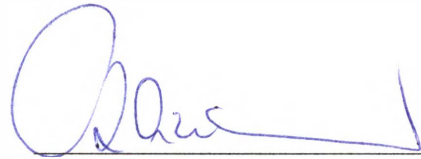


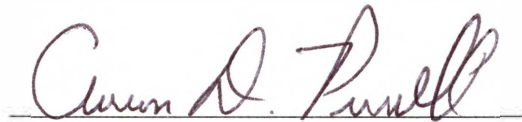
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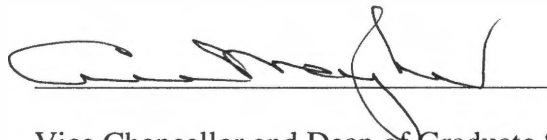


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We have read this thesis and recommend its acceptance:



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Vice Chancellor and Dean of Graduate Studies

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Architecture for the Lost Place

A Thesis Presented for the Master of Architecture Degree

The University of Tennessee, Knoxville

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ABSTRACT

This thesis investigates how architectural production can deal with the history in a place. It describes how the idea of *genius loci* can define a place's existence and how architecture can respond to a site that is disconnected from its history by a sudden loss of that which once defined it. I consider a place which has been physically transformed and whose population has been removed. These conditions invite a program to elucidate the site's past, and architecture to interpret a state of absence. The project responds to the site's history without pretending to manifest the historical place.

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1. THESIS PROPOSITION

This thesis describes an architecture that builds upon the conditions of its site. The discourse is founded on three assumptions. First, good building has particular causes, as opposed to mere scenographic considerations (fig. 1¹). Second, these causes are unique in every place. Third, these causes tend build up over time (fig. 2).

A theory of place that shares these assumptions is the idea of *genius loci* (“the spirit of the place”). We may use *genius loci*, first, as a framework for understanding what is of value in a place. To this end, I briefly treat the use of *genius loci* for the architectural interpretation of a place. But if *genius loci* can define a place, then it also defines what is lost when a place undergoes a traumatic event.²

To test the depth of my three basic assumptions, this thesis primarily considers the more complex problem of the lost place. I propose an architectural response to a region physically transformed and divested of its occupants.

The ancient Greeks believed that gods inhabited places. Such a god was a *genius loci*, the spirit of the place. People detected a local god by reading it in the landscape. When people supposed they read a god in the landscape, they built an altar there to test

¹ All images are located in the Appendices.

² Thompson, “What Use is the *Genius Loci*?” in *Constructing Place*, ed. Menin, 72.

the god's presence. The site was indeed holy if smoke from the burnt offering rose to heaven rather than spreading low. Then a temple was made to mark the holy place.³ At the far end of the Athenian acropolis was such a place, which is why the Parthenon faces away from the approach path.⁴

Today the meaning of *genius loci* is unclear. The philosopher Isis Brook discovers a number of contemporary interpretations in terms of "energy fields, authenticity, coherent narrative, local distinctiveness, essence, character, ecosystem, pantheism, panpsychism, health, and special atmosphere."⁵ We can make rational arguments neither for the existence of the Greeks' local gods nor for theistic, pantheistic, occult, or any other supernatural views. Brook advocates the view that *genius loci* does not reside in our feelings about a place and does not consist of the collection of things at a place, and yet it does refer to something real.⁶

³ Vincent Scully's account is similar: "All Greek sacred architecture explores and praises the character of a god or a group of gods in a specific place. That place is itself holy and, before the temple was built upon it, embodied the whole of the deity as a recognized natural force. With the coming of the temple, housing its image within it and itself developed as a sculptural embodiment of the god's presence and character, the meaning becomes double, both of the deity as in nature and the god as imagined by men. Therefore, the formal elements of any Greek sanctuary are, first, the specifically sacred landscape in which it is set and, second, the buildings that are placed within it" (Scully, *Earth, the Temple, and the Gods*, 1-2).

⁴ This story was told to me by Dr. George Dodds in the fall of 2004.

⁵ Thompson, "What Use is the *Genius Loci*?" in *Constructing Place*, ed. Menin, 68. Referring to Brook, "Can 'Spirit of Place' be a guide to Ethical Building?" in *Ethics and the Built Environment*, ed. William Fox.

⁶ Thompson, "What Use is the *Genius Loci*?" in *Constructing Place*, ed. Menin, 68.

Within these parameters, *genius loci* may be defined as distinct local character. This is the conclusion of Ian Thompson in his examination of the problem in “What use is the *genius loci*?”⁷ Pervading character is the most common construction of the term’s meaning and the one generally found in dictionaries.

This definition makes the application of *genius loci* to architecture a matter of building in accordance with the character of the place. But this is simplistic. Aldo Rossi argues that compositional extensions of context will generate only weak works of architecture; because this process, being conformative, prevents a place from evolving with time.⁸ To build in accordance with the character of a place is to stifle the place.

But Isis Brook’s view allows of a more meaningful definition, one with more of the intensity of the term’s spiritualistic roots. The Greeks, reading local gods in the landscape, saw the *genius loci* as the instigator of natural phenomena. Alexander Pope, too, sets the “*Genius of the Place*” as the cause to nature’s effects: it tells waters to rise or

⁷ Thompson, “What Use is the *Genius Loci*?” in *Constructing Place*, ed. Menin, 69.

⁸ Rossi, *City*, 126-127. “. . . It would be foolish to think that the problem of architecture can be resolved solely from the compositional viewpoint or newly revealed through a context or a purported extension of a context’s parameters. These notions are senseless because context is specific precisely in that it is constructed through architecture. The singularity of any work grows together with its *locus* and its history, which themselves presuppose the existence of the architectural artifact.” For Rossi, only weak works of architecture result from compositional extensions of context, because this process does not permit individually designed monuments, the amalgam of which constitutes the *locus solus*. For Rossi, the “spirit of a place” grows along with the works of man.

fall, it raises hills, it excavates valleys.⁹ When Pope and the Greeks consider how to build, the landscape's character is not as imperative as the causative forces behind the character. From this viewpoint can be drawn a better definition of *genius loci*: it is the collection of forces that bear locally over time.

These forces are cultural and natural. Cultural forces may include mythology, commerce, art, politics, collective memory, individual will, ideas, worldviews, war, exploitation. Natural forces include geology, topography, climate, ecology, and nature's response to exploitation. These forces leave traces—remnants of their action and clues to their existence (fig. 3)—such as buildings, infrastructure, natural features, patterns of trees, stories and histories, civic organizations, and singular places (*loci soli*).¹⁰

⁹ Hunt, *Genius of the Place*, 212. Alexander Pope (1688-1744) was a prominent English poet and satirist, as well as a philosopher and landscape gardener. The following is the famous passage from Pope's verse letter to Lord Burlington (1731): "... In all, let *Nature* never be forgot. Consult the *Genius* of the *Place* in all, That tells the Waters or to rise, or fall, Or helps th' ambitious Hill the Heav'ns to scale, Or scoops in circling Theatres the Vale, Calls in the Country, catches opening Glades, Joins willing Woods, and varies Shades from Shades, Now breaks, or now directs, th' intending Lines; *Paints* as you plant, and as you work, *Designs*."

¹⁰ *Locus solus*, described by Aldo Rossi in *The Architecture of the City*, is another theory of place that is based on the assumption of a unique set of causes built up over time in a place. For example, Rossi sees a relationship between urban form and the historic patterns in which the site was inhabited, such as when he describes shepherd paths growing into a city. For Rossi, the singular place arises from any number of causes, some planned, some accidental; some chance, some traditional; some rational, some irrational; or perhaps from a single historic act there (Rossi, *City*, 103, 106). *Genius loci* (the spirit of the place) is diametrically different from Rossi's *locus solus* (the singular place) in that the one is a recognized pre-existing quality that must govern all building and the other is built up over time as the result of collective artifice (and is therefore urban in nature). A *locus* is a major public building or complex, slowly constructed over time through a number of complex events, in the interests of mercantile, government, civil, and religious groups. The architectural ensemble of St. Mark's Square demonstrates this kind of place. The *locus* is not made up of individual works but social works; it is of a collective nature

Most places are subject to a rich array of forces over time. At worst the forces are latent and their traces are faint. Our strategy, in these cases, is to investigate the site and its records to discover important traces, and use these traces as anchors from which to architect a more vital place. Adherence to the built-up forces, once they are researched

(Rossi, *City*, 107). It is not a type but a unique artifact, “a singular artifact determined by its space and time, by its topographical dimensions and its form, by its being the seat of a succession of ancient and recent events, by its memory” (Rossi, *City*, 107). “The city is the *locus* of the collective memory” (Rossi, *City*, 130). Rossi sees *locus* as a place that changes to reflect the different cultures present over time, because of the influence of the cultures themselves. “Halbwachs, in the last years of his life, concerned himself with the topography of legendary places. He argued that during different periods holy places have presented different physiognomies, and in these can be found the images of the various Christian groups who constructed and situated them according to their aspirations and their needs” (Rossi, *City*, 103). T.S. Eliot has a similar idea of old orders changed and re-perfected by additions: In art “the existing monuments form an ideal order among themselves, which is modified by the introduction of the new (the really new) work of art among them . . . for order to persist” (Eliot, *Tradition and Talent*, 5). The “singularity of an urban artifact,” argues Rossi, “begins in the event and in the sign that has marked the event,” and he suggests that the event and its sign are indistinguishable (Rossi, *City*, 106). This is the same notion that Riegl expresses regarding his “art-historical monument,” the concept that all works of art are seen as key to historical event (i.e. progress for him) while at the same time becoming seen as a monument—or an event in itself (Riegl, *Monuments*). For Rossi, since the *locus solus* is a sign of the events in the city, the forms of architecture change as the place greatly changes. In service to an event, a new whole arises from the changed architecture and site (Rossi, *City*, 103, 106). The amalgam of forms is orderly in that it follows the thread of collective memory. Rossi is saying that places are signs of collective memory of culture (not civilization). Rossi associates history and collective memory with *genius loci*, the spirit of place: “‘The soul of the city’ becomes the city’s history, the sign on the walls of the municipium, the city’s distinctive and definitive character, its memory” (Rossi, *City*, 130). The collective memory is, like the *genius loci*, the cause of a place’s form. The *locus solus* is the field of the collective memory, just as the rural landscape is the field of the *genius loci*. In the continuum of unique place-making, the *locus solus* is on the order of an effect, while *genius loci* are on the order of a cause.

and revealed, would like a “guiding thread” provide consistency in all intervention on the site.¹¹ In a word, we build upon the *genius loci*.

An extremely traumatized site, however, may lose its *genius loci*. Consider the site of Pompeii in late A.D. 79. There was no human culture and nothing of the former landscape. For anyone who came to build in the vicinity, nothing that was particular to the Pompeii remained to guide them. In a sense, the site was no longer a place. Consider also the largest suburban shopping centers, square miles graded and paved and all trace of prior community and landscape replaced with commodified space. The pre-commercial place cannot be revived there; its “guiding thread” is broken. Again, consider the Tennessee Valley Authority’s project to instrumentalize a five-state watershed (fig. 3). The creation of Norris Reservoir impounded thousands of acres of land and cleared a large part of five counties of its inhabitants. The forces that constituted the *genius loci* of

¹¹ Rossi, *City*, 130-31. Just as the Greeks had criteria for testing the presence of a god in a place, one could establish criteria for determining on the important forces in a place. For example, an important force is one that is consistent over time (though one may question how much time). Also, the most important forces have some relationship to one another; they do not operate independently or with independent results. The phrase “guiding thread” I take from Aldo Rossi’s *Architecture and the City*, in which he terms collective memory the “guiding thread” of the built-up place, the *locus* [Rossi, *City*, 130-31]. Analogies are possible between collective memory/*locus solus* and *genius loci*/rural landscape (See note 1, above). The building would be an instance of rebuilding according to established, if only latent, forces. In this sense the strategy is analogous to the urban strategy of instauration, the consistent rebuilding of the city over time.) Joseph Spence famously instructs the gardener, in 1751, to “. . . consult the Genius of the place. What is, is the great guide as to what ought to be” (Hunt, *Genius of the Place*, 268). In light of the following discussion of the traumatized site, it is relevant to point out that Spence doubtless had in mind all that was natural and long-standing, not simply all that was.

this area had built up over time and were cut off within three years of 1933.¹² We cannot augment what is not there; in such places, we can hardly build upon the *genius loci*.

This thesis project focuses on Norris basin, a traumatized site whose history is that of a real place made a *tabula rasa*.¹³ It is possible to speak of the present character of the site that has been traumatized. Even the sites of atomic bomb blasts retain their underlying geology, their climates, and the regional force of surrounding culture; yet this

¹² McDonald, *TVA*, 3.

¹³ Among the sites considered for this thesis were Fontana Dam, Berlin, Ft. Sanders in Knoxville, and Dandridge, TN. The latter appears to be a perfect site for a thesis concerned with building on the *genius loci*, for there are rich layers of history manifested simultaneously in the center of town. Figure [below] shows the TVA dike, built to preserve the historic town from inundation that cuts across one corner of the town beside one of Dandridge's eighteenth-century buildings.

Similar to the Norris Dam site, Fontana Dam has a history of a more unique but even less concentrated white culture and also a thin history of a strong Cherokee culture; Fontana also has very strong landforms. If I were to take the position that every place has a *genius loci*, I may as well have an undistinguished site, to prove the approach to architecture that I am taking. Such a site is the Fort Sanders neighborhood in Knoxville, where drastically different historic layers lie, some partially extant in disorderly contiguity: Civil War fortification (now erased), vibrant neighborhood, student neighborhood, and large-scale disruptive or encroaching constructions, such as the interstate highway, high-rise apartments, hospital, and World's Fair Park. Here I could investigate an area, choose a site based on the place where strongest forces appear, and let the forces determine what is needed to revitalize the place, including building form and program. But this site risks banality. It is possible nothing of significance will be found to constitute a *genius loci*. On the other hand, if the strategy is seen as a prototype, then its development here would be applicable to any American city.

The "Topography of Terror" site in Berlin is in several ways a good site for this thesis, though it must be rejected because of the difficulty of understanding both its history and the force of its history in the present. Here was the site of the Nazi administrative center, the basement ruins of which are extant. A museum to this history was designed by Peter Zumthor and partially built before Berlin abandoned the project for political reasons. The presence of the archaeological site, the Zumthor constructions, and the Berlin Wall make this a rich site, though the site is in a somewhat desolate part of the city, some adjacent blocks also lying empty. Another difficulty is the impossibility of frequent visits to understand the special quality of the place.

set of enduring forces is too meager to constitute a *genius loci*.¹⁴ The present character of the traumatized site is determined more by the external disruptive force: volcanic, commercial, or, in the case of Norris basin, the modern project. In view of the *history* of such sites, the overriding characteristic is loss. We may use this defining characteristic, though it is no *genius loci*, as the “guiding thread” for our activity. In doing this, we respond to the site’s history without pretending to participate in the historical place.

In sum, I propose to architect a response to the overriding condition of the site: the absence of *genius loci*—the forces of culture and nature, including vibrant communities and ecosystems, that were nullified when TVA removed the population of Norris basin and transformed its landscape. Richard Etlin defines the “space of absence” as a space or object in the presence of which one feels both the presence and absence of a

¹⁴ I argue that the continued existence of some forces at the traumatized site may not be sufficient to constitute a *genius loci*. With the TVA dam projects such as Norris, some old forces can be traced to the present. Of course, geology and climate are consistent. The mountainous enclosing landforms continue to act as containers; they contain the reservoir as they have contained space, human cultures, and plant and animal communities. The river, however retarded, still flows through the valley, remaining in its old state upstream and downstream from the reservoir. One may see the project as a manifestation of American idealism, in which the Americans living on the site beforehand must have collectively shared (Kyle, “TVA,” 3.). The TVA project was characteristic of the modern era, so it was conceivably a continuation of the modernizing tendencies in the Norris area, which was already becoming modern under the transformative power of the automobile and the radio (McDonald, “TVA,” 27). Even the harnessing of water power is consistent from grist mills to turbines. The point at which continuities are insufficient remains to be defined; depending on where one stakes that point of no return, the assumption that a place can lose its *genius loci* could become untenable.

lost person or thing.¹⁵ The building type for this project is a visitors' center and historical museum. This project will attempt to create a "space of absence" insofar as it will put the visitor in mind of the lost while heightening the visitor's sense of loss. The ways in which the project will perform these functions are further described in "3. Performance Program."

¹⁵ Ochsner, "Space of Loss," 156, 163. The difference between the situation at Norris Dam and the monuments Etlin describes is that the Norris site does not represent a person or people who are lost to death but a social and environmental disruption, which is metaphorically seen as the "death" of the spirit of the place. Furthermore, very few visitors will arrive at Norris with any knowledge of that which is lost, whereas the Vietnam Veterans Memorial, an exemplar of the "space of absence," depends for its success upon its resonance with the visitor's own experiences of loss. For Etlin's discourse on the "space of absence," see Etlin, *Symbolic Space*, 172-98.

2. SITE

The Tennessee Valley Authority (TVA) was a product of Franklin D. Roosevelt's First Hundred Days of the New Deal. Congress created it as a quasi-governmental agency charged with developing the Tennessee River watershed. TVA was responsible for flood control, navigation improvement, power generation, and improvement of natural, economic, and social well-being in the Tennessee River watershed.¹⁶ In the early 1930s the Clinch River in East Tennessee became the site of TVA's first hydroelectric dam project, Norris Dam. (Figures 5 and 6 are maps showing about 150 square miles about the lower half of Norris basin before [1896] and after [1981] the construction. Figures 7 and 8 are maps showing about ten square miles in the vicinity of Norris Dam soon after construction [1941] and fairly recently [1990].)

The Norris basin is part of the Great Valley of Tennessee. The Great Valley is characterized by ranks of narrow ridges and valleys, with fair to rich soil in the valleys and fairly poor soil on the ridges (fig. 9). The Native American settlements in the Norris basin were well documented before TVA's construction (though only some pottery shards in a cave have been found within sight of the dam itself) (fig. 10). When TVA arrived, the region was overpopulated relative to land use practice, which almost entirely

¹⁶ Kyle, "TVA," 4.

consisted of subsistence farming by white tenants and owners (fig. 11). In the early part of the twentieth century this condition encouraged a wave of emmigration to the industrial northwest that was soon reversed by the Great Depression.¹⁷

TVA purchased, by right of eminent domain, 153,008 acres for the Norris project, 78% of it excessive, that is, above the normal pool elevation. TVA's overpurchase policy Fig. 5. Clinch River including future location of Norris Dam, 1896, scale 1:125,000. The dam's site is on the left side and the town of Loyston is on the right (compare with fig. 6). TVA's overpurchase policy had several purposes: the retirement and afforestation of unproductive farmland, the protection of the reservoir from siltage, the obviation of the need to build bridges and roads to lands cut off by the reservoir, and the regulation of recreation and access. Siltage was later seen as a problem of little moment. Advocates of the general welfare program of TVA favored the retirement of poor and abused farmland as a way of making region-wide agricultural work more productive.¹⁸

In the end, however, the new farms supplied to families were generally no better than those of which they were dispossessed. Perhaps through lack of means or out of sentiment for their old home places, relatively few families left the county of their original residence. While TVA paid fair market price for the farms, the sudden influx of buyers in the market drove up land prices so that most of the dispossessed ended up with

¹⁷ McDonald, "TVA," 7.

¹⁸ McDonald, "TVA," 129-133.

less or poorer land than they had possessed before. In addition, TVA spent most of its resettlement budget on land purchase, spending little to assist the people to relocate and rebuild.

Nearly three thousand families were removed, breaking up the numerous communities that had developed over generations. These people experienced community almost exclusively through churches rather than through a town or neighborhood. Resettlement next to an old friend or neighbor, even when possible, was no substitute for the rich social intercourse afforded by church congregation. Most people reported being much less connected after their separation from their community and replacement among a different community. A few church buildings, though divested of their congregations, were removed to higher ground. Over five thousand graves were exhumed from numerous churchyards and family burial grounds and reinterred at a few large memorial cemeteries outside TVA's boundary. For the displaced living, the reinterred dead were often the only reminders of the collective memory of those dissolved communities.¹⁹ Norris basin's one significant town, Loyston—a small but thriving trading community—is stood in stead by New Loyston, nothing more than a half dozen buildings on two corners of a crossroads a few miles away outside the basin. Figure 12 is a graphic summary of the displacement.

¹⁹ McDonald, "TVA," 195.

The Norris project has its focus at Norris Dam, the physical cause of the inundation. Transmission lines radiate to the region from the powerhouse at the base of the dam. The dam is crossed by TVA's Norris Freeway (now U.S. Highway 441), built to draw construction material from Knoxville and the railhead in Lake City²⁰ and still the only road to approach the reservoir. A few miles away, TVA's model town, Norris, is also accessed via Norris Freeway. Several significant attractions of Norris Reservoir are proximate to the dam, including Norris Dam State Park (built by TVA with the CCC and the National Park Service), a major boat harbor (carved from the quarry that supplied the aggregate for the concrete dam), and the Lenoir Museum (exhibiting early twentieth-century local artifacts as well as a barn and water mill moved from the inundated area). An annual reunion for the dispossessed and their families uses the TVA-built lodge in Norris Park. The dam itself, as a thin division between the inundated valley and the river-drained valley, is like a threshold between the present and former states of the Clinch River valley. As the place where the present world most closely occupies the changed valley and most potently experiences the change in the valley, it is the most appropriate location for a work of architecture to respond to that change.

The architecture of Norris Dam reflects the modern feeling for large technological solutions made possible by universal cooperation. Contemporary photographs valorize clean lines and industrial design (fig. 13). A remarkable mural in the powerhouse

²⁰ Kyle, "TVA," 20.

visitors' lobby is devoted to illustrating the function of the dam. The visitors' lobby, powerhouse, and dam are now closed to visitors. The 1933 visitors' center at the top of the dam was replaced in the mid-twentieth century. Now unused, its original function will be reinstated for this project. The existing parking lot there will serve the new building.

The proposed building will be adjacent to, even attached to, the dam to counter the notion of the modern object as a complete solution. The building will be on the upstream side of the dam to deemphasize the grand frontal view of the dam while permitting the use of the expanses of water and concrete under north shadow for metaphors with loss—through emptiness, silence, and coldness.

The building will be at the margin of the reservoir and left embankment. The left embankment area is at some distance from the dangerous areas near the intakes and spillway gates. Here the bank is covered with 30-inch derrick-placed rip rap (fig 14). This artificial field of rip rap may represent TVA's artifice on the landscape. The roadway on the dam is at elevation 1061'. The pool elevation varies: it is designed for 1052' at maximum flood stage, though 1034' is designated as normal maximum elevation and has never been exceeded. Normal pool elevation is 1020', the height of the spillway crest; flooding above 1020' is rare enough that the mantle of earth and vegetation endures. The pool elevation was, for example, around 1011' in early December 2004 and around 1003' in January 2005. A pool elevation of 955' is ordinary low water, 547' above the river bed. The reservoir does not ebb and flow, but is raised and lowered

mechanically (“reservoir,” not “lake,” is the official term). The reservoir, consisting of water taken from the river’s natural system of flow, is simultaneously disconnected from its banks, rising to scour them and falling to expose them raw (fig. 15). This theme of dispossession informs the performance program of this thesis project.

Though the Standard Building Code is not binding on TVA property, the federal agency abides by it in order to “be a good neighbor”. Anderson County zoning ordinances do not cover TVA property. Internally, TVA classifies the dam site as Zone 2 (energy production).

3. PERFORMANCE PROGRAM

The proposed building²¹ responds to what is the governing condition of the site: the sudden loss, in 1933-36, of all long-standing governance—the loss of *genius loci*. The building works as a “space of absence” insofar as it will put the visitor in mind of the of the lost communities and natural orders while heightening the visitor’s sense of loss.

In the most literal sense, the building makes the visitor to know loss through verbal and graphic description of the site before, during, and after TVA’s advent. A visitors’ center and museum space are included to this end.

²¹ An alternative solution (or one that works in conjunction with the above) is an indexing of the events and disruptions. This project would also treat of the shattered communities. The assumption is that the historic ethos can no longer be found in any one place, but that shards, so to speak, can be picked out in different places. None of these places, understood by itself, addresses the disruption caused by the TVA project. A series of markers, or similar pavilions, at these places highlight their role in the TVA intervention. The places for these markers could be (1) the dam site, (2) the surface of the lake over Loyston (once the largest town) or the Loyston Overlook on shore, (3) an existing museum to which a mill and threshing barn and other artifacts were moved from out of the Basin, (4) the tiny crossroads community of New Loyston as an exemplar of the resettlement of the dispossessed, (5) Norris town as TVA’s model for new development, (6) and one of the churches and graveyards which were actually removed from the Basin and which represent an attempt to maintain community. All of these places are miles apart. The pavilions would be very similar and probably striking and very simple. Each would have an unstaffed interior space in which would be installed an exhibit of that place’s history with regard to TVA. As people saw one and another of these pavilions in the landscape, the similarity would prompt recollection of the others they had seen and visited; and they would recognize the theme of the pavilions’ placements and the theme of the exhibits: to elucidate the effects of TVA on the five-county area that was flooded. The performance program for this design scheme responds to dispossession by effecting “re-possession” at least in the mind of the visitor, though the dispossessed people cannot actually regain their lost communities.

Visitors arrive at the existing parking lot, which suffices for the entire project. There the small existing visitors' building is reopened to supply its original functions: travelers' restrooms and an orientation to the site. From here visitors find a path to the new building, where the main entrance leads to a larger visitors' reception room that has space for large groups and supplies, through a staffed desk, exhibit panels, and a small video room, more detailed information about the five-county site, recreation opportunities, the Museum and Archive, and education opportunities.

The 6000 ft² museum (Table 1) is a 1.5- to 2-hour circulation loop off the visitor's reception room. The exhibition sequence begins with a natural and cultural history of the region and valley before TVA, followed by an explanation of TVA and its projects, focusing on the Norris project. The actual construction, land clearing, and population removal is shown. The condition of the displaced people in the decades following their disruption is then shown along with the change in and resultant state of the valley's ecosystem. Also there are outdoor spaces for contemplation, large-scale exhibition, observing the landscape, and gathering.

In addition, the building hosts a new archive focused on the history of TVA and on the history of the places TVA has impacted. Currently, TVA archives only that material necessary to support ongoing projects (not historical material as such).²² The

²² McDonald, "TVA," 309.

Table 1. Norris Dam Museum and Visitors' Center (~18,650 ft²)

Area	Program Elements
1800 ft ²	Café for ~50 people
1800 ft ²	Norris Dam/Norris Basin Visitors' Center + museum vestibule
4000 ft ²	Permanent Historical Exhibition
1400 ft ²	Changing Exhibition space
600 ft ²	Exhibition storage
300 ft ²	Exhibition preparation
350 ft ²	24-person small video room
2500 ft ²	145-person auditorium for film presentations, conferences, assemblies, public lectures (including 300 ft ² entry circulation and 125 ft ² projection room and closet)
650 ft ²	Group Room: 50-person flexible classroom/meeting room with audio-visual equipment (overhead & slide projector, blackboard)
1000 ft ²	Research Library/Archives including "Norris Archives": Stack room and
1500 ft ²	Lodging for two scholars-in-residence
300 ft ²	Studies for two scholars-in-residence

Table 1 . Concluded.

Area	Program Elements
1200 ft ²	Travelers' hostel/dormitory for 10 people
300 ft ²	Chapel
800-1000 ft ²	Administration offices
200 ft ²	Coat and other closet
100 ft ²	Janitorial closet
500 ft ²	Estimated additional circulation
300 ft ²	Public restrooms
100 ft ²	Social activities room for workers
1800 ft ²	Outdoor exhibition of large historic artifacts; outdoor promenade space to understand landscape, water as inundator, and dam as a powerful mass; includes a contemplative places.
150 ft ²	Storage for outdoor maintenance
--	Small dock/boathouse for research and educational expeditions (one 50-person boat and several small boats)

archive's lobby is accessible by the public. Apartment residences for two visiting scholars complement the archival function. A small dock and boathouse are proposed for research and educational expeditions. An auditorium, meeting rooms for groups of up to fifty people, and a small hostel round out the program of education and community.

More subtly, the architecture will function as an illustration of the uprooting and scattering of the occupants of the Norris basin. The form and siting of the building will pose an analogy with the phenomenon of flotsam (fig. 16). The people were, in a sense, uprooted and left to drift, for TVA did little for people to meliorate their move or resettle them in viable communities.²³ After resettlement, the dispossessed people among their new neighbors were like debris, present but dissociated from the place. Likewise, discarded things and loose vegetation float in the reservoir and sometimes collect behind the dam miles from their origin (fig. 17). The architecture reminds one of the qualities of flotsam: it is attracted to the cause of its dislocation; it is orderly though unorganized; it is re-ordered with no respect to origins; the whole is less than the sum of its parts. The building is sited at the same place as actual flotsam: at the margin of the dam and shore, off the main current. In coming to the building, the visitor has the feeling of being in the "wrong" place. Because the building is over water and because the reservoir rises and

²³ McDonald, "TVA," 270.

falls—and perhaps the building with it—it may be said to have an indefinite site, echoing again the sense of dispossession. Through the building itself as well as through the exhibits, the visitor may come to understand what it is to be dispossessed.

If the architecture reflects the confusion of gathered fragments by modelling flotsam, it is against a backdrop of blankness (fig. 18). The fragments put one in mind of that which was, while the blankness heightens the sense of its absence. Vistas are starkly framed below the horizon, taking advantage of the cold expanse of concrete on the north side of the dam and the extending plane of the water surface as well as the unpunctured walls of the light-controlled museum galleries. When the water is low, entering the major spaces will feel like descending to a grave. Only the residences at the top of the building, have the full relief of open vistas to the valley below the dam.

4. PRECEDENTS AND CASE STUDIES

The new Tuckaleechee Heritage Museum in Townsend, Tennessee, has a similar program and will serve as a precedent. It is a museum to celebrate the past cultures of the Tuckaleechee Valley, both native American and white. A “rustic-looking” building displays the native American artifacts found in the archaeological digs preceding the Tennessee Department of Transportation’s widening of East Lamar Alexander Parkway through Townsend. The architecture heightens the separation between native American and white cultures by placing their respective artifacts in separate wings of the building.

The program for the Mittelbau-Dora Study and Documentation Center competition (Table 2) is another useful precedent for the program of my thesis project. The building is a visitors’ center, research library, education center and museum to the Mittelbau-Dora Nazi concentration camps. It is to sit on a rise between two important archaeological sites of the camp, binding the two places and acting as a gate. The camp is not to be rebuilt or “re-enacted”. The architecture is to make clear relationships on the site that have little above-ground points of reference.

Sverre Fehn’s 1992 Glacier Museum at Fjærland, Norway, sits on a plain amid enormous mountains. Fehn’s sketch of the building as a dot on a plain overhung by mountains not much lower than the moon clearly shows that the building is at the focus of the mountains and is natal to the mountains. The formal force of its central location in

Table 2. Program for the Mittelbau-Dora competition (1 000 m², or 11 000 ft², gross)

#	Function	Area or Quantity	
1	Visitor Information and Book Sales	at least 60 m ²	650 ft ²
2	Historical Permanent Exhibition	at least 500 m ²	at least 5,400 ft ²
3	Archives & Library with Visitor Workplaces	at least 60 m ²	at least 650 ft ²
4	Two Group Rooms for Memorial Site Pedagogy and Meetings	large enough for a school class	
5	Room with Forum Character for Public Lectures, Assemblies, Conferences, Films	for about 80 people	
6	eight offices for Memorial Site Employees	~100 m ² total	~1 100 ft ² total
7	Cafeteria	for about 30 people	
8	Technical Equipment Closet	~30 m ²	~320 ft ²
9	Sanitary Room	~10 m ²	~110 ft ²
10	Social Activities Room	~10 m ²	~110 ft ²
11	Depot	~15 m ²	~160 ft ²
12	Powder Rooms		

the landscape is marked by—and observed from—the circular roof terrace upon the cylindrical auditorium (fig. 19). The cylinder represents the building's participation in the landscape forces.²⁴ Fehn compared the exterior stair to the ascent of a mountain,²⁵ and the stair is on axis with one mountain (fig. 20). Part of the Sognefjord landscape is glaciers, the subject of the museum. Numerous iconic readings of the museum's form suggest the museum's theme.

By its site and by its long shape, the building is like a moraine pushed up by a glacier flowing down from the mountains (figures 21 and 22). On another scale, the entry canopy is like a glacier creeping off the roof, leaving in its path the depression that becomes the long skylight (fig. 23). The glacier and moraine motif reappears inside in the linear path through the entrance and exhibition hall with a mass (a full-scale physical exhibit) pushed to the end of the building (fig. 24). The splintered crystalline forms in plan and section are like crevasses in a glacier, admitting light to the interior.²⁶ The small pool behind the museum exhibits the forces of freezing and melting as it collects melted water from the roof, just as glacial lakes sometimes form behind moraines. Concrete walls express both permanent weight and fluidity, appropriate for metaphors with masses of ice.

²⁴ Daidalos, 43

²⁵ Daidalos 42

²⁶ Daidalos 40-45 No.63 march 1997

The Norwegian Glacier Museum, as a small museum to one aspect of social and physical conditions of the region, is a good model for this thesis project. The museum collects, originates, and teaches knowledge about snow, ice, and glaciers in service to both experts and tyros. The focus is on both natural history and cultural history. In particular, the museum exhibits how glaciers form, how they change the land, and how they contribute to climate research. The Norwegian Glacier Museum is a privately-owned foundation set up by a number of recreation, scientific, governmental, and educational bodies (the Norwegian Mountain Touring Association, the International Glaciological Society, the Norwegian Water Resources and Energy Directorate, the Norwegian Polar Institute, Sogn & Fjordane Regional College and the universities of Bergen and Oslo). An ice-carving festival occurs annually.

Twenty-two permanent exhibits occupy a 4000-ft² exhibition hall. Some exhibits change annually. One interactive exhibits permits visitors to perform their own experiments with millennium-old glacier ice. A 145-seat auditorium shows Ivo Caprino's panoramic short film about Jostedalsbreen, the major glacier in the region. A normal visit might take 1.5 hours, including the film, which plays every half hour. A separate building for the use of schools has a laboratory and a fifty-person classroom furnished with audiovisual equipment. Table 3 tabulates the square footage of the museum.

Table 3. Quantitative program for Fehn's Glacier Museum

Space	Notes	Area	Area
Vestibule + exhibition	vestibule area is roughly 1/3 of total	490 m ²	5274 ft ²
Café	public 81 m ² (872 ft ²) + kitchen 25 m ² (270 ft ²)	106 m ²	1141 ft ²
Theater	145 seats	202 m ²	2174 ft ²
Theater service spaces	Projection room 2/3 and closet 1/3	11.5 m ²	124 ft ²
Circulation to theater:		26 m ²	280 ft ²
Janitorial closet		6.75 m ²	73 ft ²
Restrooms			290 ft ²
Closets	coat and small storage	12.5 m ²	135 ft ²
Staircase		12 m ²	129 ft ²
Administration	Upstairs	63.5 m ²	684 ft ²
Total net (interior) area			10,361 ft ²
Total gross area		1049 m ²	11291 ft ²

Table 2. Concluded.

Space	Notes	Area	Area
Exterior roof promenade		483 m ²	5200 ft ²
Exterior Covered entrance		90 m ²	969 ft ²
Exterior closet by entrance		6 m ²	65 ft ²

The proposed building at Norris Dam is, in a sense, a negative monument. It takes the view that there was something permanently lost by the *tabula rasa* TVA project—real communities, whole ecosystems, and the *genius loci* of the Norris Basin. While the program remains museological (telling the story of dispossession), the building itself recognizes absence, loss. The dark side of the TVA is that rural communities were destroyed by TVA's *tabula rasa* project. The building, as a “monument” to what isn't there, would be a blank object, cold, a box without views. Peter Zumthor's Topography of Terror project is situated over the ruins of the Nazi headquarters. It uses fully exposed construction with white concrete as a gesture of honesty and purity. It is designed to be simple and silent and open, with a view out from any point. The double shell form, with the occupiable intermediate space acting as a climatic buffer, may be seen as a filter. The function of the building is to atone for the history of the site. Figure 25 is a montage representing this idea.

The Arthur and Yvonne Boyd Art Education Centre in Riversdale, Australia, heightens awareness of two basic forces meeting there: the indigenous and the Old World. Arthur Boyd's paintings deal with the relationship between the natural and cultivated landscapes. The building lies between native bush on one side and the Boyds' cultivated homestead on the other. Transparency across the building keeps it from seeming to be a barrier between the two landscapes. The strong roof lines clarify and repeat the lay of the land. The large frontward projection of the roof makes a space like the traditional veranda—it is an intermediate space between these two landscapes. At the

Boyd Centre, the *genius loci* is the dynamic of Old World civilization and indigenous nature. The building site, program, and form build upon this dynamic, an idea I explored in Figures 26-27. As a result the building may be read as a metaphor for that relationship.²⁷

Hans Hollein designed the European vulcanology center based on two major forces. The first is the volcanic force that created the rural Auvergne landscape. The extinct cones of the Puy de Dôme loom nearby, echoed by the truncated cone at the center of the museum complex.²⁸ Volcanic rock lies just below the soil of this landscape; the museum is carved as much as thirty meters into the solid rock. The basalt is often left exposed or, as in the local vernacular, placed again as a construction material in walls, floors, and stairs. Visitors learn about volcanism as they pass through underground exhibition rooms and auditoria, a rock garden, natural caves, carved-out passages, and a crater excavated from the volcanic rock. Then, like spewing lava, visitors return to the surface.²⁹

²⁷ Rab, "Rooted Modernity" in Menin, ed., *Constructing Place*, 265-268. Rab wishes to "induce in architecture students the ability to create buildings that are rooted in the history of a place" (p. 264). Rooting my project in the history of the site is my aim, though I do not believe such buildings need be metaphors for history. She praises "examples of thoughtful and imaginatively creative attempts to go beyond the mere technology of built form and to search for the means by which a direct relationship can be established between the building, the site, its history, the individual and the community" (p. 265).

²⁸ Architectural Review Aug 1995 v.198 n.1182 p.75

²⁹ Daidalos no. 63 1997

The second force is cultural; it is the popular French affection for the sublime. Edmond Burke explained the sublime as those qualities of vastness, solitude, and ruggedness that astonish and give pleasure.³⁰ The competition brief explicitly required a natural space that manifested the sublime exemplified in the invented landscapes of Jules Verne, for whom the French maintain a great affection. Hollein's concept sketch bears a remarkable similarity to illustrations of Verne's *Voyages Extraordinaires* by his Paris publisher J. Hetzel.³¹ The vulcanology center, a product of the tradition of political patronage of buildings for constituents, feeds this popular sentiment for the sublime: the crater suddenly rumbles and emits smoke, the cone houses a real fire, a high gangway pierces the monolithic cone, passages lead between and under jagged rock.³²

³⁰ Burke, Edmund. *On the Sublime and Beautiful*. Vol. XXIV, Part 2. The Harvard Classics. New York: P.F. Collier & Son, 1909–14; Bartleby.com, 2001. www.bartleby.com/24/2/. [05 December 2004]

³¹ Daidalos no. 63 1997

³² Architectural Review Aug 1995 v.198 n.1182 p.75

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APPENDICES

Appendix A: Figures Referenced in Text

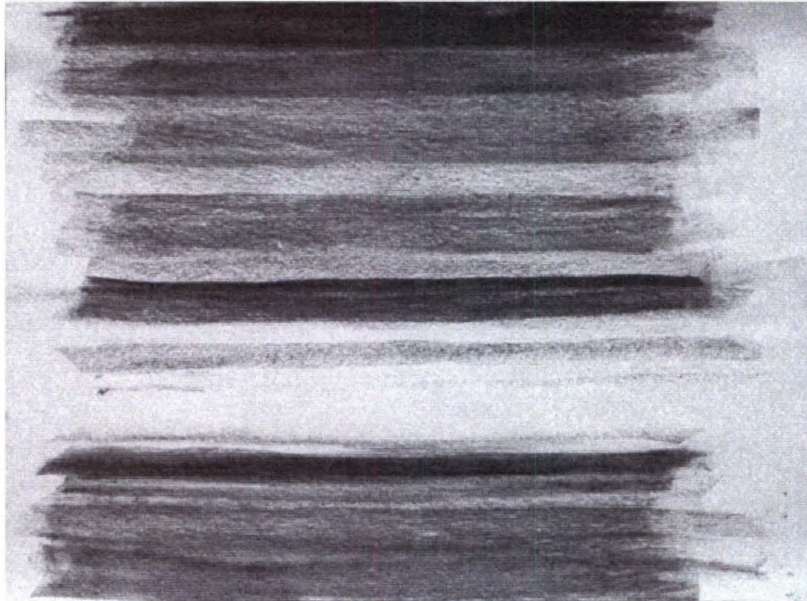


Fig. 1 Construction based on particular causes

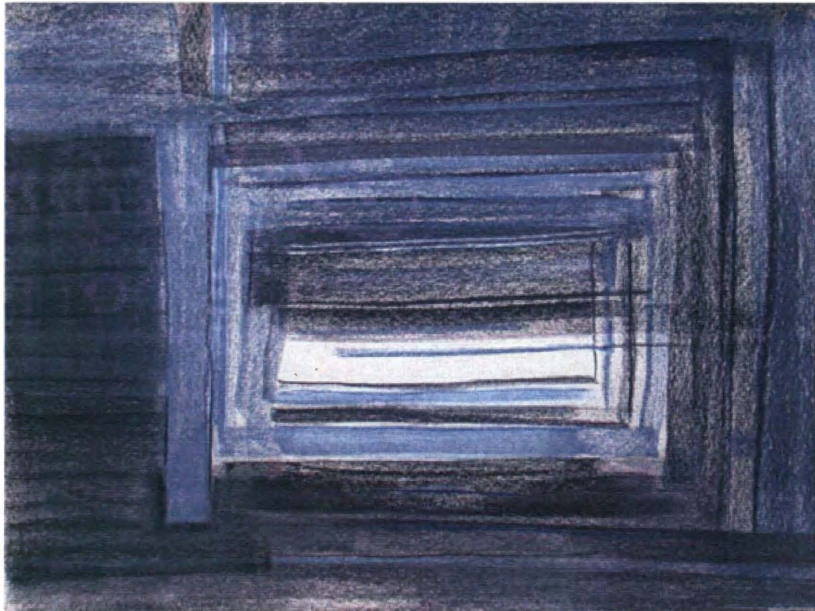


Fig. 2. Unity of layers built up over time

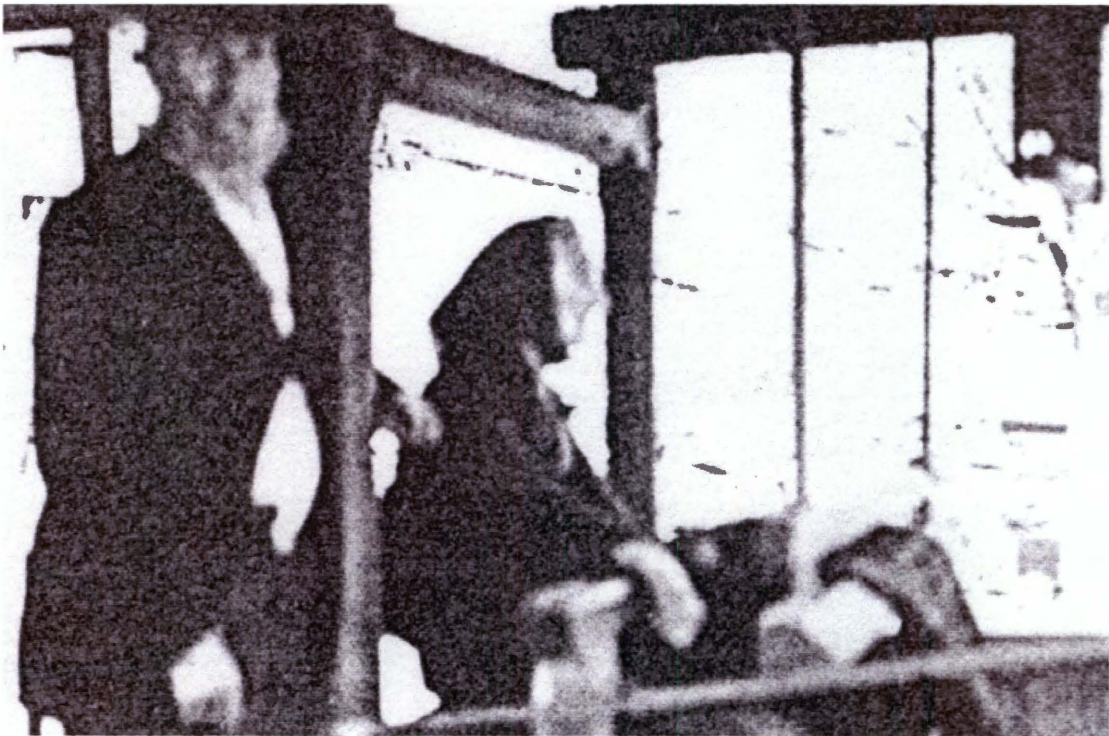


Fig. 3. A trace from the inundated Clinch River valley

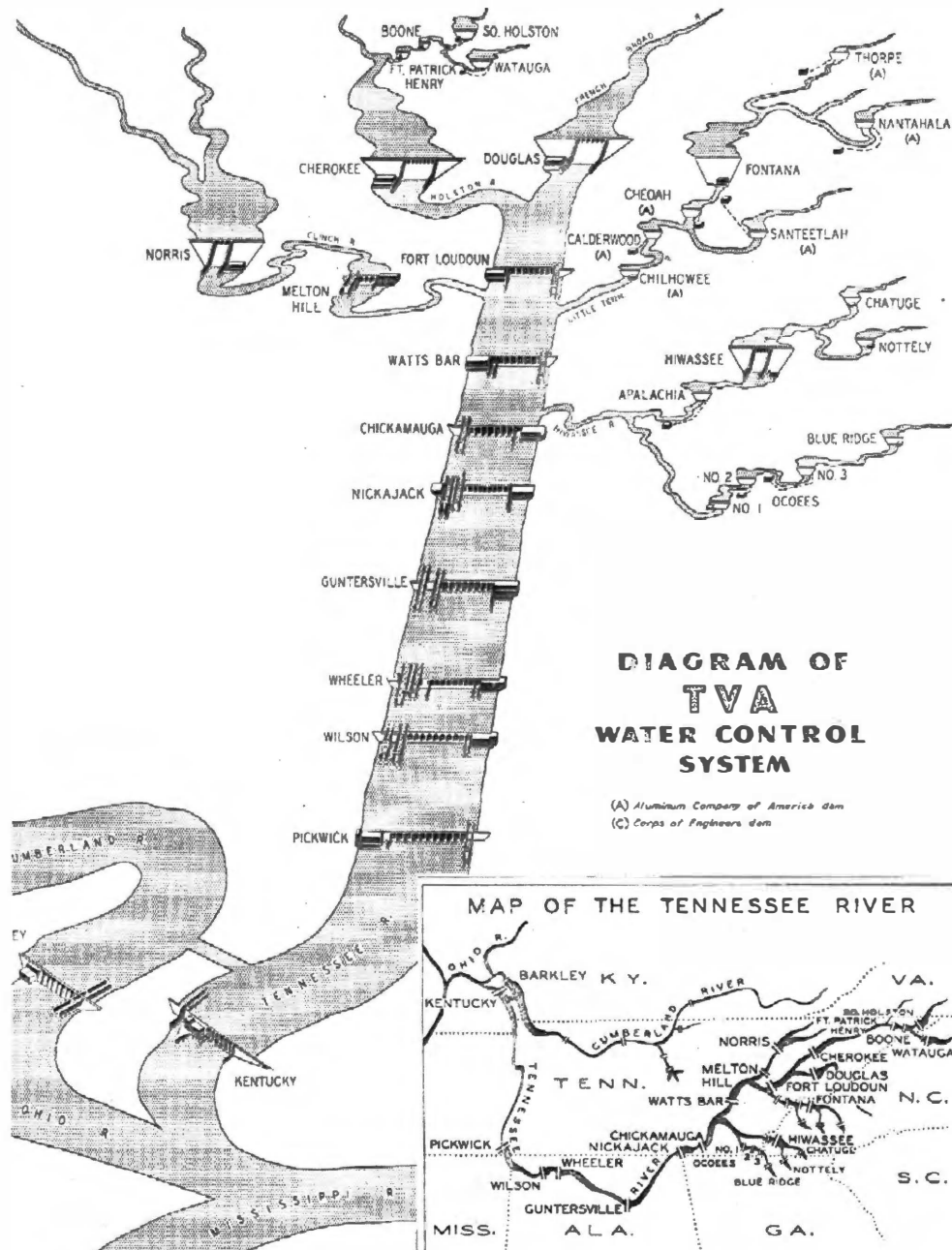


Fig. 4. TVA's instrumentalization of the Tennessee Valley

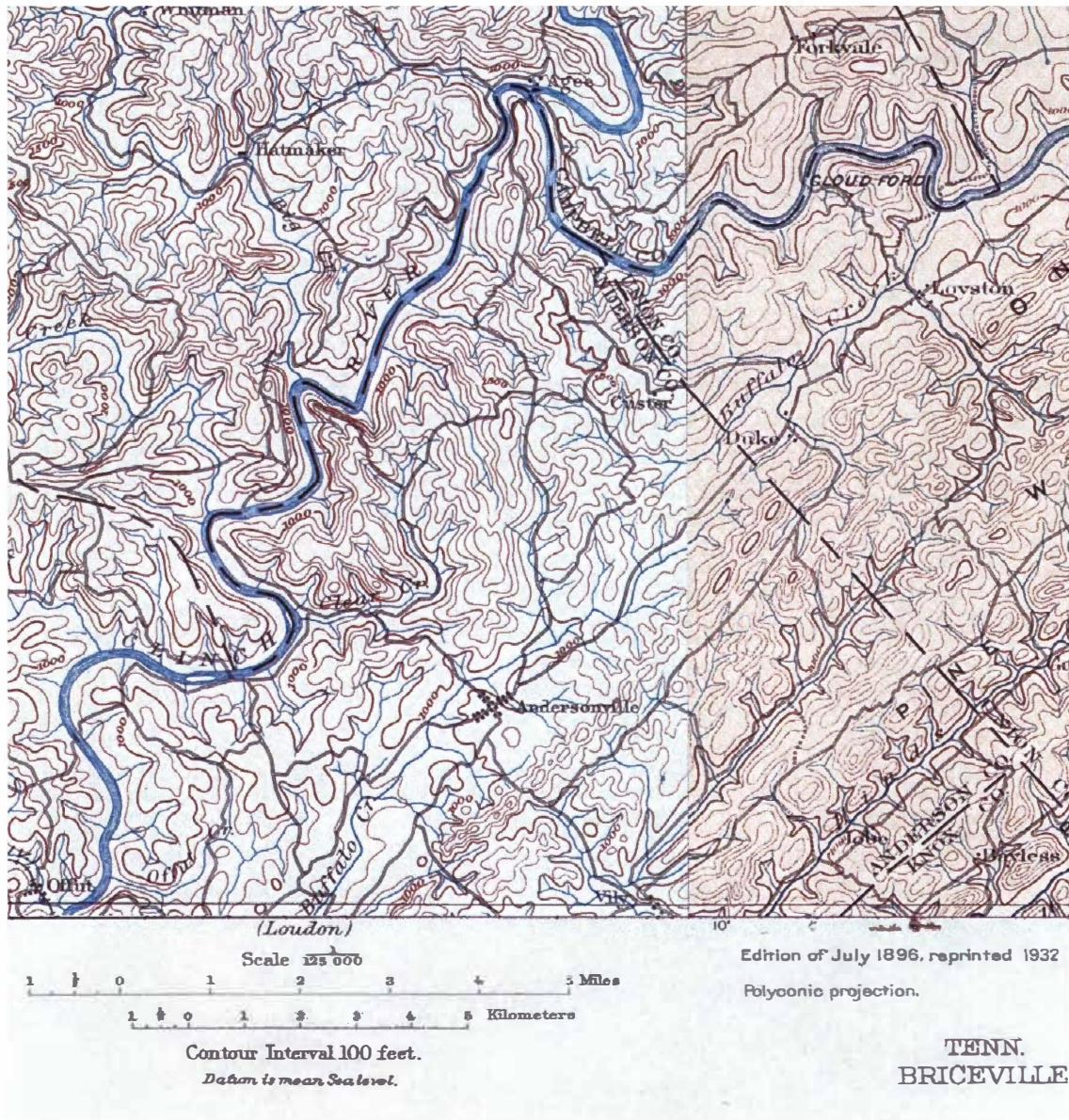


Fig. 5. Clinch River including future location of Norris Dam, 1896, scale 1:125,000. The dam's site is on the left side and the town of Loyston is on the right (compare with fig. 6).

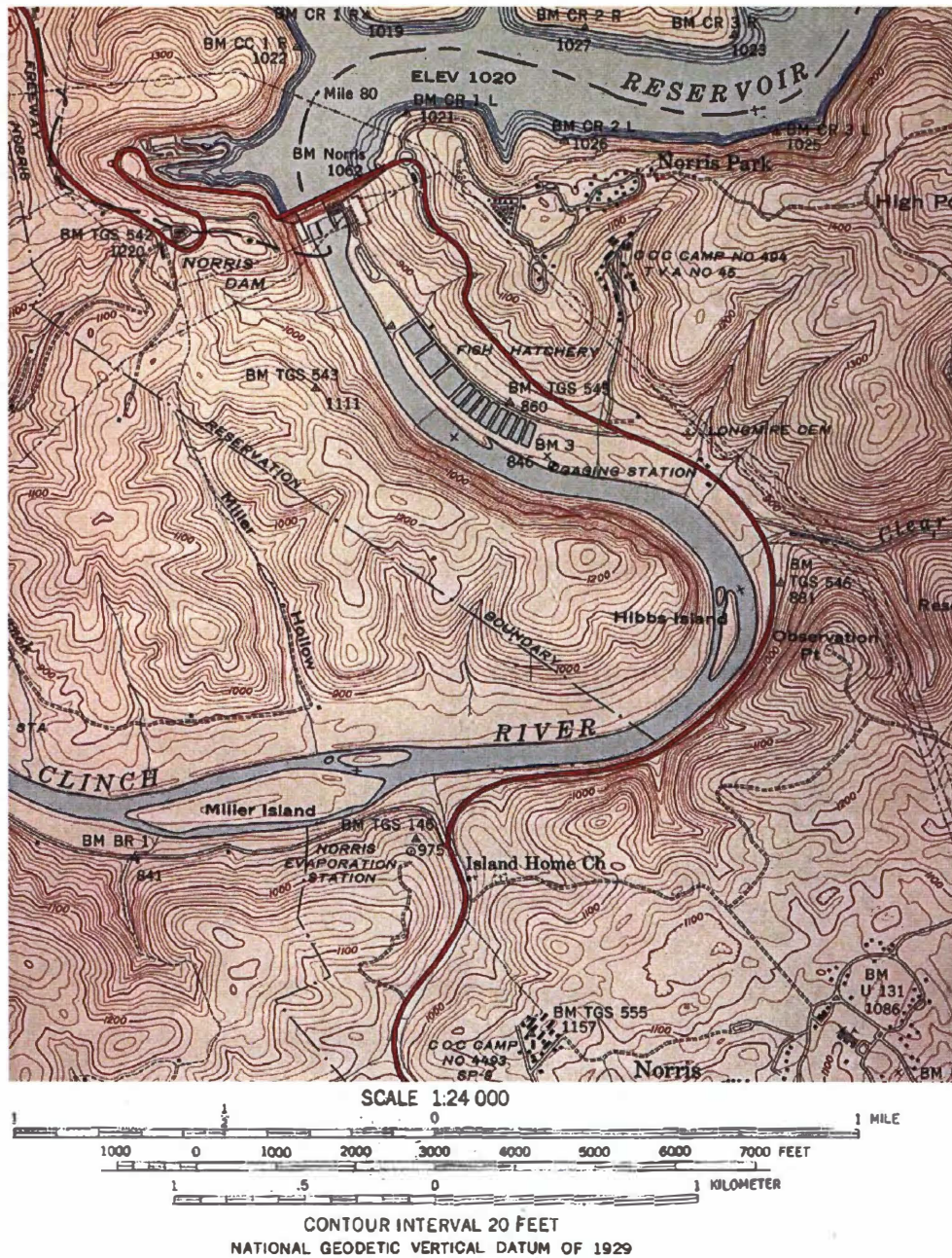


Fig. 7. Norris Dam and vicinity, 1941

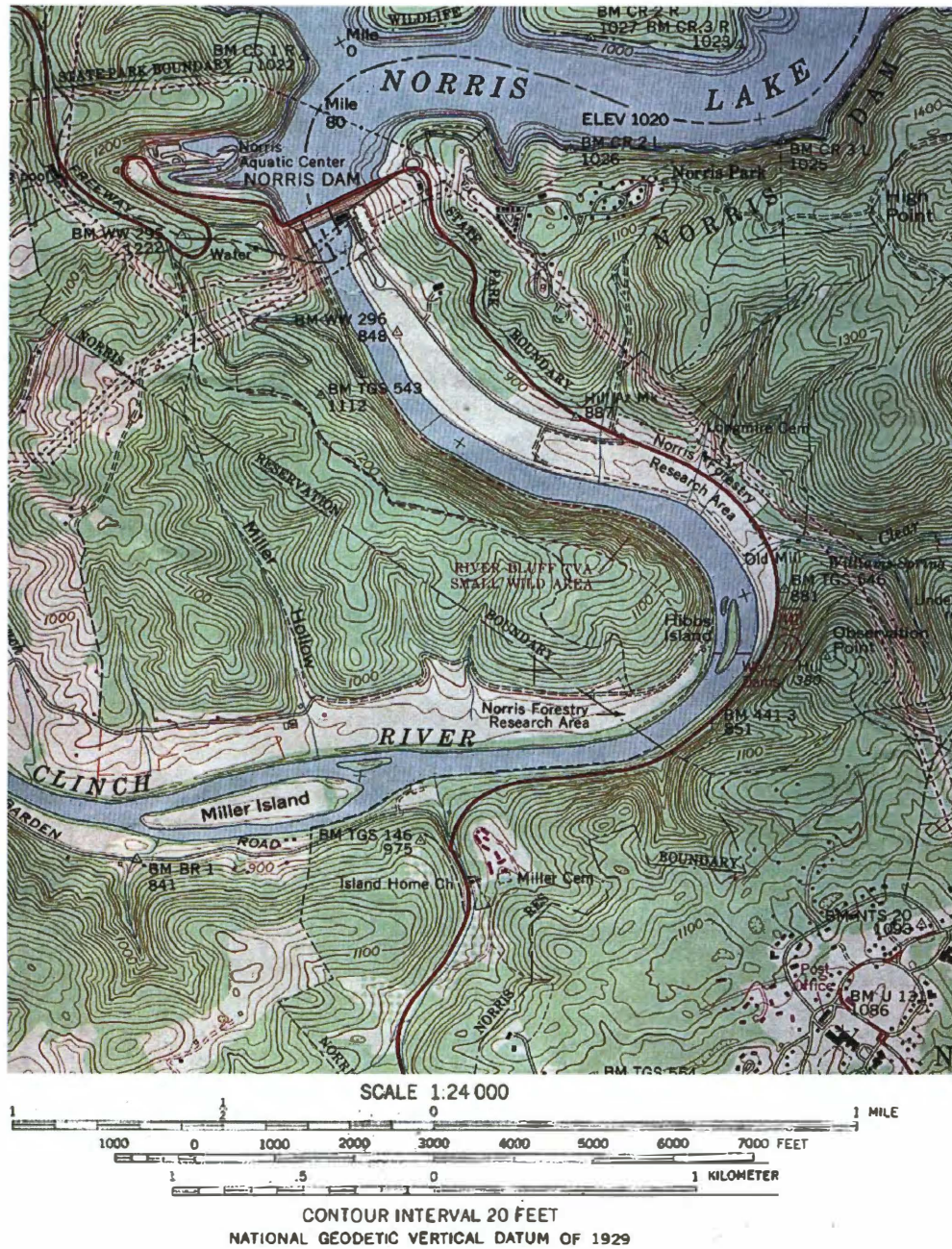


Fig. 8. Norris Dam and Vicinity, 1990

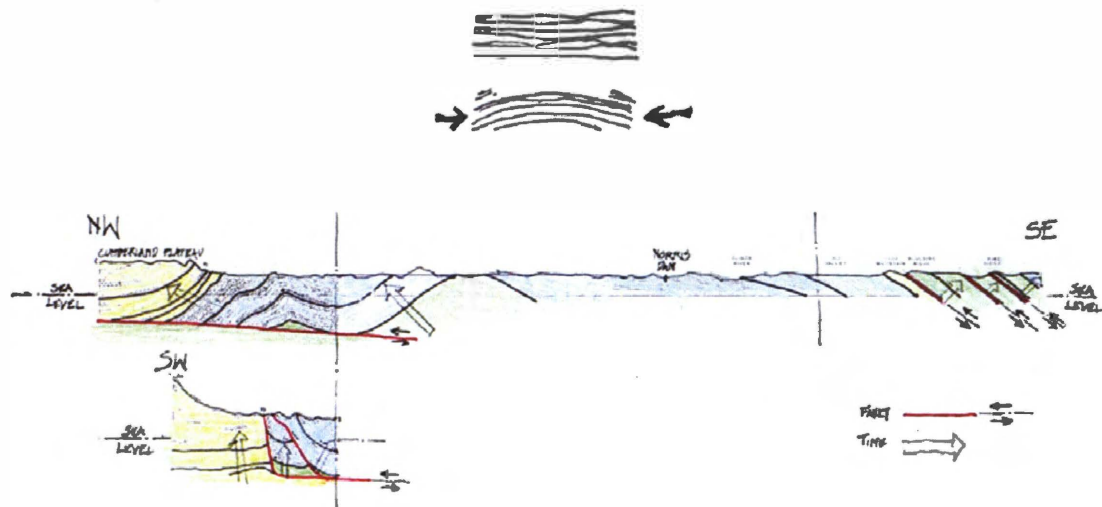


Fig. 9. Sectional analysis of geology



Fig. 10. Analysis of cave and paths at Norris Dam



Fig. 11. Erosion on a subsistence farm

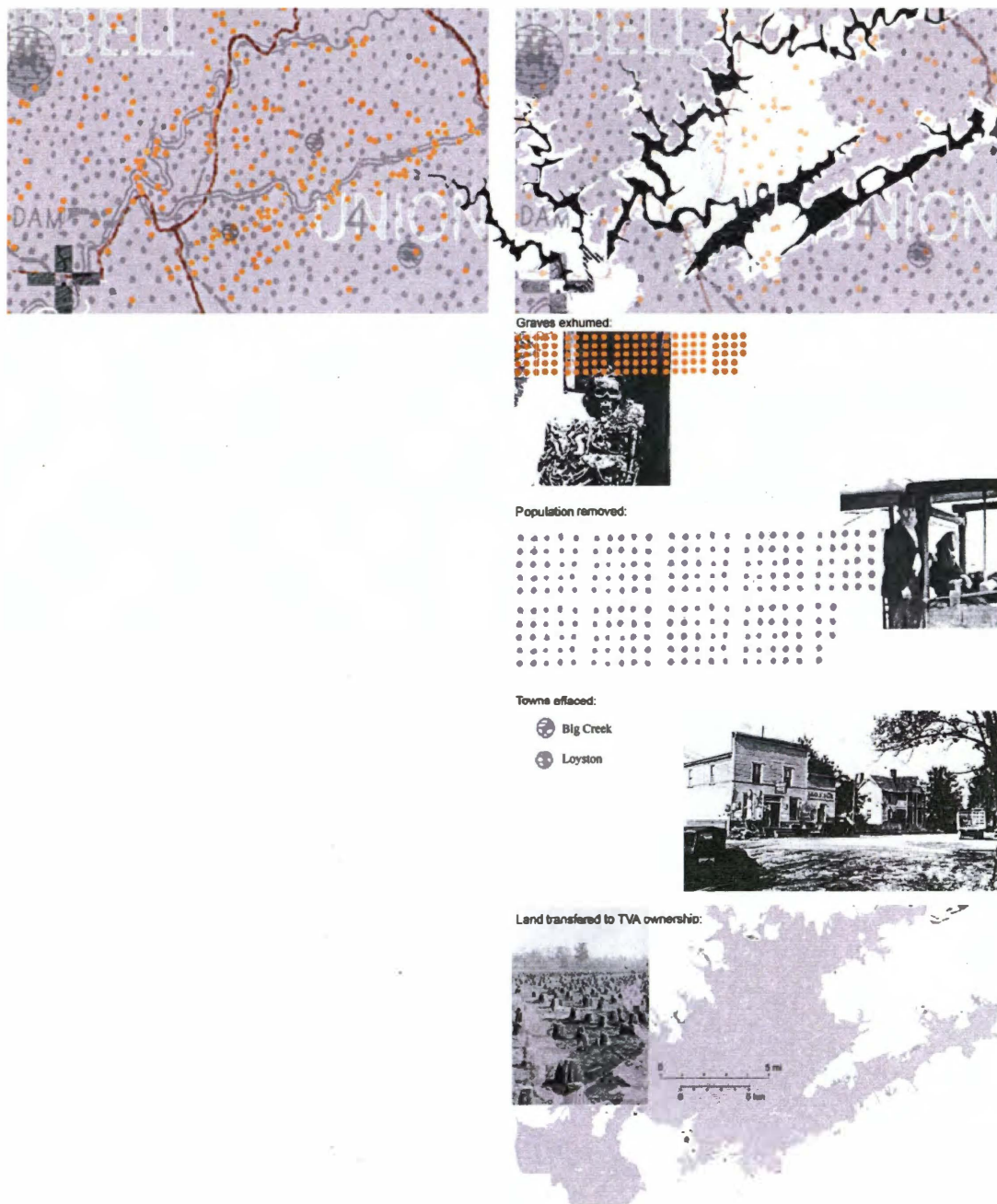


Fig. 12 The Clinch River valley before and after reservoir construction

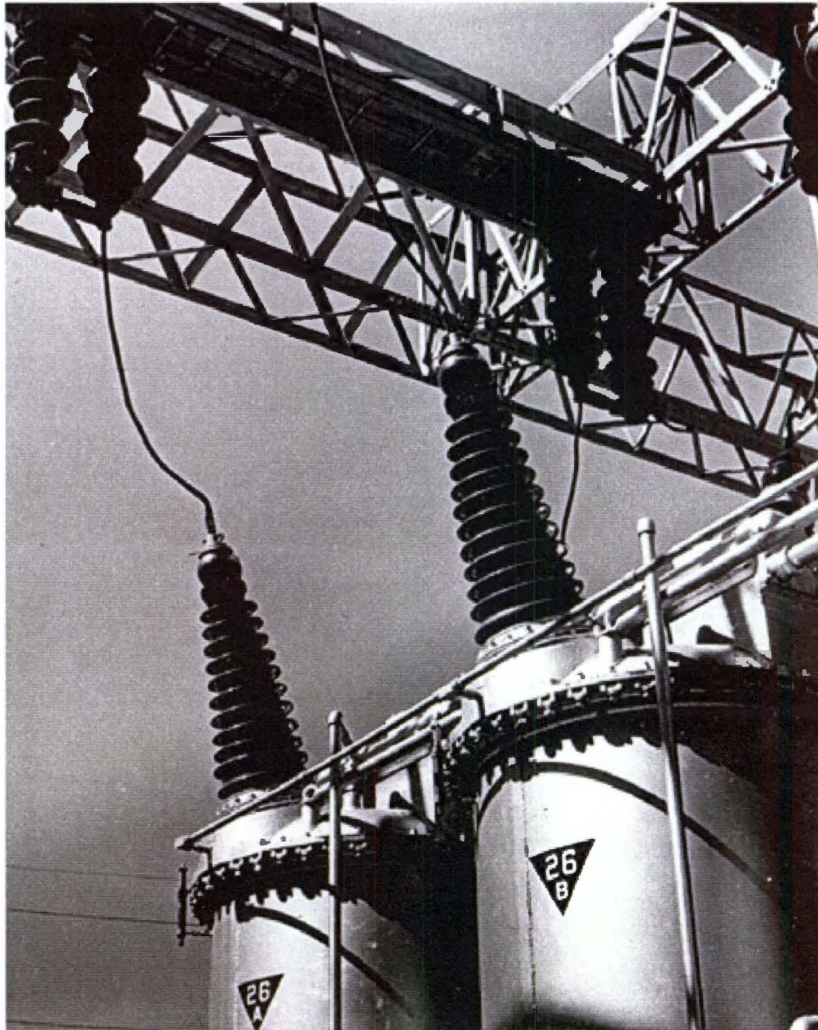
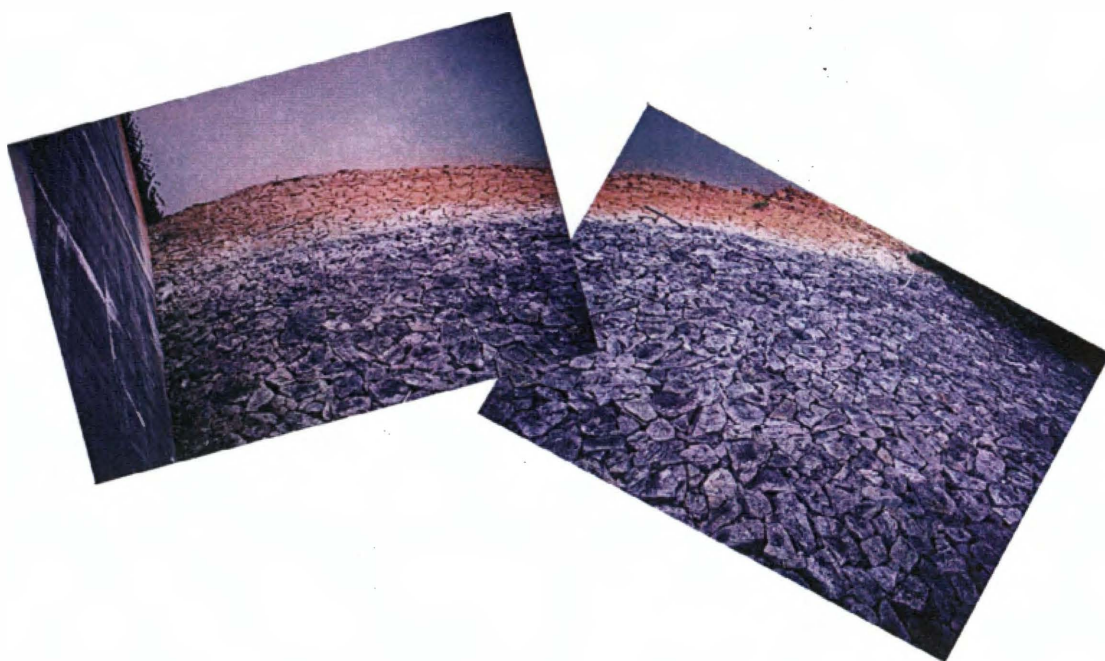


Fig. 13. A TVA photograph (Norris Dam's electrical transmission lines)



Fi.g. 14. Field of rip rap on the left embankment

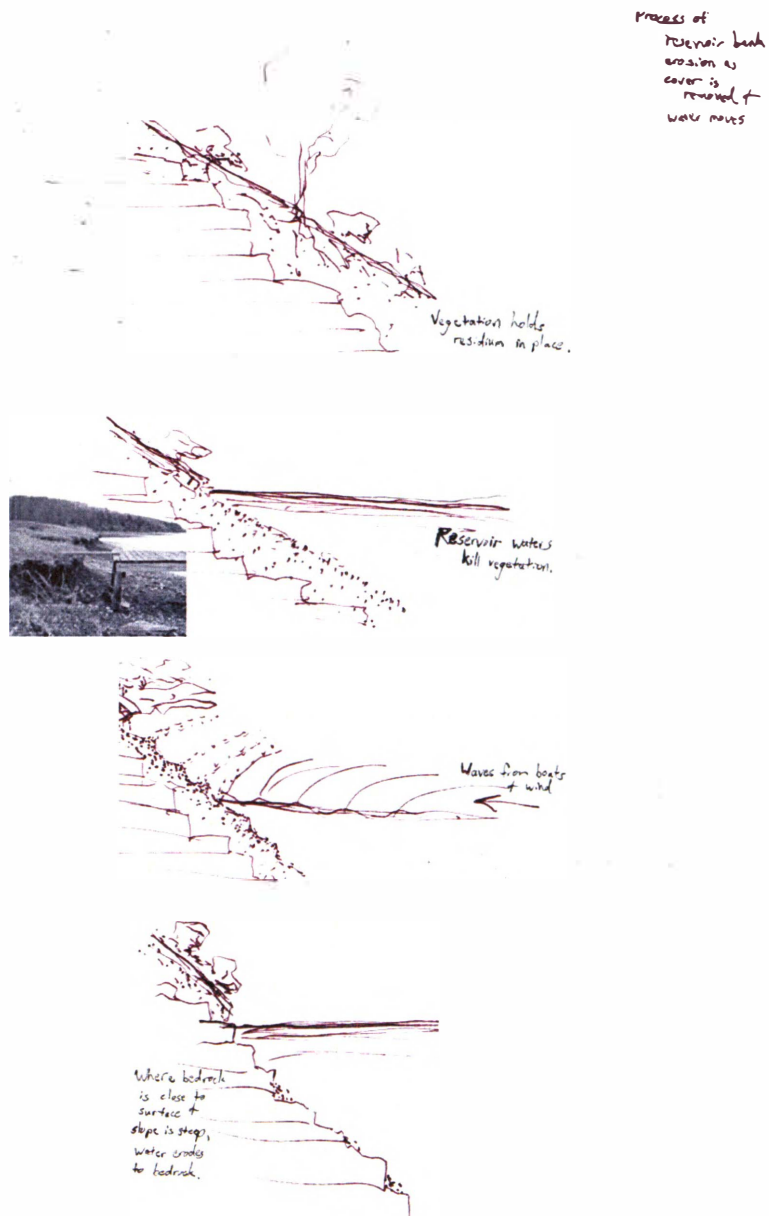


Fig. 15. Analysis of reservoir bank erosion

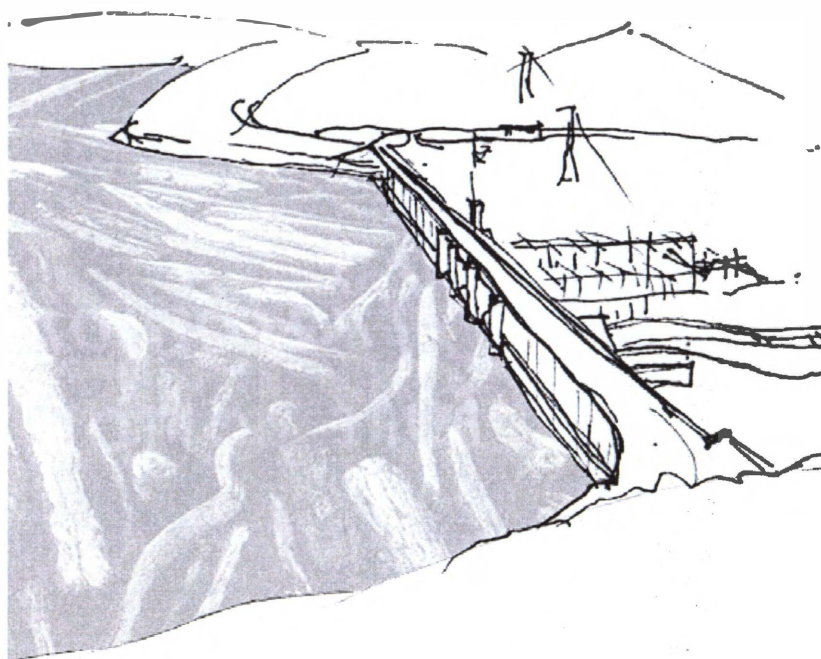


Fig. 16. Flotsam concept



Fig. 17. Flotsam at an Ocoee River dam

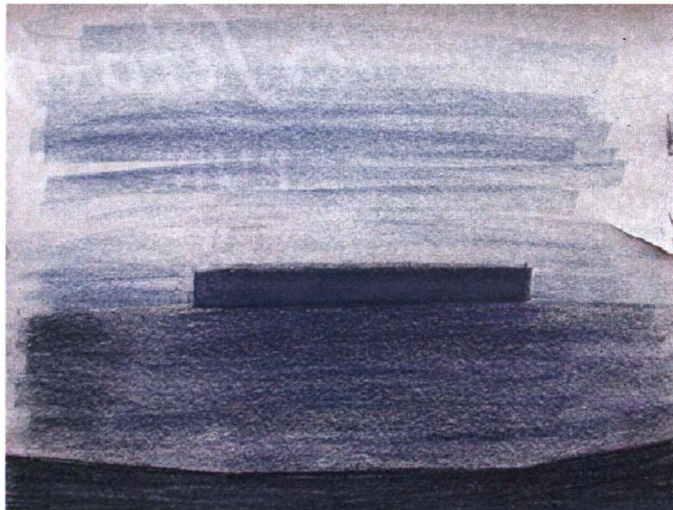


Fig. 18. Thesis abstraction

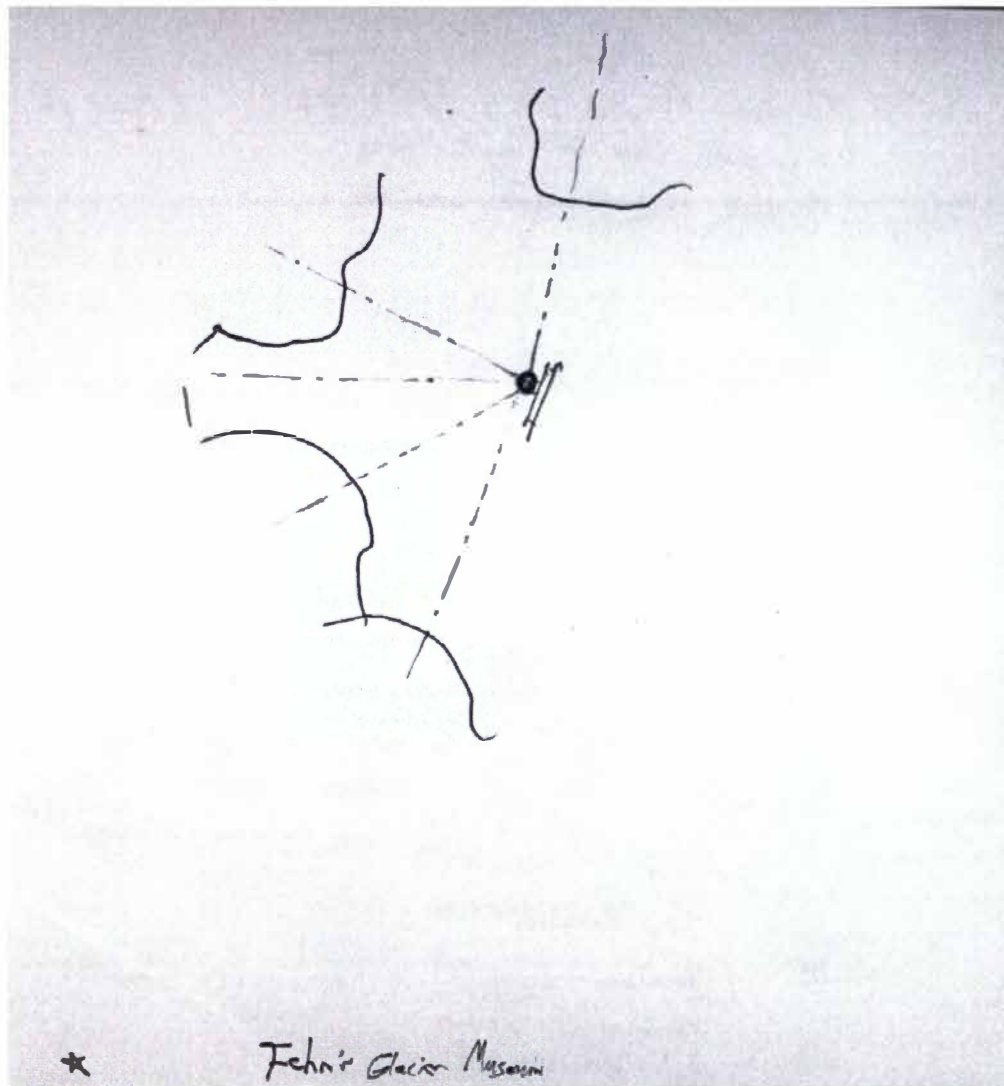


Fig. 19. Glacier Museum: centrality

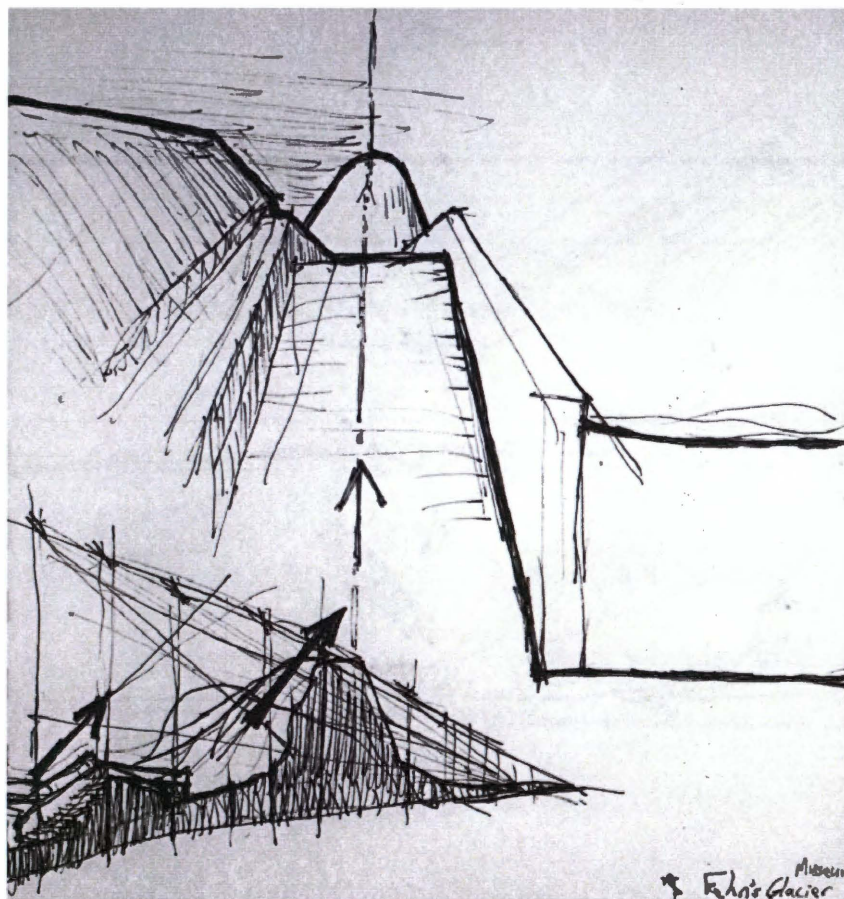


Fig. 20. Glacier Museum: The roof is like ascending a mountaintop



Fig. 21. A glacial moraine

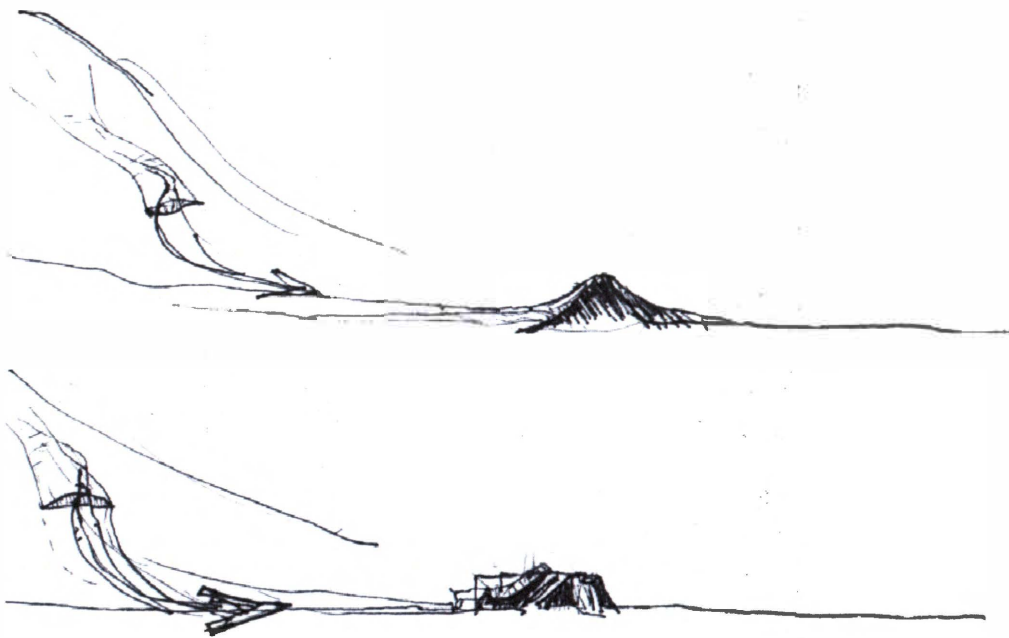


Fig. 22. The Glacier Museum as a moraine

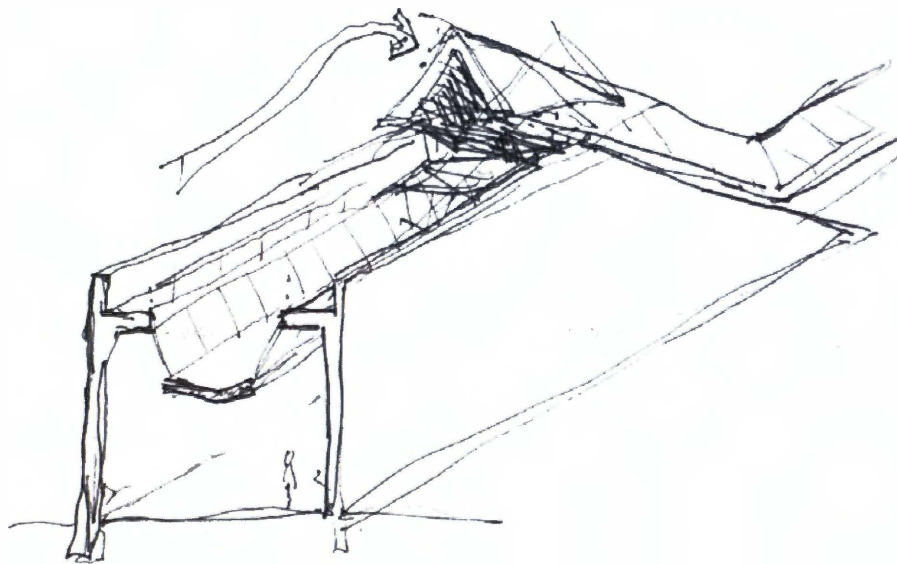


Fig. 23 The museum's roof as a glacier

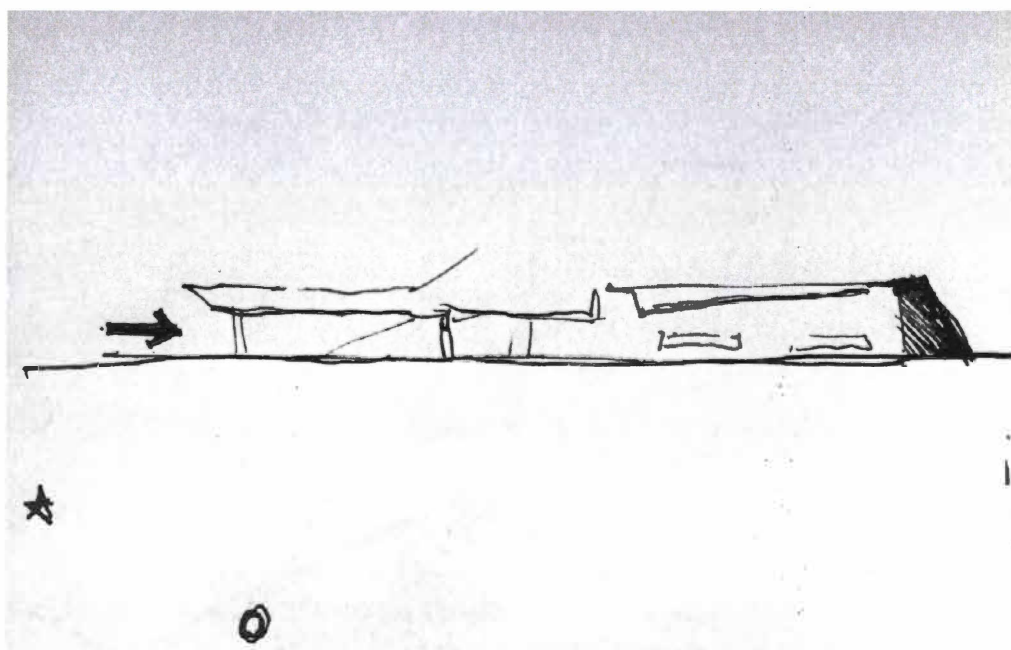


Fig. 24. Glacier Museum: movement pushes toward a terminal mass

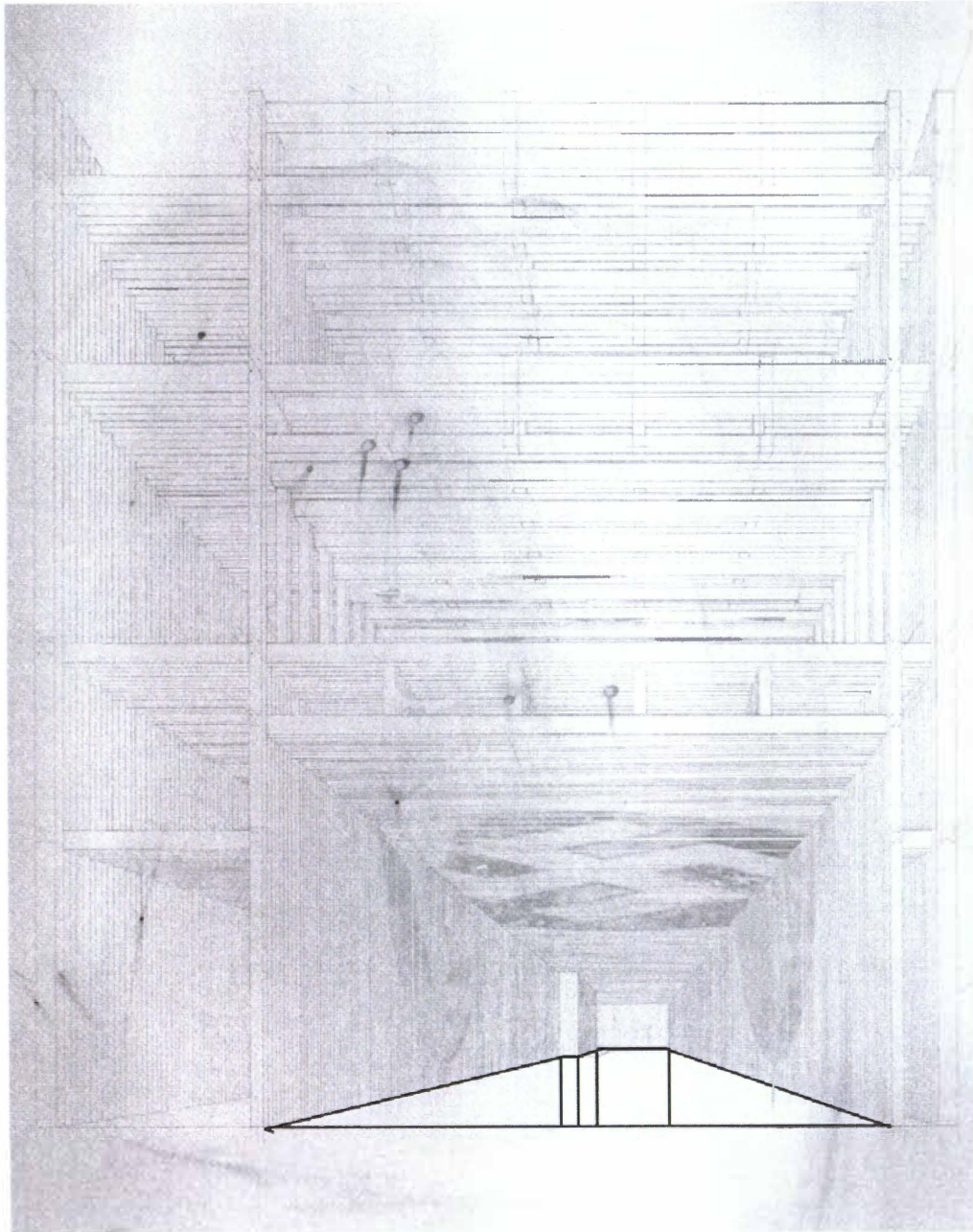


Fig. 25. Topography of Terrors collage



Fig. 26. Murcutt/Boyd collage 1

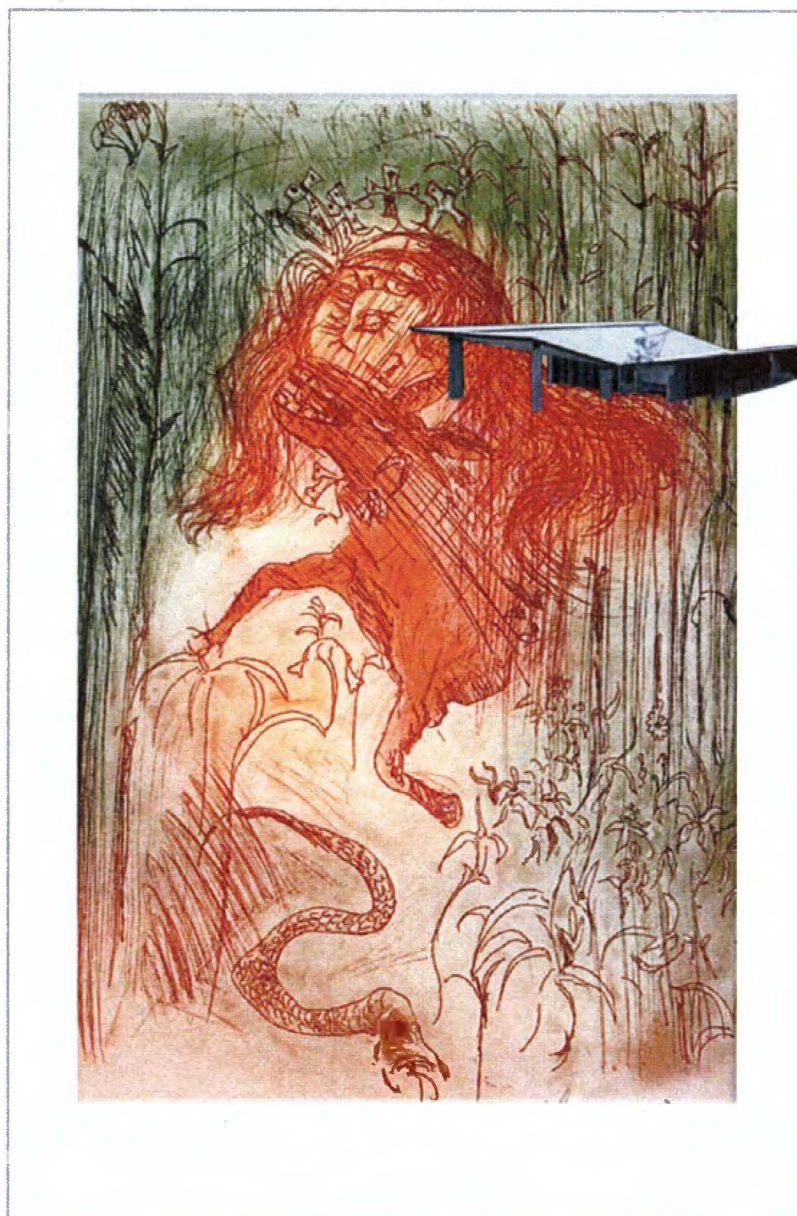


Fig. 27. Murcutt/Boyd collage 2

Appendix B: Final Thesis Project Panels

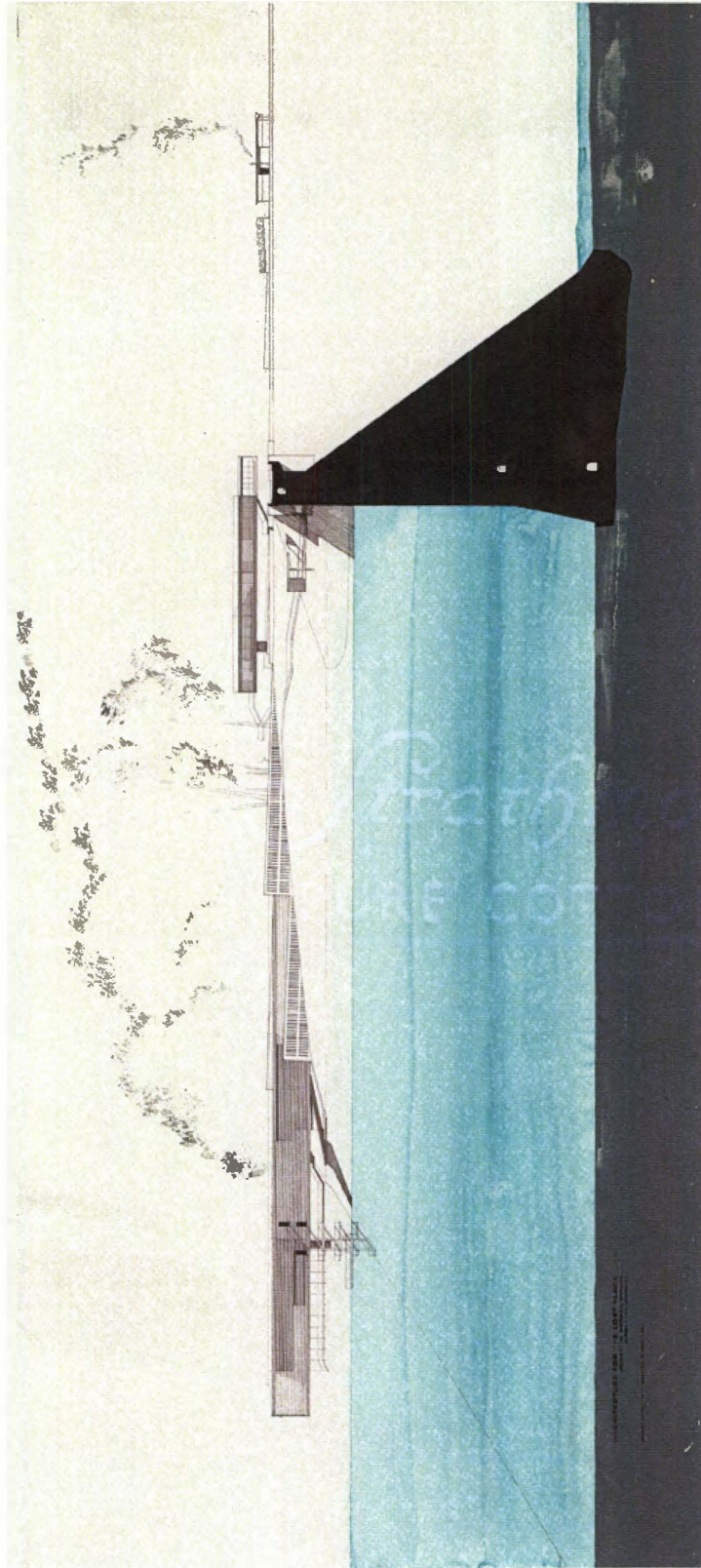


Fig. 28. Longitudinal elevation

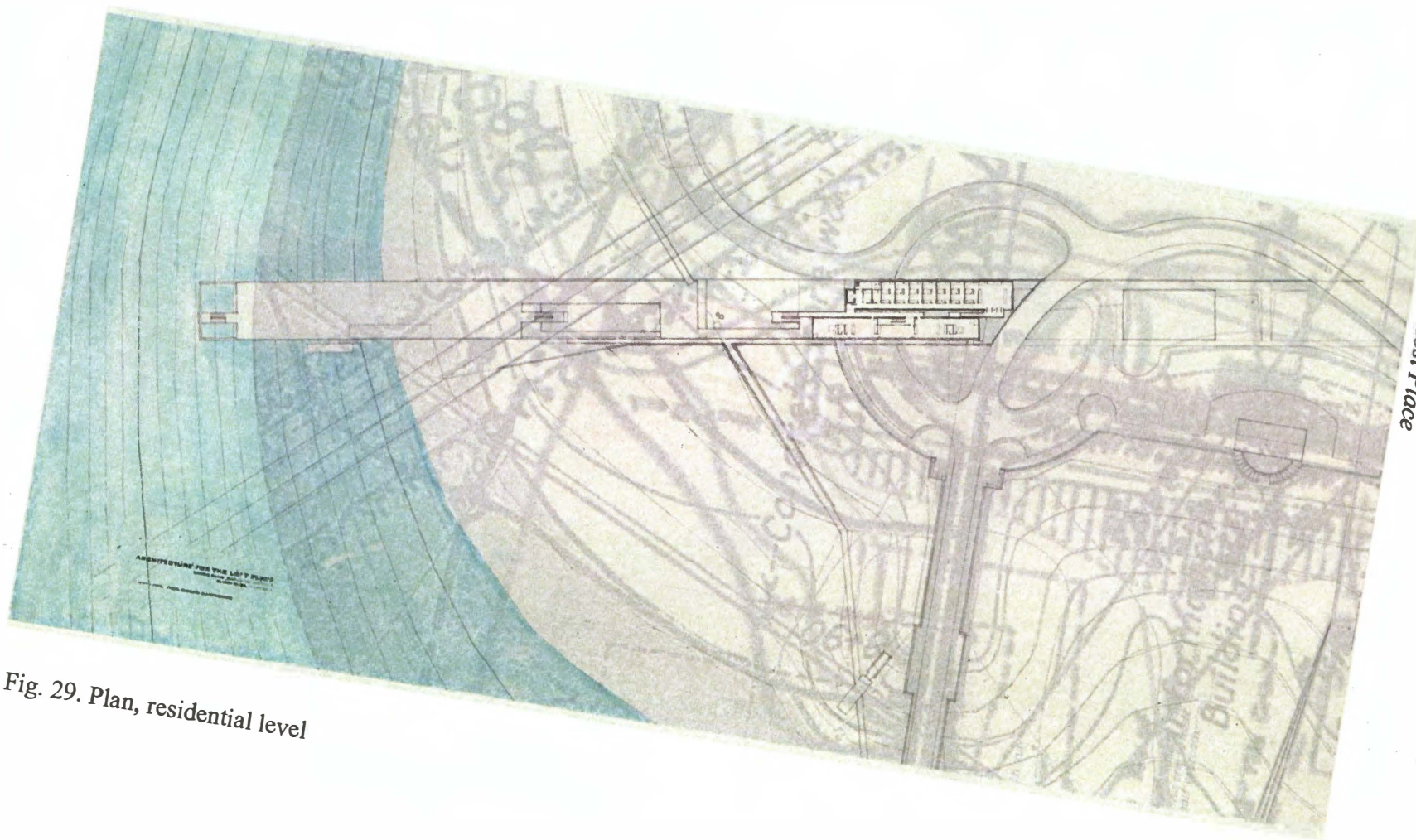


Fig. 29. Plan, residential level

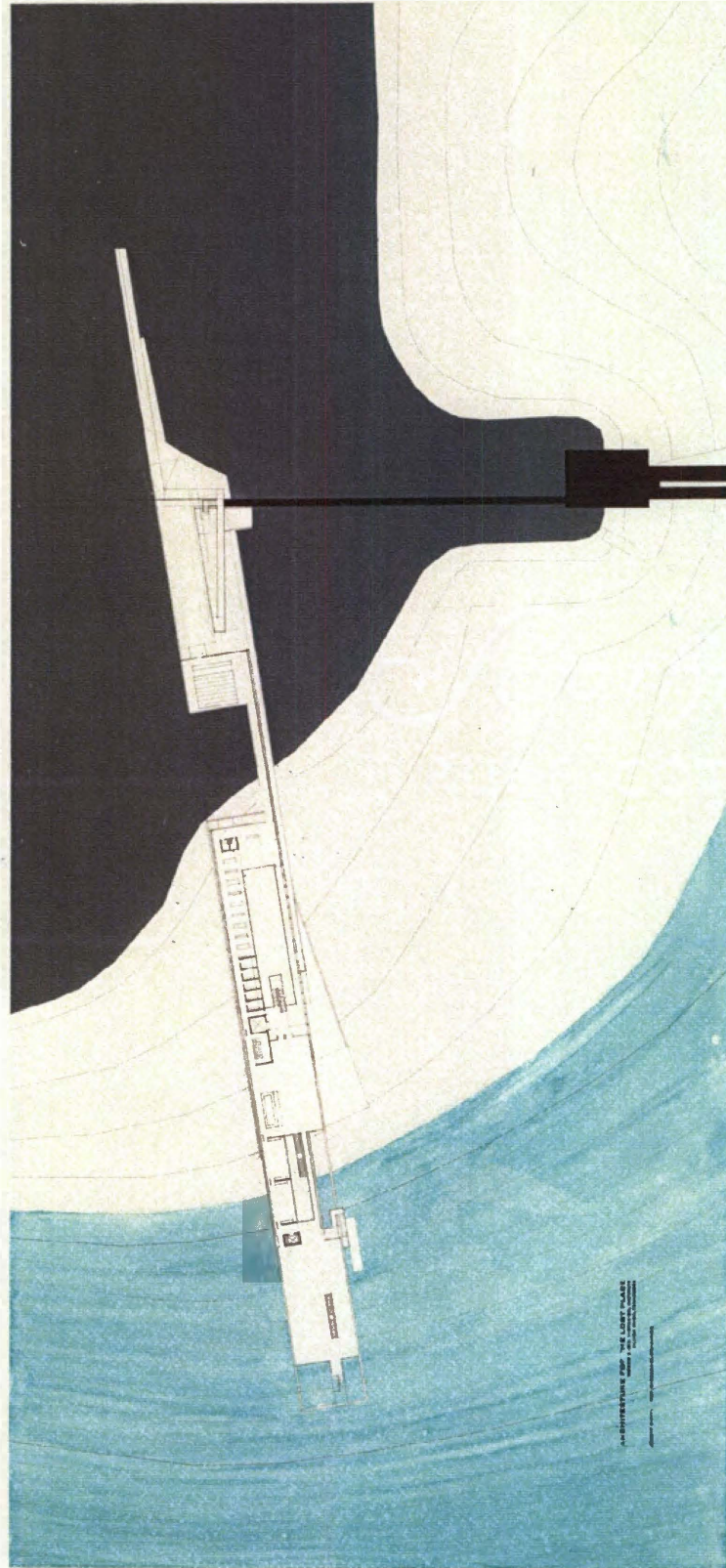


Fig. 30. Plan, main level

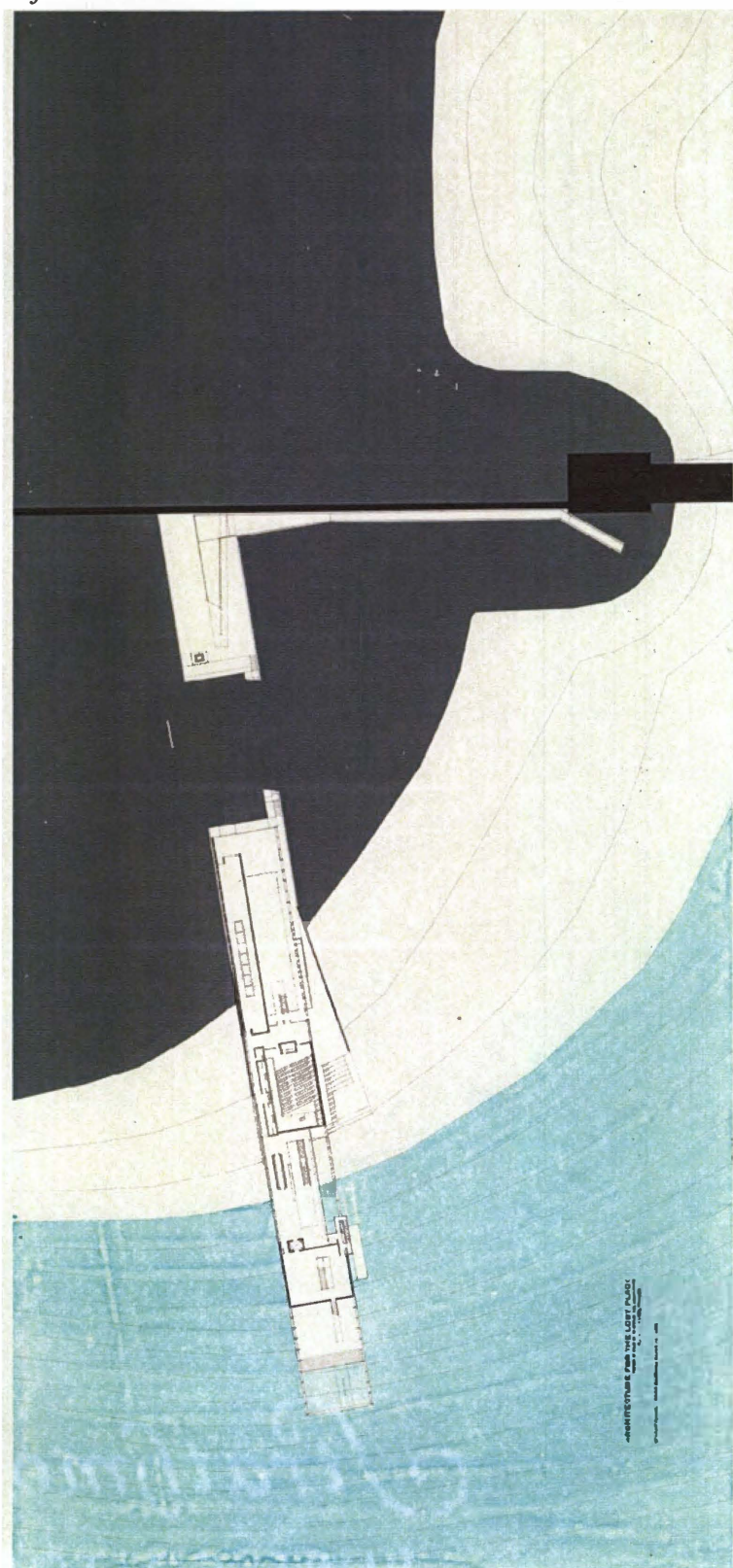


Fig. 31. Plan, courtyard level

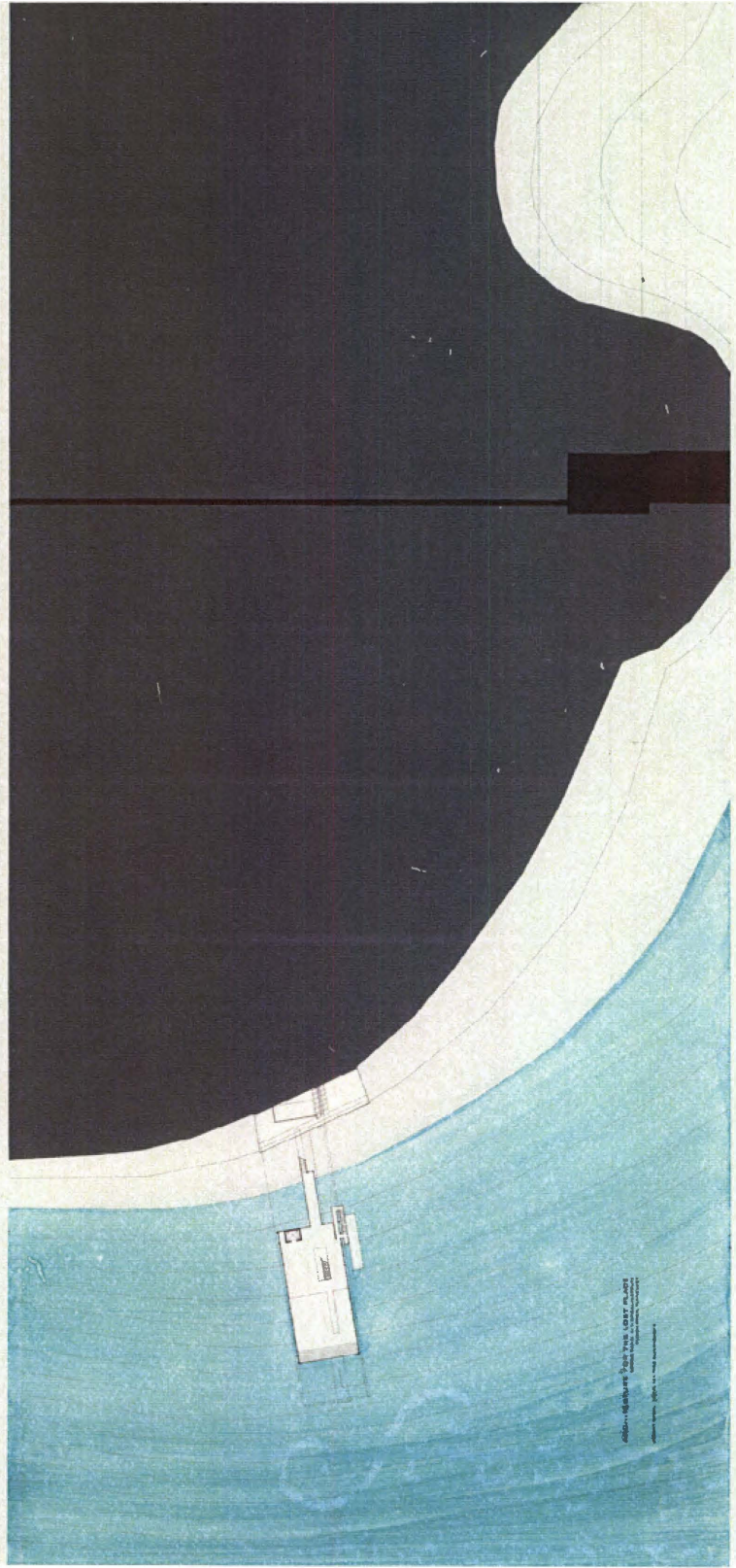


Fig. 32. Plan, lower level

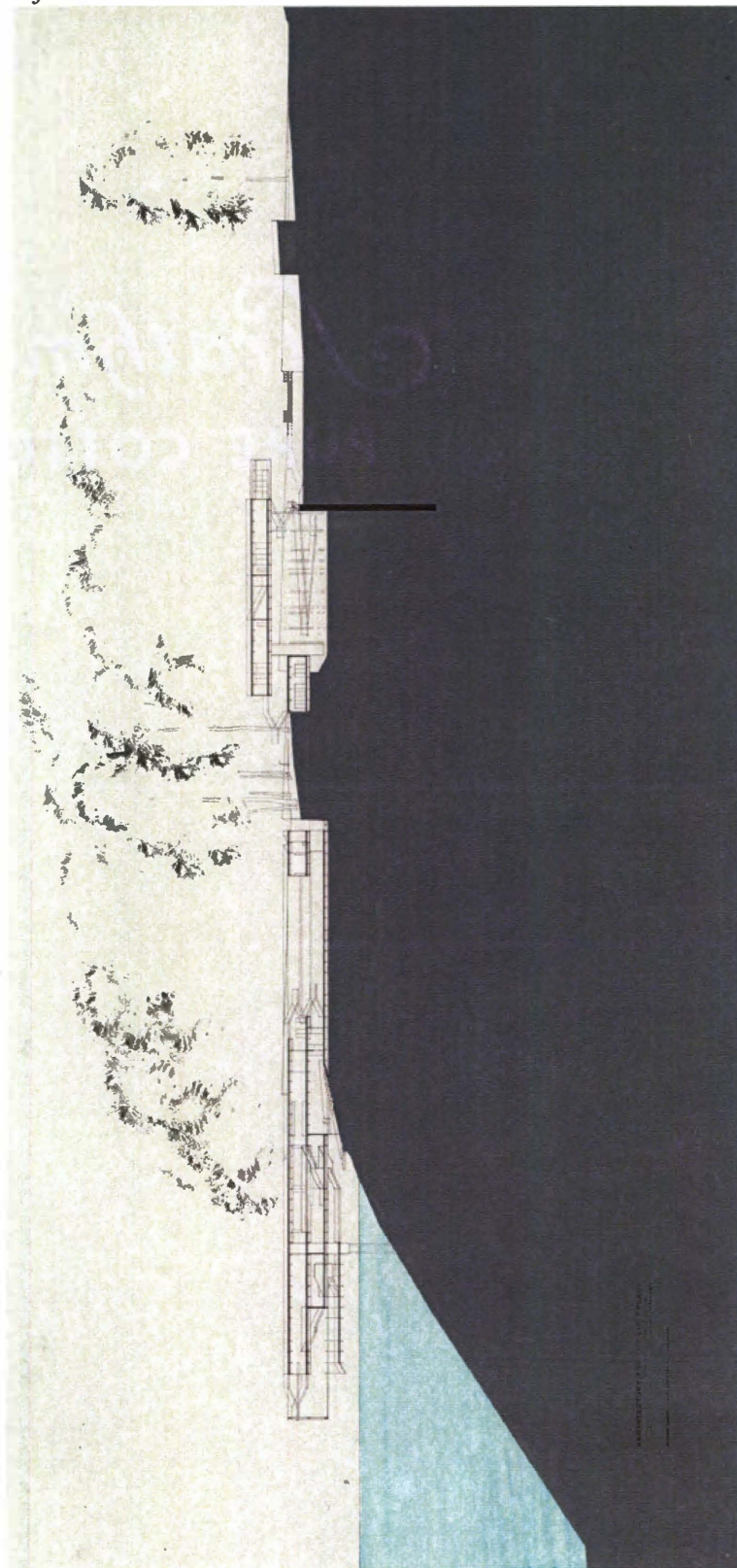


Fig. 33. Longitudinal section

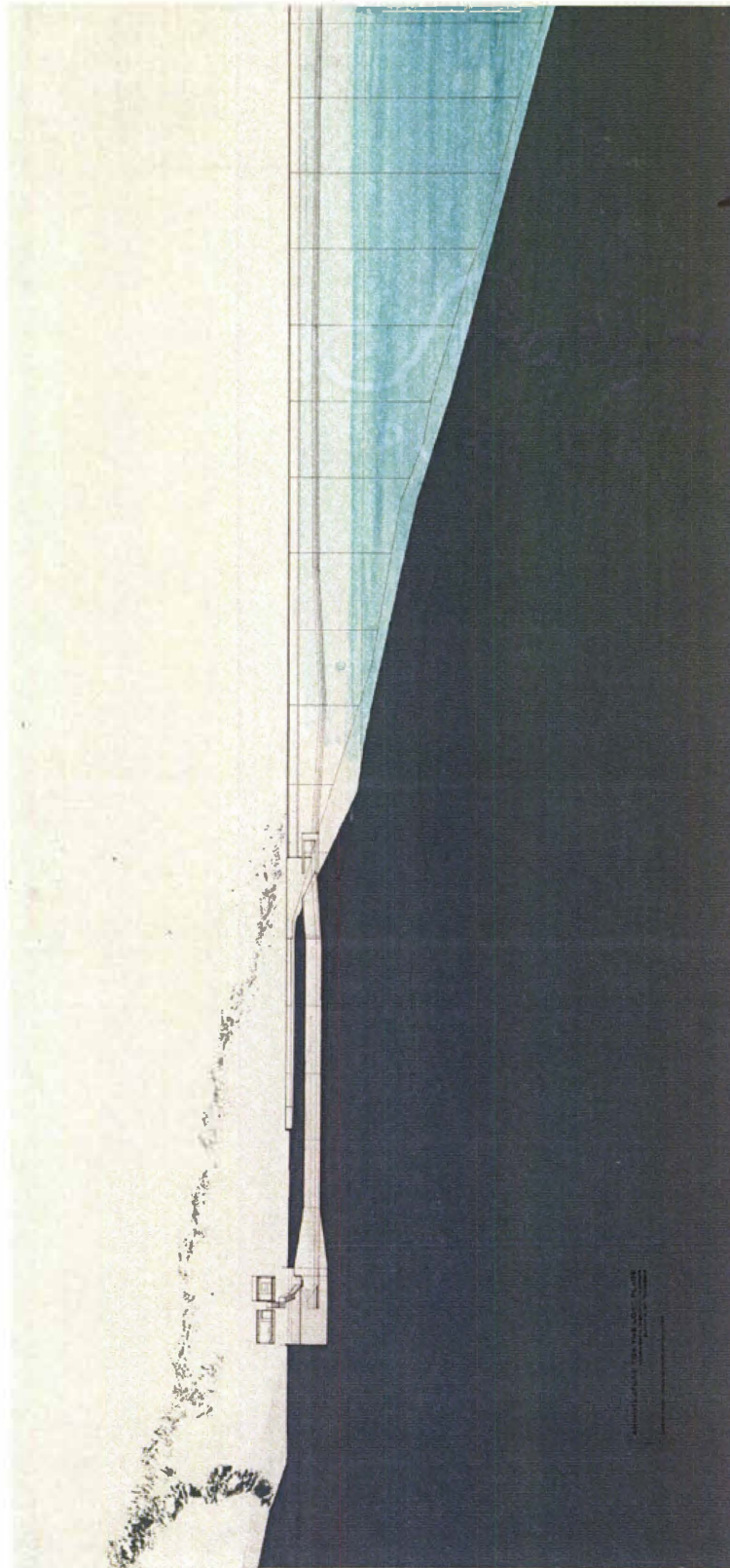


Fig. 34. Cross-section

VITA

I, Jeremy Shipp, was born in suburban Marietta, Georgia, in 1979. I moved to the edge of the Unaka Mountains in East Tennessee in 1999, where in 2002 I received a B.A. in liberal studies from Thomas Edison State College, Trenton, New Jersey. This thesis is in partial completion of a Master of Architecture degree (2005) at the University of Tennessee, Knoxville.

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