.00-11.00 Unit coordinator meeting with a representative from each group for tissue level decisions to design the "rules" or "themes" that each teams' intervention (one or more buildings, depending on how each team works) should use – each team to appoint one representative to work together on that for a day.
- Tuesday 14 April 11.00-17.00 Denver site visit
- Wednesday 15 April 12.00-15.00 MTEch2 site visits
- Wednesday 15 – Friday 17 April Each student group works with one of two possible building types
 - a) A linear edge built form, located at the informal settlement site to contribute towards an anticipated re-blocking to happen in the near future. The exact location, dimensional variations and orientation of the prescribed tissue plan will be made available to the students in the morning. The students will each design a set of 2-3-storey residential units adjacent to each other in a row-housing typology. Each student in a team is to design a set of 3 row houses, side-by-side to make a "street space", two teams on either side of a street. The details of this will be developed with the students.
 - b) Working with the existing structures of the hostels in a multi-family housing development. The intention is to ensure minimum cost to transform existing buildings into good base buildings. In component b of the exercise, each student is responsible for a base building design for 20 (+/-) dwelling units – this will depend on the size of the existing hostels: if each hostel is bigger than what will hold 20 dwellings of varying sizes and layout, the larger building needs to be subdivide into parts, each the responsibility of a student or team, to be assembled into a coherent urban block to fit in to the prescribed tissue plan. The urban blocks would have to be placed in the tissue with each intervention sharing the same set of architectural themes.
 - c) The teams are then tasked to develop scale models (and drawings) and put them together to make a coherent fabric.
- Wednesday 15 – Friday 17 April The MTECH2 students are tasked to:
 - a) Articulate the arguments for site selection
 - b) Articulate the uniqueness and/or replicability aspects of the identified problems and relate that to the site selection process
 - c) Refine the intentions, users, clients and various other parameters of the project
 - d) Produce a series of drawings/maps/diagrams/graphics – base information extracted from
 - e) Identifying the elements (physical, spatial or systemic) that are deemed of value to be retained in future interventions
 - f) Make decisions about the intervention type and its exact location within the larger site context

The second week of Prof Kendall's intensive engagement with the UJ_UNIT2 students in studio aims to give the students skills in the following:

- a) How to design with CAPACITY – how to adjust an existing building to make it more “open” (designing a base building from an existing building) – THE HOSTELS
- b) How to think about the placement of the base buildings' utility shafts/trenches in respect to what is served (unit variety in size and lay-out) – IN THE NEW ROW HOUSING, IN THE EXISTING HOSTEL STRUCTURES
- c) How to design a façade for an open building – IN THE NEW BUILDINGS AND IN THE EXISTING HOSTEL STRUCTURES

During the week, and running in parallel to the above, the MTECH2 students will work on their selected sites to define:

- a) The potential for the insertion of new buildings, landscape or appropriation and re-use of existing buildings and the relationship to the surrounding structures
- b) How to think about the placement of the base buildings' utility shafts/trenches within the chosen sites
- c) How to design a façade for an open building

The intention is to introduce basic concepts of capacity, alternative ways to handle MEP, building circulation, and facades to both MTECH1 groups, as well as to the MTECH2 students, at the beginning. On the last day, the two groups of students, and the MTECH2 students, will show their capacity studies, perhaps with rough physical models and of course drawings.

Q2 WEEK 4 27 April – 01 May

Q2 WEEK 5 04-08 May

Based on the two week intensive workshop offered by Prof. Kendall, the knowledge gained and skills

developed, as well as the analysis and research carried out on the area of Denver, the students will now undertake an immersive exercise alongside the UJ 3rd Years as well as via the Joint FADA community project which includes the disciplines of Architecture, Industrial Design, Multimedia and Graphic Design – in collaboration with partners from the various community-based structures that make up the governance of Denver.

The unit will work closely with these stakeholders to critically co-develop a contextual understanding of the socio-spatial factors of the neighborhood and its immediate surrounds over a period of 4 weeks. The outcomes of this process will be determined by the nature of the engagement and are not fixed as yet.

MTECH1 students will be aiming to transform the previously prescribed tissue models (developed during the Kendall Intensive) to fit the specifics of the Denver site and make a TISSUE PLAN (an urban design) into which individual teams and designers can place their contributions to make a whole fabric. Such a living tissue will have built-in margins for (limited) transformation over time, both inside buildings and on their edges (e.g. additions big or small depending on the prescribed “margins.”) while including crucial socio-spatial information developed during the immersion. This TISSUE PLAN (urban design) should come from the co-developed immersion and critically engage with the initial technical exploration.

This intensive collaboration with the studio at Denver teams which also runs in parallel to the launch of the FADA joint community engagement project, will require some logistical coordination and further details will be provided.

MTECH2 students will also be aiming to refine and add to the design decisions developed during the 2 weeks with Prof Kendall to fit the specifics of their project sites – however, it is intended that this be carried out through a more studio-based engagement at this stage as the site immersion exercises have already been carried out.

Q2 WEEK 6 11-15 May (mid year unit reviews) The students are now tasked to develop the tissue plan and building sites based on the knowledge of the site gained in the previous 2 weeks of immersion in context. The intention is that each student will now know exactly the site conditions they will work with. The students proceed to detailed proposals on specific plots. The whole group will together take responsibility for the public space design.

Q2 WEEK 7 18-22 May The final week will be used to refine the individual projects within these frameworks, in consultation with the studio leaders and as far as possible some input remotely from Prof. Kendall – who will be involved in the final assessment of the projects.

This process is both “top down” and “bottom up.” Top down means that knowledge of the context (prior and on-going studies) has to inform the spatial order and built-form vocabulary of the neighborhood design. Bottom up means that knowledge of various building types and their capacity is a key ingredient of a coherent but living, growing and welcoming neighborhood.

For the MTECH1 students, the outcomes for these two weeks will be a final project, which includes the listed outcomes below, and will be assessed based on the listed set of criteria. For the MTECH2 students, the outcomes will be a conceptual design and a first draft of the dissertation document which must include an abstract, a definition of a research problem, a thorough site selection motivation and analysis, a critical response to the issue of programme, the users/clients/funders, ethical considerations and architectural/urban precedents as well as a comprehensive bibliography.

OUTCOMES – DENVER APPLICATIONS

- a) A linear edge built form (made up of individual row houses) located at the informal settlement site – 2 to 3-storey residential units adjacent to each other in a row-housing typology.
OR
- b) A multi-family housing development using “reactivated” hostels.
- c) Scale models (and drawings) and how they are put together to make a coherent fabric
- d) Revised and completed tissue models based on contextual realities showing delineation of public spaces, parks, group parking, commercial areas, public facilities, etc.
- e) Technically resolved individual projects
- f) An individual blog entry by each student reflecting meaningfully on the process and the topics raised in this brief and throughout Quarter 2

ASSESSMENT – DENVER APPLICATIONS

Your submissions will be assessed based on the following criteria:

- a) The completion and design quality of the linear edge family housing or the multi-family residential development
- b) The quality of the scale models (and drawings) and the synergy between individual and group decisions
- c) The quality of the completed tissue models
- d) The design quality and technical resolution of the individual projects
- e) The individual blog entries and the ability to critically engage and reflect on themes and process

OUTCOMES – MTECH2 SITES/PROJECTS

- a) A first draft of the dissertation document which must include an abstract, a definition of a research problem, a thorough site selection motivation and analysis, a critical response to the issue of programme, the users/clients/funders, ethical considerations and architectural/urban precedents as well as a comprehensive bibliography
- b) A conceptual design, with preliminary technical decision making, demonstrating understanding of capacity, alternative ways to handle MEP, building circulation, and facades
- c) Individual blog entries, with select images, explaining your own experience of the assignments and learning tasks presented in Quarter 2

ASSESSMENT – MTECH2 SITES/PROJECTS

Your projects will be assessed based on the following criteria:

- a) A first draft of the dissertation document which must include an abstract, a definition of a research problem, a thorough site selection motivation and analysis, a critical response to the issue of programme, the users/clients/funders, ethical considerations and architectural/urban precedents as well as a comprehensive bibliography
- b) A conceptual design, with preliminary technical decision making, demonstrating understanding of capacity, alternative ways to handle MEP, building circulation, and facades
- c) Individual blog entries, with select images, explaining your own experience of the assignments and learning tasks presented in Quarter 2

READING MATERIAL AND RESOURCES

Habraken, N.J., et al, 1981. *The Grunsfeld Variations: a report on the thematic development of an urban tissue.* Department of Architecture, Massachusetts Institute of Technology, Thomas A. Whalen Press, Inc., Boston, Massachusetts.

Kendall, S., 1982. Teaching with supports. *Open House Int.* 7, 38–52.

Kendall, S., 1984. Teaching with tissues: observations and reflections. *Open House Int.* 9, 15–22.

Teicher, J., Kendall, S., 2007. *Residential Open Building.* Taylor & Francis.