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## Issues Statement for Unincorporated North Clackamas County

Trell Anderson  
*Portland State University*

Will D'Andrea  
*Portland State University*

Tom Boullion  
*Portland State University*


Aaron Corman  
*Portland State University*

Donna Davis  
*Portland State University*

*See next page for additional authors*

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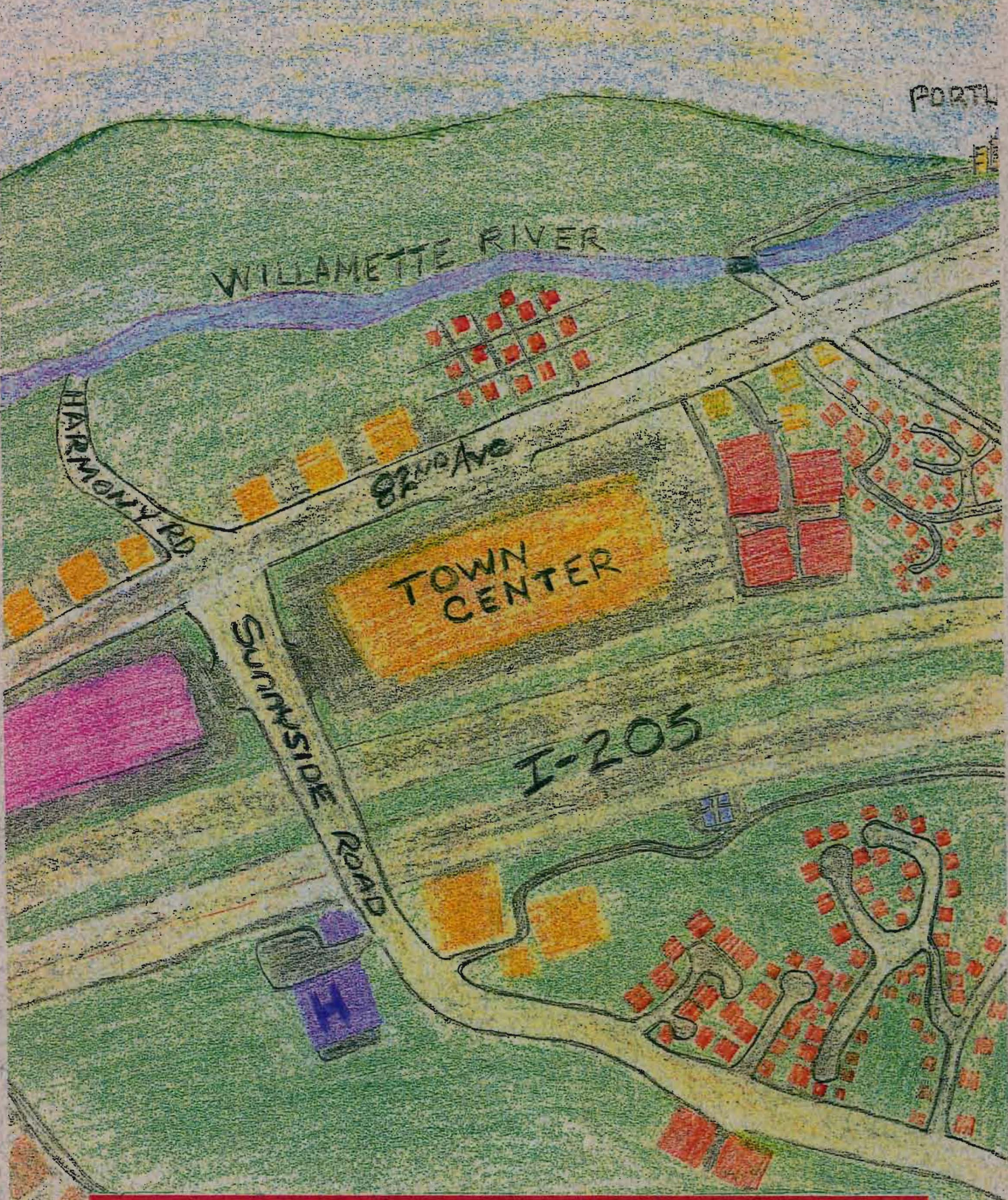
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**Authors**

Trell Anderson, Will D'Andrea, Tom Boullion, Aaron Corman, Donna Davis, Mark Greenhite, Barry Hennelly, John McKnight, Nan Stark, and Andy Wilch

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**UNINCORPORATED  
NORTH CLACKAMAS COUNTY  
ISSUES STATEMENT**

**Issues Statement for  
Unincorporated  
North Clackamas County**

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**USP 558 Comprehensive Planning Workshop  
Revised - March 1993**

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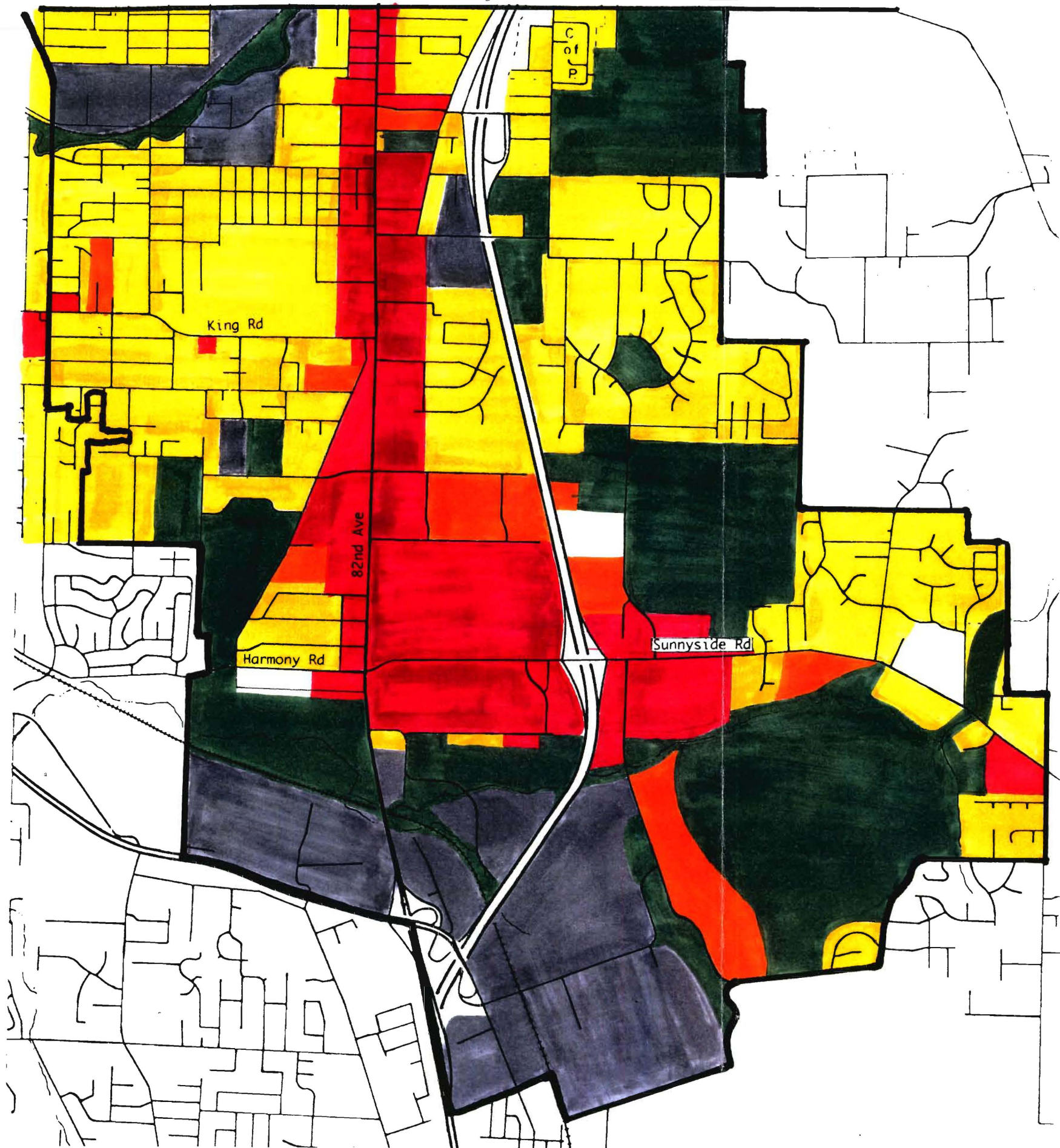
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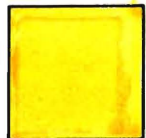




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# Land Use Map

LEGEND



-  SINGLE F AMILY
-  MULTI-FAMILY
-  COMMERCIAL
-  INDUSTRIAL
-  PARK/OPEN SPACE

PREPARED BY  
 THE PORTLAND STATE UNIVERSITY  
 PLANNING WORKSHOP  
 1992-93

# Issue Analysis

## Introduction

This document was produced as a student project by students in the Master of Regional and Urban Planning (MURP) program at Portland State University during the Comprehensive Planning Workshop, Fall 1992. By focusing on a particular sub-area within Clackamas County, we hope to generate ideas and compile issues that may not have been seen in quite the same light as from a county-wide perspective. A separate document focusing on implementation will be published in March 1993.

Contacts have been made with local neighborhood planning associations and business owners to begin the public participation process. Public forums will be held for residents and business owners to participate in a visioning process. An educational element will be introduced as forum participants are informed about the planning process and recent governmental mandates that will be shaping urban policies and urban form.

## Study Area and Boundaries

The study area is identified as the Clackamas Town Center area (CTC), and is located in unincorporated northwest Clackamas County. The area is most widely known as a regional shopping area anchored by the Clackamas Town Center Mall and several new shopping complexes on the surrounding streets of Sunnyside and 82nd Avenue. The area is well served by an auto dominated transportation system defined by I205, 82nd Avenue, Highway 224, and Highway 212, serving as gateway to Clackamas County from outer Southeast Portland and to the Mt. Hood National Forest to the east. Serving as borders to the area are Multnomah County to the north, Milwaukie city limits and Highway 224 to the west, Highway 224 and Mather Road to the south, and 122nd Avenue and Happy Valley city limits to the east. For purposes of this study it was decided to divide the study area into four sub-areas representing somewhat discrete units of homogeneous characteristics. These homogeneous characteristics were derived from comparisons of demographic and housing stock studies.



# History

This year Clackamas County and the state will celebrate the sesquicentennial of the first pioneer trek across the Plains, into the Oregon Country by way of the Oregon Trail. Before settlers migrated west to Oregon, the Oregon Country was composed of four districts. Clackamas was the name of one of these divisions. Then, the Oregon Country extended from the California-Nevada-Oregon border, eastward to the Rocky Mountains. Its northern border was Russian America, now Alaska. The Pacific Ocean formed its western boundary.

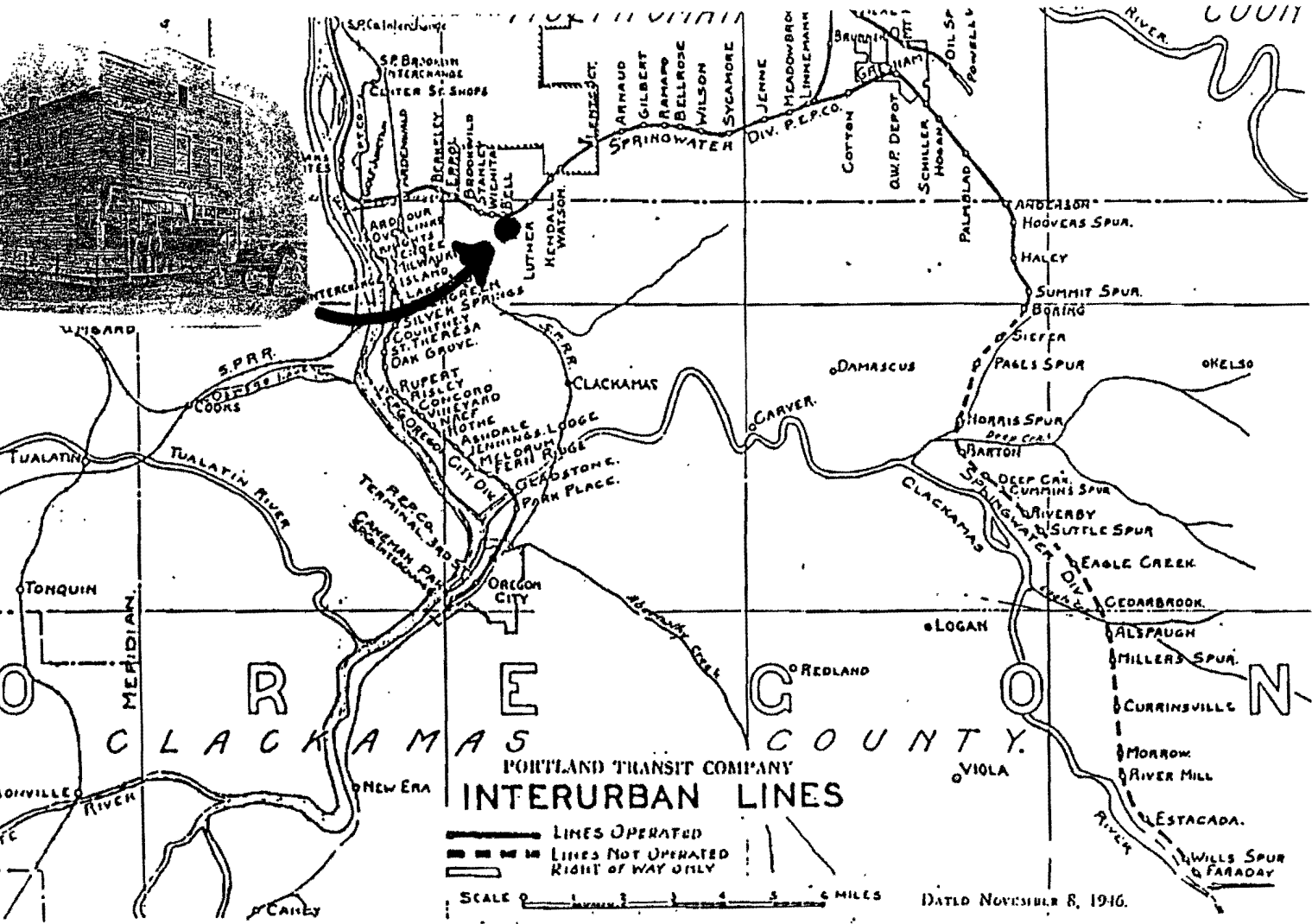
Within Oregon Country the four districts were named: Twality, Clackamas, Yamhill, and Campooick. Clackamas was the third district. It extended from the mouth of the Pudding River to the Rocky Mountains and it reached northward to Russian America (latitude 54 degrees 40 minutes, approximately half the distance from Vancouver, British Columbia to the current Alaska border).

In 1853, the U. S. Congress created the Washington Territory out of the northern part of the Oregon Country and the Clackamas District passed into history. The Oregon county which now bears this title is much smaller than its namesake. Today Clackamas County's southern boundary is delineated by the Pudding River and the Butte River. Multnomah County is the northern border. Its western edge is the Willamette River.

In 1842, Dr. John McLoughlin named the settlement area on the east bank of the Willamette River, Oregon City. In that same year the first settlers followed the Oregon Trail west to Oregon City. Soon the community became a major American settlement on the West Coast.

Prior to the arrival of settlers or fur traders, the Clackamas Indian tribe lived along the Clackamas River; however, their numbers dropped because members lacked immunity to the diseases that arrived with the newcomers. In 1865, the remaining members of the tribe were moved to the Grande Ronde Reservation.

During the 18th century, horses provided the primary means of travel. Intra-regional travel was by carriage or private horse. Inter-regional or interstate travelers could go on private horse or by overland stage line. By the 1870's horse drawn street car service began in Portland, a settlement some 16 miles northwesterly of Oregon City. In the 1880's street railway services sprouted on the east side of the Willamette River and by 1893, railway service reached Oregon City. At the turn of the century, the Oregon Water, Power and Railway Company provided trolley service to rural Multnomah and Clackamas Counties. Bell Station (see map and photo on the following page), was one of the station stops. It is located in the study area.



The Oregon Water, Power and Railway Company planned to build a hydro-electric power plant on the Clackamas River at Cazadero (now known as Faraday, it is located south of Estacada). The Cazadero line was part of the Springwater Division of the rail system, the name probably evolved because the Cazadero dam site is located near Springwater. The route transported men and equipment to the power plant as well as passengers and fishermen seeking recreation at the Springwater end of the line. By 1906, the Oregon Water & Power Railway Company was purchased by Portland General Electric & Portland Railway Company. In 1908 the interurban railway properties formed the Portland Railway Light and Power Company.

Since that time much of the history of the study area is shrouded in mystery, Unincorporated North Clackamas County is a vague designation. Because of this fact, history has not readily attached itself to the area. A settlement name like Lents, for example, undergirds historical development. It is like the grain of sand which encysts itself in the body of an oyster. Over time, the grain forms a pearl. History of community is similar to a pearl's development. The name is the protective vessel, within which the pearl germinates and grows. However, without the a name as an edifice for progress, community never deposits its history, the precious pearl ennobling its existence.

However without named settlement, old maps of the study area provide some guidance as to its history. Old road maps indicate that the early developers had a sense of humor. They named the streets adjacent to King Road – Queen Road and Jack Road. This gesture earned this lowlands locations the title "poker flats." Later developers of the hills adjacent to Mt. Scott and Mt. Talbert gave their streets titles reflecting the grandeur of the homes and their scenic orientation : Vista View Lane, Valley View Terrace, and City View Drive.

Throughout history, cities emerged on the banks of waterways or along trade routes. The livelihood of the community depended upon what came down the pike (or what went out by it). In modern times, the importance of waterborne transportation has declined while overland routes, carry fleets of vehicles on a sea of concrete. In the present as in yesteryear the synaptic process called transportation is as much a function of daily life as each breath is to the body.

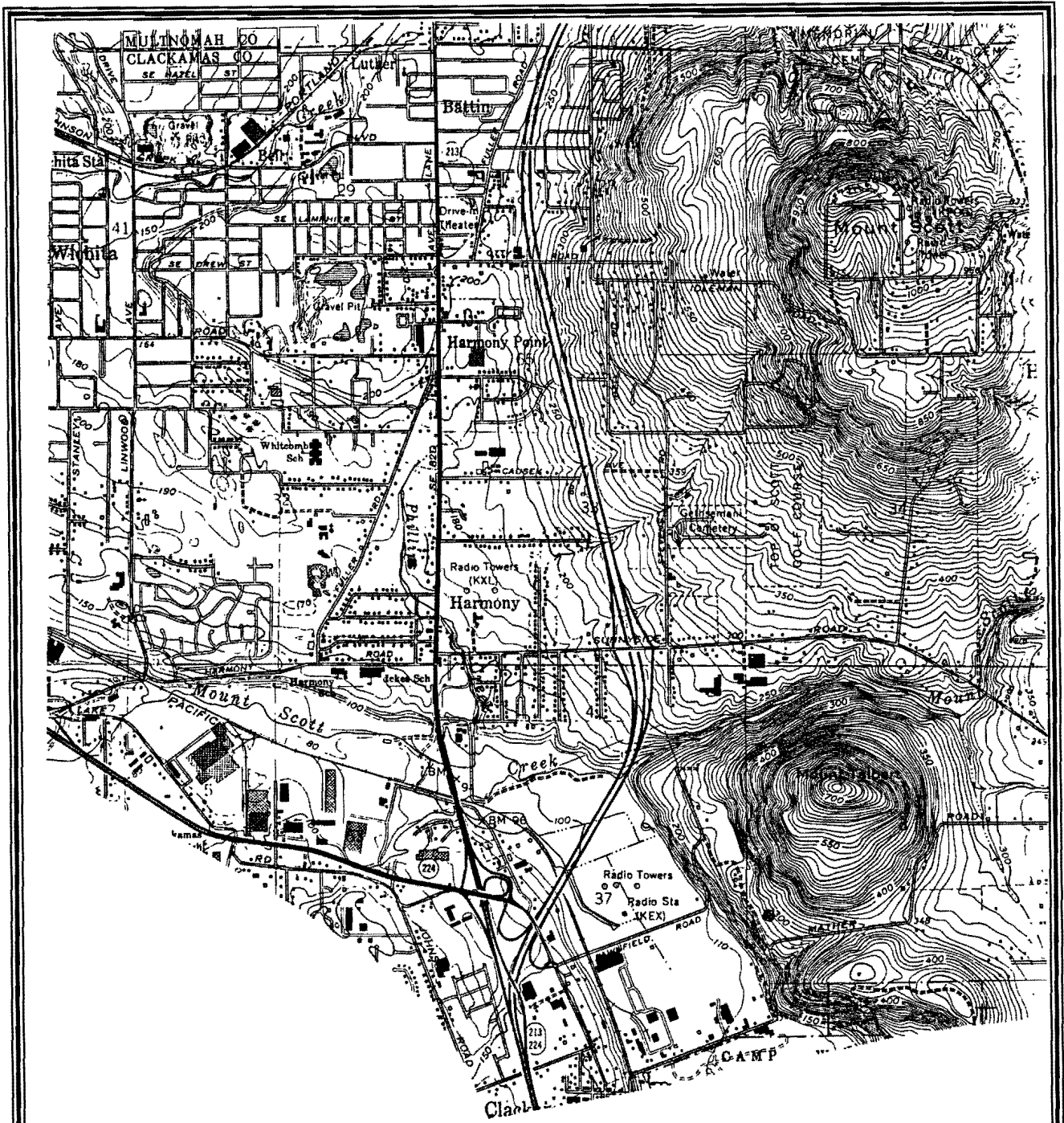
The city-building cycle has begun anew in our study area. With the advent of Interstate 205 ( in the 1970's) and the subsequent development of Clackamas Town Center (opened in 1981), both facilities created the fundamental elements of a city. This infrastructure will support the evolution a new-century city.





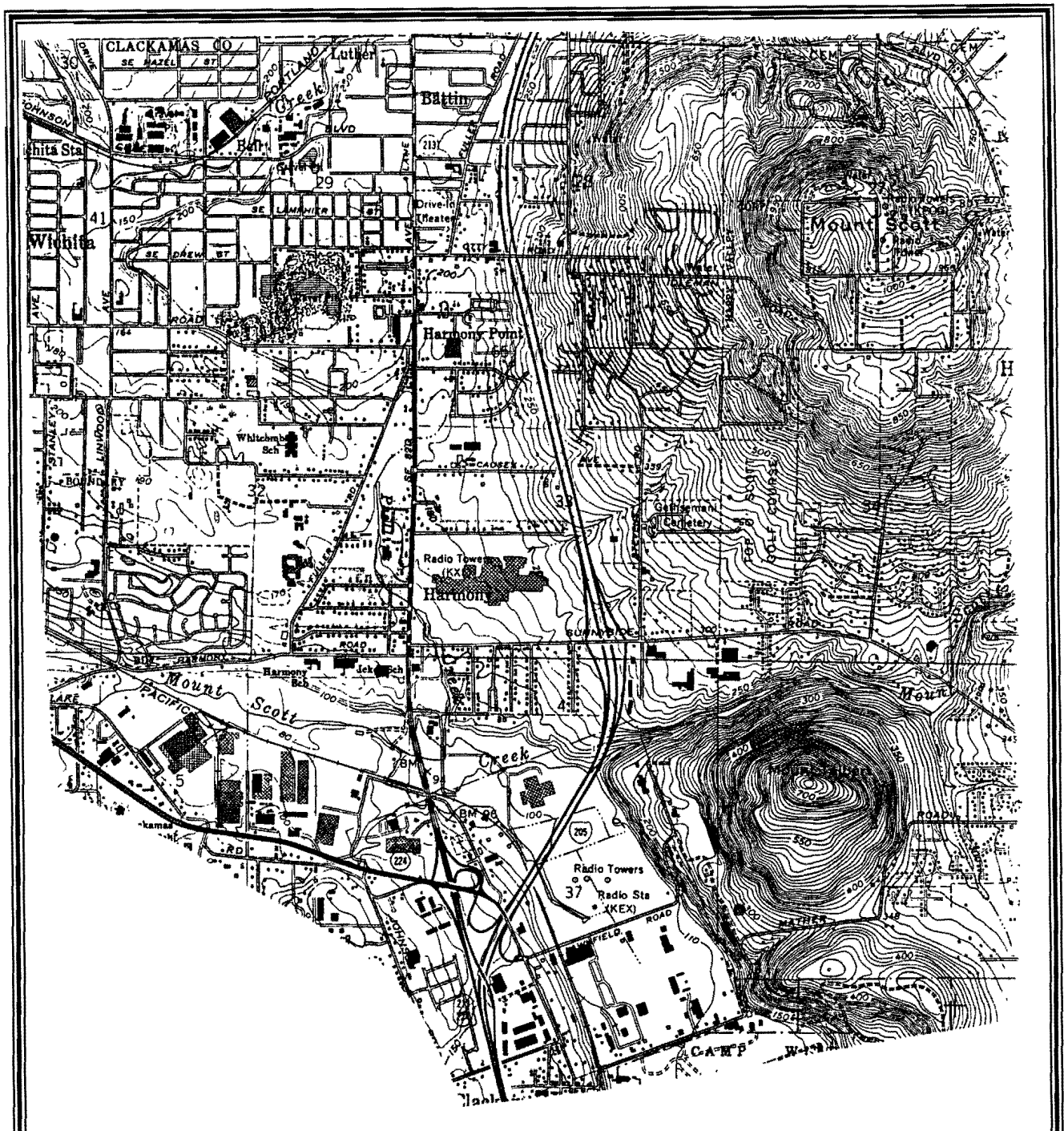
This 1970 revision of the U. S. Geological Service map reveals the completion of Highway 224 located in the southwest corner of the map. The industrial park lying between Mather Road and Lawnfield Road has added several times more tenants than the facility housed almost a decade earlier. The Gravel pit located westerly of Harmony Point, near King Road, has doubled its excavation radius. However, overall the community is still semi-rural.

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This map is the 1975 revision of the U. S. Geological map. It reveals the first stages of the Kaiser Sunnyside Hospital facility (located proximate to the Sunnyside Rd. interchange with I-205, on the southeastern side). The most significant change is the removal of the orchards and the completion of Interstate 205 from the eastbank of the Willamette River northeasterly beyond the study area. However, the interstate was not complete as far as Lents, a Multnomah County neighborhood located north of the study area. The industrial park located adjacent the Southern Pacific's mainline and northerly of Highway 224 has doubled its occupancy.

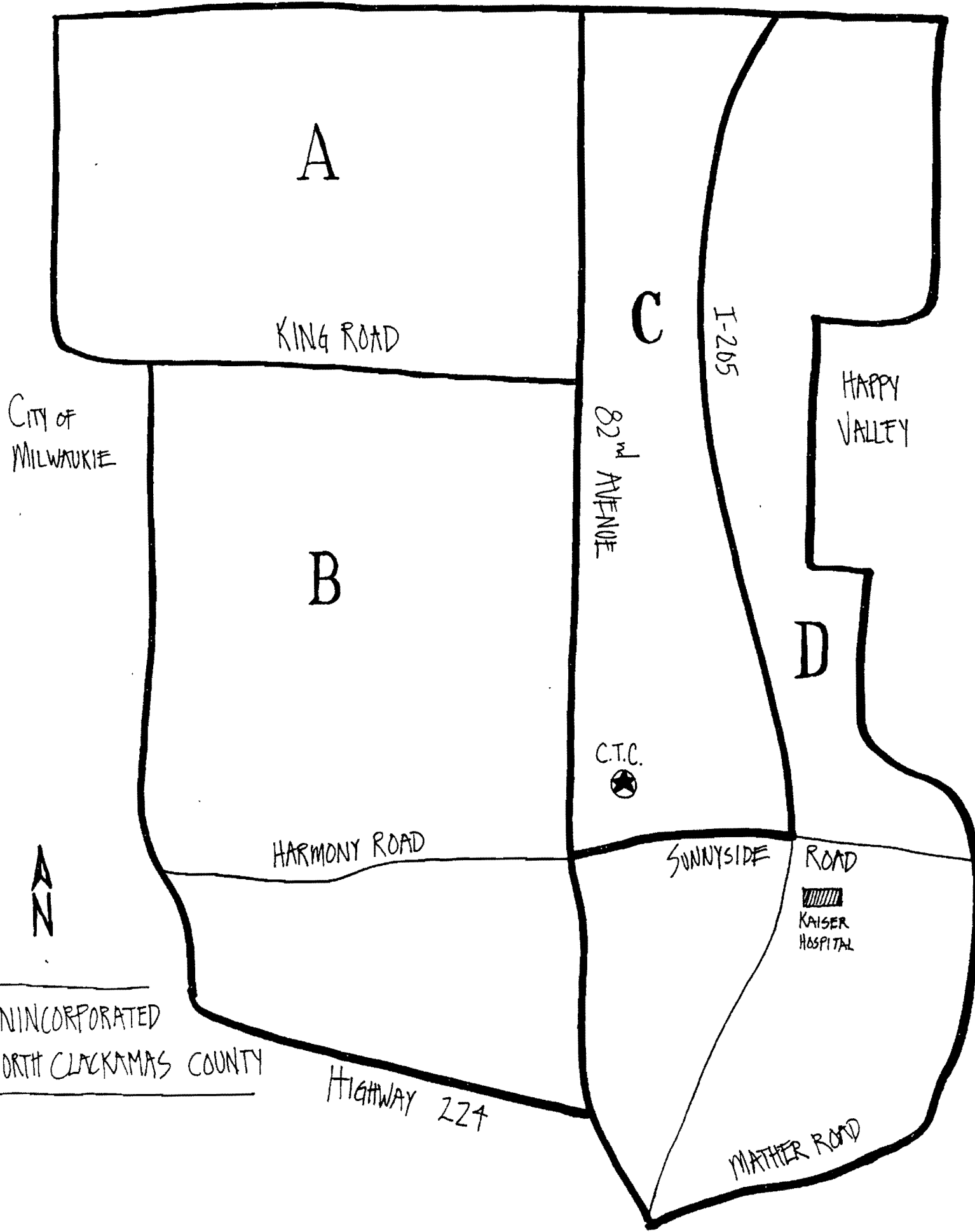
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This is a U.S.G.S. map of the study area in 1984. Here we see the land uses change as the KXL Radio towers vanish and the Clackamas Town Center replaces them. Residential development easterly of the I-205 interchange explodes as the new interstate creates a juncture for development of a "city." The industrial park adds new facilities and the Gravel pit converts to a new use as manufactured-home park. The New Hope Community Church moves its 6,000 member congregation to its newly constructed 119,000 square foot facility on Stevens Road. The church is located near the Sunnyside interchange of I-205.

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MULTNOMAH COUNTY





## Four Sub-Areas

In an auto dependant region crossed with heavily used major arterials, it is not suprising that these same arterials which move traffic through the area also serve to delineate development within the area. I205 and 82nd Avenue separate sub-areas in a north/south direction while King Road, Highway 224, and Sunnyside Road divide sub-areas in the east/west direction.

A) Sub-area A consists of census tract 216.01 and block group 1 of census tract 210. This area is bordered by the Milwaukie city limits to the west, Multnomah County to the north, King Road to the south, and 82nd Ave. to the east.

B). Sub-area B consists of block groups 1, 2, and 3 of census tract 216.02 and block group 1 of census tract 215. This area is bordered by the Milwaukie city limits to the west, King Road to the north, 82nd Avenue to the east, and Highway 224 to the south.

C). Sub-area C consists of census tract 222.01. This area is bordered by Multnomah County to the north, 82nd Avenue to the west, and Interstate 205 to the south and east.

D). Sub-area D consists of block groups 3 and 4 of census tract 221.02 and block groups 2 and 3 of census tract 222.02. This area is bordered by Interstate 205 to the west, Highway 224 and Mather Road to the south, 122nd Ave and Happy Valley city limits to the east, and Multnomah County to the north.

## Transportation Related Legislation

Transportation infrastructure in the study area, initially developed to rural road standards, are quickly being stripped of their capacity. Many other factors are causing this portion of Clackamas County's road system to come under careful scrutiny. Recent federal, state , and regional regulations will have a significant impact on this transportation system. These regulations, and their corresponding agencies include:

- Transportation Planning Rule. The Land Conservation and Development Commission (LCDC) requires the County to reduce the number of vehicle miles traveled per capita (VMT) by 20% and reduce available parking 10% in areas such as the Town Center over the next thirty years . With population growth of over half a million people expected to occur within the metropolitan area during the next decade, attaining this goal could indeed prove difficult for a rapidly growing area such as the Town Center. Statewide Planning Goal 12 also requires amending current subdivision codes ( by May 1993), and changing current land use patterns . Increasing opportunities for pedestrians, bicyclists,

and transit patronage are seen as integral to successful implementation of the rule.

- EPA Airshed Requirements/ Clean Air Act Amendments (CAAA). The area surrounding the CTC does not currently meet EPA airshed clean air requirements. The airshed must meet the EPA requirements before any new transportation related projects can go forward.
- Intermodal Surface Transportation Efficiency Act (ISTEA). This federal act requires enhanced management of existing transportation facilities, rather than continued construction of new facilities. New, more flexible funding guidelines will also allow for U.S. Department of Transportation monies to be allocated to either transit or road improvement projects. This bodes well for continued expansion of eastside light rail transit improvements.
- Regional Urban Growth Goals and Objectives (RUGGOS). Metro's effort to integrate types of land uses with the transportation infrastructure will affect the Town Center area since the Town Center is a major activity node within the region . Increased emphasis on medium and high density residential located near transit, shopping, and working centers, coupled with new proposals for light rail and an increased Tri-met bus presence will require rethinking of present land use locations. Insightful planning efforts could enhance the study area's opportunities in the years ahead.
- Tri-Met Strategic Plan. Tri-Met's plan seeks to encourage transit use through increases in access and optimizing existing resources region-wide. As a major regional attraction (requiring dedicated transportation resources), the Town Center could benefit from any such developments in Tri-Met's policy orientation.
- Americans With Disabilities Act (ADA). While this act has wide ranging effects, there are specific transportation related implications. The act requires all types of transit used in the area to be accessible to persons with disabilities. Alternatives to public transit must be provided for disabled individuals who are unable to use fixed-route transit, unless it poses an undue burden on the transit agency involved. Such systems are usually referred to as paratransit. Updating of sidewalks and curb ramps to acceptable standards must also continue.

# Urban Growth Boundary

Currently, Metro is undertaking a study entitled Region 2040. The purpose of this study is to determine the fate of the urban growth boundary. Three options are being considered to accommodate the region's expected growth. They are as follows:

1. Elimination of the urban growth boundary;
2. Continuation of the UGB as it already exists;
3. The expansion of the UGB in specific areas and the creation of urbanized areas around nodes beyond the existing urban growth boundary.

The location of the study area and its adjacency to the UGB reflect on the sensitivity of this issue regarding any changes in the UGB. What effects will occur as a result of the implementation of any of the alternatives and how can we best plan for these changes are issues that must be addressed.

## Suburban Concepts

### Issues

- suburban areas are inadequately served by contemporary transit services
- neither road or transit facilities address inter-suburban mobility needs
- changing land use and transportation policies must recognize vital role suburbs will play in 21st century urban regions

### Background

Late 20th century suburban centers play an important role in an emerging 21st century community form. Because of the high costs of activity locations -- business, commerce, retail, and residential-- in and around the urban core, many of the functions associated with an earlier central place have shifted to suburban sites. Suburban locations provide a contrast to older downtowns. Here employers find a willing work force, lower property costs, and fewer regulations. These advantages, juxtaposed alongside the perceived rising inconveniences of downtown areas, have attracted business and residences to the spacious environment of suburbs.

Two decades of shifting economic currents have moved the nation's economy off of its industrial mooring and on to a service-based tether. These new economic activities can be provided just as easily in suburban centers, not just the central cities. However, the outbound migration of capital and labor that results from such changes are not entirely welcomed by downtown interests.

Suburban leaders recognize that part of the reluctance to accept this dynamic shift is because of the economic gain suburbs have achieved at costs to the older area. The suburban areas, in reply, are quick to point out that these new centers "decrease the burdens the older community would have had to carry as a result of increased congestion, increased air pollution, and increased infrastructural investment.

The most important stimulus for the "Edge City" evolution has been the construction of a massive Interstate system developed since the Eisenhower Administration. This network has been the sculptor of the lands and the architect of its uses. Nearly 20 years ago, Interstate 205 brought improved access to Clackamas County.

Highways opened the land to new uses and they expedited access. Because land was plentiful, a dispersed pattern of development evolved. This pattern is easy to follow via an auto; but, it is difficult for conventional fixed route buses. As a result, transit ridership has decreased steadily in suburban locations since 1960. In July, the Oregonian reported preliminary U. S. Census data on mode choice in the region. The numbers reveal that driving alone in Clackamas County has increased from 70.3 percent in 1980 to 78.5 percent in 1990, an increase of 8.2 percent.

Infrequent service and central city orientation of transit routes leave transit users with poor inter-suburban mobility. With two workers in most families, two car ownership is common and Tom Walsh, General Manager of Tri-Met recognizes that, "[t]he merit badge of major suburban development now is the three car garage." Regaining passengers means transit providers must meet suburban needs. To make this possible will require changes in land use, new rules for transportation and parking, and other policy changes that must act together in a single strategy.

## **Charting a New Course**

The inability of mass transit to make any headway in suburban areas may change as a result of new transportation policies at the state and federal level. Federal policies shifted when President Bush signed the Intermodal Surface Transportation Efficiency Act of 1991 (pronounced ice-tea) (ISTEA).

This act signals the last chapter in the development of America's autobahn. ISTEA alters the dynamics of previous transportation planning; it focuses on local and state decision making and not top-down plans from the federal government. No longer are the federal gas tax revenues earmarked to a single purpose – states and regions can make flexible decisions. The U. S. DOT recognizes that, "we can not pave our way out of traffic congestion."

The ISTEA legislation recognizes important innovations in traffic management - Intelligent Vehicle Highway Systems (IVHS), "Smart Bus " technologies, demand responsive transit, and others. These new technologies will not be cheap to implement; however, the transportation services they provide are geared to the settlement patterns and travel demands of suburban and rural communities.

# Demographics and Diversity Within the Planning Area

Through analysis of 1990 U.S. Census data and direct observation, it has been determined that there are at least four distinct neighborhoods or districts that are defined by their physical and social make-ups. Observations were made of dwelling type, dwelling size and condition, yard condition and up-keep, parking arrangements and car type. The diversity of the planning area becomes evident as the issues are laid out.

## Demographic Analysis

Demographics are based on the 1980 and 1990 U.S. Census.

From 1979 to 1989, the population of the study area increased from 18,266 to 22,161, or 21%. According to Clackamas County Planners, between the years 1988 and 2020, the area is expected to grow by 16,000 people to a population of roughly 38,000, or a 72% increase. Additionally, county planners project that sub-area D will experience the most growth.

Of the current population, 95% is White; less than 1% is Black; 1% is American Indian; 3% is Asian and/or Pacific Islander; and 3% is of Hispanic origin. The change of the racial make-up from 1979 to 1989 was slight. In 1979, 98% of the population was White, the percent of Asian and/or Pacific Islanders stayed constant, and the percents of Blacks, American Indians, and people of Hispanic Origin were each less than 1%.

The elderly population has increased from 1979. Currently making-up 13% of the total population, thirteen years ago elderly people (aged 65 years and older) comprised 7% of the total. At the other end of the age scale, the change was in the "school aged" age group, of individuals aged 18 years and less. Currently, the "school aged" population makes up 25% of the total, but in 1979 it made up 31%. These figures are consistent with national trends.

Changes in household size from 1979 to 1989 are even less evident than the changes in the racial make-up of the planning area as the following chart illustrates.

<u>Household Size</u>	<u>1979</u>	<u>1989</u>
1 Person	18%	26%
2 Persons	35%	35%
3 Persons	18%	17%
4 Persons	18%	14%
5 Persons	8%	5%
6 or more	3%	3%

The number of female households with their own children and no spouse increased significantly. In 1979, there were 7 households of this type and in 1989 there were 381. These figures also reflect national trends in family type.

In the most recent decade, there is a greater tendency for area residents to become sedentary. Thirty-eight percent of the households in 1979 reported that they were in the same living unit five years ago, whereas, in 1989, 43% reported occupancy of the same living unit five years ago. This indicates a growing rate of tenure stability. Compared to the moving activities of households in the Portland metro area, 46% reported that they were in the same living unit five years ago.

Over the past decade, the residents of the planning area aged eighteen and older have become better educated or the people of the same age group who have moved into the area since the '80 Census brought with them more years spent in school. For example, in 1979 31% had attained some college education with 13% of the total population obtaining college degrees. In 1989, 48% had attained some college education with 17% obtaining a degree.

Though household incomes vary in the planning area, they can generally be grouped into the following categories:

less than \$20,000	29%
\$20,000 to \$29,999	19%
\$30,000 to \$39,999	17%
\$40,000 to \$49,999	12%
\$50,000 to \$59,999	8%
\$60,000 to \$99,999	13%
greater than \$100,000	3%

As a whole, poverty in the planning area has decreased. In 1979, 8% of the area's households were below 125% of the poverty level. In 1989, though, only 5% were determined to be at that same level, after adjustments for interest rates and living costs were made in the Census. Sub-area A, however, showed an increase in the percent of households below 125% of the poverty level. Referred to as the Overland Park neighborhood roughly, twenty-five percent of this population was below 125% of the poverty level. Additionally, a church based emergency food pantry located in the heart of the Overland Park neighborhood provided emergency food boxes to 17,300 individuals in the immediate area. 17,300 is equal to 78% of the planning area's total population.

# **LIVABILITY**

## **Introduction**

A lack of neighborhood orientation is a significant issue in this area. The regional emphasis has diminished the neighborhood scale. Explicit neighborhood centers are not present in any of the four sub-areas of the study area.

Residential areas are divided by 82nd Street and I-205, delineating neighborhoods and limiting pedestrian access.

In the ten years since development of Clackamas Town Center, crime has increased dramatically.

Service levels for parks and recreation are low. Residents must rely on school playgrounds for parks and recreation facilities, which have restricted access. A large regional park and recreation facility is currently under development.

82nd Street is characterized by regionally oriented strip development. A lack of design standards and emphasis on automobile use result in an absence of human-scale commercial activity.

## **Livability Issue Statement**

The study area is largely identified by regional commercial activity, the focal point of which is Clackamas Town Center, which was developed following completion of I-205. Large-scale development that has occurred subsequent to the Town Center has also had a regional focus: Kaiser Hospital, Clackamas Promenade, New Hope Church, and most recently, the regional park and swimming complex. Residential development is rapidly occurring as well. Neighborhood focal points have not been developed at the pace of the regional attractions which are pervasive throughout the area.

Because of the regional draw for retail and commercial activity, local neighborhood quality is impacted. Factors affecting livability for local residents include the following issues: crime, housing, access to public facilities, parks and recreation, streets and pedestrian uses, and locally directed commercial activity. One of the intents of this planning effort is to give attention to these neighborhood issues, while maintaining the importance of the the regional functions as the area continues to grow.

## Neighborhoods

A lack of neighborhood orientation is one of the underlying issues in the Clackamas Town Center planning area. Four separate neighborhoods form the boundaries of this analysis: Southgate, Sunnyside, West Mt. Scott, and North Clackamas. While each of these areas has its particular concerns, all share in problems associated with the regional emphasis of the area. Specific areas of consideration include the following:

*Pedestrian access.* Safety is a major factor limiting pedestrian access because of the presence of the two major thoroughfares, 82nd St. and I-205, which delineate the study area. According to the *Clackamas Town Center Area Design Standards Study*, the Standards Committee for this study "expressed a need for a walkway system in the Clackamas Town Center area which would include special amenities. Sidewalks separated from streets with planted strips were desired." Sections of all four neighborhoods do not have sidewalks, and street lighting and storm drains are lacking in some areas, also impeding pedestrian access. Competition with autos makes other forms of transportation—walking, bicycling, and transit—more difficult and less desirable.

*Neighborhood integrity.* Cohesive neighborhood centers are not present in any of the four neighborhoods. This reinforces the lack of neighborhood scale in the area, and the preponderance of regional attractions. Recreational and cultural activities are lacking, as expressed by the above mentioned standards committee. Some examples of these inadequacies are summarized below.

- Local schools are being underutilized as community centers, as stated in the Clackamas County Comprehensive Plan. While they are used for after school daycare and special events, there are no identifiable community centers in any of the neighborhoods.

- Only one senior center serves the North Clackamas urbanized area, and is located in Milwaukie.

- The regional emphasis of this community is typified by the fact that the neighborhood library is located in Clackamas Town Center.

- Neighborhood schools have shifted eastward as the population has grown in that direction. Within the last two years, Batten School, formerly serving Overland Park residents, was razed to make way for a freeway overpass; Harmony and Ickes Schools are now the sites of OIT and Clackamas Community College. While these facilities serve the immediate area, they also function for a broader constituency.

While some aspects of these issues are of a qualitative, rather than quantitative nature, they represent quality of life factors which are significant to local residents. For example, if the local community must do all of its retail shopping in the same establishments as those of people who travel from miles away, then the degree of local contact and neighborhood recognition is reduced. Casual as well as explicit local gathering spots, which are important characteristics of neighborhood livability, are lacking.

*Crime.* Crime rates are a measure of livability for any area. In the past ten years, crime has increased by 35%, while the population has grown by 17% and



the number of law enforcement personnel has remained the same. This planning area is receiving the same level of service as that of Clackamas County, which has .67 officers per 1,000 population. The national standard is 1 officer per 1,000 population; in the city of Portland, the service level is 2.5 per 1,000. In 1991, 1/3 of the top six crimes in Clackamas County were committed in this planning area.

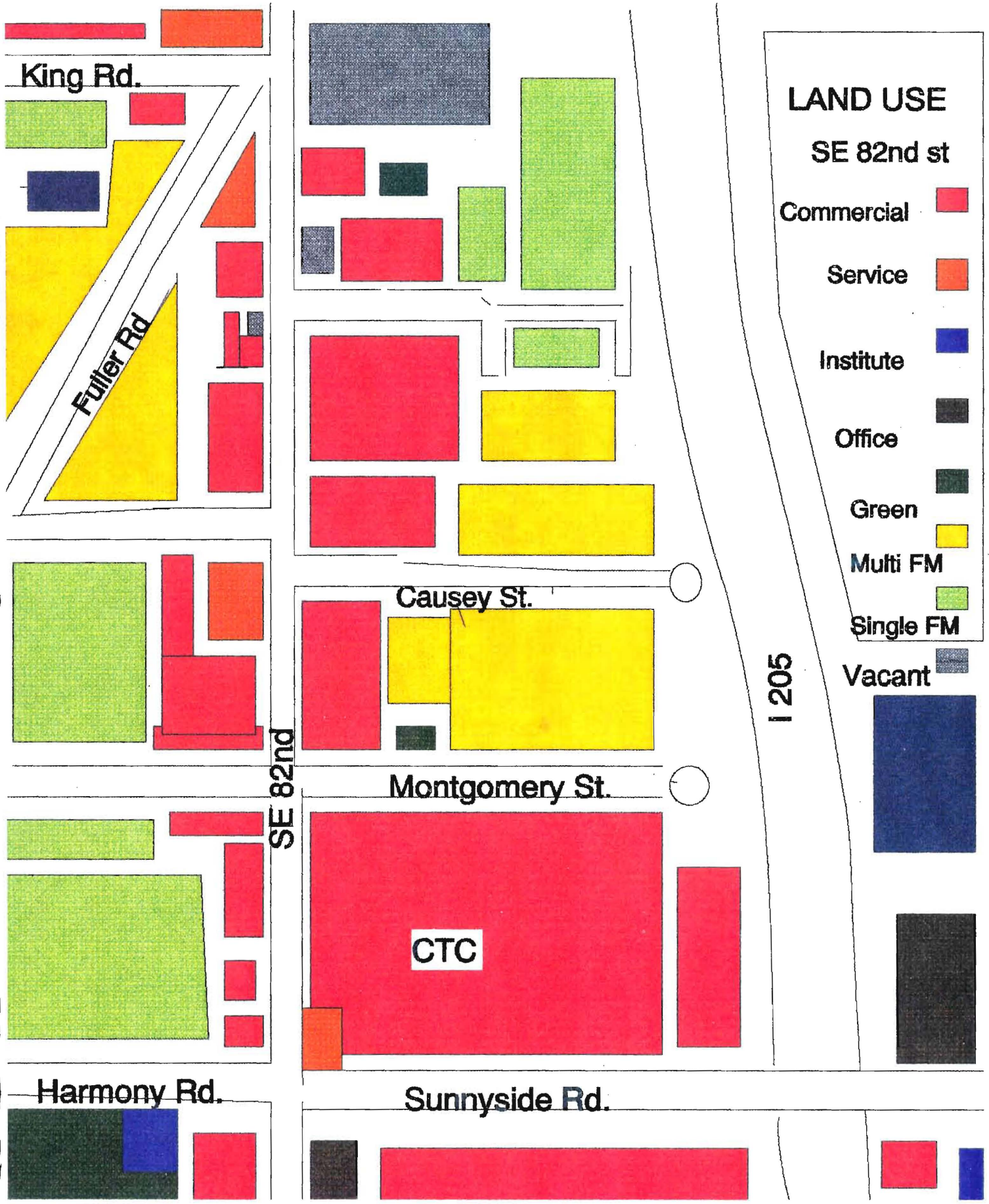
## **Parks and Recreation**

The Clackamas County Comprehensive Plan has identified that the level of service for parks in the North Clackamas area is less than 2 acres per 1,000 population, far below the national standard of ten acres per 1,000 population. Within this planning area, there are no public neighborhood parks. School playgrounds are semi-accessible: through an intergovernmental agreement, these play areas are open to the public during non-school hours.

Passage of a voter levy in 1990 created the North Clackamas Parks and Recreation District, and \$2.5 million in general obligation bonds for parks acquisition and development. As stated in the North Clackamas Parks District Master Plan, the number one goal of the district is to "improve the community's livability and quality of life" by providing parks and recreation facilities for residents.

From the bond levy, \$500,000 has gone towards development of a 100 acre regional park and swimming facility scheduled to open in the spring of 1993. While the new park and swimming complex will benefit the local area, it will be a regional facility. This is another example of local and regional tradeoffs which exist in this planning area. The remaining \$2 million from the levy is being divided equally among the four areas within the Parks District, for acquisition of 5 to 10 acre parcels in each area for future parks development. According to Parks District staff, some of the open spaces with significant environmental features have been priced out of their funding range because of competition for land by developers. The same is true of vacant land along 82nd Street. Two examples of parcels which would be well suited for park development are located in the Overland Park and Southgate areas; both have large stands of mature trees, and are surrounded by residential development, easily accessible by local streets. These factors make them competitive for private development and consequently out of range for purchase by the Parks District.

Johnson Creek is a major local natural resource which the Parks District has targeted for land acquisition and development. Cooperation with surrounding jurisdictions will be a vital ingredient in securing necessary funding for implementation. Preservation and enhancement of natural areas along this watershed is an important issue to this area as well as to the region, and consequently interjurisdictional support enhances the possibility for preservation of natural areas along the watershed. The Springwater Corridor, a segment of the regional 40-mile loop trail system which extends from the west side of Portland to Gresham, follows the northern boundary of this study area and is another important recreational amenity. It is in the ownership of the City of



**LAND USE**

SE 82nd st

Commercial 

Service 

Institute 

Office 

Green 

Multi FM 

Single FM 

Vacant 

I 205

King Rd.

Fuller Rd.

Causey St.

Montgomery St.

CTC

Sunnyside Rd.

Harmony Rd.

SE 82nd

Portland, to be developed and maintained by the N. Clackamas Parks District. Funding for this project is a determinant of the extent to which trail development and maintenance will occur, but the important step of acquiring the land for preservation is, fortunately, not an issue.

## **Commercial Use on 82nd Ave.**

The purpose of this analysis is to shed some light on the mix of commercial activity, housing, and public space on the 82nd St. corridor between the I-205 interchange and King Rd.

The basic composition of the built environment is not so different from many typical strip-developed areas in and around the Portland metro area. However, in regards to local connectivity, commercial use on 82nd street is focused on a regional draw. A lack of mixed-use development has encouraged this regional focus resulting in depleted sense of community involvement. Primary data indicates that of 50 lots (sited between Sunnyside Rd. and King Rd.) 48 are currently in commercial use. The remaining 2 lots are vacant. There currently exists no green spaces as the two aforementioned lots are vacant structures as opposed to vacant lots.

The lack of mixed-use housing adjacent to the commercial activity of 82nd street may be a significant factor when planning development that seeks to incorporate livability with a human scale. In a 1990 design standards study, mention was made as to the lack of a strong visual framework which would pull the area "together" as a single district. This study called for extensive use of decorative street lighting and border trees to improve the aesthetics of the area. To date, however, no ordinance or funding mechanism has been implemented to achieve this end.

The net result is a continued "status-quo" whereby dominant commercial activity and poor design standards contribute to a decreased community identity. Furthermore, in complying with Goal 12, there is a need to incorporate mixed usage of housing and commercial activity to promote pedestrian travel. With 96% of the land use in the area of 82nd street. currently being devoted to commercial activity, auto dependency is heightened, further degrading the idea of a "single district".

# HOUSING

## Issue Statement

Analysis of the housing component of the North Clackamas County Area reveals several housing issues. These are:

- 1) Housing affordability is limited for large segments of very low and low income households.
- 2) Housing affordability is limited for large segments of the aged population.
- 3) Large segments of the older housing stock are deteriorating reducing the affordable housing alternatives for very low and low income households.
- 4) Patterns of residential development have encouraged a low density, auto dependent urban form.

## Housing Stock Assessment

A survey of the housing quality and the condition of structures in the planning area is useful to gauge the current housing stock. Employing the use of census variables at the block group level and following up with direct observation of the different neighborhoods, several generalizations regarding the housing stock can be made.

The typical housing unit is a single family unit with a detached garage. In general, this home has 4 or 5 rooms and is owner occupied. There are exceptions to both cases. Sub-area C, located just north of the Clackamas Town Center, has the largest concentration of multi-unit structures in the study area. Over 70% of the structures in this area have ten or more units. Not coincidentally, this sub-area is the only location where the majority of units are occupied by renters. In all other sub-areas, greater than 75% of all housing units are owner occupied. Also, in sub-area D, the average housing unit has over 7 rooms per structure. This may be attributed to the relatively newer units of single family housing indicative of both the suburban growth to the east and the highest median incomes in the planning area. In contrast, sub-area A is characterized by an average of 4.5 rooms per structure, contains the oldest housing stock, and has the lowest median household incomes (see variables sheet).

## Housing Quality and Condition

The overall quality and condition of the housing stock is identifiable with distinct differences between sub-areas. In general, the older residential neighborhoods located in the northwest section of the planning area are of lower standard condition relative to the quality of stock in sub-area D. Sub-area A is characterized by many housing units with a poor overall exterior appearance demonstrating low levels of maintenance and marked deterioration. Many yards are cluttered and show little sign of maintenance or landscaping. Also, many homes need paint and minor repairs to roofs and windows. This area provides the best source of affordable housing stock for very low and low

income persons and minor physical improvements would vastly improve the perceived negative physical appearance.

In contrast, the housing stock in sub-area D shows consistent patterns of maintenance. The overall exterior appearance of the housing stock demonstrates high levels of maintenance. Yards are clutter free and manicured. The median year of construction of housing units in this area is 1985. On average this housing stock is much newer than units in sub-area A and display the effects of increased quality construction. A poured concrete foundation is the norm and few minor repairs are noted. Very few units in this area are affordable for the typical resident that currently resides in sub-area A.

The remaining two areas, B and C, fall between the extremes described in A and D. Sub-areas B and C are characterized by a more well maintained older housing stock, except for the neighborhood directly north of the Clackamas Town Center which consists of newer multi-family dwellings. The median incomes in these two areas are closer to the overall median incomes of the entire metropolitan area.

It should be noted that the deterioration of the housing stock in the older areas serves a purpose by facilitating the filtering down of housing units to lower income families. Additionally, the original quality of the structure and the observed differences in the levels of performed maintenance are a function of income constraints on owner occupants or are characteristic of the unwillingness of landlords to invest in rehabilitation and maintenance.

## **Housing Affordability**

Adequate and affordable housing is important to the stability and vitality of any neighborhood. Assessment of the housing stock reveals patterns of residential development that are consistent throughout the entire area. Though the area has a wide range of median incomes, from a low of just over \$20,000 in sub-area A to a high of over \$50,000 in sub-area D, the lack of affordable housing for many income groups is apparent throughout the entire area. Affordable housing for very low and low income households, as well as, affordable housing for elderly populations is lacking.

The purpose of a housing affordability study is to evaluate the ability of all income groups in a market to find safe, sanitary and affordable housing. Specifically, this study is intended to assess the housing opportunities available to very low and low income households within the North Clackamas County area. Restricting the focus of the study to these two income groups reflects the assumption that if housing is affordable for very low and low income households then housing will also be affordable for higher income households.

According to guidelines set forth by the U.S. Department of Housing and Urban Development (HUD), housing is affordable for households if housing costs do not exceed 30% of household income. Housing affordability is established for different income groups within the area. For this study, the Portland CMSA median household income is the standard utilized to establish very low and low income criteria. The HUD definitions of very low and low income households which this study utilizes are as follows:

- Very low income households are those with household incomes below 50% of the area's median income.
- Low income households are defined as those with household incomes between 50% and 80% of the area's median income.

The following assessment of housing affordability considers what area residents can afford to pay compared with the costs of the area's rental and owner occupied units.

These costs are reflected by median gross rent and median owner costs. HUD standards establish 30% of household income as the maximum level of income a household can afford to spend on housing and still meet their other living needs. To better gauge the availability of affordable housing for the area's residents, the 30% threshold is compared with the median housing unit costs at the block group level.

The lack of affordable housing for very low and low income households is clearly an issue for residents of the study area. This problem not only affects lower income neighborhoods in the Overland Park Area (area A), but also is prevalent for many households living in the higher income areas of sub-area D, west of Happy Valley.

Affording the housing stock in sub-area A is problematic for many residents. 57% of all households in this sub-area are very low and low income households. Both the median priced rental housing unit and the median priced owner occupied housing unit are unaffordable for all very low income households. However, both types of units are affordable for low income households in all but one of the block groups in sub-area A.

The lack of affordable housing for many households in sub-area B is also alarming. 32% of all households in this sub-area are very low and low income households. Both the median priced rental housing unit and the median priced owner occupied housing unit are unaffordable for all very low income households. Additionally, low income households can afford the median priced rental unit throughout the area, but cannot meet the median priced owner costs in two of the area's four block groups.

Sub-area C has striking housing affordability concerns. 57% of all households in this sub-area are very low and low income households. The median priced rental unit is unaffordable for very low income households in all but one of the block groups. Both median rental units and median owner units are affordable for low income households. However, in one block group, the median priced owner units are almost \$300 over and above the 30% threshold.

Even for residents of sub-area D housing affordability is an issue. This sub-area has median household incomes in excess of \$50,000, yet 19% of all households are very low and low income households. Based upon the Portland CMSA median household income of \$40,000, both the median priced rental unit and the median priced owner unit are unaffordable for all very low and low income households in sub-area D.

Special segments of the population are faced with a housing affordability problem. Specifically, the aged population 55 years and older, face housing concerns. 59% of all elderly households are very low and low income households. In perspective, the total elderly households make up 34% of all households in the North Clackamas County Area.

A household's ability to afford adequate housing can easily be affected by a number of factors including: growing family size, unemployment, poor education, and overall increases in non-housing costs. Thus, providing a sanitary, affordable physical structure, may not effectively address the complex causes which force many households to live in unaffordable housing units.

# Transportation

## Issue Statement

- While current proposals will temporarily relieve congestion, they will not adequately address attainment of Goal 12 requirements for reducing vehicle miles traveled (VMT) and parking levels in the future.
- The Clackamas County Comprehensive Plan encourages a balance of transportation modes, including light rail in the North urban area of the county.
- Automobiles currently account for over 95% of all transportation trips in our study area, and this is not expected to change over the next twenty years.
- Urban street standards as applied to this area do not provide for adequate separation of pedestrian and vehicular uses.
- Increasing demands on the study area's transportation network by regional forces will continue to negatively impact the study area by causing increased auto congestion.
- Bus transit is extensive along 82nd and King Rd., but deficient along Price-Fuller, Harmony, Linwood, and Sunnyside (east of I-205).
- Metro has determined that Clackamas County will be the terminus of the region's third light rail line. The priority corridor will be chosen in March, 1993.

## Modal Split Overview

As previously indicated, the main objective of our alternatives plan will be to reduce vehicle miles travelled per capita in our study area. This objective was chosen because of its overriding implications for planning in the future, and additionally, because traffic congestion has generally been perceived as the most serious problem throughout our study area.

In order for us to quantify our perceptions into hard data, we decided that it would be useful to prepare a breakdown of the percentage of trips taken by different modes of transportation (a modal split analysis). Dick Walker of Metro helped us by creating a regional origin/destination model for the purposes of determining daily trips (by mode) to and from our study area with respect to fourteen other transportation zones throughout the region. The data is divided into three modal types: walk/bike, transit, and auto person; and the data is for the years 1990 and 2010. It is important to realize that the estimates for 2010 are based on existing land uses. It will be our goal to propose land use options that favor mass transit, bicycle, and pedestrian uses; ultimately dramatically changing the modal split by the year 2010.

	1990		2010	
	<u>TRIPS</u>	<u>MODAL SPLIT</u>	<u>TRIPS</u>	<u>MODAL SPLIT</u>
WALK/BIKE	7,013	2.5%	8,704	2.9%
TRANSIT	2,727	1.0%	3,706	1.2%
CAR	<u>272,758</u>	96.5%	<u>290,692</u>	95.9%
TOTAL	282,498		303,102	



## Current Projects

### Issues

- While current proposals will temporarily relieve congestion, they will not adequately address attainment of Goal 12 requirements. Historically, systematic increases in capacity only defer the problem of congestion to some future date, at which time the solution is typically to once again increase capacity to relieve the congestion. This cyclical pattern of road building to relieve congestion typically results in increased aggregate congestion levels. This is contrary to the Goal 12 objectives which seek to reduce vehicle miles traveled per capita.
- Urban street standards as applied in this area do not provide for buffering of pedestrians. The present system has a distinct orientation toward automobile usage. The lack of a single standard for pedestrian amenities within the study area leads to a disjointed approach in addressing pedestrian needs.
- Established neighborhoods within the study area built prior to the creation of urban design standards will need to be retrofitted with modern urban infrastructure such as sidewalks, street trees and streetlighting.
- Goal 12 requires percentage reductions in available parking. An accurate assessment of available parking must be made before strategies can commence to meet this goal. A detailed inventory will allow an opportunity to examine ways to reduce total area dedicated to parking.
- Current land use patterns encourage increased auto usage while reducing potential use of alternative modes of transportation. Single use zoning districts of low density reduce the opportunity for viable transit operations, while also hampering pedestrian circulation.
- Population expansion in the area is expected. Accommodating future commercial and residential growth, through the use of current zoning practices, can only lead to a continuation of the type of development practices which have prompted the passing of the legislation (Goal 12) that we now seek to address. Alternative development patterns as suggested by Goal 12 should be examined more closely if any realistic attainment of the objectives is to be expected.
- Stressors on the study area's transportation network by regional forces can be expected to further change the area's complexion by increased volumes of through traffic.

- Recognition and implementation of the Americans with Disabilities Act requirements must be considered as integral to any transportation planning effort.

## **Current Projects**

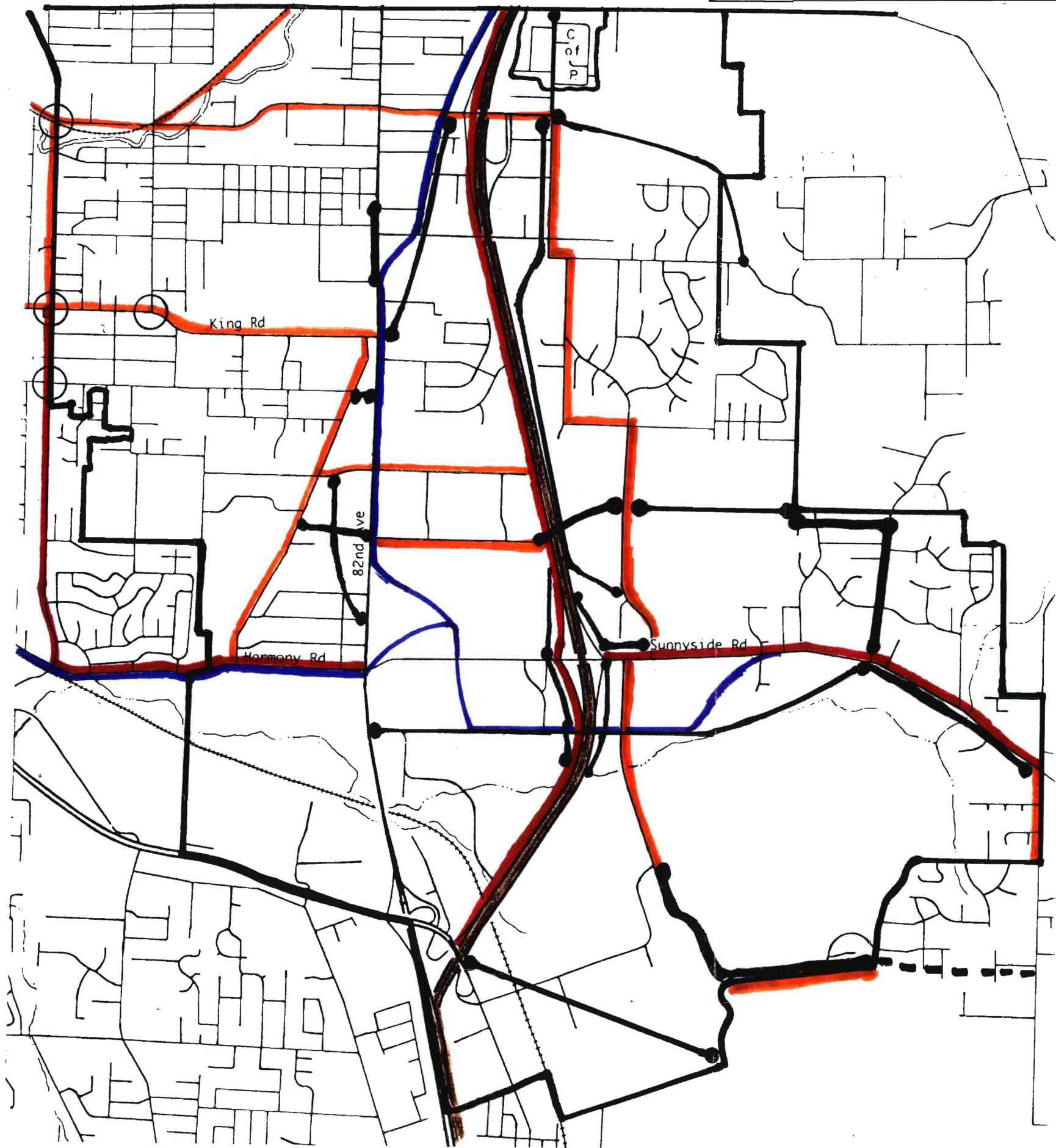
### **Analysis**

Current projects within the study area seek to address existing deficiencies in the transportation infrastructure. Increasing levels of traffic on area arterials are leading to higher levels of congestion that reduce the efficiency levels of area arterials. This decrease is partly attributable to a demand for rural roads to service urban levels of traffic. These increasing traffic flows have also caused more conflicts between autos and pedestrians . Modification of existing urban street design standards could vastly improve pedestrian and vehicular circulation within the study area.

Recent legislation addressing the problems of congestion, pollution, accessibility for the disabled, and enhancing intermodality have recently changed the requirements placed on the study area's transportation network. The transportation element of section 1 summarizes these requirements.

Presently there are a number of projects slated for the study area. The map and table in the appendix summarizes locations and improvements for area arterials and intersections while also indicating projected construction period. Seventeen roadway and five intersection improvements are scheduled within a five year time horizon. Four major improvements are currently proposed on a five to twenty year time frame.




The road improvement projects slated for the study area are expected to increase vehicular capacity while also enhancing the pedestrian environment. Projects will be of two types, road improvement and road creation. Road improvement projects will increase capacity and improve circulation on area arterials. The Sunnyside , Fuller, Sunnybrook, and Monterey roadways are chief recipients of these improvements. The Frontage Road and Monterey Road Extension are examples of new road construction. These projects will increase connectivity within the eastern section of the study area. Intersection improvements focusing on enhanced signaling, signage, sidewalks, and curbing will help address current shortfalls in the pedestrian/vehicle interface.



# Proposed Road Improvements

## LEGEND



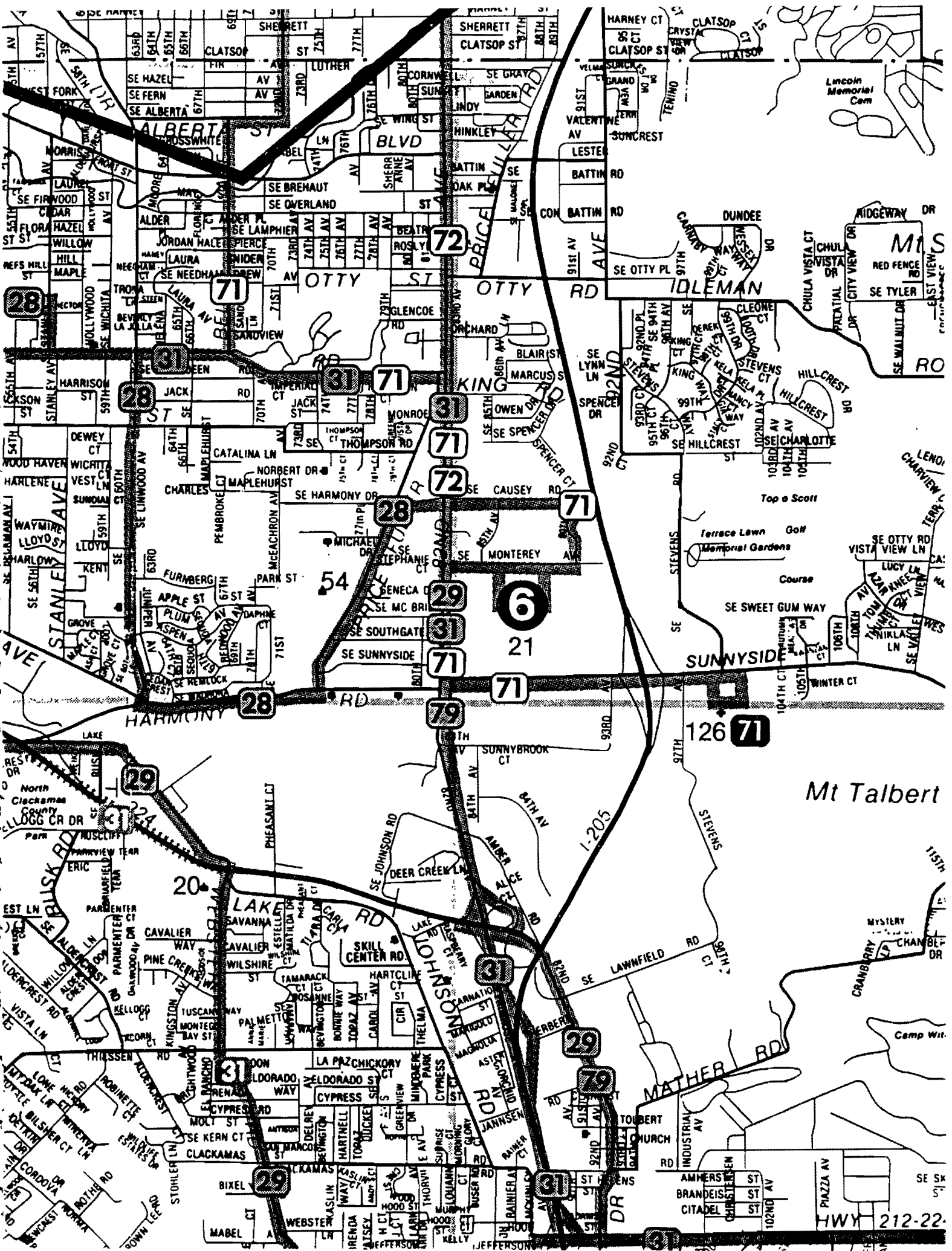
-  Proposed road improvements
-  Proposed bike routes
-  Existing bike routes
-  Proposed Light Rail Transit
-  Potential HighSpeed Rail

PREPARED BY  
 THE PORTLAND STATE UNIVERSITY  
 PLANNING WORKSHOP  
 1992-93

## **Bus Transit**

### **Issues**

In conclusion, the area along 82nd Ave. is extensively served by current transit service and the service will only improve in the future. Areas along King Rd., to the west and north of 82nd Ave., are also well served. The area along Price Fuller Rd., Harmony Rd. and Linwood Ave. is poorly served, particularly on the weekend, when there is no service. This may possibly be corrected under the best case 1993 fiscal scenario, but it is not a high priority project. Sunnyside Rd. to Kaiser is poorly served considering the size of the facility, and there are no plans to increase the service. Further to the east of Sunnyside Rd., there is no service, despite having the most requests for service by individuals in 1991. There are no plans in 1993 to provide service to this area. Increases in service to these deficient areas should be addressed as soon as possible, particularly to the Sunnyside Road area.



## **Bus Transit**

### **Analysis**

In general, the fiscal year 1993 for Tri-Met calls for a 3.25% increase in service level, which is the largest increase in the last nine years. Service improvements are supposed to represent a more proactive effort in gaining new riders.

As part of the peak corridor improvements, the Highway 224 corridor (Milwaukie/Clackamas) was identified as a possible location for an express service. Currently, there exists the Milwaukie shuttle, which serves employment centers in the Milwaukie industrial corridor between the Milwaukie TC and the CTC Transit Center during peak hours and functions as a demand responsive service at other times during the day. The demand responsive service has only been used by an average of 6 people per day since its inception in April 1992. One problem seems to be a perception in the community that the service is only for elderly people. The average age of riders for this service is 70.

As part of service expansion, there is a proposal to extend service on Sunnyside Rd. east of Kaiser Sunnyside, where it currently terminates today. In fiscal year 1991, this area had the most requests of any area by individuals for service expansion. Tri-Met is currently evaluating this request. A potential problem might be that a portion of the area along Sunnyside Road is no longer part of the Tri-Met service district.

Currently the CTC Transit Center (and surrounding area) is serviced by six Tri-Met bus lines plus the Milwaukie Shuttle. For a better visual representation, please see the Tri-Met map on the next page.

The #28 Linwood is a suburban feeder route that stretches from the Milwaukie Transit Center to the CTC Transit Center and in our area serves 82nd Ave., Price Fuller and Harmony Roads and Linwood Ave. The service currently runs every 30 minutes during peak time and every hour during non-peak times. There is no service in the evenings or on the weekends. Under a best case 1993 funding scenario, this route service would be increased to every 60 minutes on Saturday.

The #29 Lake Webster line is another suburban feeder route that also stretches between the Milwaukie Transit Center and the CTC Transit Center and in our area serves only 82nd Ave. before dipping down to Johnson City and then to Lake Rd. in Milwaukie. The service also runs every 30 minutes during peak time and every hour during non-peak times. There is no service in the evenings or on the weekends. Under a best case 1993 funding scenario, this route service would be increased to every 60 minutes on Saturday.

The #31 Estacada is a suburban radial route that goes between either downtown Portland or the Milwaukie Transit Center and Estacada. In our area the route serves King Rd., 82nd (stopping at the CTC) and continuing down 82nd into Johnson City. The service runs every 30 minutes during peak and non-peak

times. The service goes until 10:20 pm on weekdays and Saturday service is either every 30 or 60 minutes until 10:40 pm. Sunday service is every 60 minutes until 6:45 pm. Under a best case 1993 funding scenario, this route service would be increased later on weekday evenings.

The #71 60th-122nd is a crosstown route that goes between Woodstock and 96th and Kaiser Sunnyside. In our area the route serves Kaiser Sunnyside, Sunnyside Rd., 82nd Ave., Monterey Ave., 90th Ave., Causey Rd., back onto 82nd Ave., King Rd., Bell Ave., Alberta St. and 72nd Ave., continuing north to Flavel St. The service runs every 15 minutes for the most part during peak and non-peak times. The service runs as late as 10:46 p.m. on weekdays and Saturday service is every 15 minutes during the day. Sunday service is every 30 minutes until 7:43 pm.

The #72 Killingsworth-82nd Ave. is a crosstown route that goes between CTC and Swan Island Drydock. In our area the route serves CTC and 82nd Ave. The service runs every 10 or 15 minutes for the most part during peak and non-peak times during the week. The service runs as late as 1:27 am on weekdays and weekend service is every 10, 15, or 20 minutes until 1:24 a.m.

The #79 Canby-Clackamas Town Center is a suburban feeder route that goes between CTC and Canby. In our area the route serves CTC and 82nd Ave. before going down south into Johnson City. The service runs every 60 minutes during peak and non-peak times during the week. The service runs as late as 7:20 pm on weekdays and weekend service is every 60 minutes until 6:25 pm. Under a best case 1993 funding scenario, weekday service would be increased to every 20 or 30 minutes and weekend service would be increased to every 60 minutes.

## **Light Rail Transit**

### **Issues**

We are currently awaiting the decision by Metro as to which corridor is preferred for the next LRT alignment, the I-205 corridor or the Milwaukie corridor. Their decision is expected in March of 1993. Once the corridor is determined, a further analysis will be undertaken to determine what type of improvements will be made. The transit options include express bus transitways, traffic demand management such as HOV lanes, and light rail transit. If light rail is designated as the preferred transit improvement option, then alternative alignments will be studied for approximately two years. This study takes a long time because draft environmental impact statements need to be drafted for each alignment option. That will be followed by a final EIS for the preferred alignment.

The time frame for planning and constructing a light rail line is approximately ten years. Currently, the planning process for the next light rail line is finishing its second year of planning, so any light rail line terminating in our study area would not be completed until approximately 2001. In the long term (20 years) we can expect increased high capacity transit in the study area, and this would have considerable land use implications for the Clackamas Town Center and its environs.

## **Light Rail Transit**

### **Analysis**

Currently Metro is engaged in two concurrent studies. They are considering which one of two corridors is preferred for High Capacity Transit to Vancouver, Washington and which one of two corridors is preferred to Clackamas County. Metro's Council adopted a resolution in 1991 that stated that the next area to be served by High Capacity Transit is Clackamas County. This resolution does not preclude concurrent construction of a light rail line to Vancouver, however.

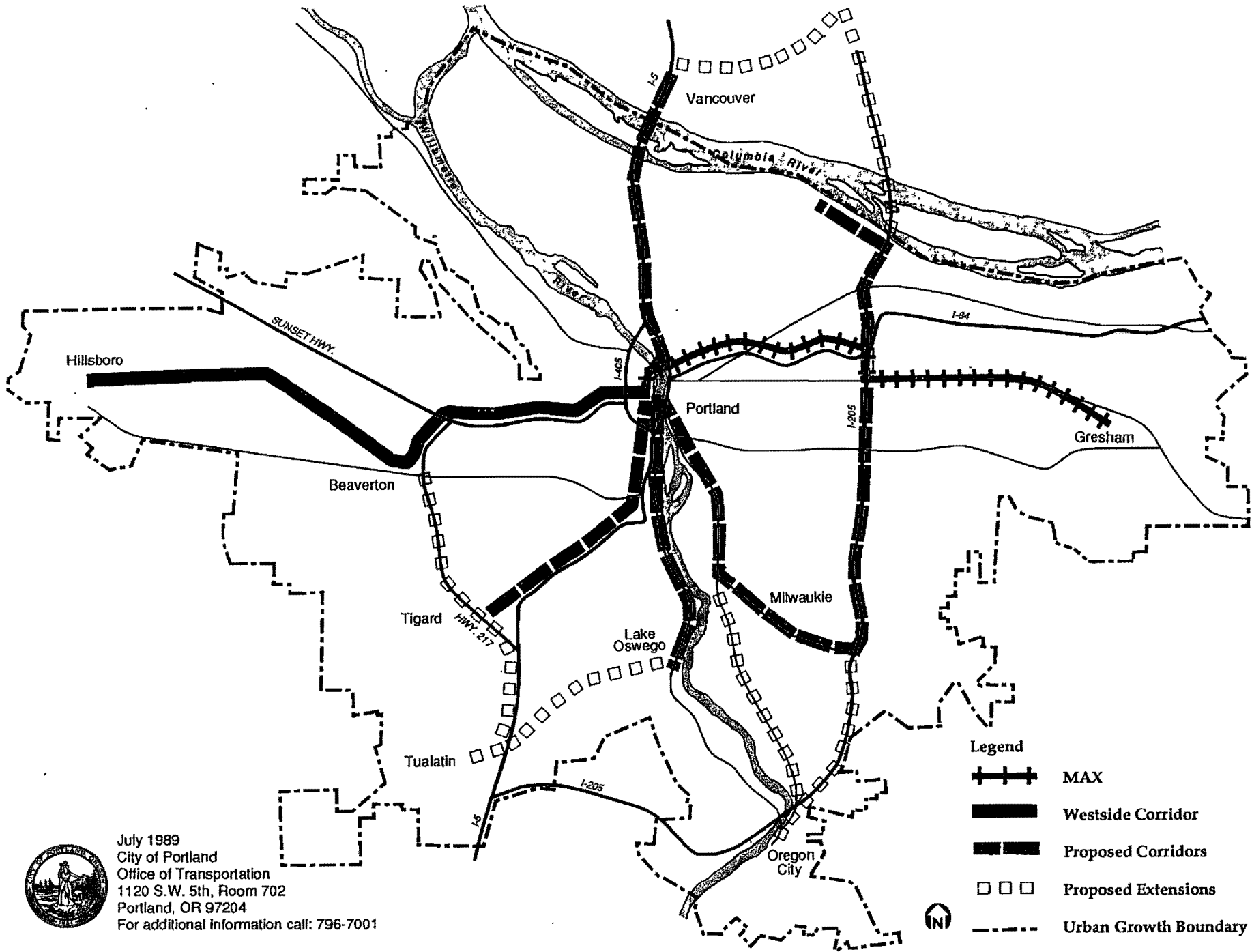
The first step in the light rail planning process, with regard to our study area, is to determine which corridor is preferred (refer to the Regional Light Rail System map on the following page) to Clackamas County:






1. I-205 south of Burnside (connecting with the Banfield line), or
2. Milwaukie

Each corridor has at least two alignment options, and all but one alignment option includes the Town Center. The one that doesn't will follow



# PORTLAND REGIONAL LIGHT RAIL SYSTEM



- Legend**
-  MAX
  -  Westside Corridor
  -  Proposed Corridors
  -  Proposed Extensions
  -  Urban Growth Boundary



July 1989  
 City of Portland  
 Office of Transportation  
 1120 S.W. 5th, Room 702  
 Portland, OR 97204  
 For additional information call: 796-7001

McLoughlin Blvd. south from Portland, through Milwaukie, and terminate at Oregon City.

From a ridership standpoint, the Milwaukie corridor will be the most likely choice (although the decision will not be made until at least March). And although the alignment for the preferred corridor will not be determined for at least another year, it is very likely that Clackamas Town Center will be included as part of the light rail alignment, regardless of which corridor is selected to serve Clackamas County's high capacity transit needs.

The location of potential transit stations will be very important in determining the alignment. Within our study area there is the opportunity to redevelop large tracts of land that would be potentially viable sites to build high-density mixed-use transit-oriented developments. Clearly, Clackamas Town Center has excellent redevelopment potential if one considers the possibility of development on the large surface lots. Other opportunities exist along Harmony Road at the intersection of SE 80th (the Milwaukie alignment) and at the intersection of Price-Fuller Rd. and Otty Rd. (the I-205 alignment). In the long run it is likely that both alignments will be built, so it is reasonable to discuss redevelopment along their potential routes. In the Alternatives Analysis to be prepared in March, specific redevelopment options will be discussed including zone changes that will be necessary to create the land use pattern that we will be proposing

# Regional Draws

## Introduction

Diverse business activities serve as regional draws to the study area. For example, there are six retail plaza/mall type retail activity locations that house some 2,014,000 square feet of retail space; 6 business complexes that house some 54,300 square feet of class A office space; three motels providing about 420 rooms, a medical center and a 145 bed hospital; and a six screen movie theater.

Dave Senior, a planner who specializes in issues pertaining to 82nd Avenue and the Clackamas Town Center expounded upon this area's growth and importance as a regional draw. Historically speaking, 82nd Avenue has been a focus of regional commercial activities for many decades. The reason for this explains Senior is that it is the only street on the east side of the Willamette that runs from the south shore of the Columbia River and into Clackamas County. Because of this unique characteristic it became a focus for commercial activity in east Multnomah County. As growth occurred in Clackamas County, so too did the commercial activity spread southward along 82nd. The construction of I-205 only reinforced the area's dominance as a regional draw.

The growth is continuing and according to Senior, if the urban growth boundary remains static, it will continue to reinforce north Clackamas County's dominance as a regional draw along 82nd Avenue. Senior predicts a doubling or tripling of Class A office space over the next ten to twenty years. There is room for one more anchor store such as Macy's at the Clackamas Town Center. The siting and construction of the Aquatic Center adjacent to the Oregon Institute of Technology campus will add to the regional character of the area. This facility will have five pools: a wave pool, a lap pool, a wading pool, a whirlpool, and a recreation swim pool; public meeting rooms; and a snack area. Surrounding the building will be a regional park with fields for various types of activities.

The Clackamas Town Center Mall, however, continues to be the most dominant regional draw in this area. It was built in 1980, and there is the potential for facilities of this type to become outdated and obsolete after about twenty years. Redevelopment of the mall may become a high priority around the turn of the century. The Lloyd Center area is an example of this process as it has recently finished redevelopment construction. There is also the possibility that the Town Center will not be a viable retail attraction after the turn of the century. The likelihood of this actually happening is highly dependent upon an expansion of the urban growth boundary further to the east.

## Clackamas Town Center Market Area Demographics

From a publication produced by the Clackamas County Development Agency, "Market Data Report Clackamas Town Center Area", several observations are listed below. All observations stated here focus on issues of employment and travel time to work. These demographics are based upon the 1988 figures from National Decision Systems.

All statistics refer to a 2 mile radius of CTC:

- 1) Average household income \$23,622  
Median household income \$20,927
- 2) Total number of households 7,730  
Total number of employees 15,885  
Daytime population 15,885  
Residential population 22,794

There seem to be employment opportunities for 70% (15,885/22,794) of the residential population. Additionally, the medium household income reflects the wages that are earned by individuals working in the retail service sector which is predominant at Clackamas Town Center.\*

- 3) Of the 15,885 employees, 56% (8,828) do not work in the retail and service sectors.\*

- 4) Population by travel time to work; total is 9,776.

Under 5 min.	2.70%	(264)
5 to 9 min.	11.93%	(1,167)
10 to 14 min.	15.82%	(1,546)
15 + min.	69.54%	(6,799)

It is possible that, at most, 1,431 working individuals from the two mile radius surrounding CTC make up the 15,885 daytime population. Concluding, 91% if the employees of CTC stores and services commute from distances of 10 minute or more.\*

- 5) Population by transportation to work; total is 9,833.

drive alone	70.83%
car pool	18.25%
public trans.	4.94%
walk only	2.34%
other means	1.59%
work at home	2.05%

6) From yearly car count in the CTC parking lot; 1988 estimates based on sales increases and projections.

total	8,003,212
daily average	22,107
monthly average	666,934

The number of employee daily parking is not reported.\*

It is quite evident that residents of the CTC area drive to work and that almost half travel to employment located at least six miles from CTC. In addressing Goal 12 of the State Comprehensive Planning Goals, the 2 mile radius of CTC needs to be better connected to the metropolitan region by mass transit and commuter organization.

\* Conclusions were derived from provided data and were not part of the documented publication.

# **Kaiser Sunnyside Medical Center: Expansion Plans, Traffic and Other Local Impacts**

## **Issues**

- Congestion at certain intersections will be made worse in the future in part by KSMC generated traffic. The worst intersections will be 82nd Ave. and Sunnyside Rd. and northbound and southbound I-205 and Sunnyside Rd. intersections.
- An increasing level of congestion in the surrounding street system may adversely impact the economic viability of KSMC in the future as a regional facility.
- KSMC is not accessible for patrons using alternate transportation modes such as walking and bicycling.

## **Analysis**

This summary is based almost entirely upon a report titled Parking and Traffic Impact, Kaiser Sunnyside Medical Center Campus, Kaiser Permanente, by Carl H. Buttke, Inc., Consulting Transportation Engineer, 11/11/87. This summary will list current and future facilities expansion and traffic generation rates into the surrounding road network as a result of this expansion. However, this summary will dispute some of the conclusions reached by Mr. Buttke regarding traffic impacts in the surrounding road network. In addition, some economic and other conclusions will be made on the basis of demographic data provided in Mr. Buttke's report.

The Kaiser Sunnyside Medical Center (KSMC) is located on the south side of Sunnyside Road, east of SE 97th Ave. in Clackamas County. As of 1987, the campus included a 145 bed hospital, two medical offices (which includes an optical center and a clinic), a service center which houses a regional lab, a regional process center, and a regional supply center. The later three buildings serve Kaiser Permanente facilities in the entire Portland metro area.

Approximately 1700 people worked at the KSMC campus in 1987 in a 24 hour period. 1270 parking spaces were provided. At that time, it was estimated there was a need for 1430 parking spaces to provide a cushion during peak hours.

Approximately, 94% of employees drove their own vehicle to work, 5% were passengers and less than 1% used Tri-Met, even though the campus is served by the 71 bus line, which runs every 15 minutes. Expansion of transit service is not expected in the near future. 6% of employees participated in carpooling or ride sharing. The 24 hour trip generation rates were 7,700.

Since that time, 5 expansion phases between 1988-2002 have been planned. These expansion plans are represented on the phase site plan maps found in the appendix. In phase 1 from 1988-1990, a sub-specialty medical office and an administrative office to the hospital were under construction. The number of hospital beds stayed at 145, the amount of hospital personnel increased to 1,023, medical office employees increased to 430, service center employees stayed at 425 and parking spaces increased to 1,750. Demand for parking was estimated to be 1676. 24 hour trip generation rates were 8,600.

Phase 2 added a small amount of space to the hospital and began construction of the first addition to the regional supply center. No hospital beds were added, hospital employment increased to 1,043, no medical office or service center employees were added, parking spaces increased to 1,750. The estimated demand for parking was 1,740. 24 hour trip generation rates (for phases 2 and 3) should be 9,400.

Phase 3 is ongoing into 1993, which has begun construction of an above ground parking structure. The first addition to the regional supply center is still under construction. The first addition to the regional laboratory is also being constructed. The amount of hospital beds will increase to 180 beds, the amount of hospital employees will increase to 1,194, medical office employees will increase to 430, service center employees will increase to 620, and the total amount of parking spaces will decrease to 1,740 as construction takes place. The estimated demand for parking in this phase is 1,830.

Phase 4 will occur from 1995-1996 which have a 350 space parking structure completed, the first addition of the regional center completed and the first addition of the regional laboratory completed. Furthermore, construction will begin on the first addition to the regional process center, the second addition to the regional supply center, the second addition to the regional laboratory, an addition to the sub-specialty medical office built in phase 1 and an additional parking structure with 558 spaces. This later structure is dependent on the Sunnybrook Extension being built, as that is where it would have street access. The amount of hospital beds would be expanded to 235 due to the addition of beds in the sub-specialty medical offices, the amount of hospital personnel would be increased to 1,411, medical office employees would be increased to 510, service center employees to 620 and the amount of available parking spaces would increase to 2,125 spaces. The estimated peak demand for parking is estimated to be 2,140 spaces. 24 hour trip generation rates are estimated to be 11,500.

Phase 5 is the final expansion planned for 2000-2002. The first addition to the regional process center will be completed, as will the second addition to the regional laboratory, the regional supply center, the sub-specialty medical offices and the 558 parking structure bordering the proposed Sunnybrook Extension. Construction will begin on a second addition to the regional process center, an addition to the nursing wing, as well as the main hospital and a 175 space addition to the 558 space parking structure bordering the Sunnybrook Extension. At the completion of this phase, there will be 350 hospital beds, 1,719 hospital employees, 510 medical office employees, 640 service center employees and 2,300

parking spaces. The estimated peak parking demand will be 2,314 spaces. 24 hour trip generation rates are estimated to be 13,300.

The traffic assignment maps in the appendix show how KSMC-generated traffic will be distributed. In addition, table 6 in the appendix looks at the capacity and level of service at selected intersections in the mapped area. The table indicates that 1 intersection at present is at 'D' level of service. This indicates long traffic delays. No intersection exceeds capacity. By 1995, 3 intersections are at 'D' or 'E' level of service. 'E' indicates very long traffic delays. Three intersections are over capacity. By 2000, only 2 intersections are at 'D' or 'F' level of service and only 1 intersection is over capacity. This is due to presumed road improvements, such as the Sunnybrook Extension. However, if any of these improvements are not constructed, the level of service could be expected to be much worse. By the year 2009, there are projected to be 5 intersections with 'D' or 'F' level of service and 4 intersections exceeding capacity.

Mr. Buttke concludes that "Sunnyside Road will experience traffic volumes exceeding its capacity at the major intersections west of the KSMC campus over the next twenty years, regardless of any expansion plans at the KSMC campus." [Parking and Traffic Impact, Kaiser Sunnyside Medical Center Campus, Kaiser Permanente, Buttke, p.36.] However, he also concludes that "... the proposed KSMC master plan is not expected to cause the operation of the surrounding street system to drop into unacceptable levels of service." [Ibid, p. 36.]

His conclusions ignore the fact that an expanding KSMC campus traffic generation rate and no increase in transit usage must have a negative impact on congestion of intersections. Simply because KSMC traffic is not causing a given intersection to go from 'D' level of service to 'F' level of service does not mean there is no impact. Any additional increment of traffic at a congested intersection is still a negative impact.

Therefore, KSMC seems like it should be working to be more proactive in encouraging transit and alternative transportation mode usage. Even with enormous (and costly) parking expansion in each of the 5 expansion phases, the supply has barely kept up with demand. KSMC might find attacking parking from the demand side to be more cost effective, rather than building more parking structures. Increased transit and multimodal transportation use at KSMC would provide service and quality of life benefits for the whole community.

While the major impacts of the KSMC expansion on the surrounding area involve traffic impacts, there are also significant impacts economically and in terms of health services. The KSMC campus is the largest single employer in the area. Many of the jobs are high quality in terms of income, benefits and stability. There are numerous economic spin-off effects, such as the hiring of local construction subcontractors to work on building additions, nearby motels being filled by visitors of patients in the hospital, KSMC workers buying houses and raising families in the area, to KSMC employees buying lunch every day at local restaurants. KSMC will continue to expand into the future because of its



regional focus toward medical care, supply and service. The workforce will grow and remain the largest in the county.

The community also benefits from the regional focus of KSMC in terms of medical care and facilities. Normally, the small population of this area would not merit a 145 bed hospital, as well as associated medical clinics, optical centers and medical offices. Due to the regional draw, however, this size and quality of facility does exist.

In conclusion, the Kaiser Sunnyside Medical center is undergoing a 5 phase expansion plan between 1988-2002. The hospital, medical offices, medical clinics, regional laboratory, supply center, process center and parking structures are all undergoing substantial expansion. The number of employees has expanded from 1,711 in 1987 to an estimated 2,869 employees by 2002. Parking spaces have gone from 1,270 in 1987 to an estimated 2,300 by 2002. Hospital beds have expanded from 145 in 1987 to an estimated 350 by 2002. Average trip generation per day has gone from 7,700 in 1987 to an estimated 13,300 by 2002.

This expansion will contribute negatively to the amount of congestion in the immediate road network. The most effected will be the 82nd and Sunnyside Rd. intersection and both north bound and south bound I-205 and Sunnyside Rd. intersections. At the same time, KSMC will continue its expansion with an ever increasing regional focus. This facility will continue to be the largest single employer in Clackamas County, particularly of high paying medical professions. This has an enormous economic spin off benefits to the region. The community will also benefit from having an exceptionally high level of medical care for a community of this size. The main issue seems to be how to mitigate the local traffic congestion while maintaining the strong economic and medical benefits to the community and the region as a whole. There also may be problems of connectivity for some local residents in this area without using an auto. Walkers and bicyclists, for example, may be intimidated trying to cross busy Sunnyside Rd while going to or from KSMC.

## **Development Opportunities**

**Issue:** The lands identified along S.E. 82nd Ave. and the target area are currently underused.

Redevelopment potential is shown on the Redevelopment potential map. Development on vacant or undeveloped land was limited in the target area. The target area is bounded by 82nd Ave. to the east, I-205 to the west, Johnson Creek Blvd. to the north and Sunnyside Rd. to the south. Due to the limited amount of vacant lands, redevelopment was determined to offer the greatest potential for further growth.

The analysis considered the effect of such factors as accessibility and proximity to regional economic attractors, and ability to accommodate commercial development without significant reinvestment in the physical infrastructure. The target area was determined to have the highest potential of successful redevelopment, given the above conditions. 82nd Ave. was also examined as part of an effort to analyze its commercial health and viability. Redevelopment potential was determined by the following criterion:

- Buildings with assessed values of 70% or less than the value of the underlying land
- Vacant land
- Surface parking lots

It was found that 82nd Ave and the target area had great potential for conversion of use and/or reinvestment. It was found that a total of 171 parcels along 82nd Ave and within the target area had building values less than 70% of underlying land values. This was based on calculations attained from Clackamas County's 1992 Assessed Values. The Redevelopment Potential map also identifies parking lots and vacant lands potentially available for redevelopment.

## **Common Issues with Lents**

### **Issues and functional linkage:**

- I-205 (including light rail) - transportation/land use
- 82nd Avenue - transportation/land use and livability
- Clackamas Town Center - commercial
- Johnson Creek and Springwater Corridor - recreation and environmental
- Lents Park and Benedict Park - recreation
- I-205 bikepath - transportation and recreation



# APPENDIX

## Livability Methodology

### Methodology

Information used to complete the livability issues analysis came from a variety of primary and secondary sources.

Interviews took place with staff members from several agencies in the study area. These interviews provided both quantitative and qualitative information which formed much of the basis for the analysis. Staff from the following agencies participated in interviews:

Clackamas County Community Development Agency -- information on Overland Park.

Clackamas County Public Affairs Office -- neighborhood districts.

Clackamas County Sheriff's office -- crime statistics.

N. Clackamas School District -- schools.

Dept. of Transportation and Development -- public services, infrastructure, design standards, and economic development.

N. Clackamas Parks and Recreation District -- parks and recreation, and daycare and after-school care.

The *North Clackamas Parks District Draft Neighborhood Parks Plan* provided data on parks and recreation.

Data regarding 82nd Street was gathered through windshield surveys and from the *Clackamas Town Center Area Design Standards Study*.

Primary data was gathered using walking and windshield surveys of the study area using the following factors to formulate a qualitative assessment: neighborhood amenities, such as small businesses located on non-arterial streets; informal play areas and vacant lots; street conditions; presence or absence of sidewalks; storm drainage; noise; traffic on neighborhood streets; pedestrian access; natural features or points of interest; and any other localized attractions serving the residential areas. Comments from residents were collected at the Metro 2040 citizen participation meeting in November.

## References

Clackamas County Community Development. Interview. October, November 1992.

Clackamas County Development Agency. *Clackamas Town Center Area Design Standards Study*. March 19, 1990.

Clackamas County Department of Transportation and Development. *Clackamas County Comprehensive Plan*. 1992.

Clackamas County Office of Public Affairs. Interview. October 1992.

Clackamas County Sheriff's office. Interview. October 1992.

N. Clackamas Parks and Recreation District. *N. Clackamas Parks and Recreation District Draft Neighborhood Parks Plans*. February 1992.

N. Clackamas Parks and Recreation District. *N. Clackamas Parks District Master Plan*. 1991.

N. Clackamas Parks and Recreation District. Interview. November 1992.

N. Clackamas School District. Interview. November 1992.

## **Housing Stock Assessment Methodology**

The secondary data used to assess the housing quality and conditions were gathered from 1990 census tract and block group data. Several variables are referred to in making generalizations within the sub-areas. These are:

- median year structure built.
- units per structure.
- percentage of housing units that are owner occupied and renter occupied.
- median household income.
- average rooms per housing unit.

Traditional variables measuring substandard conditions of the housing stock such as adequacy of plumbing facilities, condition of electrical systems, and number of persons per room were not investigated. The overall increases in housing quality due to building codes and quality construction methodology have made these measurements of substandard conditions somewhat obsolete.

Additionally, primary data gathered from a windshield/walking survey served a descriptive role in the housing condition assessment. The survey route was established by randomly selecting an entry point into each sub-area, and then randomly selecting a path of observation. The actual addresses of each housing unit was not recorded, rather attention was given to physical characteristics of housing quality and qualitative differences between neighborhoods. Several criteria were measured including:

- general appearance of landscaping and yard care upkeep
- unit exterior:
  - condition of paint and/or siding.
  - condition of exterior walls and roof.
  - condition of foundation and type, i.e. poured concrete, concrete slab, stone, or cinder block.
  - general maintenance, i.e. broken windows, porch disrepair, sidewalk disrepair.

The data was stored on a tape recorder and analyzed to produce general impressions.

## Housing Affordability Methodology

### Variables by Census Block Group:

Portland CMSA Median Household Income ('90 Census)  
50% of Median Household Income  
80% of Median Household Income  
Total Households ('90 Census)  
Households with 50% or less of Median HH Income  
• percent of total HH  
Households with between 50% and 80% of Median HH Income  
• percent of total HH  
30% of 50% of Median HH Income  
• per month (divided by 12)  
30% of 80% of Median HH Income  
• per month (divided by 12)  
Median Gross Rent ('90 Census)  
Median Owner Cost with Mortgage ('90 Census)

Using the Clackamas County Comprehensive Housing Affordability Strategy as a guideline, as well as documented HUD standards, the affordability of housing for the four sub-areas is observed.

HUD defines "very low income" households as those that measure 50% or less of the determined area's median household income. Additionally, "low income" households are those that measure between 50% and 80% of the determined area's median household income. HUD defines households in need of housing assistance as very low, low and moderate income households who pay more than 30% of their income for housing.

30% of the Portland CMSA median household income was determined for very low and low income households. This 30% threshold was then divided by 12 to observe income available for housing consumption per month. This amount equals \$387 for very low income households and \$625 for low income households. These two income levels were measured against the median gross rent and median owner cost with mortgage, both taken from the '90 Census. Thus, the affordability study gauges the ability of different income groups to afford the median priced rental and owner units within the area.

Analysis was performed at the block group level because Median Household Incomes could not be aggregated to the sub-area level. Hence, generalizations about affordability are extrapolated from the block group level.

## Bibliography

- Urban Economics*. Arthur M. Sullivan, 1990.
- Real Estate*. James B. Kau and C.F. Sirmans, 1985.
- The Modern Economics of Housing*. Randall Johnston Pozdena, 1988.
- "Clackamas county Comprehensive Housing Affordability Strategy 1992-1996."  
Clackamas County Department of Human Services, Housing and community Development, 1991.
- "Southeast Portland Comprehensive Housing Plan: Background Report."  
Comprehensive Planning Workshop, Winter Quarter, 1989.
- Clackamas County Comprehensive Plan, 1990.



<b>Housing Affordability by Sub-Area</b>					
		Sub-Area A	Sub-Area B	Sub-Area C	Sub-Area D
# block groups		6	4	3	4
Portland CMSA Median HH Income		\$31,071	\$31,071	\$31,071	\$31,071
Income Ranges					
Very Low Income (less than 50% Portland CMSA Med.)		\$15,500	\$15,500	\$15,500	\$15,500
Low Income (less than 80% Portland CMSA Med.)		\$24,800	\$24,800	\$24,800	\$24,800
Total Households		2121	3234	1525	2157
Very Low Income HH % of total HH		650 31%	411 13%	462 30%	114 5%
Low Income HH % of total HH		1216 57%	1053 32%	868 57%	420 19%
30% Very Low Income/Mo.		\$387	\$387	\$387	\$387
30% Low Income/Mo.		\$625	\$625	\$625	\$625
Range of Med. Gross Rent		\$381 to \$675	\$441 to \$516	\$346 to \$544	\$560 to \$806
Range of Med. Mortgage Owner Costs		\$469 to \$559	\$558 to \$731	\$450 to \$903	\$778 to \$911
Affordable for Very Low Income HH?		no	no	yes, one block group	no
Affordable for Low Income HH?		yes	yes, 2 block groups	yes, one block group	no

## **Transportation Issues Methodology and Bibliography**

- Reviewed LCDC Land Use Goals
- Reviewed Clackamas County Comprehensive Plan (1992) and spoke with County planning officials to ascertain initial issues and problems.
- Spoke with transportation planners at Metro in order to gather data which could be used to determine modal splits.
- Spoke with officials at Tri-Met and reviewed their Strategic Plan.
- Spoke with City of Portland Light Rail Transit Planners and reviewed maps and documents provided by them.
- Analyzed Clackamas County zoning maps using ocular estimation to determine zoning around proposed LRT stations.

## **Key points from the Clackamas County Comprehensive Plan**

### **Transportation and Land Use:**

- Public transit service from Tri-Met must also keep pace with future land use development.
- The transportation system in Clackamas County must emphasize a balance between safety and efficiency with highways, transit, and pedestrian/bikeways.
- Develop a system of light rail transit routes in selected corridors in the north urban area of the County.
- Promote park and ride lots, bus shelters and pedestrian/bikeway connections to transit.
- Work within federal, state, and regional agencies to implement light rail transit (LRT) lines in the I-205, the downtown Portland to Milwaukie, and the Milwaukie to Clackamas Town Center corridors.
- Pedestrian access should be provided connecting transit centers or stops on trunk routes with centers of employment, shopping or medium to high density residential areas within one-quarter mile of these routes.
- Locate land uses of higher density or intensity to increase the effectiveness of transportation and other public facility investments.
- The study area is designated Immediate Urban by the Clackamas County Comprehensive Plan.

- Encourage infilling of Immediate Urban Areas with a minimum of disruption of existing neighborhoods.
- Integrate developments combining retailing, office, and medium and high density housing at places with frequent transit service and pedestrian facilities.
- Control land uses in Immediate Urban Areas through the zoning and subdivision ordinances and application of urban zoning districts.
- Simplify County ordinances as much as possible to encourage development in Immediate Urban areas.
- Require pedestrian access to school, transit, commercial, recreational and employment areas
- Ensure that traffic attracted to commercial development will not adversely affect neighborhoods.
- Limit expansion of commercial strips and encourage better design of existing strips to make them more functional and attractive.

Criteria for designating transit centers:

- pedestrian access
- transit-supportive land uses
- medium to high density
- frequent service
- transit transfers
- modal transfers
- park and ride
- located on trunk route
- one-quarter mile radius of major employment, residential, commercial

Trunk routes in study area:

- I-205 (north of CTC)
- Railroad Ave. - Harmony Rd. - Sunnyside Rd.
- 82nd Ave. - 82nd Dr. - Arlington St. (south of CTC to Oregon City)

Transit center in study area:

- Clackamas Town Center

Park and Ride lot in study area:

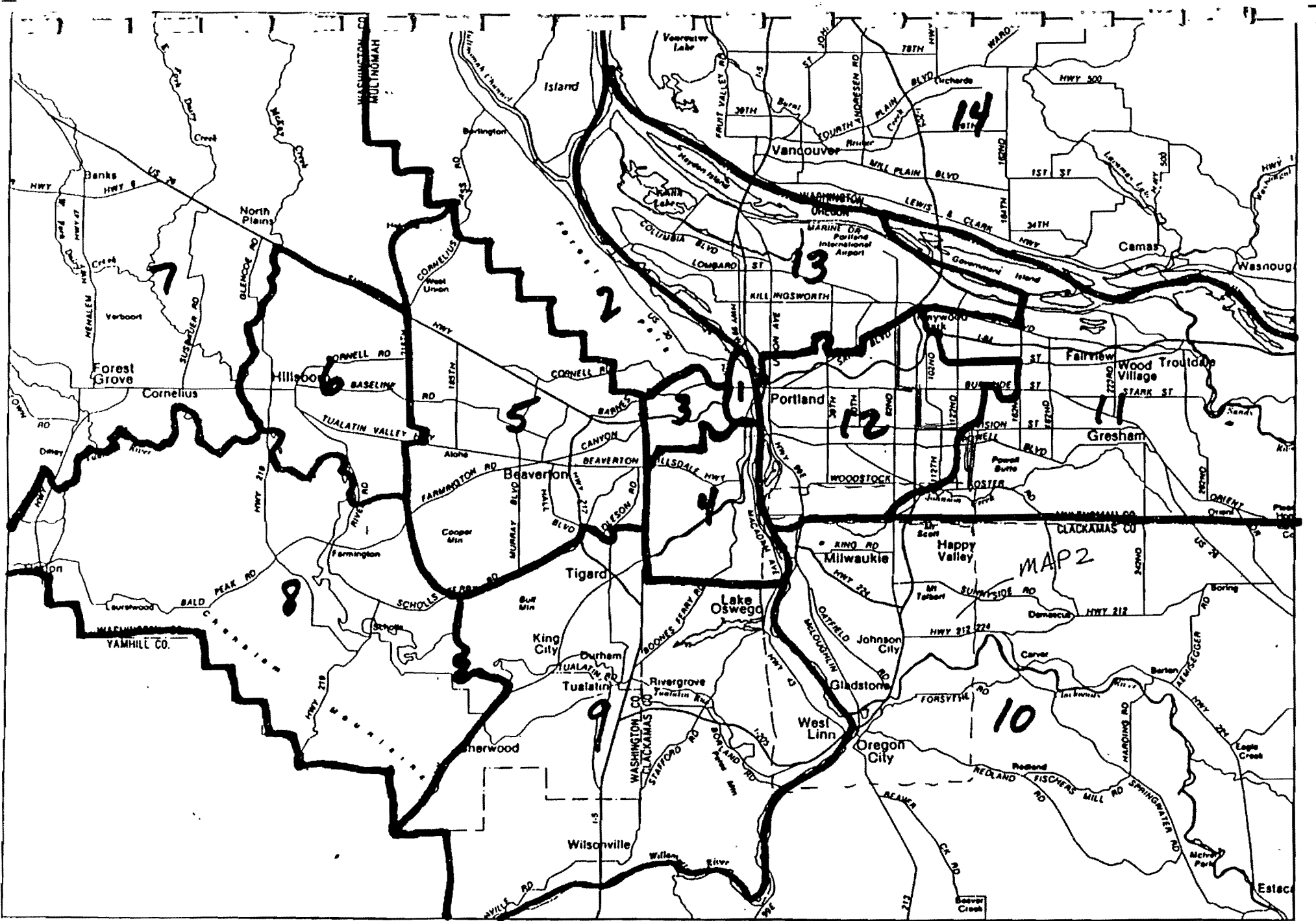
- Clackamas Town Center

## **Summary of Metro Zone Trip Tables**

The summarized tables on the following pages are aggregated from data provided by Dick Walker of Metro. The output which he generated was derived from a regional origin/destination model which divides the region into fourteen transportation zones and provides data for the years 1990 and 2010 (refer to Map 1 on the following page). Our study area was designated as its own zone (Zone 15), and is completely within zone ten (refer to Map 2).

The top series of percentages of trips (for each modal category) corresponds to that percentage of trips which originate in the study area and end in any one of the fifteen zones. The bottom series of percentages of trips (for each modal category) corresponds to that percentage of trips which ends in the study area and originate in any one of the fifteen transportation zones.

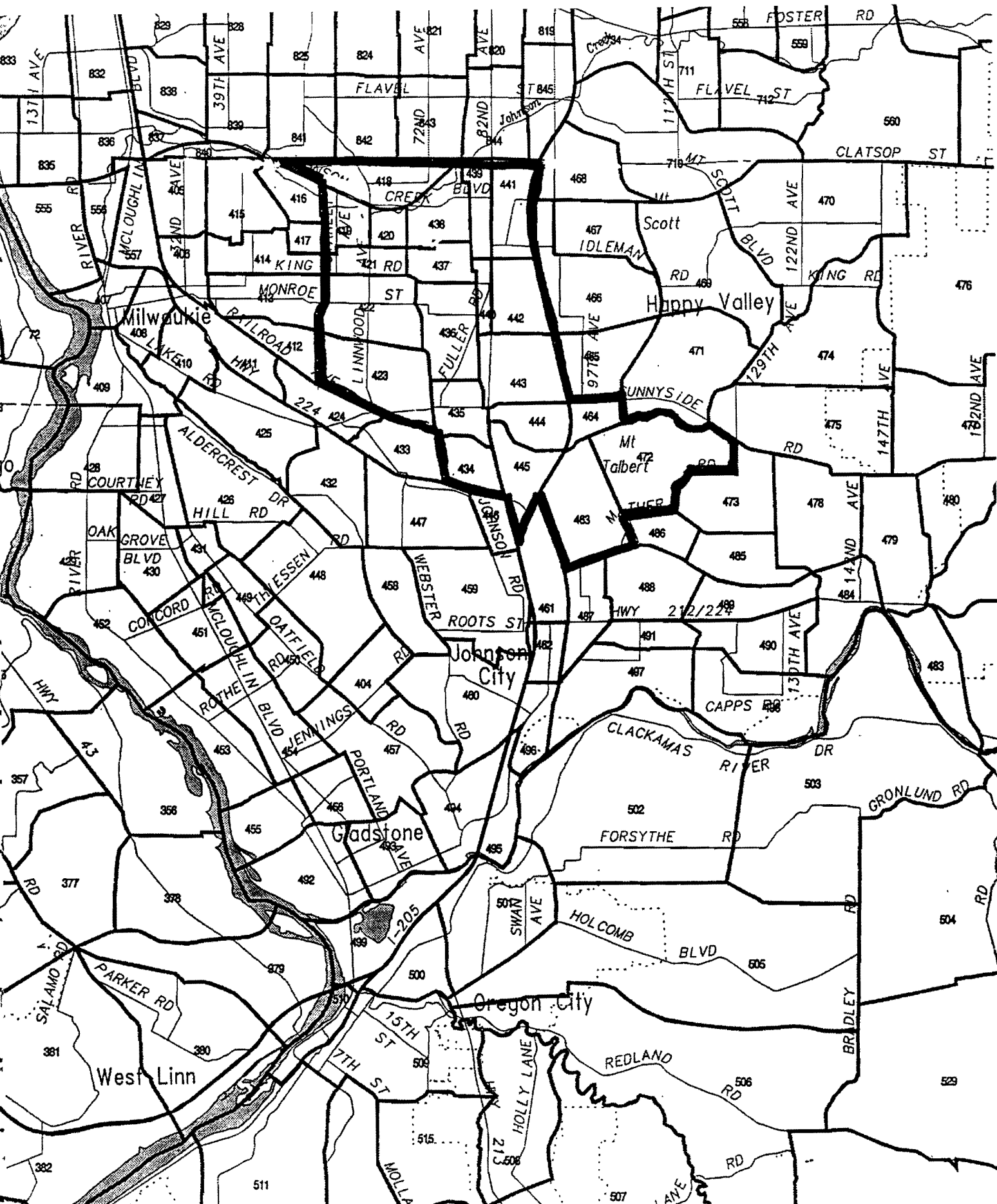
Below most of the modal categories is an interpretation of the data corresponding to that mode, which should clarify potential ambiguities.



METRO

2000 S.W. First Ave., Portland, OR 97201-5398, (503) 221-1646, 1" = 4 mi., 1-87-01

# MAP 1



<u>1990</u>		<u>2010</u>	
<u>Walk/Bike (work trips)</u>			
○ 15/D 15	-	55%	○ 15/D 15 - 69%
○ 15/D 10	-	29%	○ 15/D 10 - 25%
○ 15/D 12	-	17%	○ 15/D 12 - 07%
○ 10/D 15	-	40%	○ 15/D 15 - 57%
○ 15/D 15	-	37%	○ 10/D 15 - 35%
○ 12/D 15	-	22%	○ 12/D 15 - 08%

Over 3/4 of these trips occur in Clackamas County and this percentage will be increasing in the next twenty years.

<u>Walk/Bike (non-work trips)</u>			
○ 15/D15	-	62%	○ 15/D 15 - 63%
○ 15/D10	-	27%	○ 15/D 10 - 30%
○ 15/D15	-	55%	○ 15/D 15 - 59%
○ 10/D15	-	37%	○ 10/D 15 - 37%

Again, these trips predominantly occur in Clackamas County and this percentage will be increasing over the next twenty years.

1990

2010

Transit (work trips)

O 15/D 1	-	58%	O 15/D 1	-	84%
O 15/D 12	-	13%			
O 15/D 15	-	12%			
O 15/D 10	-	10%			

In the next 20 years, there will be an intensifying of these types of trips ending in downtown.

O 12/D 15	-	36%	O 11/D 15	-	41%
O 11/D 15	-	26%	O 12/D 15	-	30%
O 10/D 15	-	19%	O 10/D 15	-	14%
O 15/D 15	-	10%			

About 70% of these transit work trips originate in Multnomah County.

Transit (non-work)

O 15/D 15	-	45%	O 15/D 15	-	42%
O 15/D 12	-	25%	O 15/D 12	-	19%
O 15/D 1	-	16%	O 15/D 1	-	17%
O 15/D 10	-	09%	O 15/D 10	-	14%

This implies that many people are using transit within our study area, probably to get to the CTC and commercial areas along 82nd.

O 15/D 15	-	38%	O 15/D 15	-	33%
O 12/D 15	-	35%	O 12/D 15	-	28%
O 10/D 15	-	19%	O 10/D 15	-	27%



**1990**

**2010**

**Auto persons (work)**

O 15/D 12 - 27%  
O 15/D 10 - 23%  
O 15/D 15 - 15%

O 15/D 10 - 26%  
O 15/D 12 - 24%  
O 15/D 15 - 17%

People are staying on the east side of the Willamette to get to work in their car.

O 10/D 15 - 41%  
O 12/D 15 - 22%  
O 11/D 15 - 09%

O 10/D 15 - 43%  
O 12/D 15 - 18%  
O 9/D 15 - 10%

The highest percentage of people are arriving from Clackamas County, and this will increase over time.

**Auto persons (non-work)**

O 15/D 15 - 49%  
O 15/D 12 - 23%  
O 15/D 10 - 21%

O 15/D 15 - 44%  
O 15/D 10 - 30%  
O 15/D 12 - 22%

People are primarily staying within Clackamas County and this will be reinforced over time.

O 10/D 15 - 40%  
O 15/D 15 - 32%  
O 12/D 15 - 17%

O 10/D 15 - 42%  
O 15/D 15 - 31%  
O 12/D 15 - 16%

People are overwhelmingly arriving from within Clackamas County and this will not change much in the next twenty years.

The following table shows the service levels of the major roads in our study area following future improvements.

TABLE 6

## ESTIMATED LEVEL OF SERVICE

	1987		1990 + Phase 1		1995 + Phase 2&3		Yr.2000 + Phase 4		Yr.2009 + Phase 5		Yr. 2000 + Existing Master Plan	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
82nd & Sunnyside	.76	C	.90	C	1.03	D	1.19	F	1.48	F	1.50	F
SB I-205 & Sunnyside	.77	C	.95	D	1.08	E	0.85	C	1.04	F	1.13	F
NB I-205 & Sunnyside	.85	C	.91	C	1.04	D	0.95	D	1.15	F	1.15	F
97th & Sunnyside	.61	B	.71	B	0.86	B	0.56	B	0.69	B	0.76	B
Stevens & Sunnyside	.73	C	.86	C	0.92	C	0.79	C	0.94	C	0.94	C
Mid Access & Sunny.		B/E	.58	B	0.72	C	0.54	C	0.61	C	0.61	D
E.Access & Sunnyside	-	-	-	C/E	-	C/E	-	B/E	-	B/E	-	-
122nd & Sunnyside	-	-	.59	B	0.73	C	0.87	C	1.13	F	1.12	F
SB I-205 & Sunnybrook	-	-	-	-	-	-	0.69	C	0.86	C	0.85	C
NB I-205 & Sunnybrook	-	-	-	-	-	-	0.73	C	0.82	C	0.80	C
97th & Sunnybrook	-	-	-	-	-	-	0.71	C	0.99	D	1.09	E
Access & Sunnybrook	-	-	-	-	-	-	-	-	-	A/C	-	-
97th & N. Access	-	-	-	-	-	-	-	-	-	A/A	-	-
97th & S. Access	-	-	-	-	-	-	-	-	-	A/A	-	-

Legend: V/C = Volume to Capacity Ratio, or portion of capacity utilized by traffic  
 LOS = Level of Service  
 A/C = LOS A on main street/C LOS on stop sign controlled cross street

## Conclusions from the "CTC Market Data Report"

There is clearly a need for multi-modal forms of transportation because there is a dominance of the auto here.

This area is wealthier than the region as a whole.

There is a concentration of retail jobs in this area.

As people live closer to the CBD, avg. travel time decreases, but not by much.

There is a market for residential developments within the immediate vicinity of the CTC.

Below is a summary of the relevant findings from the "Market Data Report of the Clackamas Town Center Area", October, 1988:

There are 200 acres available for residential, office, and commercial development.

Class A office space:           232,800 sq. ft. (existing)  
  250,000 sq. ft. (planned for construction)

By 2005 the population within a five minute drive of CTC will be 87,605, up from 67,614 in 1990, a 30% increase in 15 years.

Mean Household income within certain driving times of the CTC:

- 5-min.      \$32,763
- 15-min.     \$29,144
- 25-min.     \$30,260

% of jobs that are retail within \_\_\_ minutes of the CTC:

	<u>5</u>	<u>15</u>	<u>25</u>
1990	26%	17%	18%
2005	27%	18%	19%

# of vehicles per household based on distance from CTC:

	<u>2 miles</u>	<u>6 miles</u>	<u>10 miles</u>
No vehicle	5.34%	10.32%	13.84%
1	29.86%	36.57%	36.95%
2	36.54%	32.67%	31.36%
3+	28.26%	20.43%	17.85%

Mode of transit to work based on distance from CTC:

	<u>2 miles</u>	<u>6 miles</u>	<u>10 miles</u>
Drive alone	70.83%	63.84%	62.58%
Car Pool	18.25	18.38	17.23
Public Transit	4.94	10.53	11.40
Walked	2.34	3.58	4.87
Other	1.59	1.86	1.91
Worked at home	2.05	1.86	2.01

Average travel time to work for those who live within specific distances of the CTC:

- 2 miles - 22.16 minutes
- 6 miles - 22.02 minutes
- 10 miles - 21.07 minutes

	<u>2 miles</u>	<u>6 miles</u>	<u>10</u>
Daytime population per business	14.6	12.0	14.0
Residential population per business	21.0	36.2	28.2

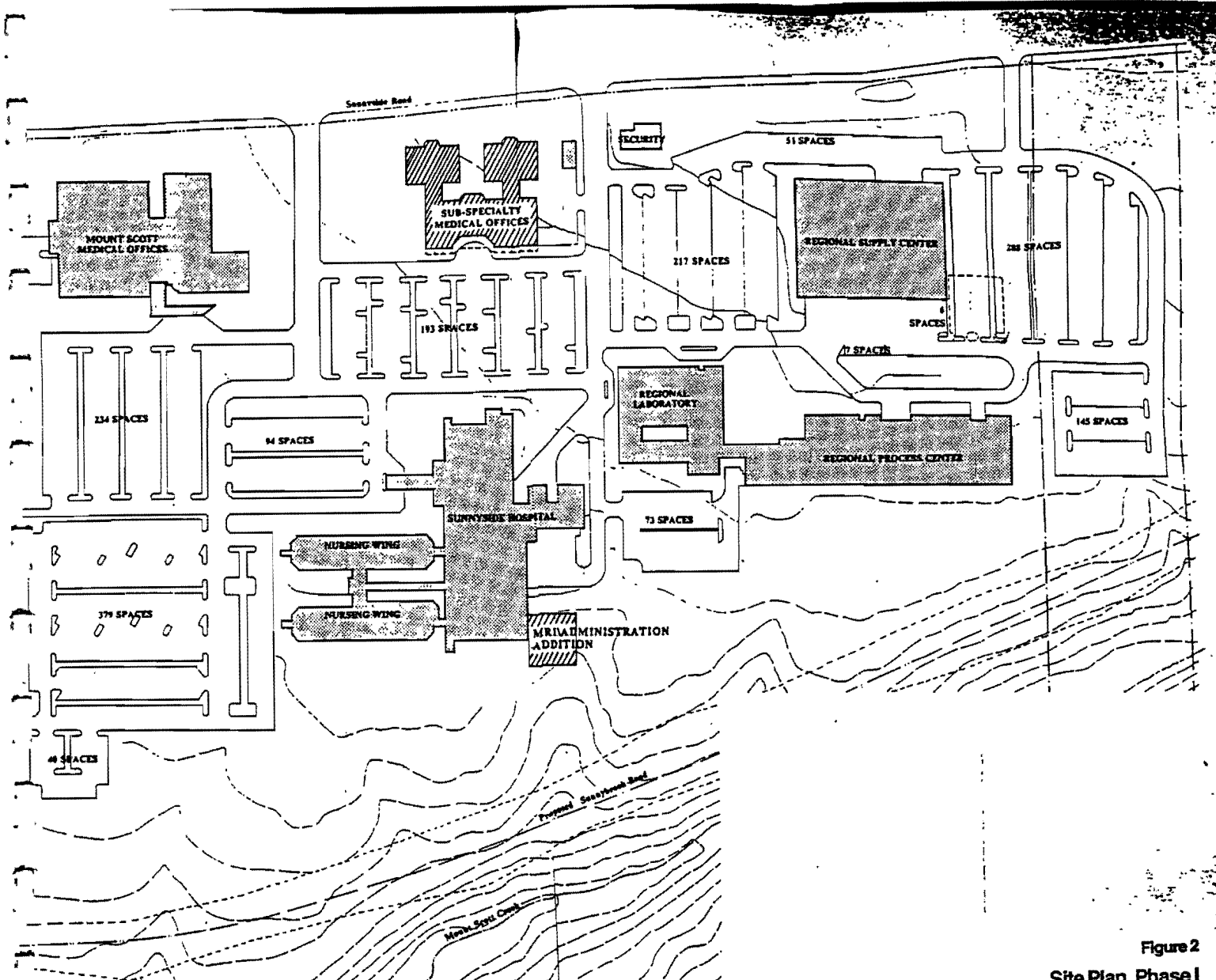
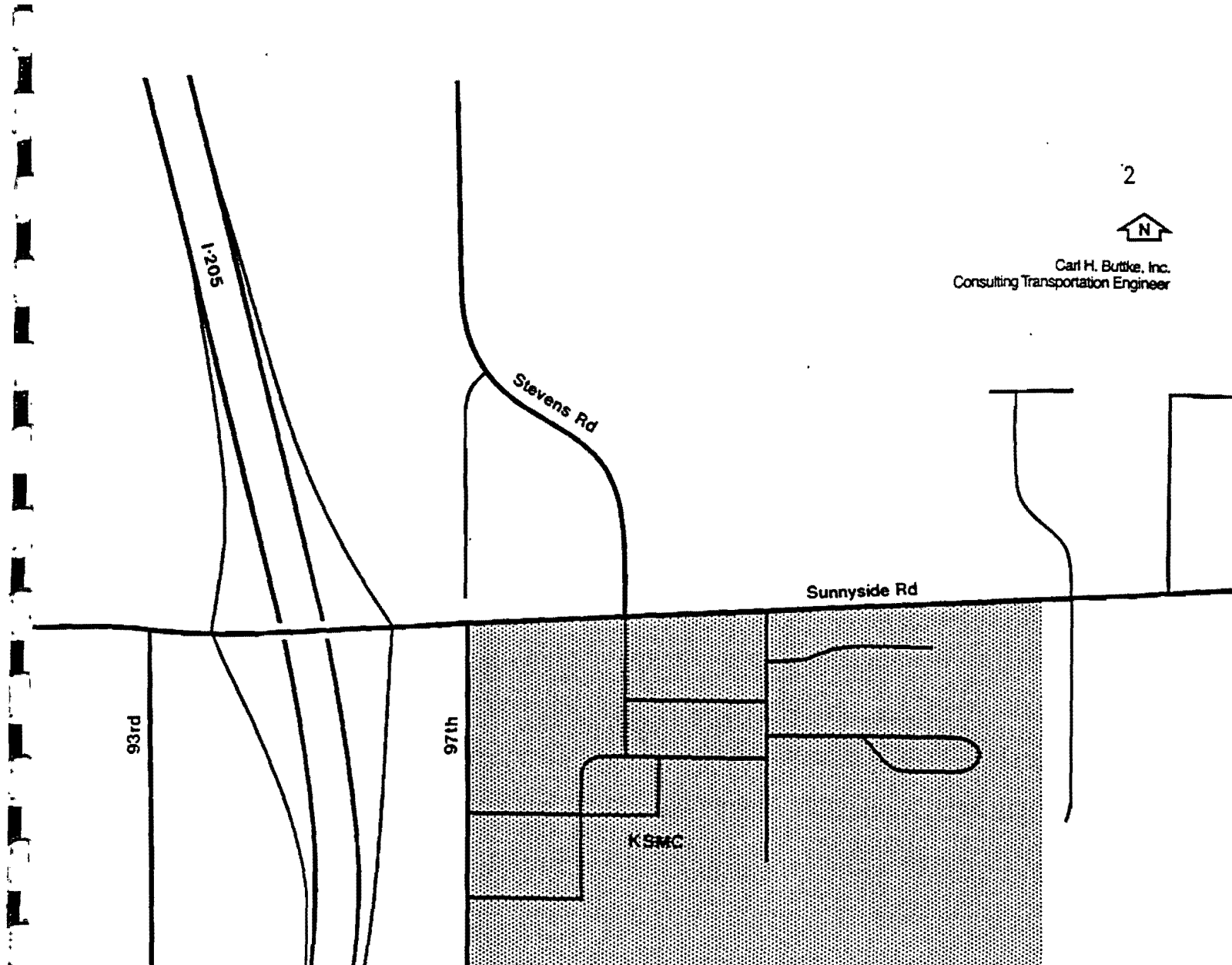


Figure 2  
Site Plan Phase I



Carl H. Buttkie, Inc.  
Consulting Transportation Engineer



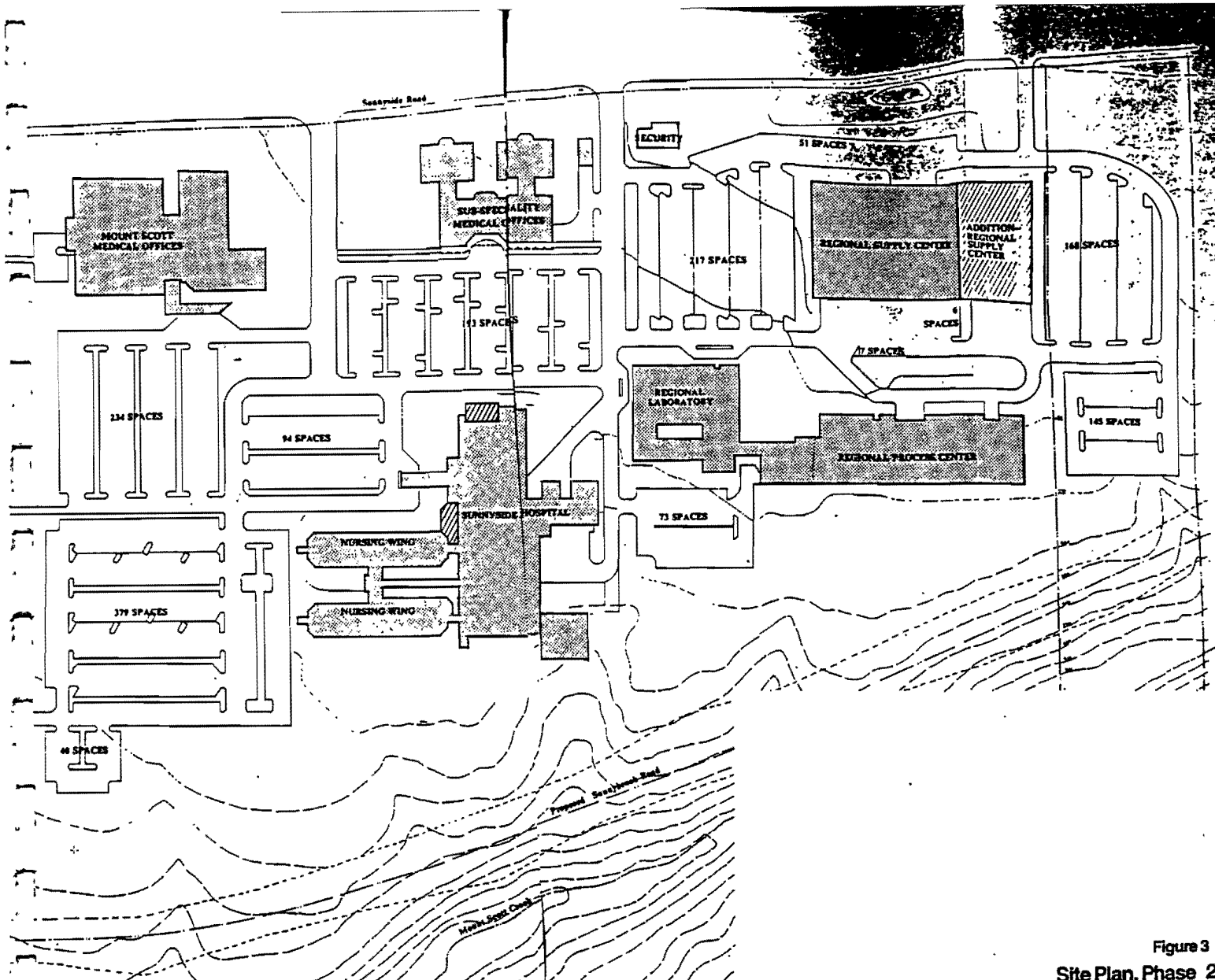


Figure 3  
Site Plan, Phase 2

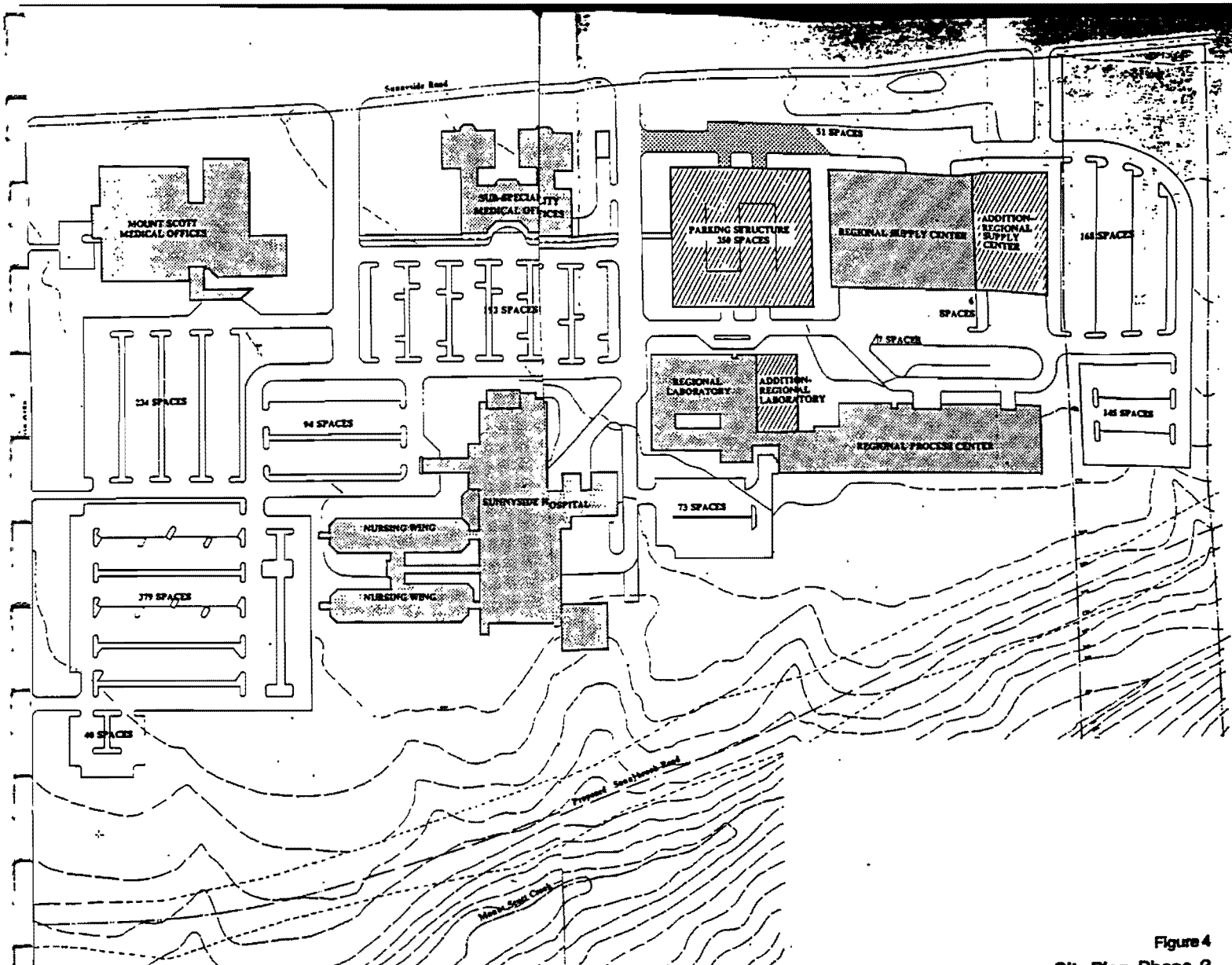


Figure 4  
Site Plan Phase 2



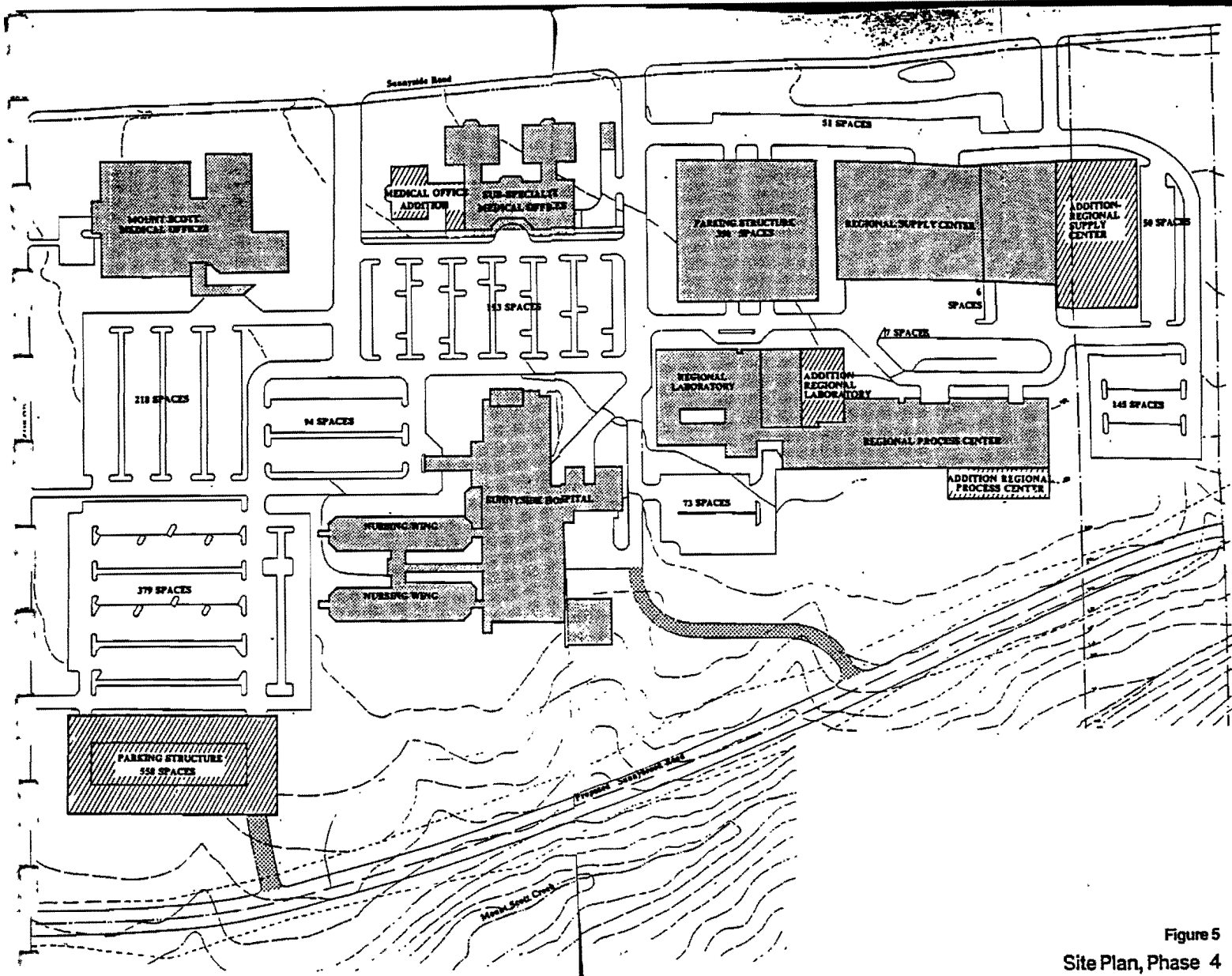
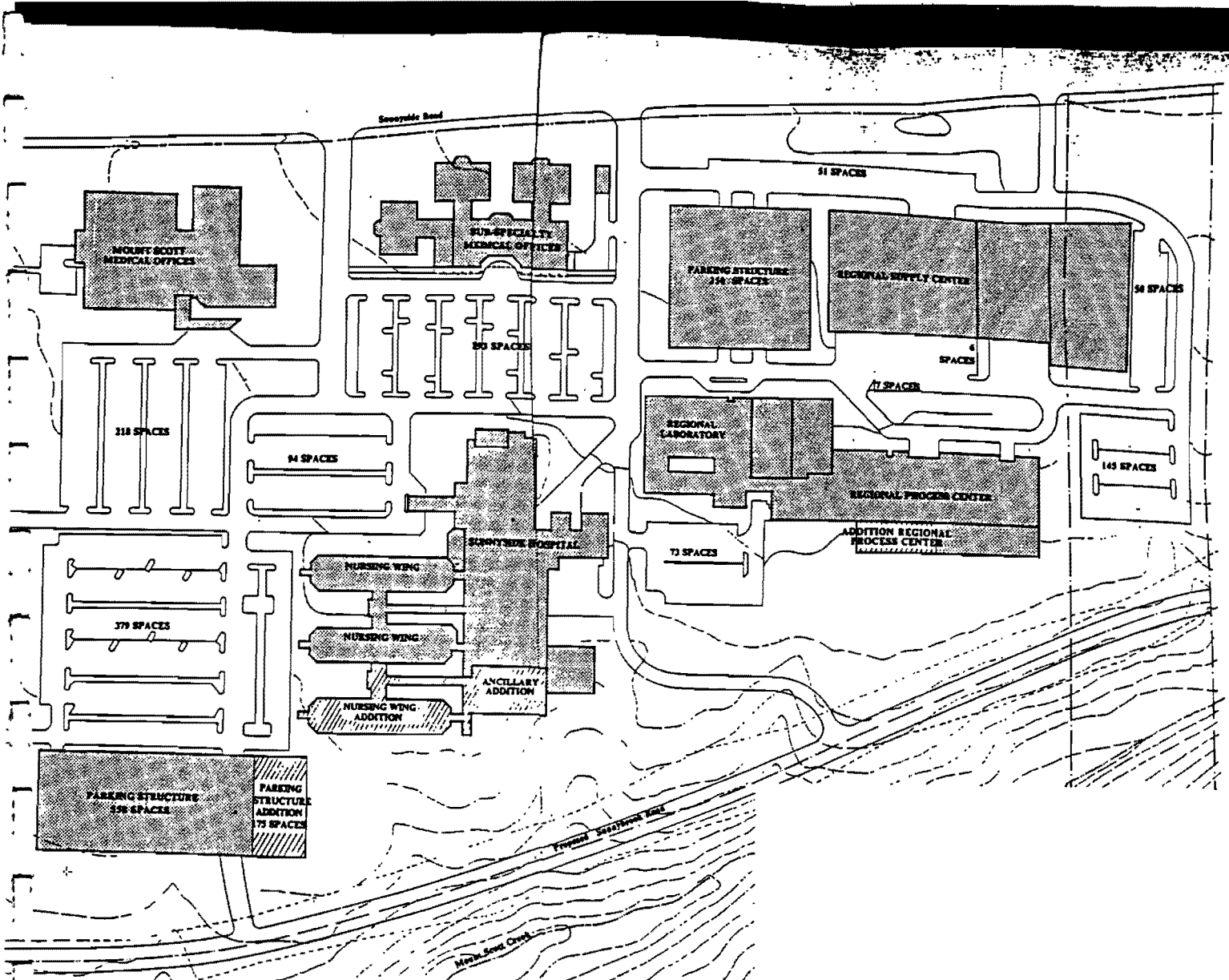
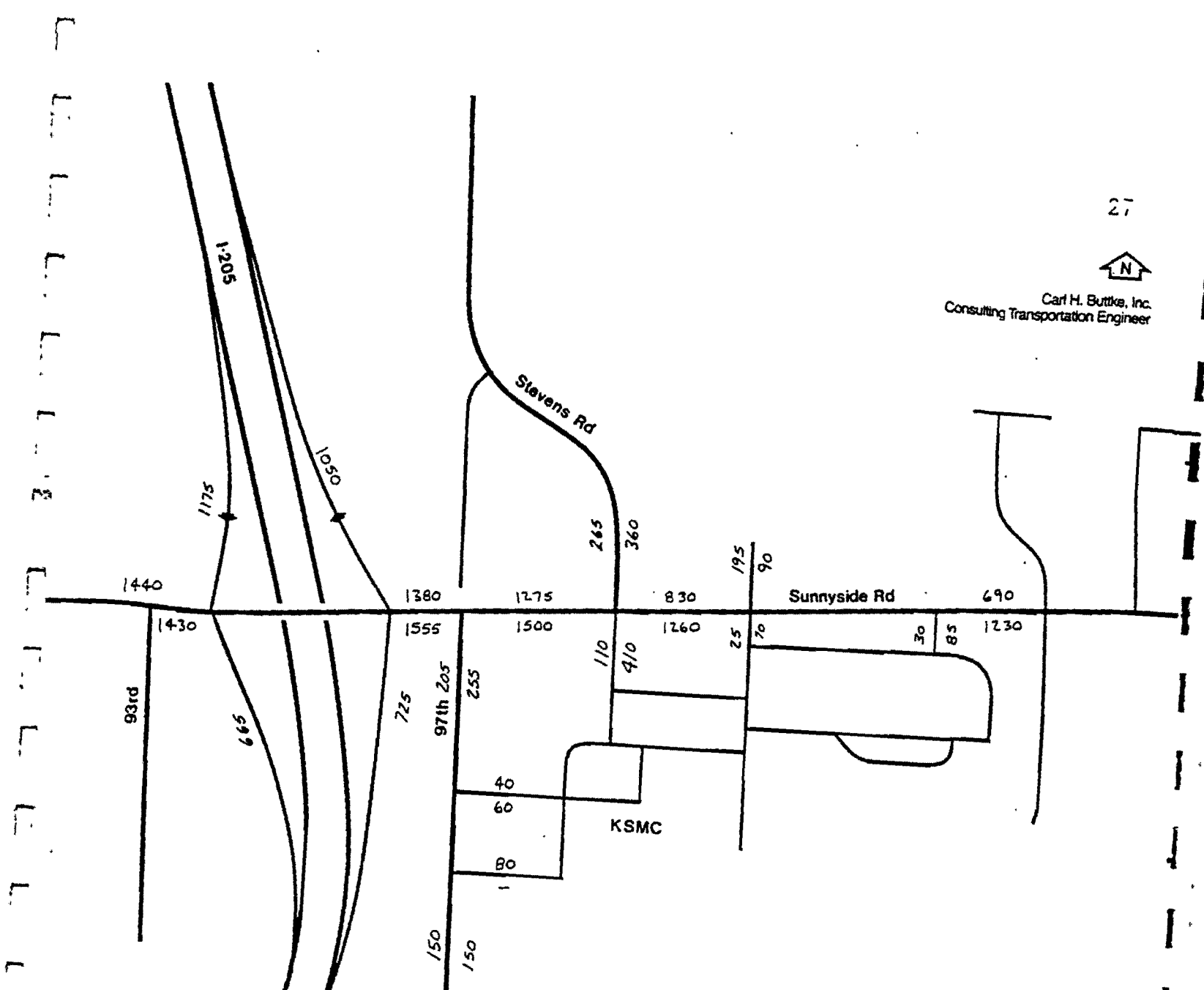


Figure 5  
Site Plan, Phase 4





Carl H. Buttko, Inc.  
Consulting Transportation Engineer



1440

1430

93rd

1205

1175

1050

665

649

1380

1555

725

97th 205

255

40

60

80

150

150

Stevens Rd

265

360

110

410

KSMC

830

1260

195

90

Sunnyside Rd

25

70

30

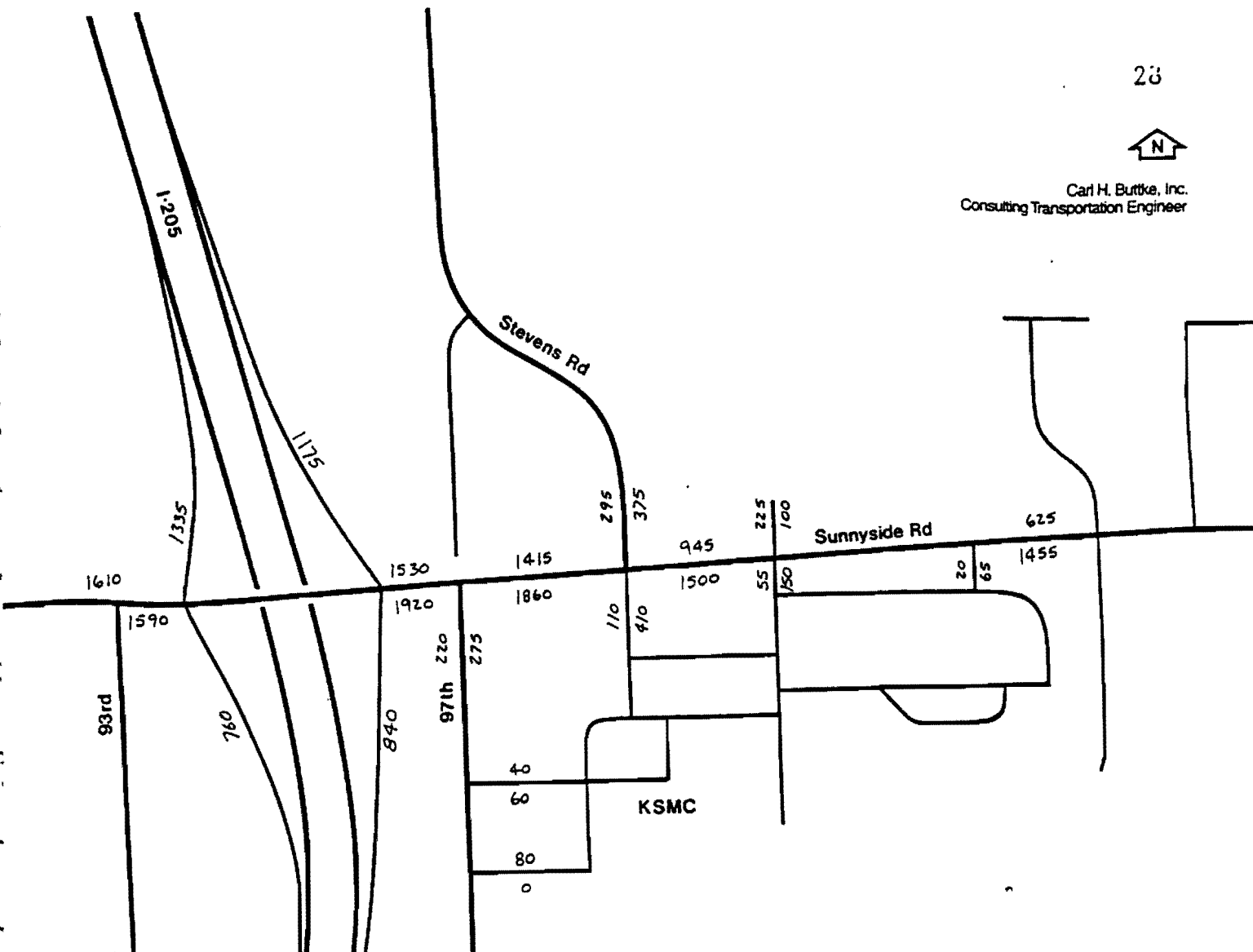
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690

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Consulting Transportation Engineer





Carl H. Buttko, Inc.  
Consulting Transportation Engineer

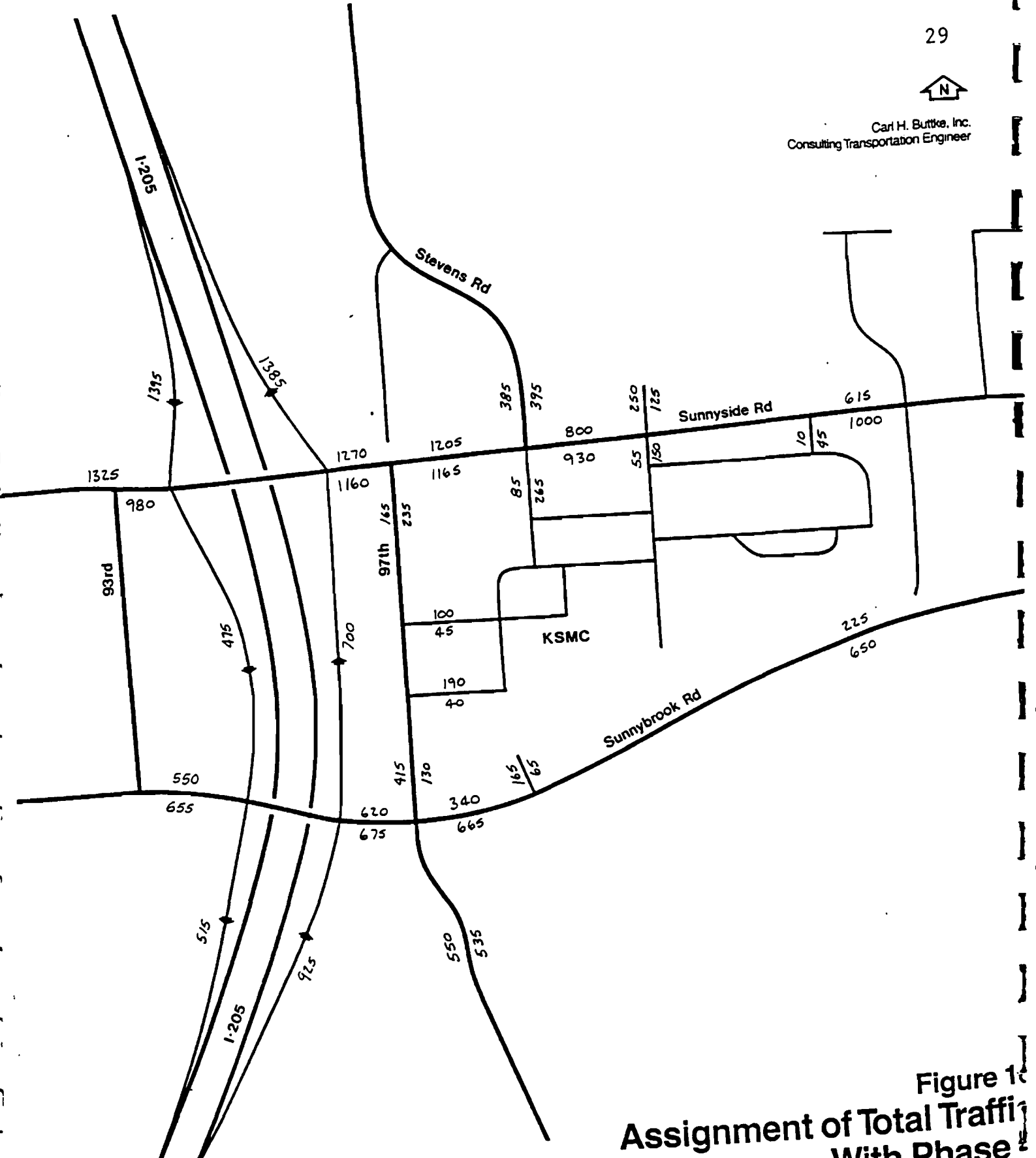


Figure 1c  
Assignment of Total Traffic  
With Phase



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Consulting Transportation Engineer

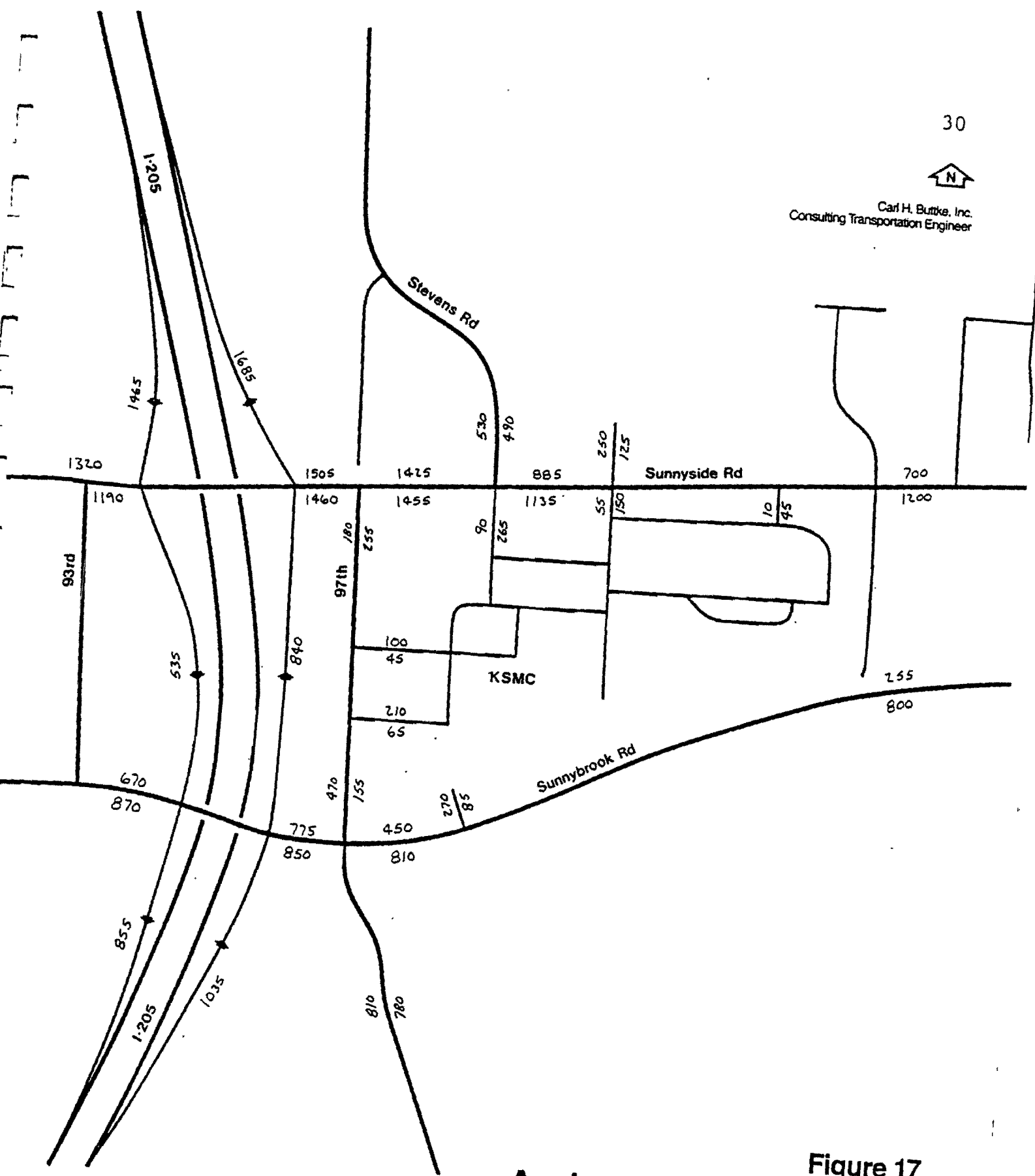
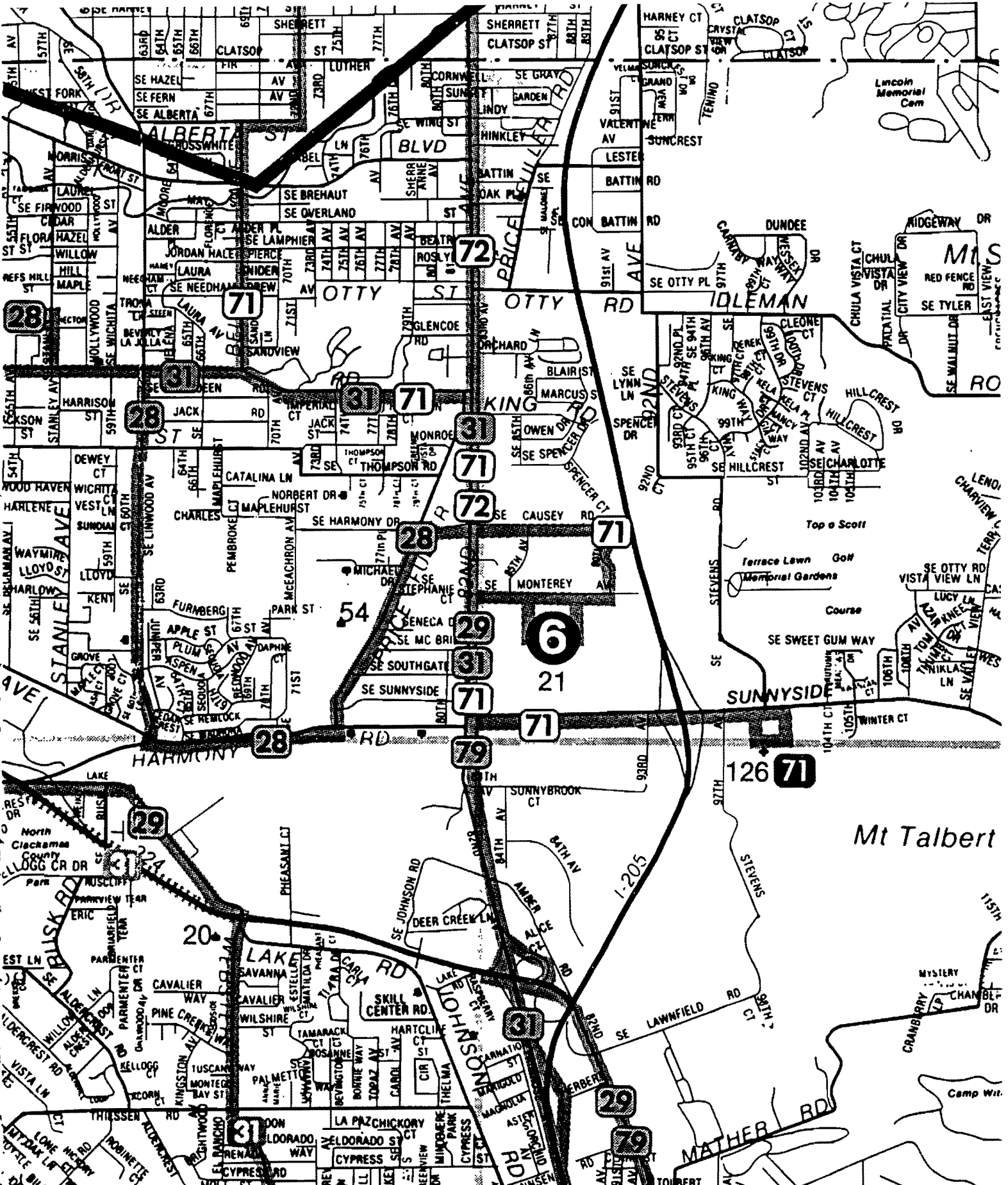


Figure 17  
Assignment of Total Traffic  
With Phase 5

## **Bus Transit**

### **Issues**

In conclusion, the area along 82nd Ave. is extensively served by current transit service and the service will only improve in the future. Areas along King Rd., to the west and north of 82nd Ave., are also well served. The area along Price Fuller Rd., Harmony Rd. and Linwood Ave. is poorly served, particularly on the weekend, when there is no service. This may possibly be corrected under the best case 1993 fiscal scenario, but it is not a high priority project. Sunnyside Rd. to Kaiser is poorly served considering the size of the facility, and there are no plans to increase the service. Further to the east of Sunnyside Rd., there is no service, despite having the most requests for service by individuals in 1991. There are no plans in 1993 to provide service to this area. Increases in service to these deficient areas should be addressed as soon as possible, particularly to the Sunnyside Road area.





## **Bus Transit**

### **Analysis**

In general, the fiscal year 1993 for Tri-Met calls for a 3.25% increase in service level, which is the largest increase in the last nine years. Service improvements are supposed to represent a more proactive effort in gaining new riders.

As part of the peak corridor improvements, the Highway 224 corridor (Milwaukie/Clackamas) was identified as a possible location for an express service. Currently, there exists the Milwaukie shuttle, which serves employment centers in the Milwaukie industrial corridor between the Milwaukie TC and the CTC Transit Center during peak hours and functions as a demand responsive service at other times during the day. The demand responsive service has only been used by an average of 6 people per day since its inception in April 1992. One problem seems to be a perception in the community that the service is only for elderly people. The average age of riders for this service is 70.

As part of service expansion, there is a proposal to extend service on Sunnyside Rd. east of Kaiser Sunnyside, where it currently terminates today. In fiscal year 1991, this area had the most requests of any area by individuals for service expansion. Tri-Met is currently evaluating this request. A potential problem might be that a portion of the area along Sunnyside Road is no longer part of the Tri-Met service district.

Currently the CTC Transit Center (and surrounding area) is serviced by six Tri-Met bus lines plus the Milwaukie Shuttle. For a better visual representation, please see the Tri-Met map on the next page.

The #28 Linwood is a suburban feeder route that stretches from the Milwaukie Transit Center to the CTC Transit Center and in our area serves 82nd Ave., Price Fuller and Harmony Roads and Linwood Ave. The service currently runs every 30 minutes during peak time and every hour during non-peak times. There is no service in the evenings or on the weekends. Under a best case 1993 funding scenario, this route service would be increased to every 60 minutes on Saturday.

The #29 Lake Webster line is another suburban feeder route that also stretches between the Milwaukie Transit Center and the CTC Transit Center and in our area serves only 82nd Ave. before dipping down to Johnson City and then to Lake Rd. in Milwaukie. The service also runs every 30 minutes during peak time and every hour during non-peak times. There is no service in the evenings or on the weekends. Under a best case 1993 funding scenario, this route service would be increased to every 60 minutes on Saturday.

The #31 Estacada is a suburban radial route that goes between either downtown Portland or the Milwaukie Transit Center and Estacada. In our area the route serves King Rd., 82nd (stopping at the CTC) and continuing down 82nd into Johnson City. The service runs every 30 minutes during peak and non-peak

times. The service goes until 10:20 pm on weekdays and Saturday service is either every 30 or 60 minutes until 10:40 pm. Sunday service is every 60 minutes until 6:45 pm. Under a best case 1993 funding scenario, this route service would be increased later on weekday evenings.

The #71 60th-122nd is a crosstown route that goes between Woodstock and 96th and Kaiser Sunnyside. In our area the route serves Kaiser Sunnyside, Sunnyside Rd., 82nd Ave., Monterey Ave., 90th Ave., Causey Rd., back onto 82nd Ave., King Rd., Bell Ave., Alberta St. and 72nd Ave., continuing north to Flavel St. The service runs every 15 minutes for the most part during peak and non-peak times. The service runs as late as 10:46 p.m. on weekdays and Saturday service is every 15 minutes during the day. Sunday service is every 30 minutes until 7:43 pm.

The #72 Killingsworth-82nd Ave. is a crosstown route that goes between CTC and Swan Island Drydock. In our area the route serves CTC and 82nd Ave. The service runs every 10 or 15 minutes for the most part during peak and non-peak times during the week. The service runs as late as 1:27 am on weekdays and weekend service is every 10, 15, or 20 minutes until 1:24 a.m.

The #79 Canby-Clackamas Town Center is a suburban feeder route that goes between CTC and Canby. In our area the route serves CTC and 82nd Ave. before going down south into Johnson City. The service runs every 60 minutes during peak and non-peak times during the week. The service runs as late as 7:20 pm on weekdays and weekend service is every 60 minutes until 6:25 pm. Under a best case 1993 funding scenario, weekday service would be increased to every 20 or 30 minutes and weekend service would be increased to every 60 minutes.

## **Light Rail Transit**

### **Issues**

We are currently awaiting the decision by Metro as to which corridor is preferred for the next LRT alignment, the I-205 corridor or the Milwaukie corridor. Their decision is expected in March of 1993. Once the corridor is determined, a further analysis will be undertaken to determine what type of improvements will be made. The transit options include express bus transitways, traffic demand management such as HOV lanes, and light rail transit. If light rail is designated as the preferred transit improvement option, then alternative alignments will be studied for approximately two years. This study takes a long time because draft environmental impact statements need to be drafted for each alignment option. That will be followed by a final EIS for the preferred alignment.

The time frame for planning and constructing a light rail line is approximately ten years. Currently, the planning process for the next light rail line is finishing its second year of planning, so any light rail line terminating in our study area would not be completed until approximately 2001. In the long term (20 years) we can expect increased high capacity transit in the study area, and this would have considerable land use implications for the Clackamas Town Center and its environs.

## **Light Rail Transit**

### **Analysis**

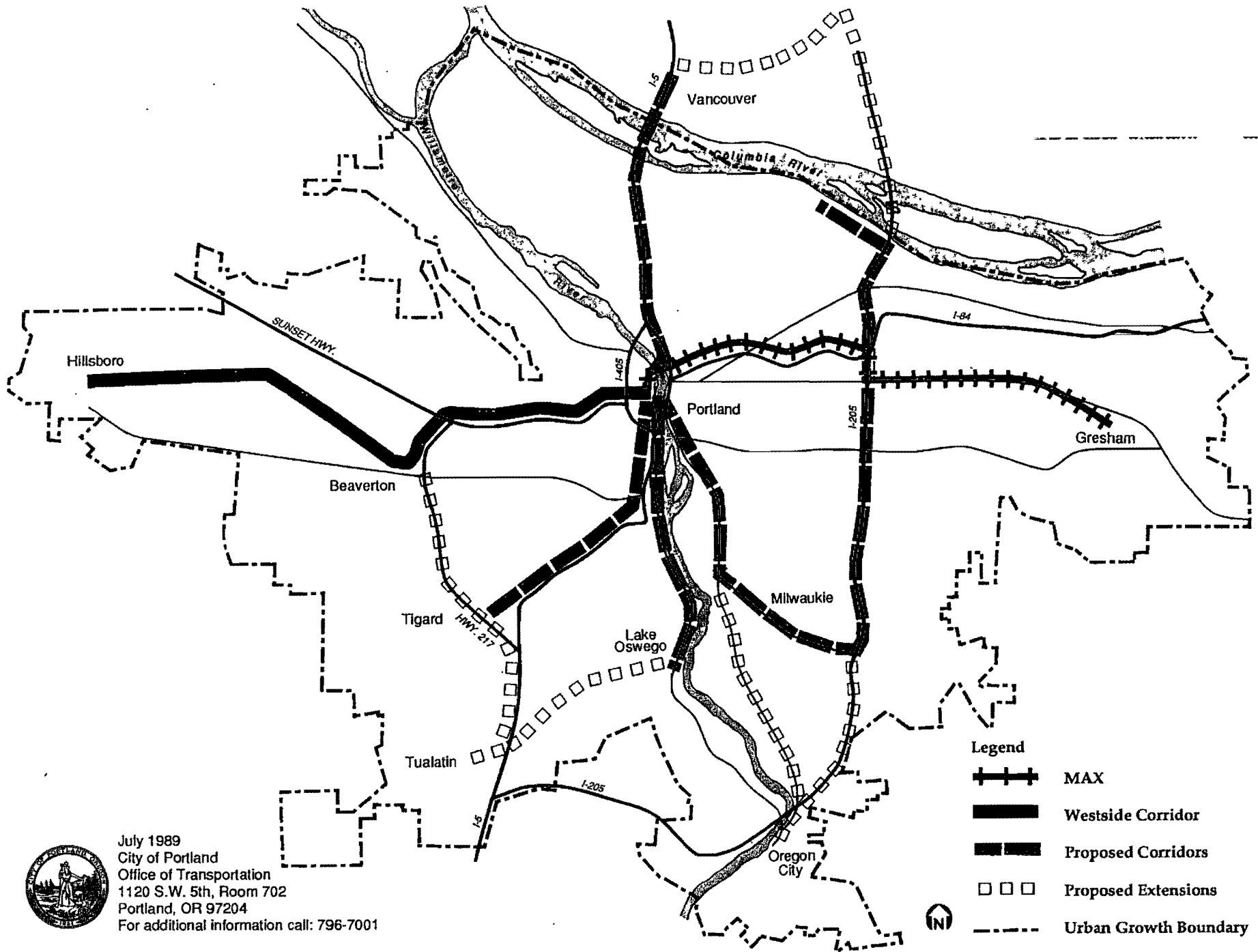
Currently Metro is engaged in two concurrent studies. They are considering which one of two corridors is preferred for High Capacity Transit to Vancouver, Washington and which one of two corridors is preferred to Clackamas County. Metro's Council adopted a resolution in 1991 that stated that the next area to be served by High Capacity Transit is Clackamas County. This resolution does not preclude concurrent construction of a light rail line to Vancouver, however.

The first step in the light rail planning process, with regard to our study area, is to determine which corridor is preferred (refer to the Regional Light Rail System map on the following page) to Clackamas County:

1. I-205 south of Burnside (connecting with the Banfield line), or
2. Milwaukie






Each corridor has at least two alignment options, and all but one alignment option includes the Town Center. The one that doesn't will follow

# PORTLAND REGIONAL LIGHT RAIL SYSTEM



July 1989  
 City of Portland  
 Office of Transportation  
 1120 S.W. 5th, Room 702  
 Portland, OR 97204  
 For additional information call: 796-7001

### Legend

-  MAX
-  Westside Corridor
-  Proposed Corridors
-  Proposed Extensions
-  Urban Growth Boundary

McLoughlin Blvd. south from Portland, through Milwaukie, and terminate at Oregon City.

From a ridership standpoint, the Milwaukie corridor will be the most likely choice (although the decision will not be made until at least March). And although the alignment for the preferred corridor will not be determined for at least another year, it is very likely that Clackamas Town Center will be included as part of the light rail alignment, regardless of which corridor is selected to serve Clackamas County's high capacity transit needs.

The location of potential transit stations will be very important in determining the alignment. Within our study area there is the opportunity to redevelop large tracts of land that would be potentially viable sites to build high-density mixed-use transit-oriented developments. Clearly, Clackamas Town Center has excellent redevelopment potential if one considers the possibility of development on the large surface lots. Other opportunities exist along Harmony Road at the intersection of SE 80th (the Milwaukie alignment) and at the intersection of Price-Fuller Rd. and Otty Rd. (the I-205 alignment). In the long run it is likely that both alignments will be built, so it is reasonable to discuss redevelopment along their potential routes. In the Alternatives Analysis to be prepared in March, specific redevelopment options will be discussed including zone changes that will be necessary to create the land use pattern that we will be proposing

# Regional Draws

## Introduction

Diverse business activities serve as regional draws to the study area. For example, there are six retail plaza/mall type retail activity locations that house some 2,014,000 square feet of retail space; 6 business complexes that house some 54,300 square feet of class A office space; three motels providing about 420 rooms, a medical center and a 145 bed hospital; and a six screen movie theater.

Dave Senior, a planner who specializes in issues pertaining to 82nd Avenue and the Clackamas Town Center expounded upon this area's growth and importance as a regional draw. Historically speaking, 82nd Avenue has been a focus of regional commercial activities for many decades. The reason for this explains Senior is that it is the only street on the east side of the Willamette that runs from the south shore of the Columbia River and into Clackamas County. Because of this unique characteristic it became a focus for commercial activity in east Multnomah County. As growth occurred in Clackamas County, so too did the commercial activity spread southward along 82nd. The construction of I-205 only reinforced the area's dominance as a regional draw.

The growth is continuing and according to Senior, if the urban growth boundary remains static, it will continue to reinforce north Clackamas County's dominance as a regional draw along 82nd Avenue. Senior predicts a doubling or tripling of Class A office space over the next ten to twenty years. There is room for one more anchor store such as Macy's at the Clackamas Town Center. The siting and construction of the Aquatic Center adjacent to the Oregon Institute of Technology campus will add to the regional character of the area. This facility will have five pools: a wave pool, a lap pool, a wading pool, a whirlpool, and a recreation swim pool; public meeting rooms; and a snack area. Surrounding the building will be a regional park with fields for various types of activities.

The Clackamas Town Center Mall, however, continues to be the most dominant regional draw in this area. It was built in 1980, and there is the potential for facilities of this type to become outdated and obsolete after about twenty years. Redevelopment of the mall may become a high priority around the turn of the century. The Lloyd Center area is an example of this process as it has recently finished redevelopment construction. There is also the possibility that the Town Center will not be a viable retail attraction after the turn of the century. The likelihood of this actually happening is highly dependent upon an expansion of the urban growth boundary further to the east.

## Clackamas Town Center Market Area Demographics

From a publication produced by the Clackamas County Development Agency, "Market Data Report Clackamas Town Center Area", several observations are listed below. All observations stated here focus on issues of employment and travel time to work. These demographics are based upon the 1988 figures from National Decision Systems.

All statistics refer to a 2 mile radius of CTC:

- 1) Average household income \$23,622  
Median household income \$20,927
- 2) Total number of households 7,730  
Total number of employees 15,885  
Daytime population 15,885  
Residential population 22,794

There seem to be employment opportunities for 70% (15,885/22,794) of the residential population. Additionally, the medium household income reflects the wages that are earned by individuals working in the retail service sector which is predominant at Clackamas Town Center.\*

- 3) Of the 15,885 employees, 56% (8,828) do not work in the retail and service sectors.\*

- 4) Population by travel time to work; total is 9,776.

Under 5 min.	2.70%	(264)
5 to 9 min.	11.93%	(1,167)
10 to 14 min.	15.82%	(1,546)
15 + min.	69.54%	(6,799)

It is possible that, at most, 1,431 working individuals from the two mile radius surrounding CTC make up the 15,885 daytime population. Concluding, 91% if the employees of CTC stores and services commute from distances of 10 minute or more.\*

- 5) Population by transportation to work; total is 9,833.

drive alone	70.83%
car pool	18.25%
public trans.	4.94%
walk only	2.34%
other means	1.59%
work at home	2.05%

6) From yearly car count in the CTC parking lot; 1988 estimates based on sales increases and projections.

total	8,003,212
daily average	22,107
monthly average	666,934

The number of employee daily parking is not reported.\*

It is quite evident that residents of the CTC area drive to work and that almost half travel to employment located at least six miles from CTC. In addressing Goal 12 of the State Comprehensive Planning Goals, the 2 mile radius of CTC needs to be better connected to the metropolitan region by mass transit and commuter organization.

\* Conclusions were derived from provided data and were not part of the documented publication.



# Kaiser Sunnyside Medical Center: Expansion Plans, Traffic and Other Local Impacts

## Issues

- Congestion at certain intersections will be made worse in the future in part by KSMC generated traffic. The worst intersections will be 82nd Ave. and Sunnyside Rd. and northbound and southbound I-205 and Sunnyside Rd. intersections.
- An increasing level of congestion in the surrounding street system may adversely impact the economic viability of KSMC in the future as a regional facility.
- KSMC is not accessible for patrons using alternate transportation modes such as walking and bicycling.

## Analysis

This summary is based almost entirely upon a report titled Parking and Traffic Impact, Kaiser Sunnyside Medical Center Campus, Kaiser Permanente, by Carl H. Buttke, Inc., Consulting Transportation Engineer, 11/11/87. This summary will list current and future facilities expansion and traffic generation rates into the surrounding road network as a result of this expansion. However, this summary will dispute some of the conclusions reached by Mr. Buttke regarding traffic impacts in the surrounding road network. In addition, some economic and other conclusions will be made on the basis of demographic data provided in Mr. Buttke's report.

The Kaiser Sunnyside Medical Center (KSMC) is located on the south side of Sunnyside Road, east of SE 97th Ave. in Clackamas County. As of 1987, the campus included a 145 bed hospital, two medical offices (which includes an optical center and a clinic), a service center which houses a regional lab, a regional process center, and a regional supply center. The later three buildings serve Kaiser Permanente facilities in the entire Portland metro area.

Approximately 1700 people worked at the KSMC campus in 1987 in a 24 hour period. 1270 parking spaces were provided. At that time, it was estimated there was a need for 1430 parking spaces to provide a cushion during peak hours. Approximately, 94% of employees drove their own vehicle to work, 5% were passengers and less than 1% used Tri-Met, even though the campus is served by the 71 bus line, which runs every 15 minutes. Expansion of transit service is not expected in the near future. 6% of employees participated in carpooling or ride sharing. The 24 hour trip generation rates were 7,700.

Since that time, 5 expansion phases between 1988-2002 have been planned. These expansion plans are represented on the phase site plan maps found in the appendix. In phase 1 from 1988-1990, a sub-specialty medical office and an administrative office to the hospital were under construction. The number of hospital beds stayed at 145, the amount of hospital personnel increased to 1,023, medical office employees increased to 430, service center employees stayed at 425 and parking spaces increased to 1,750. Demand for parking was estimated to be 1676. 24 hour trip generation rates were 8,600.

Phase 2 added a small amount of space to the hospital and began construction of the first addition to the regional supply center. No hospital beds were added, hospital employment increased to 1,043, no medical office or service center employees were added, parking spaces increased to 1,750. The estimated demand for parking was 1,740. 24 hour trip generation rates (for phases 2 and 3) should be 9,400.

Phase 3 is ongoing into 1993, which has begun construction of an above ground parking structure. The first addition to the regional supply center is still under construction. The first addition to the regional laboratory is also being constructed. The amount of hospital beds will increase to 180 beds, the amount of hospital employees will increase to 1,194, medical office employees will increase to 430, service center employees will increase to 620, and the total amount of parking spaces will decrease to 1,740 as construction takes place. The estimated demand for parking in this phase is 1,830.

Phase 4 will occur from 1995-1996 which have a 350 space parking structure completed, the first addition of the regional center completed and the first addition of the regional laboratory completed. Furthermore, construction will begin on the first addition to the regional process center, the second addition to the regional supply center, the second addition to the regional laboratory, an addition to the sub-specialty medical office built in phase 1 and an additional parking structure with 558 spaces. This later structure is dependent on the Sunnybrook Extension being built, as that is where it would have street access. The amount of hospital beds would be expanded to 235 due to the addition of beds in the sub-specialty medical offices, the amount of hospital personnel would be increased to 1,411, medical office employees would be increased to 510, service center employees to 620 and the amount of available parking spaces would increase to 2,125 spaces. The estimated peak demand for parking is estimated to be 2,140 spaces. 24 hour trip generation rates are estimated to be 11,500.

Phase 5 is the final expansion planned for 2000-2002. The first addition to the regional process center will be completed, as will the second addition to the regional laboratory, the regional supply center, the sub-specialty medical offices and the 558 parking structure bordering the proposed Sunnybrook Extension. Construction will begin on a second addition to the regional process center, an addition to the nursing wing, as well as the main hospital and a 175 space addition to the 558 space parking structure bordering the Sunnybrook Extension. At the completion of this phase, there will be 350 hospital beds, 1,719 hospital employees, 510 medical office employees, 640 service center employees and 2,300

parking spaces. The estimated peak parking demand will be 2,314 spaces. 24 hour trip generation rates are estimated to be 13,300.

The traffic assignment maps in the appendix show how KSMC-generated traffic will be distributed. In addition, table 6 in the appendix looks at the capacity and level of service at selected intersections in the mapped area. The table indicates that 1 intersection at present is at 'D' level of service. This indicates long traffic delays. No intersection exceeds capacity. By 1995, 3 intersections are at 'D' or 'E' level of service. 'E' indicates very long traffic delays. Three intersections are over capacity. By 2000, only 2 intersections are at 'D' or 'F' level of service and only 1 intersection is over capacity. This is due to presumed road improvements, such as the Sunnybrook Extension. However, if any of these improvements are not constructed, the level of service could be expected to be much worse. By the year 2009, there are projected to be 5 intersections with 'D' or 'F' level of service and 4 intersections exceeding capacity.

Mr. Buttke concludes that "Sunnyside Road will experience traffic volumes exceeding its capacity at the major intersections west of the KSMC campus over the next twenty years, regardless of any expansion plans at the KSMC campus." [Parking and Traffic Impact, Kaiser Sunnyside Medical Center Campus, Kaiser Permanente, Buttke, p.36.] However, he also concludes that "... the proposed KSMC master plan is not expected to cause the operation of the surrounding street system to drop into unacceptable levels of service." [ibid, p. 36.]

His conclusions ignore the fact that an expanding KSMC campus traffic generation rate and no increase in transit usage must have a negative impact on congestion of intersections. Simply because KSMC traffic is not causing a given intersection to go from 'D' level of service to 'F' level of service does not mean there is no impact. Any additional increment of traffic at a congested intersection is still a negative impact.

Therefore, KSMC seems like it should be working to be more proactive in encouraging transit and alternative transportation mode usage. Even with enormous (and costly) parking expansion in each of the 5 expansion phases, the supply has barely kept up with demand. KSMC might find attacking parking from the demand side to be more cost effective, rather than building more parking structures. Increased transit and multimodal transportation use at KSMC would provide service and quality of life benefits for the whole community.

While the major impacts of the KSMC expansion on the surrounding area involve traffic impacts, there are also significant impacts economically and in terms of health services. The KSMC campus is the largest single employer in the area. Many of the jobs are high quality in terms of income, benefits and stability. There are numerous economic spin-off effects, such as the hiring of local construction subcontractors to work on building additions, nearby motels being filled by visitors of patients in the hospital, KSMC workers buying houses and raising families in the area, to KSMC employees buying lunch every day at local restaurants. KSMC will continue to expand into the future because of its

regional focus toward medical care, supply and service. The workforce will grow and remain the largest in the county.

The community also benefits from the regional focus of KSMC in terms of medical care and facilities. Normally, the small population of this area would not merit a 145 bed hospital, as well as associated medical clinics, optical centers and medical offices. Due to the regional draw, however, this size and quality of facility does exist.

In conclusion, the Kaiser Sunnyside Medical center is undergoing a 5 phase expansion plan between 1988-2002. The hospital, medical offices, medical clinics, regional laboratory, supply center, process center and parking structures are all undergoing substantial expansion. The number of employees has expanded from 1,711 in 1987 to an estimated 2,869 employees by 2002. Parking spaces have gone from 1,270 in 1987 to an estimated 2,300 by 2002. Hospital beds have expanded from 145 in 1987 to an estimated 350 by 2002. Average trip generation per day has gone from 7,700 in 1987 to an estimated 13,300 by 2002.

This expansion will contribute negatively to the amount of congestion in the immediate road network. The most effected will be the 82nd and Sunnyside Rd. intersection and both north bound and south bound I-205 and Sunnyside Rd. intersections. At the same time, KSMC will continue its expansion with an ever increasing regional focus. This facility will continue to be the largest single employer in Clackamas County, particularly of high paying medical professions. This has an enormous economic spin off benefits to the region. The community will also benefit from having an exceptionally high level of medical care for a community of this size. The main issue seems to be how to mitigate the local traffic congestion while maintaining the strong economic and medical benefits to the community and the region as a whole. There also may be problems of connectivity for some local residents in this area without using an auto. Walkers and bicyclists, for example, may be intimidated trying to cross busy Sunnyside Rd while going to or from KSMC.

## **Development Opportunities**

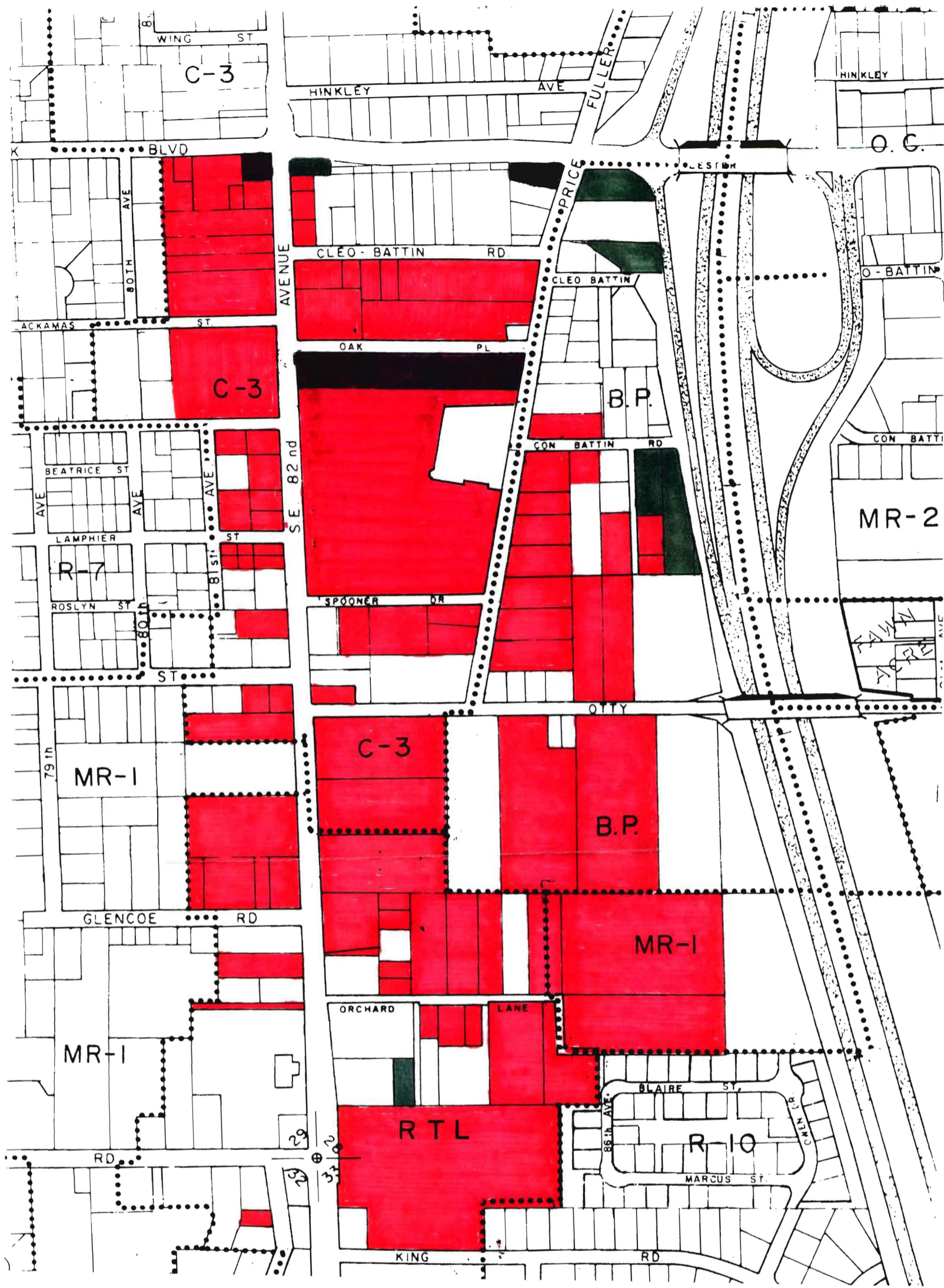
**Issue:** The lands identified along S.E. 82nd Ave. and the target area are currently underused.

Redevelopment potential is shown on the Redevelopment potential map. Development on vacant or undeveloped land was limited in the target area. The target area is bounded by 82nd Ave. to the east, I-205 to the west, Johnson Creek Blvd. to the north and Sunnyside Rd. to the south. Due to the limited amount of vacant lands, redevelopment was determined to offer the greatest potential for further growth.

The analysis considered the effect of such factors as accessibility and proximity to regional economic attractors, and ability to accommodate commercial development without significant reinvestment in the physical infrastructure. The target area was determined to have the highest potential of successful redevelopment, given the above conditions. 82nd Ave. was also examined as part of an effort to analyze its commercial health and viability. Redevelopment potential was determined by the following criterion:

- Buildings with assessed values of 70% or less than the value of the underlying land
- Vacant land
- Surface parking lots


It was found that 82nd Ave and the target area had great potential for conversion of use and/or reinvestment. It was found that a total of 171 parcels along 82nd Ave and within the target area had building values less than 70% of underlying land values. This was based on calculations attained from Clackamas County's 1992 Assessed Values. The Redevelopment Potential map also identifies parking lots and vacant lands potentially available for redevelopment.




# Target Area Redevelopment Potential

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PLANNING WORKSHOP

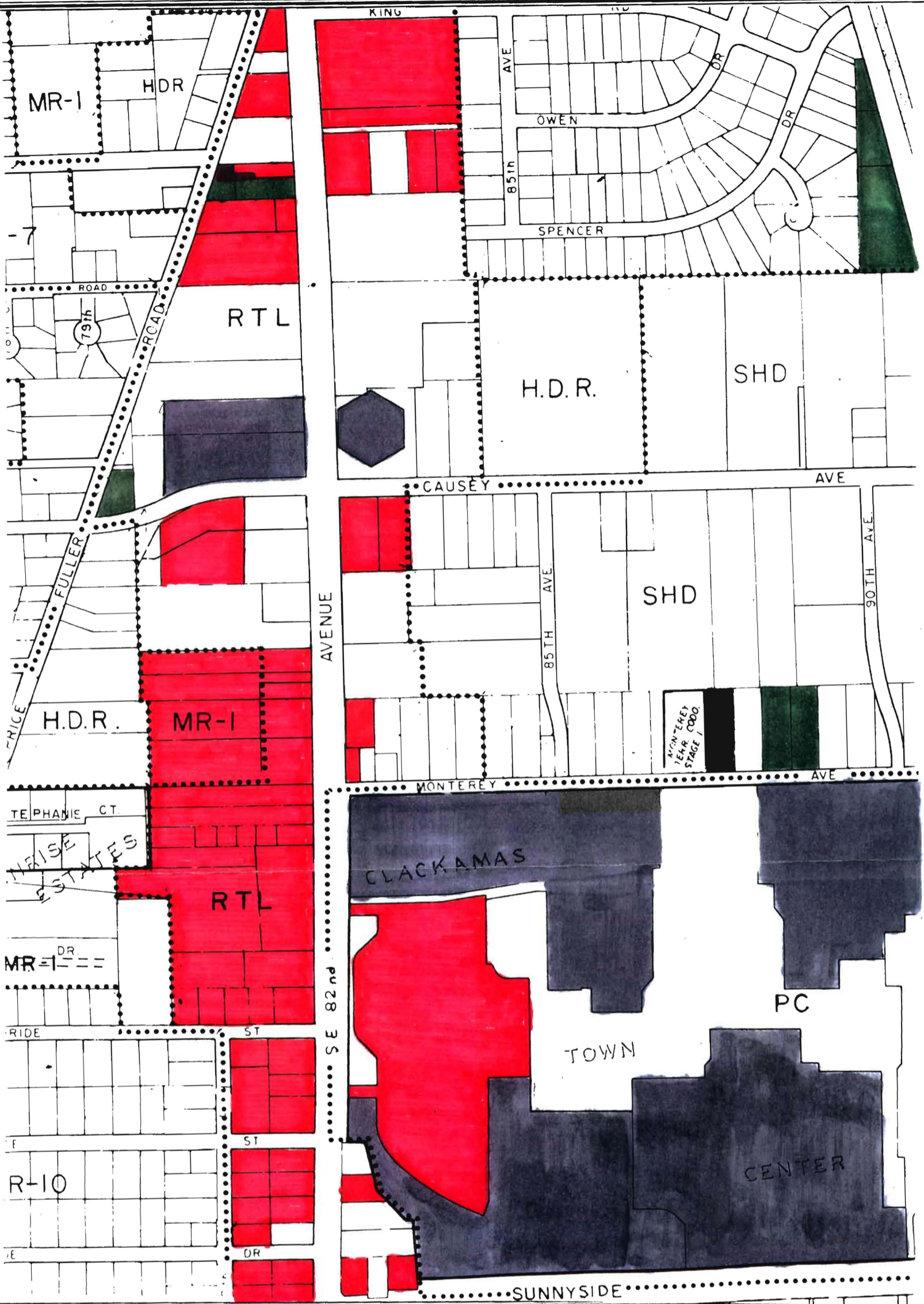
## LEGEND

 Building value < 70%  
of land value

 Vacant lands

 Surface parking lots





# Target Area Redevelopment Potential

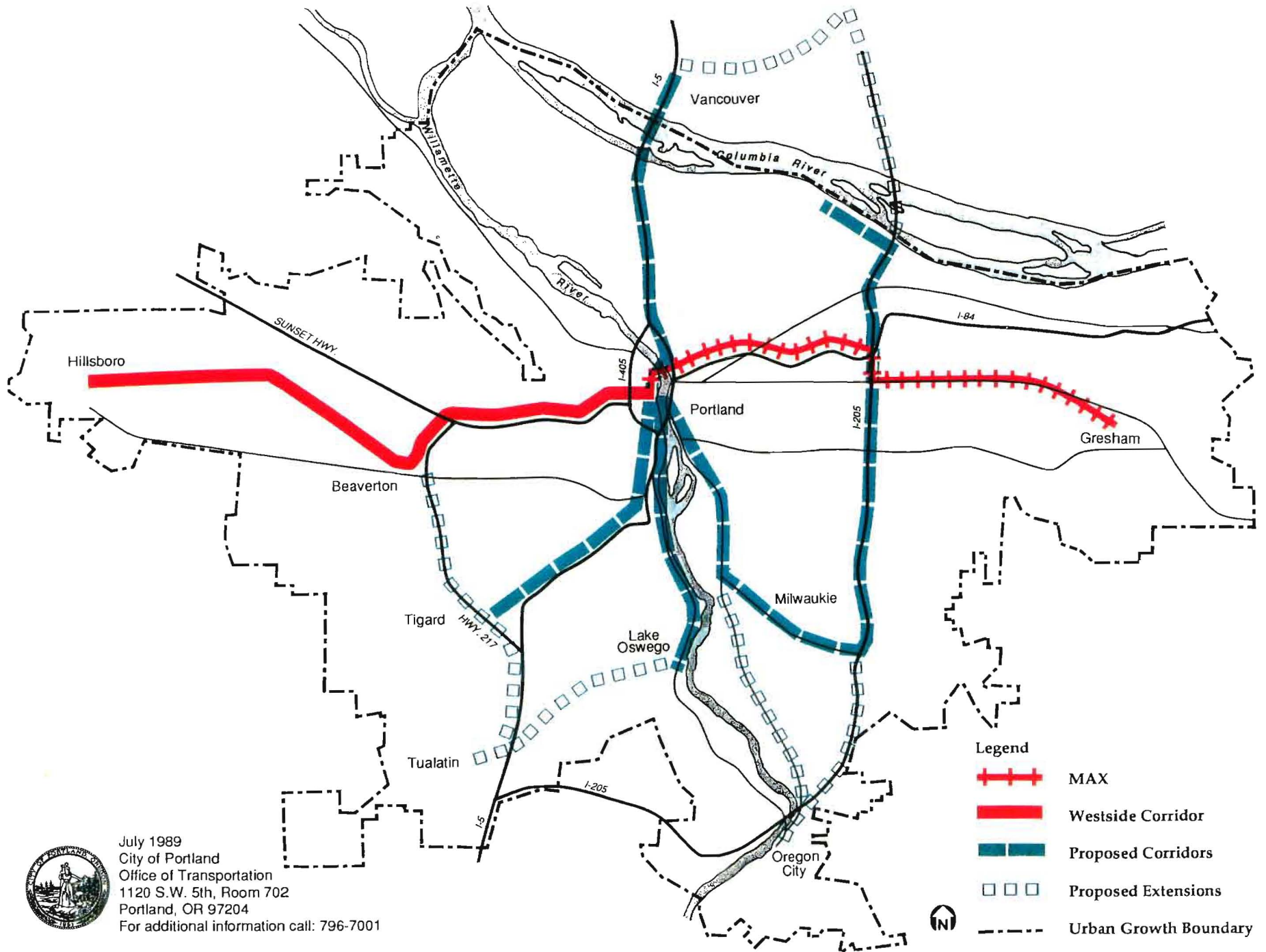
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THE PORTLAND STATE UNIVERSITY  
PLANNING WORKSHOP





## LEGEND

- Building value < 70 % of land value
- Vacant lands
- Surface parking lots



# PORTLAND REGIONAL LIGHT RAIL SYSTEM



- Legend**
-  MAX
  -  Westside Corridor
  -  Proposed Corridors
  -  Proposed Extensions
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July 1989  
 City of Portland  
 Office of Transportation  
 1120 S.W. 5th, Room 702  
 Portland, OR 97204  
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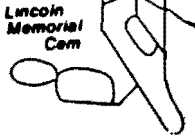
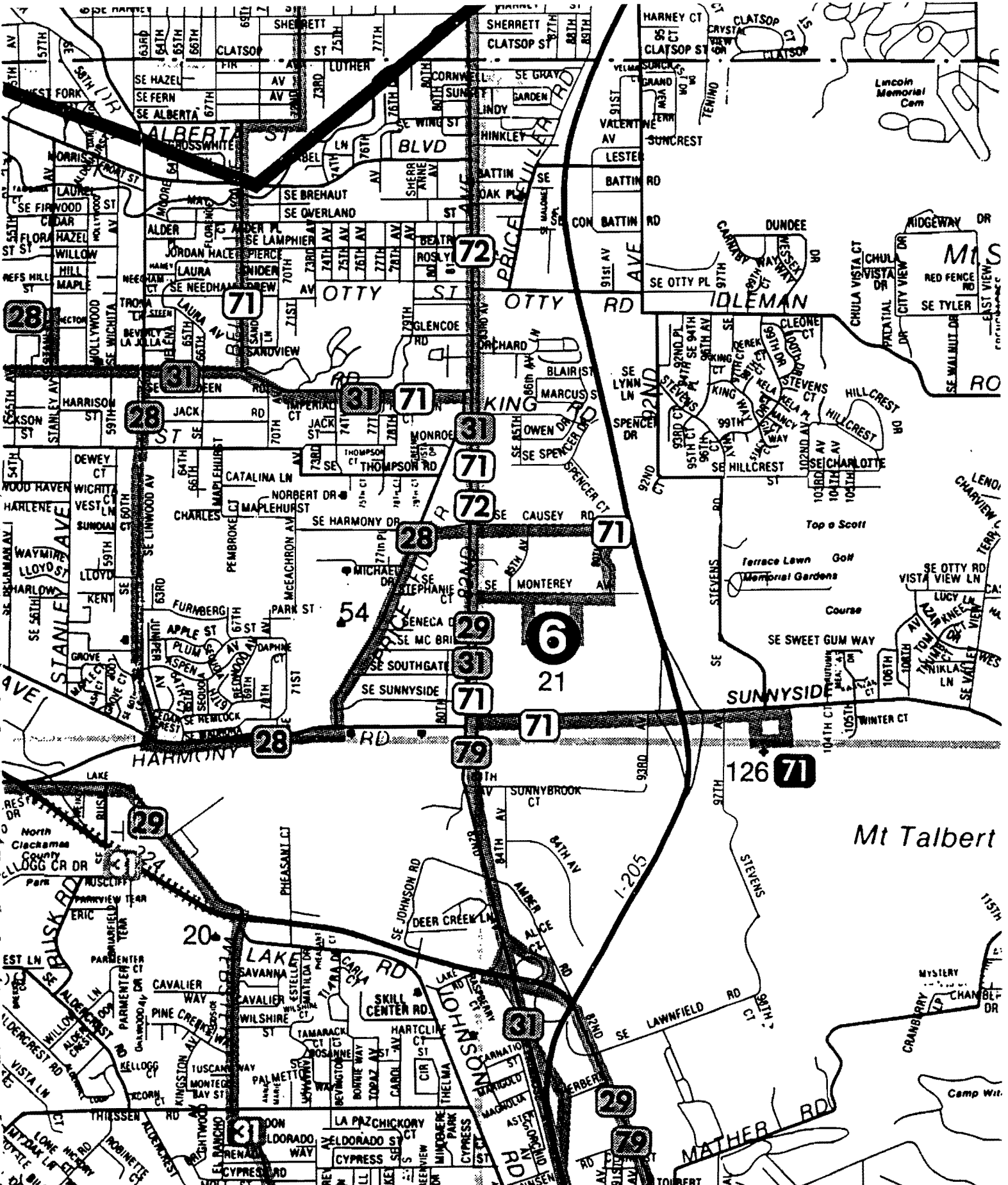




## **Bus Transit**

### **Issues**

In conclusion, the area along 82nd Ave. is extensively served by current transit service and the service will only improve in the future. Areas along King Rd., to the west and north of 82nd Ave., are also well served. The area along Price Fuller Rd., Harmony Rd. and Linwood Ave. is poorly served, particularly on the weekend, when there is no service. This may possibly be corrected under the best case 1993 fiscal scenario, but it is not a high priority project. Sunnyside Rd. to Kaiser is poorly served considering the size of the facility, and there are no plans to increase the service. Further to the east of Sunnyside Rd., there is no service, despite having the most requests for service by individuals in 1991. There are no plans in 1993 to provide service to this area. Increases in service to these deficient areas should be addressed as soon as possible, particularly to the Sunnyside Road area.



Mt Talbert

Camp Wil.

## **Bus Transit**

### **Analysis**

In general, the fiscal year 1993 for Tri-Met calls for a 3.25% increase in service level, which is the largest increase in the last nine years. Service improvements are supposed to represent a more proactive effort in gaining new riders.

As part of the peak corridor improvements, the Highway 224 corridor (Milwaukie/Clackamas) was identified as a possible location for an express service. Currently, there exists the Milwaukie shuttle, which serves employment centers in the Milwaukie industrial corridor between the Milwaukie TC and the CTC Transit Center during peak hours and functions as a demand responsive service at other times during the day. The demand responsive service has only been used by an average of 6 people per day since its inception in April 1992. One problem seems to be a perception in the community that the service is only for elderly people. The average age of riders for this service is 70.

As part of service expansion, there is a proposal to extend service on Sunnyside Rd. east of Kaiser Sunnyside, where it currently terminates today. In fiscal year 1991, this area had the most requests of any area by individuals for service expansion. Tri-Met is currently evaluating this request. A potential problem might be that a portion of the area along Sunnyside Road is no longer part of the Tri-Met service district.

Currently the CTC Transit Center (and surrounding area) is serviced by six Tri-Met bus lines plus the Milwaukie Shuttle. For a better visual representation, please see the Tri-Met map on the next page.

The #28 Linwood is a suburban feeder route that stretches from the Milwaukie Transit Center to the CTC Transit Center and in our area serves 82nd Ave., Price Fuller and Harmony Roads and Linwood Ave. The service currently runs every 30 minutes during peak time and every hour during non-peak times. There is no service in the evenings or on the weekends. Under a best case 1993 funding scenario, this route service would be increased to every 60 minutes on Saturday.

The #29 Lake Webster line is another suburban feeder route that also stretches between the Milwaukie Transit Center and the CTC Transit Center and in our area serves only 82nd Ave. before dipping down to Johnson City and then to Lake Rd. in Milwaukie. The service also runs every 30 minutes during peak time and every hour during non-peak times. There is no service in the evenings or on the weekends. Under a best case 1993 funding scenario, this route service would be increased to every 60 minutes on Saturday.

The #31 Estacada is a suburban radial route that goes between either downtown Portland or the Milwaukie Transit Center and Estacada. In our area the route serves King Rd., 82nd (stopping at the CTC) and continuing down 82nd into Johnson City. The service runs every 30 minutes during peak and non-peak

times. The service goes until 10:20 pm on weekdays and Saturday service is either every 30 or 60 minutes until 10:40 pm. Sunday service is every 60 minutes until 6:45 pm. Under a best case 1993 funding scenario, this route service would be increased later on weekday evenings.

The #71 60th-122nd is a crosstown route that goes between Woodstock and 96th and Kaiser Sunnyside. In our area the route serves Kaiser Sunnyside, Sunnyside Rd., 82nd Ave., Monterey Ave., 90th Ave., Causey Rd., back onto 82nd Ave., King Rd., Bell Ave., Alberta St. and 72nd Ave., continuing north to Flavel St. The service runs every 15 minutes for the most part during peak and non-peak times. The service runs as late as 10:46 p.m. on weekdays and Saturday service is every 15 minutes during the day. Sunday service is every 30 minutes until 7:43 pm.

The #72 Killingsworth-82nd Ave. is a crosstown route that goes between CTC and Swan Island Drydock. In our area the route serves CTC and 82nd Ave. The service runs every 10 or 15 minutes for the most part during peak and non-peak times during the week. The service runs as late as 1:27 am on weekdays and weekend service is every 10, 15, or 20 minutes until 1:24 a.m.

The #79 Canby-Clackamas Town Center is a suburban feeder route that goes between CTC and Canby. In our area the route serves CTC and 82nd Ave. before going down south into Johnson City. The service runs every 60 minutes during peak and non-peak times during the week. The service runs as late as 7:20 pm on weekdays and weekend service is every 60 minutes until 6:25 pm. Under a best case 1993 funding scenario, weekday service would be increased to every 20 or 30 minutes and weekend service would be increased to every 60 minutes.

## **Light Rail Transit**

### **Issues**

We are currently awaiting the decision by Metro as to which corridor is preferred for the next LRT alignment, the I-205 corridor or the Milwaukie corridor. Their decision is expected in March of 1993. Once the corridor is determined, a further analysis will be undertaken to determine what type of improvements will be made. The transit options include express bus transitways, traffic demand management such as HOV lanes, and light rail transit. If light rail is designated as the preferred transit improvement option, then alternative alignments will be studied for approximately two years. This study takes a long time because draft environmental impact statements need to be drafted for each alignment option. That will be followed by a final EIS for the preferred alignment.

The time frame for planning and constructing a light rail line is approximately ten years. Currently, the planning process for the next light rail line is finishing its second year of planning, so any light rail line terminating in our study area would not be completed until approximately 2001. In the long term (20 years) we can expect increased high capacity transit in the study area, and this would have considerable land use implications for the Clackamas Town Center and its environs.

## **Light Rail Transit**

### **Analysis**

Currently Metro is engaged in two concurrent studies. They are considering which one of two corridors is preferred for High Capacity Transit to Vancouver, Washington and which one of two corridors is preferred to Clackamas County. Metro's Council adopted a resolution in 1991 that stated that the next area to be served by High Capacity Transit is Clackamas County. This resolution does not preclude concurrent construction of a light rail line to Vancouver, however.

The first step in the light rail planning process, with regard to our study area, is to determine which corridor is preferred (refer to the Regional Light Rail System map on the following page) to Clackamas County:

1. I-205 south of Burnside (connecting with the Banfield line), or
2. Milwaukie

Each corridor has at least two alignment options, and all but one alignment option includes the Town Center. The one that doesn't will follow

McLoughlin Blvd. south from Portland, through Milwaukie, and terminate at Oregon City.

From a ridership standpoint, the Milwaukie corridor will be the most likely choice (although the decision will not be made until at least March). And although the alignment for the preferred corridor will not be determined for at least another year, it is very likely that Clackamas Town Center will be included as part of the light rail alignment, regardless of which corridor is selected to serve Clackamas County's high capacity transit needs.

The location of potential transit stations will be very important in determining the alignment. Within our study area there is the opportunity to redevelop large tracts of land that would be potentially viable sites to build high-density mixed-use transit-oriented developments. Clearly, Clackamas Town Center has excellent redevelopment potential if one considers the possibility of development on the large surface lots. Other opportunities exist along Harmony Road at the intersection of SE 80th (the Milwaukie alignment) and at the intersection of Price-Fuller Rd. and Otty Rd. (the I-205 alignment). In the long run it is likely that both alignments will be built, so it is reasonable to discuss redevelopment along their potential routes. In the Alternatives Analysis to be prepared in March, specific redevelopment options will be discussed including zone changes that will be necessary to create the land use pattern that we will be proposing

# Regional Draws

## Introduction

Diverse business activities serve as regional draws to the study area. For example, there are six retail plaza/mall type retail activity locations that house some 2,014,000 square feet of retail space; 6 business complexes that house some 54,300 square feet of class A office space; three motels providing about 420 rooms, a medical center and a 145 bed hospital; and a six screen movie theater.

Dave Senior, a planner who specializes in issues pertaining to 82nd Avenue and the Clackamas Town Center expounded upon this area's growth and importance as a regional draw. Historically speaking, 82nd Avenue has been a focus of regional commercial activities for many decades. The reason for this explains Senior is that it is the only street on the east side of the Willamette that runs from the south shore of the Columbia River and into Clackamas County. Because of this unique characteristic it became a focus for commercial activity in east Multnomah County. As growth occurred in Clackamas County, so too did the commercial activity spread southward along 82nd. The construction of I-205 only reinforced the area's dominance as a regional draw.

The growth is continuing and according to Senior, if the urban growth boundary remains static, it will continue to reinforce north Clackamas County's dominance as a regional draw along 82nd Avenue. Senior predicts a doubling or tripling of Class A office space over the next ten to twenty years. There is room for one more anchor store such as Macy's at the Clackamas Town Center. The siting and construction of the Aquatic Center adjacent to the Oregon Institute of Technology campus will add to the regional character of the area. This facility will have five pools: a wave pool, a lap pool, a wading pool, a whirlpool, and a recreation swim pool; public meeting rooms; and a snack area. Surrounding the building will be a regional park with fields for various types of activities.

The Clackamas Town Center Mall, however, continues to be the most dominant regional draw in this area. It was built in 1980, and there is the potential for facilities of this type to become outdated and obsolete after about twenty years. Redevelopment of the mall may become a high priority around the turn of the century. The Lloyd Center area is an example of this process as it has recently finished redevelopment construction. There is also the possibility that the Town Center will not be a viable retail attraction after the turn of the century. The likelihood of this actually happening is highly dependent upon an expansion of the urban growth boundary further to the east.

## Clackamas Town Center Market Area Demographics

From a publication produced by the Clackamas County Development Agency, "Market Data Report Clackamas Town Center Area", several observations are listed below. All observations stated here focus on issues of employment and travel time to work. These demographics are based upon the 1988 figures from National Decision Systems.

All statistics refer to a 2 mile radius of CTC:

- 1) Average household income \$23,622  
Median household income \$20,927
- 2) Total number of households 7,730  
Total number of employees 15,885  
Daytime population 15,885  
Residential population 22,794

There seem to be employment opportunities for 70% (15,885/22,794) of the residential population. Additionally, the medium household income reflects the wages that are earned by individuals working in the retail service sector which is predominant at Clackamas Town Center.\*

- 3) Of the 15,885 employees, 56% (8,828) do not work in the retail and service sectors.\*

- 4) Population by travel time to work; total is 9,776.

Under 5 min.	2.70%	(264)
5 to 9 min.	11.93%	(1,167)
10 to 14 min.	15.82%	(1,546)
15 + min.	69.54%	(6,799)

It is possible that, at most, 1,431 working individuals from the two mile radius surrounding CTC make up the 15,885 daytime population. Concluding, 91% if the employees of CTC stores and services commute from distances of 10 minute or more.\*

- 5) Population by transportation to work; total is 9,833.

drive alone	70.83%
car pool	18.25%
public trans.	4.94%
walk only	2.34%
other means	1.59%
work at home	2.05%



6) From yearly car count in the CTC parking lot; 1988 estimates based on sales increases and projections.

total	8,003,212
daily average	22,107
monthly average	666,934

The number of employee daily parking is not reported.\*

It is quite evident that residents of the CTC area drive to work and that almost half travel to employment located at least six miles from CTC. In addressing Goal 12 of the State Comprehensive Planning Goals, the 2 mile radius of CTC needs to be better connected to the metropolitan region by mass transit and commuter organization.

\* Conclusions were derived from provided data and were not part of the documented publication.

# **Kaiser Sunnyside Medical Center: Expansion Plans, Traffic and Other Local Impacts**

## **Issues**

- Congestion at certain intersections will be made worse in the future in part by KSMC generated traffic. The worst intersections will be 82nd Ave. and Sunnyside Rd. and northbound and southbound I-205 and Sunnyside Rd. intersections.
- An increasing level of congestion in the surrounding street system may adversely impact the economic viability of KSMC in the future as a regional facility.
- KSMC is not accessible for patrons using alternate transportation modes such as walking and bicycling.

## **Analysis**

This summary is based almost entirely upon a report titled Parking and Traffic Impact, Kaiser Sunnyside Medical Center Campus, Kaiser Permanente, by Carl H. Buttke, Inc., Consulting Transportation Engineer, 11/11/87. This summary will list current and future facilities expansion and traffic generation rates into the surrounding road network as a result of this expansion. However, this summary will dispute some of the conclusions reached by Mr. Buttke regarding traffic impacts in the surrounding road network. In addition, some economic and other conclusions will be made on the basis of demographic data provided in Mr. Buttke's report.

The Kaiser Sunnyside Medical Center (KSMC) is located on the south side of Sunnyside Road, east of SE 97th Ave. in Clackamas County. As of 1987, the campus included a 145 bed hospital, two medical offices (which includes an optical center and a clinic), a service center which houses a regional lab, a regional process center, and a regional supply center. The later three buildings serve Kaiser Permanente facilities in the entire Portland metro area. Approximately 1700 people worked at the KSMC campus in 1987 in a 24 hour period. 1270 parking spaces were provided. At that time, it was estimated there was a need for 1430 parking spaces to provide a cushion during peak hours. Approximately, 94% of employees drove their own vehicle to work, 5% were passengers and less than 1% used Tri-Met, even though the campus is served by the 71 bus line, which runs every 15 minutes. Expansion of transit service is not expected in the near future. 6% of employees participated in carpooling or ride sharing. The 24 hour trip generation rates were 7,700.

Since that time, 5 expansion phases between 1988-2002 have been planned. These expansion plans are represented on the phase site plan maps found in the appendix. In phase 1 from 1988-1990, a sub-specialty medical office and an administrative office to the hospital were under construction. The number of hospital beds stayed at 145, the amount of hospital personnel increased to 1,023, medical office employees increased to 430, service center employees stayed at 425 and parking spaces increased to 1,750. Demand for parking was estimated to be 1676. 24 hour trip generation rates were 8,600.

Phase 2 added a small amount of space to the hospital and began construction of the first addition to the regional supply center. No hospital beds were added, hospital employment increased to 1,043, no medical office or service center employees were added, parking spaces increased to 1,750. The estimated demand for parking was 1,740. 24 hour trip generation rates (for phases 2 and 3) should be 9,400.

Phase 3 is ongoing into 1993, which has begun construction of an above ground parking structure. The first addition to the regional supply center is still under construction. The first addition to the regional laboratory is also being constructed. The amount of hospital beds will increase to 180 beds, the amount of hospital employees will increase to 1,194, medical office employees will increase to 430, service center employees will increase to 620, and the total amount of parking spaces will decrease to 1,740 as construction takes place. The estimated demand for parking in this phase is 1,830.

Phase 4 will occur from 1995-1996 which have a 350 space parking structure completed, the first addition of the regional center completed and the first addition of the regional laboratory completed. Furthermore, construction will begin on the first addition to the regional process center, the second addition to the regional supply center, the second addition to the regional laboratory, an addition to the sub-specialty medical office built in phase 1 and an additional parking structure with 558 spaces. This later structure is dependent on the Sunnybrook Extension being built, as that is where it would have street access. The amount of hospital beds would be expanded to 235 due to the addition of beds in the sub-specialty medical offices, the amount of hospital personnel would be increased to 1,411, medical office employees would be increased to 510, service center employees to 620 and the amount of available parking spaces would increase to 2,125 spaces. The estimated peak demand for parking is estimated to be 2,140 spaces. 24 hour trip generation rates are estimated to be 11,500.

Phase 5 is the final expansion planned for 2000-2002. The first addition to the regional process center will be completed, as will the second addition to the regional laboratory, the regional supply center, the sub-specialty medical offices and the 558 parking structure bordering the proposed Sunnybrook Extension. Construction will begin on a second addition to the regional process center, an addition to the nursing wing, as well as the main hospital and a 175 space addition to the 558 space parking structure bordering the Sunnybrook Extension. At the completion of this phase, there will be 350 hospital beds, 1,719 hospital employees, 510 medical office employees, 640 service center employees and 2,300

parking spaces. The estimated peak parking demand will be 2,314 spaces. 24 hour trip generation rates are estimated to be 13,300.

The traffic assignment maps in the appendix show how KSMC-generated traffic will be distributed. In addition, table 6 in the appendix looks at the capacity and level of service at selected intersections in the mapped area. The table indicates that 1 intersection at present is at 'D' level of service. This indicates long traffic delays. No intersection exceeds capacity. By 1995, 3 intersections are at 'D' or 'E' level of service. 'E' indicates very long traffic delays. Three intersections are over capacity. By 2000, only 2 intersections are at 'D' or 'F' level of service and only 1 intersection is over capacity. This is due to presumed road improvements, such as the Sunnybrook Extension. However, if any of these improvements are not constructed, the level of service could be expected to be much worse. By the year 2009, there are projected to be 5 intersections with 'D' or 'F' level of service and 4 intersections exceeding capacity.

Mr. Buttke concludes that "Sunnyside Road will experience traffic volumes exceeding its capacity at the major intersections west of the KSMC campus over the next twenty years, regardless of any expansion plans at the KSMC campus." [Parking and Traffic Impact, Kaiser Sunnyside Medical Center Campus, Kaiser Permanente, Buttke, p.36.] However, he also concludes that "... the proposed KSMC master plan is not expected to cause the operation of the surrounding street system to drop into unacceptable levels of service." [Ibid, p. 36.]

His conclusions ignore the fact that an expanding KSMC campus traffic generation rate and no increase in transit usage must have a negative impact on congestion of intersections. Simply because KSMC traffic is not causing a given intersection to go from 'D' level of service to 'F' level of service does not mean there is no impact. Any additional increment of traffic at a congested intersection is still a negative impact.

Therefore, KSMC seems like it should be working to be more proactive in encouraging transit and alternative transportation mode usage. Even with enormous (and costly) parking expansion in each of the 5 expansion phases, the supply has barely kept up with demand. KSMC might find attacking parking from the demand side to be more cost effective, rather than building more parking structures. Increased transit and multimodal transportation use at KSMC would provide service and quality of life benefits for the whole community.

While the major impacts of the KSMC expansion on the surrounding area involve traffic impacts, there are also significant impacts economically and in terms of health services. The KSMC campus is the largest single employer in the area. Many of the jobs are high quality in terms of income, benefits and stability. There are numerous economic spin-off effects, such as the hiring of local construction subcontractors to work on building additions, nearby motels being filled by visitors of patients in the hospital, KSMC workers buying houses and raising families in the area, to KSMC employees buying lunch every day at local restaurants. KSMC will continue to expand into the future because of its

regional focus toward medical care, supply and service. The workforce will grow and remain the largest in the county.

The community also benefits from the regional focus of KSMC in terms of medical care and facilities. Normally, the small population of this area would not merit a 145 bed hospital, as well as associated medical clinics, optical centers and medical offices. Due to the regional draw, however, this size and quality of facility does exist.

In conclusion, the Kaiser Sunnyside Medical center is undergoing a 5 phase expansion plan between 1988-2002. The hospital, medical offices, medical clinics, regional laboratory, supply center, process center and parking structures are all undergoing substantial expansion. The number of employees has expanded from 1,711 in 1987 to an estimated 2,869 employees by 2002. Parking spaces have gone from 1,270 in 1987 to an estimated 2,300 by 2002. Hospital beds have expanded from 145 in 1987 to an estimated 350 by 2002. Average trip generation per day has gone from 7,700 in 1987 to an estimated 13,300 by 2002.

This expansion will contribute negatively to the amount of congestion in the immediate road network. The most effected will be the 82nd and Sunnyside Rd. intersection and both north bound and south bound I-205 and Sunnyside Rd. intersections. At the same time, KSMC will continue its expansion with an ever increasing regional focus. This facility will continue to be the largest single employer in Clackamas County, particularly of high paying medical professions. This has an enormous economic spin off benefits to the region. The community will also benefit from having an exceptionally high level of medical care for a community of this size. The main issue seems to be how to mitigate the local traffic congestion while maintaining the strong economic and medical benefits to the community and the region as a whole. There also may be problems of connectivity for some local residents in this area without using an auto. Walkers and bicyclists, for example, may be intimidated trying to cross busy Sunnyside Rd while going to or from KSMC.

## **Development Opportunities**

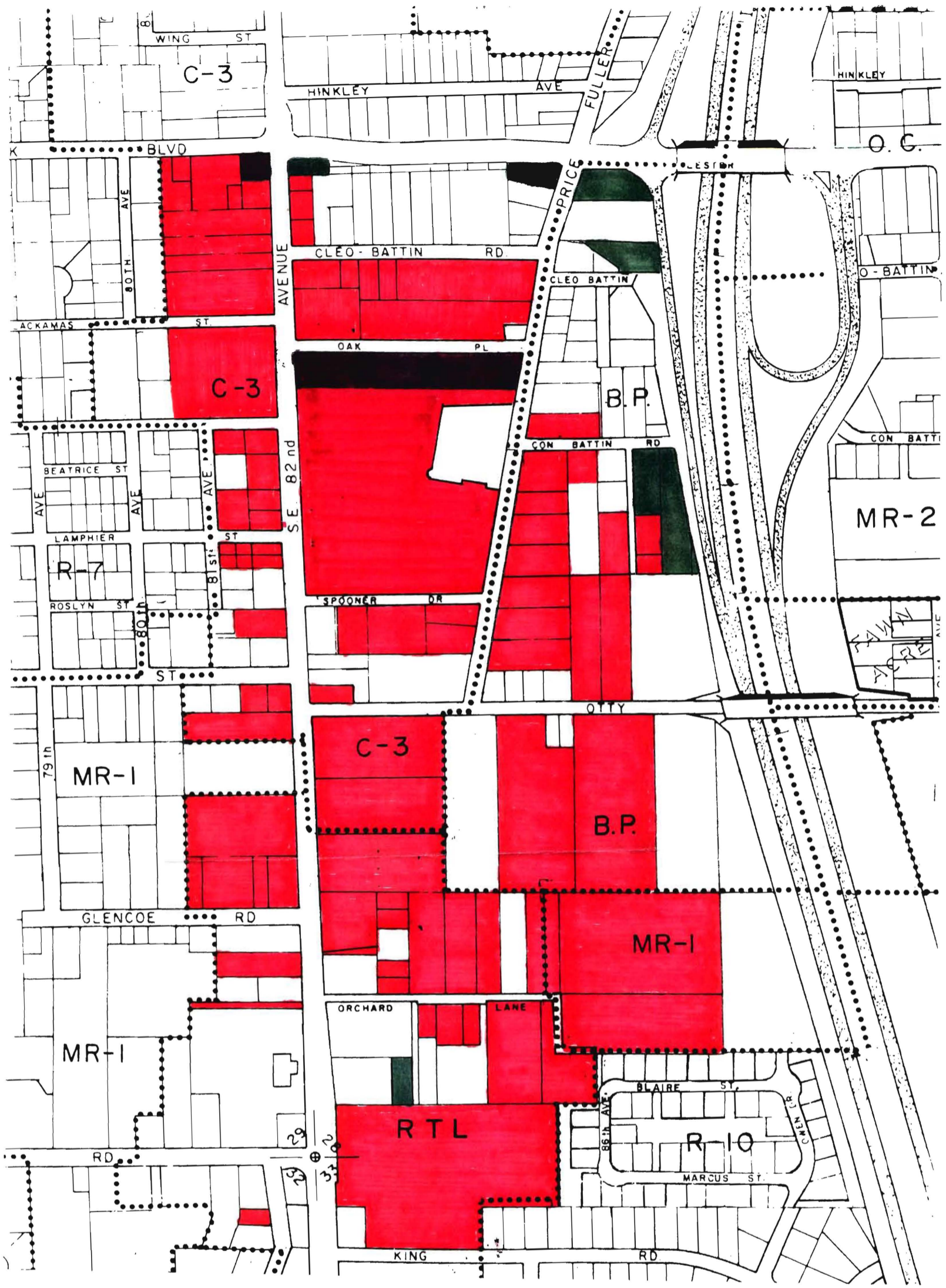
**Issue:** The lands identified along S.E. 82nd Ave. and the target area are currently underused.

Redevelopment potential is shown on the Redevelopment potential map. Development on vacant or undeveloped land was limited in the target area. The target area is bounded by 82nd Ave. to the east, I-205 to the west, Johnson Creek Blvd. to the north and Sunnyside Rd. to the south. Due to the limited amount of vacant lands, redevelopment was determined to offer the greatest potential for further growth.

The analysis considered the effect of such factors as accessibility and proximity to regional economic attractors, and ability to accommodate commercial development without significant reinvestment in the physical infrastructure. The target area was determined to have the highest potential of successful redevelopment, given the above conditions. 82nd Ave. was also examined as part of an effort to analyze its commercial health and viability. Redevelopment potential was determined by the following criterion:

- Buildings with assessed values of 70% or less than the value of the underlying land
- Vacant land
- Surface parking lots

It was found that 82nd Ave and the target area had great potential for conversion of use and/or reinvestment. It was found that a total of 171 parcels along 82nd Ave and within the target area had building values less than 70% of underlying land values. This was based on calculations attained from Clackamas County's 1992 Assessed Values. The Redevelopment Potential map also identifies parking lots and vacant lands potentially available for redevelopment.



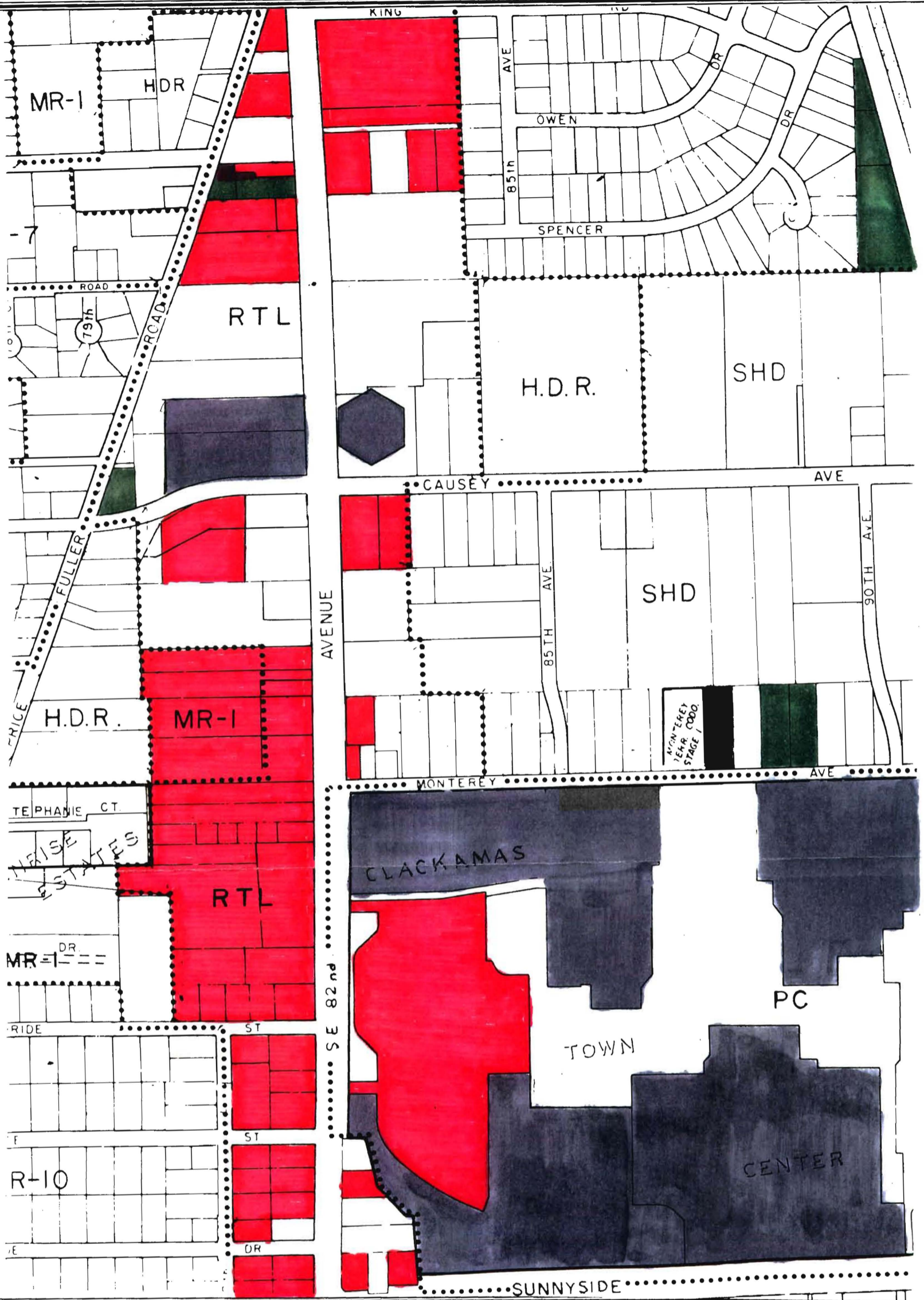
# Target Area Redevelopment Potential

## LEGEND

- Building value < 70 % of land value
- Vacant lands
- Surface parking lots



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PLANNING WORKSHOP



# Target Area Redevelopment Potential

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THE PORTLAND STATE UNIVERSITY  
PLANNING WORKSHOP



## LEGEND

- Building value < 70 % of land value
- Vacant lands
- Surface parking lots