

BEFORE THE COUNCIL OF THE  
METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF FINDING	)	RESOLUTION NO. 81-259
THE CLACKAMAS TOWN CENTER AREA	)	
TRANSPORTATION PLAN CONSISTENT	)	Introduced by the Joint
WITH THE TRANSPORTATION SYSTEMS	)	Policy Advisory Committee
PLANNING PROCESS AND AMENDING	)	on Transportation
THE TRANSPORTATION IMPROVEMENT	)	
PROGRAM	)	

WHEREAS, Clackamas County has developed a Clackamas Town Center (CTC) Area Transportation Plan; and

WHEREAS, This plan includes a series of transit and highway improvement projects to serve the CTC and solve associated travel problems; and

WHEREAS, Some of the projects in the CTC Area Transportation Plan impact the regional transportation system; and

WHEREAS, Those projects of regional significance have undergone Metro systems analysis and are enumerated in Staff Report No. 70 (Exhibit A), attached hereto; and

WHEREAS, Funding for these projects will be provided by developers in the area; and

WHEREAS, The transportation planning process requires Metro review and approval of regionally significant projects, federally funded or not; now, therefore,

BE IT RESOLVED,

1. That the Metro Council finds the following projects from Exhibit A to be consistent with the transportation planning process and are approved in concept:

- a. 82nd Avenue upgrading - Otty Road to Harmony;
- b. 82nd Avenue service road - Causey to the Town Center;
- c. An interchange on I-205 north of Sunnyside Road at either Otty Road or Lester Street; and

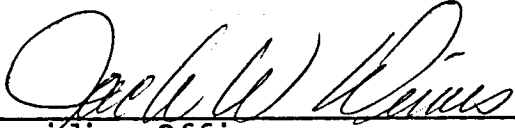
d. An exclusive transitway on new right-of-way west of I-205 and between the new interchange and the Town Center.

2. That Metro approval of an interchange on I-205 north of Sunnyside is predicated on further environmental analyses of the Otty Road and Lester Street overpasses and associated arterial connections.

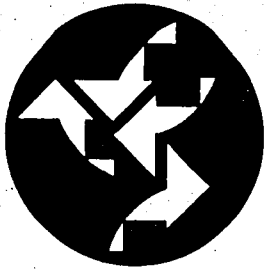
3. That the Transportation Improvement Program be amended to reflect the estimates for the above projects as set forth in Exhibit A.

4. That the Metro Council finds the noted projects to be in accordance with the region's continuing, cooperative, comprehensive planning process and hereby gives affirmative A-95 Review approval.

ADOPTED by the Council of the Metropolitan Service District  
this 23rd day of July, 1981.

  
\_\_\_\_\_  
Presiding Officer

BP/srb  
3514B/236  
07/10/81



STAFF REPORT No. 70

*Date:* SEPTEMBER 15, 1980

*Title:* SYSTEM ANALYSIS AND RECOMMENDATIONS:  
CLACKAMAS TOWN CENTER AREA  
TRANSPORTATION PLAN

Transportation Department  
**Metropolitan Service District**

Published By

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## I. INTRODUCTION

### A. Background

As part of the adopted Clackamas County Comprehensive Plan, a "design plan" to provide a framework for the intensive land use development in and around the Clackamas Town Center (CTC) is being prepared by County planning staff. One of the components of this design plan is the Clackamas Town Center Area Transportation Study - Final Report (July 9, 1980) which examines the current and projected conditions of the transportation system in the CTC vicinity and develops a series of transit and highway improvement project concepts to serve the proposed development and solve the associated travel problems. The details of the exact locations and specific dimensions of many of the projects will be contained in the final Design Plan, to be completed by the County in the fall of 1980.

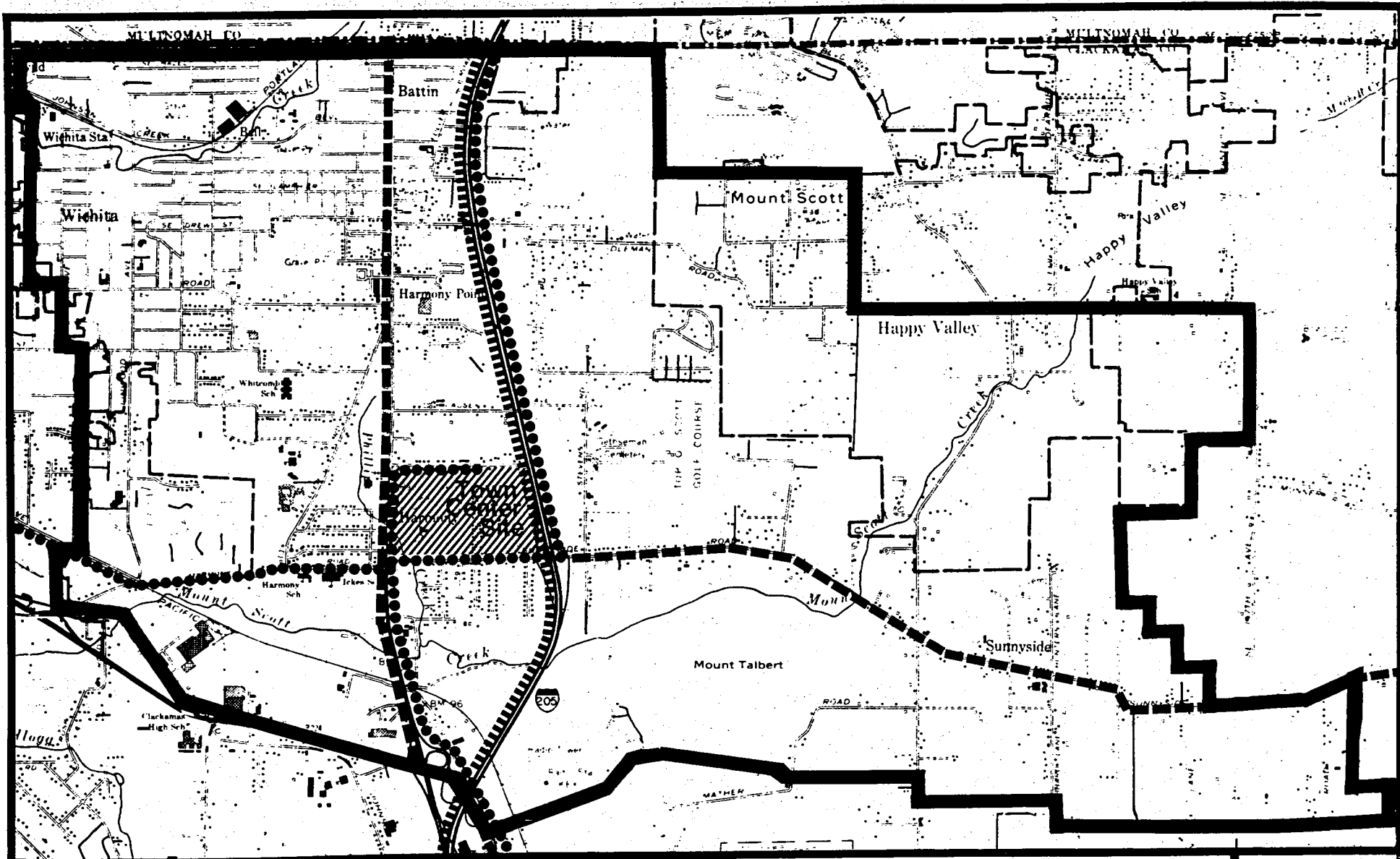
Although there are no specific funding requests associated with these projects at this time, the County has identified a potential capital improvement program for the projects in the CTC plan. Much of the funding is anticipated to come from a proposed financial district made up of developers in the area. However, all of the projects of regional significance must be incorporated into the Regional Transportation Plan before proceeding with construction. In addition, many of the projects are expected to require future Metro Council action to authorize the use of federal interstate transfer funds from the Southern Corridor Reserve.

### B. Regional Context

The area studied in the County document extends from the Multnomah/Clackamas County line south to the intersection of I-205 and 82nd Avenue, and from Milwaukie east to the County's urban growth boundary (Map 1). One major regional freeway (I-205 freeway) is included in the study area, as are a state highway (82nd Ave./Hwy 99E) and a major Clackamas County arterial (Sunnyside Rd. east of I-205). In addition, two major regional transit trunk bus routes are expected to serve the CTC--a north/south route connecting the Banfield LRT and Oregon City and an east/west route connecting the CTC with the proposed Milwaukie Transit Station.

### C. Purpose of This Report

The majority of the improvement activities outlined in the CTC Area Transportation Plan are of a localized nature and are not anticipated to impact the regional transportation system. However, several of the project concepts would affect the regional system. This Metro staff report reviews the findings of the Clackamas County study in light of the most recent travel projections and presents an analysis of the system impact of those projects considered to be of regional significance.



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# CLACKAMAS TOWN CENTER TRANSPORTATION STUDY AREA



- STUDY AREA BOUNDARY**
- REGIONAL TRAFFICWAY/TRANSITWAY**
- MAJOR ARTERIAL**
- TRANSIT TRUNK ROUTE**

**MAP**  
**1**  
**AUG 1980**



## II. CURRENT CONDITIONS AND PLANNED IMPROVEMENTS

### A. Current Conditions

#### 1. Highway System

Previous Metro analysis has indicated that four locations within the study area were experiencing or approaching conditions of serious congestion in 1977. (A Systems Analysis of Major Regional Transportation Corridors, Metro, May, 1979, Map VI-3). These sites are: (a) 82nd Avenue south of Johnson Creek Blvd.; (b) Johnson Creek Blvd. from McLoughlin Blvd. to SE 45th; (c) the intersection of Sunnyside Road, Harmony Road and 82nd Ave; and (d) Harmony Road between Hwy. 224 and Linwood. In addition, the large number of access points along study area arterials was identified as a significant contributor to congestion as well as heightened accident potential.

#### 2. Transit System

Presently only one bus route, #72, passes through a significant portion of the study area, although several other bus routes do pass through (or adjacent to) small sections. The #72 route serves the Clackamas Town Center site, as well as Sunnyside Medical Center, and provides connections with Portland along 82nd Avenue and to the south along I-205 and 82nd Drive to Gladstone and Oregon City. Peak period service has 15-20 minute headways.

As a result, much of the CTC study area has no transit service within walking distance. In addition, pedestrian access opportunity is very limited, with most roads in the area having no sidewalks.

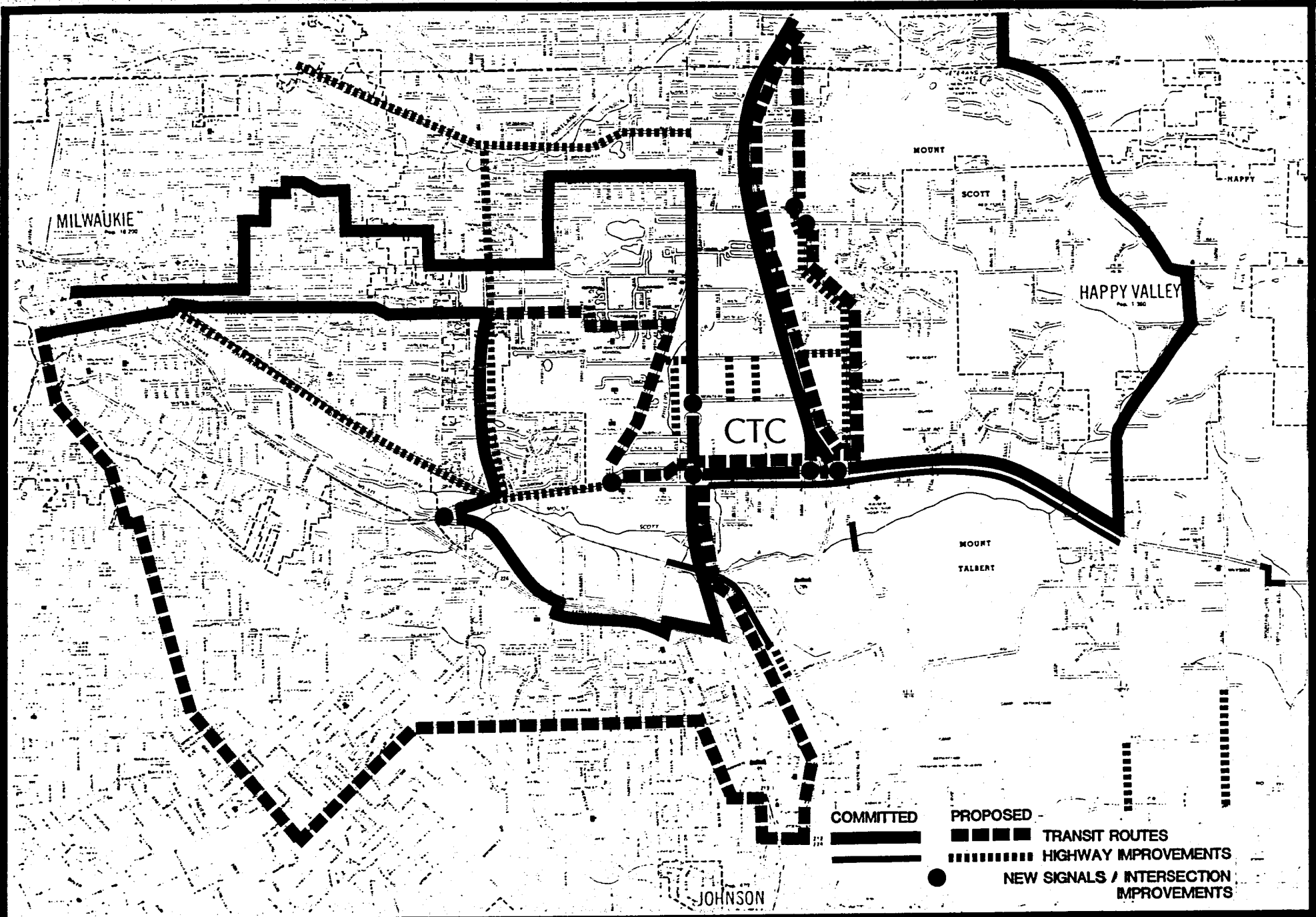
### B. Committed and Planned Improvements

Two categories of highway and transit improvement projects have been developed by the County to date to address the problems outlined above: (1) those which are currently committed, and (2) those which are recommended in the Clackamas County Comprehensive Plan. A brief summary of these activities is presented below and illustrated on Map 2.

#### 1. Highway Improvements

##### a. Committed

In conjunction with the development of the Town Center, several traffic signals will be installed. On 82nd Avenue, signals will be placed at Monterey Street and at two entrances to the Town Center. The existing signal at 82nd and Sunnyside will be



CLACKAMAS TOWN CENTER AREA HIGHWAY AND TRANSIT IMPROVEMENTS

MAP 2  
AUGUST 1980

replaced with a signal capable of handling additional lanes and turning phases. On Sunnyside, traffic signals will be placed at two entrances to the Town Center as well as at both freeway ramps. A bus-activated signal will be installed on Sunnyside at the bus access to the park and ride lot in the CTC.

The widening of Sunnyside Road to four lanes between 82nd and I-205 and the installation of sidewalks around the Town Center are nearing completion. The County is committed to widen Sunnyside to four lanes from I-205 to a point east of the entrance to the Medical Center. Further east (to 122nd Avenue), Sunnyside will be widened to two 14-foot lanes with shoulders. Two sharp curves near 135th will be improved.

Commitments have been made for connecting 97th to Lawnfield, and improving the northern portion of Ambler Road. Harmony Road will be improved and signals will be installed at the intersection with Price-Fuller and International Way.

b. Planned

The County's Comprehensive Plan recommends a number of road improvements in the study area. The following is a list of the major improvements recommended in the County Plan to take place in the study area:

- Johnson Creek Blvd. would be widened and pedestrian and bus amenities would be developed.
- Linwood Avenue would be widened with intersections improved and bikeways completed.
- 82nd Avenue would be developed to improve pedestrian access, provide transit amenities, limit the number of auto access points and improve intersection deficiencies.
- Harmony Road would be widened with turn lanes and pedestrian/transit amenities. The intersection with 82nd would be realigned opposite Sunnyside Road.
- Railroad Avenue would be widened and provided with pedestrian and transit amenities.
- Stevens Road/92nd Avenue would be widened and pedestrian/bikeways provided. The intersections with Otty and Idleman would be improved.

- The intersection of Stevens Road and Sunnyside Road would be relocated to the east, opposite the entrance to Sunnyside Medical Center.
- A study would be undertaken to determine the most appropriate connection between 97th and Sunnyside.
- 122nd and 132nd would be connected to Highway 212.
- Causey Avenue would be extended to Price-Fuller Road and to Stevens Road.
- Ambler Road would be connected to Lawnfield.
- New collector streets would be developed to connect Causey to Monterey, and the western extension of Causey to McBride.
- Several new residential collectors and numerous local streets will be developed in the area between I-205 and the eastern urban growth boundary (UGB).

## 2. Transit Improvements

### a. Committed

In the fall of 1981, the Tri-County Metropolitan Transportation District of Oregon (Tri-Met) is committed to implement four new bus routes serving the Clackamas Town Center, in addition to the existing #72 route. One new route will connect the Town Center to Happy Valley and to the Banfield Light Rail Station at 122nd and Burnside. The second will connect the Town Center to the Milwaukie Transit Station via a route approximately along King and Harrison Roads. A third new route will connect the Town Center to the Milwaukie transfer station via 82nd, Lake, Linwood and Monroe, and the fourth route will run along I-205 between the Town Center and the Banfield Light Rail Station near Halsey Street.

### b. Planned

If finances permit, Tri-Met plans several other routes and route changes in the Town Center area, in addition to those already committed. These routes are referred to as the "major service commitments" network and are contained in Tri-Met's five-year Transit Development Program (TDP).

Clackamas County's Comprehensive Plan does not specify the location of local transit routes, but

does encourage several trunk routes in the Town Center area. With some minor differences, Clackamas County's trunk routes correspond closely to trunk routes proposed in Tri-Met's TDP and are consistent with the recommendations to be made in the Metro Regional Transportation Plan (RTP).

### III. FUTURE CONDITIONS

#### A. Land Use

Clackamas County has chosen the area around the Clackamas Town Center to be developed with high intensity land uses and a high reliance on alternative modes of travel. This area was considered to be a logical choice since the Clackamas Town Center, which is still under construction, will be a major regional shopping and employment center, and because much of the surrounding land is vacant or appears ready for redevelopment. Therefore, significant growth can be expected in the area within a few years. The I-205 freeway (a regional freeway which is presently underutilized), provides excellent regional access opportunity and adds to the area's development potential.

Several different categories of land use were adopted in the County Comprehensive Plan for the area around the Clackamas Town Center. Medium, high and special high-density residential areas, as well as industrial and commercial areas, are concentrated near the Town Center or along 82nd Avenue. Low-density residential areas are generally farther from both the Town Center and major arterial roads. Such an arrangement was felt to allow the greatest number of people to make the most efficient use of transit, bicycles and foot travel and to encourage short trips for a variety of employment, shopping and entertainment opportunities.

#### B. Population and Employment

Clackamas County projects that the year 2000 population in the CTC study area will represent an increase of almost 300 percent over 1977 levels (to slightly over 43,000 persons). Employment in the area over the same period is projected by the County to almost double from 1977 levels (to about 11,000 employees).

#### C. Transportation System

As a result of the significant projected increases in population and employment in and around the CTC, the County has re-examined the expected future year conditions of the transportation system in the area. Comparing the base year travel information, future travel demand forecasts, and the capacity provided by the committed transportation system, the County identified the following locations that are expected to experience capacity deficiencies (at level of service E) by the year 2000:

1. 82nd Avenue from Harmony to the County line.
2. Sunnyside Road from 82nd to Stevens.
3. Harmony/Lake Road from 82nd to Highway 224.

4. Johnson Creek Blvd.
5. Linwood Avenue between King Road and Harmony Road.
6. Stevens Road near Sunnyside.
7. The northern legs of the I-205 interchange at Sunnyside.
8. Sunnyside Road east of 122nd Ave.

It is noted in the County study that these congestion problems were identified from a "constrained" transportation model which assumes that drivers will attempt to avoid congested areas. This indicates that problems such as neighborhood infiltration, lengthening of the peak period and air pollution "hot spots" are likely to increase if steps are not taken to ameliorate these conditions.

The proposed future year transit system, although greatly improved over current service levels, was felt to underserve certain portions of the new development because of the inaccessibility of certain routes to the new high intensity uses.

#### IV. SUMMARY OF THE PROPOSED PLAN

##### A. Plan Objectives

The County's overall objective in the CTC Area Transportation Plan is to develop a mutually supportive relationship between land use and transportation services in the Clackamas Town Center area, and to improve the transportation network to a level capable of handling the intense development and related travel demand expected by the year 2000. Specifically the County proposes to:

1. Promote a high level of transit service and utilization in the Town Center area.
2. Provide for a pleasant pedestrian environment and good pedestrian access to transit.
3. Provide for safe and convenient bicycle movement in the Town Center area.
4. Maintain acceptable traffic operations conditions with a reasonable expenditure of resources.
5. Maintain good air quality.

##### B. Plan Description

Several alternative highway and transit improvement packages were analyzed by the County to relieve expected congestion and promote increased transit ridership.

The County's preferred improvement package recommends a series of 15 activities in the study area, including: traffic signals, local street improvements, a railroad overpass, major arterial upgrading, transit route restructuring, an exclusive transitway from Otty Rd. to the CTC and a new I-205 interchange at Otty Rd. In addition, a capital improvement program totaling \$36 million is proposed. Right-of-way totaling \$6 million would be required (much of it expected to be dedicated by landowners) and preliminary construction cost estimates totaling \$30 million are included. Much of the cost would be paid by a proposed financial district in the Clackamas Town Center area.

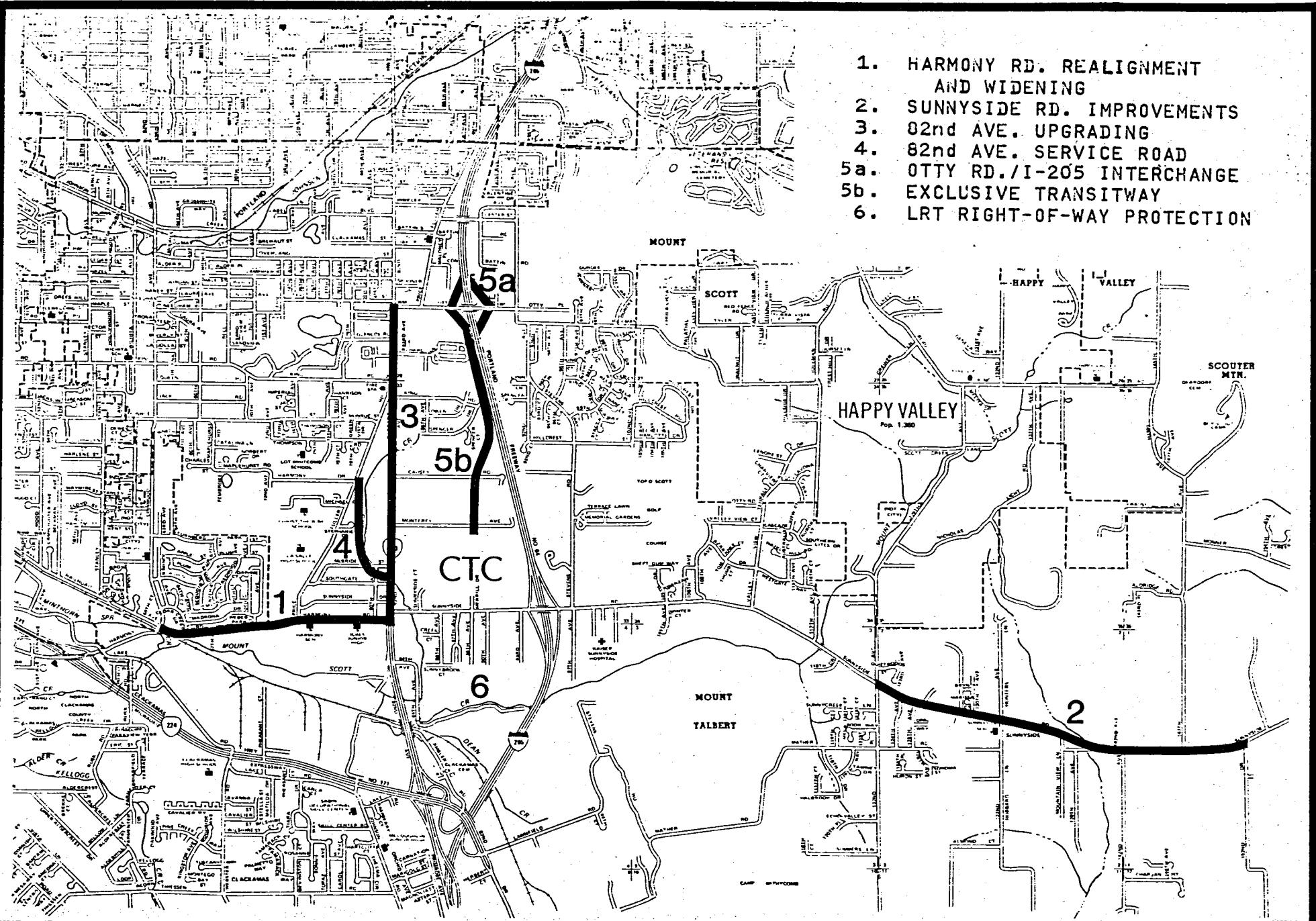
##### C. System Impact of the Plan

The majority of the projects recommended in the CTC Area Transportation Plan are not considered to be of regional significance, that is, they are expected to have a negligible effect on the regional transportation system due to their localized nature. Six of the proposed projects, however, could be expected to impact the regional system, and are analyzed in the following section of this report.



Overall, it is felt by Metro staff that the concepts developed in the CTC Area Transportation Plan are consistent with regional transportation goals and objectives, and would meet the overall objectives outlined by the County for the area.

1. HARMONY RD. REALIGNMENT AND WIDENING
2. SUNNYSIDE RD. IMPROVEMENTS
3. 82nd AVE. UPGRADING
4. 82nd AVE. SERVICE ROAD
- 5a. OTTY RD./I-205 INTERCHANGE
- 5b. EXCLUSIVE TRANSITWAY
6. LRT RIGHT-OF-WAY PROTECTION



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PROJECTS OF REGIONAL SIGNIFICANCE PROPOSED BY  
 CLACKAMAS TOWN CENTER AREA TRANSPORTATION PLAN

MAP 3  
 AUGUST 1980

## V. METRO EVALUATION

### A. Projects with Regional Significance

As previously mentioned, six of the improvement activities specified in the CTC Area Transportation Plan could be expected to impact the regional transportation system (Map 3). They are as follows:

1. Harmony Road Realignment and Widening (82nd Ave. to International Way).
2. Sunnyside Road Widening (122nd Ave. to 152nd Ave.)
3. 82nd Avenue Upgrading (Otty Rd. to Harmony).
4. 82nd Avenue Service Road (Causey to CTC).
5. I-205 Interchange at Otty Road and Exclusive Transitway (Otty Road to CTC).
6. Right-of-way protection for future construction of an exclusive transitway (south of CTC).

The remainder of this report presents a brief systems analysis and recommendations for each of these projects. The discussion of each project or activity includes a preliminary cost-estimate and recommended funding sources as defined by Clackamas County. Much of the expected costs are anticipated to be borne by a financial district to be formed in the area as part of the County's capital improvement program.

### B. Harmony Road Realignment and Widening

#### 1. Project Description

Harmony Road would be improved from 82nd to International Way with a wider surface, shoulders, turn lanes at Linwood, Price-Fuller, and 82nd Ave., sidewalks, and bikeways. The improvement would be approximately 6,000 feet long and would include a realignment at 82nd to intersect opposite Sunnyside Road (Map 3, No. 1).

A preliminary cost-estimate of the realignment portion of the project is \$410,000, including new right of way worth \$240,000 and road improvements costing \$170,000. The proposed financial district would be expected to pay 15 percent (\$61,500) of the total to match 85 percent (\$348,500) in federal interstate transfer funds.

Total cost of improving the remainder of the Harmony improvement (82nd to International) would be \$2.3 million, including \$50,000 for additional right of way where turn

lanes are required, and \$2.25 million for construction costs. Local funding sources need to be identified to provide 15 percent (\$345,000) to match 85 percent (\$1.955 million) in federal interstate transfer funds reserved for the southern corridor and potentially available for the project.

This project is one component of an overall effort by Clackamas County to develop Harmony Rd./Railroad Ave. as a major bus trunk route connecting the CTC and the proposed transit station in Milwaukie. A funding authorization request for the entire Railroad/Harmony improvement (of which this realignment and widening is a part) is expected to be received by Metro in late September, 1980.

## 2. Project Objectives

As identified by Clackamas County, the objectives of the Harmony Road project are to:

- a. Upgrade Harmony Road to allow its use as a major transit trunk route offering high-quality bus service connecting the CTC and the transit station in downtown Milwaukie;
- b. Improve pedestrian environment, access and safety along the proposed transit truck route;
- c. Improve traffic flows;
- d. Improve safety conditions; and
- e. Minimize neighborhood impacts.

## 3. Degree to Which the Project Meets the Objectives

Currently, there is no high-quality east/west transit bus trunk service in the CTC area. The proposed roadway improvements and pedestrian amenities (bus shelters, sidewalks, etc.) will provide a transit supportive environment and allow more efficient bus operations along the Harmony/Railroad route. It is still to be determined, however, if the Railroad/Harmony alignment would be the most appropriate location for the major east/west trunk route connecting the CTC with the Milwaukie Transit Station. It is expected that the project authorization request forthcoming from the County will provide data leading to that determination.

Traffic operations improvements (realignment of the intersection at 82nd, signalization and widening) will improve traffic flows and reduce turning conflicts on Harmony as well as improve flows on 82nd Ave. (due to the removal of one set of signals as a result of the realignment).

Safety hazards will be reduced by the upgrading, realignment, turn lanes and the provision of crosswalks at key transit stops.

#### 4. System Impact

Although other potential route options are available, the upgrading of Harmony Rd. to allow high-quality transit bus trunk service would address two significant regional objectives: 1) to provide improved east/west transit service between the CTC and the proposed Milwaukie Transit Station, and 2) to compliment the authorized highway and transit improvement on McLoughlin Blvd. north of Hwy 224. In addition, the provision of transit amenities and improvements to pedestrian access and safety would also further the attainment of the regional objective to divert auto trips onto transit. Furthermore, the realignment of the Harmony Rd. intersection with 82nd Ave. (a major arterial) will improve traffic flows on 82nd Ave. through the removal of one set of signals.

#### 5. Recommendations

As previously mentioned, the issue of whether or not the Harmony/Railroad route is the most appropriate location for the east/west bus trunk route has not been fully assessed. It is the belief of Metro staff, therefore, that a recommendation of the Harmony Rd. project as proposed in the Clackamas Town Center Area Transportation Plan would be premature at this time, pending a more complete study of the other bus trunk route alternatives and a final determination of the preferred trunk route location. It is expected that a resolution of this issue will be addressed as part of the Metro analysis of the entire Railroad/Harmony project authorization request to be received from Clackamas County in September, 1980.

### C. Sunnyside Road Widening (122nd Ave. to 152nd Ave)

#### 1. Project Description

This project would include the eastward extension of four lanes on Sunnyside Road from the eastern end of the Comprehensive Plan designated improvement (122nd Ave.) to a point near the urban growth boundary at approximately 152nd Avenue (Map 3, No. 2). There are currently no other east/west arterials in the area with the exception of Hwy 212.

Total cost of the project is estimated to be \$8.1 million, including new right of way worth \$1.2 million, and construction costing \$6.9 million. Eighty-eight percent of construction costs (\$6.072 million) is projected to come from federal sources, 6 percent (\$414,000) from state

sources, and 6 percent from local sources other than the proposed financial district. Right of way would be dedicated by developers outside the district.

2. Project Objectives

Clackamas County travel projections indicate that Sunnyside Rd. east of 122nd Ave. will be operating near capacity in the year 2000 (v/c ratio of .95 at LOS E). As defined by the County, the objectives of the proposed project would be to a) improve roadway capacity to produce a level of service D operation in the year 2000, b) improve traffic flows on the facility, and c) improve safety conditions in this segment.

3. Degree to Which the Project Meets the Objectives

The construction of two additional travel lanes, the incorporation of line-of-sight and alignment improvements, and the addition of turning lanes in this segment would provide improvements in level of service, traffic flow, and safety conditions.

4. System Impact

Clackamas County projects a year 2000 volume of 10,500 daily vehicle trips on Sunnyside Rd. east of 122nd Ave. This usage level represents a 375 percent increase over 1977 volumes, and incorporates a level of land use development that must be considered speculative at this time.

5. Recommendation

It is the Metro staff recommendation that no action be taken on the Sunnyside Rd. widening project east of 122nd Ave. at this time, due to the speculative nature of the land use development assumptions used in the development of the county's travel forecasts. The need for such an ambitious capacity increase in this section (from two to four lanes) is based on a very substantial growth in vehicle volumes (375%). It is recommended that this project be reevaluated at a future date to determine a) the actual land use development occurring in the area, and b) the actual effects of the CTC development on Sunnyside Rd. travel volumes.

D. 82nd Avenue Upgrading (Otty Rd. to Harmony Rd.)

1. Project Description

This project would include improvements for pedestrians, transit, traffic flow, and access control, as well as aesthetic improvements between Harmony Road and King Road

(Map 3, No. 3). Between King Road and Otty Road, traffic flow improvements, including a right turn lane at Otty, would be made. Right-of-way requirements necessary for the improvements are expected to be minimal.

Between Harmony and King, the preliminary cost estimate of the project is \$5 million, including improvements costing \$4.7 million to be paid by the proposed financial district. New right of way worth \$300,000 would be dedicated by developers in the district.

Between King and Otty, right of way costing \$50,000 is necessary and improvements are estimated to cost \$300,000. The specific funding source(s) for this project are not determined at this time.

## 2. Project Objectives

The objectives of this project, as identified by Clackamas County, are to a) facilitate bus operations and pedestrian access, b) improve travel flows on 82nd Ave., and c) improve safety conditions in this segment.

## 3. Degree to Which the Project Meets the Objectives

Bus operations and transit access would be improved by the development of bus turnouts at key locations, wider travel lanes, a signal intertie, and pedestrian amenities. Traffic flows would be improved through a) a signal intertie, b) wider lanes, c) bus turnouts, d) right turn lanes at key intersections, e) access controls, and f) left turn controls (median barrier). The incorporation of lighting improvements, crosswalks, and access and turning controls will improve safety conditions on the facility.

## 4. System Impact

82nd Avenue is a major north/south arterial which serves an extended commercial development strip. In addition, it is expected to provide local access from adjacent neighborhoods to the CTC. Improvement possibilities are constrained between King and Otty Roads due to the narrow right of way in this section. It is felt that the proposed TSM improvements would be a more cost-effective solution than acquiring additional developed right of way. Metro travel projections developed for the Regional Transportation Plan (RTP) indicate tht 82nd Ave. is expected to operate at or near capacity (28,000 daily vehicle trips) by the year 2000. The proposed improvements will provide a necessary increase in transit and auto operating levels.

5. Recommendations

Metro staff finds the proposed 82nd Ave. Upgrading Project will meet the identified objectives and provide needed improvements in travel flows, transit operations, pedestrian access and safety conditions. In addition, staff finds the project to be consistent with the regional transportation planning goals.

Therefore, it is recommended that this improvement project be included in the Metro Regional Transportation Plan (RTP), scheduled for adoption in December, 1980.

E. 82nd Avenue Service Road (Causey to CTC)

1. Project Description

This project would involve the construction of a two-lane service road to the west of 82nd Ave., and would run south from a proposed extension of Causey Rd. (between Price-Fuller and 82nd), then east to intersect 82nd Ave. opposite one of the Town Center entrances (Map 3, No. 4).

Total cost of the project is estimated at \$862,500, including new right of way worth \$450,000, and construction costs of \$412,500. The proposed financial district would pay the entire construction cost plus \$225,000 toward purchase of right of way. The remaining right of way worth \$225,000 would be dedicated by developers in the district.

2. Project Objectives

The objectives of this project, as defined by Clackamas County, are to provide a) improved traffic operations on 82nd Avenue, b) improved access to the developing residential and commercial areas west of 82nd Ave., and c) improved safety conditions on 82nd Ave.

3. Degree to Which the Project Meets the Objectives

Traffic flow improvements on the section of 82nd Ave. between Causey Rd. and the CTC should occur as a result of a) the diversion of up to 2,500 daily vehicle trips off a currently congested segment of 82nd Ave. and on to the service road, and b) the elimination of some access and turning conflicts currently experienced on 82nd Ave. The elimination of the access and turning conflicts by the diversion of trips with origin/destination points to the area immediately west of 82nd Ave. will also improve safety conditions on 82nd Ave.



4. System Impact

The proposed project would provide improvements in travel flows and safety conditions in a section of a major north/south arterial (82nd Ave.) currently identified as congested, as well as provide efficient access to a developing residential and commercial area (west of 82nd).

5. Recommendation

Metro staff finds that the proposed 82nd Avenue Service Road Project a) will meet the identified project objectives, and b) is consistent with the regional transportation planning goals. It is therefore recommended that the project be included in the Metro RTP, scheduled for adoption in December, 1980.

F. Otty Road/I-205 Interchange Improvements and Exclusive Transitway (Otty Rd. to CTC)

This project consists of a combination of highway and transit improvements in the area of the current Otty Rd/I-205 overpass. The highway portion of the improvement would provide a new freeway interchange and an intersection realignment (Map 3, No. 5a). The transit improvement would consist of an exclusive transitway from the new freeway interchange south to the CTC (Map 3, No. 5b).

1. Otty Road/I-205 Interchange Improvements

a. Project Description

A diamond interchange would be added to the existing freeway overpass at Otty Road. Otty would be improved along its entire length (2,500 feet) with wider lanes, turn lanes, limited access, and sidewalks. The intersections of Otty, 92nd and Idleman would be combined and realigned. Additional right of way would be required for this project.

A preliminary cost estimate of the freeway interchange is about \$980,000, including right of way worth \$200,000, and construction costs of \$780,000. The proposed financial district would pay the entire cost.

The widening of Otty and improvement to the Otty/92nd/Idleman intersections is expected to cost \$910,000, including \$290,000 for right of way and \$620,000 for construction. Sources other than the proposed financial district would be expected to pay the entire cost, and these sources would have to be identified prior to implementation.

b. Project Objectives

As defined by Clackamas County, the project objectives are:

- 1) to provide improved transit access (in conjunction with the exclusive transitway--see F.2) from the Banfield and I-205 to the CTC Transit Station and surrounding development;
- 2) to reduce congested conditions expected at the I-205/Sunnyside Rd. interchange;
- 3) to provide additional regional access (via I-205) to the CTC development;
- 4) to allow more direct regional access for trips originating in the Happy Valley/Rock Creek area; and
- 5) to provide a more balanced traffic flow on 82nd Ave. and the I-205 freeway.

c. Degree to Which the Project Meets the Objectives

The new Otty Rd/I-205 interchange (in conjunction with the exclusive transitway) would provide increases in transit service potential, efficiency and speed for the trunk bus route connecting the Banfield LRT station and the CTC Transit Station by removing the buses from mixed traffic at Otty Rd. and routing the service through the high-intensity development north of the CTC. This route structure would avoid the circuitous connection from the Sunnyside Rd/I-205 interchange (south of the CTC) to the transit station (to be located on the north side of the CTC).

Clackamas County and ODOT travel demand projections for the year 2000 indicate that the Sunnyside/I-205 ramps will be severely congested without the additional access provided by the proposed interchange at Otty Rd. It is anticipated that the project could remove up to 900 p.m. peak hour vehicles from the Sunnyside/I-205 ramps. This diversion would not only relieve the expected problems on the freeway ramps, but would also improve conditions for through travel on Sunnyside Rd.

Due to its location roughly midway between the Foster Rd. and Sunnyside Rd. Interchanges with I-205, the proposed interchange at Otty Rd. would provide increased access and reduce out-of-direction travel for trips generated in the Happy Valley/Rock Creek

areas east of the freeway. In addition, freeway-bound travel from the Milwaukie area could be expected to use King Rd. (which is projected to have excess capacity in the year 2000) rather than Harmony Rd. (which the County has designated as a major east/west transit trunk route) and 82nd Ave. (from Harmony to Otty Rd.).

An alternative interchange project at Causey Rd. was considered in the planning process, and was found to produce less benefit at a much greater cost. The no-build alternative was considered to be unacceptable.

d. System Impact

The I-205 freeway serves as the major regional access route to the planned regional commercial center at the Town Center site. The most critical impact of the proposed interchange on the regional transportation system would be in the area of I-205 north of Sunnyside Rd. Various sources have developed travel demand forecasts for the CTC area, each based on different perspectives, assumptions and levels of detail (see Appendix). For the purposes of this analysis, the most conservative estimate of the travel demand in this critical impact area (that is, the one least likely to be exceeded) is 86,000 daily vehicle trips without construction of the proposed interchange (no build). At this level of daily volume, the critical links on the I-205 freeway would be highly sensitive to changes brought on by the interchange project, and therefore, this volume is useful for illustrating those impacts.

Using the year 2000 volume forecast selected for illustrative purposes (85,800 daily vehicle trips in the section of I-205 north of Sunnyside Rd.) as a base, a comparison of the no-build and build alternatives (Figure 1, a and b) demonstrates the following impacts on I-205:

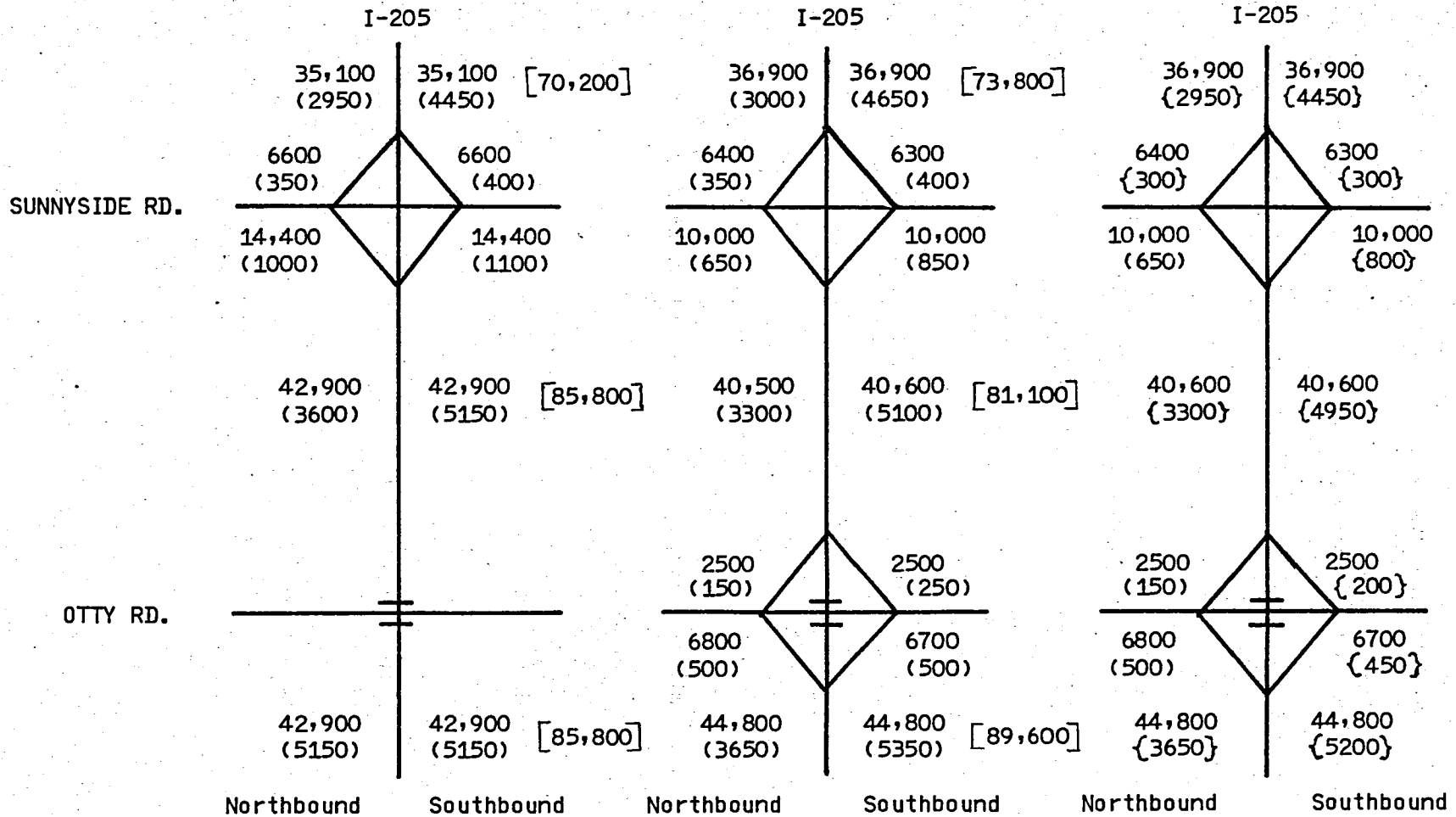
1. South of Sunnyside Rd.: +3600 ADT or +5%
2. Sunnyside to Otty Rds.: -4700 ADT or -5%
3. North of Otty Rd.: +3800 ADT or +4%

It can be seen, therefore, that the project would increase I-205 travel volumes south of Sunnyside and north of Otty Rd., and reduce volumes in the section between Sunnyside and Otty Roads. While the section of I-205 south of Sunnyside is expected to operate at a reasonable level of service even with the increase produced by the build scenario, it can be seen that ramp metering would be required north of Sunnyside

A. NO BUILD

B. WITH OTTY RD. INTERCHANGE

C. WITH OTTY RD. INTERCHANGE & RAMP METERING



[XXX] year 2000 ADT (2-way) (XXX) P.M. Peak Hour  
 XXX year 2000 ADT (directional) {XXX} Volumes affected by Ramp Metering  
 - from ODOT analysis -



IMPACT OF OTTY RD./I-205 INTERCHANGE ON YEAR 2000 TRAVEL VOLUMES

FIG. 1

Rd. if the proposed interchange is built. This measure would be necessary to ensure acceptable levels of service on the freeway. An examination of the effect of p.m. peak-hour ramp metering on this freeway segment (Figure 1, c) indicates that the impact in terms of delay would be minimal at the affected ramps. The highest volume that would be metered off the freeway would be 100 vehicles at the southbound Sunnyside Rd. ramp. This is not considered to be a significant impact because 82nd Ave. (a parallel route) is available to accommodate the diverted trips.

Additional benefits to the system as a result of the interchange would be a decrease in travel volumes on Sunnyside Rd. between 82nd Ave. and I-205, and an elimination of the need for I-205 bus routes to travel out-of-direction to access the CTC Transit Station on the north side of the center.

d. Recommendation

Metro staff finds that the proposed Otty Rd/I-205 interchange, with the inclusion of ramp metering on I-205, a) meets the objectives identified for the project, and b) is consistent with the regional transportation goals. It is therefore recommended that the project be included in the Metro RTP, scheduled for adoption in December, 1980.

2. Exclusive Transitway (Otty Rd. to CTC)

a. Project Description

If the new freeway interchange is constructed, an exclusive transitway would be constructed from the Otty interchange approximately 5,000 feet south to the Town Center, using I-205 right of way west of the freeway where possible, except for approximately 2,000 feet which would pass through the High Density and Special High Density areas north of the CTC. The transitway would initially be used by express buses, but would be designed to be convertible to LRT.

Total cost of the transitway is estimated at \$975,000, including right of way worth \$450,000 and construction costs of \$525,000. The proposed financial district would pay the entire construction cost. Developers in the district would be expected to dedicate the required right of way.

b. Project Objectives

The objectives of the exclusive transitway project,

as defined by Clackamas County, are to a) provide more efficient-transit operating conditions for the trunk route connecting the Banfield LRT station and Oregon City via the CTC Transit Station, and b) to provide improved transit access for the intensive development planned in the area north of the Town Center.

c. Degree to Which the Project Meets the Objectives

The project would provide (in combination with the Otty Rd/I-205 interchange) an exclusive transit right-of-way from the new interchange south along the west side of I-205, through the new development north of the Town Center, and into the CTC Transit Station. This improvement would allow more direct transit operations by eliminating the need for the out-of-direction travel movement that would be required if the Sunnyside Rd/I-205 interchange were used to access the CTC Transit Station. In addition, by removing transit from mixed-traffic in this section, transit travel times will be reduced, and operating efficiencies will be realized. Finally, significantly improved transit access will be afforded to the high-intensity development scheduled to occur north of the Town Center.

d. System Impact

The proposed project would provide significant benefits to the major regional transit trunk route connecting the Banfield LRT station and Oregon City via the CTC Transit Station. Improvements in the transit operating speed and user access afforded by this project should promote the diversion of single-occupant automobile trips onto transit for origin/destination points in the CTC area, a major regional trip producer/attractor.

e. Recommendation

Metro staff finds that the proposed exclusive transitway project (Otty Rd. to CTC) a) meets the identified project objectives, and b) is consistent with the regional transportation goals. It is recommended, therefore, that the project be included in the Metro RTP, scheduled for adoption in December 1980.

G. Light Rail Transit (LRT) Right-of-Way Protection

1. Activity Description

In the CTC Area Transportation plan, three long-term

transit route options for the area south of the Town Center (Map 3, No. 6) were identified, all involving the eventual development of an LRT facility: 1) through the intensive land uses in the Campus Industrial area via an exclusive right of way on 88th and then south and west via the SP right of way; 2) parallel to Sunnyside Rd. to 82nd Ave., then south along the 82nd Ave. right of way; and 3) along the I-205 right of way to Oregon City. Clackamas County proposes to acquire the right of way necessary for option 1 as part of the development process in the area south of the CTC.

While the issue of the preferred LRT route option in this area requires further detailed study, it can be seen that if the intensive development south of the CTC is to be served effectively by LRT (at some future date), it would be appropriate to acquire right-of-way dedications and/or easements prior to the actual development of the area. The proposed activity would establish that right-of-way acquisition as a condition for development.

## 2. System Impact

An LRT facility connecting Portland, Milwaukie and Oregon City has been recommended for inclusion in the Regional Transportation Plan (see Metro Staff Report #69, McLoughlin Blvd. Improvement Strategy). South of Milwaukie, two major routes are available for this LRT facility--one via McLoughlin Blvd. through Gladstone to Oregon City and one via Hwy 224, the Clackamas Town Center (CTC), and I-205 to Oregon City. Both Phase I and Phase II studies on these route options are recommended to be initiated at a later date.

If the preferred LRT route to Oregon City is via Hwy 224 and I-205, a logical terminus of an I-205 LRT facility extending south from the Banfield LRT would be the Clackamas Town Center. In that light, it is important to reserve appropriate right of way south of the CTC to allow for the option to construct an LRT segment connecting the Town Center with Oregon City.

## 3. Recommendation

Given the predevelopment opportunity currently available to preserve transit right of way in the area south of the CTC, it is recommended that Clackamas County, in cooperation with Tri-Met, 1) proceed with the identified measures to preserve appropriate right of way between the Town Center and Oregon City, and 2) that such right-of-way protection be designated in the Metro RTP, scheduled for adoption in December, 1980.

## APPENDIX

### Future Year Travel Demand Forecast Comparison: Clackamas Town Center Area

Various sources have developed future year travel demand forecasts for the Clackamas Town Center (CTC) area (Table A-1). Although these projected volumes are not directly comparable for a variety of reasons (see below), it is apparent that the development in and around the CTC area will produce significant increases in travel demand by the year 2000. For example, the most significant change (a 67% increase) identified in recorded traffic volumes in the two-year period 1977-1979 occurred on Sunnyside Road (from 9,000 to 15,000 daily vehicle trips) and is largely the result of a single development - Kaiser Hospital.

Obviously, the ambitious development planned for the entire CTC area can be expected to produce equally significant effects on the area's transportation system; effects that will depend entirely on the amount and type of development that occurs.

Each of the projected travel volumes detailed in Table A-1 is based on a series of differing assumptions. With minor exceptions, each forecast is based on assumptions that differ in regard to:

1. intensity of land use;
2. amount of development expected;
3. availability and price of gasoline;
4. location and level of transit service;
5. level of detail used in the projection;
6. trip generation and attraction coefficients;
7. modeling procedures; and
8. perspective of the analysis and purpose of the forecast.

As such, direct comparisons among the projections are not considered to be productive, but taken as a whole, are indicative of the order of magnitude of the travel demand increases expected in the area.

Specifically, the most critical area of impact of the proposed Otty Rd/I-205 interchange on the regional system would be I-205 north of Sunnyside Road. For the purposes of the analysis, a year 2000 volume of about 86,000 daily vehicle trips in this section was considered the most useful. This volume represents the "worst case" scenario of the year 2000 I-205 projections, and at this level of demand, the critical impact area of I-205 would be most sensitive to changes brought about by the new interchange.

JG:lh  
9363/153



SOURCE	MAJOR ASSUMPTIONS	LOCATION						
		I-205 (SO. OF SUNNYSIDE)	I-205 (NO. OF SUNNYSIDE)	SUNNYSIDE (E. OF LAWNFIELD)	SUNNYSIDE (W. OF I-205)	HARMONY (W. OF 82ND)	82ND AVE. (NO. OF SUNNYSIDE)	82ND AVE. (SO. OF SUNNYSIDE)
1. 1977 T.C. <sup>a</sup>	--	21	21	9	8	7	20	21
2. 1979 T.C. <sup>a</sup>	--	21	22	15	10	--	21	20
3. RTPI <sup>b</sup>	2000 FORECAST YEAR MODERATE LAND USE REGIONAL LEVEL OF DETAIL	77	78	16	11	11	30	33
4. RTPI-R <sup>b</sup>	SAME AS 3 RESTRICTED FUEL SUPPLY	67	68	9	11	10	18	19
5. BUTTKE <sup>c</sup>	1990 FORECAST YEAR INTENSIVE LAND USE SITE SPECIFIC	110	115	18	43	11	38	41
6. CTC PLAN <sup>d</sup>	2000 FORECAST YEAR INTENSIVE DEVELOPMENT SITE SPECIFIC ASSUMES OTTY RD. INTERCHANGE	--	--	31	47	19	34	31
7. ODOT <sup>e</sup>	SAME AS 6 BALANCES FREEWAY VOLUMES	74	81	40	46	20	38	33
8. ODOT <sup>e</sup>	SAME AS 7 WITHOUT OTTY RD. INTERCHANGE	73	86	--	--	--	--	--
9. RTPII <sup>f</sup>	SAME AS 3 \$3.10 GAS IN 1980 DOLLARS SLIGHTLY INCREASED LAND USE	70	56	14	--	12	28	29

<sup>a</sup> TRAFFIC COUNT

<sup>b</sup> DRAFT ONE; REGIONAL TRANSPORTATION PLAN, METRO, JANUARY 1980

<sup>c</sup> TRANSPORTATION, ACCESS AND PARKING; NORTH CLACKAMAS CENTER--FINAL REPORT, CARL H. BUTTKE, CONSULTING ENGINEER, MARCH 29, 1974

<sup>d</sup> CLACKAMAS TOWN CENTER AREA TRANSPORTATION STUDY--FINAL REPORT, CLACKAMAS COUNTY DES, JULY 9, 1980

<sup>e</sup> PRELIMINARY I-205 FREEWAY ANALYSIS, ODOT, JULY, 1980

<sup>f</sup> PRELIMINARY DRAFT; DRAFT TWO, REGIONAL TRANSPORTATION PLAN, METRO, AUGUST, 1980



Sept.  
1980

Comparison of Base & Future Year Travel  
Demand Forecasts: CTC Area (in 000's)

TABLE  
A-1



A G E N D A   M A N A G E M E N T   S U M M A R Y

*Res  
8/25/81*

TO: Metro Council  
FROM: Executive Officer  
SUBJECT: Finding the Clackamas Town Center Area Transportation Plan Consistent with the Transportation Systems Planning Process and Amending the Transportation Improvement Program

I. RECOMMENDATIONS:

- A. ACTION REQUESTED: Recommend Council adoption of the attached Resolution which finds the Clackamas Town Center Transportation Plan, set forth in Staff Report No. 70, as being consistent with the transportation planning process and amending the Transportation Improvement Program (TIP) to include selected projects appearing in the Staff Report.
- B. POLICY IMPACT: This action will endorse projects of regional significance proposed by the Clackamas Town Center Area Transportation Plan including:
1. 82nd Avenue upgrading - Otty Road to Harmony;
  2. 82nd Avenue service road - Causey to the Town Center;
  3. An interchange on I-205 north of Sunnyside Road (alternative locations include Otty Road or Lester Road); and
  4. An exclusive transitway on new right-of-way west of I-205 and between the new I-205 interchange and the Town Center.

This action is consistent with Metro's Five Year Operational Plan.

TPAC and JPACT have reviewed and approved this Resolution.

- C. BUDGET IMPACT: None.

II. ANALYSIS:

- A. BACKGROUND: As part of the adopted Clackamas County Comprehensive Plan, a "design plan" to provide a framework for the intensive land use development in and around the Clackamas Town Center (CTC) has been adopted as an amendment to the Comprehensive Plan by County planning staff. One of the components of this design plan is the Clackamas Town Center Area Transportation Study - Final Report (July 9, 1980) which examines the current and projected conditions of the transportation system in the CTC vicinity and develops a series of transit and highway improvement project concepts to serve the proposed development and solve the associated travel problems.

The majority of the improvement activities outlined in the CTC Area Transportation Plan are of a localized nature and are not anticipated to impact the regional transportation system. However, several of the project concepts would affect the regional system. Metro Staff Report No. 70 (Exhibit A) reviews the findings of the Clackamas County study in light of the most recent travel projections and presents an analysis of the system impact of those projects considered to be of regional significance.

An interchange at I-205 and Otty Road or Lester Street is called for in the plan. The "Design Plan for the Town Center Area" (adopted by Clackamas County) states: "Two overpasses, at Otty Road and Lester Street, have the potential of being converted to full interchanges with minimum expense and disruption. These two alternatives should be studied in detail to determine which one will be made into a full interchange." Metro staff recommends endorsement of an interchange at one of the locations and recommends both alternatives be examined to determine environmental impacts and necessary arterial connections and thereby provide additional information on which to base final selection.

- B. ALTERNATIVES CONSIDERED: Many alternatives were reviewed and are outlined in Exhibit A. These recommended transportation improvements are essential to support the densities included in the County's comprehensive plan.
- C. CONCLUSION: Metro staff recommends adoption of the attached Resolution.

BP/srb  
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07/10/81