

*Investing in
Portland's Future*



**PORTLAND
PARKS & RECREATION**

Healthy Parks, Healthy Portland



**Dawson Park Gazebo
Assessment
2004**

ACKNOWLEDGEMENTS

City of Portland

Vera Katz, Mayor

Jim Francesconi, Commissioner

Portland Parks & Recreation Project Staff

Zari Santner, Director

Victoria M. West, Landscape Designer

Mary Anne Cassin, Design and Development Manager

Portland Development Commission

Donald F. Mazziotti, Executive Director

Carol Herzberg, Project Coordinator

Lois Cortell, Development Manager

Interstate Corridor Urban Renewal Area Parks Subcommittee

Cynthia Sulaski, Overlook Neighborhood

Betsy Radigan, Piedmont Neighborhood

Marcine Kment, Boise Neighborhood

Susie Law, Humboldt Neighborhood

Walter Valenta, Bridgeton Neighborhood

Paul Dorsey, Eliot Neighborhood

Scott Jensen, Portsmouth Neighborhood

Matt Whitney, Bridgeton Neighborhood

Brenda Ray Scott, Kenton Neighborhood

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	I
TABLE OF CONTENTS	III
EXECUTIVE SUMMARY	V
BACKGROUND INFORMATION	1
GAZEBO ASSESSMENT	3
COST ESTIMATES	5
RECOMMENDATIONS	7
Volunteer and Funding Opportunities	7
APPENDIX	9
Structural Assessment	9

EXECUTIVE SUMMARY

In 2003 the Interstate Corridor Urban Renewal Area (ICURA) Parks Subcommittee completed a Needs Assessment for the parks and open spaces of the Interstate Corridor Urban Renewal Area. This document serves as a reference and guide for the allotment of Urban Renewal Funds in these parks and open spaces as they may become available each fiscal year.

Among the projects recommended in the assessment was the renovation of the gazebo in Dawson Park and the pursuit of grant funding opportunities to supplement Urban Renewal Funds. It appeared there was a possibility of some limited grant money from the Albina Rotary to renovate the gazebo. Before any improvements could be considered, a study of the gazebo condition was first needed. The ICURA Parks Subcommittee supported undertaking this assessment, to determine the structural integrity of the structure, the cost of renovations, the opportunities for volunteer labor for repairs, and the best use of the resources that may be donated to the park.



Dawson Park Gazebo, 2004

The Dawson Gazebo Assessment is funded by the Portland Development Commission. The information is intended to serve the PDC, the ICURA Parks Committee, the neighborhood and Portland Parks & Recreation as a guide for making the necessary improvements to the gazebo, as money may become available in the coming years. The document also will help guide groups in fundraising efforts to renovate and preserve the structure.

The Interstate Corridor Urban Renewal Plan adopted by Portland City Council in 2000 included a set of goals and objectives that reflect a broad-based community involvement effort. A Community Livability Working Group was formed to make recommendations for an implementation strategy to guide decisions related to a) Parks & Open Space, b) Community Facilities, c) Historic Preservation & Urban Design. The Community Livability Strategy was accepted in 2002. The renovation and preservation of the Dawson Park Gazebo cross cuts various of these accepted goals and strategies by enhancing an existing park, preserving a historically significant structure that reflects the area's social and cultural history, and by recognizing and honoring a structure associated with the heritage of the Albina and African-American communities.

Dawson Park is located at N. Stanton & N. Williams within the Eliot Neighborhood and the Interstate Corridor Urban Renewal Area. It was acquired by the City in 1921 and now includes a basketball court, volleyball court, playground, restroom building, picnic tables, paths and the gazebo.

The Dawson Park Gazebo was added to the park in 1978. It features the landmark dome of a business and residential building formerly located at N. Williams & Russell. This area was a commercial district of the former city of Albina, which merged with Portland in 1892. The dome's original building and many others near it were torn down in the 1970s for a proposed expansion of Emanuel Hospital that didn't take place when Congress failed to provide the funding.

The Gazebo has great significance for community members. "The Dawson Park Gazebo is all that's left of the history from that era," stated Pauline Bradford, an Eliot neighborhood resident and member of the ICURAC (Interstate Corridor URA Advisory Committee). Lenny Anderson, another ICURAC member commented that "this is the last architectural fragment remaining of the community that many neighbors grew up in, and it should be preserved."

The gazebo is a combination of this historic dome and wooden members that were integrated to create an open structure within the park. It now includes eight columns, 4 x 12 beams, and metal fasteners that support the dome, all of which are mounted on a concrete and brick foundation. The aging gazebo is now in a state that will require repairs, both structurally and aesthetically, if it is to be preserved as an asset for the neighborhood in the years to come.



*Hill Block at the Corner of Williams and Russell
Oregon Historical Society*

An assessment of the gazebo was performed to determine the integrity of the structure, and to recommend what actions should take place to sustain its life. This assessment found the gazebo to be in need of substantial repair. The open design of the roof allows moisture to affect both wood members and metal fasteners. Dry rot, a condition of deterioration due to water intrusion, is affecting the 4x12 beams and will eventually eat away the wood until they can no longer support the roof. Some of the issues the gazebo now faces are:

- Dry rot of supporting 4x12 beams
- Rust deterioration of flanges
- Lack of wood preservatives
- Exposure to the elements

The structural engineer's recommendations include the following repairs and protective design modifications:

- Replacing all of the 4x12 members with new pressure treated materials.
- Modifying the existing knife plate connections
- Treating the cut ends and bolt holes with "Wood Life" preservative
- Removing rust from, priming, and painting the perimeter steel connecting the dome to the posts and beams
- Installing flashing to the new 4x12 members to prevent future water damage
- Re-caulking or flashing the seal between the finial and pipe collar ring
- Repairing the bench

The complete report can be found in the Appendix.

These repairs will need to occur in the next couple of years to prevent structural failure of the gazebo.

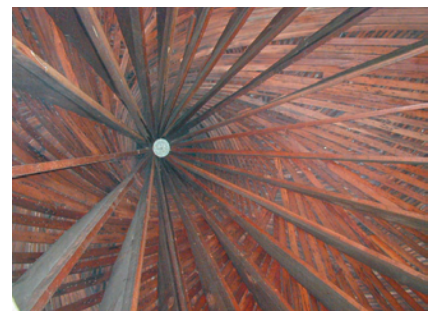
The dome of the gazebo is structurally intact, but it should be repainted to restore its original appearance and color, and to protect it from the elements. The plans for this work should be submitted to the Bureau of Development Services, Land Use Services division and undergo a Landmarks Commission Review. The Commission provides advice on historic preservation matters, and can offer guidance on the appropriate treatment for the dome. Painting and other superficial repairs are not recommended at this time, as they would be made on members that must be replaced or relocated during the structural improvements. These finishing improvements should be performed when the reconstruction of the gazebo is complete.



Existing 4 x 12" Beam Joint



Existing Post



Existing Dome Ceiling Interior

These estimated costs include approximate values for the labor and materials required for the gazebo's repair. Also included are the professional and administrative fees associated with the design and management of the project.

MATERIALS and LABOR	COST
Replace 4 x 12 members	\$30,000
Knife Plate Connections	\$7,000
"Wood Life" Treatment	\$1,500
Perimeter Steel Rust Removal and Painting	\$2,500
New Flashing	\$2,500
Re-Caulking Finial Seal	\$3,000
Repair Bench	\$3,500
Dome Repainting	\$2,500
SUBTOTAL	\$52,500
FEES	
Consultant/Engineering Fees	\$12,000
Permit Fees	\$3,500
Staff Management/Overhead	\$3,000
SUBTOTAL	\$18,500
TOTAL	\$71,000
CONTINGENCIES	
10% Design Contingency	\$7,100
10% Construction Contingency	\$7,100
GRAND TOTAL	\$85,200

Note: All costs are based on 2004 estimates and would need to be adjusted for inflation in future years.

It is recommended that the repairs outlined in the structural assessment be made as soon as possible. If the condition of the structure had not been identified, it would have continued to deteriorate. If another 5 years pass without these issues being addressed, the risk could result in damages beyond repair. Fortunately, the condition of the gazebo is such that it is still able to be restored and enjoyed for decades to come. However repairs should be prioritized and planned so that they may occur in the next 2 to 3 years.

Volunteer and Funding Opportunities

Although the neighbors desire to donate their time and effort to the repairs of the gazebo, this volunteer labor may not be appropriate for the entire project. The nature of the structural repairs on the gazebo will require the skills of a qualified contractor with prior experience with this type of project, as it is beyond the scope of work that volunteers typically perform. Unfortunately, this applies to the volunteer opportunities from the Albina Rotary. Until the structural improvements are made, the project will not be able to take advantage of this immediate resource. However, once the major repairs are made, volunteers can get involved in painting and other cosmetic improvements.

Also, because of the estimated costs associated with the repairs and the limited funds available from the Albina Rotary, the project will not be able to take advantage of this opportunity at this time. Although Portland Parks & Recreation is grateful to have community interest and support for its assets, it is recommended that the Rotary's present donation be directed to a project on which it could have greater impact.

Funding for the gazebo restoration project will need to be supplied by grants, donations and/or fund raisers. Portland Parks and Recreation does not, at this time, have the resources to make these repairs. It will be necessary to look to other funding opportunities with groups such as:

- Eliot Neighborhood Association
- Oregon State Historic Preservation Office
- PDC Funds
- Emanuel Hospital
- Albina Rotary
- State and Federal Grant Programs
- Private Historic and Other Community Foundations
- City of Portland

With the combined efforts of community support and fund raising opportunities, this structure can be preserved and enjoyed by Dawson Park visitors for many years to come.

Structural Assessment

Miller Consulting Engineers



MILLER
CONSULTING
ENGINEERS

May 6, 2004

Mr. Richard Bosch
Portland Parks and Recreation
1120 SW 5th Avenue, Room 1302
Portland, OR 97204

**Subject: Visual Structural Site Observation of the Dawson Park Gazebo
MCE Project No.: 040208**

Dear Mr. Bosch:

We have reviewed the structural condition of the subject gazebo and are reporting our findings and recommendations.

This structure is an open gazebo that combines eight (8) columns that are on a 20'-6" diameter circle which has internal beams carrying a round roof that is about 13 feet in diameter (photo #1). Both the vertical and lateral loads are carried by the 8 columns supporting the roof. The lateral loading (wind) is resisted by the way that the connection at the top of the column operates. These connections consist of a steel pipe section that is about 24-inches in length and has a snug, tight fit to the wood column. Between these column pipe collars there is a built-up steel member that uses a steel channel shape for the top and bottom flanges (photo #2).

The bottom channel has its flanges turned upward forming a rain gutter and, as a result, has promoted the corrosion seen in photograph #3. The open design of the support framing allows the unprotected wood beam to be exposed to the elements. Four of the wood beams form a square with the four corners connected to every other column. Then a second set of beams form a second square with its members starting and stopping at each of the eight intersection points of the primary frame (see the "ceiling plan" drawing enclosed).

The original 4 x 12 wood members are un-treated and half of them have been replaced. Photograph number 4 shows two of the original members coming together at a column, connected to a "knife" plate that has been welded to the pipe collar. The surface condition to the left of the light is typical of wood that has deteriorated due to water intrusion. This condition is commonly referred to as "dry rot" and this condition slowly eats away at the cellular structure of the wood until it can no longer carry any load.

About one half of the 4x12's have been replaced with pressure treated 4x12's. The pressure treated 4x12's have little slits or incising marks that are used to increase the depth of penetration of the pressure treating chemicals. Unfortunately, even pressure treated material is not exempt from "dry rot" as seen in photograph # 5. The bulging seen below the lowest bolt on the left is caused by swelling of the wood from deterioration. Also, note the bottom bearing plates of this modified connector in this photo compared to the original knife plate only in photograph #4. It is suspected that the end grain cut of the 4x12 beam did not get treated with a wood preservative.

The 8 posts appear to be in surprisingly good shape at their base connections. They were "sounded" to see if they had "dry rot". "Sounding" is simply tapping on the wood with the side of a hammer to see if the wood sounds solid or hollow. If the wood has a "rattle" sound or goes "thud", instead of having a firm bounce, deterioration is present. See photograph #6 for a view of the post base connection. In the background of photograph #6, you will notice the edge of the bench is falling apart.

Our recommendations are as follows:

1. Replace all 4x12 members with new pressure treated material. This will require the "onion shaped" top to be removed or shored in place;
2. Modify the existing knife plate connections so that they have the base plate added, per photo #5;
3. Treat the cut ends and bolt holes of the new 4x12 members with two saturated coats of "Wood Life" preservative;
4. Before the new 4x12's are placed, the perimeter steel needs to have all rust removed and these bare spots primed with zinc-rich paint. Then the perimeter steel should be re-painted;
5. After the 4x12's are placed, they need to be flashed to prevent water from coming in contact with the top, sides and ends of these members. The flashing needs to have an air gap between the flashing and the wood so that it can breathe and prevent any water that might leak in to stay trapped because of capillary action. The flashing design needs to be designed by a knowledgeable architect and the installation of the flashing needs to be inspected by the same architect to ensure a proper instillation;
6. Another location of water intrusion is between the column finial and the top of the pipe collar ring. This needs to be re-caulked or flashed;
7. Repair the bench corner by adding another bolt though the entire assembly, similar to the rest of the bench (see photo #7). A long drill bit will be required and a length of galvanized all-thread rod can be used for the bolt. Nut and washer each end will match the existing.



By following the above recommendations, the useful life of this gazebo will be extended for many years. Without repairing the problems cited above, it is only a matter of a few more years until the deterioration causes the structure to begin falling apart.

If you have additional questions or comments, please do not hesitate to call.

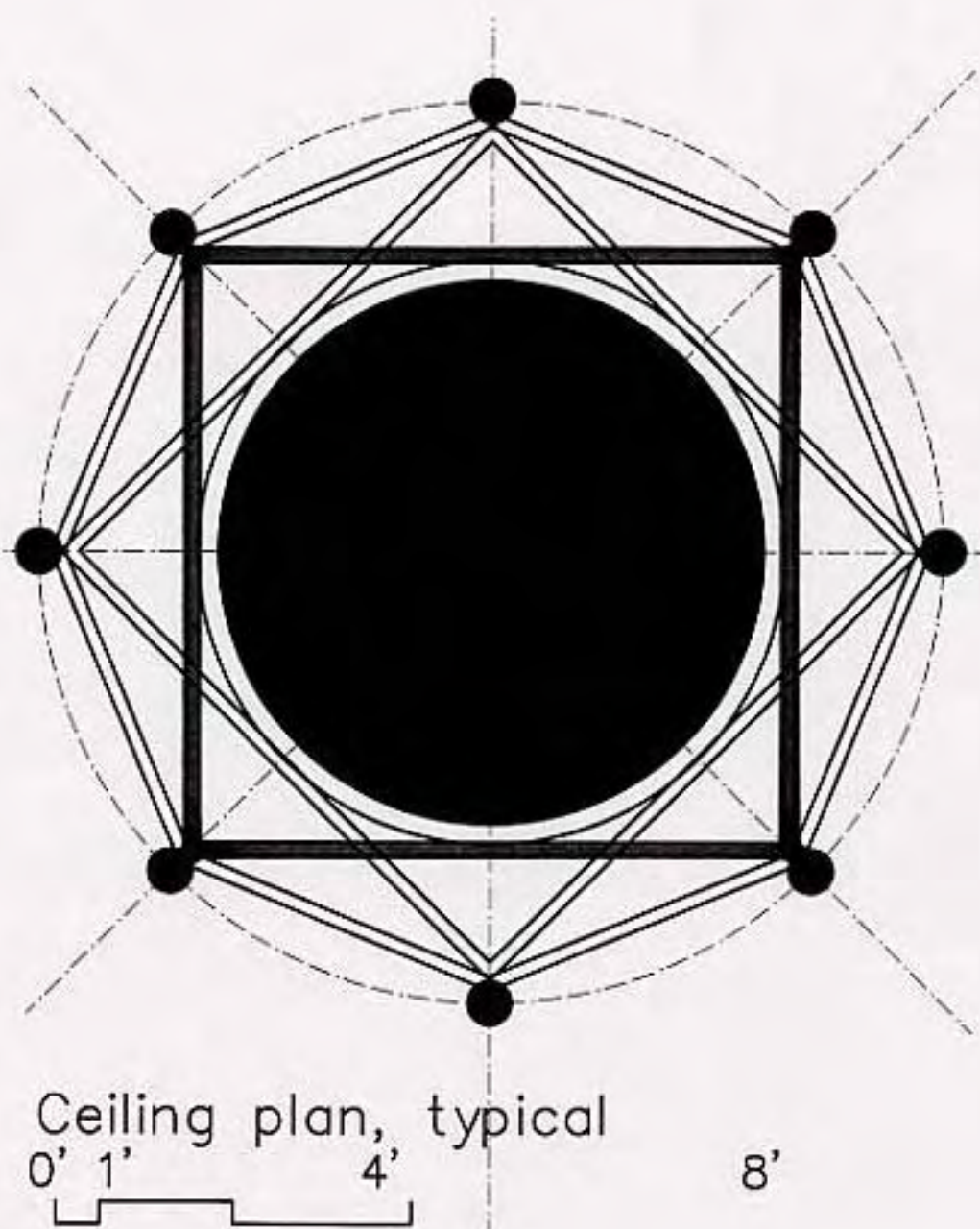
Sincerely,

Miller Consulting Engineers, Inc.

Thomas E. Fowler, S.E.
Vice President



CEILING FRAMING PLAN



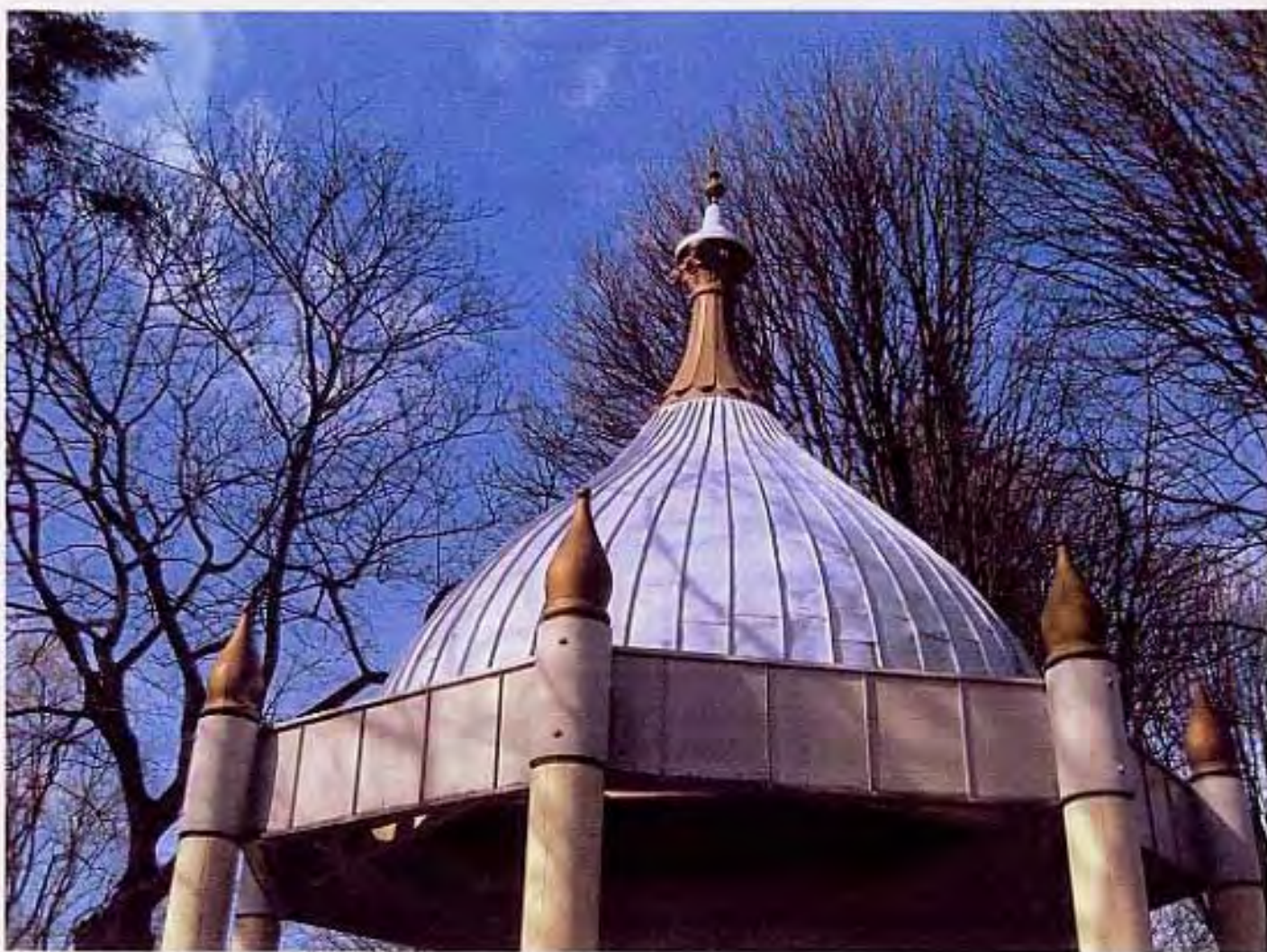


PHOTO #1: DAWSON PARK GAZBO



PHOTO #2: FRAME TO POST CONNECTION



PHOTO #3: RUST DETERIORATION



PHOTO #4: EXISTING 4X12 DETERIORATION



PHOTO #5: NEW 4X12 DETERIORATION



PHOTO #6: TYPICAL POST BASE



PHOTO #7: BENCH PROBLEM