Consensus Plan
Mississippi Riverfront Study
A Final Report

for the
City of Muscatine, Iowa

Submitted by:

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June 1997
A RESOLUTION ADOPTING THE CONSENSUS PLAN MISSISSIPPI RIVERFRONT STUDY FOR THE CITY OF MUSCATINE, IOWA

WHEREAS, the City’s goal of opening the magnificent Mississippi Riverfront visually and physically to make it accessible to all community residents and visitors has been an on-going City goal; and

WHEREAS, proactive decisions have been made by the City to cohesively link the downtown with the heritage of the adjacent Mississippi River; and

WHEREAS, the City is the steward of the community land between the confluence of Mad Creek and the Mississippi River downstream to McKee Button Company; and

WHEREAS, a planning process was initiated by the City to involve a wide-array of citizen input to develop a Consensus Plan-Mississippi Riverfront Study, during 1997; and

WHEREAS, this document establishes a community consensus for specific areas of the City’s riverfront for Recreational Boating, a Civic Plaza Area, an Entertainment and Play Area and the Open Space/Passive Recreational Area to provide continuity and a guide for future decision-making;
NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of Muscatine, Iowa accept and adopt the Consensus Plan-Mississippi Riverfront Study for the City of Muscatine, Iowa as formulated by Community input and facilitated by Johnson, Johnson and Roy (JJR) the consulting firm retained to prepare the document.

PASSED, APPROVED AND ADOPTED this 17th day of July, 1997.

BY THE CITY COUNCIL OF THE
CITY OF MUSCATINE, IOWA

[Signature]
Richard W. O'Brien, Mayor

Attest:

[Signature]
A. J. Johnson, City Clerk
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   Enlargements and Descriptions of the Three Recreational Development Areas
21 May 1997

City Riverfront Committee
City Hall, 215 Sycamore St.
Muscatine, IA 52761-3899

Attention:  Kevin Whittaker, Director of Planning and Community Development

Re:  Consensus Plan
     Downtown Riverfront Study
     Muscatine, Iowa

Dear Committee Members:

Thank you for working with us and taking an active role in the planning and design study for the revitalization of the City of Muscatine’s Downtown Riverfront. Although the rehabilitation of the marina was the initial focus of the study, the proposals we jointly arrived at for a new riverfront civic plaza and entertainment area are equally important to the future of Muscatine. We truly appreciate the interaction with you and the citizens of Muscatine during the public participation workshops. The attached plan and sections are the result of this collaboration.

The Consensus Plan for the redevelopment of the Downtown Riverfront was developed through a series of stakeholder meetings facilitated by JJR, with active input, review and endorsement by the City’s Riverfront Committee and the citizens of Muscatine. The primary design goal for the marina study was to create a revitalized marina in a manner which is considered attractive and convenient for boaters; cost effective in terms of construction and maintenance; and efficient from an operator’s point of view. In addition to providing a safe harbor for boaters, another objective of the study was to enhance recreational opportunities along the riverfront, making it a special civic and recreational attraction to both boaters and non-boaters. Midway through the study, it was decided to expand the study area to the downriver floodgates to better accomplish this goal. The resultant consensus plan has been crafted to incorporate the recreational needs of the residents of Muscatine and also to attract visitors to the city’s Mississippi Riverfront. To this end, the plan called for strengthened linkages between the riverfront and the downtown via “gateways” at both Cedar Street and Iowa Street; and an improved entrance to the marina basin itself.

The reconfiguration of the marina basin was designed to be integrated into the existing Riverside Park, while optimizing the layout of the boat slips and minimizing construction costs. This was achieved by honoring the traditional entry points to the river; protecting the existing mature trees along the shoreline and respecting the topographical and geotechnical constraints of the area. The basin is sited to take advantage of the existing breakwater and to preserve views afforded by the elevation difference between the water and access road.

The new marina, civic plaza and entertainment facilities will greatly add to the vitality of Riverside Park, fostering a stronger link between the downtown and the riverfront. The rich heritage of Muscatine will be incorporated into the design of the facility, such as prominent display areas along walkways for interpretive settings for significant artifacts. The pedestrian bridge, which serves to connect the park proper to the breakwater overlook, will be designed to symbolize the rebirth of the riverfront’s recreational and
economic vitality. The concept depicted by the attached drawing is based on reuse of the original abutment of the highway suspension bridge, that once crossed the river at this point. Incorporating the heritage and history of “The Pearl City” and its relationship to the river will add to the interest and enjoyment of the facility by boaters, active park users and visitors who simply enjoy a stroll along one of the great rivers of the world.

In summary, the riverfront has been planned to become an attraction to local residents of Muscatine, their visiting guests and first time tourists. The revitalized marina will become a welcome addition to Muscatine’s riverfront and a catalyst for the revitalization of the downtown. The boat basin, pedestrian promenades, civic and recreational areas, and landscaped open spaces will help define and sustain a new image for Muscatine. The opportunities for higher quality of life and economic development will improve dramatically with the completion of the new marina and other riverfront improvements.

It is our strong recommendation that the planning, design and implementation of this program be completed as one major recreational development project. The need for synergistic design, attention to detail and cooperation on permitting and funding issues will demand a carefully organized and managed development approach. We look forward to working with you in bringing this vision to reality.

Sincerely,

JJR Incorporated

Fred KIancnik, P.E.
Senior Vice President

Ed Freer, ASLA
Senior Urban Designer

cc: Mayor Richard O’Brien
A.J. Johnson, City Administrator
Steve Boka, Director of Building and Zoning
Larry Wolf, Director of Parks
Randy Hill, Director of Public Works
Randy Elder, Landscape Architect
David Casstevens, Finance Director
Summary Report for
Mississippi Riverfront Study
City of Muscatine, Iowa

1.0 PURPOSE OF STUDY

The purpose of this report is to present the Consensus Plan resulting from the Downtown Riverfront Study which was undertaken by JJR and the City's Riverfront Committee for the City of Muscatine. The study approach, site development issues and implementation strategies are also discussed in this report. The goal of this study was to arrive at a plan for the riverfront revitalization which achieved the following objectives:

1. Provide residents and visitors with operationally efficient, cost-effective and publicly accessible boating facilities that optimize the scenic quality and recreational opportunities offered by the Mississippi riverfront;
2. Accommodate the needs of boaters and non-boaters alike by providing public pedestrian promenades and other features around the marina while meeting the safety and security needs of slip renters;
3. Improve the economic development potential of the area by creating riverfront focal points and vital links between the downtown, the marina, and open space system located both up and down river of the downtown.

2.0 STUDY APPROACH

During the initial phase of this study, several primary issues were defined that guided the direction for project implementation:

- the extent to which the existing marina is to be rehabilitated and/or expanded;
- the best use of the riverfront land and the allocation and clustering of different uses;
- the incorporation of the existing breakwaters;
- enhancing the existing recreational uses.

Because of the potential impacts and associated large costs related to boat basin infrastructure issues, this study initially focused on optimizing the placement of the marina relative to these parameters.

After obtaining a thorough understanding of the site constraints and opportunities, two original concept plans were developed. Workshops were held with members of the City's Riverfront Committee and stakeholders selected for their interest in Muscatine's riverfront for the purpose of discussing the potential for developing the recreational potential of the riverfront while recognizing the physical, political and fiscal constraints. After the initial workshop which took place on 10 February 1997, an understanding of the Committee concerns were obtained and the two generalized marina concepts were synthesized into a preliminary Consensus Plan. The final marina Consensus Plan, refined from the preliminary plan, is a result of the full public participation process and hands on approach used in this study. Please refer to Appendix A for the drawings of Alternatives A and B and the preliminary consensus plan which resulted from the first workshop.

A second workshop and public meeting were held on 3 March 1997 to obtain input from the stakeholders on the overall downtown riverfront. The final riverfront plan was presented on 7 April 1997 and was enthusiastically received by those attending the meeting.
3.0 SITE DEVELOPMENT ANALYSIS

The first step to understanding the physical constraints to development was to collect data including topographic and utility information. This information was assessed in conjunction with the preliminary site analysis, current planning efforts, historic resources, environmental concerns and a clear understanding of the physical constraints. Discussions with Department of Public Works representatives on site engineering, hydrological, navigational, contamination and general safety issues helped shape the study team's understanding of the site's limitations.

3.1 Site Description

The project site lies along the northerly shoreline of the Mississippi River between Mad Creek on the upriver side and the floodgates on the downriver side. Mississippi Drive and railroad tracks separate this mile long riverfront parcel from the downtown. The two primary connecting links to the downtown are Iowa Avenue and Cedar Street. Key features of the study area are the existing breakwater and boat basin. Because of the cost of modifying harbor infrastructure, these two elements of the existing site need to be considered carefully. The majority of the site is in public ownership with the exception of the railroad easement.

3.2 Previous Planning Efforts

The proposed development of the Project Site is very complementary of the mission of the City’s Riverfront Committee. The development program promotes public access to the waterfront, encourages economic development, complements downtown business, and is both respectful of, as well as enhances, the community’s open space system. This study is building on the committee’s previous programming and planning for the riverfront.

3.3 Cultural Resources

In developing the site, there needs to be an awareness and sensitivity toward some of the cultural resources which exist on and adjacent to the site. Riverside Park was and remains one of Muscatine’s landmark spaces along the waterfront. The heritage monuments that exist here and elsewhere along the river can be used to enhance the attractiveness of the proposed facility. It is important to continue the historic visual and physical access to Muscatine’s riverfront.

3.4 Hydrologic Issues

Five hydrological issues which will need to be considered in the final design of the marina are: 1) flooding, 2) river current, 3) shoaling, 4) flushing, and 5) wave/wake. This study provides an overview of how these phenomena could affect the facility, based on research of available information and past experience.

Although the Mississippi River generally flows within its banks, when it crests during periods of flooding each year additional environmental stress is placed on site infrastructure (particularly dockage, buildings, the pedestrian bridge and utilities). In addition to designing for fluctuating water levels, one needs to consider that flood elevations are usually accompanied by higher velocity flows of the river. The design of the facility needs to balance the initial costs of building structures which can withstand the forces associated with regional flood events against the risk of flood damage. The 'normal' pool elevation is 286 (City of Muscatine Datum), and the breakwater is at approximate elevation 298. The typical annual spring flood elevation in the area of the proposed facility is 301. A more typical water level elevation during the boating season is 289. Requirements for clean up after flooding also need to be considered in design development.
Current is another consideration in designing a marina facility at this location. All structures will need to be designed to Federal Emergency Management Agency (FEMA) regulations.

Shoaling problems will continue to be encountered in the area of the proposed entrance. The city should build periodic dredging maintenance into their riverfront maintenance program. Both initial and maintenance dredging need to be carefully considered in final design.

Stagnant water can also be a problem with an off-channel boat basin. The breakwater structure may need to be modified in such a way as to encourage flushing and water circulation. A mechanical harbor circulation system, which could also function as a winter deicing system, may be required.

Finally, there is the potential for waves generated by recreational boat traffic and passing commercial traffic.

3.5 Navigational Issues

There are three basic navigational issues: 1) conflict with maritime commercial traffic 2) water depths and 3) channel alignment.

Because of the location of the marina facility along the Mississippi River, the potential impact of commercial maritime traffic should be considered.

Water depth at and near the entrance of the marina does present a potential navigation problem. Periodic maintenance dredging will be required to maintain adequate depths.

The proposed entrance and river alignment will allow the boaters for whom the facility is being designed to successfully access the basin. It is recommended that a detailed river hydraulic study be undertaken to design an entrance promoting better river flow past the marina. Adequate channel width at navigable water depths must be maintained over the life of the project.

4.0 THE PLAN

The final Consensus Mississippi Riverfront Plan will create inviting spaces that organize the site into areas of active and passive use nestled into the existing Riverside Park that are attractive to both boaters and non-boaters. The Plan depicts continuous pedestrian walks throughout the site that flow from one area of activity to another, taking people around the boat basin and all the way out to the end of the breakwater. An optional route is also shown across a proposed pedestrian bridge across the narrowest part of the basin, building upon the historic bridge piers. The Plan also provides for a recreational/bicycle trail linking the existing riverfront levee bike trail from Musser Park to the project site, and continuing upriver to Weed Park. The study team has succeeded in incorporating valued existing features of the site by retaining and building upon existing breakwaters, relocating the existing dockage, making Pearl City Station a more accessible and integrated part of the site. The boat launch operation will be relocated to the upriver end of the site, thereby freeing the old launch site for a riverfront amphitheater as a part of the civic area of the park. An extensive pedestrian and vehicular circulation system will be created throughout the site, preserving and enhancing the ability of residents and visitors alike to walk or drive along the riverfront park.

The Plan is organized into four general areas of activity: (1) the recreational boating facilities area; (2) the civic plaza area; (3) the entertainment and play area; and (4) the "open space - recreational" area to be addressed in future plans.
4.1 The Recreational Boating Area

The new six acre basin has a capacity of approximately 180 boats ranging in lengths from 20 feet to 40 feet. It encompasses the area of the existing marina, with its new entry basin located just upriver of the existing jetty projecting out from the Power Boat Club. The boat club structure could be remodeled into restaurant and shower/restroom facilities for boaters staying overnight. The breakwater running parallel to the river is incorporated into the new design. The entry basin is designed to accommodate boaters wishing to stay in Muscatine for a short term visit. This basin is configured to accommodate boats in the 30 to 40 ft. range (see Table 1: Schedule of Boat Slips) with a full service state-of-the-art floating dockage system. Fueling and sanitary pumpout facilities will be available near the entrance of this arrival basin.

A special site feature, the pedestrian bridge between the park and the outer breakwater, separates the entry basin from the main seasonal slip renter basin. The main basin incorporates the boat mix and dockage system of the existing marina. Just upriver of the main basin is the smaller terminal basin that, like the entry basin, accommodates 30 ft. and 40 ft. boats. It also has a circular configuration which allows boats the ability to turn around when they reach the terminal end of the marina. This basin could be designed to a higher level of comfort and sophistication than the main basin, creating a sense of exclusivity. A new marina administration building will accommodate boater and public needs for restrooms, showers, snack bar, laundry facilities and concession goods. It will be located between this basin and the breakwater structure.

<table>
<thead>
<tr>
<th>Slip Length</th>
<th>Entry Basin</th>
<th>Main Basin</th>
<th>Terminal Basin</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>40'</td>
<td>18</td>
<td>122</td>
<td>10</td>
<td>28</td>
</tr>
<tr>
<td>30'</td>
<td>6</td>
<td>22</td>
<td>4</td>
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<tr>
<td>25'</td>
<td>26</td>
<td>26</td>
<td>26</td>
<td>94</td>
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<tr>
<td>20'</td>
<td>94</td>
<td>94</td>
<td>94</td>
<td>94</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>24</strong></td>
<td><strong>142</strong></td>
<td><strong>14</strong></td>
<td><strong>180</strong></td>
</tr>
</tbody>
</table>

Please note that although the basin reshaping costs will be significant, every effort has been made to minimize harbor infrastructure costs. This has been accomplished by the decision to continue to rely on the existing breakwater for primary basin protection.

Pedestrian walkways circulate around the periphery of the marina with accessible paths down to the docks. Vehicular circulation incorporates the access road parallel to Mississippi Drive, the linear parking lots and the Pearl City Station turnaround. At the upriver end of the site, the access road was designed to give drivers the option of proceeding directly to the marina parking lot, to the marina administration building drop-off area or to the boat launch ramp and auto-trailer parking.

Parking for approximately 164 vehicles is provided upriver of the basin, with an additional 80 auto-trailer combination parking spaces near the four lane boat launch. The boat launching operation has been relocated to the far upriver end of the site and parking lots to allow for better control and security of
recreational boating uses at this more remote location of the site. Restrooms and a fish-cleaning station are also provided near the boat launch and auto-trailer parking.

4.2 The Civic Plaza Area

The civic plaza area of the site lies between Pearl City Station and the old boat club. The Plan strengthens Pearl City Station as a destination by creating a drop-off area accented with special paving and a monument or sculpture. The main walk runs between Pearl City Station and the Boat Club, parallel to the existing parking lots and the Lift Station. From this walk, pedestrians are easily directed to other features such as the amphitheater for outdoor performances, the new overlook and seating area, the festival area, and a newly-created picnic lawn where the blue metal building stands. This area is immediately adjacent to the Boat Club and will serve those users as well. Two additional drop-off areas are located at the terminus of Cedar Street and of Iowa Avenue. Specially-marked pedestrian crossings and gateways between the riverfront and downtown will be incorporated into the design. Illustrative sections show the relationship of the gateway to the riverfront. The other drop-off is just above the amphitheater so as to serve those users and distribute traffic during periods of heavy use, such as a performance or festival.

4.3 Entertainment and Play Area

The plan proposes to consolidate active play and entertainment areas into the downriver end of the site, just beyond Pearl City Station. This area and its proximity to open space and the recreational trail make it the most appropriate location for this type of activity. A small building, on axis with Pine Street would house a stage, restrooms and, if desired, seasonal concession services. In front of the stage is a multi-purpose area and relocated basketball courts. The area is surrounded by a walk for easy vehicular and pedestrian access. These surfaces can be used for seating during performances. In the winter the space can be flooded for ice skating. It is also of a size appropriate for hockey. Playgrounds for various age groups are located on the north side of the building, closest to the Pearl City Station turnaround and drop-off. Trails here allow for easy accessibility to the amenities of this area, and directly link to the recreational trail going downriver to Musser Park.

In summary, the study team applied past experience and technical expertise to the planning direction received at the workshops in arriving at a solution which meets the recreational and economic development goals of the citizens of Muscatine. The active participation of the members of the City’s Riverfront Committee and the citizens of Muscatine, produced a riverfront revitalization plan featuring a riverfront revitalization project which has been thoroughly evaluated from a planning, design, environmental, economic and social point of view. The programmed elements of the Consensus Plan have been sited and configured to optimize performance and minimize construction and maintenance costs.

5.0 IMPLEMENTATION

5.1 Community Involvement

In order to implement the riverfront revitalization concept plan, it must be acceptable to the community. Elected officials and citizens have shown their interest in developing the Muscatine Riverfront during project workshops and public meetings. Representatives of the City’s Riverfront Committee, Department of Public Works, Parks Department, and the local downtown business community have provided their input throughout the study. This project will enhance Muscatine’s presence on the Mississippi River and foster better public access to Riverside Park from the land as well as the water.
5.2 Financing the Development

The proposed plan is realistic and can be developed within the City's financial capabilities if funding opportunities are pursued. Many of the proposed improvements qualify for State and Federal funding programs. Private enterprise might provide the means of additional funding through capture of tax increment associated with the development of adjacent areas. In addition, many civic minded corporations and families have expressed an interest in investing in the quality of life of Muscatine through sponsorship of some of the landmark features of the project.

Representatives of various funding and regulatory agencies need to be introduced to the concepts of the proposed project. The final recommendation and feasibility of the proposed development could be enhanced by an aggressive approach to grantsmanship and fundraising.

The ultimate development will be financed by a combination of Federal and State funds, municipal funds, private investment and private contributions. Determination of exactly how these sources of capital are assembled is beyond the scope of this study.

5.3 Potential Funding Sources

Several sources of funding are potentially available for environmental enhancements for downtown Muscatine. A primary source of funding is the Iowa Department of Natural Resources' (IDNR) Resource Enhancement And Protection (REAP) program. Portions of this program, among others, provide matching or complete funding for the following activities:

- Open space protection, including land purchase and recreational facility construction;
- County conservation, discretionary funds to the counties for upgrading or repairing park facilities, land or easement purchase, etc.;
- City parks and open space, including expansion or development of new parks, repair of existing ones, construction of trails, and protection of native area; and
- Historical resources, including renovation of historic sites and maintenance of museums and libraries.

Another major program applicable to downtown development in Muscatine is the U.S. Department of Transportation's Intermodal Surface Transportation Efficiency Act (ISTEA). This program funds ten types of activity, including the following that may apply to the Muscatine downtown area:

- Facilities for pedestrians and bicycles,
- Scenic easements and historic sites,
- Landscaping and other scenic beautification,
- Historic preservation and rehabilitation of historic transportation facilities,
- Preservation of abandoned railroad corridors (including conversion to pedestrian or bicycle trails),
- Control or removal of outdoor advertising, and
- Mitigation of water pollution due to highway runoff.

Funding for ISTEA is currently (May 1997) depleted; however, refinancing of ISTEA is included in the current Congressional budget.

Other potential sources for funding are more specific or less adaptable to urban programs. Depending on the application sought for funding, they may provide for some aspects of the downtown Muscatine development. These programs include the following:
- U.S. EPA environmental education grants,
- U.S. EPA Clean Water Act Section 319 demonstration grants for stormwater management,
- National Science Foundation educational grants,
- Iowa DOT Living Roadway Trust Fund for roadside plantings of native vegetation,
- U.S. Fish & Wildlife Service Partners for Wildlife program that includes restoration and management components for degraded lands,
- U.S. Natural Resources Conservation Service programs including the Urban Forestry Program,
- National Aquatic Resources Trust Fund for sport fishing and recreational boating.

These resources may provide financial and/or technical support for Muscatine's downtown development. Fund administrators need to be contacted to determine suitability of the project(s), funds available, and scheduling of applications.

5.4 Economic Impacts

The large initial cost of riverfront and marina infrastructure development typically requires the involvement of public funds for financial feasibility. However, both construction and operation activities can provide direct economic growth to the community and, thus, should be looked at as an investment which lays the ground work for increased downtown development. The influx of dollars and secondary spending due to this industry (entertainment and recreational boating) not only increases income but also employment in the area.

The impact of the proposed facility depends on the number of users, their spending habits and the availability of desired services. For example, an outlet for the full array of services expected of a modern marina for both day and overnight use might be located within easy walking distance of the dockage to achieve the desired economic impacts.

5.5 Opinion of Probable Construction Costs

The following costs reflect the most current construction cost data for 1997. These costs have been increased by 10% to account for engineering fees, soil boring requirements, land surveying fees, and testing during construction (on funds borrowed to initiate construction activities). A 15% estimating contingency has also been incorporated. These costs must be appropriately increased to allow for inflation and for a valid costs comparison in years other than 1997. Refer to Appendix B for a detailed breakdown of cost information. Costs for the three activity areas are estimated to be as follows:

<table>
<thead>
<tr>
<th>Activity Area</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recreational Boating Area</td>
<td>$4.0 million</td>
</tr>
<tr>
<td>Civic Plaza Area</td>
<td>$3.0 million</td>
</tr>
<tr>
<td>Entertainment and Play Area</td>
<td>$1.0 million</td>
</tr>
<tr>
<td><strong>Total Project Cost</strong></td>
<td><strong>$8.0 million</strong></td>
</tr>
</tbody>
</table>

5.6 Permitting

Permitting concerns include wetlands, river bed, and floodplain issues. The Iowa Department of Natural Resources (IDNR) defers to the U.S. Army Corps of Engineers (USACE) for projects limited to effects on wetlands. The Rock Island, Illinois District is the USACE office that regulates wetland operations in the Muscatine area.

The IDNR regulates work within rivers, although as a special charter city, Muscatine claims ownership of all bars and beds below the Ordinary High Water mark. Because these are regulated lands, the IDNR requires a construction permit from that agency for any work within rivers.
The IDNR closely regulates floodplains, under rules in Chapters 70 to 75 of the State Rules. The IDNR requires a permit for almost any work in a flood plain that is smaller than 2 sq. mi. in an urban area or less than 10 sq. mi. in a rural area. The area including Muscatine is managed from the IDNR Southeast District office. The IDNR and USACE use a joint permit application form, but the agencies do not coordinate their reviews because the regulatory authority for USACE is focused on wetlands, whereas the IDNR’s regulatory authority is based on floodplains.

Prior to final design, soil borings will be required to determine the nature of the soils which need to be excavated for the basin expansion. The excavation, dredging and disposal of these materials will be of interest to the regulatory agencies.

5.7 Marina Management

Since the marina is a municipal venture, management of the facility will be the responsibility of a local authority commission which answers to the electorate. It is assumed that the City Parks staff and Parks Commission will be asked for input on issues related to parks and harbor operations. Certain specialists can be included in an Advisory Committee to give the Commission good advice based on non-technical expertise and relevant local experience.

The concerns of the City will be the basic concerns of any organization of a similar size and nature, specifically:

- Quality of services offered
- Type of services offered
- Maintenance and operating expenses
- Revenues generated
- Efficiency of operations
- Overall appearance of area
- Safety and security

The development of the marina needs to address these items.

Since the land proposed for development is presently City-owned, should a private operator be considered, leasing agreements would probably be drawn up between the City and the private operator.

Policies for managing the marina would be set by the City; but day-to-day management of the harbor could be the responsibility of either a Private Operator’s Manager or public employee Harbor Master. He or she would have a small staff consisting of dock, and maintenance personnel to assist him or her. Whether the maintenance expenses, overhead costs and capital outlays are paid by the municipality or the operator depends on the lease agreement.

In general, the type of management program which is finally implemented will evolve from the nature of the site and the people involved in the management of the site. A request for marina development and/or management proposals is the next step in the process. The background information presented in this section of the report is meant only as a guide as to what can be done.
**Downtown Riverfront Study**
Muscatine, Iowa

**Summary Description of Areas**

**Recreational Boating Area**
The new 6-acre marina accommodates approximately 180 boat slips, with 24 slips in the Entry Basin, 142 slips in the Main Basin, and 14 slips in the Terminal Basin. The marina is located between Cedar and Oak Streets. A marina parking lot accommodates 161 auto and 80 auto-load boaters. The boating area features a new restaurant/service building, a landscaped pedestrian bridge to the outer breakwater that incorporates the old bridge piers, extensive walkways, a relocated boat launch, added restrooms and a fish cleaning station.
*Approximate Cost: $4.0 million*

**Civic Plaza**
Located between the Boat Club and Pearl City Station, the new civic plaza consolidates civic activities into one area. An amphitheater is added where the boat launch presently exists, and festival/jazzic grounds are expanded between the overlooks at the Boat Club. New walkways and drop-offs facilitate use of this area and allow for optimal viewing of the river.
*Approximate Cost: $3.0 million*

**Entertainment/Play Area**
Play and stage performances are located on the downriver side of Pearl City Station. Ample parking and a new drop-off at Pearl City Station facilitate use of these recreational areas. A relocated stage with restrooms will be part of this multi-recreational area. The new building could also contain seasonal concession services. The area in front of the stage will serve many purposes: seating for performances, relocated basketball courts, and, in winter, floating rinks for skating and hockey. Ample walks serve to separate play areas and allow easy access to all facilities, both by service vehicles and pedestrians.
*Approximate Cost: $1.0 million*

**JJR/**
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