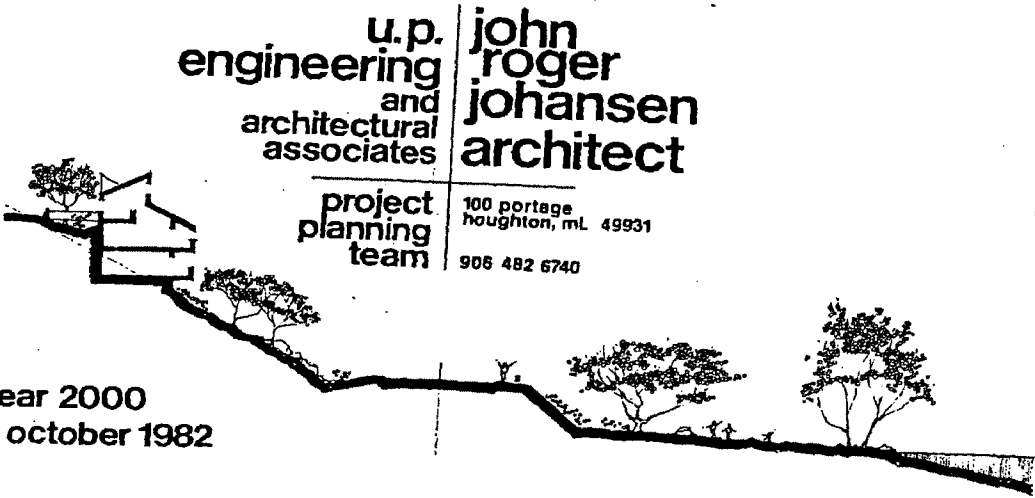


Michigan Dept of Natural Resources

WATERFRONT DEVELOPMENT PLAN

city of
houghton
michigan

MICHIGAN
OCZM GRANT #NA-80-AA-H-CZ157
SUBTASK 4D-13.2



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thru the year 2000
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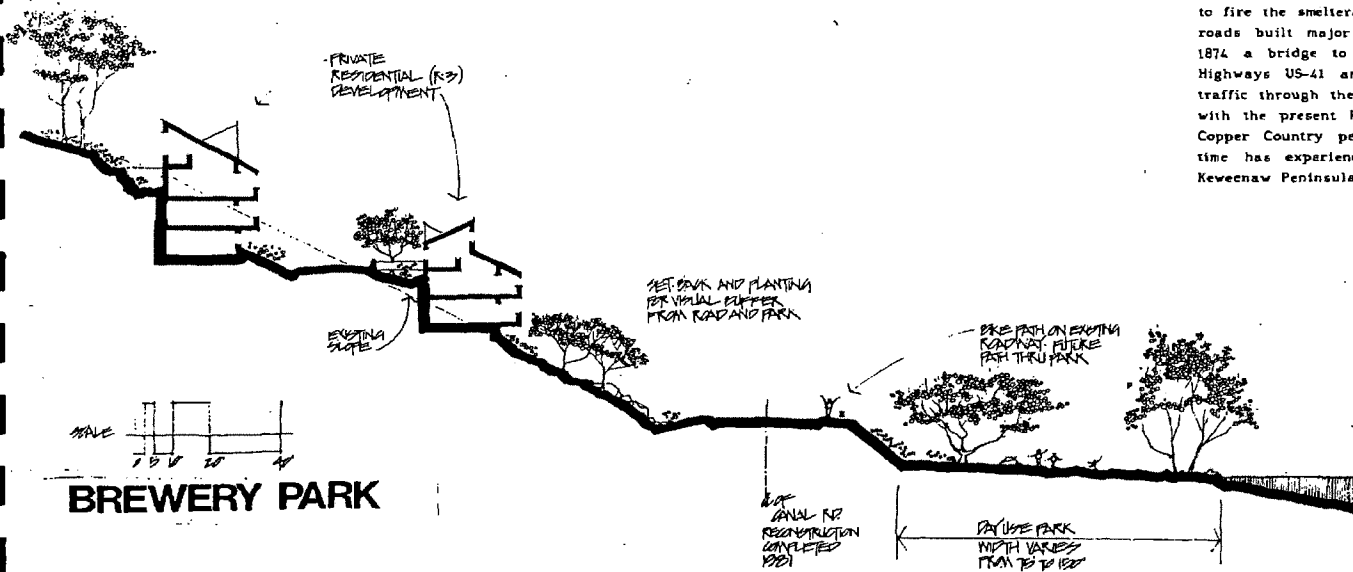
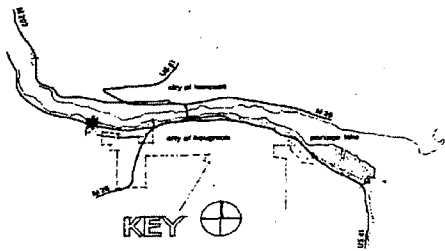
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1 INTRODUCTION

The City of Houghton is an aggressively developing community in Michigan's Upper Peninsula situated along the south shore of Portage Lake. The Lake is part of the international shipping route known as the Keweenaw Waterway, that physically separates the Keweenaw Peninsula from the mainland of the U.P.

With a 1980 census population of 7,512, Houghton is the largest city in Houghton County. It is the home of Michigan Technological University (MTU) and the Houghton County Offices are located in the center of the city. These are the largest employers in the area. The City is presently one of only six regional growth centers located in the Upper Peninsula.

Houghton was established during the copper mining boom of the 1850's. It soon became an important industrial/commercial dock; importing coal to fire the smelters and exporting copper ingots to the world. Two railroads built major yard facilities in Houghton along the lakeshore. In 1874 a bridge to Hancock was constructed from the center of Houghton. Highways US-41 and M-26 meet at the bridge thus funneling all area traffic through the City. In 1958 the State replaced the old swing bridge with the present Portage Lake Lift Bridge. The mining activity in the Copper Country peaked around the turn of the century and since that time has experienced a steady decline. The last active mine on the Keweenaw Peninsula closed in 1968.



The major remaining visual element of the mining days in Houghton is the stamp-sand that was dumped into Portage Lake during the 75 years of milling operations of the Isle Royale Mining Company. This 200 acre waterfront area forms a broad peninsula at the north-east end of the City. Known as the Isle Royale Sands, the majority of this area is undeveloped.

In the late 1960's the City of Houghton, with funding from HUD's 701 program began the preparation of a Future Land Use Development Plan for the Houghton-Hancock region. The final document was published in June, 1972. The City of Houghton realizing that the plan provided a sound approach for improving the economic base of the community has aggressively pursued the recommended strategy. An important part of the plan pertained to the development within the Central Business District (CBD).

The City, recognizing the public and private commitment existing in the CBD, placed a high priority on the revitalization of the District including the adjacent lakeshore.

Since 1972, this commitment has resulted in over 5 million dollars in public improvements. Lake Street has been extended and reconstructed. A parking deck has been built. Parking and pedestrian areas have been established along Sheldon Avenue and a new municipal Transit Center has been built as a focal point for the downtown. Two major streets have been covered to facilitate access to and from the CBD.

The initial thrust of Houghton's redevelopment plan was directed mainly toward accommodating the major expansion projects undertaken by the University during the sixties and seventies. During the 20 year period MTU invested over 200 million dollars in redevelopment construction implementing the campus master plan.

Very little emphasis has been placed directly on improving the 4 miles of Waterfront that remain Houghton's most valuable potential resource for capturing a share of the lucrative tourist market. Tourism has been identified as the Copper Country's greatest potential industry. (See Appendix). As indicated earlier the location of the only bridge over

the waterway brings every visitor to the Keweenaw Peninsula into the heart of Downtown Houghton.

As with most municipal waterfront areas the Houghton shore of Portage Lake was developed as a commercial/industrial alleyway with very little consideration given to visual integrity or general public use. Consequently, the many architecturally significant buildings that were constructed were built without emphasis to the Lake. The key to successfully re-orienting the physical impact of Houghton is redevelopment of the entire Waterfront Area with an emphasis on projects that create direct public contact with the Lake.

The current thrust of redevelopment in the City is aimed directly at the tourism market. This year two major fast-food chains have opened outlets in the CBD. The City's largest motel is expanding and a new 50 unit motel/restaurant is under construction on the east end of Downtown. A 120 unit convention center is also being planned for a location on the Waterfront, immediately west of the bridge. All three of these privately funded developments place a major emphasis on Portage Lake.

To encourage and establish a direction for development along the Waterfront, that is in the best interest of all the people, the City of Houghton Planning Commission authorized the preparation of this Waterfront Development Plan; hereinafter referred to as The Plan.

The Plan consists of six Sections and an Appendix.

Section 1 of The Plan is this introduction.

Section 2 is an inventory of existing conditions.

Section 3 is a discussion of problems identified from information contained in Section 2.

Section 4 is discussion of opportunities presented by combining the problems listed in Section 3 with the assets indicated in Section 2.

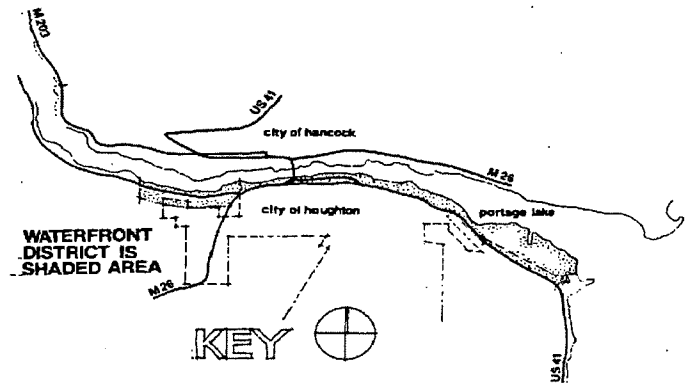
Section 5 is the graphic plan indicating the location of the various projects recommended in The Plan. A separate listing of projects is also included.

Section 6 is a series of guidelines and recommendations for the implementation and the conclusion.

The Appendix is located at the end of The Plan.

1

To facilitate the preparation of The Plan a Project Area was established as indicated on the Key map below.

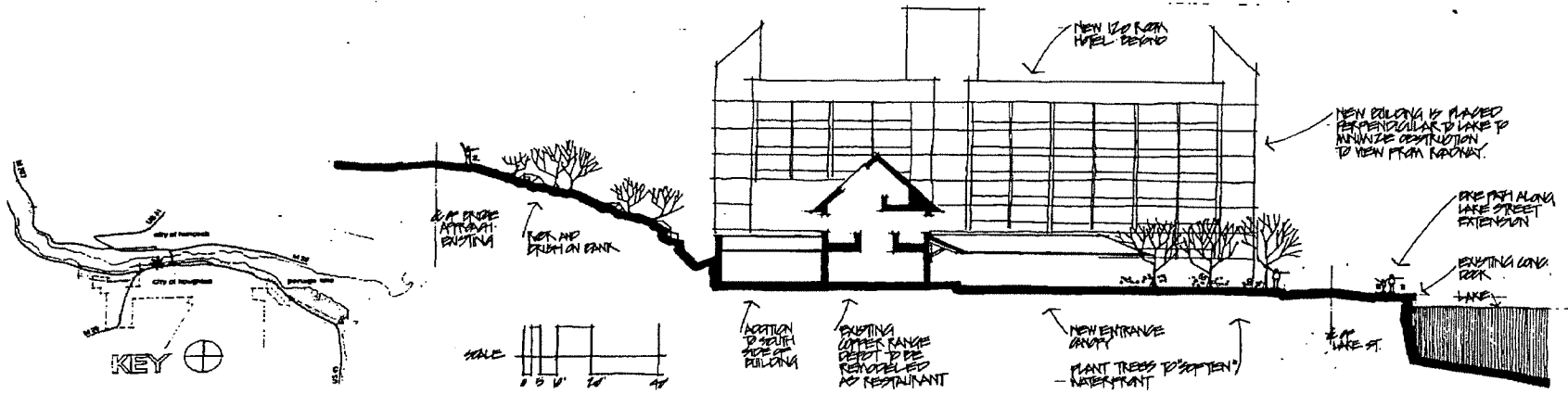


The Plan recommends that this area be established by ordinance as The Waterfront Development District (See Appendix).

2 INVENTORY

This Section is an inventory of existing conditions within the Waterfront Development District. It is divided into nine categories. Maps for each category are included in the Appendix and are meant to accompany the following narratives:

- a. Land Contours
- b. Land Use
- c. Structures
- d. Historic Sites
- e. Zoning
- f. Ownership
- g. Vehicular Traffic
- h. Parking
- i. Utilities



COPPER RANGE DEPOT

In addition to the map prepared for Item C., the Waterfront Development Plan includes a photographic log prepared in the spring of 1982. This log indicates the exterior physical condition of all the structures within the District at that time.

The original copy of the log is available for public inspection at the City Hall. Copies of photographs contained in the log will be provided upon request.

The information contained in this section is analyzed in Section 3 and forms the basis for the Waterfront Development Plan presented in Sections 4 and 5.

a. Land Contours

The City of Houghton is situated on the north facing hillside on the shore of Portage Lake. The terrain is often as steep as 14-16 percent, in a general north-south direction. Many of the original slopes in Houghton have been regraded, especially those along the main east-west thoroughfares: US-41, M-26 and the railroad beds, because of the steep grade the town has developed in an east-west direction.

As a result of early development, much of the land immediately adjacent to the Lake has been filled, specifically the area between the Copper Range Depot and Brewery Park, west of the bridge, and the area from the Soo Line Depot to Michigan Tech, east of the bridge.

A sharp drop-off exists adjacent to the shoreline between the Copper Range dock and the Isle Royale National Park headquarters. The waterfront was historically used for industrial/commercial activities and the deep mooring area was maintained for shipping. Although cargo shipments are no longer made by boat, the facilities for commercial boat docking are still available. The Corps of Engineers continues to maintain the channel in the Keveenaw Waterway at a minimum depth of 27 feet for navigation purposes.

b. Existing Land Use

Presently, the most intensive use of Houghton's waterfront occurs in the area immediately adjacent to the CBD. The traditional use of waterway as an industrial alley during the copper mining days, has established

the current use orientation. Light industry, warehousing and wholesale distribution are the primary private land uses here. The public use of the waterfront in the CBD is relegated to a small parcel between the railroad tracks and the lake, north of the parking deck, and the ends of the north-south streets.

The land use composition of the waterfront area adjacent to the CBD is helpful in servicing the downtown. The same composition, however, lacks both retail and public development thereby discouraging active use of the water by the public. (Even the dock facilities are not currently used.) Only the National Park Service, with its operative dock and public access, actively and appropriately uses its central Houghton shoreline.

An area immediately east of the Park Service property has been recently developed with the addition of two multi-family units and a private tennis court.

The Hamar-Quandt Lumber Company building uses approximately 1 acre immediately adjacent to the Soo Line Railroad yard.

The Soo Line Railroad owns approximately 1500 feet of shoreline along its old railroad freight yard. The area is sitting idle, because rail service to Houghton has been abandoned. The railroad property extends between Hamar-Quandt and MTU and includes approximately six acres.

Michigan Tech, with its heating plant, fuel storage and service facilities located along the waterfront, makes appropriate use of that part of its lakeshore. The lake bottom along the shore next to the heating plant parking lot was recently dredged in order to provide docking facilities for large lake freighters off-loading fuel.

The remainder of the University's shoreline from the heating plant to Prince's Point is undeveloped and is quite steep.

The Isle Royale Sands area has been haphazardly developed with limited industrial and residential efforts. The City of Houghton water system well field is located on a 10 acre parcel on the Sands. However, the majority of the Sands area remains undeveloped and unvegetated. 600 feet of canal was excavated into Sands as part of the existing residential plat.

The shoreline west of the lift bridge consists of 6800 feet of former Copper Range Company property. A portion of this area, the Copper Range Railroad yard, was recently cleared and is awaiting further development. A large concrete deep-water dock still exists in this area along with a large number of supporting poles 2-3 feet above the waterline. A broadside dock adjacent to the Copper Range Depot remains in fair condition. The City of Houghton owns the most westerly 1500 feet of shoreline in the Waterfront Development District. This approximately 40 acre parcel is undeveloped.

Within the CBD the City owns three small park areas and two small green areas at each entrance to the downtown sector. The majority of the CBD is privately owned and operated as commercial property, with some residential rental housing.

The shoreline docking for Houghton is deep and ideal for large pleasure boats. However, the existing facilities are not conducive to recreational activities due to deterioration and the old industrial atmosphere. A new facility is needed to attract transient boaters.

c. Existing Structures and Signage

The most important man made visual element in the Waterfront Development District is the Portage Lake Lift Bridge.

Most of the existing buildings in the District are of pre-1930 construction.

Although their conditions vary, the original quality of construction, particularly that of the early 20th century masonry buildings in the CBD, has given an enduring significance to the District.

The photographic log of the existing structures reflects the visual exterior condition of approximately 210 buildings in the Waterfront Development District.

Of the one hundred structures in the CBD, ten structures were determined to be in excellent condition. Eleven were judged to be in deteriorated condition. The remaining buildings are sound, but need some repair and/or maintenance. The buildings judged to be in excellent condition are indicated on the existing structures map. The buildings judged to be in deteriorated condition are indicated on the same map.

The buildings owned by MTU were not included in the log, but they were all judged to be in excellent condition.

Since there are no recommended architectural standards or guidelines presently in use, several pedestrian-level facades in the CBD have been insensitively altered. In most cases, however, the upper level facades have retained their original character. During the past few years, several building exteriors have been improved, but again without the benefit of a general theme.

Signage has developed over the years with a tendency toward bigger and brighter signs, resulting in an overcrowded, cluttered look on Shelden Avenue. A signage ordinance has been under consideration for the past five years. None is presently in effect. There is also lack of signs indicating the location of the public parking facilities.

d. Historic Sites

The age and original integrity of many of the buildings in downtown Houghton, particularly those in the CBD, are among the City's prime assets. The following downtown buildings, located within the Waterfront District, are included on the State and/or National Registers of Historic Places:

1. Houghton Fire Hall (birthplace of MTU)
2. Portage Lake District Public Library (Carnegie)
3. Douglass House
4. Shelden-Dee Block
5. Library Bar
6. Soo Line Depot (Richardsonian)
7. Houghton National Bank (Richardsonian Romanesque)
8. U.P. Power Company Building
9. Community Building (City Hall) (Architect's Office)
10. Copper Range Depot
11. Houghton Post Office
12. Hall Building (Engineer's Office)
13. Foley-Bergdahl Block

Three Historic Register buildings are located immediately south of the district and have major visual impact upon it. They are:

1. Houghton High School
2. Houghton County Courthouse
3. St. Ignatious Loyola Church

Michigan Technological University began in Houghton as the Michigan School of Mines in the late 1800's. In the past 15 years the original campus has been extensively reconstructed. On the campus only three of original buildings remain. The present student enrollment is 7800. The projected maximum enrollment by the year 2000 is 10,000 students. The fifth floor of the new Electrical Engineering building on campus contains one of the finest Mineral Museums in the world.

In the City of Houghton no historic district has been established and no historic preservation ordinances have been enacted.

e. Existing Zones

Zoning in the Waterfront District is generally intended to maintain existing land use in most areas. In those areas which are currently undeveloped or underdeveloped, zoning is quite flexible and indeed encouraging to most uses. The designations are: R-1 (residential), R-2 (two-family), R-3 (multi-family), B-1 (local business), B-2 (community business), B-3 (general business), I-1 (industrial), RSV (reserve), and MU (multiple use).

A long R-3 segment, containing most of the Michigan Tech campus, buffers R-1 areas to the south of the District from both the campus and the downtown business district. This segment is, in turn, separated from the lakeshore by two reserve areas, which cover most of the actual waterfront between the east end of the Central Business District and the Isle Royale Sands. The reserve designation allows flexibility in land use, although only specific industries (mining, utilities and rail services) have been encouraged. The City's zoning ordinance specifically allows reserve areas to be zoned for more intensive usage.

f. Existing Ownership

Perhaps the single most important factor which will effect the opportunities for future development is the fact that 90% of the shoreline is in the hands of seven owners. Opportunities for public development, particularly in the less developed east and west shoreline areas, rely on securing ownership, lease, or easement agreements with Royale Isles Development, Michigan Tech, Naumkaeg Inc., Lakeshore Associates, Mr. George Lepisto and the Soo Line Railroad.

The Soo Line properties are particularly important, because in addition to holding 7% of the actual shoreline, the Railroad controls right of way from the Portage Lake Lift Bridge to the east city limits along approximately 70% of the waterfront.

Property ownership as a percentage of total shoreline is indicated below:

	TOTAL	W/O AREAS NOW IN PORTAGE TOWNSHIP
Royale Isles Development	25.8	33.1
MTU	14.7	18.9
Naumkaeg Inc.	12.9	-
Lakeshore Associates	10.9	10.5
City of Houghton	10.9	5.5
George Lepisto	8.0	10.3
Soo Line Railroad	7.1	9.1
National Park Service	2.4	3.1
Namar Quandt	2.0	2.5
Spear/Mikkola	1.6	2.1
Michigan DOT	1.1	1.3
Cohodas-Paoli	0.9	1.1
Herman Gundlach	0.7	0.9
Houghton/Hancock (SWA)	0.6	0.8
UPPCO	0.4	0.5

g. Vehicular Traffic

This section will also include the effect on the community from tourists. Visitors not only affect traffic, but also tourist oriented businesses.

The three main avenues into the Central Business District of Houghton are US-41 from the south, M-26 from the west, and US-41 from the north. Visitors to Houghton, landing at the Houghton County Airport or docking at the Houghton County Marina, enter Houghton across the lift bridge. The bridge is a two level four lane roadway for vehicular traffic with railroad traffic crossing on the lower level only. It is operated by the Michigan Department of Transportation. The bridge is raised to allow sailboats and larger ships to pass under the raised span. It was repainted in 1980 and is well maintained.

M-26, west of the bridge, was rebuilt in 1980 as a four lane road. The Houghton Canal road was rebuilt in 1981 with paved shoulders on both sides. These roadways provide excellent visual access to the lake. Montezuma Avenue is a one-way street carrying traffic from west Houghton, and from the lift bridge, east to Franklin Square. It is a high volume thoroughfare with limited parking, and it is extremely difficult to cross during high volume traffic.

College Avenue is a two-way street carrying a large volume of traffic, particularly easterly during the morning rush hour and westerly during the evening rush hour. The roadway becomes four lanes around Michigan Tech, but switches back to two lanes east of McGinnis Drive. It divides the MTU campus from off-campus housing and the two largest residence halls, Wadsworth and Coed Hall. Many pedestrian crossings each day create a traffic hazard which is accentuated by high snow banks in the winter.

Bicycle riding is a popular and important means of transportation, especially among students. The City of Houghton recently installed new sidewalks along College Avenue, with lowered curbs at cross streets to meet state barrier-free regulations. This construction has provided easy bicycle riding away from traffic. However, it has increased the bicycle/pedestrian confrontation problem, especially downtown. A city ordinance was recently enacted banning bicycle riding on sidewalks of the Central Business District.

The City of Houghton has recently instituted a mini-bus service with both fixed route and demand service. One of the fixed routes runs from Michigan Tech to Hancock, and is heavily used by students during poor weather conditions.

Passenger rail service was discontinued in the 1950's and the Soo Line freight rail schedule had been reduced to one train a week for the past few years. All rail service to Houghton has now been abandoned.

Houghton is the headquarters for Isle Royale National Park and the home port and embarkation point for the 150 passenger Ranger II, the only passenger ship operated by the National Park Service.

h. Existing Parking

For purposes of this Plan, only the downtown parking is considered. The central part of the CBD is served very well by the existing parking deck, which as parking for 150 cars on the top deck and parking for 200 cars below. At the present time Shelden Avenue has on-street parking for 50 cars.

Temporary parking for delivery service is provided in the 200, 300, 400, and 500 blocks of Shelden by newly installed delivery bays. Both the eastern and western ends of the CBD are poorly served for public parking. To help alleviate this situation a 10 car parking lot was constructed at the northwest corner of Shelden and Bridge. This lot was built mainly from fill removed during construction of a 20 car lot behind City Hall in the Fall of 1981. Additional public parking is also available on the north-south streets, which cross Shelden Avenue.

There are several private parking areas within the downtown, which provide parking for customers and employees, primarily during business hours.

The recently completed M-26 roadway relocation project provided a 40 car parking lot near the Copper Range Depot, offering an unobstructed view of Portage Lake from the lift bridge to the far western limits of the City of Hancock on the opposite shore.

MTU provides several parking lots for its faculty, staff and students. However, the daytime parking situation in the residential areas south and west of the main campus continues to disrupt that area during the school year.

i. Utilities

The City has separate sanitary and storm sewer systems. The storm sewer was recently constructed leaving the formerly combined sewer as the new sanitary sewer. A new sanitary sewer interceptor extends along the lake from MTU to new Mize Park. Sanitary sewage is treated at the Portage Lake Water and Sewage Authority plant, immediately northwest of the bridge in Hancock. This project, begun in 1964 as a joint effort by Houghton and Hancock, was an important first step toward correcting a century of abuse to the harbor confines of Portage Lake. A recently completed project to locate and repair water leaks has increased the City's ability to expand the municipal sewer system. The water in Portage Lake which at one time was subject to sewage pollution has been greatly improved by the recent sewer system improvements.

Those portions of the Waterfront Development District, west of Verna Mize Park and east of MTU, are not presently served by sewers. The existing development on the Isle Royale Sands uses septic tanks and drainfields for sewage disposal.

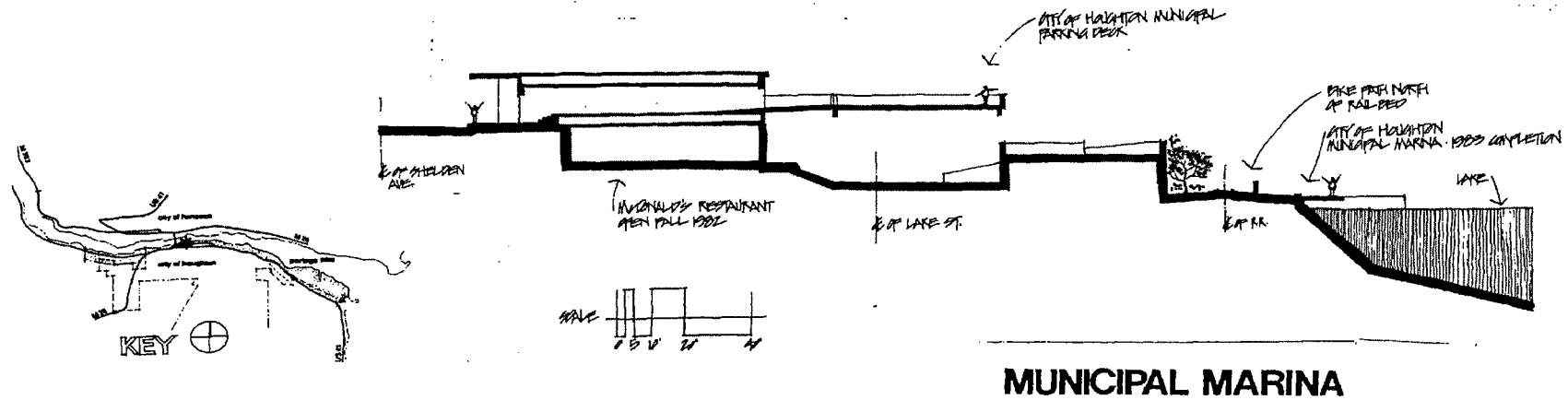
In 1980 the City of Houghton switched its source of water from the Champion Mine in Painesdale (10 miles away) to two specially drilled wells on the Isle Royale Sands. The Waterfront Development District is served by the new water system. No service, however, has been extended west of Verna Mize Park or East of the new well site.

Natural gas is provided by the Michigan Power Company with offices in Marquette.

Electrical service is provided by the Upper Peninsula Power Company, their corporate headquarters are located in the CBD. Their main source of energy is a coal-fired power plant in L'Anse. An abandoned Powerhouse Building, located immediately west of the lift bridge, is temporarily being used as a church.

3 PROBLEMS

The analysis of the inventory information presented in Section 2 revealed the problems listed below. The Plan narrative responding to these items is discussed in the same order in Section 4 and presented graphically in Section 5.



a. Railroad

The presence of two major railroad systems, the Soo Line and the Copper Range along the waterfront area, has been extremely instrumental in the historical development of the waterfront. With the demise of the copper industry, the railroads saw less and less use. The Copper Range railroad has been removed, and recently the old roundhouse area was demolished and cleared. The flat freight yard is still vacant and the railroad beds still exist, although they have been overgrown.

The recent abandonment of the Soo Line is expected to be a major detriment to the further development of the waterfront area; particularly that area between Michigan Tech and the Portage Lake Lift Bridge.

Remnants of the former industrial/commercial use form a visual barrier, and the railroad right of way creates a physical barrier along the entire waterfront.

b. Structures

Due to the present lack of the industrial/commercial activity which has historically been associated with the waterfront, a number of buildings receive only minimal utilization.

The decreased use of the docking area for commercial boat traffic has resulted in the deterioration of the broadside docks in the old Copper Range Company area, the Soo Line Depot area next to Dee Stadium, and the old Messner Coal Dock by Hamar-Quandt US-41 Lumber. A lower level of maintenance of the railroad property due to the reduced usage has resulted in over growth and building decay.

The old industrial image of the waterfront remains as a deterrent to current development. Also, the lack of a general recommendation for the redevelopment has resulted in a haphazard approach in regard to the style, color and location of the projects, which have been constructed in recent years.

The view of Houghton from Portage Lake is intriguing. So much potential seems to be buried just below the visual surface. In many instances weeds or trees block the view. Mine rock, broken concrete and other insensitive erosion control devices have been used as deterrents to erosion. In one instance the railroad has used the hillside between the tracks and the water as dump.

c. Parking

It is difficult to find parking for shoppers in the Downtown Business District. One of the primary parking problems is on-street parking along Shelden Avenue. The Michigan Department of Transportation has been very concerned with this question, and has the past few years, suggested that all parking be removed from Shelden Avenue.

The off-street parking issue has been addressed by the construction of a Municipal Parking Deck north of Shelden Avenue. Although the deck provides sufficient parking, a problem, due to under-utilization, has occurred. Several factors may be responsible for this. The narrowness of the on-off ramp from Shelden Avenue probably discourages use. Also, people may feel that they are parking behind the stores when parking on the deck, especially since they have to walk to Shelden Avenue to enter all stores except Swift's Hardware and Vertin's Department Store. Although the lower level of the deck provides shelter during poor weather, it is dark and uninviting. The stairwell has become a location for broken bottles and is a deterrent to the use of the upper deck.

Another problem with parking on the north-south streets is that travel is often prohibited from these streets in the winter. Heavy use areas such as in front of the community building and in front of the Douglass House are extremely difficult for most vehicles to handle during snowy and icy weather.

The need for additional parking at both ends of the downtown has been increased with the construction of two fast food restaurants at each end of the CBD.

There is also a need for designated bicycle parking areas in the downtown, which would allow bicycles to be secured. Presently bicycles are secured to lamp posts and parking meters.

d. Pedestrian Access

The long winters in Houghton make the opportunity to remain inside while walking from store to store a more pleasant experience than walking outside in the ice and snow. The enclosed mall, therefore, has had a great effect on shopping trends in the Houghton area in just the past year.

The additional problem of parking with convenient access to the stores is also made apparent by the under-utilization of the parking deck.

It is also more difficult maneuvering a vehicle through the crowded downtown streets than parking in the large mall lot.

e. Signage

Signage in the CBD retail area has not been coordinated or regulated in the past. This has resulted in a maze of signs being used—most of which detract from the historical character of the downtown. The jumble of signs is unattractive. Public service signs indicating parking and travel directions are often overlooked or hidden resulting in frustration for visitors and townspeople alike. Signs directing vehicle drivers to the parking deck are especially conspicuous by their absence along Montezuma Street and Lake Street.

f. Vehicular Traffic

Congested traffic and restricted vehicular movements in the Central Business District, especially on Sheldon Avenue are serious problems. The problems are most acute during the 4:30-5:30 rush hour, becoming accentuated during the dark, snowy, winter evenings. The situation is aggravated by pedestrian and north/southcross traffic which attempts to interrupt the traffic flow.

The opening of the lift bridge creates a paralysis of traffic which may extend all the way to Franklin Square on the east end of the CBD. Since there is no shunt for through traffic at the approach to the bridge, cars intending to go to west Houghton (40% of the traffic) must wait with the cars intending to cross the bridge.

Bicycle traffic becomes a problem primarily in the CBD. Bicycle riding on the sidewalks of the CBD has been prohibited by city ordinance. Riders from Hancock must either ride up to Montezuma Street or walk their bicycles along Sheldon Avenue.

g. Recreation

There is very little in the way of water oriented recreational sites in Houghton at the present time. Occasionally persons will fish from the old Copper Range docks or tie boats up at the Cohodas-Pauli dock, but these are haphazard events and persons are not even sure whether or not these activities are lawful.

Jogging and bicycling most often take place on the College Avenue and Sheldon Avenue sidewalks for lack of an alternative route.

Even public viewing of the lake is only available from a few locations none of which are adequately or attractively maintained.

The City owned beach is two miles east of the downtown and accessible only from US-41 or the water.

The water's edge at the northsouth streets has been allowed to deteriorate and in most cases is dangerous. Parking facilities near the public access sites are often not available. There are no designated fishing sites.

There is also a need for more motel rooms. The need is attributable to both tourism and programs and activities generated by MTU.

A recent study conducted by MTU demonstrates the need for convention/geminar facilities. These facilities would include motel rooms, restaurants and large meeting rooms.

h. Housing

The responsibility for providing housing is shifting nationally from the public sector to the private sector. (Location will become increasingly important in a competitive housing market.) In the past two years multi-family housing was developed along the Houghton waterfront, and this trend is likely to continue.

There are several problems related to housing in the City of Houghton. The primary problem has resulted from the increased enrollment at MTU and is the need for more and better off-campus student housing. On-campus housing has a capacity of 4000 students. The remainder have to find housing off campus, some up to 10 miles away.

The present form of off-campus housing is typically a fifty year old or older wood frame structure, often without adequate parking. Most older neighborhoods, therefore, have been converted to student housing and suffer from the typical problems of absentee landlords and too many cars. Some new multi-family housing units have been erected in Houghton in the past 10 years and they have been readily filled. Only a few new single-family homes have been constructed, partially because of the state of the economy but, also partially because of the location of the available property. The availability of property for new home construction within the City is limited to less desirable sites. The only large concentration of single family homes within the waterfront district is in an area of Portage Township known as Dakota Heights. No recommendations are included for this area in The Plan.

1. Tourism

Several industries, which once were very strong in this area, have either ceased or greatly diminished their operations. The copper mining industry is almost nonexistent. Great Lakes fisheries are almost gone and the timber/lumbering industry has decreased severely. With the closing of the major industries, the City of Houghton, as well as the remainder of the Copper Country, has had to look to other sources of financial revenue.

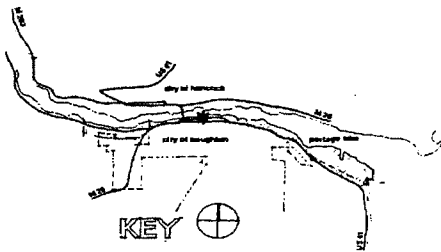
The foremost alternate revenue source is tourism. The shore of Portage Lake is Houghton's main tourist asset. However, the lack of improved/developed recreational land and facilities along the Waterfront hinders its use.

At the present time, visitors and residents can only conveniently view the lake from M-26, Franklin Square or the east end of the MTU campus.

j. Industrial/Commercial Development

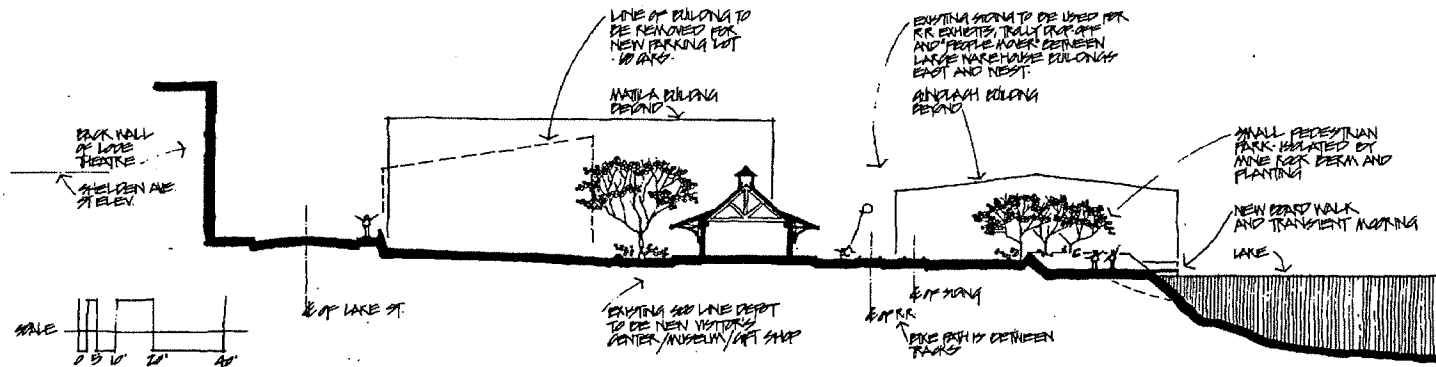
The City of Houghton has utilized almost all of its available land for housing and commercial ventures. Houghton does not have an improved industrial/commercial park, and therefore, has no area set aside to lure potential investors. The university is engaged in an international effort to introduce high-technology industries in the Houghton area. Houghton has no specific area zoned for this type of enterprise.

Existing deep water docking facilities have been allowed to deteriorate. These assets would be useful in attracting future commercial shipping activity.



4 OPPORTUNITIES

The problems listed in Section 3 are combined with the assets indicated in Section 2 to form the opportunities identified in the following narratives and graphically conveyed in Section 5.



SOO LINE DEPOT

a. Railroad

Although the presence of the Soo Line Railroad right of way has always hampered the development of the waterfront, the recent abandonment now presents an unusual opportunity to develop a public bikepath along the lake from the east end of Houghton to the lift bridge. From the bridge to the west end of Houghton the bikepath would follow the abandoned railroad beds. The installation of the pathway would provide four miles of essentially level, uninterrupted visual access to the lake.

It could be used for walking, running and bicycling in the summer, and for snowmobiling and cross country skiing in the winter. The path would also be extended to the city owned bathing beach one mile past the eastern city limits.

The City should make every effort to acquire the R.O.W. even if only to hold it for a future railway.

During the initial public input stage of developing this plan a great deal of interest was expressed in providing a small passenger trolley along the existing rail bed. The trolley system would be used to transport MTU students downtown for 9 months. In the summer it could also carry visitors on a sightseeing tour along Portage Lake and eventually extended to the city beach.

This past spring, however, the City began to operate its own bus system. A state supported scaled down version of an area wide system recently abandoned by the County.

The system will eventually require two trolley depots, one at MTU, north of Cliff Drive adjacent to the center of campus with access provided by a staircase elevator; the other depot would be located at the site of the old Copper Range roundhouse in west Houghton. The trolley system could eventually connect the Houghton waterfront with Hancock, across the bridge. While most of the track required for this system is still in place the City should more fully investigate the feasibility of a passenger trolley.

b. Structures

To aid the renovation effort presently taking place in the CBD, the City should institute some broad guidelines for restoration. The Plan recommends that, as a start, the City adopt the guidelines from the Department of the Interior for historic districts. These guidelines must be met in order to participate in certain restoration tax credit programs appropriate to many buildings in the CBD.

The Community Building (City Hall) is an example of the type of renovation restoration to be encouraged.

The City should adopt the color pallet indicated in the Appendix.

Redevelopment should be explored for providing more people oriented activities for four (4) large warehouse buildings on the waterfront: the Swift #33, Mattila #24, Gundlach #41, and Cohodas-Paoli #42 buildings indicated on the existing structures map and in the photographic log.

Building #50 in the photographic log has been removed, and an apartment building constructed. This type of development is encouraged by the Plan. Building #84 has also been removed to make way for the new McDonald's Restaurant. Buildings #30 and #31 will be removed as part of work partially financed by a Small Cities Block Grant which was recently received by Houghton. This area will become a municipal parking lot and will help facilitate the eventual extension of Lake Street, under the bridge and along the lake. The 7-Up Bottling Company #29 will then have to be relocated to make way for the Lake Avenue extension. An appropriate relocation agreement will be negotiated by the City of Houghton. Building #40 has been remodelled and is now the new home of the Houghton Burger King.

One of the most significant historic buildings in the City is the Soo Line Depot #38 on the north side of Lake Street between Isle Royale and Huron. The structure survives almost in tact even though it has been vacant almost 15 years.

The City should acquire the building and restore it as a visitors center.

c. Parking

The establishment of more convenient parking throughout the CBD has become necessary as pressure is applied to change the parking situation on Shelden Avenue. Responding to Department of Transportation comments, the City of Houghton has constructed demonstration sidewalk extensions, with clear zones of no parking and delivery zones of limited parking.

The clear zones have been decorated with flower boxes, benches and trash receptacles. Limited parking has been allowed on Shelden Avenue with this concept. The City of Houghton is intending to redesign the on-street parking along Shelden Avenue, in the same manner as the present demonstration sidewalk extensions. Downtown beautification will occur at the same time that clear visions corners and curb side parking/delivery are provided. The parking places removed along Shelden Avenue will be made up with additional City parking lots. A city lot on Quincy Street near Lake Avenue will be built. The north Quincy Street lot would fulfill two of the prime objectives identified by the City of Houghton Future Land Use Development Plan--that of providing off-street parking between Shelden Avenue and the waterfront, and that of the beautification of the waterfront area.

Also, as part of the CDBG financed program, a Community Building parking lot expansion will occur. This lot provides off-street parking for the east end of the CBD. Its completion will provide seventy-three parking places between Montezuma Street and Shelden Avenue, in the east end of the CBD.

The City has widened the parking deck approach from Shelden to provide easier vehicle access.

The Plan recommends that the warehouse building #37 be razed, and that a city parking lot be constructed on that site as part of the Soo Line Depot redevelopment.

d. Pedestrian Access

In order to compete with the new mall methods of improving customer access to CBD stores should be explored. The City is building an inside corridor connecting the downtown stores on the north side of the 400 block of Shelden Avenue. The corridor will allow shoppers continuous indoor access to all stores on the block. This project should be extended to other blocks.

The Plan recommends that further consideration be given to skywalks eventually being constructed across some of the streets, allowing passage from building to building and from parking areas to high-use facilities on the opposite side of the street. These skywalks are listed as Project 20, Item a. through f. on the list of Projects in Section 5.

e. Signage

A complete municipal graphics system should be developed by the City. It should include letterheads, envelopes, business cards, permits, street signs, vehicles, etc. Everything that carries the name of the City convey an image of the City. This image should be one of the strength and consistency.

An evaluation of existing private signage should be made in preparation for passage of a Signage Ordinance by the City. An example of appropriate wording is included in the Appendix. Examples of appropriate signs should be included in the ordinance and should be available for public guidance.

Historic buildings downtown should be signed with appropriate copper plaques and related to the "Story of Houghton" interpretive area at Prince's Point. (See Appendix). A historic walking tour should be developed.

f. Traffic

Traffic flow is an important aspect of any downtown commercial district. Several opportunities exist to improve traffic flow in downtown Houghton. Traffic congestion on College Avenue is directly related to rush hour activity generated by Michigan Tech. It is also related to the reduction in lanes from two to one at each end of the College Avenue corridor.

The Plan recommends that a new roadway should be constructed from the site of the College Motel down the hill toward the lake and along the lake by the Soo Line Railroad yard. The new roadway would be one-way west, thereby making the existing College Avenue one-way east. The new road would meet Sheldon Avenue at the Lake Street, Sheldon Avenue intersection.

The construction of this new road would have several beneficial effects. The first is that much of the traffic congestion, previously described would be reduced or eliminated. The road would also provide a long portion of visual access to Portage Lake. The hillside between College Avenue and the railroad yard would be visually improved, especially as viewed from Portage Lake. More direct access to the railroad yard would also be provided for future development.

In order to preserve the historic character of College Avenue, the City has just completed a major reconstruction project. Curb, gutter, sidewalks, street lights and poles have been replaced and new trees have been planted to replace those that had died or been removed. The new roadway would protect this investment in one of Houghton's most valuable assets.

Another facet of the traffic flow problem is that traffic headed west from the downtown area must intersect traffic going over the lift bridge. In order to partially alleviate this congestion, Lake Street should be extended under the bridge. A building with little historic value (currently housing the 7-Up Bottling Company) would be removed and the proposed east-west pathway would be incorporated on the lakeside shoulder of the street extension.

Traffic flow on Sheldon Avenue can also be improved by completion of the sidewalk extension/clear view zone project.

A third street covering should be built over Quincy Street between Sheldon Avenue and Lake Avenue. The covering on Quincy Street would be similar to that covering Huron Street, and would function as a snow diversion shelter during the winter.

Two north-south streets between Montezuma and Sheldon should be abandoned or rerouted. They are Isle Royale and Portage. These streets should be incorporated into the parking lot recommended in Section 4c. The street closing will help to reduce congestion caused by traffic crossing Montezuma and Sheldon. Problems caused by winter weather, continuous sanding and frequent closing, will be eliminated by taking this action.

Abandonment of the south end of Ripley between Sheldon and Lake should also be considered in order to eliminate the hazards of winter maintenance on this street.

g. Recreation

Several recreation sites for public use of the land along Portage Lake are recommended in the Waterfront Development Plan. The primary recreational site is the new broadside mooring facility presently under construction at the foot of Quincy Street. The mooring facility is intended to serve tourist boat traffic and will provide interests and activities that complement the CBD services, especially the restaurant, motel, and specialty shops. A launch ramp is proposed to complement the mooring facility but may be eventually built further to the west near the mouth of Huron Creek. This area can more readily provide the additional parking required for this type of use.

The mooring facility will significantly improve the appearance of a major portion of the CBD Waterfront (400 lineal feet). The City presently owns the land needed for this project, which has been funded by a Small Cities Block Grant and a \$ 35,000.00 grant from the DNR Waterways Division.

Seven day-use parks along the Waterfront are included in The Plan to allow more direct public use of Portage Lake. Each park will also be a designated fishing site and will be appropriately signed and marked. The sites will also be available for other passive recreational activities.

One day-use park is recommended at at each end of the Houghton Waterfront; Brewery Park at the west end and a wetlands nature walk at the east end. Brewery Park would offer picnic facilities and would be landscaped to provide a quiet, shaded environment away from the noise of the City. The nature walk would be constructed with boardwalks and natural paths, providing access to the various flora and fauna of the wetlands area at the mouth of the Pilgrim River. Access to the wetland site will be from a new road into the Camper Park from US-41 to a new parking lot. The trail will begin with a new bridge to be built on existing timber piles across Peepsack Creek.

The ten acre well site on the Lake at the Sands could be developed as a day-use park without violating its special reserve designation. Picnic and playground equipment would be provided.

A fourth park is designated at Prince's Point. This park includes an Interpretive Center, telling the "Story of Houghton" through a series of bronze plaques, mounted on hardrock boulders, set in a minerock bermed room with a stampsand floor. The Center would be landscaped with flowers, maple trees and thimbleberry bushes. A timber stairway with lookout platforms leads the visitor to the relandscaped Waterfront park, which extends for one-half mile along the Lake. Barrier-free access and additional parking is provided at the east end of the park. Vehicular access to the east end lot is by a new road which would also serve the new park at the well site.

A fifth day-use park is being considered for construction by the National Park Service adjacent to the existing Headquarters Building. This park will be in conjunction with an expanded Visitor's Center which is also under consideration for this site.

Small day-use parks will also be part of the Soo Depot redevelopment and the new launch facility at Huron Creek.

The construction of these seven day-use parks will enhance the public use of Portage Lake. The connection of the parks with a bikepath will be the final step.

The total park development along the Waterfront will also include completing the landscaping of Verna Mize Park and three interpretive areas downtown featuring Trains, Mines and Ships.

h. Housing

The need for housing sites is becoming more acute as the shift from public to private housing begins to gain momentum. As indicated above, two apartment buildings have recently been constructed along the Lake. This trend should continue and is encouraged in The Plan.

A large R-3 zone is recommended for establishment at the Isle Royale Sands. R-3 allows apartments and condominiums to be constructed. R-3 is also recommended for the Soo Line freight yard. The area west of Brewery Park should also be zoned R-3. The property is presently in Portage Township and it is recommended that it be annexed to the City of Houghton. The annexation should also include the area south of the Canal Road, within the Waterfront District, on the west end of Houghton. Various development approaches should be encouraged.

i. Tourism

The increased need for motel rooms and convention facilities is recognized in The Plan. Three sites have been identified as being most suitable for the development of new motel/restaurant construction. The largest site and the site with the greatest potential is the old Copper Range Depot property, directly west of the lift bridge. A private developer plans to attract a major motel chain to that site. Meeting rooms and a unique restaurant are included in the plan.

The King's Inn Best Western Motel is currently expanding its facilities to include an indoor pool, sauna, and 15 additional rooms for a total of 65 units.

A new motel/restaurant project is now under construction by another private developer. It is called Main Street Inn East. This seven story facility will have 50 motel units with a restaurant/lounge on the top floor.

j. Industrial/Commercial

Cities depend on an expanding tax base to secure the continuation of services. The City is hampered by a shortage of industrial development. Industrial sites are not readily available in the City.

The Waterfront Development Plan calls for a portion of the Isle Royale Sands to be reserved for industrial and commercial development. The revised zoning map for the Sands shows an area to be zoned industrial. (See Appendix). This area will take advantage of the existing Soo Line Railroad tracks and will have lake frontage for future development as a commercial/industrial port site.

A green belt (as indicated on the Zoning Map) is intended to be located between the industrial zone and proposed R-3 (multi-family) and MU (multi-use) zone.

A new roadway entrance for the industrial site from US-41 is recommended. The existing entrance to the Isle Royale Sands is very poor, and does not exit onto the highway at a 90 degree angle. The recommended entrance would have a gentler slope, and would provide clear vision to the highway. The proposed new entrance will serve the existing block plant, and provide improved accessibility for future development.

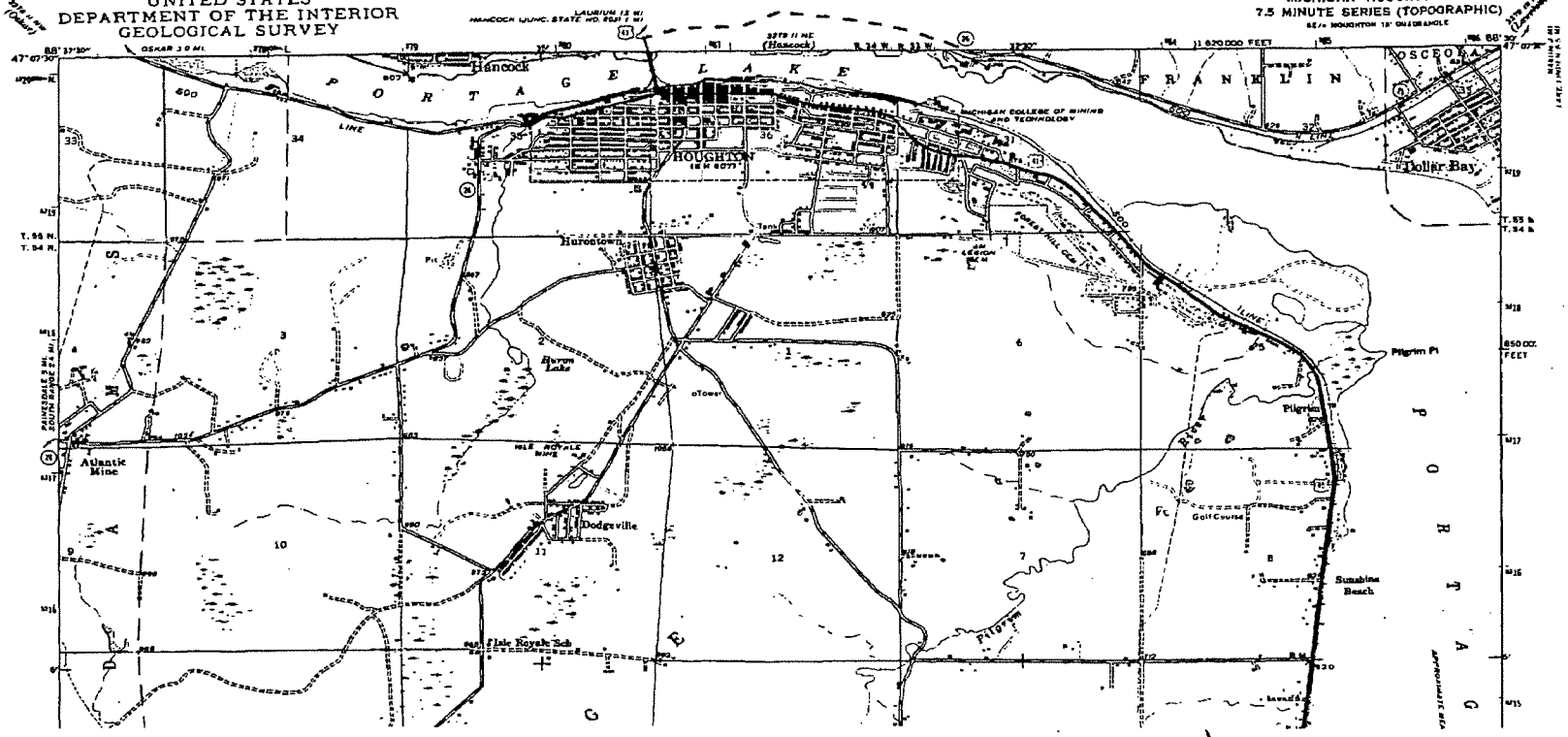
To provide for future commercial/industrial boat loading facilities, the Plan recommends that the existing broadside mooring facility next to the City-owned Dee Stadium be reconstructed. The land owned by the 41-Lumber Company should be further expanded for commercial use. The existing docking facility is still useful for commercial/industrial loading and unloading. The docking facilities at Michigan Tech are also suitable for shipping.

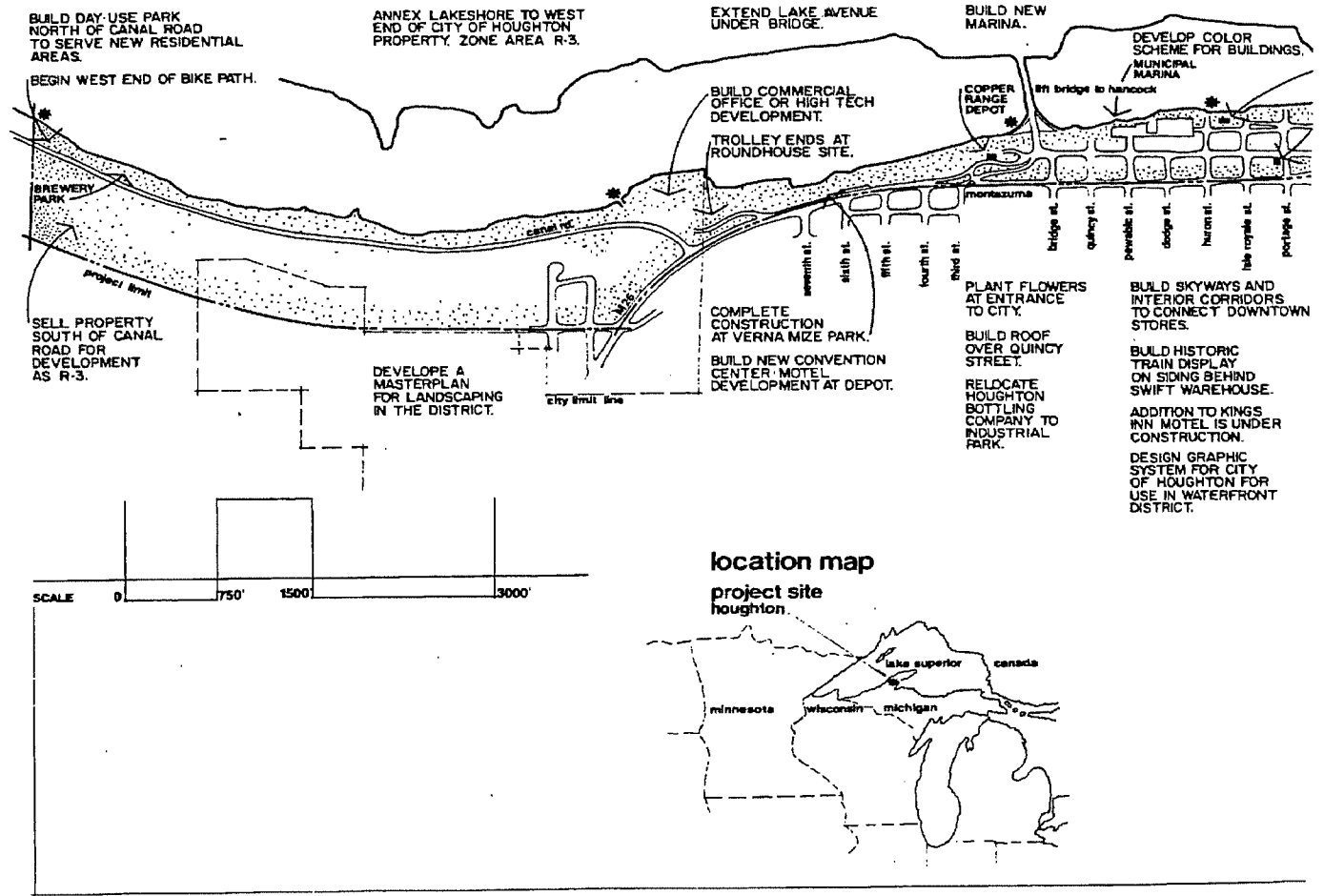
The Plan allows for additional docking space at MTU's physical plant side.

The Keweenaw Waterway is controlled by the Corps of Engineers. They are responsible for maintaining a usable shipping channel. To insure that no construction prohibits the use of the channel for shipping, a harbor line has been established, beyond which no construction is allowed. At the present time a number of docking facilities have been extended to this line. More dock extensions to the harbor line could be made.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

CHASSELL QUADRANGLE
MICHIGAN-HOUGHTON CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
SCALE MONUMENT 18' QUADRANGLE





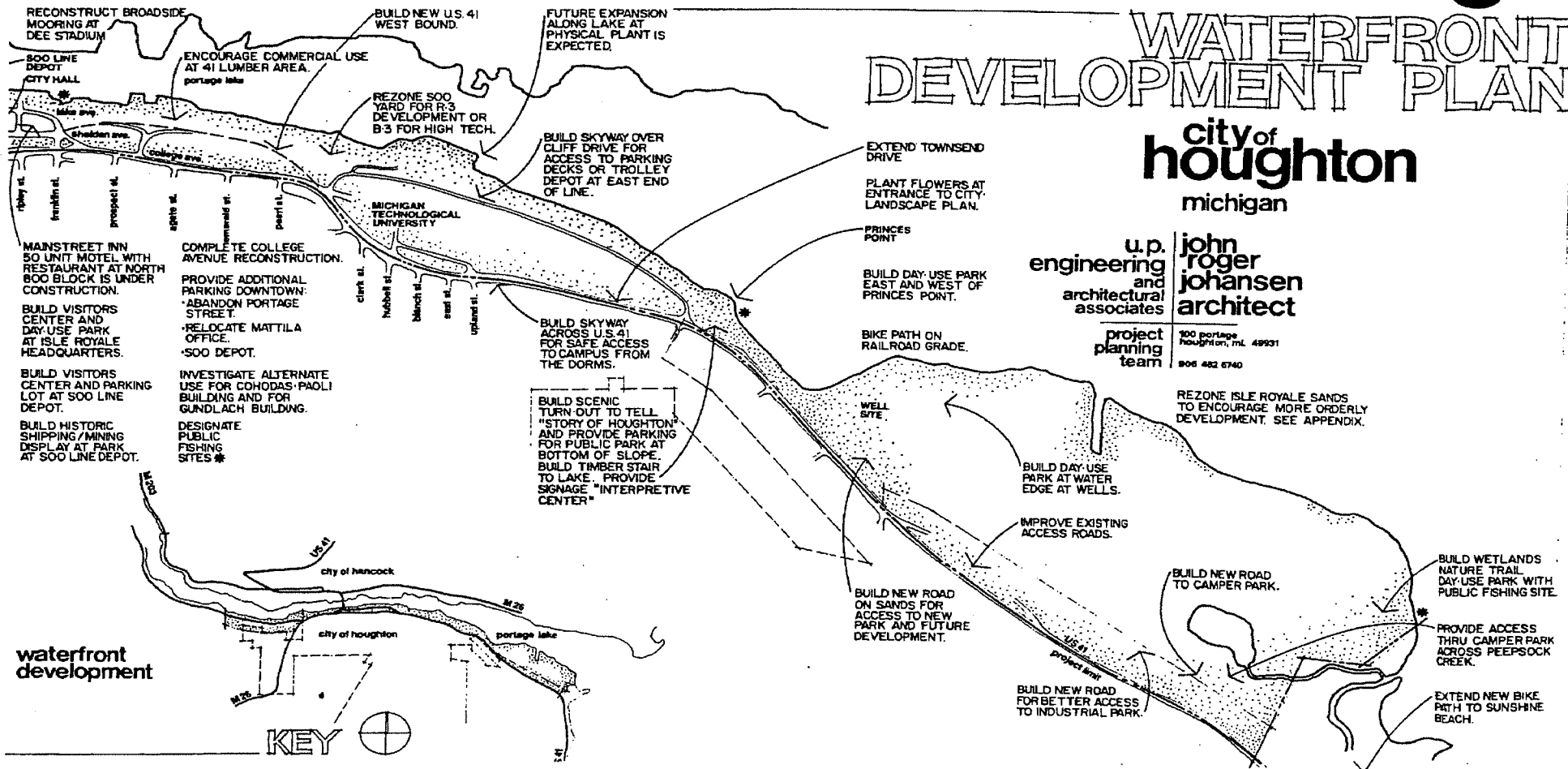
WATERFRONT DEVELOPMENT PLAN

city of
houghton
michigan

u.p. john
engineering roger
and johansen
architectural
associates

project
planning
team

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waterfront
development

KEY

In order to facilitate The Plan, the City Zoning Ordinance was analyzed for its applicability to the proposed program. The Houghton Planning Commission has recently endorsed revising the existing Zoning Ordinance. The area of the city effected by the revision is the Isle Royale Sands.

Due to the complicated pattern of past development, the proposed zoning for this area is intended to promote the highest and best use of the property.

The area consisting of 10 acres surrounding the City well site must remain undeveloped. One use of this land would be as a day use park. Since the City already owns the land the development as a park will not be difficult. Experimental planting plots could also be developed in cooperation with the Forestry Department at MTU.

The portion of the Sands which is platted for residential is recommended to remain as residential. Alternative zoning would have reduced the value of the existing investments.

The portion of the Sands, which has been developed as an industrial/commercial area, is recommended to be zoned industrial. While it is certainly the intent of this zoning to promote economic development within the city, the utilization of this land for certain uses could lead to eliminating other potential uses which require waterfront access for their operation. Uses such as ship repair and maintenance facilities, shipment of bulk material such as coal, and processing or shipment of timber resources, all represent potential activity for the Sands property.

The existing multi-use zoning on the Sands will be reduced in size, but will remain in the east end in order to allow the property to be developed as either residential or industrial property. The multi-use zone extends from the railroad tracks to the water's edge in order to allow transportation either by rail or by ship.

It is the feeling of the Planning Commission that the opportunities for both private and public development are optimized with this zoning change.

Zoning can serve as an excellent means to facilitate the orderly implementation of The Waterfront Development Plan.

Implementation of The Plan will require financial assistance from a number of federal, state, local and private funding sources. The City of Houghton has already taken advantage of a number of these programs. A description of the funding sources and how they apply to the various components of the waterfront program is outlined below:

Federal and State Programs

1. Economic Development Administration

(a) Public Works Grants (Title I)

Public Works Grants are available to areas working to overcome economic problems. To qualify, the area must be within a designated economic development district or redevelopment area. The applicant must also be legally empowered to undertake the project and to receive and disburse federal funds.

(b) Business Development Loan Program (Title II)

The EDA makes loans, loan guarantees, fixed asset financing, working capital financing and lease guarantees to private businesses and nonprofit organizations in designated redevelopment areas.

(c) Economic Development Grants (Title IX)

This program assists states and localities to plan and carry out comprehensive programs to meet special needs arising from actual or threatened severe unemployment as a result of economic dislocation.

2. Title I Urban Development Action Grants (UDAG)

UDAG requires a firm commitment of private investment from a business enterprise before a project is eligible for government funding.

The application for UDAG funding must include evidence of commitment of the public and private resources available for completing the project. The UDAG funds may be used to improve public facilities needed for a private project, or the funds may be used as a loan from the City to a private developer for the private project. The terms of such a loan are negotiable.

HUD currently favors projects which provide for financing based on a ratio of 25% government money and 75% private investment money. The greater the amount of private participation, the better are the chances of getting UDAG funding.

3. Michigan Department of Commerce

Community Development Block Grants - Small Cities Program

The Small Cities Program has been established to provide grants to local government units to undertake community development activities. This program was previously administered by HUD and in 1982 it was delegated to the state to administer.

Eligible applicants selected for funding must adequately address the needs of low and moderate income persons who will benefit from the proposed program. The Small Cities Program is extremely competitive and the demand for funds far exceeds the amount available. However, the City of Houghton has received a Small Cities Grant in the past and has an excellent opportunity to capitalize on these funds as the Waterfront Economic Development is consistent with some of the purposes identified for Small Cities Program. First, the program would promote a more rational land use development. Secondly, the program would increase economic opportunities for the low and moderate income persons through construction of the proposed motel/restaurant complexes, and through redevelopment of the downtown area.

4. U.S. Army Corps of Engineers

Small Navigation Projects

This program provides for general navigation projects which have been economically justified by the Corps of Engineers and have received authorization and funding by the City.

The Corps of Engineers would be utilized most exclusively in the design and construction and design of marina breakwater dredging and other navigation requirements. The Corps of Engineers would not be responsible for land acquisition, roads and parking, and other public facilities necessary to complete the entire project. The Corps of Engineers will require their involvement from the initial feasibility study through the detail project report which they would complete. The Corps of Engineers have programs to provide financial and technical assistance for general navigation facilities. Specific financial assistance during the construction stages of this project are dependent upon the availability of funds and the ability of the City to secure matching funds towards the Corps cost participation.

5. Upper Great Lakes Office

Michigan Department of Commerce

This State of Michigan office is available to provide technical assistance for the funding of the public and private projects proposed by The Plan.

6. SBA Community Development And Business Loans

The Small Business Administration (SBA) has a variety of loan programs commonly used by growing business and industry. These include:

(a) Regular Business Loan Program (Loans)

The maximum loan to each assisted business is \$500,000. The terms of the loan are generally seven years for working capital, ten year for machinery and equipment, leaseholds and renovations and twenty years for new construction and land acquisitions.

(b) Local Development Companies (Section 502)

Local development corporations may use this type of long-term financing to buy land or purchase, convert, expand, construct or modernize buildings. These loans are not to provide small businesses with working capital and cannot be used for refinancing purposes.

Loan terms to local development corporations may not exceed 25 years (except for special liquid extension of up to 10 years) and SBA participations are granted for a maximum of \$500,000.

(c) New Contractors Program

Small general contractors who build new residential or commercial properties or rehabilitate existing structures are eligible for guaranteed business loans from the SBA. To qualify for a loan, properties and structures must be immediately resold.

7. Construction Loan Guarantees For Contractors (Section 410)

This program enables small, independently owned contractors (not dominant in their field) to receive loan guarantees up to 90 percent for a particular contract. The Small Business Administration will guarantee these contracts up to \$500,00.

Other SBA Programs:

Economic Opportunity Loans
Small Business Investment Companies
Displaced Business Loans

8. Land and Water Conservation Fund

This fund, administered by the Department of Interior's Bureau of Outdoor Recreation (BOR) is probably the best possible source for receiving money for recreational oriented projects.

Monies from the fund are available for acquisition of land for future recreational development and for development of outdoor recreation facilities. The most important criterion for eligibility under the program is DNR approval of a local recreation plan. Projects are funded at a 50%-50% federal/local match.

9. U.S. Department of Agriculture Funding Programs

The U.S. Department of Agriculture controls monies through its various agencies for funding of land and water based projects.

Farmers Home Administration, U.S. Department of Agriculture, provides loans and grants to public bodies and non-profit organizations primarily serving rural residents to develop domestic water supply and waste disposal systems.

The Farmers' Home Administration (FmHA) guarantees loans by private lenders to improve the economic and environmental climate of rural communities. FmHA loan guarantees are available for:

Business and industrial acquisitions,
Construction, conversion, enlargement, repair and modernization.
Purchase of land, machinery, equipment, furniture and fixtures.
Processing and marketing facilities.
Start up and working capital.
Pollution control.

The FmHA guarantee may cover up to 90 percent of the loans with up to 30 years to repay. Loans may be made on land, buildings and permanent fixtures. Fifteen year loans on machinery and equipment are available with seven year loans on working capital.

10. Resource Conservation and Development Program

This program makes funds available at 50% - 50% federal/local match for the development of recreation facilities on water-based recreation areas and at 75% - 25% federal/local match for sedimentation and erosion control on water-based and land-based recreation areas.

11. Section 201 of the Federal Pollution Control Act Amendments of 1972-
EPA-208

The federal program is administered by the Environmental Protection Agency and provides funding for wastewater treatment facilities and collection systems. Its primary concern is to correct the existing water pollution problems, not the extension of sanitary sewers to the new areas. Under this program, the EPA will fund 75% of the project cost, where as the other 25% is generally shared by the state and local units.

12. Department of Natural Resources--Waterways Commission

The Waterways Division administers a program providing grants-in-aid to local units of government for the construction of recreational boating facilities. The grants be equal to 50% of the total cost of such facilities including engineering and contingencies, unless federal matching funds have been secured for the project. If this is the case, the federal government provides 50%, the Waterways Division 40%, and the local unit 10% of the project cost.