

1 BILL NO. 220

A BILL

ORDINANCE NO.
92- 238

2
3 FOR

4 AN ORDINANCE

5 AMENDING THE CITY OF KEIZER MASTER SEWER PLAN
6 (AMENDING ORDINANCE NO. 87-077)

7 The City of Keizer ordains as follows:

8 Section 1. FINDINGS. The City of Keizer adopts the findings
9 set forth in Exhibit "A" attached hereto and by this reference
10 incorporated herein.

11 Section 2. ADOPTION OF THE MASTER SEWER PLAN UPDATE. The
12 City of Keizer hereby adopts the Master Sewer Plan Update as set
13 forth in Exhibit "B" attached and by this reference incorporated
14 herein, and such Plan Update is hereby made a part of the Keizer
15 Comprehensive Plan in connection with facilities planning.

16 Section 3. AMENDMENT OF ORDINANCE NO. 87-077. Ordinance
17 No. 87-077 (Keizer Comprehensive Plan) is hereby amended by the
18 addition of the Master Sewer Plan Update.

19 Section 4. OFFICIAL RECORD. One copy of the Master Sewer
20 Plan Update referenced above shall be marked "Official Text" and
21 kept on file in the office of the City Recorder.

22 Section 5. SEVERABILITY. If any section, subsection,
23 sentence, clause, phrase, or portion of this Ordinance is for any
24 reason held invalid or unconstitutional by any court or board of
25 competent jurisdiction, such portion shall be deemed a separate,
26 distinct, and independent provision and such holding shall not
27 affect the validity of the remaining portions hereof.

28 ///

1 - ORDINANCE NO. 92-_____

LIEN, HOBSON & JOHNSON

Attorneys at Law
4855 River Rd. N.
Keizer, Oregon 97303
(503) 390-1635

1 Section 6. EFFECTIVE DATE. This Ordinance shall be effective
2 thirty days after its passage.

3 PASSED this 8 day of September, 1992.

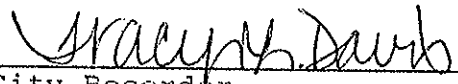
4 SIGNED this 9 day of September, 1992.

5
6



Mayor

7
8



City Recorder

9 824M.005

EXHIBIT "A"

**Findings Regarding the Adoption of the
Master Sewer Plan Update**
(See criteria set forth at Keizer Zoning Ordinance 4.15)

The City of Keizer finds that:

1. Pursuant to the criteria in Keizer Zoning Ordinance Section 4.15(a), the Master Sewer Plan Update complies with the statewide land use goals and related administrative rules as follows:

GOAL 1: CITIZEN INVOLVEMENT

Public hearings were conducted on this matter and review and adoption proceedings were consistent with local land use regulations.

GOAL 2: LAND USE PLANNING

The Master Sewer Plan Update amends the Keizer Comprehensive Plan. The adoption proceedings were conducted in a manner consistent with the requirements of the Keizer Comprehensive Plan, Keizer Zoning Ordinance, and applicable state law.

GOAL 3: AGRICULTURE LAND

This goal does not apply as the Master Sewer Plan Update does not involve land designated or zoned for agricultural use.

GOAL 4: FOREST LANDS

This goal does not apply as the Master Sewer Plan Update does not involve land designated or zoned for forestry uses.

**GOAL 5: OPEN SPACES, SCENIC AND HISTORIC AREAS,
AND NATURAL RESOURCES**

This goal does not apply as the Master Sewer Plan Update will not affect any open spaces, scenic and historic areas, or natural resources.

GOAL 6: AIR, WATER AND LAND RESOURCES QUALITY

This goal is met as the Master Sewer Plan Update will maintain air, water and land resources quality.

GOAL 7: AREAS SUBJECT TO NATURAL DISASTERS AND HAZARDS

This goal does not apply as the Master Sewer Plan Update will not affect any areas subject to natural disasters or hazards.

GOAL 8: RECREATIONAL NEEDS

This goal does not apply as the Master Sewer Plan Update will neither enhance or detract from recreational needs.

GOAL 9: ECONOMIC DEVELOPMENT

The Master Sewer Plan Update may improve the economy of the Keizer area in that housing, and therefore population will increase thereby drawing businesses to the Keizer area.

GOAL 10: HOUSING

The Master Sewer Plan Update will assist in meeting this goal in that, when completed, the sewer improvements will provide for additional housing development within the urban growth boundary.

GOAL 11: PUBLIC FACILITIES AND SERVICES

This goal is directly addressed by the Master Sewer Plan Update as such Plan Update provides a timely, orderly and efficient arrangement of public sewer facilities and services for both and rural development.

GOAL 12: TRANSPORTATION

This goal does not apply as the Master Sewer Plan Update will not affect the transportation system.

GOAL 13: ENERGY CONSERVATION

This goal does not apply as the Master Sewer Plan Update will not affect energy conservation.

GOAL 14: URBANIZATION

This goal is beneficially affected by the Master Sewer Plan Update in that the nature of the sewer improvements called for in the Plan Update leads to orderly and efficient transition from rural to urban land uses.

GOAL 15: WILLAMETTE GREENWAY

This goal does not apply as none of the provisions of the Master Sewer Plan Update will affect the Willamette Greenway.

**GOALS 16, 17, 18 AND 19:
ESTUARINE RESOURCES, COASTAL SHORELANDS,
BEACHES AND DUNES, AND OCEAN RESOURCES**

These goals do not apply as Keizer is not located in an ocean shoreland area.

The following findings relate to the criteria found in Keizer Zoning Ordinance (KZO) Section 4.15:

2. The Master Sewer Plan Update conforms with the Keizer Comprehensive Plan (KCP) goals, policies and intent, particularly with regard to the goals involving public facilities (KCP, page 53). One such policy is the planning and development of a timely, orderly and efficient arrangement of public facilities. In addition, the Master Sewer Plan Update will meet the policy of reducing the amount of public subsidy for public utilities. [KZO 4.15(b)].

3. Public need is best satisfied by the adoption of the Master Sewer Plan Update in that it provides for public facility needs and fits within the goals and policies of the Keizer Comprehensive Plan. [KZO 4.15(c)].

4. The Master Sewer Plan Update will not adversely affect the health, safety and welfare of the community, but rather will enhance such goals. [KZO 4.15(d)].

5. The criteria listed at Keizer Zoning Ordinance 4.15(e) is not applicable. Such criteria involves site-specific development and whether public facilities, services and transportation networks are in place. This Plan Update is not a site-specific one.

Findings with regard to this Ordinance are based on all written and oral testimony received at the City Council hearings on this matter. Such testimony includes, but is not limited to, staff reports, and other written documents submitted in connection with this Ordinance. This evidence is incorporated by this reference as if fully set forth herein.

City of Keizer, Oregon
Master Sewer Plan Update

Clear Lake Sector
(Basin 36)

1992

Proposed Trunk Line Sizing and Routing
and
Cost Estimates

BASIN 36

▪ Basin Characteristics

Basin 36 forms the northern sector of the Keizer Urban Growth area. Ultimately, the service area will encompass 955 acres, part of which is served by existing sewer lines along Wheatland and North River Roads. The design population calculated in this report is approximately 10,970 persons, at full development.

Land uses within the basin are predominantly low density residential. The basin does, however, include some 67 acres of industrially zoned property along North River Road. Smaller areas of commercial and institutional uses are also included.

Land slopes in the basin are generally flat to gently rolling with a few minor exceptions along the Labish Ditch and the steeper slopes west of Wheatland Road below elevation 177.

Soils types are tabulated below. These are of interest in the design of sewers for this area because they affect both the cost of the initial construction and the design allowances for infiltration and inflow (I/I) used to select pipe sizes for the proposed collection system.

<u>Soils Type</u>	<u>Depth to GW</u>	<u>Permeability</u>
Woodburn	> 30 "	0.63 - 2.0 "/hr
Amity	6-12	0.63 - 2.0
Willamette	> 72	0.63 - 2.0
Concord	> 72	0.06 - 2.0
Dayton	> 72	0.06 - 0.63
Cloquato	> 72	0.63 - 2.0
Newberg	> 72	2.0 - 6.3
Chehalis	> 72	0.63 - 2.0

▪ Design Criteria

The proposed collection system is designed based on criteria contained in the City of Salem's letter of May 20, 1992.

Briefly these criteria are:

Average Daily Sanitary Flow	75 gpcd
City of Salem Peaking Factor	3.2 to 1.6 ¹
Infiltration/Inflow Allowances:	
Pre 1970 Sewers	6000 gpad
1970-1979 Sewers	3000 gpad
1980 and newer Sewers	1500 gpad
Residential Densities: ³	
Single Family	11.76 persons/Ac.
Multi Family	23.40
Industrial Area Equivalent	55.50 ²

gpcd = gallons per capita per day
 gpad = gallons per acre per day

1. Varies, depending on average flow.
2. Industrial flows are calculated based on equivalent population density and a peaking factor of 2.0. 55.5 persons per acre is equivalent to 8,325 gpad peak flow. This is comparable to flow estimates used in other areas of the Salem sewer system.
3. Based on the City of Keizer Comprehensive Plan

▪ Proposed Collection System

Basin 36 can be served by extending the Lower Labish Trunk sewer easterly along the Labish ditch, and then northerly to the intersection of North River Road and Oneill Road. The proposed system is shown on Map 2.

Those parts of Basin 36 which already have sanitary sewer service depend on two interim pump stations on Wheatland Road and Clear Lake Road. These were built in the late 1980s and can be eliminated by the construction of the collection system proposed here.

This plan also provides capacity to serve the Chemawa Activity Center (CAC) in the future. The CAC area of 150 acres is expected to include a mix commercial and light industrial uses. Conservative estimates of the future sanitary sewer flows from this area have been made and provided for in the Middle Labish Trunk sewer portion of the collection system.

In several areas of the existing system capacity is limited. The most significant of these is the existing 21-inch interceptor extending from the Mc Nary Estates Subdivision to its point of connection to the City of Salem 75-inch interceptor in Lockhaven Dr. To provide the capacity needed to serve the ultimate development of Basin 36, costs to parallel this 21-inch line are included in the estimates below.

- Cost Estimates

The collection system illustrated on Map 2 is expected to cost \$ 2,232,784. These costs are detailed in Table on the following page. Costs are estimated for mid-1992 construction, although many of the proposed lines are not expected to be built for several years to come. Recent bid prices from Albany, Salem and other nearby communities were used to arrive at construction costs and these have been reviewed with contractors in the area.

- Financing

It is proposed that the collection system improvements described above be financed through the levying of assessments to the properties benefited. This may be done by both general and special assessment procedures.

A summary of these assessments is set forth at the end of the Table. The reasoning behind these calculations is explained below.

The Middle Labish Trunk sewer provides service to all of Basin 36. It will also have capacity for, and is designed to serve, the Chemawa Activity Center (CAC) at some future time. The same is true of the parallel 21-inch interceptor south of Mc Nary Estates. Therefore, it is proposed to finance both these lines through a per acre charge against all properties within Basin 36 and the CAC. The charge necessary to cover the cost is estimated to be \$ 1,222 per acre.

Because the Oneil Road Trunk Sewer, and the lines tributary to it, serve only areas within Basin 36, it is proposed to finance it through a similar per acre charge levied only against properties within that basin. The trunk sewer assessment necessary to defray that cost is estimated to be \$ 1,439 per acre. Property owners within Basin 36 would thus be required to pay a total trunk sewer assessment of \$ 2,661 per acre to pay for part of the Middle Labish Trunk Sewer and the Oneil Rd. subsystem.

Nearly all of the proposed sewers in the Oneill Road, Barrick Road, Clear Lake Road collection system provide "direct benefit" to the properties along them. That is, they may be used to provide service connections to existing dwellings and homes yet to be built in these areas. Properties, or portions of properties, within 200 feet of these sewers are considered to be so benefited. Such properties would be expected to pay the cost of an equivalent 8-inch sewer along their entire frontage. The estimated cost of this "special" assessment is calculated to be some \$20.94 per Front Foot.

Taking these all together, a 100 foot by 100 foot lot in the developing Clear Lake area could expect to pay the following assessments:

Middle Labish Trunk Assessment:

$$\frac{100' \times 100'}{43,560 \text{ sf/Ac}} \times \$ 1222/\text{Ac} = \$ 280.53$$

Oneil Rd. Trunk Assessment:

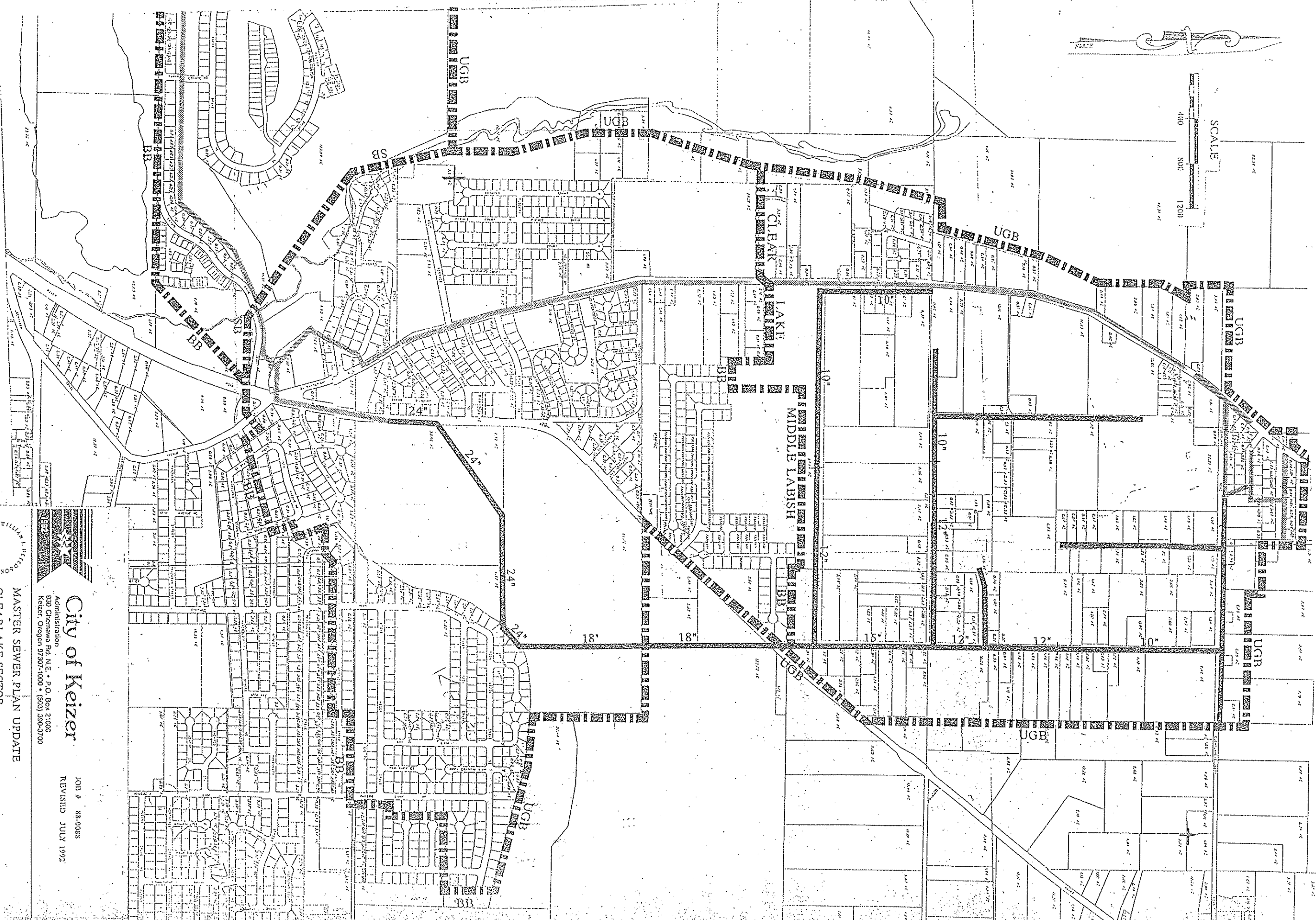
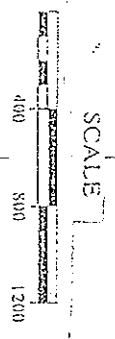
$$\frac{100' \times 100'}{43,560 \text{ sf/Ac}} \times \$ 1439/\text{Ac} = 330.35$$

Direct Benefit Assessment:

$$100 \text{ FF} \times \$ 20.94/\text{FF} = \underline{2,094.00}$$

TOTAL \$ 2,704.88

These estimates are subject to refinement and, under State law, final assessments must be calculated based on actual costs at the time of construction.



City of Keizer
Administration
530 Chinawawa Rd. N.E. • P.O. Box 21000
Keizer, Oregon 97307-1000 • (503) 390-3700

MASTER SEWER PLAN UPDATE
CLEARLAKE SECTOR
PROPOSED TRUNK LINE

JOB # 88-0088
REVISED JULY 1992

MAP 2

BASIN 36 - NEW SANITARY SEWER CONSTRUCTION

JO 88-0082

7-15-92 RWF

BASIN36\$.WQ1

COST ESTIMATES

Line From - To	30" LF Avg. Depth Cost	24" LF Avg. Depth Cost	21" LF Avg. Depth Cost	18" LF Avg. Depth Cost	15" LF Avg. Depth Cost	12" LF Avg. Depth Cost	10" LF Avg. Depth Cost	8" LF Avg. Depth Cost	MH	ASSESSABLE LENGTH FT.	TOTAL ESTIMATED CONSTRUCTION COST
Middle Labish Trunk N. River Rd. to Oneil Rd.	400 21' \$70,000	2,315 8' \$196,775		2,715 20' \$230,775					17 \$30,600	2,150	\$528,150
Meadows Trunk to Clear Lake Rd.					1,060 22 \$84,800	1,060 20 \$74,200	1,600 16 \$96,000		3 \$5,400	4,260	\$260,400
Meadows Trunk to Wheatland Rd.						1,030 12' \$58,092	2,220 20' \$150,960		12 \$21,600	3,250	\$230,652
Meadows Trunk Along Wheatland Rd.						1050 12' \$59,220			4 \$7,200	0	\$66,420
Barrick Rd. Trunk East/West Reach						1,650 12' \$93,060	400 10' \$20,600	650 8' \$21,775	7 \$12,600	2,700	\$148,035
Barrick Rd. Trunk North/South Reach							650 12' \$44,038	1,200 8' \$40,200	5 \$9,000	1,850	\$93,238
Clear Lake Rd. West Reach								1,370 10' \$51,718	3 \$5,400	1,370	\$57,118
Clear Lake Rd. East Reach								660 8' \$22,110	2 \$3,600	660	\$25,710
"A" Line								1,480 8' \$49,580	4 \$7,200	1,480	\$56,780
Oppeck Road								750 8' \$25,125	2 \$3,600	750	\$28,725
Parallel 21-inch and Misc. Replacements			1,850 16' \$222,000			850 10' \$51,000			10 \$18,000	2,700	\$291,000
SUB TOTAL - LIN. FT.	400	2,315	1,850	2,715	1,060	4,590	4,870	6,110		21,170	23,910

Lin. Ft.

SUBTOTAL - NEW SAN. SEWER IN BASIN 36 **\$1,786,227**

*** Includes 437 acres in Basin 36 plus 150 acres in the CAC.

Design, Engineering, Survey, Insp. and Testing @ 10% **\$178,623**

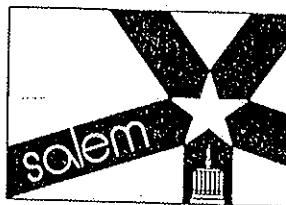
** Includes only the 437 acres in the Clear Lake sub-basin.

Admin., Legal and Contingencies @ 15% **\$267,934**

* These sewers provide direct service to the areas along their routes.

TOTAL ESTIMATED PROJECT COST **\$2,232,784**

ASSESSMENT SUMMARY	TOTAL COST	COST PER UNIT
MIDDLE LABISH TRUNK SEWER AND, PARALLEL 21"	*** \$717,469	\$1,222 PER ACRE
CLEARLAKE BASIN TRUNK SEWERS	** \$628,821	\$1,439 PER ACRE
DIRECTLY ASSESSABLE COSTS	* \$886,494	\$20.94 PER FF
	\$2,232,784	



CITY
OF SALEM,
OREGON

City Hall / 555 Liberty St. S.E.
Zip Code 97301-3503

Public Works Department
(503) 588-6211
FAX (503) 588-6025

July 20, 1992

Mr. Wally Mull, Director
Keizer Public Works Department
PO Box 2100
Keizer OR 97307-1000

**SUBJECT: REVIEW OF KEIZER SEWER SECTOR PLAN FOR BASIN 36
(CLEAR LAKE AREA)**

Dear Wally:

Thank you for the staff presentation on the proposed amendment to the Keizer Sewer Master Plan for the Clear Lake Area. Our staff has reviewed the fifth draft, dated July 13, 1992, for basic concepts. We have made suggestions for minor revisions directly to Bill Peterson, and it is our understanding that the revisions will be incorporated in the final draft before it is presented to your City Council for adoption.

We have not reviewed in detail the financial conclusions or pipe size recommendations contained in the documents, nor the cost estimates and assessment methodologies. The purpose of our review was to ensure compatibility between the initial assumptions used by both Keizer and Salem in planning efforts.

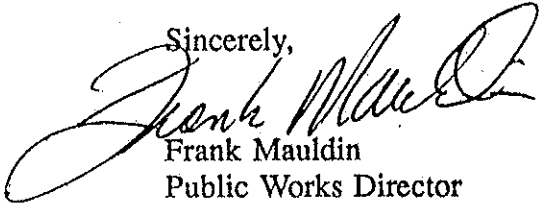
We are in agreement with the basin boundaries, flow allowances, and technical criteria contained in the document presented. The schematic plan showing proposed routing of future lines appears to be a logical approach to serving Keizer's long-term needs.

Our examination of the sewer computer model data indicates a need for minor capacity improvements at the lower end of the Wheatland trunk, in the vicinity of McNary Heights Court, to relieve surcharging. We would recommend the addition of that project to the Master Plan, with construction scheduling to be resolved based on development needs in that sub-basin.

Wally Mull, Director
July 20, 1992
Page 2

We strongly support the gravity sewer approach recommended by your engineer, and the elimination of any need for pump stations. The higher life-cycle costs and maintenance burden posed by a pump station are not acceptable when a gravity option is available which will provide service to this area as well as the other developing basins to the east of North River Road.

Sincerely,



Frank Mauldin
Public Works Director

In/c15/lkmp.tim

c: Bill Peterson, William I. Peterson Engineering, Inc.
John Morgan, Director, Keizer Community Development
Kenn Battaile, Planning Administrator
Karl Goertzen, City Engineer
Dave Siegel, Transportation/Development Services Manager
Paul Eckley, Civil Engineer IV
Tim Gerling, Chief Planning Services Engineer