

THE DEVELOPMENT OF A
RECREATIONAL SYSTEM
BY
DUANA DAVID OBERQUELL

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THE DEVELOPMENT OF A RECREATIONAL SYSTEM ON

THE CHARLES M. RUSSELL WILDLIFE RANGE

by

Duane David Oberquell

An undergraduate thesis submitted in partial
fulfillment of the requirements for the degree

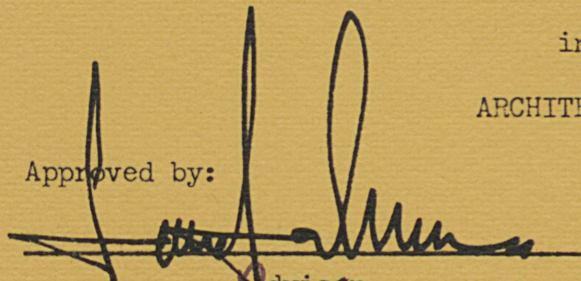
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Duane David Oberquell

June 10, 1977

THESIS STATEMENT:

Architecture developed through a contextual analysis can be more compatible to the environment.

PURPOSE:

The development of a program through which regionalistic design can be achieved.

PROJECT:

The development of a recreational system on the Charles M. Russell Wildlife Range.

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INTRODUCTION

The primary objective of this study is to develop a method for a design oriented contextual analysis that can be used by architects and planners alike in determining land use guide lines, building guide lines and architectural design for a given area. The process of land use planning is usually left to developers or, at best, local city and county planning boards, many whose members are usually not qualified in planning techniques.

Numerous planning processes have been developed by many different competent groups that are exceptionally good, however, not many have incorporated image as a goal or objective. This has become my main goal during this study.

"In Montana we have a special closeness to the land. It has made us what we are; its use in the coming years will determine what we become."¹

The future of America lies in its ability to analyse its environment and the impact that the built environment will have on

¹Cunningham and Werth, A Resource Inventory Method for Land Use Planning in Montana, (Helena, Montana: Montana Department of Natural Resources and Conservation, 1973), p. 2.

the natural environment. No longer can we go around planting houses on prime agricultural land. The future of the architect and planner will go hand in hand with their ability to foresee this situation and to effectively forecast the proper directions of development.

CHAPTER ONE
DEFINING THE REGION

To begin my thesis study the first thing that I had to do was to identify the region that I was to consider and use to develop my theory. I felt that a region was an area that was large enough to be identified and had some method of defined borders whether cultural, political, geographic or whatever. This identification process would have to take on an in-depth study in itself. The portion of identification became the first part of my thesis. I had hoped to develop some conceptions of what the region would be or is would be obtained during the first quarter. It happens that it did work out but I would have an interesting match with interpretation of the symbols.

The beginning of any project such as this was to start with a given area, and I selected one that I felt had many of the major factors required to create a definable region, the Charles M. Russell Wildlife Range in northeast Montana. The process that I would begin to investigate an area such as this was the Regional Planning Approach, but I would use different defining factors than

they did. To identify an area, I felt that I would have to study it from a historical, social, cultural, and topographic point of view. This became a major undertaking as northeast Montana had very little history written about it. The culture is not readily definable from other areas throughout the United States and the topography was not essentially readily available. There had been no soils analysis done on the area and the people that were there were very few and far between.

I then began to approach the study through an interpretation approach. This approach is a little more difficult normally where there is an abundance of information available to research and this process took on several of the regional inventory methods and I was right back to the original starting point except that I had located my site.

I began to investigate the history of the area from a cultural direction and I felt it would be good to start from the earliest culture that we know existed.

History

Lewis and Clark may not have been the first white men

to blaze a trail through the Montana wilderness, nor were they even the first men of any kind, but they were the first to record their visit for posterity and thus the history of Montana began. Although eastern Montana did not have the exciting "gold fever" that gripped so many Americans during the 1840s - 1860s, and continues to do so today as is evidenced by Montana's written history, it did provide a base where many millions were won and lost. It did have its "Buffalo Bills" and "Annie Oakleys". It provided trail heads for many trail drives and drunken cowboys. It also produced great artists like Charles M. Russell. As western Montana left its scars behind, as the mining camps disappeared, so too eastern Montana left a blazing trail of evidence to show its courageous history. The legacy of ghost towns cannot be limited to the mining district of Montana, but must include "New Deal", "Wheeler", "Square Deal", "Frazier", "Theoney" and many others. Towns of one time hustle and Bustle, now dead or dying, but living on in memory.

At the time of Lewis and Clark's arrival the occupying civilization was one of very meager existence. The culture of the plains Indian was basically a culture of survival. The quantity of

game was plentiful,

"As usual, we saw a great quantity of game today: buffalo, elk, goats or antelopes feeding in every direction. We kill whatever we wish...The country is as yesterday, beautiful in the extreme."

Meriweather Lewis, May, 1805

With these great abundances of available meat, it is not unusual that meat was the staple of the American Indian, although they did search out herbs and roots to supplement their diets. This did, however, establish the basic pattern of life that the Indians lived. A constant migration ensued to follow the herds of game in an effort to build up great supplies of food, to see them through the hard winters and periods of scarcity of available animals.

This cultural system produced the need to have a very moveable form of living quarters that would allow them to take their home with them. Thus the tepee developed and became the main form of architecture that the Indian used.

Other forms of shelter were known among the plains Indians which seem to be ignored by many documentations. A permanent structure and winter home was an essential item among many tribes of Indians. For instance, the Mandan Indians constructed a hut made of

waudle and daub type construction. These structures were of a very primitive type, but nevertheless they were waudle and daub.

The northern plains in Montana were fairly devoid of trees and in the winter time with the extreme temperatures there was definately a need for a much warmer shelter than the tepee provided.

These forms were never accepted by the white culture as they were an established or immovable culture. They wanted to put down their roots and claim this area as theirs, with fixed, known boundaries.

The Lewis and Clark expedition returned with declaration of a "Garden of Eden" and the surge of white trappers began. Beaver, buffalo, ermine, mink — all those luxurious furs just waiting to be grabbed. The road to this wilderness was already built — the great Missouri River. All one had to do was buy supplies for a year and a boat of some kind and head out West to make his fortune.

However, once the fur trappers arrived out there, it was found that the peaceful Indian tribes did not take kindly to the extreme waste of animals that the trappers left behind them. After all, all the trapper wanted was the hide, or the tongue. This was the

time of "Kit" Carson, and the beginning of the great Indian battles. At first there were just a few skirmishes, probably brought about by the whiskey that was traded for furs that the Indian had. Nevertheless it brought about a need for some form of protection to shelter the trader from the sometimes hostile natives or maybe to protect their "whiskey" from those "whiskey" thirsty savages. Thus the forts began; Ft. Peck, Ft. Benton, Ft. Belknap, Ft. Logan, Ft. Mussellshell, Ft. Assinaboine; mostly private trading posts, but all situated on the river bank as that was still the most effecient method of transporting trade goods to the post and transporting furs back to civilization. The great paddle wheels had begun their treck up the Missouri River.

The forts were usually constructed of those available materials located at the site or within a reasonable distance to it. Since the rivers of Montana claimed the sites, it was unusual to find an adobe fort in Montana. Primarily log structures were used and thus there are no remaining posts in existance today; However, their location and their appearance was recorded and we do know what they looked like.

Following the forts and cavalry came the first major impact on civilization and culture in Montana, GOLD! GOLD!! It hit like wildfire. The people of the United States were all familiar with the fantastic fortunes made in California and now there was a second chance, Montana.

This period had very little effect on eastern Montana. Who ever looked for gold in shale? However, a few began to show up at Lewistown, Zortman, Landusky, Hays and a few more, in the Little Rockies, the Bear Paws and Lewistown's Mountains. The towns that sprung up here were very typical of all Montana mining towns: basic shelters to live in; great wooden structures that housed the mining equipment and mine shafts; tent cities that turned into wooden false-fronted structures to give an indication of stability of the store or bar that it housed; very few if any brick structures. These towns were constructed with essentially one purpose, to get rich quick and then move on. A few like Lewistown hung on and became a town of stability, but this happened primarily when it was chosen as a county seat or picked up the role of trade center for agriculture.

The next great stage came when the great "Iron Horse"

moved out to the prairie. This development had probably the largest effect towards opening up the prairies of eastern Montana of all of the influences that shaped it. I refer to the two included maps. The Northern Pacific came through in 1882 and opened up the south and southeastern portions of Montana to settlement, creating numerous small towns, usually at ten mile intervals, as that is what the government allowed for the distance between sidings. In 1890 the Great Northern came through the northern part of Montana opening up the remaining half of the state to settlement. Again small towns sprang up, almost overnight, bringing to Montana settlers, farmers as they called themselves, but these people were interested in providing themselves with a lifestyle that would prove their civilized existence. When they first arrived, it was to an area in which settlement did not exist, and they were all used to the civilized society. So, the culture and architectural style that followed was a transplanted form, as were the people.

By this time most of the Indians had been confined to reservations. These legal entities, created by the white laws could only be broken by the white man and became the very evident case when a strip of land along the Great Northern Railroad on the Fort

Peck Indian reserve was opened up for white settlement. It just may be coincidence, but at that location, as all through Montana, the railroad goes through or along the river bed which is the most fertile land in northeast Montana. However, this was one of the greatest impacts that opened up the northeast corner of the state and drew numerous new groups of people to Montana.

The transplanted cultures that Montana began to experience were of numerous origins. There were Poles, Norwegians, Germans, Scotts, and many more. These people tended to settle in the same general area creating communities that had strong ties to their ancestral cultures as can be evidenced through a study of the areas. The study of the local architecture that is still existant in the areas will uphold this theory. The primary sources will be churches and barns as these either had strong cultural ties or experiences. The people tended to absorb the housing that the New World (U.S.A.) provided as it was a way of showing loyalty to the new adopted home or it was simply a more feasible home. Many times the people were young and had to rely on help because they had not experienced the building technology of their ancestral backgrounds and it was easier

to adopt new forms for living than to try to adapt new technology to old forms.

At first, temporary structures were built to provide shelter from the elements. These buildings were produced from whatever materials were at hand or available. Many sod shanties, tar paper shacks, log cabins were built to be destroyed later as the owner could afford to provide more permanent structures for his family.

The next phase of development that affected towns in Montana were the automobiles. The highway made people more mobile and they could travel greater distances faster. Thus the highway or auto tended to condense the number of towns. Many new towns died and other new towns boomed.

This phase had the main effect of producing new ghost towns, providing an ease of transportation of materials to the home-site and began to allow the builder the freedom from materials restrictions. He no longer was limited to the materials available at the site. It was here that building began to boom in those towns that were of major importance to an area, the county seat or an industrial area.

Through all of this study I find that the architecture of Montana became a copy of a building some place because of the lack of architects and the economic level of the people. They relied primarily on the mason or carpenter as they were at hand and readily available for work. They were less expensive.

Fort Peck

The era known as the Depression (1925-30) has received very little mention in architectural history books. Perhaps the historians felt that very little influence came out of that period. However, there were numerous building projects undertaken during this period. These projects were mainly funded by the various governmental systems in the U.S. Of primary importance were the ones undertaken by the Public Works Administration (P.W.A.) authorized under the "New Deal" package of the Roosevelt administration.

The P.W.A. projects were primarily devised to provide a means to raise the American economy out of the slump that it was experiencing. There were numerous other projects undertaken, T.V.A., Relocation, Missouri River Water Works, the Greenbelt Cities and more, but Ft. Peck had the greatest effect on Montana.

Ft. Peck's purpose was two-fold; first to provide employment for jobless, local population, second to provide improvements in navigation on the Missouri, improve irrigation, and provide hydro-electric capabilities. Its final goal was to be the world's largest hydraulic fill dam and the fourth largest man-made lake. This was primarily an engineering project and the role that architecture played was a result of the location. Ft. Peck was located about 25 miles from the nearest town and a town would have to be provided for the employees. The project was turned over to the U.S. Army Corps of Engineers for design and supervision and execution, but not before P.W.A. had its influence.

The Administrator of the Housing Division of the P.W.A., R.D. Kohn had been noted for his connection with the Regional Planning Association of America, and his association with C.S. Stein and Henry Wright who were to become involved with the Green Belt cities. Mr. Kohn's experience began with the United States Shipping Board War Housing during WWI, and he had developed a strong interest in housing at the community level.²

²C.S. Stein, Towards New Towns for America, (New York, N.Y.: Rheinhold Publishing Corporation, 1957), p. XII.

The town of Ft. Peck provided an opportunity for a city planner to put into effect all of the most modern town planning theories of the time. Although a forerunner of the Garden cities by almost two years, the influence of the English Garden Cities is evidenced in the siting and housing design. The housing element, based on the English cottage, was constructed entirely of wood as they were only temporary living units intended to be used only during the construction of the dam and then abandoned. Several additional factors came to light during the design phase; the extremely cold temperatures of the northern plains, the development of tract housing that was suitable for annual incomes of \$1200 and a quality home that could be constructed in a short period of time without sacrificing individuality. The degree to which the designers solved these problems is a matter of interpretation, however, I feel that it was a valid attempt at solution, and did provide as good an example as any tract housing of any later era. An article appearing in the Glasgow Courier in 1937 quotes an author, "This is a point very well worth a great deal of consideration in meeting the smaller home problem where sameness is distinctly distasteful to individual owners and

where the limitations on small homes make it difficult to secure the necessary individuality and yet retain some of the economy of duplicate plans".³

The solution that came from the temporary status proved to be more than adequate as the buildings, except for a few minor storage buildings, are still being used today. Some, as the hotel and theatre, are still at their original site, and others have been sold to private individuals and moved to various sites throughout the neighboring counties. Except for a necessary modification that is a matter of owner taste, the buildings have remained as originally built.

P.W.A. policies in general were not creative in style, although they did search for new and innovative methods and systems in engineering, they were afraid to bring new styles into an area. They emphasized economics and function rather than artistic endeavors.⁴ Many lessons and new technologies were overlooked after the war when the private economies picked up the load, such as fuel economy and site planning. At Ft. Peck the major contributions that were to

³Glasgow Courier. Good Ideas for Low Cost Homes. (Glasgow, Montana: November 30, 1937), p. 21.

⁴C.W. Short and R.S. Brown, Public Buildings, (U.S. Government Printing Office, Washington D.C., 1939), p.XIV.

result were site planning and fuel.

The homes were designed to withstand temperatures of -40°F and still maintain a large degree of efficiency. The average home with six rooms used an average of 84,000 cf/mo of gas to heat the home. While this may not appear to be a large savings, if the technology that was initiated here in 1934 had been improved upon as technology increased, we may have avoided the energy problem that we face today.

The solution to siting was based upon the principle of individuality as well as the Garden City principle. In this endeavor, again, the ground work was laid for future generations to expand upon. There were only seven basic floor plans, but the architect also developed 36 variations so that no two in a row were alike, "these homes constitute a valuable folio of suggestions not only for cottages but for permanent homes as well".⁵

This procedure, if followed in other tract developments, would prevent the tract developments that came out of the "50s" with which we are all too familiar.

⁵Glasgow Courier, op. cit., p. 21.

The terrain was the major determinant to the overall siting of the town. It was placed as close to the construction site as possible, and the existing terrain provided the basic shape of the town. The shopping and business area were placed closest to the construction so that it would separate the living area from the dam. The homes were placed next so they could relate to this area, thus the formation of the neighborhood unit appeared. Third came the barracks area that was to be used by the working laborers, this was separated by a gullie from the rest of the town. The Greenbelt theory was planned around the neighborhood unit which consisted of school, community buildings, shopping center, government and management offices, and recreational buildings.⁶ In this respect Ft. Peck is complete.

Another policy of P.W.A. was to utilize local traditions as much as possible and it appears that the architects that were associated with the project were at least familiar with the cultural heritage of the area.⁷ At that point in time the majority were of Norwegian background and the architectural character is also. The

⁶C.S. Stein, op. cit., p. 79.

⁷Short and Brown, op. cit., p. 12.

finest existing structures are the hotel, school, and the theatre. The homes appear to have been fitted in after they were designed as they only carry hints of decoration, but all major buildings are very firm in design. However, the time element that was allowed for design, about four months, limited the design to only the necessary major buildings. Only the main administration building was designed as a permanent structure and only it is constructed of concrete, the rest are of wooden structure which almost appears out of character in an environment that is devoid of trees and would be unless one studies the heritage.

One of the major contributions of the P.W.A. era was a result of the basic purpose of its foundation, the need to provide jobs to the unskilled. There was no time to train people for the technical type jobs. Therefore, the intricate architectural embellishments had to be eliminated. Thus, architecture became simplistic in nature. I call this a contribution as I believe that this allowed the Americans to accept the post-war Internationalism in architecture.

I have tried to show through parallels and analogies the

effects that were a result of P.W.A. projects and demonstrated primarily through Ft. Peck town site. Prior to this era, architecture in eastern Montana was a result of masons and carpenters, except for the more lucid towns as Billings or Great Falls. After Ft. Peck, a stronger interest in architects and their work began to surface.

Ft. Peck townsite began during April 1934 and before it was completed in October 1934, boasted of being the most modern town in Montana consisting of 400 homes, a hotel, an administration building, a hospital, ninety-six dormitories, a firehall with twenty-six alarms, grocery store, a drug store, a restaurant, a theatre with seating capacity for 1,209, and recreational facilities with basketball, handball, tennis courts. The town began to die by the beginning of the war and has since dwindled to a maintenance size unit.

Culture

History is possibly some of the most fascinating material to research, but it has very little value on architectural forms. This, however, is not always the case. If one knows what a group of people are one will have a much better understanding of what to build for them, and how to design. History eventually turns into

culture if you follow it long enough. According to More "Architecture becomes the image of that culture."

These implications that one finds in a historic study are interesting but really do not have a large effect on architecture designed for the area. They do, however, begin to direct one to the cultural boundaries that the region has. This becomes a much larger area than the one I proposed originally as is shown on the historical map.

Legal

The next step was a legal investigation which gives an indication of the ownership possibilities of the area concerned. This is an important step that must be conducted at the onset of the study as it would be futile to compile a proposal on land that could not be obtained from an owner whether public or private.

As I proceeded, I discovered that the Federal Government owned the first 70% of the land, the second 28% was owned by the State and about 2% was private property. There are, however, several institutions that manage this property with no inter-coordination. The U.S. Army Corps of Engineers, U.S. Fish and Wildlife, U.S. Coast

Guard, Montana Fish and Game, Montana Bureau of Reclamation, Department of Sport Fisheries, six county governments, Department of State Lands, and Montana Highway Commission are the major ones; there are others, however they do not contribute substantially to any management decisions.

Hydrology

The investigation of water runs hand-in-hand with the legal aspects, due to the fact that water has led in the land fights throughout western history. However, my investigation at Ft. Peck primarily determines that the majority of water problems comes not from who gets it, but who traps it. There is a large amount of run-off dams for catching water for cattle as that is the primary economic consideration of the area.

The drinking water at Ft. Peck is obtained primarily by hauling or catching rain water. Wells have been drilled but the water that is produced is high in mineral and alkaline substance and therefore unpotable. These are a few of the necessary factors one finds when looking for implications, for design and management.

Landscape

Landscape, vegetation and view are all fairly consistent with each other. The rougher and closer the terrain is defines what the view is and what type of vegetation grows there naturally. These considerations begin to define certain regionalistic characteristics that may be identical in many areas that have similar features. Views, orientation, location of barriers, both for sun and wind, are but a few of these, but they do establish design/management guidelines.

Landscape in itself establishes some limitations on building location, building form and structure. Limitations as to scope are needed to find sites that can sustain buildings. Granted that, as my maps show, there are building sites in the area which I have marked unbuildable, it is also true that technology can place a building on even the steepest site. However, this can also be limited by soil conditions which can be found by vegetation forms. If the soil is unsuitable for trees to obtain a foothold on a slope it would be impossible to build a house there.

View also becomes an important factor in the considerations/implications, and has a relationship to terrain and vegetation.

The western end is of such disposition as to provide for areas of surprise to be used in design. It is not densely wooded nor are the trees of any great height. To obtain a view one must normally build on a slope or over the river. In the middle section, around U.L. Bend, the terrain is such that the majority of views are less than a mile, unless one builds on the ridgeline. On the eastern end, the views are tremendously large and unless designed quite well can tend to become monotonous.

Impact

The next step I took was to locate the minerals that were available for an economic gain. During this phase economics began to become a very important factor. It became important to determine the feasibility of each possibility. In some cases the economics of strip mining have higher desirability than ranching or even recreational possibilities. The majority of strip mining was or will take place on the southeast corner and will become eyesores during the process.

In the case of Ft. Peck, human impact has had a very excessive role. Ft. Peck is unique as it is a man-made lake and as

such is complete human impact. This can lead to two interpretations; one that human impact has created the reservoir and therefore it should be opened entirely to development, the second, that since human impact has created so much already, the remaining should be given to nature. There is a third that I feel should be utilized everywhere and becomes a major goal of my thesis. That is that all development must be done with such sensitivity that man and nature will continue to live in harmony. Nature does not interfere with the continuation of man and man can and does interfere with nature. He must do so without disruption.

This leads one back to consider not only economics but the future problems those considerations must produce.

Transportation

A final step that I took was to provide a study on transportation of present and future. Several modes of transportation are available at Ft. Peck: the automobile, which has been the main transportation system for Montana and will continue to be so, due to the extreme distances and the lack of population in Montana; the train, which in its present state is within ten miles of Ft. Peck but which

has been at Ft. Peck and could return; and air transportation, which has a link at Ft. Peck.

This study brought out the greatest economic potential for C.M. Russell Wildlife Range. A recreational area, it provides a place to recreate for 80,000 visitors per year (1976) and the number has been increasing 4% per year.

Contextual Analysis

After gathering all of this final information, I began to compile the important information together to get my contextual analysis. Some of the information was of no super value as it is normal material. However, it did produce the information that I sought. Thus, the regional inventory method began to become valuable for my process. It also showed, as I have indicated, the interaction of all of the separate parts. A continual return to former information and the reinterpretation of it was utilized.

The summary analysis provided a semi-complete regional definition and now the problem of interpretation was to become important.

REGIONAL DEFINITION

First Step

Location	Hydrology
History	Legal
Culture	Transportation
Zone of Closure	
Impact	

CHAPTER TWO

INTERPRETATION

Interpretation became the next step. In order to prove my thesis, I must take that information and develop guidelines that would produce a management system for development.

At first an impact study should have been completed to determine the feasibility of any particular development. However, time eliminated any such study and I merely assumed for purposes of finishing my study that any impact study would be in my favor.

A purpose for development had to be found. After my regional inventory I feel that the only thing to lead to development of the entire area would be recreation and ranching. Ranching having no real development potential that would allow for a proof of my thesis, was not considered. But the recreational development could happen and not upset the ranching production. Therefore, I settled on the recreational development as a means of producing my project.

With this decision I could then develop a master plan that would fulfill the requirements of my thesis.

The master plan for the entire area would have to be initiated to determine the guideline portion. The function of a subject has a large portion of determining guidelines.

I had to return to my regional study to find out how this new information would effect the area. The former information was not valid at this point until the recreational aspect had been fed back through. A new summary had to be initiated with any new information found. From this I developed two concepts for the master plan simultaneously listing any guidelines that made my decisions.

The first master plan that I developed was a complete wilderness type approach. This determined guidelines that provided for transportation, construction, location, building type and building need. In the first approach I obtained an attitude that was nature dependent. The second approach gave the exact opposite and was completely independent of nature.

I felt that neither of these two approaches were satisfactory as one did not allow for enough utilization of a natural resource and was selfishly maintained for actually no one. Only 25% of Americans own boats of which only about 5% are wilderness buffs.

The second pushed complete annihilation of the environment for the future. So I settled on a third approach which was a combination of the two.

Each step of this process is dependent on the former and future steps. As a decision is made it must be run back through the former steps to see if it is valid. New information must be gathered and recorded for each decision.

The method used for determining building requirements for the site was based upon use. An assumption was made that if one provided the opportunity for people to use the lake they would. At this point I fell back on interviews that I had with the Corps of Engineers and the State Fish and Game who informed me that if roads were improved and service facilities provided, more people would use the C.M.R. Wildlife Refuge more effectively. I was unable, due to the size and distance factors, to gain empirical information to establish these factors. Furthermore, I feel that if fuel for private automobiles is further reduced that it would change a lot of factors and I therefore made an assumption that this would not happen.

The development of four major points was established so

as to provide a realistic service capability for the Range. Each point was defined by its own location and the things that would happen there. The one thing that I felt was important was the establishment of a buffalo range near U. L. Bend that could be combined with the wilderness area.

The development of the master plan became simultaneous with the management plan. One could not be produced without the other. The management plan guidelines began to produce the need for a centralization of management control. Management should be turned over to a system that could utilize the information from each facility that is presently making decisions, weigh them against all alternatives and come up with a decision that has taken all other alternatives into consideration. Several methods have been previously established. Some are privately controlled, some are public non-profit and some are private non-profit organizations. Any system established that would return all profits back to the system would be beneficial. However, the system that is now in effect that allows the government to spend money on a recreational system to provide each property owner to receive free trees for his property (at tax

payers expense) will not make it, or should be deplored.

At the same time that management, and master guidelines are being produced, so is the image analysis. An inventory of existing buildings begins and is related to the area. This is a result of the historic analysis but is reused here.

The proof then comes with the final site selection and design. Once again everything must be re-fed through the process to determine its validity.

The site and design have attempted to provide an answer to my thesis. The major controlling factor is how the building relates to the site.

All sites should use the site design guidelines that I have produced. These guidelines are established not only for management control purposes but for character development, also. I feel that this was probably the hardest part of the process; to interpret the large amount of information that I have thus far maintained and put it to use in an actual site and building.

The element that I selected to use as a tying element throughout the total site is outdoor space relationship to the whole

site and how the buildings relate to that space.

I selected the five listed sites and began to produce design elements for each one simultaneously. However, due to a time element, I was able to get only two completed. I completed the Dredge Cuts area first as I felt that it will, now and in the future, receive the largest number of people and be the most critical area for need. This area is primarily a recreational element and therefore has a need for open space. The building has been placed in the ground so that as you approach from the parking lot, swimming or camping area, it does not hide the view or become a dominant area. This aids in the outdoor space requirements. It is located in an obvious line of sight from anywhere on the entire site. This aids in the location of the facility.

This facility is one where architecture is not a dominant element but a service element and should be less dominant. It is not the attraction. That is why I handled it in the method that I did.

The U.L. Bend concept uses the same factors and due to the different concept begins to relate differently. I have decided to place the service facilities as close to the waters edge as possible

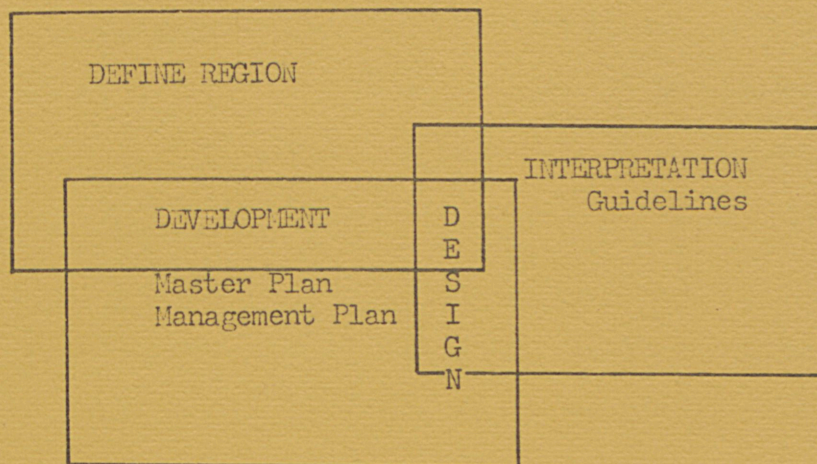
to facilitate the water-oriented, as well as land-oriented, activities.

This concept begins to relate space to the water as well as the building.

The materials that I selected to use were of existing materials. At this point in time I find that it is not necessary to introduce new materials. The use of concrete and wood are both well established materials for the area. The continued use of these materials as a major image function is recommended. During a process such as this, one will usually either discover a material that is natural to the site and can be implemented to the design or it can also produce, as in this case, a material that is necessary for one function or the other to be introduced to the site. At Ft. Peck, the transportation of a material to the site is a major problem and must be satisfied by a portable item. I have tried to show here the implementation of these materials in both of my designs.

This brings into focus the completion of the process with design happening at the fusion of the other three parts. There is a relationship of continual interaction between all of the parts until the final product is achieved.

PROGRAM



CONCLUSION

The process that I have developed here is a process that I feel will aid the designer in his search to gain an understanding of the region in which he will be working. It is also a method that can be complete at four different stages; the inventory, the master plan, the guideline stage or the design stage. It can be used by planners, architects or landscape architects.

My major purpose was to find a method to aid me in future design problems. I do not feel that the guidelines produced should become a legal requirement for use. They should be considered as a method for a layman to use as a substitute for professional advice. They are also considered as beneficial to land use planning and should always be referred to for such uses.

I feel that my final product is complete and did satisfy my original goal.

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