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# Weather Register

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1. Registering Vancouver's rainfall (E.Shotton)

*This thematic study was run as a portion of the second term of design studies in a first professional Masters of Architecture degree program in Spring of 1998.*

For the foot the surface of the sandal represents a little piece of soft ground, whereas the underside acts as a toughened floor in relation to the ground. In the same way the inside of the house is for man a piece of habitable environment, while on the outside, where it confronts nature, it stands for a fortified human existence. Thus between the two extreme terms—man and nature—the house appears as a reconciling element that enables man to maintain himself in nature.

—Dom van der Laan, *Architectonic Space*

## **Weather Register as Theme**

While architecture acts very literally in registering the forces of weather—shedding rain, tempering heat and cold, controlling illumination—the intent of these studio investigations was to extend the sense of “weather” simultaneous with the sense of “registration” beyond the literal to the figurative.

In considering the natural phenomenon of weather, attention is immediately drawn to the broadest of material contexts for our work as architects. Powerful geological structures revealed through the transformative forces of climate provide a sublime measure for our own desires and efforts. Moreover, given its profound breadth of presence, weather reveals itself in the most subtle of circumstances as well as the most direct. The pitch of a room anticipates winter's snowfall and the depth of the foundations measures winter's length, the metal surface marking the passage of the seasons as the wearing away of a timber threshold relates the accumulated stresses of daily use.

Precisely in this desire for expressive subtlety, the sense of architecture as register holds special promise. Architectural culture's persisting use of linguistic analogies encourages us to imagine architecture speaking with a vocabulary engaged in the full range of rhetorical attitudes. Yet the truth is that architecture is most interesting—most particular and most compelling—when it is behaving the least like a language. It is in the much more surreptitious communication of sensual and haptic inference that architecture profoundly engages our senses and informs our intellect. Evoking the act of registration enables us to entertain expressive ambitions in full knowledge of architecture's often unwieldy and certainly indirect regard for meaning in the world.

### **In Design Studio Setting**

. . . seeking to reconcile a structure with its surroundings and assimilate everyday ritual with the transcendent potential of evanescent phenomena . . .

—Excerpt from program introduction

These thematic considerations were explored through a structured series of exercises aimed at refreshing the conventional expectations of architecture brought to the first-year studio of a master's level first-professional degree program. Above all else, it was an effort to develop students' understanding of architecture as part of a broad cultural enterprise—one particular demonstration of human artifice in which value will always be measured by circumstance. The projects were framed in a manner that would compel students to operate within the known realm. While supported by exposure to outside readings and material, the suggestive breadth of the themes encourages the deliberate investment in familiar landscapes with a sense of their dignity and potential.

The studio topic was introduced through the identification of weather registers observed in the local, immediate landscape. Students were invited to investigate the manner in which natural forces can inform the ambitions of design, and, more significantly, they were invited to begin to appreciate how motives of problem solving and expediency become assimilated within the culture of architecture itself. Students identified compelling instances of this phenomenon within their own familiar environment with the rich diversity of responses, providing an immediate and suggestive point of departure. The investigations documented the remarkable range of weather registrations to be found in the city, from considered design responses to more unconscious reactions to the environment. Among the most provocative were perhaps these uncalculated responses; steam rising from the green manicured forecourt of a residential highrise, registering the chill in the air and marking a source of heat below; or, similarly, the condensation on a café window making manifest the difference between interior and exterior environments, tempered subtly by the heat of candles; the wear of a dock edge registering the movement of the tides; the degradation of a boat's hull; and the marks of occupation on a concrete bench modifying the cold and damp to a point of comfort. These discoveries, when shared with the class as a whole, encouraged a greater awareness and sensitivity for the relationship between environmental circumstance and the built fabric of our city, so often slighted in deliberately formal analysis.

These early insights were then set against studies of instances in which architecture as weather register has historically been developed with both authority and finesse. These precedents—both local and geographically distant—were set in familiar temperate locales alongside regions of more extreme environments where the terms of registration were significantly more direct, and intensely literal. Geographic circumstance, climate, and related siting conditions were observed, and their tacit engagement by the architecture was explored. This analytic work took place in small groups and included the production of precise drawings and scale models. The precedents were Strawberry Vale School, Patkau Associates; Mount Angel Library, Alvar Aalto; Ricola Factory, Herzog and deMeuron; deMenil Collection, Renzo Piano; Odium Road Studio Housing, Peter Cardew; Economist Building, Alison and Peter Smithson; Kommerzbank, Norman Foster and Associates; Blackwell House, Judith Chaffee; Robson Square Law Courts, Arthur Erickson; OPSEU Building, Carmen Corneil; Ball-Eastaway House, Glenn Murcutt; Full Moon Theatre, Peter Rice and RFR; St. Ignatius Chapel, Steven Holl; Bagsvaerd Church, Jorn Utzon; Bregenz Art Museum, Peter Zumthor; Seville British Pavilion, Nicholas Grimshaw and Associates.

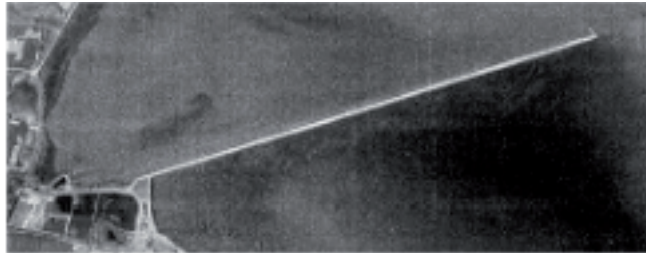
In moving from the found, and often unconscious, circumstance located in the immediate environment to observations of more studied environmental responses, the students could assess the manner in which their own design process might be informed. The precedents were rarely comprehensive in the response to local circumstance, although Judith Chafee's or Glenn Murcutt's work might be considered in these terms. Indeed some, such as the Full Moon Theater by Peter Rice, were explicitly singular in their acknowledgment of locale. Nevertheless, within each project was an appropriation of environmental circumstances into the design strategy observed, which made the work expressive of a specific place. Finally, to appreciate the manner in which weather could be considered as a critical apparatus in design, a fairly brief design study was pursued. Very particular and exposed geographic settings formed the site, deliberately framing modestly scaled and direct programs of use. This common theme was developed and given distinct emphasis by each instructor through a selection of local, yet very diverse, physical settings. These were in turn coupled with programs constructed with temporal agendas that addressed the particularities of each circumstance. Drawings and model studies were invested with information pertinent to the description of each place as specific geographic and environmental moments and the resolution of these forces in building form. Studies, while beginning at small-scale conceptual images, evolved into large-scale fragments exploring the potentials of structural and material resolve.

Physical settings of some force are in abundance in the Vancouver region. The four sites used in the studio represented diverse circumstances and included a constructed "jetty" in alluvial surroundings occupied by sewage treatment plant and dog-walkers; the remnants of a granite spit occupied by log booms and windsurfers; significant hillsides of alpine meadows and conifers occupied by hikers and skiers; and coastal granite outcrops edged with dense evergreen forest presently occupied by a lighthouse and picnickers. Design responses to each proved to be peculiar to the specificity of the place and urgency of the occupation. The projects described here provide emblematic evidence of the broad range of work prompted by the studio theme and elaborate the programs of three of the four programs, that were explored.

### **Jetty**

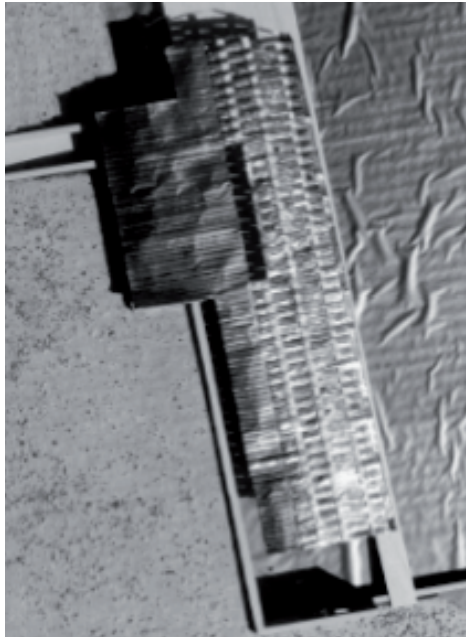
*site: a 4.5-km-long man-made form that defines an island estuary . . . a site of intense exposure where minor tidal fluctuations result in the dramatic reconfiguration of the landforms. (See Figure 2.)*

*brief: a small facility for the keepers of the jetty, to serve as provisional rest spot and point of embarkation for surveys of the jetty by boat and by foot.*



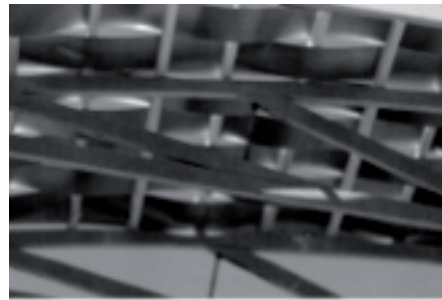
*2. Iona Island Jetty and the Strait of Georgia*

Among the many interpretations of provisional rest spot, were two thoughtful responses to the shifting configuration of the landmass, expressing this conjunction of environment and occupation in a particularly evocative manner. The mutable edge of the jetty was consolidated by L. Mitchell, where a definitive retaining wall aids in measuring the shifts in tide and land, while the structure rises and falls with the tides. Sheltering this space is a copper roof, braided into the heavy timber and purlin roof structure, which measures time in its oxidation and through the shifting pattern of light below (Figures 3, 4).



*3. Left, Keeper of the Jetty Project model (L. Mitchell)*

*4. Bottom, Keeper of the Jetty Ceiling detail (L. Mitchell)*



A second strategy within the same project description, by S. Mankowski, attended not only to the tidal movements and resulting landforms, but responded also to the degradation of the environment caused by the deposit of industrial debris on the shores of the jetty. Reflecting this as inspiration, the keepers' shelter was reminiscent of an industrial shipping container, attenuated in form, and placed on the shore to explicitly measure the incoming tide. Copper pipes pierce the encrusted copper walls to focus views of the estuary and bring intense direct light into the otherwise subdued echoing container.

### **Spit**

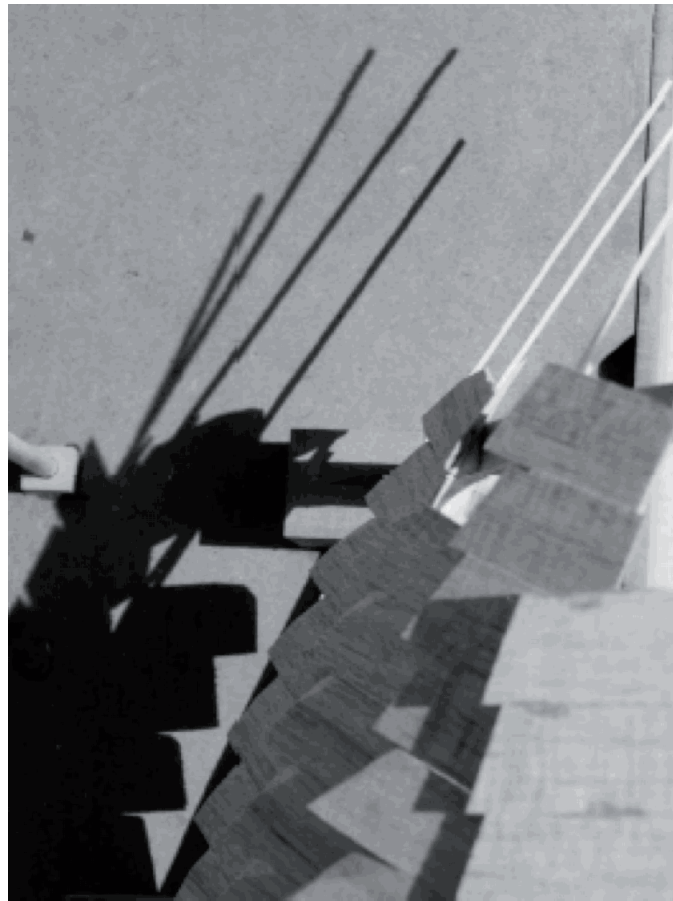
*site: a man-made rock dike stretching from the mainland to the outer edge of an estuary . . . characterized by thermal winds, shifting direction according to time of day and season, yet utterly reliable in fulfilling the needs of serious windsurfers. (See Figure 5.)*

*brief: rest shelter to accommodate surfers and visitors as a register of this special place.*



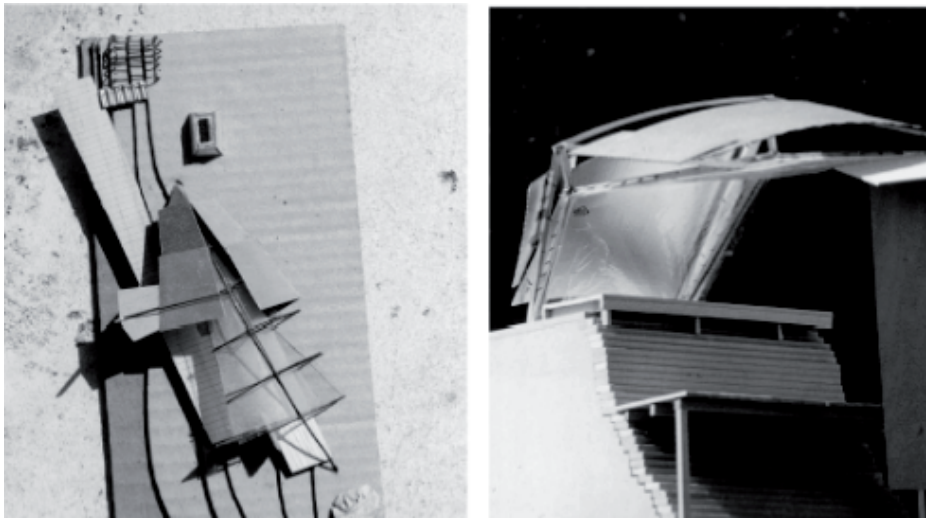
*5. The Spit, Squamish, British Columbia*

Like the investigations at the Jetty site, the Spit gave students an opportunity to explore the consequences of daily and seasonal tidal fluctuations, but singular focus was given to the action of the wind, and the surfers' temporal, and tentative, occupation of the site. In consequence, I. Ho used the shifting wind patterns as design inspiration, creating an ambiguous form of wood and steel construction that tempered and filtered the wind, creating a diversity of air patterns and shading each of the various interior environments acoustically (Figure 6). More directly attentive to the dike form and tidal action was a seemingly provisional and fragmented structure designed by M. So. A fixed docklike platform hugged the dike edge and registered high tide in its level. Forming a wind screen over was a frame of steel draped in sail cloth and corrugated metal sheets to buffer the most intense winds and rain while allowing a play of light within (Figures 7, 8).



6. *Wind Shelter Project: Filter wall and roof seen from above (I. Ho)*





7/8. *Wind Shelter, Site model and sectional model (M. So)*

### **Alpine Meadow**

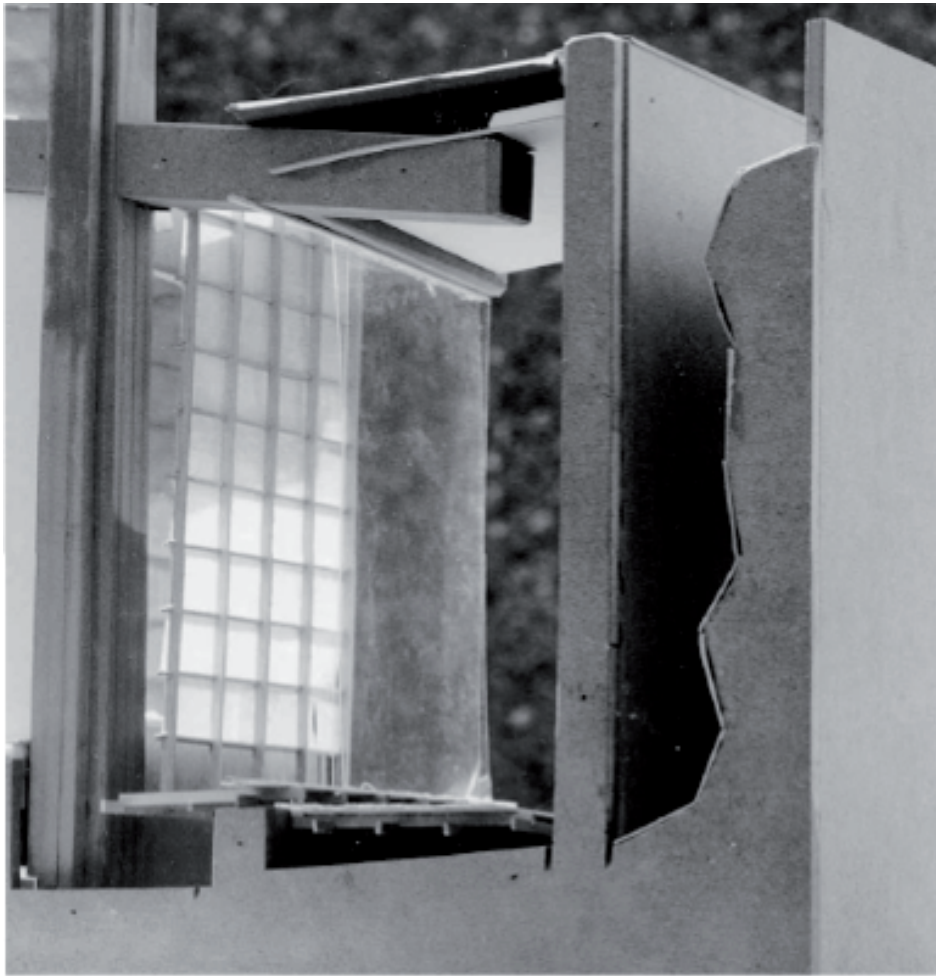
*site: a world of dramatic topography and intense seasonal variations in weather and ground surfaces, overlooking city and harbor.*

*brief: accommodation for day and overnight use by skiers and hikers; a point of respite from habitual action giving opportunity for repose and prospect.*

The shifting topography of this site, from alpine meadow to deep snow drift, offered potential to explore the nature of ground plane and the variable quality of precipitation. In this sectional model of a corridor (Figure 9), I. McLean explores the shifting ground plane and registers the depth and age of snow by carving a glazed well between corridor and room. This well both captures the snow and serves to filter light, altered in color and texture through the snow, not simply to the space below but also reaching upward and acting as an evening lantern in the snowy ground plane above the roof. Snow accumulates and melts through the permeable concrete retaining wall opposite and finally below the floor, offering a more tactile experience of the weather conditions.

### **Postscript**

The use of the weather register theme in design studio setting provides an impetus for individual explorations capable of many levels of complexity, proving particularly pertinent to students in a first-professional degree who have come to architecture with a broad range of background experiences and expectations. While a proportion of students continued to treat the topic in a problem-solving mode, considering the content in merely technical



9. *Bed and Breakfast, Section Model (I. MacLean)*

terms, for most students the fundamental nature of the theme remains provocative. The discovery of subtle and evocative weather registers within students' home environments provided perhaps the most directly affecting evidence of the manner in which such a simple construct has the ability to refresh our sense of locale. Studies of more conventionally canonical works often allowed a retreat into a more conventional cultural approach—even among first-year students—which within the overall project serves to inhibit the inventiveness of the individual design proposals. A decidedly positive appraisal of this project would include the observation that these issues of weather, temporal occupations, a sense of time and the conditional status of material were to be clearly observed in students' subsequent works, giving evidence that, in the words of the JAE call for submissions, “elusive and unstable relationships” had truly been brought within the realm of their architecture.























