

CITY OF MILWAUKIE
PLANNING COMMISSION MINUTES
TUESDAY, JULY 8, 1997

COMMISSIONERS PRESENT

Michael Smith, Chair
Bryan Cosgrove
Pat Lent
Charles Stoudt

COMMISSIONERS ABSENT

Tim Havel
Terry LaRocque

STAFF PRESENT

Maggie Collins,
Com. Dev. Dir
Dan Pava,
Senior Planner
Stacy Lawson,
Assistant Planner
Shirley Richardson,
Hearings Reporter

1.0 CALL TO ORDER

The meeting was called to order at 6:35 p.m.

2.0 PROCEDURAL QUESTIONS -- None.

3.0 CONSENT AGENDA

3.1 Planning Commission Minutes - June 24, 1997

Pat Lent moved to approve the minutes of June 24, 1997, as corrected. **Bryan Cosgrove** seconded. MOTION CARRIED 4-0.

Charles Stout noted that an item should not be acted on under a consent agenda if it has been discussed and amended. A separate motion must be made. Staff indicated that they would make appropriate format changes on the Commission's agenda.

5.0 PUBLIC HEARINGS

5.1 Applicant: City of Milwaukie
Property Owner: City of Milwaukie
Location: 40th Street & Harvey Street
Proposal: Place four new telecommunication antennas on top of the water tower.
File Number: CSO-97-04/VR-97-02

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Chair Smith opened the public hearing on File Number CSO-97-04/VR-97-02 to allow the City to make the water tower available for additional telecommunications antenna towers allowing for up to six antennas on each quadrant, not to exceed 142 feet above grade.

Chair Smith asked if there were any conflicts of interest or ex-parte contacts to declare. There were none. He asked if any member of the Planning Commission visited the site; three hands were raised. No one who visited the site spoke to anyone at the site or noted anything different from what is indicated in the Staff Report. No one in the audience challenged the impartiality of any Commission member or the jurisdiction of the Planning Commission to hear this matter.

Dan Pava reviewed the Staff Report with the Commission. Staff recommended approval of the Community Service Overlay and the Major Variance, as detailed in the Staff Report. Based on the findings, Staff recommended approval with six proposed conditions found in Exhibit 9. **Dan Pava** read into the record an additional sentence to be added to the end of Finding #5, "In addition, the City shall work with the Parks District to develop a Master Plan that will include sidewalks and improve internal pathways, appropriate buffering along east and north boundaries, and installation of playground equipment that is suitable for a neighborhood park."

Dan Pava explained that the Park Master Plan will come before the Planning Commission at a later time as a Community Service Overlay Application.

Chair Smith asked if any additional correspondence or comments had been received on this Application since the packets were sent out to the Commissioners. **Dan Pava** reported that a telephone call was received on June 23, 1997, from Ms. Ethel Leibert who stated no objection or comment; she was concerned that there was public notice at tax-payers expense. One other telephone inquiry was made by Julia J. Noe, 9840 SE 38th, who stated that she approved of the antennas on the water tower providing that it does not interfere with TV reception as she does not have cable.

Dan Pava reported that this afternoon he spoke to Commissioner Havel who voiced concern about lighting requirements for the antennas. Another issue of concern to him was the number of trips generated for maintenance and what the possible impact on the neighborhood park.

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APPLICANT PRESENTATION

Speaking: Kelly Somers, City of Milwaukie

Mr. Somers stated that he is here to represent the City of Milwaukie and that he would try to answer any questions from the Commissioners. He stated that representatives were also here tonight from PageNet and Voice Stream to answer any questions.

TESTIMONY IN FAVOR

Speaking: Thom Kaffun, North Clackamas Parks and Recreation District (NCPR), 11022 SE 37th, Milwaukie, Oregon

Mr. Kaffun read a letter in support of the antennas on the water tower; he submitted a copy of the letter for the record.

Mr. Kaffun stated that NCP&R is currently working on the Community Service Overlay portion of this project. Proposed improvements to parks include the construction of sidewalks along Harvey Street and 40th Street, replacement and realignment of the existing walkway in the park, a new play structure, a creation of a basketball area under of the water tower, installation of a drinking fountain, automatic irrigation system, bike racks, picnic tables and benches, and demolition of the concrete structure on the southwest corner of the site. These improvements are anticipated to cost about \$150,000 and will take 5-7 years to complete.

Mr. Kaffun then showed a rendering and explained the updating of the park in accordance with the proposed Master Plan. The Neighborhood Association has reviewed and approved the plan, and the Park and Recreation Board has approved the concept.

Pat Lent asked if there will be lighting in the park facility. **Mr. Kaffun** stated that lighting is not proposed in the park because lighting draws vandalism. The School District has taken the stand that lighting around their buildings encourages vandalism. When they eliminated the lighting, the vandalism stopped. Police were able to better spot activity because the lights on top of their cars can easily pick up movement in a dark area. It is becoming standard to not light parks.

Pat Lent asked when the park is open. **Mr. Kaffun** stated that the park is open 1/2 hour before sunrise and closes 1/2 hour after sunset.

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Pat Lent asked when the park is open. **Mr. Kaffun** stated that the park is open 1/2 hour before sunrise and closes 1/2 hour after sunset.

Speaking: John DeCost, 255 SW Harrison Street, #21E, Portland

Mr. DeCost stated that he and Elaine DeCost were here tonight representing PageNet. They both are here to answer any technical questions that the Commissioners may have.

Chair Smith asked if the antennas will be high enough to require lights. **Mr. DeCost** stated that the FAA does not have any lighting requirements or restrictions. If a light would be required, it would be a small red light to warn aircraft, not a ground based light that would illuminate the area.

Speaking: Jim Barta, Voice Stream Wireless, 7535 B NE Ambassador Place, Portland

Mr. Barta stated that he agrees with the Staff Report. By allowing four quadrants on the water tower, it eliminates the need for four additional cellular antennas in the City.

In regards to the maintenance trip generation, **Mr. Barta** stated that based on his experience after the installation is completed, there will be at most 1 trip per month to the site by a service technician. The station is operated by computer and telephone lines. The only time a technician is required at this site would be in response to a malfunction. In reality, the site will only require a visit from a technician maybe once every three months. There is no set schedule; only maintenance because of malfunctions.

There could be a total of four providers with a total of 24 antennas. The additional units will not be any higher than the antennas that are in place now (Public Works and Police and Fire). The maximum height of the antennas mounted on the tower top will be 96 inches.

QUESTIONS OR COMMENTS

TESTIMONY IN OPPOSITION

ADDITIONAL COMMENTS FROM STAFF

QUESTIONS FOR CLARIFICATIONS

Chair Smith closed the public testimony portion of the hearing and opened the meeting to discussion among the Commissioners.

Bryan Cosgrove moved to approve CSO-97-04, based on the respective findings in the Staff Report, and subject to the conditions of approval contained in Exhibit 9, with the addition to Finding #5 as stated by Dan Pava tonight. **Pat Lent** seconded. MOTION CARRIED 4-0.

Bryan Cosgrove moved to approve VR-97-02, based on the respective findings in the Staff Report, and subject to the conditions of approval contained in Exhibit 9 of the Staff Report. **Pat Lent** seconded. MOTION CARRIED 4-0.

- 5.2 Applicant: Dwayne and Mavis Buchholz
 Property Owner: North Clackamas School District
 Location: 5323 SE Logas Road
 Proposal: 5-lot subdivision
 File Number: S-96-04

Chair Smith opened the public hearing on File Number S-96-04, to allow the subdivision of one existing lot into five parcels. He asked if there were any conflicts of interest or ex-parte contacts to declare. There were none. He asked if any member of the Planning Commission visited the site; three hands were raised. **Pat Lent** reported that while she was visiting the site, she had a conversation with an adjacent property owner, Mr. Mayes. There was nothing in the conversation that would cause a conflict of interest and she plans on voting on this application. No other Commissioner who visited the site spoke to anyone at the site or noted anything different from what is indicated in the Staff Report. No one in the audience challenged the impartiality of any Commission member or the jurisdiction of the Planning Commission to hear this matter.

STAFF REPORT

Stacy Lawson reviewed the Staff Report with the Commission. The property to be divided is the Lewelling Elementary School. Four new single-family lots will be created. The remainder of the school property will continue to be used by the school. The proposal will not eliminate any of the playing fields on the school site.

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The Applicant has submitted both a geotechnical report and a wetlands report to verify that there are no jurisdictional wetlands on the site. Each site will need to be specifically evaluated on a geotechnical basis before a building permit is issued. The Applicant is proposing to develop four single-family lots on the site.

There is a portion of this site that is used by the school children as a pathway. There is a proposal by the School District and the Applicant to provide for an ownership strip to remain from the school to Willow and develop a stairway for the public and school children going to and from the school site. Staff is recommending that this stairway and a crosswalk be provided as a part of the Conditions of Approval.

Staff recommends approval of this Application with the proposed conditions and findings as contained in the Staff Report.

Bryan Cosgrove asked if only an hand bore analysis was done; not a full geotechnical analysis? **Stacy Lawson** stated that the geotechnical engineer stated that since the site had not been cleared the hand bore analysis was all that could be done at this time. The geotechnical engineer may be required to return and do a complete geotechnical excavation and determination of the soil once the site has been cleared and the house plans developed.

Bryan Cosgrove asked if there were guidelines for the stairway that is proposed for the children? **Stacy Lawson** stated that there are no specific guidelines related to materials to be used. This issue could be addressed in amended conditions. **Bryan Cosgrove** suggested that a guardrail be added for the safety of those traveling up and down the slope.

Bryan Cosgrove asked if the City has erosion control standards or if they have adopted Clackamas County standards. **Stacy Lawson** stated that erosion control measures are required but she did not know where the standards originated. A grading plan and erosion control plan will be required, in addition to engineer retaining walls.

Chair Smith asked if any additional correspondence or comments had been received on this Application since the packets were sent out to the Commissioners? **Stacy Lawson** reported that no other comments or materials have been received.

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APPLICANT PRESENTATION

Speaking: Ken Sandblast, Compass Corporation

Mr. Sandblast stated that his corporation is representing the Applicants, Dwayne and Mavis Buchholz. He handles the land-planning aspect of the Application and Bruce Goldson deals with engineering. They are here tonight to answer any questions regarding the Application.

This Application was originally submitted about a year ago. The plans were to have six lots on the west side of the school as well. Because of the grades and road requirements, the Buchholz decided against this plan. The application was revised down to the four lots proposed.

Mr. Sandblast stated that the Staff Report was well done and he agrees with the majority of it. The walkway strip will be retained as a part of Lot 5. It will be owned by the School District. The School District, in their Board action, authorized the sale to the Buchholz' and states, "...with the proceeds of the sale, a walk/stairway, allowing students from the Willow Street neighborhood direct and safe access to the school..."

Speaking: Bruce Goldson, Compass Engineering, 6564 SE Lake Road, Milwaukie

Mr. Goldson stated that as a part of the Application there was a geotechnical report by West Coast Goetech, Inc., in which they indicated that ground water is not anticipated. He would expect very little ground water will be found.

Approximately five years ago, Compass Engineering worked for the school district and developed some concept plans for stairs in this location. The plans called for concrete stairs with a handrail. Because of budget constraints at the School District, the construction was not completed at that time. This is an opportunity for the School District to pay for this stairway. This has been a long-time goal for the School District.

Mr. Goldson stated that erosion control practices are required as part of this Application and will be reviewed by the City of Milwaukie. Individual house plans will be reviewed in the same manner.

TESTIMONY IN FAVOR -- None.

QUESTIONS OR COMMENTS ABOUT THE APPLICATION

Speaking: Joe Stockham, 5622 SE Willow, Milwaukie

Mr. Stockham voiced concern about the water situation on this site. A drainage ditch has been put in and there is still a water problem. What is going to be done about the water?

Maggie Collins stated that in Exhibit 5 of the Staff Report, it stated that drainage lines will be required at the retaining walls and at the foundation wall and a tight-line connection to a 12-inch storm drain on Willow Street. This will be done in resolution to the drainage problem. **Stacy Lawson** reported that there is a Local Improvement District (LID) that is being developed for a section which does not include this project but may include Mr. Stockham's property. This LID project and the proposed Application will result in storm drain improvements.

Speaking: Steve Mayes, 5431 and 5430 SE Willow, Milwaukie

Mr. Mayes stated that his mom owns these properties and he is here representing her. He asked Mr. Sandblast which parts of the Staff Report he does not agree with? **Mr. Sandblast** stated that he does not agree with the claim of super-saturation of soils and the only other thing he questions is in the background section of the Staff Report where it states, "...While the supporting documentation is not totally consistent with this amendment to the proposal." This is an unfinished sentence. **Stacy Lawson** explained that the period should be a comma and the sentence continued.

Speaking: Mary Barteaux, 5094 SE Winworth Court, Milwaukie

Ms. Barteaux asked for clarification on the mailing notice boundaries. **Stacy Lawson** stated that the specific distance is 250 feet from the edge of the property line of any portion of the subject site.

Ms. Barteaux asked how much of Winworth Court will be open to automobile traffic? **Stacy Lawson** explained the location of existing homes in this area and the improved portions of the road.

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Speaking: Tom Sweeny, 5512 SE Willow

Mr. Sweeny asked for clarification of the site map. He asked where the proposed homes will be sited in comparison to his home? **Stacy Lawson** pointed out the boundaries of the subject site.

TESTIMONY IN OPPOSITION -- None.

ADDITIONAL COMMENTS FROM STAFF

Stacy Lawson reviewed the amendments to conditions to address issues that came up tonight:

Condition #5: A detailed grading and erosion control plan shall be submitted for review and approval prior to issuance of a building permit for Lots 1 through 4. Erosion control measures shall be in place prior to any site disturbance, which includes vegetation removal. The grading plans shall show areas of cut and fill, location of retaining walls, elevations and percent slope of finished grades.

Condition #7: Designs for a walkway with concrete stairs and handrails extending along the School District's 10 foot pedestrian access located to the west of Lot 1 shall be submitted to the Community Development Department, Public Works Department and Building Division for review and approval. The walkway shall be installed prior to occupancy of any structures to be built on Lots 1 through 4.

QUESTIONS FOR CLARIFICATIONS -- None.

APPLICANT'S CLOSING COMMENTS

Speaking: Ken Sandblast, Compass Corporation

Mr. Sandblast stated that hopefully, all the improvements to Willow Street and others in that area will enhance the existing system and clear up the water problems in this area.

In response to the amendments to Conditions #5 and #7, he has no concerns; however, he would suggest "durable non-slip surface where appropriate" to replace "concrete" in Condition #7.

DISCUSSION AMONG THE COMMISSIONERS

Chair Smith closed the public testimony portion of the hearing and opened the meeting to discussion among the Commissioners.

Bryan Cosgrove voiced concern about the timing of grading and how it could result in a mess for residents in this area. He encourages and recommends that grading be done early and be restricted to dry times of the building season. **Maggie Collins** stated that existing erosion control requirements will address additional measures during winter months.

When asked, Mr. Goldson discussed soil stability on the site. He stated that the soils report indicates no problem; however, if further investigation proves there is a problem, there are ways to stabilize the slope to its original condition or better. He does not foresee this to be a problem. There are no leaning trees or indicators that there are slope stability problems.

It was the consensus of the Commissioners to change the wording in Condition #7 to: "Designs for a walkway with stairs of a durable, non-slip surface and handrails extending along the School District's 10-foot pedestrian access located to the west of Lot 1 shall be submitted to the Community Development Department, Public Works Department, and Building Division for review and approval. The walkway with stairs and handrails shall be installed prior to occupancy of any structures to be built on Lots 1 through 4."

Bryan Cosgrove moved to approve Subdivision S-96-04, based on the findings contained in the Staff Report and subject to the conditions in Exhibit 1 as amended. **Pat Lent** seconded. MOTION CARRIED 4-0.

Recess was taken at 8:13 p.m. and the meeting reconvened at 8:20 p.m.

6.0 WORKSESSIONS -- None.

7.0 DISCUSSION ITEMS

Pat Lent suggested having a Public Works Department person available when storm drainage or slope issues are involved.

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Bryan Cosgrove asked if the Regional Center Master Plan was scheduled for the end of July? **Maggie Collins** stated that a Regional Center Steering Committee meeting is scheduled for August 21, 1997.

8.0 OLD BUSINESS

8.1 Light Rail Study Update -- No Report

8.2 2040 Study Update -- No Report

9.0 OTHER BUSINESS

9.1 Historic Resource Commission Report -- None.

9.2 Town Center Area Task Force Report -- **Chair Smith** reported that the Task Force is meeting on a regular basis again. He has been appointed Chair of the Transportation Committee. They are now in the process of developing preliminary criteria and a timeline for the project.

9.3 Community Development Report

Maggie Collins reported that City Council has adopted its set of goals, and one is to develop an Urban Forestry Program. **Dan Bartlett** will be asking the Community Development Department to prepare a work program. In this program will be a timeframe. There are several opinions as to what will make the most workable program. She also noted that the final version of the Transportation System Plan includes a policy for planting strips throughout the City. These items will put Milwaukie in a better position for the future in terms of enforcement issues and application requirements.

10.0 Next Meeting -- July 22, 1997

Michael Smith moved to adjourn the meeting of July 8, 1997. **Bryan Cosgrove** seconded. MOTION PASSED UNANIMOUSLY. The meeting adjourned at 8:40 p.m.

Michael Smith, Chair



Shirley Richardson, Hearings Reporter

AGENDA
MILWAUKIE PLANNING COMMISSION
 Milwaukie City Hall, 10722 SE Main
 Tuesday, July 8, 1997
 6:30 pm

		ACTION REQUIRED
1.0	Call to Order	
2.0	Procedural Questions	
3.0	Consent Agenda Planning Commission Minutes: June 24, 1997 City Council Minutes: June 3, 1997 (upon approval by Council)	Motion Needed Information Only
4.0	Public Comment This is an opportunity for the public to comment on any item not on the agenda	
5.0	Public Hearings	
5.1	Applicant: City of Milwaukie Property Owner: City of Milwaukie Location: 40th Street & Harvey Street Proposal: Place telecommunication antenna on top of water tower. File Numbers: CSO-97-04/VR-97-02	Discussion and Motion Needed
5.2	Applicant: Dwayne and Mavis Buchholz Property Owner: North Clackamas School District Location: 5323 SE Logus Road Proposal: 5-lot subdivision File Number: S-96-04	Discussion and Motion Needed
6.0	Worksession - None	
7.0	Discussion Items	
8.0	Old Business	
8.1	Light Rail Study Update	Information Only
8.2	2040 Study Update	Information Only
9.0	Other Business/Updates	
9.1	Historic Resources Commission Report	Information Only
9.2	Clackamas Regional Center Area Plan Report	Information Only
9.3	Community Development Report - None	

10.0	Next Meeting - July 22, 1997	

The Milwaukie Planning Commission welcomes your interest in these agenda items. Feel free to come and go as you please.

Milwaukie Planning Commission Statement

The Planning Commission serves as an advisory body to, and a resource for, the City Council in land use matters. In this capacity, the mission of the Planning Commission is to articulate the Community's values and commitment to socially and environmentally responsible uses of its resources as reflected in the Comprehensive Plan

Public Hearing Procedure

1. Staff Report
2. Correspondence
3. Applicant's presentation
4. Public testimony from others in support of application
5. Comments or questions from interested persons who are neither proponents nor opponents
6. Public testimony from those in opposition to the application
7. Questions from the Planning Commission
8. Rebuttal testimony from Applicant
9. Closing of public hearing
10. Commission discussion/action

The Planning Commission's decision on these matters may be subject to further review or may be appealed to the City Council. For further information, contact the Milwaukie Community Development Department office at 786-7650.

Milwaukie Planning Commission

Michael Smith, Chair
Bryan Cosgrove
Tim Havel
Terry LaRocque
Pat Lent, Vice-Chair
Charles Stoudt

Community Development Department Staff

Maggie Collins, Community Development Director
Dan Pava, Senior Planner
Susan Heiser, Senior Planner
Stacy Lawson, Assistant Planner
Jeanne Garst, Office Assistant
Marcia Hamley, Office Assistant
Shirley Richardson, Recording Secretary

CITY OF MILWAUKIE
COMMUNITY DEVELOPMENT DEPARTMENT
STAFF REPORT

Application: Telecommunications Antennas on Water Tower
File Nos.: CSO-97-04 and VR-97-02

Applicant: City of Milwaukie

Property Owner: Same

Location: Water Tower Park - SE 40th Avenue and SE Harvey Street
Tax Lots 12600 and 12700 on Tax Map 1 1E 25DA

Date: July 8, 1997

PROPOSAL

The City of Milwaukie has received numerous requests to use its existing 122 foot-high water tank as a platform for wireless telecommunications equipment. Presently, there are three 20-foot City antennas installed on top. This three-million gallon water tower has been in place since 1962.

The City proposes to make the water tower available for additional telecommunications antennas by leasing four quadrants to separate companies, and allowing for up to six antennas in each quadrant. None of the antennas will exceed 20 feet in height. The Pagenet Company is one prospective leasee. **Exhibit 1** is a series of six drawings prepared by Pagenet at the City's request that depict existing and proposed conditions.

The project is a Utility similar to other telecommunications facilities listed in Section 321.2.B. of the Milwaukie Zoning Ordinance and requires a Community Service Overlay Zone. A variance to the height requirements of the underlying R-7 zone is also required for the antennas pursuant to Section 700 of the Milwaukie Zoning Ordinance.

RECOMMENDATION

That the Planning Commission move to Approve CSO 97-04 and VR-97-02, based on the respective findings in this report, and subject to the conditions of approval contained in Exhibit 9.

SITE INFORMATION

This overall site (tax lots 12600 and 12700) is .98 acre (42,750 square feet) and is located at the Water Tower Park which is publicly-owned land and is a designated Neighborhood Park as defined by the Milwaukie Comprehensive Plan. The subject property and all abutting land is zoned R-7 which permits single-family homes on lots of at least 7000 square feet in accordance with Section 302 of the Milwaukie Zoning Code. Actual land use is also single family residential, and the City Water Department maintenance yard is located on the southwest corner. The site is within the Ardenwald Neighborhood District Association which is delineated by Harvey Street from the Lewelling Neighborhood District Association.

DISCUSSION

This is both a request for a Community Service Overlay and Major Variance to the height requirements of the R-7 zone. Section 1005 of the Milwaukie Zoning Ordinance allows for a single hearing for concurrently reviewed applications. However, separate findings are required for each application.

Community Service Overlay - CSO-97-04

Section 1011.3.C of the Milwaukie Zoning Ordinance requires that there be a public hearing before the Planning Commission for minor quasi-judicial reviews, and that a decision is based on compliance with applicable Comprehensive Plan goals and policies and other implementing ordinances.

Section 321.4 of the Milwaukie Zoning Ordinance states that a community service use may be allowed if the requirements of the underlying zone are met. Section 321.10 sets forth the specific standards for facilities such as the proposed wireless telecommunications installation. In permitting a community service use, the Planning Commission may impose suitable conditions which assure compatibility of the use with other uses in the vicinity. The applicant's narrative addressing the Community Service Overlay criteria is included as **Exhibit 2**.

Compliance With Comprehensive Plan

The site is designated Public (P) on Map #7 in the Comprehensive Plan. The following are the applicable Comprehensive Plan goals, objectives and policies:

1. Recreational Needs Element, Goal: To provide for the recreational needs of present and future City residents by maximizing the use of existing public facilities...

This proposal allows the existing water tower to be used as a platform for up to 24 wireless telecommunications antennas thereby providing an important commercial service to Milwaukie residents and businesses while eliminating the need for additional tall antenna poles in this area of Milwaukie. There currently is no approved master plan for the Water Tower Park but the North Clackamas Parks and Recreation District is now preparing one. The District does not object to the proposed community service overlay and variance provided that additional structures are not constructed on the ground. The proposed community service overlay would use the existing well #1 pump house to provide shelter for electronic equipment. This building is surrounded by a chain link fence but is otherwise unscreened.

2. Public Facilities and Services Element, Goal: To plan, develop, and maintain a timely, orderly and efficient arrangement of public facilities and services to serve urban development.

The rapid growth of the new wireless telecommunications technologies and providers is the result of the 1996 Telecommunications Act. This has created intense competition for antenna sites to create local networks and a consequent proliferation of structures such as towers and poles. The City has been approached by several providers during the past year seeking approval for siting their facilities at various locations. Using the existing water tower as proposed is a way to effectively manage the proliferation of telecommunications facilities in an orderly way while assuring safe and efficient service delivery in a timely manner for this infrastructure. This proposal fosters Objective #12 Utilities (page 5PF-10): "To ensure that energy and communications services are adequate to meet residential and business needs." The proposal also complies with Policy #1 which follows and states, "The City will coordinate with public utility and communications companies to ensure adequate services are provided, while minimizing negative impacts on residential neighborhoods, scenic and recreational areas."

Compliance with Zoning Regulations

Section 321.4 of the Milwaukie Zoning Ordinance sets forth approval criteria for this Community Service Overlay and states that the proposal may be allowed if :

1. The requirements of the underlying zone are met per Section 302 ; and
2. Specific standards for the proposed use are met per Section 321.10.

R-7 Zone Development Requirements

Permitted Uses: A wireless telecommunications utility facility is a permitted use in the R-7 district through the CSO process.

Lot size: The R-7 zoning district lot size minimum for single family detached homes is 7,000 square feet. The area of Tax Lot 12600 is 32,750 square feet and Tax Lot 12700 is 10,000 square feet.

Front yard (west side of site): The minimum front yard setback is 20 feet. The existing water tower is five feet from the west property line. No new structures are proposed within 20 feet of the property line. The standard is met.

Side yard (north and south sides of site): The minimum north sideyard setback is ten feet, and the south street sideyard setback is twenty feet. The existing water tower is located 111 feet from the north property line of Tax Lot 12600; and the pump house is located 23 feet from the north property line and 65 feet from the south property line of Tax Lot 12700. The standard is met.

Rear yard (west side of site): The minimum setback is 20 feet; no structure is proposed within 20 feet of the rear property lines of Tax Lot 12600 or 12700. The standard is met.

Yard abutting a major street: The standard is met. See *Side Yard*, above.

Height: The maximum height allowed in the CSO standards is 50 feet per Section 321.10.D. The existing water tower and antenna structure exceeds this height but it is a legal nonconforming structure. Any new antennas will exceed the height standard and require a variance in accordance with Section 700 of the Milwaukie Zoning Ordinance. The variance is considered later in this staff report.

Lot coverage: The maximum lot coverage for the R-7 zoning district is 30 percent of the proposal area. The proposal will cover only 19 percent of both tax lots. The standard is met.

Access: Every lot in the R-7 district shall abut a public street for at least 35 feet. This requirement is met as both lots have more than 35 feet of frontage along 40th Street Avenue and Harvey Street.

Minimum Vegetation: This standard is met. The R-7 zoning district requires at least 30 percent of the proposal area to be covered with vegetation. The site is a developed neighborhood park and is almost completely planted with lawn. The master plan now being prepared by the North Clackamas Parks and Recreation District recommends screening pump house #1 to make the park more visually appealing.

Off-street parking: Section 500 of the Milwaukie Zoning Ordinance does not list off-street requirements for an unstaffed wireless telecommunications installation, and states that the Planning Commission shall make a determination based upon nationally accepted standards or similar justification. It would not be appropriate to use part of the existing park to construct parking. There is no need for parking since this is an unstaffed facility. Adjacent on-street parking can be used during routine maintenance. The existing neighborhood park does not have an automobile parking lot and thus the parking lot landscaping requirements do not apply. This requirement is met.

Bicycle Parking: Section 505 directs all CSO applications to meet bicycle parking standards. This section requires that at least 2 bicycle parking spaces be provided. This requirement can be met by providing bicycle parking in the park.

Section 321.10 - Special Standards for Institutions

A. Utilities, streets or other improvements necessary for the facility shall be provided by the agency constructing the use.

The existing utilities are sufficient to service the proposed wireless telecommunications installation, and no new utilities are required.

B. When located in or adjacent to a residential zone, access should be located on a collector street if practicable.

The proposal is to collocate unstaffed wireless telecommunications equipment on the existing water tower that stands at the corner of 40th Avenue and Harvey Street. Since this use will generate fewer than 20 trips per day, it is exempted from this subsection.

C. When located in a residential zone, lot area shall be sufficient to allow required setbacks that are equal to a minimum of two-thirds of the height of the principal structure.

The existing water tower and antennas are 142 feet above grade. This standard is met because the tower was built in 1960 and is legally nonconforming as to R-7 setback requirements.

D. The height limitation of a zone may be exceeded to a maximum height of 50 feet provided subsection 321.10.C is met.

Any new antennas will exceed this height standard and will require a variance in accordance with Section 700 of the Milwaukie Zoning Ordinance. The variance is considered later in this staff report.

E. Noise-generating equipment shall be sound buffered when adjacent to residential areas.

There will not be any mechanical noise generating equipment associated with this installation.

F. Lighting shall be designed to avoid glare on adjacent residential uses and public streets.

There is no new lighting associated with this community service overlay proposal.

G. When possible, hours and levels of operation shall be adjusted to make the use compatible with adjacent uses.

The proposed wireless telecommunications facilities will not require staffing. Normal maintenance will be performed during normal working hours as required. Access to the water tower and pump house #1 will be coordinated with the City of Milwaukie Facilities Manager. This creates a situation that is compatible with adjacent residential and park uses.

Variance to Height - VR-97-02 - Section 321.10.D. Milwaukie Zoning Ordinance

Section 321.10. D. of the Milwaukie Zoning Ordinance limits the height of Community Service Overlay facilities such as the proposed wireless telecommunications installation to 50 feet. This proposal would result in additional antennas and related equipment exceeding 50 feet as depicted in Exhibit 1 and described in the applicant narrative (See **Exhibit 3**). Section 700 of the Milwaukie Zoning Ordinance states that the Planning Commission may authorize variances from the standards and attach conditions to lessen the impacts on nearby property, and to protect the general welfare of the City. A variance

may be granted only when the Planning Commission finds all three of the following criteria are satisfied in accordance with Section 702.1:

- A. **That the property in question has unusual conditions over which the applicant has no control. Such conditions may only relate to the physical characteristics of the property, lot or boundary configurations, or prior legally existing structures.**

The existing water tower was constructed in 1960, prior to the adoption of the current zoning ordinance and the 50 foot height restriction. It is an existing legally nonconforming structure. This criterion is therefore met as the pre-existing structure places the subject property in this unusual condition.

- B. **That there are no feasible alternatives to the variance and that the variance is the minimum variance necessary to allow the applicant the use of his/her property in a manner substantially the same as others in the surrounding area.**

Wireless telecommunications antennas need to be situated high enough over the surrounding terrain to provide effective coverage to the surrounding service area (cell). Such facilities have been installed on rooftops, street lights, steeples, free-standing monopole and lattice towers and guyed towers. The existing 122 foot-high water tower provides a large and structurally stable platform for up to 24 antennas, making it an ideal site for such uses. There are no other structures this high in this cell area. Other water towers in the North Industrial Area, and taller buildings such as Willamette View Manor are also being used to serve nearby cells. Attempts to lease space on the roof of the Hillside Manor tower have been unsuccessful. None of the proposed antennas will exceed the height of the three antennas already mounted on top of the tower; therefore the nonconforming height of the existing structure is not increased by this proposal. There would be no additional buildings associated with the Community Service Overlay. This criterion is met.

- C. **That adverse effects upon other properties that may be the result of this variance shall be mitigated to the extent feasible.**

Concerns about the placement of wireless telecommunications antennas include the health impacts of electromagnetic fields and radio frequency interference with other appliances such as televisions and radio. The Federal Telecommunications Act of 1996 and Federal Communications Commission rules regulate both radio frequency interference and allowable exposure standards. Two studies were submitted to staff by prospective leasees. Both conclude that power density levels produced by the proposed equipment will be far below the FCC permitted

standards. (See **Exhibit 4**). Consolidating several sites on this existing structure minimizes impacts on the surrounding properties and area because it results in fewer additional structures and mitigates against further visual blight. Another way to mitigate this proposed use is to screen pump house #1 which will be used to shelter electronic equipment. This will make it compatible with the neighborhood park use. This criterion is met.

REFERRALS

Public Works and South Metro Fire Comments

The Public Works Department had no objection to the proposal and commented that it has no impact on public facilities such as water, sewer, storm drainage or streets (See **Exhibit 5**). The South Metro Fire Prevention District noted that the request does not conflict with the Uniform Fire Code, and stated that there is a requirement to maintain fire department access to this site with a minimum unobstructed width of 20 feet (See **Exhibit 6**).

Other Reviewing Agency Comments

Clackamas County: provided telephone response by Ron Weinman who stated that the County had no comments regarding the proposal.

North Clackamas Parks and Recreation District: noted that a master plan is underway at the request of the Milwaukie City Council, and that the proposal will not conflict with the planned recreation improvements (See **Exhibit 7**).

Neighborhood Association Comments

The Lewelling Neighborhood District Association Land Use Committee commented that the use of City property for this commercial endeavor appears to put the City at risk, and noted that related maintenance activity on the tower increases the opportunity for accident. The Association commented that the City must be assured that no health hazards are inherent in this type of business (See **Exhibit 8**).

FINDINGS FOR COMMUNITY SERVICE OVERLAY (CSO-97-04)

1. The applicant is proposing to make the existing water tower located at the northeast corner of 40th Avenue and Harvey Street in Water Tower Park available as a platform for wireless telecommunications antennas and related equipment.

This requires a Community Service Overlay in accordance with Section 321 of the Milwaukie Zoning Ordinance.

2. The City of Milwaukie is the property owner of Tax Lots 12600 and 12700 and is the applicant for this proposal. The site is also a neighborhood park maintained and administered by the North Clackamas Parks and Recreation District.
3. Community Service Overlay 97-04 requires review through a Minor Quasi-Judicial process as detailed in Section 1011.3 of the Milwaukie Zoning Ordinance. A public notice was published in the Clackamas Review on June 27 and July 4, 1997, and also sent to property owners within 250 feet of the subject site on June 18. The site was posted on June 26, 1997.
4. The proposal is situated within an area designated as Public Land on Comprehensive Plan Map #7. The proposal is consistent with the Milwaukie Comprehensive Plan because it promotes both the goals of the Recreational Needs Element and the Public Facilities and Services Element. It fosters Objective #12 Utilities, and complies with Policy #1 under Objective #12.
5. Section 321.4 of the Milwaukie Zoning Ordinance sets forth approval criteria for this Community Service Overlay and states that the proposal may be allowed if : The requirements of the underlying zone are met per Section 302 ; and if specific standards for the proposed use are met per Section 321.10.
6. The proposed Community Service Overlay is located in the R-7 zoning district and the Community Service Overlay application does meet the requirements and standards set forth in Section 302.3 A through K. The application also meets the specific standards set forth in Section 321.10 as detailed in this staff report. Bicycle parking can be provided to comply with Section 302.3.F. and Section 505 of the Milwaukie Zoning Ordinance.
7. The South Metro Fire Prevention District has noted that there is a requirement to maintain fire department access to this site with a minimum unobstructed width of 20 feet.
8. The North Clackamas Parks and Recreation District has stated that the proposal does not conflict with the draft Water Tower Park Master Plan or planned recreation improvements. That draft plan recommends screening of pump house #1.
9. The Lewelling and the Ardenwald Neighborhood District Associations were notified about this proposal on June 5, 1997. The Lewelling NDA Land Use

Committee provided written comments regarding risk, accident potential and health hazards.

FINDINGS FOR VARIANCE (VR-97-02)

1. Section 321.10. D. of the Milwaukie Zoning Ordinance limits the height of Community Service Overlay facilities such as the proposed wireless telecommunications installation to 50 feet. This proposal would result in additional antennas and related equipment exceeding 50 feet.
2. Section 700 of the Milwaukie Zoning Ordinance authorizes the Planning Commission to grant variances from the standards of the Milwaukie Zoning Ordinance and to attach conditions to lessen the impacts on nearby property, and to protect the general welfare of the City.
3. A variance may be granted only when the Planning Commission finds all three of the following criteria are satisfied in accordance with Section 702.1. These three criteria are met by this application as detailed in the staff report.

CONCLUSION

The proposal to use the existing water tower as a platform for wireless telecommunications equipment meets the requirements for a Community Service Overlay as specified in the Milwaukie Comprehensive Plan and Zoning Ordinance. The related variance to allow up to 24 antennas to extend higher than the existing water tower meets the requirements specified in the Zoning Ordinance.

RECOMMENDATION

1. Staff recommends approval of Community Service Overlay CSO-97-04 based upon the conclusion and findings noted in the staff report, and subject to the conditions included in **Exhibit 9**.
2. Staff recommends approval of Variance VR-97-02 based upon the conclusion and findings noted in the staff report, and subject to the conditions included in **Exhibit 9**.

EXHIBITS

1. Site drawings and elevations depicting existing and proposed conditions
2. Applicant's narrative addressing the Community Service Overlay criteria
3. Applicant's narrative addressing the Variance criteria
4. Hatfield and Dawson radio frequency interference and exposure risk study (a & b)
5. Public Works Department comments
6. South Metro Fire Prevention District comments
7. North Clackamas Parks and Recreation District comments
8. Lewelling Neighborhood District Association Land Use Committee comments
9. Conditions of Approval for CSO-97-04 and VR-97-02

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Milwaukie Water VOICENOW[®] Site

SITE ADDRESS: S.E. 40th Avenue and S.E. Harvey Street
Milwaukie, Oregon 97206

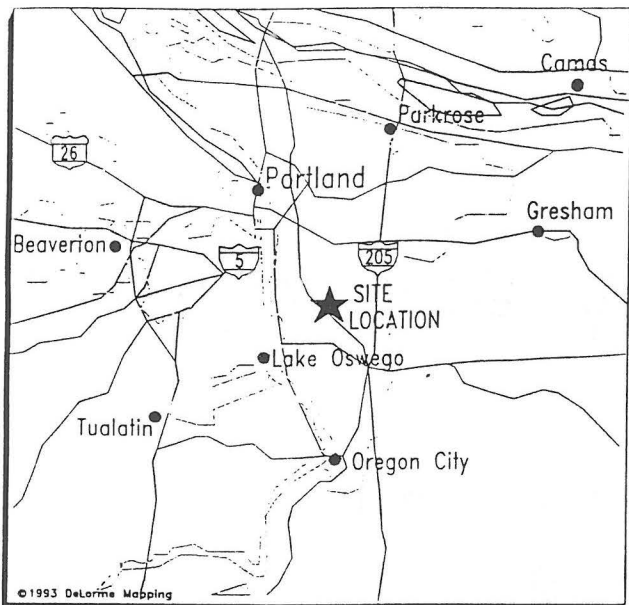


1040 CROWN POINT PARKWAY, SUITE 800
ATLANTA, GA 30338
TEL: 404-525-1100
FAX: 404-525-2150

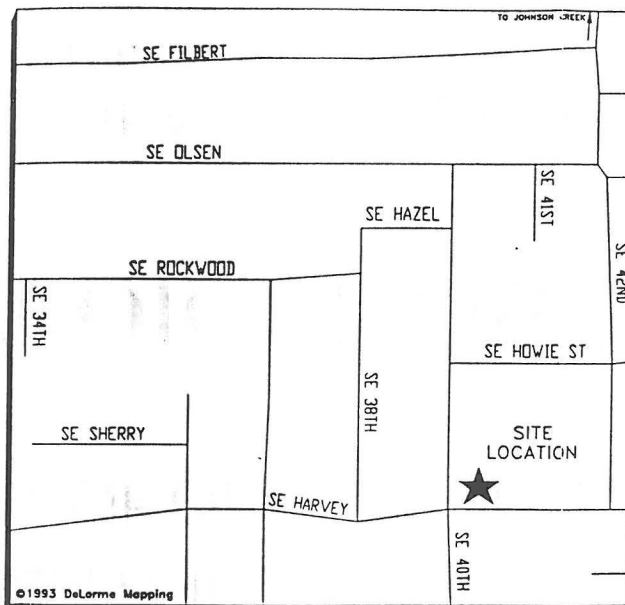
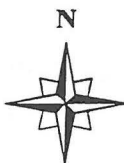


City of Milwaukie Community Development Department

Title: Site Drainage Submitted by: Applicant Date: 7/8/07 # Pages: 7
File Numbers: CSO-97-04/VR-97-02 Applicant: City of Milwaukie Exhibit #: 1



VICINITY MAP



LOCATION MAP

DIRECTIONS TO CELL SITE

MARTIN LUTHER KING SOUTH, TURNS INTO McLOUGHLIN. CONTINUE SOUTH AND TAKE JOHNSON CREEK EXIT WESTBOUND TO 42ND AVENUE. SOUTH (RIGHT) ON 42ND AVENUE TO HARVEY. WEST (RIGHT) ON HARVEY TO 40TH AVENUE. SITE IS LOCATED ON THE NORTHEAST CORNER.

SITE COORDINATES

LATITUDE: 45° 27' 05" N
 LONGITUDE: 122° 37' 18" W
 AMSL: 183 FT.
 QUAD: GLADSTONE, OR
 LATITUDE & LONGITUDE DETERMINED BY:
 SCALED FROM USGS MAP



1040 CROWN POINTE PARKWAY, SUITE 800
 ATLANTA, GEORGIA 30336
 (770) 481-2100
 FAX: (770) 481-2150

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 VOICENOW®

MILWAUKIE WATER
 MILWAUKIE, OREGON
 VICINITY & LOCATION MAP

FIELD REP: JOHN H. DeCOSTE DRAWN BY: TL
 PROGRAM MGR. RON MINNICH DATE: 11/25/96

SHEET: 1



NOTE: SCALE VALID ON 11" X 17" DRAWINGS ONLY



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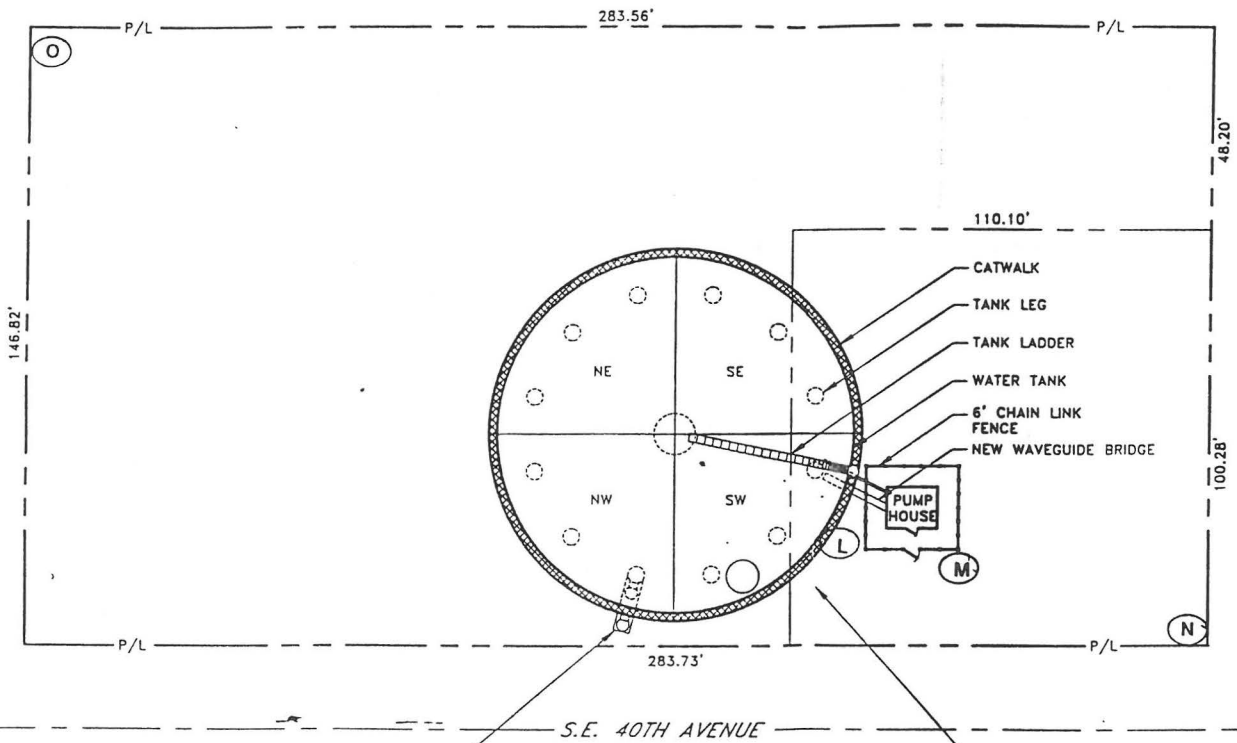
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VOICE NOW[®]

MILWAUKIE WATER
MILWAUKIE, OREGON
PLOT PLAN

FIELD REP: JOHN H. DeCOSTE	DRAWN BY: TL
PROGRAM MGR. RON MINNICH	DATE: 1/23/96

SHEET: 2

MILW2



ACCESS LADDER

POWER DENSITIES AT SIGNIFICANT STRUCTURES AND POINTS IDENTIFIED BY LETTERS L THRU O SEE ATTACHED CALCULATION TABLES
Hatfield & Dawson Consulting Engineers

A
3,4

NEW PAGENET EQUIPMENT LOCATED IN EXISTING SHELTER
2) 2'x2'x6' RADIO CABINETS

LOCATED ON S.W. 1/4 OF TANK TOP

- 1) 96" VOICENOW TRANSMIT ANTENNA
- 2) 99" VOICENOW RECEIVE ANTENNAS
- 1) CORE PAGING TRANSMIT ANTENNA
- 1) 1.2 METER SATELLITE DISH



NOTE: SCALE VALID ON 11' X 17' DRAWINGS ONLY



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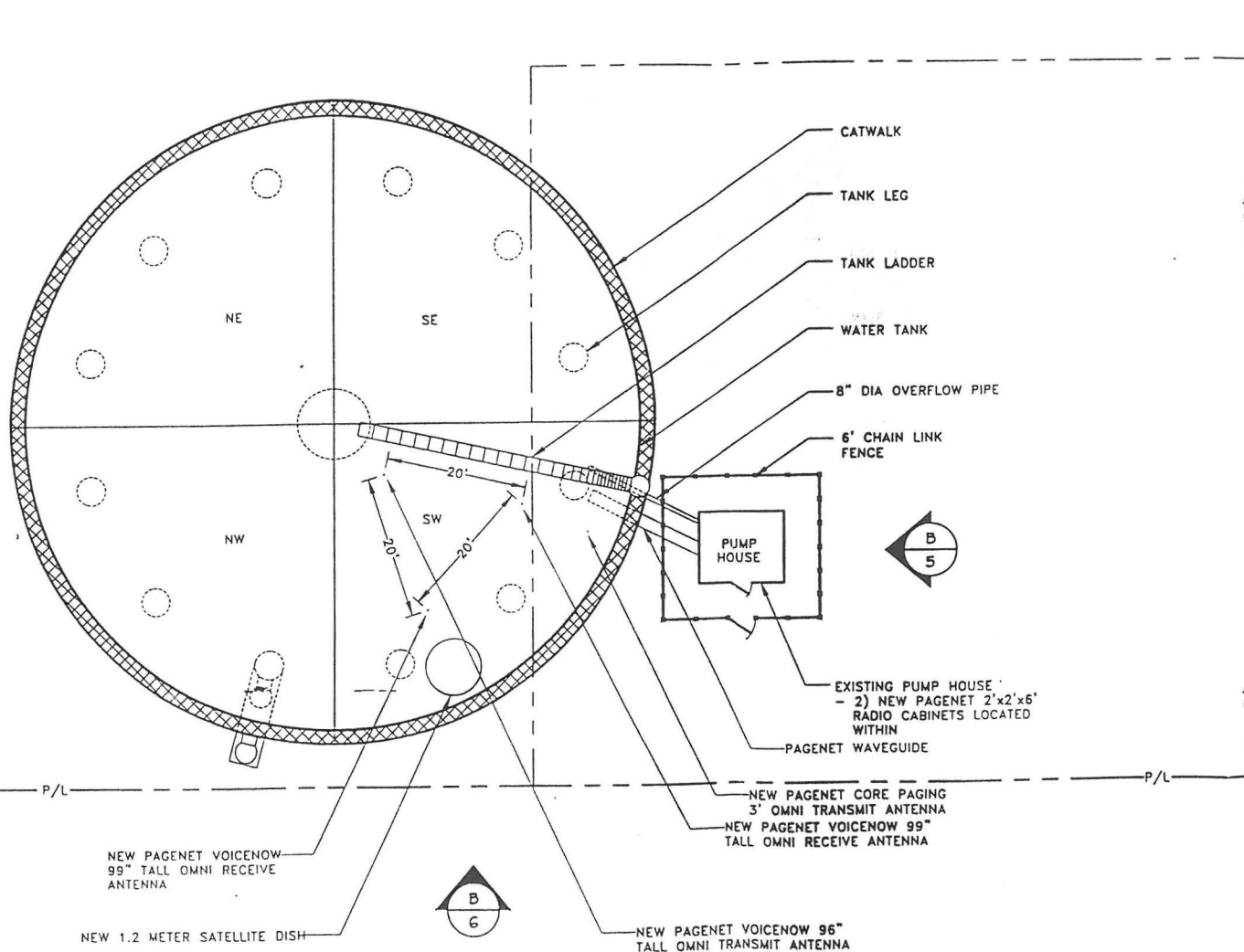
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VoiceNow®

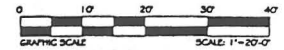
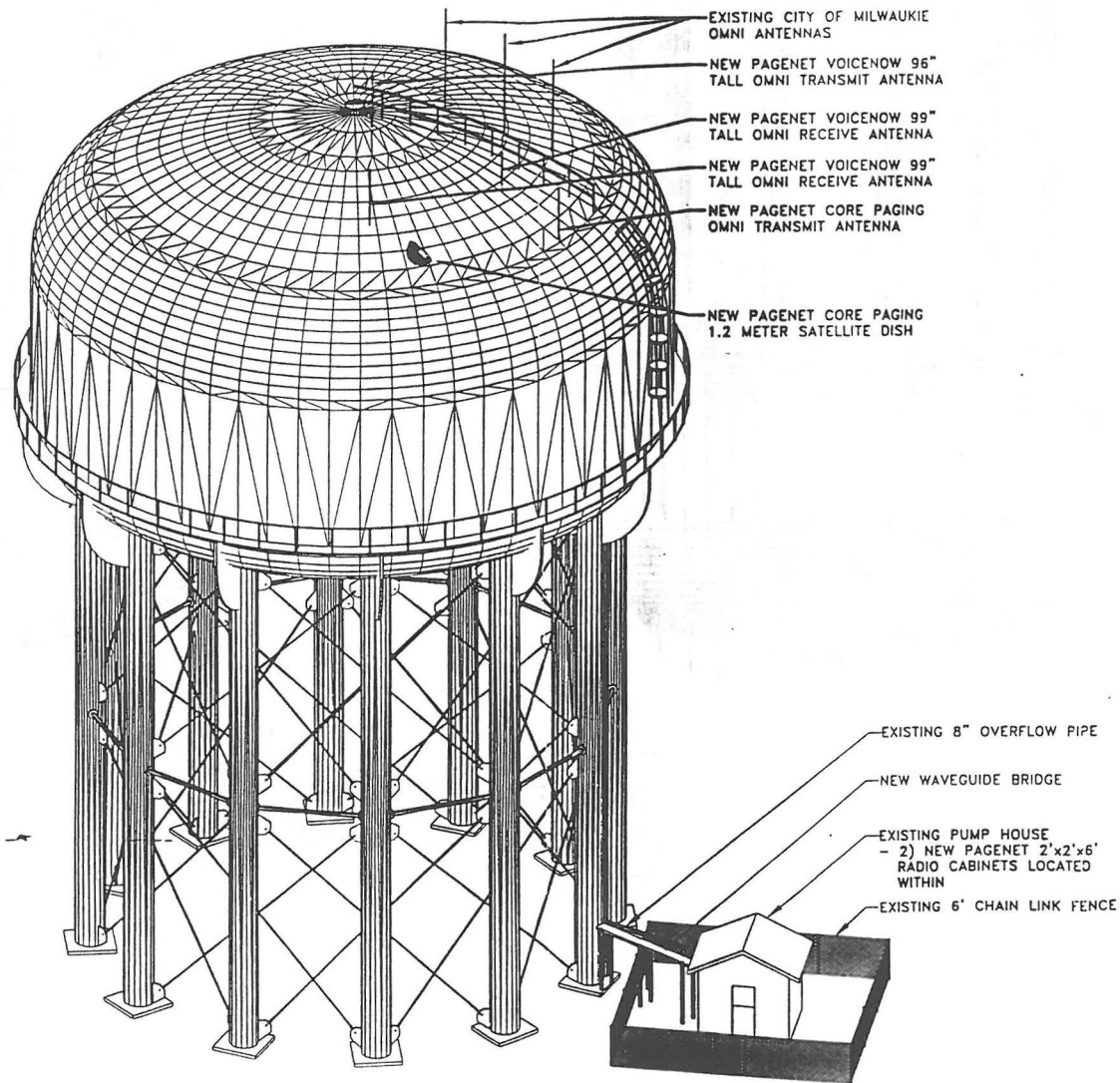
MILWAUKIE WATER
MILWAUKIE, OREGON
COMPOUND AREA PLAN

FIELD REP: JOHN H. DECOSTE DRAWN BY: TL
PROGRAM MGR. RON MINNICH DATE: 1/12/06

SHEET: 3

UNWS





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MILWAUKIE WATER
 MILWAUKIE, OREGON
 3-D VIEW

FIELD REP: JOHN H. DeCOSTE DRAWN BY: TL
 PROGRAM MGR. RON MINNICH DATE: 11/27/96

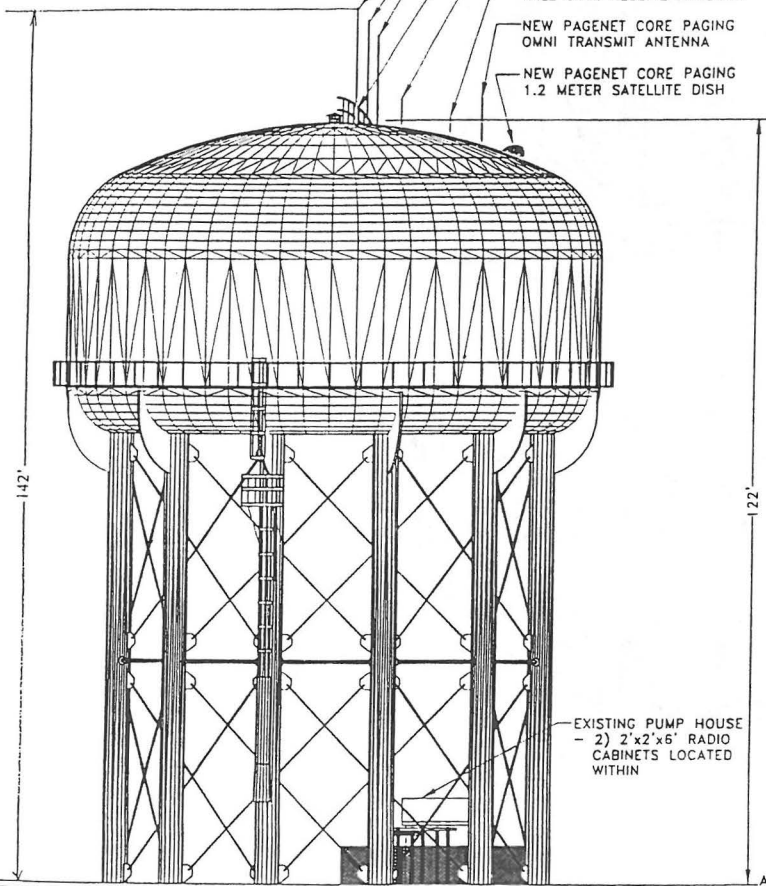
SHEET: 4

A SW 3-D ELEVATION
 4

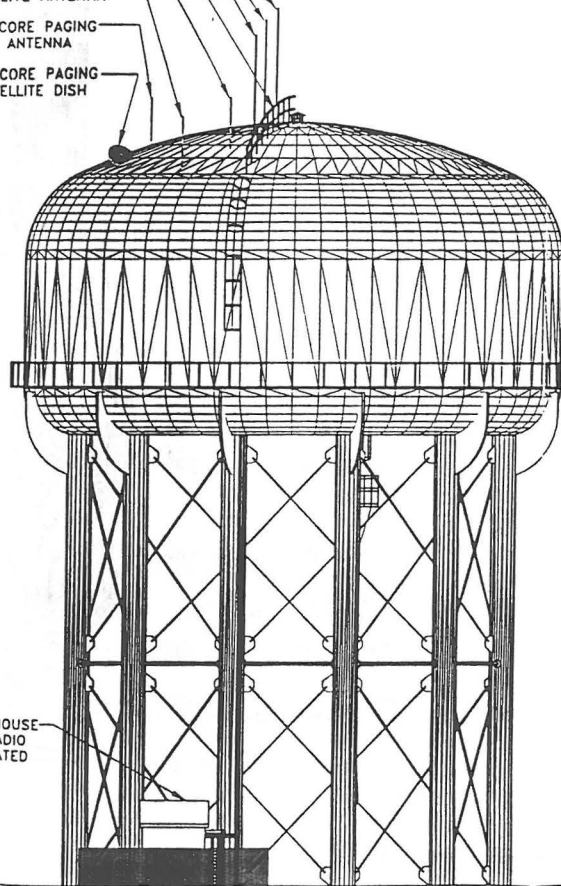
NOTE THE COMBINED HEIGHT OF THE MILWAUKIE WATER TANK AND THE TALLEST CITY OWNED OMNI ANTENNA IS 142' (122' + 20')

- EXISTING CITY OF MILWAUKIE OMNI ANTENNAS
- NEW PAGENET VOICENOW 96" TALL OMNI TRANSMIT ANTENNA
- NEW PAGENET VOICENOW 99" TALL OMNI RECEIVE ANTENNA
- NEW PAGENET VOICENOW 99" TALL OMNI RECEIVE ANTENNA
- NEW PAGENET CORE PAGING OMNI TRANSMIT ANTENNA
- NEW PAGENET CORE PAGING 1.2 METER SATELLITE DISH

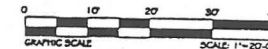
- EXISTING CITY OF MILWAUKIE OMNI ANTENNAS
- NEW PAGENET VOICENOW 96" TALL OMNI TRANSMIT ANTENNA
- NEW PAGENET VOICENOW 99" TALL OMNI RECEIVE ANTENNA
- NEW PAGENET VOICENOW 99" TALL OMNI RECEIVE ANTENNA
- NEW PAGENET CORE PAGING OMNI TRANSMIT ANTENNA
- NEW PAGENET CORE PAGING 1.2 METER SATELLITE DISH



A NORTH ELEVATION
5



A SOUTH ELEVATION
5



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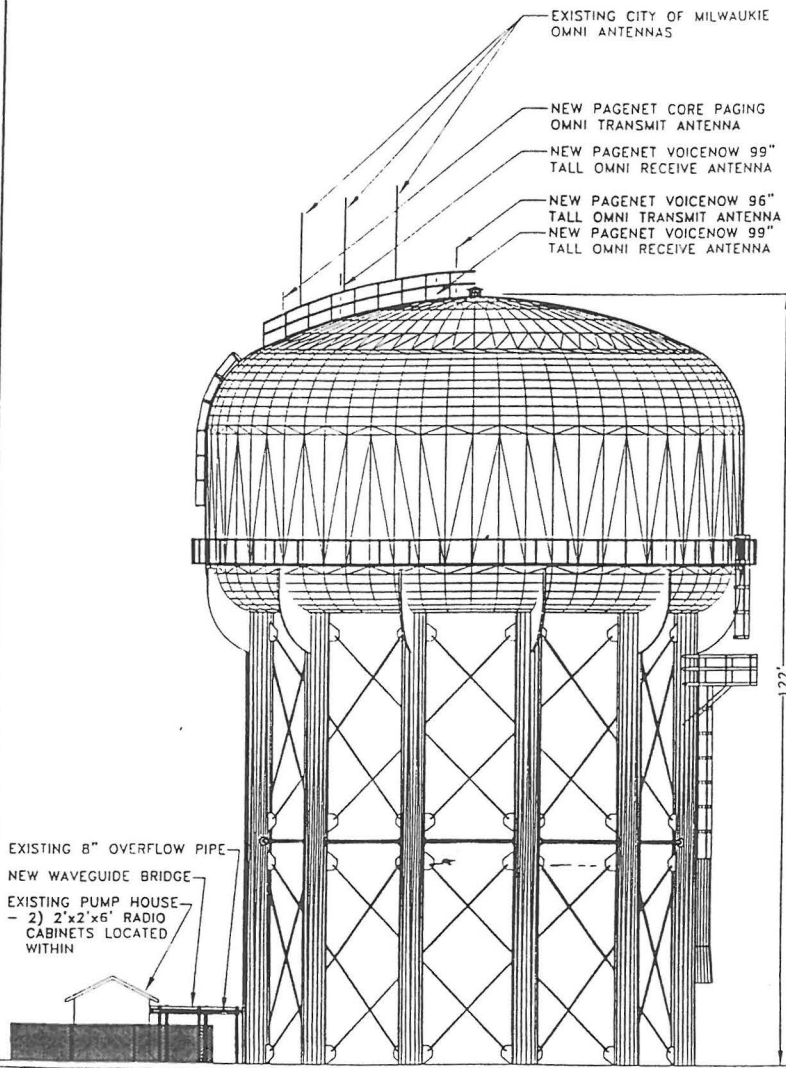
MILWAUKIE WATER
MILWAUKIE, OREGON
NORTH AND SOUTH ELEVATIONS

FIELD REP: JOHN H. DeCOSTE DRAWN BY: TL
PROGRAM MGR. RON MINNICH DATE: 11/27/96

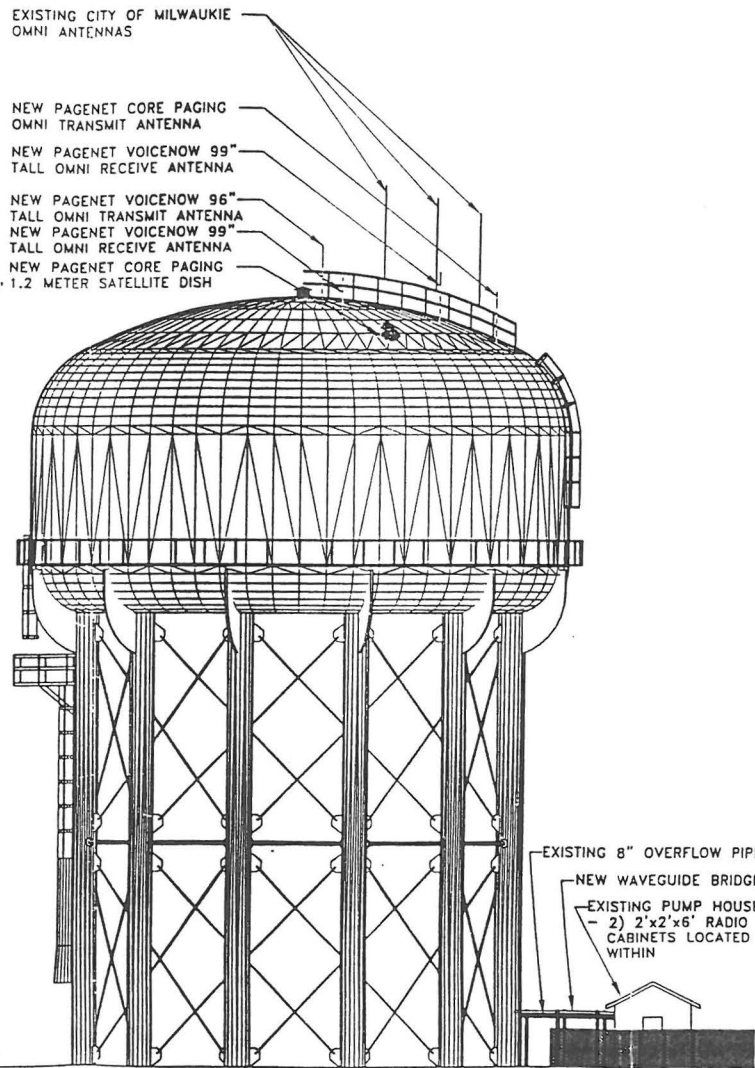
REVISED 3/27/97

SHEET: 5

MEPS



A
S EAST ELEVATION



A
6 WEST ELEVATION

0 10 20 30 40
GRAPHIC SCALE SCALE: 1"=20'-0"
NOTE: SCALE VALID ON 11" X 17"
DRAWINGS ONLY

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ATLANTA, GEORGIA 30338
(770) 481-2100
FAX: (770) 481-2150

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MILWAUKIE WATER
MILWAUKIE, OREGON
EAST AND WEST ELEVATIONS

FIELD REP. JOHN H. DeCOSTE DRAWN BY: TL
PROGRAM MGR. RON MINNICH DATE: 11/27/96

SHEET: 6

Community Service Overlay
City Water Tower Antenna Site

Proposal:

Proposal for telecommunication antenna development on four quadrants of the City water tower at Water Tower Park. The Master Development Plan proposes to lease the four quadrants to separate companies with approximately six antennas each. These antennas would not exceed 20 feet in height above the top of the tank. The Water tower is a three million gallon water storage tank owned by the City of Milwaukie. The tank is a reinforced steel structure mounts of a concrete base. The top of the tank is 122 feet above the ground and currently has three 20 foot antennas belonging to the City mounted on top. This brings the total height to 142 feet. The addition of 24 more antennas would have little or no effect on the towers structural integrity.

Criteria 321.4

A.1 The property is zoned R-7 which requires minimum 7,000 sf lots. The water tower lot which includes the water tower park, well site #1, and well site #5 has approximately 41,800 sf. No new structures would be located outside of the area already dedicated to telecommunication use. The existing structure already meets the setback and lot coverage requirements for the R-7 District.

2. Criteria 321.10

A. Power, streets/access is already provided.

B. Access exists. Unmanned station would not cause increase to traffic.

C. The structure (water tower) is existing and does not currently conform to this requirement being 20 feet from 40th Street, 80 feet from Harvey Street, and 50 feet from the East property line. Existing structure is 122 feet tall and with the existing antennas the total height is 142 feet. The new antennas would not exceed the existing height.

E. All mechanical equipment will be electronic and will be enclosed so as not to render and sound.

F. No lighting is propose.

G. Unmanned station. Monthly maintenance will occur during daytime working hours.

3. See G above.

City of Milwaukie Community Development Department

Title: Applicants Narrative Submitted by: Applicant Date: 7/8/97 # Pages: 1
File Numbers: CSO-97-04/UR97-02 Applicant: City of Milwaukie Exhibit #: 2



Variance from Section 321.10D
City Water Tower Antenna Site
Proposal:

Variance from Section 321.10D of the Zoning Code to allow additional antenna to be located on the existing City Water Tower which will exceed the 50 foot height limit. The Water Tower is 122 feet in height and currently has three 20 foot antennas mounted to the top. The additional antenna would not exceed the existing 142 foot antenna height.

Criteria 702.1

A. The Water Tower was constructed in 1962, prior to the adoption of the CSO standards. The addition of more antenna on to the existing 122 foot water tower would not exceed the existing nonconforming height limit of 142 feet.

B. Communications antenna need to be located at high elevations in order to achieve optimum signal coverage and reception. A variance would be necessary to allow any antenna to be located within the City which would exceed the 50 foot height limit. Co-locating additional new antenna on top of the existing 122 foot tower, allows for optimal communications coverage for the City of Milwaukie and results in reducing the number of individual antenna towers which would otherwise be located on other properties within the City. The request to allow multiple antenna, up to a maximum height of 142 feet, is the minimum variance needed to allow continued and efficient use of the existing water tower structure.

C. The location of additional communication antenna on the water tower, in excess of the 50 foot height limit, would not cause an adverse effect on the neighboring properties. Due to the height of the tower and the surrounding tree cover, the antenna would not be easily visible from surrounding properties. The antenna would also be finished to blend with existing green color of the water tower. Therefore, any negative effects from the proposed height variance would be mitigated.

City of Milwaukie Community Development Department

Title: applicant's Narrative Submitted by: Applicant Date: 7/8/97 # Pages: 1
File Numbers: CSO 97-04 / UR 97-02 Applicant: City of Milwaukie Exhibit #: 13



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BENJAMIN F. DAWSON III, PE
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PAUL W. LEONARD, PE
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CONSULTANT
Box 1326
ALICE SPRINGS, NT 5950
AUSTRALIA

NON-IONIZING ELECTROMAGNETIC FIELD COMPUTATIONS
AND
ENGINEERING CERTIFICATION

prepared for

PAGENET

Paging Network of Oregon, Inc.

MILWAUKIE WATER PAGEING BASE STATION SITE

9 JANUARY 1997

City of Milwaukie Community Development Department

Title: Risk Study Submitted by: Pagenet Date: 7/8/97 # Pages: 11
File Numbers: CSO-97-04 / VR-97-02 Applicant: City of Milwaukie Exhibit #: 4a



INTRODUCTION

Because paging, cellular radiotelephone and PCS sites transmit radio frequency energy, some local governments and the U.S. government require that potential human exposure in areas of casual access near these sites be evaluated. The levels of radiofrequency energy from typical paging sites are very low compared with all of the standards recognized by government agencies. As a precautionary measure, "worst-case" evaluation of exposure levels is calculated to assure the licensing or permitting authorities that facilities are operating within the guidelines outlined in the standards and rules.

A body of literature, much of which is succinctly codified in reports of the U.S.E.P.A., has been developed describing appropriate methods and techniques for these evaluations. The important considerations are (1) the maximum transmitting power of all of the facilities proposed from an antenna or group of antennas, (2) the transmitting characteristics or "pattern" of the antennas, and (3) the geometry of the antenna mounting and its relationship to the surrounding area.

Because the antennas used for radiocommunications systems, including paging, cellular and PCS systems, are directional, the energy transmitted from them is greater in some directions than others. Transmission from practical antennas is concentrated toward the horizon or just below the horizontal, and very small amounts of energy are emitted at steep vertical angles toward the nearby ground below an antenna. For this reason, it is necessary to evaluate the radiofrequency energy levels at distances out to several hundred feet from the antenna, to take into account the local topography, and the geometry of nearby buildings above ground level. This data, together with the antenna characteristics and the transmitted power from the antennas, is used to develop a spread sheet which shows the radiofrequency energy at representative locations, including all identifiable "worst case" locations, near the antenna. A site plan accompanies the spread sheet to allow identification of locations where specific analysis results are shown.

INTERFERENCE

Paging devices are certified (Type Accepted) by the FCC under the procedures in *Subpart J of Part 2*. This assures that the device operates only within the desired frequency band and that spurious emissions are within the FCC specifications. There have been no reported cases of interference to consumer electronic devices and medical devices from wireless communications systems such as Paging, PCS, cellular and ESMR.

POWER DENSITY AT GROUND LEVEL

The power density was computed using Equation (1) on page 25 of the U.S. EPA report "*An Engineering Assessment of the Potential Impact of Federal Radiation Protection Guidance on the AM, FM, and TV Broadcast Services*" by Paul C. Gailey and Richard A. Tell, April 1985. The voltage reflection coefficient of 1.64 that is used in this expression represents "...typical ground conductivities and dielectric constants found in the United States...". The voltage reflection is squared to convert from units of voltage to units of power. Equation (1), can be simplified as:

$$\mu W/cm^2 = \frac{(360) \times (ERP \text{ in Watts})}{(\text{Distance in feet})^2}$$

Where microwatts per square centimeter are shown as $\mu W/cm^2$.

A worst case antenna pattern is used to determine the predicted power density. Pagenet proposes to use three omni-directional antennas (one transmitting antenna and two receiving antennas). Pagenet will use an Andrew PC1NOF-0091-009 Base Station Antenna for the transmit antenna. A worst case pattern has been compiled based on the relative field patterns provided by the antenna manufacturers. Power densities have been computed at an elevation of six feet above ground. The maximum power for each site is 431.5 Watts.

Paging providers are required to comply with the FCC "Rules & Regulations" *CFR 47 §1.1310 Radiofrequency Radiation Exposure Limits.*¹ This rule as most recently revised has power density limits that are identical to those mandated by ordinance in Portland. According to FCC Rules the Maximum Permissible Exposure (MPE) for Uncontrolled Environments for paging frequencies is:

$$MPE (\mu W/cm^2) = \frac{(frequency\ in\ MHz)}{1.5}$$

The maximum ground level power density for the proposed Milwaukie Water paging base station site is located 732 feet from the antenna base and is 0.11 $\mu W/cm^2$, which is 0.018 % of the MPE at 940 MHz allowed by *CFR 47 §1.1310 Radiofrequency Radiation Exposure Limits.*

This antenna will be placed to meet the minimum siting distance to habitable structures as required in City of Portland Planning and Zoning Ordinance § 33.274.040.C.5.

SHOCK AND BURN

Shocks and burns from paging antennas are very unlikely due to their low power and elevated locations. The research data base upon which human exposure standards are promulgated by organizations such as IEEE, ANSI or NCRP does not support human contact current MPEs above 100 MHz.

9 January 1997

James B. Hatfield, P.E.



¹ Although the FCC has adopted these limits, they do not take effect until 1 September 1997. Prior to that time, the less stringent limits of the original 47 CFR §1.1307(b) are still controlling for Federal purposes.

CALCULATED POWER DENSITY AT GROUND LEVEL

Milwaukee Water Site

THE MAXIMUM POWER DENSITY IS 0.018% OF THE MAXIMUM PERMISSIBLE EXPOSURE (MPE) AT 702 FEET FROM THE BUILDING.

ANTENNA HEIGHT AGL 122 feet
 POWER (ERP) x NUMBER OF TX 431.5 Watts ERP (dipole)
 MAX GAIN OF ANTENNA 5.9 dBd
 LOWEST FREQUENCY 940 MHz
 MAX PRODUCED POWER DENSITY 0.11 μ W/cm²
 ANTENNA TYPE: ANDREW PC1NOF-0091-009 Omni-Directional

Degrees	Antenna Correction	Corrected ERP	Distance From	Distance From	Power Density	MPE	% of MPE
Below Horizon	dB Down From Main Lobe	Watts	Antenna Base (ft)	Antenna	μ W/cm ²	μ W/cm ²	%
30.0	-40.0	0.043	0.0	116.0	0.0012	626.7	0.000%
39.0	-38.5	0.061	2.0	116.0	0.0016	626.7	0.000%
38.0	-38.0	0.068	4.1	116.1	0.0018	626.7	0.000%
37.0	-37.6	0.075	6.1	116.2	0.0020	626.7	0.000%
36.0	-37.3	0.080	8.1	116.3	0.0021	626.7	0.000%
35.0	-37.0	0.086	10.1	116.4	0.0023	626.7	0.000%
34.0	-34.0	0.172	12.2	116.6	0.0045	626.7	0.001%
33.0	-33.0	0.214	14.2	116.9	0.0056	626.7	0.001%
32.0	-32.2	0.260	16.3	117.1	0.0068	626.7	0.001%
31.0	-31.6	0.299	18.4	117.4	0.0078	626.7	0.001%
30.0	-31.0	0.343	20.5	117.8	0.0089	626.7	0.001%
29.0	-29.5	0.484	22.5	118.2	0.0125	626.7	0.002%
28.0	-29.0	0.541	24.7	118.6	0.0138	626.7	0.002%
27.0	-28.6	0.596	26.8	119.1	0.0151	626.7	0.002%
26.0	-28.3	0.638	28.9	119.6	0.0161	626.7	0.003%
25.0	-28.0	0.684	31.1	120.1	0.0171	626.7	0.003%
24.0	-26.2	1.047	33.3	120.7	0.0259	626.7	0.004%
23.0	-25.6	1.200	35.5	121.3	0.0293	626.7	0.005%
22.0	-25.0	1.352	37.7	122.0	0.0327	626.7	0.005%
21.0	-24.7	1.472	39.9	122.7	0.0352	626.7	0.006%
20.0	-24.3	1.603	42.2	123.4	0.0378	626.7	0.006%
19.0	-24.4	1.567	44.5	124.3	0.0365	626.7	0.006%
18.0	-24.4	1.555	46.9	125.1	0.0357	626.7	0.006%
17.0	-24.5	1.545	49.2	126.0	0.0350	626.7	0.006%
16.0	-24.5	1.538	51.6	127.0	0.0343	626.7	0.005%
15.0	-24.5	1.531	54.1	128.0	0.0336	626.7	0.005%
14.0	-24.5	1.531	56.6	129.1	0.0331	626.7	0.005%
13.0	-24.5	1.531	59.1	130.2	0.0325	626.7	0.005%
12.0	-24.5	1.531	61.7	131.4	0.0319	626.7	0.005%
11.0	-24.5	1.531	64.3	132.6	0.0313	626.7	0.005%
10.0	-24.5	1.531	67.0	133.9	0.0307	626.7	0.005%
9.0	-24.5	1.531	69.7	135.3	0.0301	626.7	0.005%
8.0	-24.5	1.531	72.5	136.8	0.0294	626.7	0.005%
7.0	-24.5	1.531	75.3	138.3	0.0288	626.7	0.005%
6.0	-24.5	1.531	78.2	139.9	0.0281	626.7	0.004%
5.0	-24.5	1.531	81.2	141.6	0.0275	626.7	0.004%
4.0	-24.5	1.531	84.3	143.4	0.0268	626.7	0.004%
3.0	-24.5	1.531	87.4	145.2	0.0261	626.7	0.004%
2.0	-24.5	1.531	90.6	147.2	0.0254	626.7	0.004%
1.0	-24.5	1.531	93.9	149.3	0.0247	626.7	0.004%
0.0	-24.5	1.531	97.3	151.4	0.0240	626.7	0.004%
49.0	-24.5	1.531	100.8	153.7	0.0233	626.7	0.004%

CALCULATED POWER DENSITY AT GROUND LEVEL

Milwaukee Water Site

THE MAXIMUM POWER DENSITY IS 0.018% OF THE MAXIMUM PERMISSIBLE EXPOSURE (MPE) AT 732 FEET FROM THE BUILDING.

ANTENNA HEIGHT AGL 122 feet
 POWER (ERP) x NUMBER OF TX 431.5 Watts ERP (dipole)
 MAX GAIN OF ANTENNA 5.9 dBd
 LOWEST FREQUENCY 940 MHz
 MAX PRODUCED POWER DENSITY 0.11 μ W/cm²
 ANTENNA TYPE: ANDREW PC1NOF-0091-009 Omni-Directional

Degrees	Antenna Correction	Corrected ERP	Distance From	Distance From	Power Density	MPE	% of MPE
Below Horizon	dB Down From Main Lobe	Watts	Antenna Base (ft)	Antenna	μ W/cm ²	μ W/cm ²	%
48.0	-24.5	1.531	104.4	156.1	0.0226	626.7	0.004%
47.0	-24.5	1.531	108.2	158.6	0.0219	626.7	0.003%
46.0	-24.5	1.531	112.0	161.3	0.0212	626.7	0.003%
45.0	-24.5	1.531	116.0	164.0	0.0205	626.7	0.003%
44.0	-22.3	2.570	120.1	167.0	0.0331	626.7	0.005%
43.0	-21.5	3.034	124.4	170.1	0.0377	626.7	0.006%
42.0	-20.9	3.507	128.8	173.4	0.0420	626.7	0.007%
41.0	-20.5	3.890	133.4	176.8	0.0448	626.7	0.007%
40.0	-20.0	4.315	138.2	180.5	0.0476	626.7	0.008%
39.0	-20.0	4.315	143.2	184.3	0.0457	626.7	0.007%
38.0	-20.0	4.315	148.5	188.4	0.0437	626.7	0.007%
37.0	-20.0	4.315	153.9	192.8	0.0418	626.7	0.007%
36.0	-20.0	4.315	159.7	197.4	0.0398	626.7	0.006%
35.0	-20.0	4.315	165.7	202.2	0.0379	626.7	0.006%
34.0	-20.0	4.315	172.0	207.4	0.0361	626.7	0.006%
33.0	-20.0	4.315	178.6	213.0	0.0342	626.7	0.005%
32.0	-20.0	4.315	185.6	218.9	0.0324	626.7	0.005%
31.0	-20.0	4.315	193.1	225.2	0.0306	626.7	0.005%
30.0	-20.0	4.315	200.9	232.0	0.0288	626.7	0.005%
29.0	-20.0	4.315	209.3	239.3	0.0271	626.7	0.004%
28.0	-17.5	7.673	218.2	247.1	0.0452	626.7	0.007%
27.0	-16.7	9.225	227.7	255.5	0.0508	626.7	0.008%
26.0	-16.0	10.839	237.8	264.6	0.0557	626.7	0.009%
25.0	-15.5	12.161	248.8	274.5	0.0581	626.7	0.009%
24.0	-15.0	13.645	260.5	285.2	0.0603	626.7	0.010%
23.0	-14.4	15.667	273.3	296.9	0.0639	626.7	0.010%
22.0	-14.4	15.667	287.1	309.7	0.0588	626.7	0.009%
21.0	-14.4	15.667	302.2	323.7	0.0538	626.7	0.009%
20.0	-14.4	15.667	318.7	339.2	0.0490	626.7	0.008%
19.0	-14.4	15.667	336.9	356.3	0.0444	626.7	0.007%
18.0	-14.4	15.667	357.0	375.4	0.0400	626.7	0.006%
17.0	-14.4	15.667	379.4	396.8	0.0358	626.7	0.006%
16.0	-14.4	15.667	404.5	420.8	0.0318	626.7	0.005%
15.0	-14.4	15.667	432.9	448.2	0.0280	626.7	0.004%
14.0	-14.4	15.667	465.3	479.5	0.0245	626.7	0.004%
13.0	-14.4	15.667	502.5	515.7	0.0212	626.7	0.003%
12.0	-14.4	15.667	545.7	557.9	0.0181	626.7	0.003%
11.0	-9.7	46.024	596.8	607.9	0.0448	626.7	0.007%
10.0	-6.6	94.402	657.9	668.0	0.0761	626.7	0.012%
9.0	-4.0	173.772	732.4	741.5	0.1137	626.7	0.018%
8.0	-3.1	211.242	825.4	833.5	0.1094	626.7	0.017%
7.0	-2.4	250.600	944.7	951.8	0.0995	626.7	0.016%

CALCULATED POWER DENSITY AT GROUND LEVEL

Milwaukee Water Site

THE MAXIMUM POWER DENSITY IS 0.018% OF THE MAXIMUM PERMISSIBLE EXPOSURE (MPE) AT 732 FEET FROM THE BUILDING.

ANTENNA HEIGHT AGL 122 feet
 POWER (ERP) x NUMBER OF TX 431.5 Watts ERP (dipole)
 MAX GAIN OF ANTENNA 6.9 dB
 LOWEST FREQUENCY 940 MHz
 MAX PRODUCED POWER DENSITY 0.11 μW/cm²
 ANTENNA TYPE: ANDREW PC1NOF-0091-009 Omni-Directional

Degrees	Antenna Correction	Corrected ERP	Distance From	Distance From	Power Density	MPE	% of MPE
(Below Horizon)	dB Down From Main Lobe	Watts	Antenna Base (ft)	Antenna	μW/cm ²	μW/cm ²	%
5.0	-1.8	283.127	1103.7	1109.7	0.0827	626.7	0.013%
5.0	-1.3	319.875	1325.9	1331.0	0.0649	626.7	0.010%
4.0	-0.7	371.519	1658.9	1662.9	0.0483	626.7	0.008%
3.0	-0.4	389.745	2213.4	2216.4	0.0285	626.7	0.005%
2.0	-0.3	406.425	3321.8	3323.8	0.0132	626.7	0.002%
1.0	-0.1	418.775	6645.6	6646.6	0.0034	626.7	0.001%
0.0	0.0	431.500	10000.0	10000.0	0.0016	626.7	0.000%

POWER DENSITY AT SIGNIFICANT STRUCTURES AND POINTS
 SEE ATTACHED SITE PLANS

POINT "L"

71.8	-25.0	1.352	40.0	128.4	0.0295	626.7	0.005%
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POINT "M"

62.0	-28.0	0.684	65.0	138.2	0.0129	626.7	0.002%
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POINT "N"

45.5	-24.5	1.531	120.0	171.1	0.0188	626.7	0.003%
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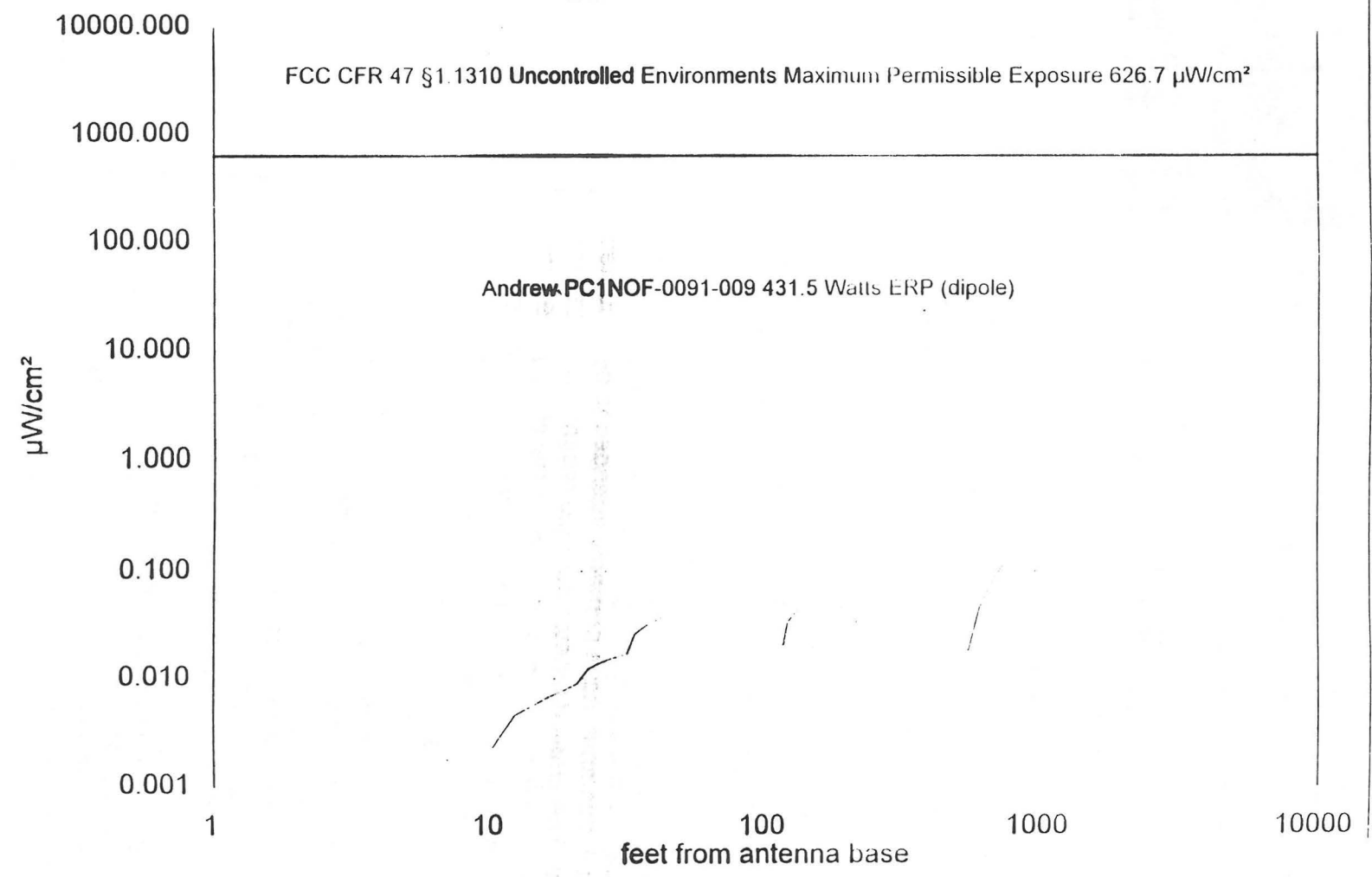
POINT "O"

33.4	-20.0	4.315	185.0	221.6	0.0316	626.7	0.005%
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GROUND LEVEL POWER DENSITY

Milwaukie Water Paging Base Station

LOGARITHMIC SCALES



9 dBi Nominal Gain, Omni-Directional Antenna

ANDREW 9 dBi/6.9 dBd PCS Base Station Antenna 901-902 MHz.



PC1N0F-0091-009

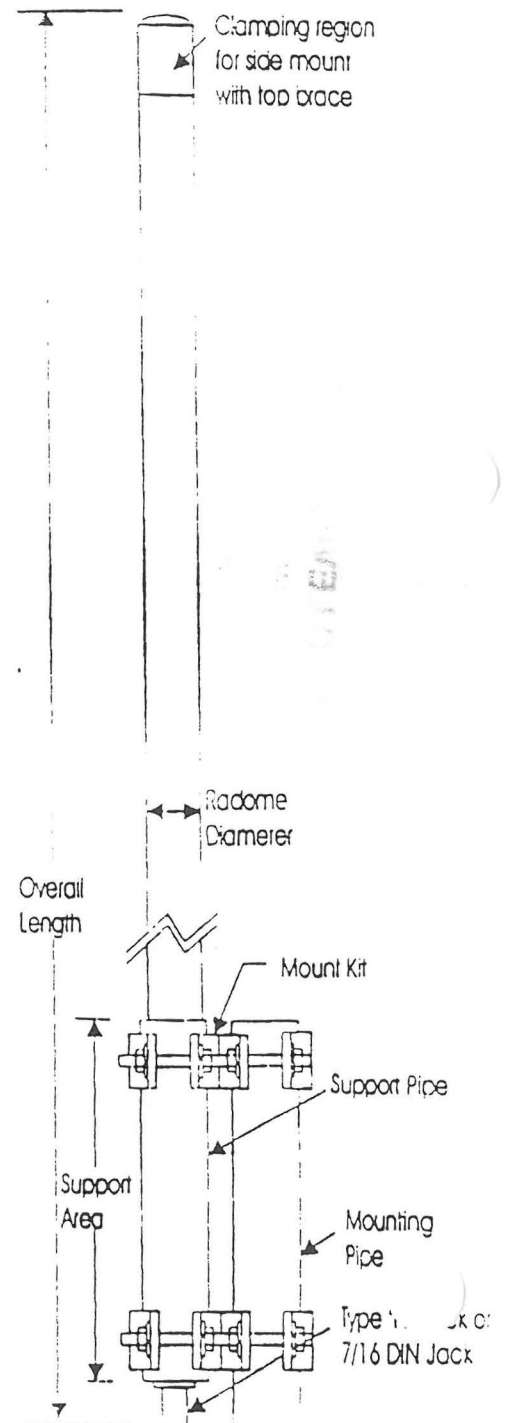
The narrow band Personal Communications Services (PCS) 9 dBi/6.9 dBd gain omni-directional antenna combines a high performance in a low profile package. Particular emphasis has been placed on maintaining excellent pattern and Return Loss performance across the operating transmit frequency band.

Andrew has employed a patented (US. Patents #5,339,089 and 5,363,115, Australian Patent #654,595) design featuring DC grounded, brass and copper radiating element sections.

The radiating elements are encased in a weather resistant, low loss, UV protected fiberglass radome. Due to the beam down tilt, this antenna is primarily intended to be mounted upright. The small diameter but rigid radome results in minimal tip deflection in a free standing installation under high wind conditions, thus providing increased reliability of coverage in the main beam coverage area as well as maintaining antenna pattern integrity.

A variety of standard mounting clamps can be used to mount this antenna using bottom mount or tower side mount. When side mounting the antenna, a clamping region has been incorporated at the top 2" (51 mm) of the antenna. Thus a side mount with top brace can be reliably used, without obstructing a radiating area of the antenna.

Since this antenna has no electrical beam-tilt, but has a moderately broad elevation pattern beam-width, it is possible to install the antenna either upright or inverted, depending on site conditions.



ELECTRICAL SPECIFICATIONS

Type Number	PC1N0F-0091-009
Frequency Range - (MHz)	901-902
Gain - Nominal, dBI/(dBd)	9/(6.9)
Polarization -	Vertical
Return Loss - Minimum, (dB)	14
Input Impedance - (Ohms)	50
Elevation HPBW, Nominal -	12.5°
Antenna Beam Down Tilt	0° degrees, nominal
Azimuth Coverage	Omnidirectional
Maximum Power Input - Watts Average Power	100
Lightning Protection -	Internal DC Ground.
Input Connector - Direct Fixed	Type N Jack

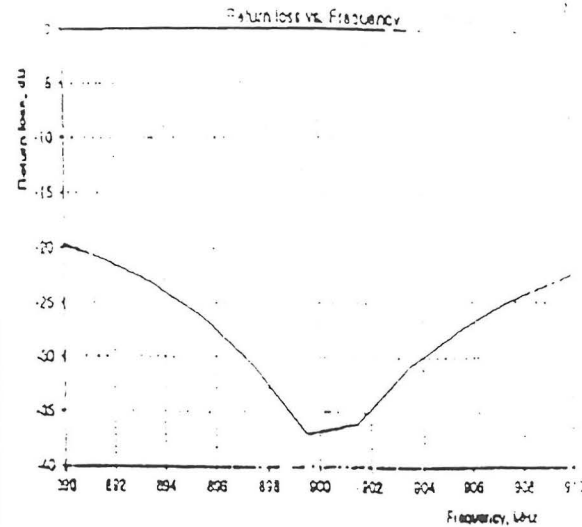
MECHANICAL SPECIFICATIONS

Survival Wind Velocity - mph/(km/h)	125/(200)
Operational Temperature -	-40°F to 158°F/(-40°C to 70°C)
Lateral Thrust @100 mph/(161 km/h) - lb. force/(N)	19/(83)
Bending Moment - lb-ft/(N-m)	54/(74)
Diameter of Radome - in./(mm)	1.25/(32)
Diameter of Support Pipe - in./(mm)	1.5/(38)
Overall Length - in./(mm)	69/(1753)
Length of Support Pipe - in./(mm)	9/(229)
Support Pipe Material -	Aluminum
Radome Material -	UV Protected Fiberglass
Radome Color:	Light Gray
Net Weight - lb/(kg)	3/(1.4)
Shipping Weight, Unit Pack - lb/(kg)	7/(3.2)
Shipping Volume - ft. ³ /(m ³)	0.18/(.01)
Unit Pack -	2.375"/(60 mm) diameter x 72"/(1829 mm) long
Shipping Mode -	UPS or Common Carrier.

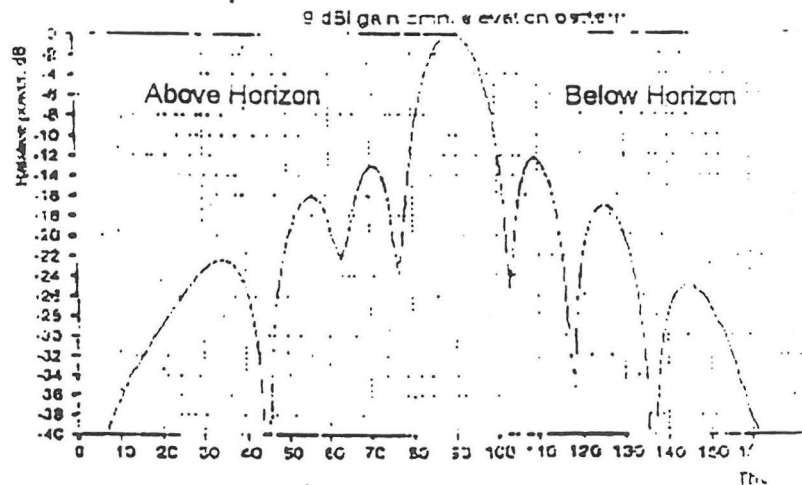
MOUNTING HARDWARE

Mounting clamps are ordered separately, based upon the diameter of the mounting pipe. Mount hardware options include:

Type Number	Description
225023	Mount kit for mounting to 1.3-2.4 inch/(33-61 mm) OD mounting pipe.
DB370	Mount kit for mounting to 1.3-2.75 inch/(33-70 mm) OD mounting pipe.



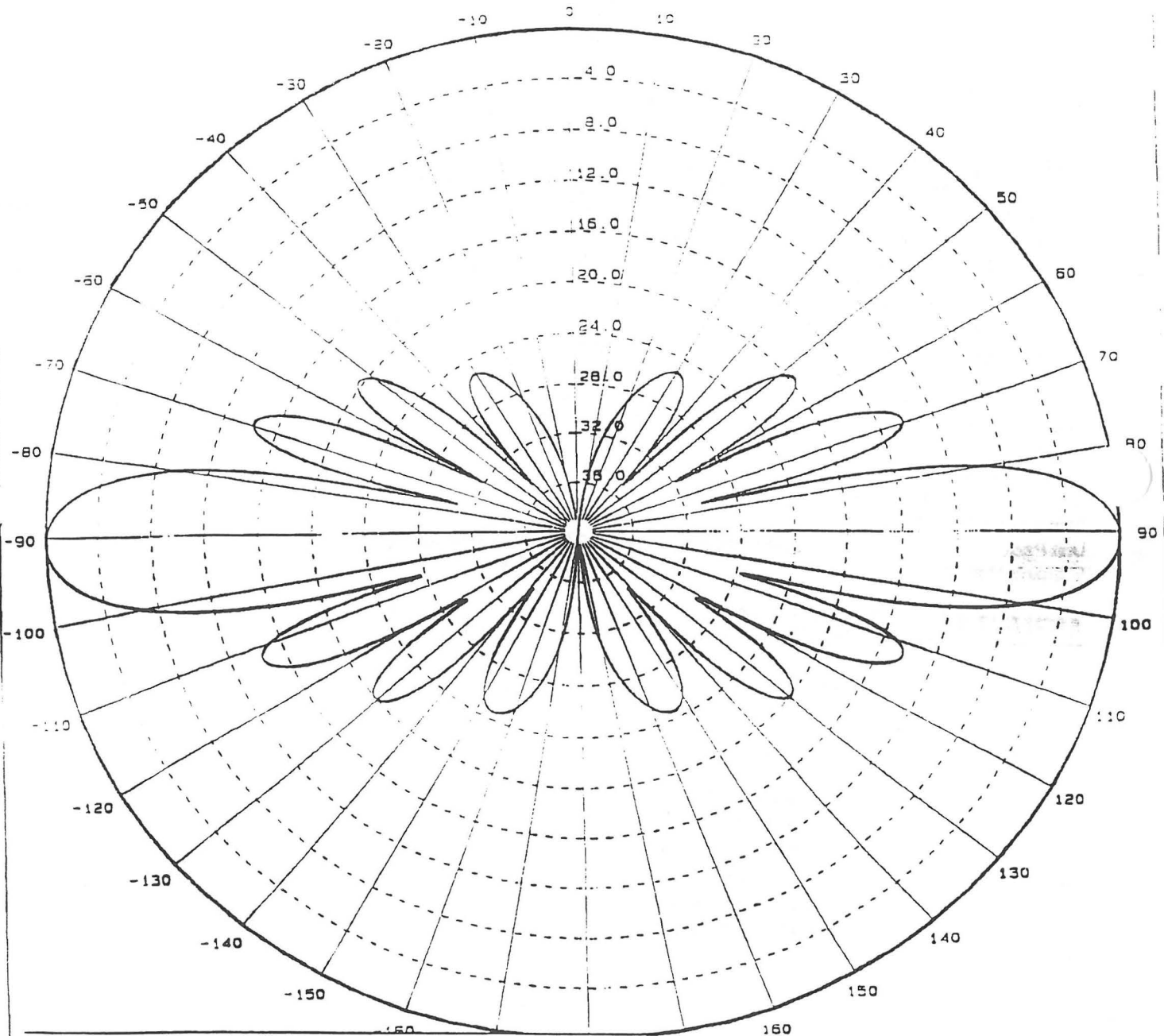
Typical Return Loss, 901-902 MHz



Elevation Pattern @ 901.5 MHz

~~ANDREW~~
ANDREW

Sine Directivity = 3.1 dBi
3 dB Beam width = 12.8 Deg.
Peak at -90.7 deg



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To	Steven Lockwood	From	Bob Wilson
Co.	PCINITE-6091-00	Co.	Andrew
Dept.		Phone #	(701) 873-8635
Fax #	(206) 749-9834	Fax #	(701) 873-2226

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IE

Date: 6/9/97

MEMORANDUM

Date: June 9, 1997

To: Jim Barta

From: Austin Roberts, RF Engineer

Subject: King Rd. Cell Site Power Density

The King Rd. cell site will have an Effective Radiated Power of 100 Watts. Attached is a calculation sheet detailing the power density levels that would be attributed to the King Rd. cell site. The maximum result of 0.000122 mW/cm^2 is far below the ANSI maximum allowable 1.3 mW/cm^2 .


Austin Roberts RF Engineer

6-9-97
Date

City of Milwaukee Community Development Department

Title: Power Density Calculations Submitted by: Pagenet Date: 7/8/97 # Pages: 2
File Numbers: CSO-97-04/UR97-02 Applicant: City of Milwaukee Exhibit #: 46



Power Density Calculation for: **King Rd.**
 Type of structure antennas are to be mounted on: **Water Tank**

Power Density Calculation Parameters:

Average transmit power: 2.5 Watts
 Maximum Effective Radiated Power (ERP): 100 Watts
 Radiation Center (RC): **130 ft.** 39.624 m
 Power density to be calculated at this height: 2 m
 Antenna type: **DB980H90E**
 Antenna downtilt: 0 degrees
 Ground reflection coefficient: 3 **
 Number of channels on site: 3

Distance from Site to Target	Angle	Attenuation Coefficient	Effective ERP	Power Density	% of Standard
m		dB	W	mW/cm ²	(1.3mW/cm ²)
0	90	27.4	0.18	0.00000921	0.00071
1	88	25.8	0.26	0.00001330	0.00102
2	87	26.1	0.25	0.00001238	0.00095
6	81	25.3	0.30	0.00001456	0.00112
12	72	28.1	0.15	0.00000711	0.00055
15	68	33.5	0.04	0.00000195	0.00015
18	64	38.8	0.01	0.00000054	0.00004
21	61	31.3	0.07	0.00000286	0.00022
24	57	27.2	0.19	0.00000685	0.00053
27	54	23.7	0.43	0.00001425	0.00110
30	51	19	1.28	0.00003894	0.00300
35	47	16.3	2.34	0.00006358	0.00489
40	43	19.9	1.02	0.00002430	0.00187
50	37	15	3.16	0.00005784	0.00445
60	32	10.7	8.51	0.00012154	0.00935
70	28	15.2	3.02	0.00003425	0.00263
80	25	23.9	0.41	0.00000373	0.00029
100	21	23.7	0.43	0.00000268	0.00021
120	17	13.6	4.37	0.00001977	0.00152
150	14	12.8	5.25	0.00001572	0.00121

Power Density is defined by the following:

$$\text{Power Density} = \frac{\text{Eff ERP} * \text{Gnd Relf} * \# \text{ Chnls}}{4 * \pi * D^2} \quad \frac{W}{m^2}$$

Conversion from W/m² to mW/cm² is defined by:

$$\frac{mW}{cm^2} = \frac{W * 1}{m^2 * 10}$$

** Typically 3 for minor lobes, 4 for main lobe

Maximum Power Density of: **0.0001215** milliWatts / cm² at
60 meters from base of structure

MEMORANDUM

TO: COMMUNITY DEVELOPMENT

FROM: Paul Roeger, Civil Engineer *PR*

RE: CSO-97-04/VR-97-02
40th and Harvey Street

DATE: June 10, 1997

Public Works has no objection to the proposed CSO and Variance for antenna installation on top of the water tower. There is no impact on public facilities such as water, sewer, storm drainage or streets. Public Works recommends approval.

RECEIVED
JUN 10 1997
CITY OF MILWAUKIE
COMMUNITY DEVELOPMENT

City of Milwaukie Community Development Department

Title: *Public Works memo* Submitted by: *Staff* Date: *7/8/97* # Pages: *1*
File Numbers: *CSO-97-04/VR-97-02* Applicant: *City of Milwaukie* Exhibit #: *5*



SOUTH METRO FIRE PREVENTION OFFICE

"SERVING MILWAUKIE & CLACKAMAS COUNTY F.D. #1"

3200 S.E. Harrison
Milwaukie, Oregon 97222

Business - 655-8537

FAX - 655-8880

Voice Mail - 655-8537

TO: Dan Pava, Senior Planner (Milwaukie Community Development)

FROM: Deputy Fire Marshal Ernie Badeau

SUBJECT: CSO-97-04 / VR-97-02

DATE: June 10, 1997

After careful review the South Metro Fire Prevention Office wishes to report that the granting of this request to install antennas on top of the water tower at 40th and Harvey is not in conflict with the U.F.C. (Uniform Fire Code) adopted by the City of Milwaukie. However, there is a requirement to maintain fire department access to this site with a minimum unobstructed width to be maintained at 20 feet.

If you need additional comments, or if I can provide you with further information, please let me know.

Yours in Fire and Life Safety,



Ernie Badeau,
Deputy Fire Marshal

COMMUNITY DEVELOPMENT
CITY OF MILWAUKIE
JUN 11 1997

RECEIVED

City of Milwaukie Community Development Department

Title: So. Metro Memo Submitted by: Staff Date: 7/8/97 # Pages: 1
File Numbers: CSO-97-04 / VR-97-02 Applicant: City of Milwaukie Exhibit #: 6



Response (please add pages if necessary):

File #CSO-97-04/VR-97-02

At the request of the City of Milwaukie City Council, the North Clackamas Parks and Recreation District is planning improvements to Water Tower Park. The Park District has concluded its public involvement process and has created a park master plan for City approval. We are currently completing a community service overlay for the improvements to the park.

It appears that no new structures will be added to the site (other than on top of the water tower) as a result of the telecommunication antenna, and therefore will not conflict with the recreation improvements planned.

RECEIVED

JUN 25 1997

CITY OF MILWAUKIE
COMMUNITY DEVELOPMENT

Agency: North Clackamas Parks & Recreation District

Signature: Diane Kean Campbell

Date: 6-25-97

City of Milwaukie Community Development Department

Title: Parkes Memo Submitted by: Staff Date: 7/8/97 # Pages: 1
File Numbers: CSO-97-04/VR-97-02 Applicant: City of Milwaukie Exhibit #: 7





COMMUNITY DEVELOPMENT
 101 SE JOHNSON CREEK BLVD.
 MILWAUKIE, OREGON 97206

PHONE: (503) 786-7650
 FAX: (503) 774-8236

Neighborhood Land Use Referral

TO: Jeff Marshall, Chair, Lewelling NDA Land Use Committee

FROM: Dan Pava, Senior Planner

CC: Angus Anderson, Ardenwald NDA Staff Liaison

The City of Milwaukie has received a land use application in your neighborhood as noted below. Please review this application and inform me in writing of the action taken by the Land Use Committee or full Association. To be included in the Staff Report, comments must be received by the date listed below. A copy of this cover sheet is also being sent to all members of the Land Use Committee and the Neighborhood Association chair. If you have any questions on the application or the process, please call me at 786-7652.

Date routed: 6/5/97	PC hearing date: 7/8/97	Comments due by: 6/20/97
File type: Community Service Overlay/Variance	File #: CSO-97-04/VR-97-02	
Criteria: Sections 321 and 700 of the Milwaukie Zoning Ordinance		
Applicant: City of Milwaukie	Site location: 40th & Harvey	
Address: 10722 SE Main Street Milwaukie OR 97222	Zoning: R-7	
Phone: 786-7521	Proposal: Install antennas on top of water tower.	

Comments: (attach separate sheet if necessary)

THE USE OF CITY PROPERTY FOR THIS COMMERCIAL ENDEAVOR APPEARS TO PLACE THE CITY AT RISK.
 AT A MINIMUM THE CITY MUST BE ASSURED THAT NO HEALTH HAZARDS ARE INHERENT IN THIS TYPE OF BUSINESS.
 THE MONTHLY MAINTAINANCE ACTIVITY ON THE TOWER INCREASES THE OPPORTUNITY FOR ACCIDENT.

RECEIVED

JUN 20 1997

CITY OF MILWAUKIE
 COMMUNITY DEVELOPMENT

Jean Michel
 JEAN MICHEL
 LEWELLING NDA LAND USE COMMITTEE

City of Milwaukie Community Development Department

Title: NDA Memo Submitted by: NDA Date: 7/8/97 # Pages: 1
 File Numbers: CSO-97-04/VR-97-02 Applicant: City of Milwaukie Exhibit #: 8



CONDITIONS OF APPROVAL FOR CSO-97-04 & VR-97-02:

Community Development

1. The project shall be developed in accordance with the drawings included as Exhibit 1 as reviewed and approved by the Planning Commission on July 8, 1997.
2. A maximum of 24 additional antennas and related equipment may be installed on the tower. The maximum height of any antenna shall not exceed 142 feet above grade.
3. Existing structures shall house electronic and mechanical equipment. Additional structures for this purpose shall be subject to Section 321.4. of the Milwaukie Zoning Code, and any applicable park master plan.
4. Access to the water tower and pump house #1 will be coordinated with the City of Milwaukie Facilities Manager. Access and safety procedures for wireless maintenance at the water tower shall be made available in writing and approved by the Facilities Manager.
5. The City shall work with the North Clackamas Parks and Recreation District to provide improved and aesthetically appropriate screening around pump house #1, and at least two bicycle parking spaces.

South Metro Fire Prevention

6. The applicant shall maintain access to this site with a minimum unobstructed width of 20 feet to meet the Fire Department requirements.

City of Milwaukie Community Development Department				
Title: <u>Conditions</u>	Submitted by: <u>Staff</u>	Date: <u>7/8/97</u>	# Pages: <u>1</u>	
File Numbers: <u>CSO-97-04 / VR-97-02</u>	Applicant: <u>City of Milwaukie</u>	Exhibit #: <u>9</u>		

CITY OF MILWAUKIE
COMMUNITY DEVELOPMENT DEPARTMENT
STAFF REPORT

Date: July 8, 1997 S-96-04
Application: Subdivision of Property in an R-7 Zone
Applicant: Dwayne and Mavis Buchholz
Property Owner: North Clackamas School District
Location: 5323 SE Logus Road, Milwaukie, OR 97222,
Tax Lot 3700 Tax Map 1 2E 30 DB (Exhibit 2)

RECOMMENDATIONS:

- 1) **That the Planning Commission Move to Approve Subdivision S-96-04, based on the findings contained in the Staff Report and subject to the conditions in Exhibit 1.**

PROPOSAL:

The applicant proposes to subdivide one existing parcel into five parcels (Exhibit 2). The property to be divided is the Lewelling Elementary School. Four new single-family lots would be created and the remainder of the school property would continue in school use. The proposal would not eliminate any of the playing fields on the school site. The applicant proposes to divide off the northeast portion of the property, located on a steep hillside that forms the outer bank of the historic flood plain of Johnson Creek. The new lots would take access from Willow Street. A pedestrian path to allow access to the school is proposed on the west side of Lot 1. (Exhibit 2).

SITE INFORMATION:

The existing property fronts on Logus Road, 51st Street and Willow Street. The parcel is zoned R-7 (Single Family Residential, 7,000 square foot minimum).

ADJACENT USES

<u>North</u>	<u>South</u>	<u>East</u>	<u>West</u>
Single-family	School	Single-family	Single-family

The portion of the property which is proposed for single-family home development is characterized by steep topography and heavy vegetative cover. The low end of the proposed lots is located at their frontage on Willow Street. From there, each site rises steeply to the top of the bank where the north edge of the Lewelling School's playing field begins. Soils on the site are generally stable. A wetlands analysis was required to determine whether there is a need for a Natural Resources Overlay application.

CITY OF MILWAUKIE COMMUNITY DEVELOPMENT DEPARTMENT

STAFF REPORT - Dwayne and Mavis Buchholz / Subdivision 96-04

July 8, 1997

Page 2

Staff has also required side elevations of the proposed development because of the need for substantial retaining walls.

BACKGROUND

The original application proposed an eight lot subdivision which included an additional three lots to be located at the northwest side of the subject property. This application would have required the improvement of Willow Street through to 51st Street. The application was determined to be incomplete in August of 1996. The response to staff's letter of incompleteness was not received until May 21, 1997. The proposal that came in was an amended proposal, eliminating the three lots on the northwest side of the subject site. While the supporting documentation is not totally consistent with this amendment to the proposal. Staff has verified that the intended proposal is for 5 lots total without phasing and no improvement of Willow through to 51st. This recommendation and conditions of approval are based on this information. This staff report and recommended action do not include any evaluation or approval of a phased project.

DISCUSSION:

Compliance With The Comprehensive Plan

The Comprehensive Plan designation for this site is Low Density (up to 6.5 dwelling units per net acre). This proposal will provide approximately 6 dwelling units per net acre. The proposed use is consistent with Objective 4, Policy 5, in that it maintains the single-family scale of development in the surrounding area.

Compliance With Development Standards of the R-7 Zoning District

The proposed subdivision is located within the R-7 (Residential, 7,000 square foot minimum) Zoning District. The proposed subdivision will meet all of the lot size and configuration requirements of the R-7 Zoning District.

<u>Lot Number</u>	<u>Min. Lot Area</u> <u>7,000 sq. ft.</u>	<u>Min. Lot Depth</u> <u>80 feet</u>	<u>Min. Lot Width</u> <u>60 feet</u>
1	7,121	117	61
2	7,029	117	60
3	7,029	117	60
4	8,200	117	70
5	10.69 acres	786	383

In addition, each of the proposed lots will have a north/south orientation in compliance with Section 1300 (Solar Access) of Milwaukie's Zoning Ordinance.

Geotechnical Report

The geotechnical report submitted for the project is based on homes with a daylight basement and a lower slab-on-grade concrete floor at the garage level, located 20 feet from the front property line. It is preliminary, based on hand borings because of the heavy vegetation on the site. Subsequent evaluation after the building site has been cleared may be necessary to determine the exact method of stabilization required. It is estimated that the retaining walls required for the site will be 10 to 15 feet high with smaller walls establishing the rear yard area. Specific recommendations have been made regarding foundation design and slab construction. Perimeter footing drains are recommended. Slopes should not exceed a 2/1 ratio.

Significant grading of the site appears to be necessary based on the geotechnical report. It is noted that any areas of loose or unstable earth will need to be removed and then recompacted in to an engineered fill. Staff is requiring that detailed grading and erosion control plans be submitted before the building permit is issued to verify compliance with the geotechnical evaluation, the building code and erosion control requirements.

Wetlands Evaluation

A portion of the subject property exhibits some potential for having natural resource values. To determine whether a Natural Resource Overlay application would be required, the applicant was asked to submit a wetland evaluation for the site. This evaluation has been submitted to the Community Development Department with this application. The study found that while portions of the site used to have wetlands, there are no jurisdictional wetlands on the site today. This is due to past construction and sewer and drainage facility installation. Staff has determined that absent indicators of currently existing wetlands, there is no natural resources requirement for this site.

Public Works Department

The Department of Public Works has reviewed this application and found that street improvements and an additional dedication of 5 feet along Willow Street are necessary. Sewer and water service are available to the site. Drainage Improvements and catch basins will be required. The conditions of approval found in Exhibit 1 reflect the specific requirements of the Department of Public Works.

South Metro Fire Prevention

South Metro Fire Division has not found that there are significant issues with the proposed development. Fire Division requirements have been incorporated into the Conditions found in Exhibit 1.

Neighborhood Association Comments

The Lewelling Neighborhood District Association Land Use Committee has identified no concerns regarding the proposed project, except a concern that the proposed pedestrian path be developed into stairs as a condition of this proposal. Staff agrees that this is appropriate, as the hillside would be very steep and difficult to negotiate with a limited width access and no improvements. A condition to this effect has been recommended in Exhibit 1.

CITY OF MILWAUKIE COMMUNITY DEVELOPMENT DEPARTMENT

STAFF REPORT - Dwayne and Mavis Buchholz / Subdivision 96-04

July 8, 1997

Page 4

Public Comments

No letters of public comment have been received regarding this application. Several general inquiries have been received and questions answered.

FINDINGS FOR SUBDIVISION S-96-04

1. The Applicant is proposing a 5 lot subdivision on property zoned R-7 (Exhibit 3). This subdivision will be called Willow Estates and will include four lots ranging in size from 7,029 to 8,200 square feet. The surrounding area is residential and is zoned R-7.
2. The proposed use is consistent with Objective 4, Policy 5 of the Comprehensive Plan, in that it maintains the single-family nature of the surrounding neighborhood.
3. The proposed lots will meet all the applicable requirements of the R-7 (Single Family Residential, 7,000 Square Foot Minimum) Zoning District.
4. The preliminary plat (Exhibit 3) meets all of the submission requirements of Section 17.16 of the Subdivision Ordinance.
5. Section 1303.3 (Solar Design Standards) of the City Zoning Ordinance requires that 80% of the lots in a new development be solar oriented (north/south orientation). All lots in this proposed subdivision are north/south oriented.
7. **Subdivision S-96-04 requires review through a Minor Quasi-Judicial process per Section 17.16.090 of the City's Subdivision Ordinance. This section refers to the process described in Section 1011.3 of the City's Zoning Ordinance. Public Notice has been issued in accordance with the provisions of Section 1011.3.**

EXHIBITS:

1. Conditions of Approval
2. Vicinity map
3. Proposed Subdivision S-96-04
4. Lewelling Neighborhood Association Land Use Committee Memo dated 6/23/97
5. Public Works Department Memo dated 6/24/97
6. South Metro Fire District Memo dated 6/19/97

EXHIBIT 1

CONDITIONS OF APPROVAL FOR SUBDIVISION 96-04

GENERAL

1. Lot configuration shall be as indicated on Exhibit 3, except that it shall show the required 5 foot public right-of-way dedication on Willow Street.
2. Submittal of the final plat shall follow all requirements of Section 17.20 of the City Subdivision Ordinance. The final plat submittal shall include timelines and plans for construction and completion of required improvements. This submittal must occur within one year of this preliminary plat approval.

COMMUNITY DEVELOPMENT

3. Homes on proposed Lots 1 through 4 shall comply with all requirements of the Zoning Ordinance. This includes the provision which prohibits the location of fencing located on top of retaining walls, the combined height of which measures more than 6 feet.
4. Retaining walls shall be designed and located to be as low as possible to allow homes to be built on Lots 1 through 4. Every effort shall be made to step the homes back into the hillside so as to reduce the height of the retaining walls necessary to create the homes. Any walls not directly supporting the home, or walls designed for the purpose of creating yard area shall be limited to a maximum height of six feet, if no variance is approved.
5. A detailed grading and erosion control plan shall be submitted for review and approval prior to issuance of a building permit for Lots 1 through 4. The grading plans shall show areas of cut and fill, location of retaining walls, elevations and percent slope of finished grades.
6. Every effort shall be made to preserve trees not located in the built area of Lots 1 through 4.
7. Designs for a walkway with stairs extending along the School District's 10 foot pedestrian access located to the west of Lot 1 shall be submitted to the Community Development Department, Public Works Department and Building Division for review and approval. The walkway shall be installed prior to occupancy of any structures to be built on Lots 1 through 4.
8. If deed restrictions are proposed, they must be provided to City staff for review, prior to final plat approval.
9. Appropriate crosswalk markings shall be installed to identify the access to the path strip from Winsor Drive across Willow Street.

City of Milwaukie Community Development Department

Title: Conditions Submitted by: Staff Date: 7/8/97 # Pages: 2
File Numbers: S-96-04 Applicant: Dwayne Curtis Buchholz Exhibit #: 1



PUBLIC WORKS

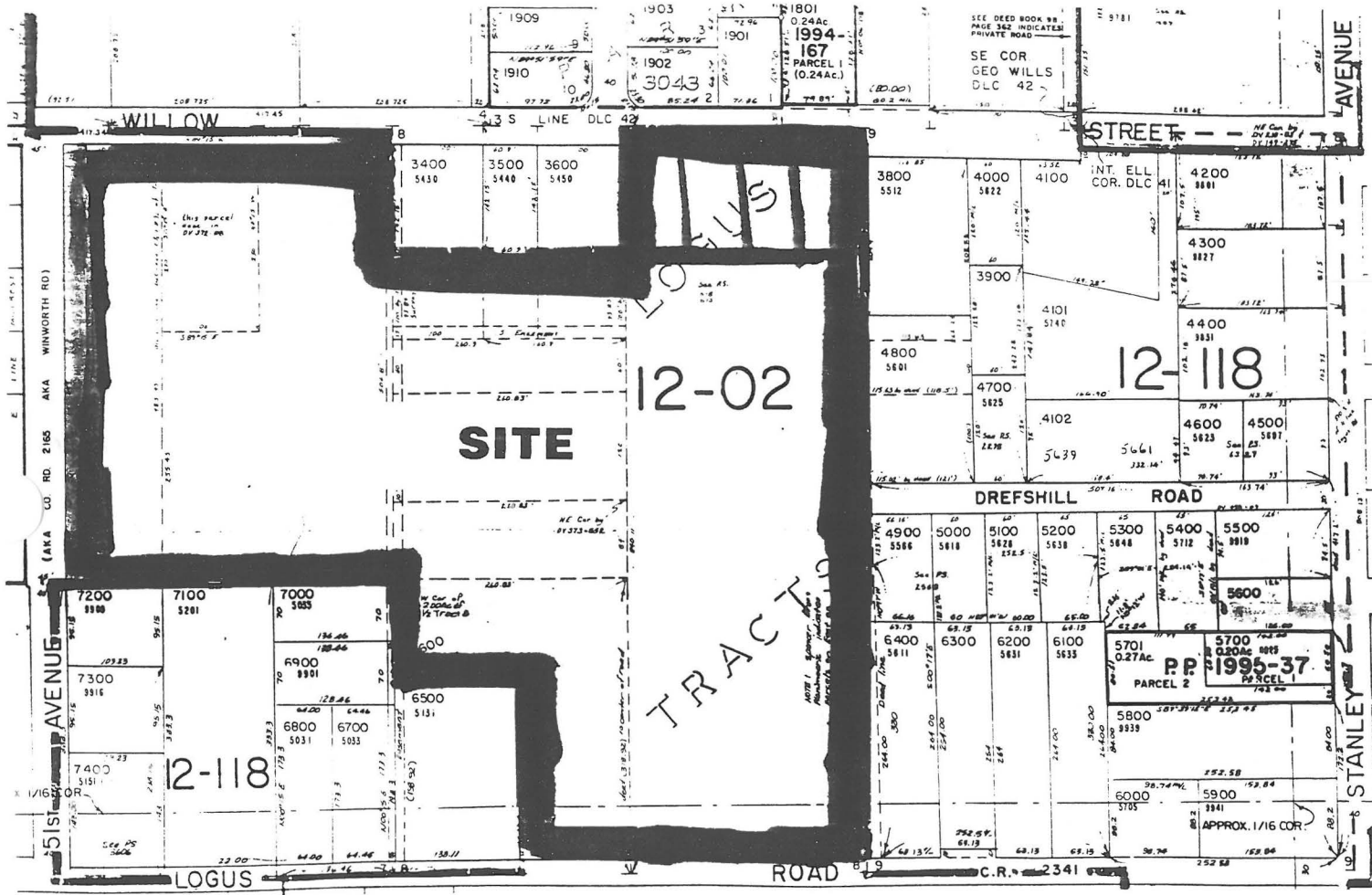
10. A dedication of an additional 5 feet on Willow Street must be made and included on the Final Map. The applicant shall install curb, gutter, sidewalk and storm drainage along the frontage of the property being developed, including the path strip.
11. City Sanitary sewer is available in Willow Street from an existing 8 inch main. As part of the public improvements, laterals must be extended to the property lines.
12. Water shall be provided by the City of Milwaukie. Water service is available in Willow Street from an existing 8 inch main. As part of the required public improvements, service lines must be installed with meter setters near the right-of-way line.
13. Storm drains are available on Willow Street from an existing 12 inch line at the intersection of Willow Street and Winsor Drive. A catch basin will be required along the curb at the low point to collect storm water. Drainage must be provided from the roof drains on each house to the curb line or directly to the storm system. Drainage around the foundation and/or from behind any retaining walls must also be piped to the storm system or to the curb.
14. Full construction plans, including an erosion control plan, for the public improvements must be submitted to Public Works and approved, and an inspection fee must be paid, prior to work beginning. The developer must sign a "Subdivision Agreement" and "Assignment of Funds" or complete the improvements before the plat will be signed by the City.
15. **All system development charges for water, sanitary sewer, storm drainage, and parks and recreation will be assessed at the time of review of the building permit applications.**

SOUTH METRO FIRE PREVENTION OFFICE

16. The fire flow requirement must be met. This requirement appears to be satisfied by the fire hydrant shown on SE Willow along the front of the property.

VICINITY MAP

S-96-04



City of Milwaukie Community Development Department

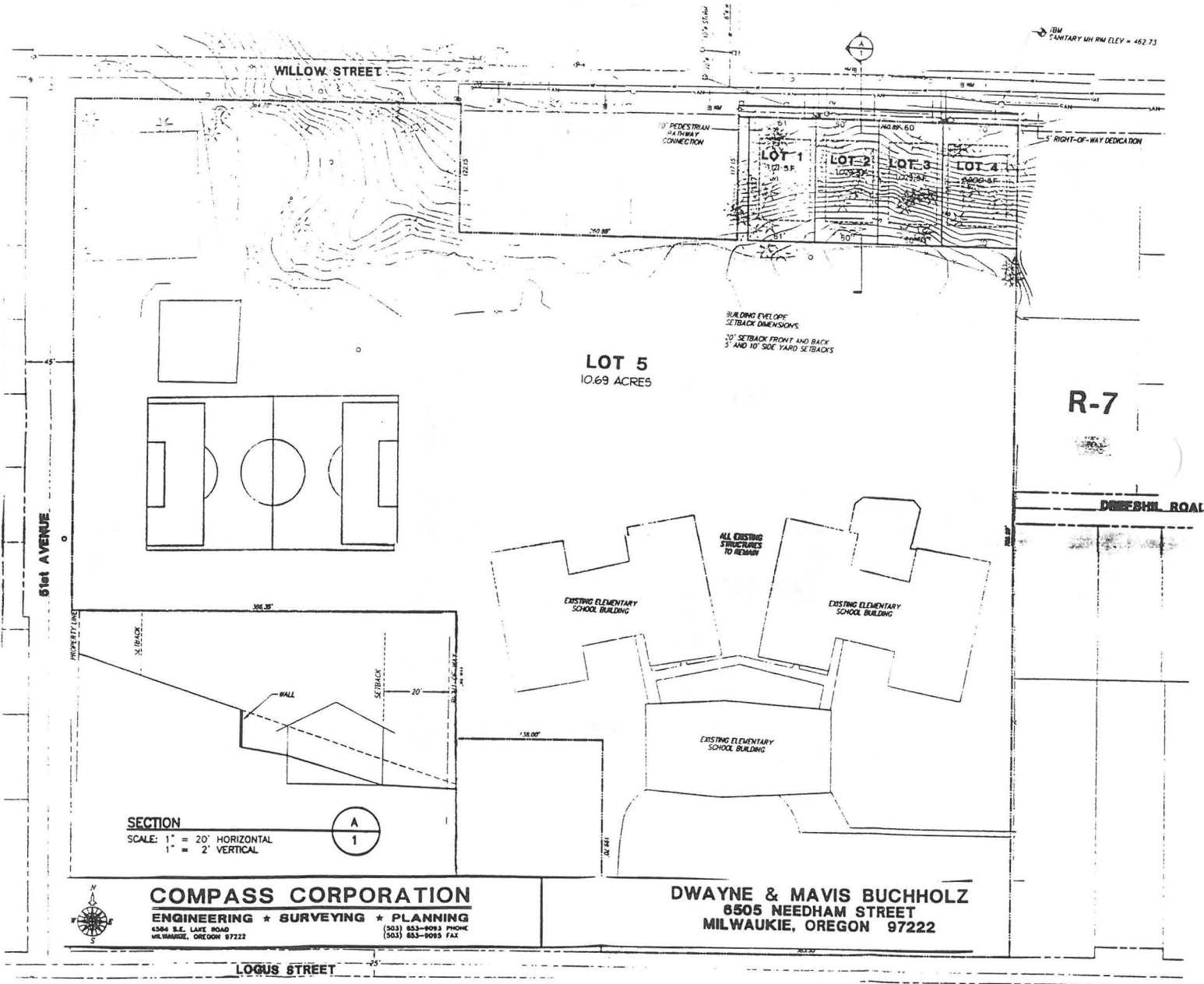
Title: Vicinity Map Submitted by: Staff Date: 7/8/17 # Pages: 1
 File Numbers: S-96-04 Applicant: Dwayne & Marissa Buchholz Exhibit #: 2



TENTATIVE MAP

BUCHHOLZ S-96-04

WILLOW ESTATES



SECTION
 SCALE: 1" = 20' HORIZONTAL
 1" = 2' VERTICAL

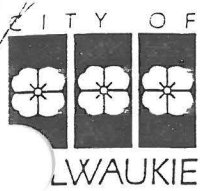
COMPASS CORPORATION
 ENGINEERING * SURVEYING * PLANNING
 4504 S.E. LAKE ROAD
 MILWAUKIE, OREGON 97222
 (503) 833-9093 PHONE
 (503) 833-9095 FAX

DWAYNE & MAVIS BUCHHOLZ
 6505 NEEDHAM STREET
 MILWAUKIE, OREGON 97222

City of Milwaukie Community Development Department

Title: Subdivision Map Submitted by: Applicant Date: 7/8/97 # Pages: 1
 File Numbers: S-96-04 Applicant: Dwayne & Mavis Buchholz Exhibit #: 3





COMMUNITY DEVELOPMENT
3101 SE JOHNSON CREEK BLVD.
MILWAUKIE, OREGON 97206

PHONE: (503) 786-7650
FAX: (503) 774-8236

Neighborhood Land Use Referral

RECEIVED

JUN 23 1997

TO: Jeff Marshall, Chair, Lewelling NDA Land Use Committee

FROM: Stacy Lawson, Assistant Planner

CC: JoAnn Herrigel, Lewelling NDA Staff Liaison

CITY OF MILWAUKIE
BUILDING DIV.

The City of Milwaukie has received a land use application in your neighborhood as noted below. Please review this application and inform me in writing of the action taken by the Land Use Committee or full Association. To be included in the Staff Report, comments must be received by the date listed below. A copy of this cover sheet is also being sent to all members of the Land Use Committee and the Neighborhood Association chair. If you have any questions on the application or the process, please call me at 786-7653.

Date routed: 6/10/97 **PC hearing date:** 7/8/97 **Comments due by:** 6/24/97

File type: Subdivision **File #:** S-97-04

Criteria: Section 302, 321 400, and 500 of the Zoning Ordinance; Chapter 17 of the Subdivision Ordinance

Applicant: Duane & Mavis Buchholz **Site location:** 5323 SE Logus Road

Address: 6505 SE Needham Street **Zoning:** R-7

Milwaukie OR 97222 **Proposal:** Subdivide 2 parcels into a total of five lots.

Phone: 771-6776

Comments: (attach separate sheet if necessary)

THE LEWELLING LAND USE COMMITTEE HAS REVIEWED THIS REFERRAL AND CAN SUPPORT THE SUBDIVISION OF THE SCHOOL PROPERTY TO PROVIDE 4 RESIDENTIAL LOTS AS SHOWN ON THE DRAWING MARKED "WILLOW ESTATES 12-2E-300B - TAX LOT 3700" DATED MAY 1997.

WE ARE CONCERNED ABOUT SURFACE WATER IN GENERAL AND THE APPROPRIATE DISPERSMENT OF SUCH. ALSO THE PROPOSED PATHWAY FROM THE SCHOOL TO WILLOW STREET WILL BE VERY STEEP AND CARE MUST BE TAKEN IN THE DESIGN TO MINIMIZE POTENTIAL ACCIDENTS.

JEAN MICHEL
LEWELLING LAND USE COMMITTEE

City of Milwaukie Community Development Department

Title: NDA Response Submitted by: Lewelling NDA Date: 7/8/97 # Pages: 1
File Numbers: 5-96-04 Applicant: Duane & Mavis Buchholz Exhibit #: 4



MEMORANDUM

TO: COMMUNITY DEVELOPMENT

FROM: Paul Roeger, Civil Engineer *PR 9/23*

RE: S-96-04
5323 SE Logus Road

DATE: June 24, 1997

This is the Seth Llewelling Elementary School property owned by the North Clackamas School District and although the address is on Logus Road the property proposed for subdivision lots fronts on Willow Street. Therefore, no public improvements will be required on Logus Road.

Willow Street is a dedicated 40 foot wide right-of-way with curb and gutter and sidewalk on the north side of the street. This property will be required to dedicate an additional 5 feet of right-of-way, install curb and gutter, sidewalk and storm drainage along the frontage of the property being developed, including the path strip.

Originally development was proposed on the western part of the property fronting on Willow Street. However, that portion has been removed from this proposal. When the western part is developed, the City will require Willow Street to be extended west to 51st Avenue to complete a much needed traffic circulation loop.

City sanitary sewer is available in Willow Street from an existing 8 inch main. As part of the public improvements, laterals must be extended to the property lines.

City water is available in Willow Street from an existing 8 inch main. As part of the public improvements, service lines must be installed with meter setters near the right-of-way line.

Storm drainage is available in Willow Street from an existing 12 line at the intersection of Willow Street and Winsor Drive. A catch basin will be required along the curb at the low point to collect storm water. Drainage must be provided from the roof drains on each house to the curb line or directly to the storm system. Drainage around the foundation and/or and from behind any retaining walls must also be piped to the storm system or to the curb.

Full construction plans, including an erosion control plan, for the public improvements must be submitted Public Works and approved, and an inspection fee must be paid prior to work beginning. The developer must sign a "Subdivision Agreement" and "Assignment of Funds" or complete the improvements before the plat will be signed by the City.

All system development charges for water, sanitary sewer, storm drainage, and parks and recreation will be assessed at the time of review of the building permit applications.

City of Milwaukie Community Development Department

Title: Public Works Memo Submitted by: Staff Date: 7/8/97 # Pages: 1
File Numbers: S-96-04 Applicant: Dwayne or Max's Buchholz Exhibit #: 5



SOUTH METRO FIRE PREVENTION OFFICE

"SERVING MILWAUKIE & CLACKAMAS COUNTY F.D. #1"

15711 S.E. 90th

Clackamas, Oregon 97015

Business - 655-8537

FAX - 655-8880

Voice Mail - 655-8537

TO: Stacy Lawson, Assistant Planner (Milwaukie Community Development)

FROM: Deputy Fire Marshal Ernie Badeau

SUBJECT: S - 96 - 04 - PROPERTY LOCATED AT 5323 S.E. LOGUS

DATE: June 19, 1997

After careful review the South Metro Fire Prevention Office wishes to report that the granting of this subdivision of two parcels into a total of five lots is not in conflict with the U.F.C. (Uniform Fire Code) adopted by the City of Milwaukie. There are several considerations that need to be conditions of use with regard to the proposed subdivision.

The first requirement is that Fire Department access be provided and maintained in the subdivision so there is a minimum, unobstructed street width of 20 feet. Second, there is no turnaround required unless the length of any access roadway exceeds 150 feet in length from the street, which shall then be subject to joint approval by both the Planning Department and the Fire Department. Third, the fire flow requirement for this subdivision shall be met, which appears to be satisfied by the fire hydrant shown on S.E. Willow along the front of the property. Fourth, when access is restricted by road width, or obstructive parking of passenger vehicles, the fire department access shall be clearly marked with red striping and red letters, or with signs that indicate "NO PARKING - FIRE LANE - TOW AWAY ZONE."

Yours in Fire and Life Safety,



Ernie Badeau,
Deputy Fire Marshal

City of Milwaukie Community Development Department

Title: So. Metro Memo Submitted by: Staff Date: 7/8/97 # Pages: 1
File Numbers: 596-04 Applicant: Darvynna Marie Buchholz Exhibit #: 6

