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ARCHITECTURAL THESIS PROJECT
0 MAY 1976
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BAY STATE UNIVERSITY: COLLEGE OF ARCHITECTURE & PLANNING
I am proposing as a thesis project, a lakefront/channel/harbor development. Physical elements that will directly play major roles in design are:

- Charles Mears State Park
- Channel & Adjacent Land
- Lakes Michigan & Pentwater
- Town of Pentwater

Major aims of this development are:

- Create a master plan for lakefront development from the town center to the state park.
- To develop a natural harbor in Lake Pentwater into a marina with supporting facilities on shore. Also this area would be the major node of activity between town & state park.
- Create a link from the marina complex to the state park by means of
INTERJACENT HARBOR

Developing the land adjacent to the channel, this area would act as a 'people mover' from the state park into the complex & eventually into the town.

- Also included with the marina, acting as the node for the whole complex would be an:
  - Ecological/Visitor Center
  - Weather Station
  - Restaurant
  - Farmers Market for boaters.
Interjacent Harbor

* Pedestrian link could be developed into:
  * Fishing Pier
  * Landscaped Boardwalk
  * Arboretum
  * Picnic areas
  * Observation areas.

* Where the pedestrian link connects with the state park, there would be located a beach facility including the following:
  * Dressing rooms/showers/washrooms
  * Food counter
  * Bait shop/tackle

This beach facility/bath house will act as the main focal point for drawing the pedestrian from the state park into the complex & possibly into the town. Also included in this facility would be a graphics/information area to lend all assistance to incoming pedestrians.

* Provisions that must be considered for transportation:
  * Bicycle
  * 3-wheel pump car
  * Pedestrian
INTERJACENT HARBOR

- TRANSPORTATION:

  * BICYCLE - PROVIDE AREAS FOR RIDING & STORAGE.
  * PEDESTRIAN - AWAY FROM AUTOS - SAFE FROM BICYCLE ACCIDENTS.
    PRIMARY CONSIDERATION IN DESIGN.
  * AUTO - ALL AUTOS WILL BE LEFT AT PERIPHERAL STORAGE AREAS.

- NATURAL CONSIDERATIONS OF SITE:

  MAKE CAREFUL STUDY OF DUNE VEGETATION & LIFECYCLE. MUST RETAIN TOTAL NATURAL CHARACTERISTICS OF SITE.

- ARCHITECTURAL:

  MATERIALS - ALL MATERIALS WILL BOTH BE CONGRUENT IN CONTEXT OF PROJECT & HARMONIC WITH SITE. FORM WILL LEND ITSELF TO EXISTING STYLES.
- **SCALE:**

  The scale will be the most important aspect of this project. The scale will deal with & center around the human. At no point will this complex ever exceed (3) three stories in height.

- **EXTERIOR EDGE CONDITIONS:**

  This consideration will be the next most important aspect of this project. This complex will not impose itself nor overshadow any existing facility but will be designed to enhance said facility.

- **VIEWS:**

  All natural views cut will be used to the maximum possible enjoyment of the individual.
Sources of Design Criteria & Information

Program:
Mr. Dick Whitpen, Dir. Midwest Region
National Park Service, Dept. of the Interior
Denver Service Center
7575 Farfet St.
P.O. Box 215287
Denver, Colorado 80225

Maps:
The U.S. Dept. of Commerce
National Ocean Survey
National Oceanic & Atmospheric Administration
Rockville, Maryland, 20852

Rules of Water
Dept. Of The Army
Detroit District, Corps of Engineers
P.O. Box 1027
Detroit, Michigan, 48231

Maps
Pentwater City Hall
Division of Maps & Plats, Deed Recorder
Pentwater, Michigan 49449
INTERJACENT HARBOR

- RESTAURANT / COFFEE SHOP / QUICKSNACK  - 12,420 $

- VISITORS CENTER  - 7299 $  
  - GROCERY
  - MARINE SALES
  - BATH HOUSE
  - BATH HOUSE
  - BIKE RENTAL
  - GRAPHICS/INFO. AREA
  - WEATHER STATION
  - LAUNDRY

- BEACH FACILITY  - 3258 $  
  - SHOWER & CHANGING
  - BIKE RENTAL
  - SNACK SHOP
  - LIFEGUARD / FIRST AID
  - GRAPHICS/INFO. AREA

- TOWN FACILITY  - 2040 $  
  - SNACK SHOP
  - GRAPHICS/INFO. AREA
  - BIKE RENTAL
INTERJACEAT | HARBOR

- **Marina**
  - Dock/Mooring Facilities
  - Boat Launching Ramp
  - Boat Sanitary Facilities
  - Boat Repair
  - Boat Storage

- **Parking**
  - 100 Cars $358 Each Car $35,800
This visitor's center will contain all shops & concessions necessary to the sailor mooring his boat at the Marina. This center will have all weather information for the area. A place to purchase provisions. Facilities that will allow a boater to live on his boat but have access to washrooms/showers, etc.

Total square feet: 7296.7
INTERJACEH HARBOR

- GROCERY STORE: 700 USD
  Store related to dock area for use by boaters to purchase supplies for use on the boat.

- STORAGE FOR STORE: 200 USD
  For receiving shipped goods, storage of, transitory point between shipping & sales, located directly next to store.

- OFFICE: 100 USD

- MARINE SHOP / BAIT HOUSE: 500 USD
  For sale of marine hardware, compasses, lines, rope, etc. Diving equipment.

  Bait house for live & dry bait, fishing equipment & tackle.

- STORAGE & OFFICE: 300 USD
BATH HOUSE FACILITIES

- TOTAL: 1500 ft²

This area will serve the boater as a place to shower, shave, clean up & refresh.

MEN'S FACILITY
- 10 SHOWERS · 10 CHANGE BOOTHs
- LOCKERS
- TOILET · 4 STALLS · 2 URINALS · 4 SINKS
- JANITOR'S CLOSET
- SINK: SHELVES: STORAGE
- ENTRY

WOMEN'S FACILITY
- 10 SHOWERS · 10 CHANGE BOOTHs
- LOCKERS
- TOILET · 7 STALLS · 4 SINKS
- JANITOR'S CLOSET
- ENTRY

TOTAL: 1500 ft²
• Bicycle Rental
  For the rental & service of
  bicycles & 3 wheeled cars

• Graphics/Information Area
  For displaying of brochures,
  maps, info, etc.

• Ecology Center
  For explanation of natural
  landscape throughout complex

• Ranger's Office
• Naturalist Office
• Storage

• Observation Area
  Canvas covered & open

• Weather Station
  For computing weather
  conditions.
o LAUNDRY 450 Y
Washington Machines: Dryers, Folding Tables, Laundry Sinks, Storage for Attendant, Toilet, Waiting Area (Dryers - 1/2 # of Washers)

o PUBLIC WASHROOMS 300 Y
  o MEN: Same as Bathouse
  o WOMEN

o MECHANICAL/ Janitor's Closet
  10% of Total
The function of this marina complex will be the storage of boats, temporary & permanent. Other functions are the total service & repair of all types of craft, from fuel to sewage service.

Total Square Feet: 52,503
INTERJACENT HARBOR

- Docking & Mooring Facilities (On Land)
  - Fueling Docks/Slips
    - 5 Slips @ 21' x 32'
    - 5 Pumps
  - Fuel Storage Tanks (Underground)

- Fire Station

- Boat Launching Area
  - This area will serve the motorist/boater who wishes to launch boat for a short period of time
  - Parking, 10 cars & trailers, circulation & ramp

- Boat Sanitary Facility
  - This facility will serve as a collection point for sewage from boats

- Office & Toilet

- Mechanical Room
  - 10% of floor area
The function of the beach/town facilities is to offer the pedestrian services that will make his stay in the facility more pleasant. These facilities will also act as introduction points to the development. Also, these points the board walk will begin & end. This walk will serve as the main circulation spine for the whole facility. The walk will be used by pedestrians, bikes & 3 wheeled cars. The total length of walk will be approximately 2200.± - 3000.±.

Total square feet:

<table>
<thead>
<tr>
<th>Beach Facility</th>
<th>3258 ft²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Town Facility</td>
<td>2040 ft²</td>
</tr>
</tbody>
</table>
INTERJACENT HARBOR

BATH HOUSE FACILITY: MEN

- 8 SHOWERS & CHANGING AREAS —— 2388$1
- WASHROOM, 4 STAUS
  4 SINKS
  3 URINALS.
- DRESSING AREA
- JANITORS CLOSET

BATH HOUSE FACILITY: WOMEN

- 8 SHOWERS & CHANGE AREAS
- WASHROOM, 7 STALLS
  4 SINKS
- DRESSING AREA
- JANITORS CLOSET

BIKES CONCESSION

- BIKE RENTAL & SERVICE
- 3 WHEELED CARS
- OFFICE
- STORAGE

1088$1
300$1
400$1
100$1
1088$1
300$1
288$1
400$1
525$1
## Interjacent Harbor

<table>
<thead>
<tr>
<th>Facility/Department</th>
<th>Capacity</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Snack Shop/Observation Area</strong></td>
<td>557</td>
<td>$</td>
</tr>
<tr>
<td>* Food Prep. Area</td>
<td></td>
<td>$375</td>
</tr>
<tr>
<td>* Seating for 40 @ 13¢/Person</td>
<td></td>
<td>$18.21</td>
</tr>
<tr>
<td><strong>Life Guard/First Aid Station</strong></td>
<td></td>
<td>$400</td>
</tr>
<tr>
<td>* Cot Room</td>
<td></td>
<td>$50</td>
</tr>
<tr>
<td>* Office/Toilet/Storage</td>
<td></td>
<td>$150</td>
</tr>
<tr>
<td>* Change Room</td>
<td></td>
<td>$200</td>
</tr>
<tr>
<td><strong>Signage/Graphic/Info. Area</strong></td>
<td></td>
<td>$300</td>
</tr>
<tr>
<td>To introduce people to the complex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Directions, pamphlets, etc.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
INTERJACENT HARBOR

TOWN FACILITY

BICYCLE CONCESSION
  • BIKE RENTAL & SERVICE

SNACK SHOP/OBSERVATION AREA
  • FOOD PREP AREA
  • SEATING FOR 60 @ $1 PER PERSON

SIGNAGE/GRAPHICS/INFO. AREA

BOARDWALK TO CONNECT ALL FACILITIES
MIN. OF 10' WIDE PITCHED 1/4" PER FOOT FOR DRAINAGE.

525/
1216/
3150/
8040/
300/
This entertainment facility will function primarily as a people mover catalyst. It will draw people from both the town of Pentwater & the state park into the complex & hopefully spend time within the premises.

Total square footage: 13,123
ICE RINK / STAGE AREA ——— 9,000 sq ft

ICE RINK: MINIMUM SIZE FOR HOCKEY & GOOD SIZE FOR LEISURE SKATING. 105'0" X 600'0"

SUPPORT FACILITIES ———— 3,323 sq ft

- TOILETS 4 MEN ———— 300 sq ft
  - WOMEN ———— 300 sq ft
- CHANGE AREA: SKATES ———— 280 sq ft
- SKATE RENTAL ———— 3,500 sq ft
- OFFICE ———— 2,000 sq ft
- LOCKERS ———— 300 sq ft
- SPRAY FOR SPACE PANELS ——— 400 sq ft

MECHANICAL ———— 1,193 sq ft

10% OF FLOOR AREA
INTERJACENT HARBOR

OUTDOOR AMPHITHEATER · COVERED — $4,000
  * Seating will accommodate 200-300 persons — $3,700

* Toilet facilities 1 Men — $300
  1 Women — $300

* Box Office/Ticket Counter — $300
This restaurant/coffeeshop/quick snack facility will be closely related to the dock area, with the potential of having its own docking facility. Most boaters when they come to the Pen/Water area use only their boats for means of transportation, & the need for 'boat up' restaurant facilities is among the greatest.

This facility will also relate to the boardwalk & bicycle facilities so that this clientele will also have ready access.

Total square footage: 12,420 sq ft
Lounge/Pub. 1700
For the serving of alcoholic beverages to pedestrian & boater.

Used primarily in the afternoon & evening.

Bar. 15 stools, tables, chairs, booths.

Storage 200
Liquor storage, etc. for bartenders only.

Coat Storage 50
KITCHEN & FOOD PREPARATION AREA – 2000 $

These areas will serve as food preparation for the main dining room, coffee shop & lounge areas. The kitchen will be organized into the following areas.

**PANTRY**
- Breakfasts, desserts, liquids
- Sink, refrigerator, cups & saucers
- Coffee, toaster, egg boiler
- Ice cream

**SERVICE BAR**
- Liquor, wines, soft drinks
- Bottle rack, drain board, sink
- Refrigerator, ice maker, soda
disp. back bar, bottle cooler.

**COLD FOODS**
- Sandwiches, appetizers
- Slicer, refriger. sink, toaster, ice
- Counter

**COOKING AREA**
- Main dishes, etc.
- Steamer, kettles, ranges, ovens.
- Fryer, broiler, hearth.
VEGETABLE & SALAD PREPARATION
CUTTER DICER. TABLE COUNTER.
REFRIC. SINKS. PEELER. MIXER

MEAT & FISH PREPARATION
FISH BOX. REFRC. MEATSAW. TABLE
TENDERIZER. BENCH BLOCK GRINDER
SINK. DRAINBOARD. FISH PREP.UNIT.

DISH & POT WASHER
SOILED GLASSES. GLASS WASHER. SOILED
DISHES. VENTS. PREWASHER & DISP.
DRAINBOARDS. DISHWASHER.
STORAGE
### Dining Area

This area will be used to serve all meals: breakfast, lunch, dinner. This will be a more formal atmosphere.

Seating for 200 @ 15¢/person

### Coat Storage

50¢

### Table Preparation

200¢

### Coffee Shop/Counter

This area will be used for quick service: lunch, dinner, breakfast. Open 24 hours.

Seating for 100 @ 15¢/person

### Storage/Table Preparation/Clean

150¢ U.P.
INTERJACENT HARBOR

QUICK FOODS KITCHEN/CONSUMPTION AREA
THIS AREA WILL BE DIRECTLY RELATED TO THE BOARDWALK/CHANNEL

SEATING FOR 75 PERSONS @
15 @ PERSON

FOODS KITCHEN

STORAGE

WASHROOMS - MAIN DINING
1 MEN
1 WOMEN

WASHROOMS - CAFE/SHOP - QUICK FOODS
1 MEN
1 WOMEN

MECHANICAL
10% FLOOR AREA

OFFICE & RECORDS

1125 @
700 @
250 @
200 @
200 @
150 @
150 @
1242 @
150 @
REGION:
The region is comprised of sparsely populated areas. The largest city being nearby is Ludington, located 14 miles north of Pentwater. The weather and climate conditions are primarily dictated by Lake Michigan.

AREA:
The area of Pentwater is comprised of a small town whose two major sources of income are tourists and that of a small nail & wire mfg. company. The town is small but neat. It has many very interesting shops & the potential for more. The town has a municipal pier & docking facilities but not enough. It also has adequate dry docking facilities for winter storage of local craft. The summer tourist trade is steady but not overwhelming.
IMMEDIATE GIST:

- THE SITE IS SURROUNDED BY
  - HOMES/RESIDENTIAL
  - CHANNEL
  - STATE PARK
  - LAKE PENTWATER
  - MICHIGAN PINE FORESTS.

THE HOMES FOR THE MOST PART ARE OLD & DECREEPED. ESPECIALLY THE ONES LOCATED ALONG THE CHANNEL.

THE CHANNEL IS 12' DEEP
SAND BOTTOM WHICH HAS THE CAPACITY FOR HANDLING FAIRLY LARGE CRAFTS.

AT THE WORST POINT THE CHANNEL IS ABOUT 150' WIDE. THE SIDES ARE CONSTRUCTED OF CONO. & STILL REMAIN IN GOOD SHAPE.

THE CHAS. NEARS STATE PARK IS SMALL IN RELATION TO OTHER STATE PARKS.
THE PARK CONTAINS TRAILER FACILITIES FOR MOTOR/MOBILE HOMES, WHICH IS CONSTANTLY FULL @ ALL HOLIDAYS. THERE ARE VERY HIGH TUNES ALMOST RIGHT ON THE LAKEFRONT ACROSS THE CHANNEL.
PRIVATE LAND & AGAIN HIGH DUNES & UNINHABITED.

LAKE PENTWATER

THIS IS A SPRING FED LAKE & RATED AS ONE OF THE BEST LAKES IN MICHIGAN FOR COHO FISHING. THIS LAKE BECAUSE IT IS SPRING FED IS A NATURAL BROWN IN COLOR BUT PURE, HENCE IT IS USUALLY 20° WARMER THAN LAKE MICHIGAN.
INTERJACENT HARBOR

SECOND QUARTER
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* Harbor Studies
• INTERIOR SPACE STUDIES
INTERJACEAT HARBOR

· PRESENTATION: MID WINTER QUARTER
INTERJACEHT | HARBOR

- MODEL PHOTOGRAPHS
INTERJACEAT HARBOR

- MODEL PHOTOGRAPHS