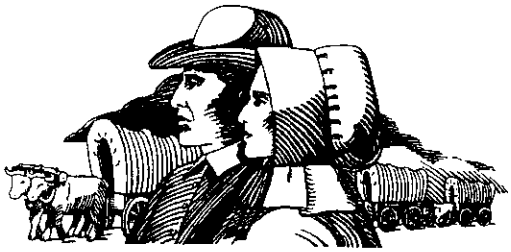
CITY OF OREGON CITY

PLANNING COMMISSION

320 WARNER MILNE ROAD OREGON CITY, OREGON 97045
TEL 657-0891 FAX 657-7892



AGENDA

City Commission Chambers - City Hall
April 23, 2001 at 7:00 P.M.

PLANNING COMMISSION MEETING

7:00 p.m. 1. **CALL TO ORDER**

7:05 p.m. 2. **PUBLIC COMMENT ON ITEMS NOT LISTED ON AGENDA**

7:10 p.m. 3. **APPROVAL OF MINUTES**: April 9, 2001

7:15 p.m. 4 **PUBLIC HEARINGS:**

ZC 01-01; Mildren Design Group / Rezone parcel from "R-6" Single Family Dwelling District to "LO" Limited Office District. 108 Beverly Drive, Clackamas County Map 3-2E-05CA Tax Lot 400

7:45 p.m. **PZ 00-01;** Morris Womack / Amend the City of Oregon City Comprehensive Plan Map from an Industrial designation to a Limited Office designation. 19988 Molalla Avenue, Clackamas County Map 3-2E-9C Tax Lots 500 & 501

ZC 00-04; Morris Womack / Amend the Zoning Map from "CI" Campus Industrial zoning to "LO" Limited Office zoning. 19988 Molalla Avenue, Clackamas County Map 3-2E-9C Tax Lots 500 & 501

8:15 p.m. **CU 01-03;** Milstead and Associates and the Oregon City School District / Approval of an approximately 41,000 square foot addition, which includes two new classrooms, four new restrooms, and an elevator to the Park Place Elementary School. 16075 Front Avenue, Clackamas County Map 2-2E-20DD, Tax Lot 2800

8:45 p.m. **CU 01-04;** Milstead and Associates and the Oregon City School District / Approval of an approximately 7,800 square foot addition, including six new classrooms, to the Holcomb Elementary School. 14625 S. Holcomb Blvd, Clackamas County Map 2-2E-28A, Tax Lot 1100

9:15 p.m. **CU 01-05;** Milstead and Associates and the Oregon City School District / Approval of an approximately 5,052 square foot addition, including four new classrooms and two restrooms to the Gaffney Lane Elementary School. 13521 Gaffney Lane, Clackamas County Map 3-2E-8BD, Tax Lot 4200

9:45 p.m. **CU 01-06;** Milstead and Associates and the Oregon City School District / Approval of an approximately 5,000 square foot addition, which includes four new classrooms and two new restrooms to the McLoughlin Elementary School. 19230 South End Road, Clackamas County Map 3-1E-12AC, Tax Lot 4400

10:15 p.m. **PD 00-01/WR00-013 (continued);** Lowell Wittke / Approval of a 31-unit Planned Development including 17 single-family homes and 14 duplex units. 16281 S. Oak Tree Terrace, Clackamas County Map #2S-2E-28A, Tax Lots 1712, 1714, 1717 & 1722

10:25 p.m. 5. **OLD BUSINESS**

A. Report on South Corridor Study and Light Rail Discussion

6. **NEW BUSINESS**

A. Staff Communications to the Commission

1. **Metro Survey of Local Elected Officials and Planning Commissioners** *(Memo and Survey Attached)*

2. **City Regulations on Demolitions and Tree-Cutting** *(To Be Sent Separately)*

B. Comments by Commissioners

10:30 p.m. 7. **ADJOURN**

NOTE: HEARING TIMES AS NOTED ABOVE ARE TENTATIVE. FOR SPECIAL ASSISTANCE DUE TO DISABILITY, PLEASE CALL CITY HALL, 657-0891, 48 HOURS PRIOR TO MEETING DATE.

DRAFT

CITY OF OREGON CITY
PLANNING COMMISSION MINUTES
April 9, 2001

COMMISSIONERS PRESENT
Chairperson Carter
Commissioner Bailey
Commissioner Main
Commissioner Mengelberg
Commissioner Orzen
Commissioner Surratt

STAFF PRESENT
Maggie Collins, Planning Manager
Bryan Cosgrove, Assistant City Manager
Nancy Kraushaar, Senior Engineer
Carrie Foley, Recording Secretary
Tom McLaughlin, Recording Secretary

1. CALL TO ORDER

Chairperson Carter called the meeting to order.

2. PUBLIC COMMENT ON ITEMS NOT LISTED ON AGENDA

Kathy Hogan made an announcement about a fundraiser for the "Fill A Stocking, Fill the Heart" organization that fills stockings for people in need at Christmastime. There will be an all-you-can-eat chili and cornbread function with raffle on Saturday April 21, 2001 from 4-7 PM at the Pioneer Community Center.

3. APPROVAL OF MINUTES

A. February 26, 2001 Minutes

Commissioner Surratt stated that on Page 5 of the minutes, "Chairperson Main" should read "Commissioner Main." She stated that on the same page the sentence "She stated that the applicant...chemical usage" did not sufficiently reflect the content of that conversation. She suggested that the sentence be deleted since the conversation could not be written about in a short, concise way. **Maggie Collins** recommended rewording the sentence as follows: "The discussion concerned maintenance plans and schedules." **Commissioner Surratt** agreed to that change. **Commissioner Mengelberg** stated that the spelling of her name needed to be corrected throughout the document.

Commissioner Bailey moved to accept the minutes of the February 26, 2001 Planning Commission meeting with the changes as noted. **Commissioner Main** seconded.

Ayes: Bailey, Main, Mengelberg, Orzen, Surratt, Carter; Nays: None.

B. March 12, 2001 Minutes

Commissioner Orzen moved to accept the minutes of the March 12, 2001 Planning Commission meeting. **Commissioner Main** seconded.

Ayes: Bailey, Main, Mengelberg, Orzen, Surratt, Carter; Nays: None.

4. HEARINGS: None

5. OLD BUSINESS

A. Review and Action on Planning Commission Code of Conduct

Commissioner Bailey stated that he wanted to read aloud for the record the Planning Commission Code of Conduct and proceeded to do so. **Commissioner Bailey** then moved to adopt the statement as written. **Commissioner Main** stated that the Code of Conduct should be a living, breathing document that is revisited from time to time and changed as needed. **Commissioner Mengelberg** stated that in the sentence "To promote more effective governance..." the word "governance" might not be appropriate because the Planning Commission does not govern but rather recommends to the City Commission who governs. A discussion ensued about governance. **Maggie Collins** suggested the following sentence: "To promote an effective structure for governance, we commit...." The Commissioners accepted this recommendation. **Commissioner Mengelberg** further stated that the word "blame-fixing" is unclear. **Chairperson Carter** stated that the intent of that word is that the Planning Commission not live in the past but rather focus on the future. **Maggie Collins** suggested the following sentence as more positive: "We commit to learn from the past, and focus on the present and the future in making wise planning decisions." **Commissioner Orzen** suggested that the last sentence be amended to read "...with regard to the governing of Oregon City." **Chairperson Carter** prefers that the word "our" remain because it implies a sense of ownership. The Commission decided upon "our city of Oregon City."

Because **Commissioner Bailey's** earlier motion was not seconded, **Commissioner Surratt** moved that the Oregon City Code of Conduct be approved with the amendments discussed. **Commissioner Orzen** seconded.

Ayes: Bailey, Main, Mengelberg, Orzen, Surratt, Carter; Nays: None.

Chairperson Carter thanked **Maggie Collins** for her help in drafting the amendments to the Code of Conduct.

6. NEW BUSINESS

A. Worksessions

1. Oregon City Urban Renewal Districts and How They Work and Tax Increment Financing Principles

Nancy Kraushaar presented a handout as a primer on Urban Renewal and referred to a map of the Urban Renewal districts during her presentation. **Bryan Cosgrove** also participated in the presentation.

- In the 1950's and 1960's the State of Oregon established the laws under which Urban Renewal functions. Urban Renewal provides funding to trigger re-development and a stronger tax base.

- There are two Urban Renewal Districts in Oregon City, one downtown and the other in the Hilltop area. Each of the districts has a separate Urban Renewal budget. The money collected within an Urban Renewal boundary must be spent within that boundary.

- The goals and objectives for each district are quite similar. Both concern bringing in more tax dollars to the City and increasing tax values; identifying properties that the City could acquire and re-develop; creating infrastructure and improving highways.

- Opportunity exists for creating a third Urban Renewal district. The City Commission acting as the Urban Renewal agency would make such a decision.

- An Urban Renewal plan must have a list of Activities that guide the spending of funds. The Activities include the creation of infrastructure: streets, sewer, water, acquiring park land.

- The Tax Assessor determines the value of properties within each district. As the value of properties increase, the taxes collected above the originally assessed amount go to the Urban Renewal district to do more projects. The tax rate within the districts is the same as that outside, but the taxes collected are distributed differently.

- Ballot Measure 50 stalled Urban Renewal projects for approximately 18 months. It established maximum indebtedness on each district. The Urban Renewal plans were reviewed to see how much the listed activities would cost over a 15-20 year period. In the downtown area, $24 million worth of activities were identified. In the Hilltop area the projects were worth $9 million. Once those dollar amounts are spent, the Urban Renewal project will end. The City Commission can halt Urban Renewal at any time or take portions of the taxes earmarked for the projects. It is more efficient to spend the money sooner rather than later and to collect the monies until you reach the maximum indebtedness point.

- One of the objections of Urban Renewal is the perception that you take money from taxpayers that you normally wouldn't collect.

- Staff is trying to put together a flexible five-year plan to give guidance regarding projects and whether to use bond money or stick to cash-flow money. One of the projects, for instance, is the SR 213-Beavercreek intersection. Building out Beavercreek between Molalla and SR 213, transportation improvements downtown, and development to get people back to the riverfront are other areas of consideration. Implementation of the 7th Street Corridor Plan will also be addressed in the five-year plan.

- Urban Renewal agencies acquire land, assemble parcels, and prepare the parcels for development.

2. Oregon City Civic Improvement Trust

Bryan Cosgrove stated that the Oregon City Civic Improvement Trust derives its revenue from a hotel-motel tax. It is a non-profit function to which people can donate money. The goal is to fund projects and activities that are related to tourism or increase Oregon City's visibility in the region.

- The Oregon State Legislature gave local governments permission to create these trusts. Most cities have them.

- The Oregon City Civic Improvement Trust is made up of the five City Commissioners and four citizens appointed at-large that are supposed to meet quarterly or as the Trust's cash accrues. The Trust advertises to the public that grant funds are available, citizens complete a brief application, and then decide which projects the Trust will fund.

- Revenue comes from the Rivershore Motel and several bed-and-breakfasts in Oregon City.

- Most cities earmark 30-60% of the Trust funds to their Chambers of Commerce, although that is not currently done in Oregon City.

3. Metro Enhancement Fund

Bryan Cosgrove stated that another development tool available to Oregon City is the Metro Enhancement Fund. The Fund was created as part of the agreement allowing Metro to put a transfer facility at the corner of SR 213 and Washington Street. It is basically a 50 cents per ton tipping fee to be spent anywhere within the city limits of Oregon City. Revenue is approximately $210,000 per year. $40,000 of the revenue goes into the general fund and is called the Tax-Offset

Portion that is paid by Metro in lieu of the amount lost by the City because it cannot collect taxes from a private facility on that property. The rest of the revenue comes from the tipping fee and goes into the Metro Enhancement Fund. The Fund is has accrued approximately $750,000. **Bryan Cosgrove** hopes the City Commission will use some of that money to fund the City's Comprehensive Plan update. The rest of the money can be disbursed as grants for projects that will enhance Oregon City, as the Fund can now be used outside a designated area around the Metro facility.

B. Staff Communications to the Commission

Maggie Collins recommended that the Commissioners place the Sample Motions sheet included in their packets into their notebooks and familiarize themselves with the formal procedures for making motions. She also stated that there is a revised Public Hearing Procedure that adds a scheduled time during hearings for "Final Staff Comments." She also stated that **Carrie Foley**, the Recording Secretary, would be leaving to pursue full-time employment and that **Tom McLaughlin** is in training as the new Recording Secretary. **Chairperson Carter** stated that the Planning Commission appreciates the very fine job that **Carrie Foley** has done.

C. Comments by Commissioners

Commissioner Mengelberg suggested putting the Code of Conduct on the web page under the Planning Commission section. **Chairperson Carter** stated that the logo on the Agenda sheet needs to be replaced by a design that is more inclusive of other phases in Oregon City's history.

Commissioner Bailey stated that the issue of light rail in the South Corridor has been raised in the City of Milwaukie. The question of Oregon City being a terminus should be revisited and the Planning Commission and the City Commission should participate in the discussion to help shape the direction of the debate. **Commissioner Main** stated that certain publications indicate a lack of citizen support for light rail south of Clackamas. **Maggie Collins** stated that it would be appropriate for the Planning Commission to make its views known and to invite people involved in the South Corridor Study to make a presentation during a worksession. **Commissioner Surratt** stated that the issue should be visited despite apparent public opinion. **Commissioner Bailey** stated that the Planning Commission could serve as a forum for information and education about light rail for the public. **Chairperson Carter** stated that citizens want pressing road improvement issues addressed before light rail. **Commissioner Mengelberg** stated that light rail is funded from a different source than road improvements. **Maggie Collins** stated that the South Corridor Study is progressing and was set up by Metro to study all alternatives to light rail in the South Corridor. The public involvement process has brought Southeast Portland's neighborhoods, to request a discussion light rail in this Study. She will bring information to the next Planning Commission meeting or worksession. **Chairperson**

Carter stated that the Commissioners want to be involved in the discussions about light rail and its alternatives.

Chairperson Carter stated that a lot of demolition has taken place prior to applications by property owners to the Planning Department. She is concerned that old trees are being destroyed, ground leveled, and possibly historically important buildings are being torn down to the detriment of Oregon City. **Commissioner Surratt** stated that there are engineering guidelines to address this issue. She discouraged micro-managing individual property owners to the point of discouraging people from living in Oregon City. **Chairperson Carter** stated that planned unit developments require an approved detailed plan and that the same should apply to smaller lots. **Commissioner Bailey** stated that it would be helpful to know how other districts handle this issue. **Maggie Collins** stated that she would provide a set of rules and regulations that govern demolition and tree cutting in Oregon City.

Commissioner Main asked about the status of the road realignment near Oregon City High School that had been discussed in regard to the Transportation System Plan. **Maggie Collins** stated that the School District and the City reached an agreement about transportation in that area. The City Commission passed the Transportation System Plan with the stipulation that the City-School District agreement be added to the Plan.

7. ADJOURN

All Commissioners agreed to adjourn.

Linda Carter, Planning Commission Chairperson

Maggie Collins, Planning Manager

CITY OF OREGON CITY
PLANNING COMMISSION

320 WARNER MILNE ROAD
OREGON CITY, OREGON 97045
TEL 657-0891 FAX 657-7892

STAFF REPORT
Date April 16, 2001

FILE NO.:	ZC 01-01
APPLICATION TYPE:	Quasi-Judicial/Type IV
HEARING DATE:	April 23, 2001 7:00 p.m., City Hall 320 Warner Milne Road Oregon City, OR 97045
APPLICANT	Regan Carter 601 SW Second, Suite 1500 Portland, OR. 97204
OWNER:	Regan Carter 601 SW Second, Suite 1500 Portland, OR. 97204
APPLICANT'S REPRESENATIVE:	Mildren Design Group 11830 SW Kerr Parkway, Suite 325 Lake Oswego, OR. 97035 Harper Houf Righellis, Inc. 5200 SW Macadeam Aven, Suite 580 Portland, OR. 97206
REQUEST:	Zone Change from "R-6" Single-Family Dwelling District to "LO" Limited Office District.
LOCATION:	108 Beverly Drive, Clackamas County Map 3S-2E-5CA, Tax Lot 400
REVIEWER:	Colin Cooper, AICP, Senior Planner Dean Norlin, P.E., Engineering Manager
RECOMMENDATION:	**Staff recommends approval of ZC 01-01**

CRITERIA:

Comprehensive Plan:
Section "C" Housing
Section "D" Commerce and Industry
Section "I" Community Facilities
Section "L" Transportation

Municipal Code:
Chapter 17.12 "R-6" Single-Family Dwelling District
Chapter 17.20 "LO" Limited Office Conditional District
Chapter 17. 50 Administration and Procedures
Chapter 17.68 Zoning Changes and Amendments

SUMMARY OF ISSUES:

Scope of the Request: The applicant is requesting a zone change from "R-6" Single-Family Residential for an approximately 13,225 square foot parcel located at the southwest corner of Beverly Drive and Molalla Avenue, Clackamas County 3S-2E-05CA, Tax Lot 400 (Exhibit 1). If the City Commission approves this request, the applicant's intention is to consolidate the tax lot and develop the subject property and adjacent Tax Lot 300 with an approximately 7,700 square foot office building.

The zone change request is reviewed by the Planning Commission and the City Commission as a Type IV quasi-judicial application. A Site Plan and Design Review request (File SP 01-02) is being reviewed and processed as a Type II administrative decision by the Planning Division concurrent with the Zone Map Amendment.

Summary of Analysis: Based on the analysis and findings contained in this staff report, there is sufficient evidence to show that the proposed Zone Change ZC 01-01 satisfies the Oregon City Municipal Code criteria.

No limitation on capacity of public facilities has been identified that cannot be overcome through construction of improvements as required by the City.

Upon application for development, the City will require the applicant to meet appropriate standards and provide necessary improvements and facilities to accommodate site development.

BASIC FACTS:

1. The subject property is approximately 13,225 square feet in area and consists of a single tax lot. The proposed development site is located at the southeast corner of the intersection of Molalla Avenue and Beverly Drive (Exhibit 1). The proposed development site, Tax Lot 400, is designated as "O" Office Limited on the Oregon City Comprehensive Plan Map. Tax Lot 400 is presently zoned "R-6" Single Family Dwelling District on the City's Zoning Map. The "O" Office Limited Comprehensive Plan designation may be implemented by the "LO" Limited Office zoning district.

2. A vacant single-family dwelling is located on Tax Lot 400 the subject property. The property to the southeast of the subject site is zoned "LO" and is currently developed with a single-family dwelling. The properties to the south and west of the subject site are zoned "R-6" Single-Family Dwelling District and developed with detached single-family dwellings. The properties to the east across Molalla Avenue are zoned Commercial. The property directly abutting the site to the southeast is zoned "LO" Limited Office Commercial.

3. Pursuant to Oregon City Municipal Code Section 17.22.010, the proposed "LO" Limited Office District is designed to accommodate a limited number of offices and medical buildings as well as high density housing. These areas can act as buffer between residential and non-residential areas.

4. Transmittals on the proposal were sent to various City departments, affected agencies, property owners within 300 feet, and the Citizen Involvement Committee Council (CICC), the Mt. Pleasant Neighborhood Association.

   Several letters expressing objection to the proposed rezone have been received and made part of this application and are attached to this report as Exhibits 5 through 7. The two primary objections stated in the letters are a concern regarding traffic and the impact to livability of the neighborhood if commercial development occurs on the site.

   The City's Engineering Division (Exhibit 3a), the Traffic Engineer (Exhibit 3b), and the Public Works Division (Exhibit 3c) reviewed the proposal and provided their comments. The received comments are incorporated into the analysis and findings section below.

ANALYSIS AND FINDINGS:

Oregon City Municipal Code Chapter 17.68

Criteria for a zone change are set forth in Oregon City Municipal Code (OCMC) Section 17.68.020 and are as follows:

Criterion A. The proposal shall be consistent with the goals and policies of the comprehensive plan.

The following goals and policies of the City of Oregon City Comprehensive Plan are applicable to the requested change:

Citizen Participation Goal

The public hearing was advertised and notice was provided as prescribed by law to be heard by the Planning Commission on April 23, 2001. The public hearing will provide an opportunity for comment and testimony from interested parties.

Conclusion: The proposal is in conformance with the Citizen Involvement Goal of the Comprehensive Plan.

Housing Goal

Provide for the planning, development, and preservation of a variety of housing types at a range of rents.

The City encourages planning, development and preservation of a variety of housing types at a range of price and rents. Adjacent to the subject site is the Beverly Drive neighborhood. This neighborhood includes exclusively detached single-family homes with the only access being Beverly Drive to Molalla Avenue. The homes are generally in good repair with the exception of the dwellings fronting Molalla Avenue. Although the subject site is currently zoned as "R-6" Single Family Dwelling District and is developed with a single-family house, it appears that because of the impact of traffic and development along Molalla Avenue that this home has been allowed to deteriorate.

The effect of approving the proposed Zone Map Amendment will allow for the assembly of the subject site with the adjoining Tax Lot 300, and the likely commercial development of the two sites. Commercial development is subject to the Site Plan and Design Review standards found in OCMC Section 17.62. Included among the standards for Site Plan and Design Review is the requirement for compatible development be compatible with the adjoining development.

Conclusion: In that change of the Zoning Map would delete one dwelling unit from the City's housing stock, staff finds this to be a negligible effect due to the location of said dwelling unit in an area plan designated for "O" Limited Office uses. Therefore, staff finds that the proposal to be consistent with the City's Housing Goal.

Commerce and Industry Goal:

This goal requires that the City maintain a healthy and diversified economic community for the supply of goods, service and employment.

The site already has a "O" Limited Office Comprehensive Plan Designation. Section "M", Commerce and Industry in the Comprehensive Plan, anticipates that commercial development will continue to be concentrated along Molalla Avenue. The proposal is to amend the Zoning Map by

changing the zoning from "R-6" Single-Family to "LO" Limited office and thereby implement the existing "O" Limited Office Comprehensive Plan designation already in place. Staff review of available "LO" property within one mile of the site find only 4.7 acres of available developable land (Exhibit 4).

Conclusion: The proposal is in conformance with the Commerce and Industry Goal of the Comprehensive Plan.

Community Facilities Goal

This goal requires the City to plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve development in the City.

The City Engineering Division (Exhibit 3a), the City Traffic Engineer (Exhibit 3b), and the Public Works Division (Exhibit 3c) reviewed the proposal for availability of public services and facilities and utilities. The Engineering Division notes that the applicant will be required to ensure that Beverly Drive meets City cross-section standards prior to approval of any future development of the site. The Engineering Division also indicates that a 10-foot dedication to meet the newly adopted Molalla Avenue Boulevard and Bikeway Improvements Plan will be necessary prior to approval of future development on the site.

Conclusion: This site can be served by urban services or services can be made available to the site. Therefore, the proposed zone change complies with the Public Facilities Goal of the Comprehensive Plan. Upon application for development, the City will require the applicant to meet appropriate standards and provide necessary improvements and facilities to accommodate site development.

Transportation Goal

This goal requires that the City insure a transportation system that supports the City's land uses and provide appropriate facilities to accommodate transportation movements.

The applicant submitted a Traffic Report that was evaluated by the City's Traffic Engineer (Exhibit 4b). The City's Traffic Engineer determined that the proposed development would not have a significant impact on the intersections of Molalla Avenue and Warner Milne or Molalla Avenue and Beavercreek Road.

The Traffic Engineer concluded that the applicant's traffic impact analysis meets the City's requirements and there will not likely be a short-term impact on the transportation system. The City Traffic Engineer recommends that any site access for future development is located at least 50-feet from Molalla Avenue and the landscape design accommodate vision clearance at the intersection of Molalla Avenue and Beverly Drive.

Conclusion: No specific traffic facility improvements are required by approval of the zone change request. Upon future development of the subject property, the City would require half-street improvements on Beverly Drive along the subject property frontage.

Conclusion for Criterion A:

Based on the above analysis, the proposal, as presented by the applicant, has satisfied Criterion 1.

Criterion B. **That public facilities and services (water, sewer, storm drainage, transportation, schools, and police and fire protection) are presently capable of supporting the uses allowed by the zone, or can be made available prior to issuing a certificate of occupancy. Service shall be sufficient to support the range of uses and development allowed by the zone.**

The Engineering Division and Operations Division note that all public services are currently available to the site. Specific improvements to the site will be required with development of the site.

Conclusion for Criterion B:

Upon application for future commercial development, the City will require the applicant to meet appropriate standards and provide necessary improvements and facilities to accommodate site development, including the notations of the Engineering Division. As discussed earlier in this report, this site can be served by urban services or services can be made available to the site. Therefore, the proposed zone change complies with Criterion B.

Criterion C. **The land uses authorized by the proposal are consistent with the existing or planned function, capacity and level of service of the transportation system serving the proposed zoning district.**

If approved by the Planning Commission, the proposed zone change from R-6 Single-Family Dwelling District to "LO" Limited Office District would implement the existing "O" Limited Office Comprehensive Plan designation. The site fronts onto Molalla Avenue, which is designated as a Major Arterial and is anticipated to accommodate commercial trip traffic from this site.

Conclusion for Criterion C:

As previously discussed in this report, proposed development on the subject site will not have a significant impact on the existing capacity and level of service of the transportation system that serves the subject site and surrounding transportation network.

Criterion D **Statewide planning goals shall be addressed if the Comprehensive Plan does not contain specific policies or provisions, which control the amendment.**

The following Statewide Planning Goals are applicable to this request: Goal 1 Citizen Involvement; Goal 2 Land Use Planning; Goal 10 Housing; Goal 11 Public Facilities and Services; and Goal 12 Transportation.

Conclusion for Criterion D:

The Oregon City Comprehensive Plan was acknowledged by the Land Conservation and Development Commission on April 16, 1982. The acknowledged City's Comprehensive Plan includes specific goals and policies that are applicable to the requested zone change. Therefore, it is not necessary to address the Statewide Planning Goals in response to this criterion. The applicable Comprehensive Plan Goals and policies were addressed in response to Criterion A.

CONCLUSION AND RECOMMENDATION:

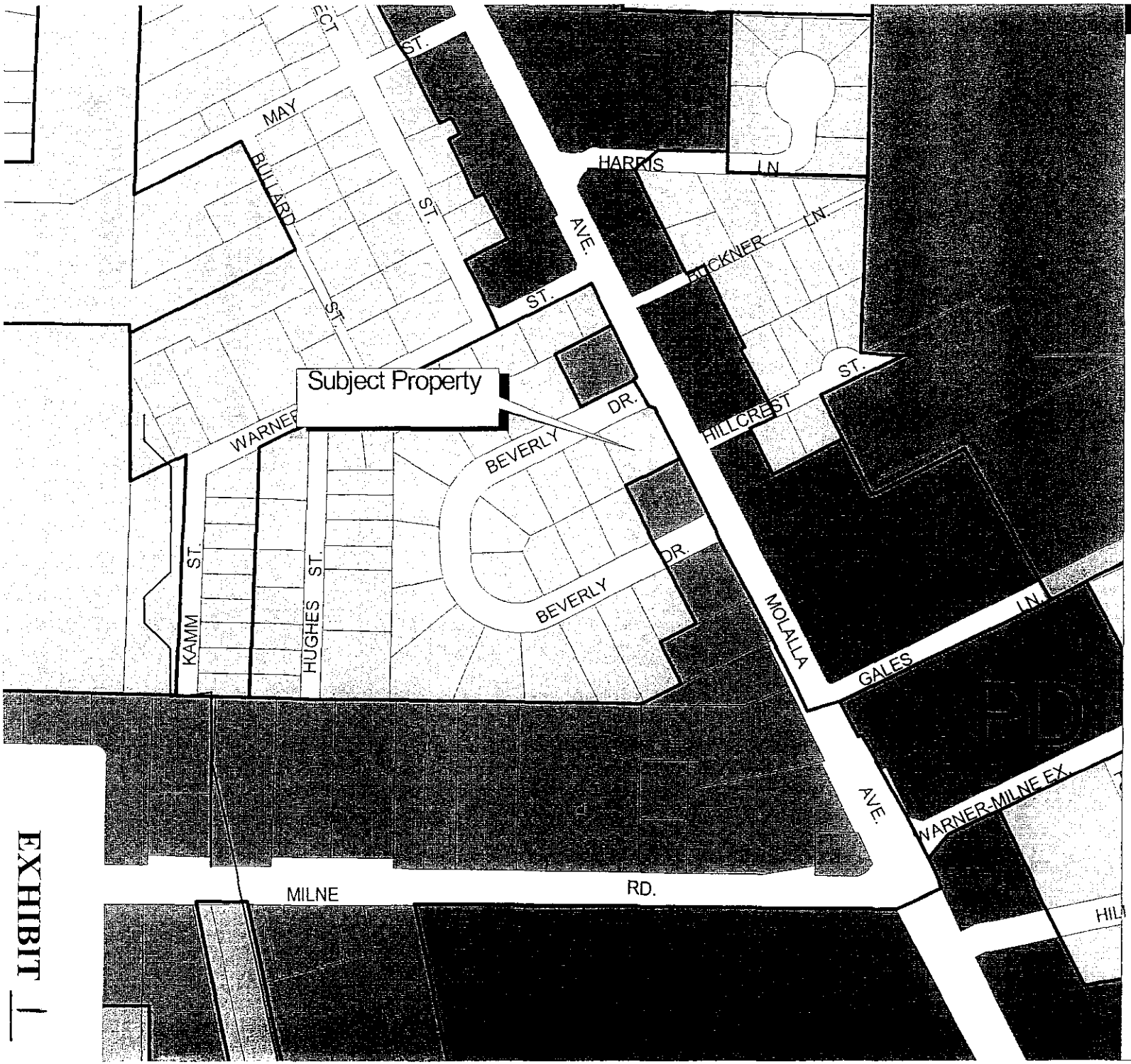
Based on the analysis and findings presented in the report, the proposed Zone Change from "R-6" Single-Family Dwelling District to "LO" Limited Office District satisfies the requirements as described in the Oregon City Comprehensive Plan and the Oregon City Municipal Code.

Staff recommends the Planning Commission recommend to the City Commission approve the requested Zone Change from "R-6" Single-Family Dwelling District to

"LO" Limited Office District for the property identified as Clackamas County Map 3S-2E-7A, Tax Lot 400.

EXHIBITS:

1. Site Map
2. Applicant's Narrative
3. Agency Comments
    a. City Engineering Division
    b. Traffic Engineer
    c. Public Works Division (on file)
4. Map - Vacant "LO" Property within 1 Mile of Site
5. Letter from Cindy Hess, dated March 15, 2001
6. Letter from Residents of Beverly Drive, dated March 16, 2001
7. Letter from Frieda A. Lehman, dated March 17, 2001



City of Oregon City

GEOGRAPHIC INFORMATION SYSTEM

Vicinity Map
ZC 01-01

0 50 100 150 200 250 Feet

MAP FOR REFERENCE PURPOSES ONLY.
The information on this map is derived from Oregon City's digital database. However, there may be map errors or omissions. Please contact Oregon City directly to verify map information. Notification of any errors will be appreciated.

City of Oregon City
320 Warner Milne Road | Oregon City, Oregon 97045
503 657-0891

EXHIBIT 1

with colored office grade paper.

Plot date: Apr 3, 2001; g:\gis\users\sean\czone.apr

Harper · Houf
Righellis, Inc.

Application for:

Comprehensive Plan Amendment/Zone Change

for the proposed:

Cartwill Office Building

Prepared for:

Cartwill
601 SW Second, Suite 1500
Portland, Oregon 97204

Submitted To:

City of Oregon City
Community Development Department
320 Warner Milne Road
P.O. Box 3040
Oregon City, Oregon 97045

December 8, 2000

Prepared by:

Harper Houf Righellis, Inc.
5200 SW Macadam Avenue, Suite 580
Portland, Oregon 97201

EXHIBIT 2

I. SUMMARY

Applicant:	Regan Carter 601 SW Second, Suite 1500 Portland, Oregon 97204 Ph: (503) 223-3423
Applicant's Representative:	Mildren Design Group 11830 SW Kerr Parkway, Suite 325 Lake Oswego, OR 97035 Contact: Betty Sheppard Ph. (503) 244-0552 Harper Houf Righellis, Inc. 5200 SW Macadam Avenue, Suite 580 Portland, Oregon 97206 Contact: Mike Pruett, AICP Ph: (503) 221-1131
Map and Tax Lot;	3-2E-5CA Lot 400
Site Size:	13,225 Square Feet
Zoning:	Residential (R6)
Access:	Molalla Drive fronts the site. It is a designated major arterial. Access to the proposed office building will be restricted to Beverly Drive.
Surrounding Land Uses:	Immediately north of the site the zoning is Limited Office (LO) and the lot contains an existing residence. A dentist office is located immediately north of this residence. To the south of the subject parcel is a single-family home on a lot designated LO. Further south on the west side of Molalla Avenue area variety of professional offices. West of the subject parcel are single-family homes on the R6 designation. Across Molalla Avenue to the east are a variety of commercial businesses. There is also an assisted living/retirement center located across Molalla Avenue from the site. Zoning along the east side of Molalla is General Commercial (C).
Public Facilities and Services:	There is a 16-inch waterline in Molalla Avenue and a 6-inch waterline in Beverly Drive. There is an 8-inch sanitary sewer line in Molalla Avenue. There is an existing 12-inch storm sewer line in Molalla Avenue.

II. PURPOSE

The applicant is proposing to construct an office building on a site comprised of two tax lots (Lots 300 and 400), one with Limited Office zoning (LO) and the other with Residential zoning (R6). A comprehensive plan amendment and zone change is necessary to change the R6 designated lot

to the Limited Office (LO) Zone. The proposed building is intended to house a social security office.

III. APPLICABLE CODE SECTIONS AND APPROVAL CRITERIA

- Section 17.68.020 -- Criteria for Zone Changes
- Section 17.22. "LO" Limited Office District

IV. ANALYSIS AND FINDINGS

The following is the zone change criteria as set forth by Section 17.68.020 of the Oregon City Zoning Code:

The criteria for a zone change are set forth as follows:

A. The proposal shall be consistent with the goals and policies of the comprehensive plan.

B. That public facilities and services (water, sewer, storm drainage, transportation, schools police and fire protection) are presently capable of supporting the uses allowed by the zone or can be made available prior to issuing as certificate of occupancy. Service shall be sufficient to support the range of uses and development allowed by the zone.

C. The land uses authorized by the proposal are consistent with the existing or planned function, capacity and level of service of the transportation system serving the proposed district.

D. Statewide planning goals shall be addressed if the comprehensive plan does not contain specific policies or provisions which control the amendment.

Response. The applicant is proposing to change the zone on Lot 400 from R6 to LO, a change that has occurred many times, as the majority of the properties fronting Molalla Avenue on the west side are already zoned LO and have existing limited office uses.

Each of the above criteria are addressed as follows:

A. The proposal shall be consistent with the goals and policies of the comprehensive plan.

According to the Comprehensive Plan and Zoning Ordinance, the "limited office" (LO) district was designed to accommodate a limited number of offices and medical buildings as well as high-density housing. These areas can act as buffer between residential and non-residential areas.

Molalla Avenue is a major arterial roadway with commercial uses on the east side of the road. A change to the LO designation from the current R6 designation will provide a transitional buffer between traffic and existing commercial uses along Molalla Avenue and single-family residences located west of the subject parcel. This buffer will help to protect the property values of remaining residences by providing a "low-impact" use along Molalla Avenue. The subject site exceeds the area and dimensional standards for the LO zone.

The social security office proposed for the site qualifies as a "Governmental Service or Agency" as defined in Section 17.22.020 of the Oregon City Zoning Code. The proposed change is consistent with the changing character of properties located along the western side of Molalla

Avenue. Formerly residential properties along this section of roadway have been gradually changing to professional office and medical uses.

The subject parcel, even when combined with the adjacent parcel zoned for Limited Office use, is not large enough to develop attractive, functional and desirable high-density housing. Therefore, this request is consistent with the neighborhood trend of smaller frontage properties along Molalla Avenue shifting from residential to Limited Office uses.

B. That public facilities and services (water, sewer, storm drainage, transportation, schools police and fire protection) are presently capable of supporting the uses allowed by the zone or can be made available prior to issuing as certificate of occupancy. Service shall be sufficient to support the range of uses and development allowed by the zone.

A memorandum from Joe McKinney, Public Works Operations Manager, attached to the preapplication conference notes **(Appendix A)**, indicates that all public services and utilities are present and capable of serving the proposed use. Thus the proposed zone change is served sufficiently.

C. The land uses authorized by the proposal are consistent with the existing or planned function, capacity and level of service of the transportation system serving the proposed district.

Land uses authorized by the LO district are identified as permitted uses in Section 17.22.020 of the Oregon City Zoning Code. Conditional uses are listed in Section 17.22.030 of the Oregon City Zoning Code. The applicant is proposing to construct a social security office, which was interpreted by staff in the preapplication conference to be a permitted "governmental services and agencies" office use.

Molalla Avenue is designated as a major arterial roadway. It is intended to move larger volumes of traffic from place to place and provide access to commercial uses that are larger generators of traffic.

Staff indicated that no direct access onto Molalla Avenue would be allowed for the proposed office building. As seen on the attached plans, no direct access onto Molalla Avenue is proposed. Two small parking areas are proposed, one each side of the building. Access to these parking areas will be from Beverly Drive.

Trip generation from the proposed use is expected to be low. A traffic report assessing the existing functionality of Molalla Avenue and the incremental impact to the roadway from the proposed zone change is forthcoming. Given the small size of the parcel (approximately 13,000 square feet) it is highly unlikely that any impact to level of service of Molalla Avenue will be experienced. The traffic engineer will also examine local intersections to determine if any turning conflicts or potential unsafe situations warrant conditions to improve traffic safety.

D. Statewide planning goals shall be addressed if the comprehensive plan does not contain specific policies or provisions which control the amendment.

According to Section O of the Comprehensive Plan, citizens may request a plan change twice each year, to be considered in March and September. This method of plan maintenance should be evaluated according to the following criteria:

a. Does the proposed change conform with State Planning Goals and local goals and policies?

b. *Is there a public need to be fulfilled by the change?*
c. *Is the public need best satisfied by the particular change being proposed?*
d. *Will the change adversely affect the public health, safety and welfare?*
e. *Does the factual information base in the Comprehensive Plan support the change?*

The plan change application shall include the following to be provided by the applicant;

A. *A description of the specific change proposed, including the legal property description;*
B. *A statement of reasons for the proposed change;*
C. *A factual statement of how the proposed change meets a community need or Comprehensive plan policy;*
D. *A description of how the proposed change will affect the community facilities, natural resources, transportation and adjacent properties;*
E. *A statement of how the proposed change complies with LCDC Goals.*

The above listed provisions within the Comprehensive Plan are meant to control the plan Amendment/Zone Change process. Therefore, they must be addressed. Each provision of the comprehensive plan is listed below and followed by discussion related to the attributes of the subject proposal.

a. Does the proposed change conform with State Planning Goals and local goals and policies?

As stated above, the proposed change from R6 to LO is consistent with the trend of the area. Other properties fronting on the west side of Molalla Avenue have changed fro residential to limited office use over the years. The change in zoning appears to have occurred in a piece-meal basis as individual property owners have requested the change from R6 to LO.

The proposed change is consistent with prior actions and thus consistent with the Comprehensive Plan of the City and local goals and policies that have been overseeing the transition from residential to limited office uses.

b. Is there a public need to be fulfilled by the change?

There is public need to help this area provide a transitional buffer between existing residential uses further removed from Molalla Avenue and the traffic and commercial uses associated with Molalla Avenue. There is also a public need for providing the opportunity for development of professional office uses and other permitted office uses as identified in the LO district of the Oregon City Zoning Code.

Residential properties fronting along Molalla Avenue are largely vacant and/or dilapidated properties, reflecting their undesirability for the original intended use of the structure. Traffic volumes on Molalla Avenue and commercial development across the street are not conducive or compatible with single-family residential uses, so it is understandable why these properties are in run-down condition.

The presence of vacant and/or degraded properties in a neighborhood can attract illegal activities, negatively impact property values, result in flight from the neighborhood, and generally cause further decay to the neighborhood as a whole. The proposed zone change fights this trend by allowing a transitional use to develop that acts as a buffer between existing single-family residential uses and the traffic and commercial uses located along Molalla Avenue.

Both sides of Molalla Avenue have many professional office type uses within a limited distance of the subject site. It is obvious from the existence of these uses that there has been demand for them. Given the continued growth expected for the Oregon City area, demand for professional offices along Molalla Avenue will continue. Thus, there is a "public need" for the specific type of uses that locate in the LO district and the proposed plan amendment/zone change.

c. Is the public need best satisfied by the particular change being proposed?

The public need for a transitional buffer between the traffic and land uses of Molalla Avenue and the R6 residential area centered around Beverly Drive is site specific. Changing the designation on the subject property and allowing development of the professional office building will provide a buffer to residential uses further west of Molalla Avenue and make better use of an area of single-family housing that was in decline. Thus, the subject site is the best alternative for satisfying the public need for the change.

d. Will the change adversely affect the public health, safety and welfare?

No. Limited office uses are one of the ten Comprehensive Plan Land Use Districts contemplated. Limited Office was specifically intended to provide a buffer in areas that could experience negative impacts from commercial uses. The designation was made to protect the health, safety and welfare of the public. Continuation of R6 to LO conversion along the west side of Molalla Avenue will work to protect the health, safety and welfare of the residents west of Molalla Avenue by allowing a buffer to be created between their residences and commercial uses and traffic.

e. Does the factual information base in the Comprehensive Plan support the change?

Yes. The Comprehensive Plan indicates that Oregon City is growing, thus their demand for specific types of goods and services are also growing – including demand for limited office uses. The Comprehensive plan also identifies "Limited Office" plan districts as a way to provide for medical facilities, limited office uses, and high-density housing. The Comprehensive Plan also states that "Limited Office" uses can be designed to act as a buffer between commercial and residential uses.

The second portion of the plan policies governing comprehensive plan changes listed in the Oregon City Comprehensive is addressed as follows:

A. A description of the specific change proposed, including the legal property description;

The applicant has provided a legal description of the subject property in the summary. A description of the proposal is also found under the summary heading.

B. A statement of reasons for the proposed change;

The applicant is proposing the change on Lot 400 to allow development of an office building on the subject lot and an adjoining parcel already zoned LO. The zone change is necessary to allow development of the office building to occur.

C. A factual statement of how the proposed change meets a community need or Comprehensive plan policy;

Properties fronting along the west side of Molalla Avenue, a major collector status roadway, have been transitioning from Residential to Limited Office uses. Residences that still remain along Molalla Avenue have fell into disrepair or are vacant due to the undesirable location along a major arterial roadway. Meanwhile, growth of professional office uses in the vicinity has grown substantially over the last 5-10 years. A lack of desirable space for such uses has led to the conversion of single-family residences and/or the construction of new buildings along Molalla Avenue for "Limited Office" (LO) uses.

Converting the frontage along Molalla Avenue from R6 to LO provides the community with easily accessible professional office space. The proposed change also provides an alternative marketable use for residential properties located along Molalla Avenue that have fallen into disrepair due to negative impacts on property value generated primarily by high levels of traffic on Molalla Avenue and nearby commercial uses.

The Comprehensive Plan calls for adequate and sensitive transitions between incompatible uses and the LO zone was identified by the plan as a use that could provide a buffer/transition between commercial and residential uses. Thus, the proposed change from R6 to LO is consistent with the Comprehensive Plan's intent to buffer incompatible uses and serves a community need for office/commercial areas for locating professional office uses and limited commercial uses that serve the need of the immediate community.

D. A description of how the proposed change will affect the community facilities, natural resources, transportation and adjacent properties;

The proposed change will result in development of a new office building. The new office building will have minimal negative impact on the neighborhood. Trip generation to the office building is slightly higher than that of single-family residential, but due to the small size of the subject parcel, any increase in traffic will be negligible. Any negative impact experienced from the slight increase in traffic on Beverly Drive will be offset by replacing neglected and dilapidating single-family structures with an attractive office building. The office building will also be attractively landscaped and screened from adjacent residential properties to the west. Properties to the north are already in the LO district. North of the property is a dentist office while south of the property is another vacant single-family residence with a "for-sale" sign on it.

There are no natural resources located on the subject parcel.

E. A statement of how the proposed change complies with LCDC Goals.

The proposed change is in compliance with state planning goals. The Comprehensive Plan and the Zoning ordinance of the City of Oregon City were prepared to specifically address state planning goals and guide development of the city. The Comprehensive Plan specifically identifies the LO district for areas where a mixture of medical office, professional office and high-density housing are appropriate. The Comprehensive Plan also indicated that the uses allowed in the LO District can be buffers between adjacent residential and commercial uses.

This property is one of the last along the west side of Molalla Boulevard that is still designated R6. Properties north and south have been changed to Limited Office or Commercial as the corridor along Molalla Avenue has transitioned from residential to commercial uses. The proposed change is consistent with past land use actions that have added LO designated area to the Molalla Avenue corridor.

IV. CONCLUSION

The applicant is proposing to develop a building for a social security office on two tax lots on the west side of Molalla Avenue. One of the tax lots is zoned R6 the other zoned LO. The applicant is requesting a comprehensive plan/zone change from R6 to LO for the parcel currently designated R6. The proposed change would provide the necessary zoning to move ahead with a design review submittal for the proposed structure.

The subject parcel is one of the last along Molalla Avenue to retain an R6 designation. In fact, the city indicated at the preapplication conference that they were surprised that there was still a couple parcels along Molalla Avenue that were still designated R6. Other parcels north and south of this parcel have been changed over the years from R-6 to Limited Office and General commercial. This proposal will continue the trend for conversion of depressed housing stock to limited office uses.

TRI-MET
TRI-COUNTY METROPOLITAN
TRANSPORTATION DISTRICT OF OREGON

CAPITAL PROJECTS & FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

DocC # PP1317

Post-it™ brand fax transmittal memo 7671	# of pages ▸ 3
To OR City	From
Co. Planning Dept	Co.
Dept.	Phone #
Fax # 657-7892	Fax #

August 10, 2000

Oregon City Planning Department
Attn: Planning Tech
P. O. Box 351
Oregon City, Oregon 97045

RE: File No.: PH00-43 Beverly Drive Commercial Building

Dear Sir or Madam:

Tri-Met welcomes the opportunity to comment on this proposal for a commercial building on Beverly Drive. Tri-Met line 32 serves the area with a bus stop (location ID#3981) located adjacent to the site.

The purpose of our recommendations is to minimize the traffic impacts of new development by encouraging development patterns that are transit, bicycle, and pedestrian supportive. Improved pedestrian access and connection promotes walking and reduces local dependence on automobiles.

TRI-MET STAFF RECOMMENDATIONS

Provide a bus passenger-landing pad to meet ADA requirements. In order to meet the needs of disabled passengers, we request that any frontage improvements required by the City include the provision of a transit passenger landing pad at the existing bus stop, as illustrated in the attached drawing. Refer to Diagram A for bus stop location.

Attached are design guidelines from Tri-Met's publication, *Planning and Design for Transit Handbook*, which are intended to help clarify our recommendations.

Thank you for the opportunity to comment on this proposal. If you have any questions, please contact me at 962-2140.

Sincerely,

Charlotte Cramer

FOR: Ben Baldwin
Project Planner

Attachments: Diagram A
Handbook page 3-14

Report to

City of Oregon City

For the

Beverly Drive Building Traffic Impact Study

Prepared by

DKS Associates

January 2001

DKS Associates

1400 SW 5th Avenue, Suite 500
Portland, OR 97201
Phone: (503) 243-3500
Fax: (503) 243-1934

January 9, 2001

Regan Carter
Colliers International
601 SW Second Street, Suite 1500
Portland, OR 97204

Subject: Beverly Drive Building Traffic Impact Study P00389x0

Dear Regan:

DKS Associates is pleased to submit this Traffic Impact Study for the proposed Beverly Drive office building rezone project, located on Beverly Drive, in the City of Oregon City. This report meets the guidelines defined by the City of Oregon City. In summary, we find that:

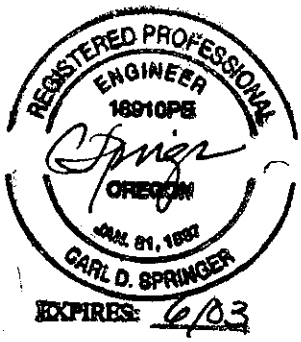
- The project will not significantly impact the LOS of off-site signalized intersections
- The project will not significantly impact the major-street movement at the unsignalized intersections of Beverly Drive/Molalla Avenue
- The project should locate the access points as far to the west as possible (at least 50 feet) from Molalla Avenue
- The project should restrict landscaping/vegetation such that it does not encroach into sight distance triangles at driveway/access roads
- The project should construct frontage improvements on Molalla Avenue and Beverly Drive as required by the City of Oregon City's standards

Please call Chris Maciejewski or me with any questions regarding this report.

Sincerely,

DKS Associates
A Corporation

Carl D. Springer, P.E.
Project Manager



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Chapter 1 Introduction and Summary

This report evaluates the transportation impacts associated with the proposed Beverly Drive office building rezone project located on Beverly Drive to the west of Molalla Avenue, in the City of Oregon City (see Figure 1). The proposed project site encompasses one R6 (single-family dwelling district) zoned lot and one LO (limited office district) lot. The proposed project consists of a rezone of a R6 lot to a LO lot, and two access points onto Beverly Drive (see Site Plan).

Study Intersections

The following intersections were chosen for focused analysis in this report based on a conversation with City of Oregon City Staff[1]:

- Beverly Drive (North)/Molalla Avenue
- Beverly Drive (South)/Molalla Avenue
- Warner-Milne Road/Molalla Avenue
- Hilltop Mall Access (McDonalds)/Molalla Avenue
- Beavercreek Road/Molalla Avenue

At full buildout the office development will generate approximately 180 daily vehicle trips, with about 25 of these during the AM and PM peak hours.

The signalized study intersections operate at a LOS of D or better during all of the studied scenarios. The unsignalized intersections of Beverly Drive/Molalla Avenue (north and south) deteriorate to a LOS of E and F on the minor approaches with the PM Peak Hour Existing Plus Approved Plus Project scenario. The addition of future year 2018 planned improvements and background growth deteriorates both of these two intersections to a LOS of F in the PM Peak hour on the minor approaches.

Mitigation

The proposed Beverly Drive Building commercial rezone project will not significantly impact the level of service at any of the signalized study intersections. The north and south Beverly Drive/Molalla Avenue intersections deteriorate to a LOS of F for the minor approach with future traffic volumes. However, peak hour traffic signal warrants at these intersections are not met. In addition, the major approach to these intersections operates at a LOS of B or better in all of the study scenarios. Therefore, a traffic signal is not recommended at either location. The following measures mitigate any impacts from the proposed project onto the local street network:

[1] Conversation with Jay Toll, City of Oregon City Engineering Division, November 2000.

- In order to ensure safety at the project access points onto Beverly Drive, it is recommended that the access points be located as far to the west as possible (at least 50 feet) from Molalla Avenue.
- Restrict landscaping/vegetation such that it does not encroach into sight distance triangles at driveways/access roads.
- The project should construct frontage improvements on Molalla Avenue and Beverly Drive as required by the City of Oregon City's standards.

Chapter 2: Existing Conditions

This chapter of the report discusses the existing transportation conditions in the vicinity of the proposed project, including roadway geometries, traffic volumes, posted vehicle speeds, and pedestrian, transit and bicycle facilities. Existing operating conditions of roadways and key intersections in the study area are also discussed.

The proposed project site is located to the west of Molalla Avenue on Beverly Drive in the City of Oregon City (see Figure 1). Based on a conversation with City of Oregon City Staff[2], the following intersections were chosen for focused analysis in this report:

Study Intersections

- Beverly Drive (North)/Molalla Avenue
- Beverly Drive (South)/Molalla Avenue
- Warner-Milne Road/Molalla Avenue
- Hilltop Mall Access (McDonalds)/Molalla Avenue
- Beavercreek Road/Molalla Avenue

Existing Network Description

The following sections describe the key roadways that would serve the proposed project. The key roadways in the study area are Molalla Avenue, Warner-Milne Road, Beavercreek Road, and Beverly Drive. The two accesses for the proposed project would be located on Beverly Drive. These roadways are shown in Figure 1.

Molalla Avenue is a major arterial that carries approximately 24,000 vehicles per day in the vicinity of Warner-Milne Road. Sidewalks are provided in the study area, but bike lanes are only provided in the vicinity of Beavercreek Road.

Warner-Milne Road is a minor arterial extending from Molalla Avenue to the western city limits. It carries approximately 9,000 vehicles daily near Molalla Avenue. Sidewalks and bike lanes are provided in the study area.

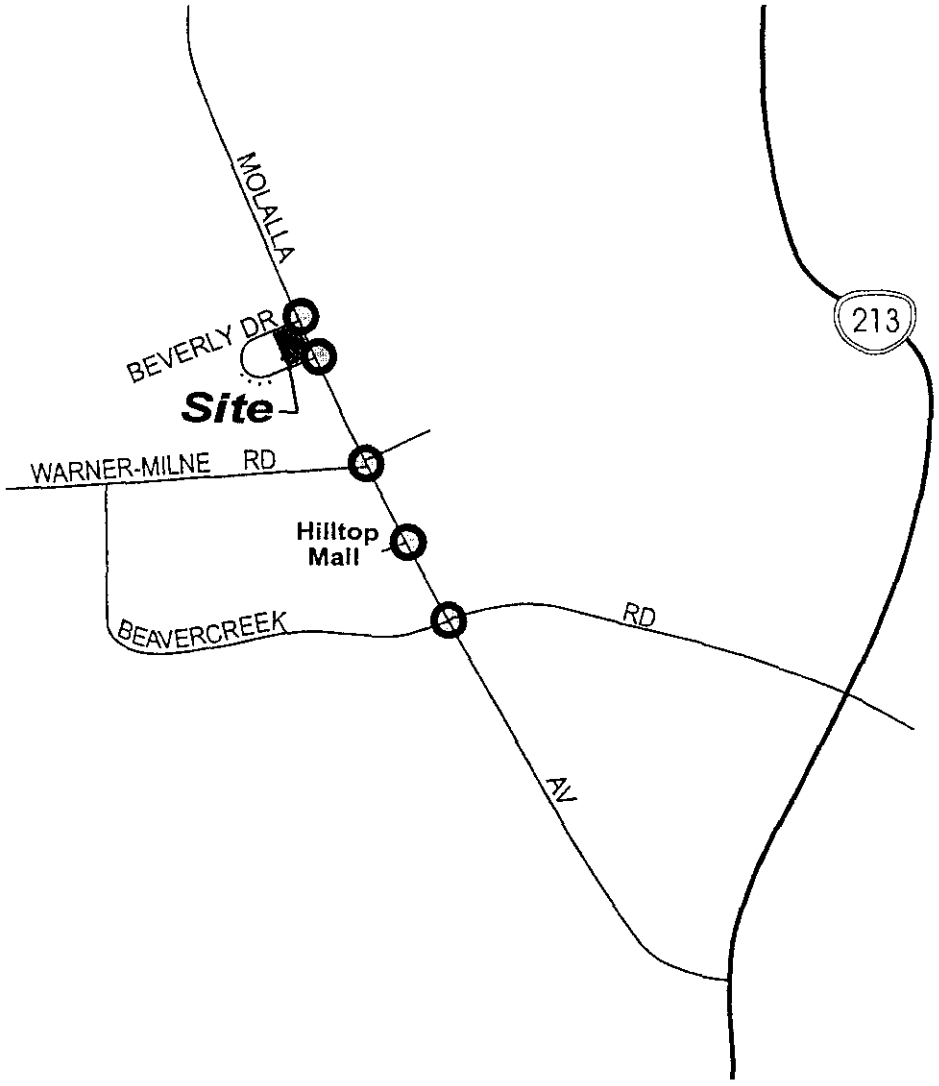
Beavercreek Road is a major arterial that connects Molalla Avenue and a Highway 213 to the east. Recent improvements to Beavercreek Road include realignment at Molalla Avenue to provide connectivity to Warner-Milne Road to the northwest and the construction of sidewalks and bike lanes to the east of Molalla Avenue. Bike lanes and sidewalks also exist to the west of Molalla. Avenue, where developed.

Beverly Drive is a local street loop to the west of Molalla Avenue. Sidewalks and bike lanes are not provided on the unstriped, paved road.

[2] Telephone discussion with Jay Toll, City of Oregon City Engineering Division.

DKS Associates

NOT
TO SCALE



LEGEND

- Study Intersection

Figure 1
STUDY AREA

Existing Operating Conditions

Existing level of service (LOS) was determined based on the *1997 Highway Capacity Manual* methodology for signalized and unsignalized intersections[3]. Level of service is used as a measure of effectiveness for intersection operation. It is similar to a "report card" rating based upon average vehicle delay. Level of service A, B, and C indicate conditions where vehicles can move freely. Level of service D and E are progressively worse. Level of service F represents conditions where traffic volumes exceed the capacity of a specific movement, in the case of unsignalized intersections, or an entire intersection, in the case of signalized control, resulting in long queues and delays. Level of service D or better is generally desirable for signalized intersections. Unsignalized intersections provide levels of service for major and minor turning movements. For this reason, LOS E and even LOS F can be acceptable under conditions where signalization is not warranted or would adversely affect intersection operation as a whole. A summary of the descriptions of level of service for signalized and unsignalized intersections is provided in the appendix.

Intersection turn movement counts were conducted during the morning and evening (7:00-9:00 AM and 4:00-6:00 PM) peak periods at the study intersections were at various times during 1999 and 2000. Traffic counts conducted during December of 2000 at Beverly Drive/Molalla Avenue were factored to match the historical volumes at Warner-Milne/Molalla Avenue. The historical 1999 counts were determined to be representative of the existing 2000 traffic volumes and were used for the intersections in the analysis. Figure 2 provides a summary of the existing traffic volumes.

The results of the intersection analysis are shown in Table 1. All study intersections currently operate at a LOS of D or better in both the AM and PM peak hours.

Table 1: Existing (2000) Peak Hour Intersection Operation

Intersection	*AM Peak*			*PM Peak*		
	Delay	*LOS*	*V/C*	*Delay*	*LOS*	*V/C*
Beverly Dr (N)/Molalla Ave		A/C			B/C	
Beverly Dr (S)/Molalla Ave		A/B			B/D	
Warner-Milne Rd/Molalla Ave	18.2	B	0.37	20.6	C	0.58
Hilltop Mall Access/Molalla Ave	6.3	A	0.18	6.9	A	0.40
Beavercreek Rd/Molalla Ave	38.3	D	0.61	40.6	D	0.69

Signalized Intersection LOS:
Delay = Average vehicle delay in peak hour for entire intersection
V/C = Volume to Capacity Ratio
LOS = Level of Service

Unsignalized Intersection LOS:
A/A=Major Street turn LOS/Minor street turn LOS

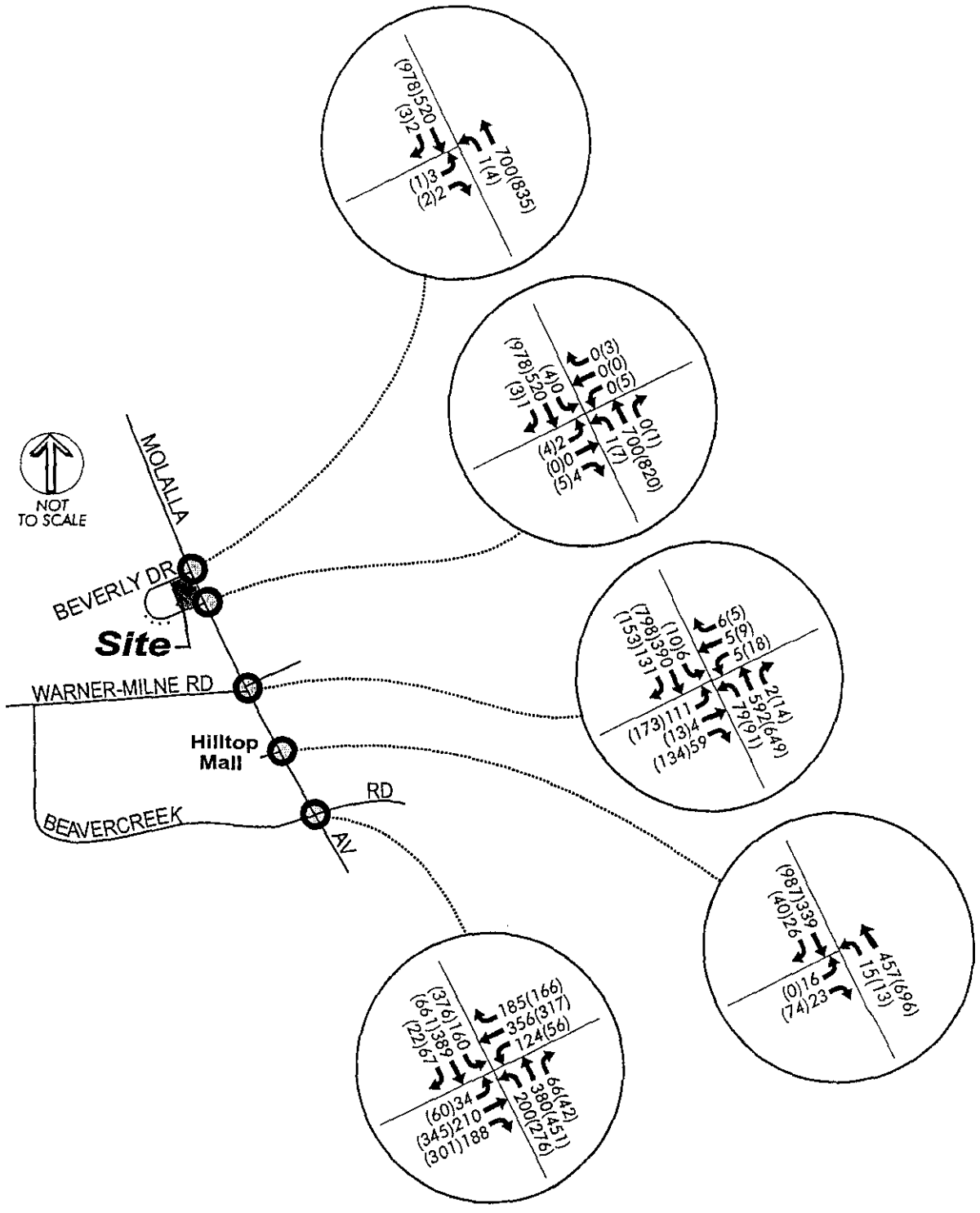
[3] *Highway Capacity Manual,* Special Report 209 (Third Edition), Transportation Research Board, 1998.

Pedestrian/Bicycle

Sidewalks are found along all of the major roadways in the study area, however they are not provided on Beverly Drive. Bike lanes are provided along portions of Warner-Milne Road, Molalla Avenue, and Beavercreek Road.

Transit

Tri-Met Route 32 runs along Molalla Avenue at approximately 30-minute peak headways with stops on Molalla Avenue between Beverly Drive north and south. Route 99X is an express route that travels between Clackamas Community College and downtown Portland at approximately 15-minute peak headways.



LEGEND

- Study Intersection

AM(PM) - Peak Hour Traffic Volumes

Figure 2
EXISTING AM/PM PEAK HOUR TRAFFIC VOLUMES

Chapter 3: Impacts

This chapter reviews the transportation impacts associated with the proposed Beverly Drive Building development on the study area transportation system. The analysis includes an assessment of project trip generation, distribution and assignment, capacity analysis of the study intersections including traffic from the proposed project as well as background traffic growth from other approved projects in the area, evaluation of signal warrants and turn lane needs, and evaluation of sight distance. The following three scenarios were chosen for analysis:

- Existing + Approved Projects
- Existing + Approved Projects + Proposed Project
- Future Year 2018 + Proposed Project

This chapter begins with a brief description of the proposed project.

Project Description

The proposed Beverly Drive Building is an office use development that requires a rezone of a single-family residential lot to a limited office use. The proposed project site encompasses two lots on Beverly Drive, including one that is currently zoned for limited office use and one that is currently zoned for single family residential use. The proposed project will access the adjacent existing roadways via two driveways onto Beverly Drive.

Trip Generation

Three cases were evaluated to compare impacts of the proposed re-zone versus existing permitted uses. The first case chosen was the buildout based on current zoning (1 lot single family residential, one lot limited office). The limited office lot was assumed to be developed at a floor area ratio (FAR) of 0.30 (4,300 square feet for a two-story building), while the single-family residential lot was assumed to have two units based on allowed density. Case 2, 7,600 square feet of office, is the proposed land use for the two lots. Case 3, 11,600 square feet of office, is the assumed maximum reasonable buildout of the two lots based on allowed density and current practice (a three-story building).

Vehicle trip generation for the proposed project was estimated based on ITE's *Trip Generation*[4]. The single-family units were assumed to generate traffic similar to a standard detached single family dwelling unit (ITE Code 210). The office uses were assumed to generate traffic similar to a general office building (ITE Code 710). ITE trip generation rates were used for the single family trip generation. ITE fitted curve equations were used to determine daily trip generation for the general office building use. Ratios between average peak period/daily ITE rates were multiplied by the daily trip generation to determine the peak hour general office

[4] *Trip Generation (6th Edition)*, Institute of Transportation Engineers, 1997, land use codes 210 and 710.

building trip generation. Daily, AM peak and PM peak period trip generation was estimated for the development cases and is shown in Table 2.

Case 2, the proposed case, would generate approximately 180 daily vehicle trips, with about 25 of these during both the AM peak hour PM peak hour. Case 1 would generate 7 fewer vehicle trips during the PM Peak hour, while Case 3 would generate 9 more. Table 3 lists the differences between the three possible cases. Cases 1 and 3 were not further examined for traffic impacts due to the small differences from Case 2.

Table 2: Project Vehicle Trip Generation

Land Use	*Period*	*Total Trips*	*In/Out*
Case 1 – Possible Development with Existing Zoning			
Single Family Residential	Daily	20	10/10
ITE Code 210,	AM Peak	1	0/1
2 Units	PM Peak	2	1/1
General Office Building	Daily	118	59/59
ITE Code 710,	AM Peak	17	15/2
4,300 square feet	PM Peak	16	3/13
Total	Daily	138	69/69
	AM Peak	18	15/3
	PM Peak	18	4/14
Case 2 – Proposed Land Use			
General Office Building	Daily	184	92/92
ITE Code 710,	AM Peak	26	23/3
7,600 square feet	PM Peak	25	4/21
Case 3 – Worst Case Development with the Proposed Rezone			
General Office Building	Daily	254	127/127
ITE Code 710,	AM Peak	36	32/4
11,600 square feet	PM Peak	34	6/28

Table 3: Case Trip Generation Comparison

Period	C1	C2	C3	C2-C1	C3-C2
Daily	138	184	254	46	70
AM Peak Hour	18	26	36	8	10
PM Peak Hour	18	25	34	7	9

Trip Distribution/Assignment

Vehicle trip distribution for the proposed project was based on Metro's travel demand forecast model and vehicle turn movement counts at the study intersections. Figure 3 shows the traffic

distribution percentages in the vicinity of the project site. Vehicle trips were assigned to the roadway network based on this distribution, with added project traffic traced from the project site through the study intersections. All volume figures shown in this report reflect this distribution. Figures 4 and 5 show the added project traffic to intersections within the study area.

Intersection Capacity

The following sections provide results of intersection capacity analysis for the three scenarios listed above. Level of service analysis was performed for each of these three scenarios based on the *1997 Highway Capacity Manual* methodology for signalized and unsignalized intersections. A description of each scenario is also included.

Future Background

Based on input provided by City of Oregon City staff[5], there are no nearby approved projects that will generate traffic in the study area. However, the scheduled restriping (within the next year) of Molalla Avenue to the north of Warner-Milne Road to a three-lane cross section impacts the operation of the local street network and was included in the analysis.

Table 4 summarizes the level of service results. With the addition of the approved Molalla Avenue restriping project, the LOS at Beverly Drive (South)/Molalla Avenue deteriorates to a LOS of F in the PM peak hour for the minor street approach. All other study intersections continue to operate at a LOS of D or better in both the AM and PM peak hours.

Total Traffic

This scenario adds the proposed project traffic on top of the future background scenario. This scenario assumes the same roadway network and geometries as used for the future background scenario. Figures 4 and 5 show the total traffic volumes for this scenario.

Table 4 shows the results of the capacity analysis. With the addition of project traffic, the Beverly Drive (North)/Molalla Avenue intersection deteriorates to a LOS of E in the PM peak hour on the minor approach. Beverly Drive (South)/Molalla Avenue continues to operate at a LOS of F in the PM peak hour for the minor approach. All other study intersections continue to operate at a LOS of D or better in both the AM and PM peak hours.

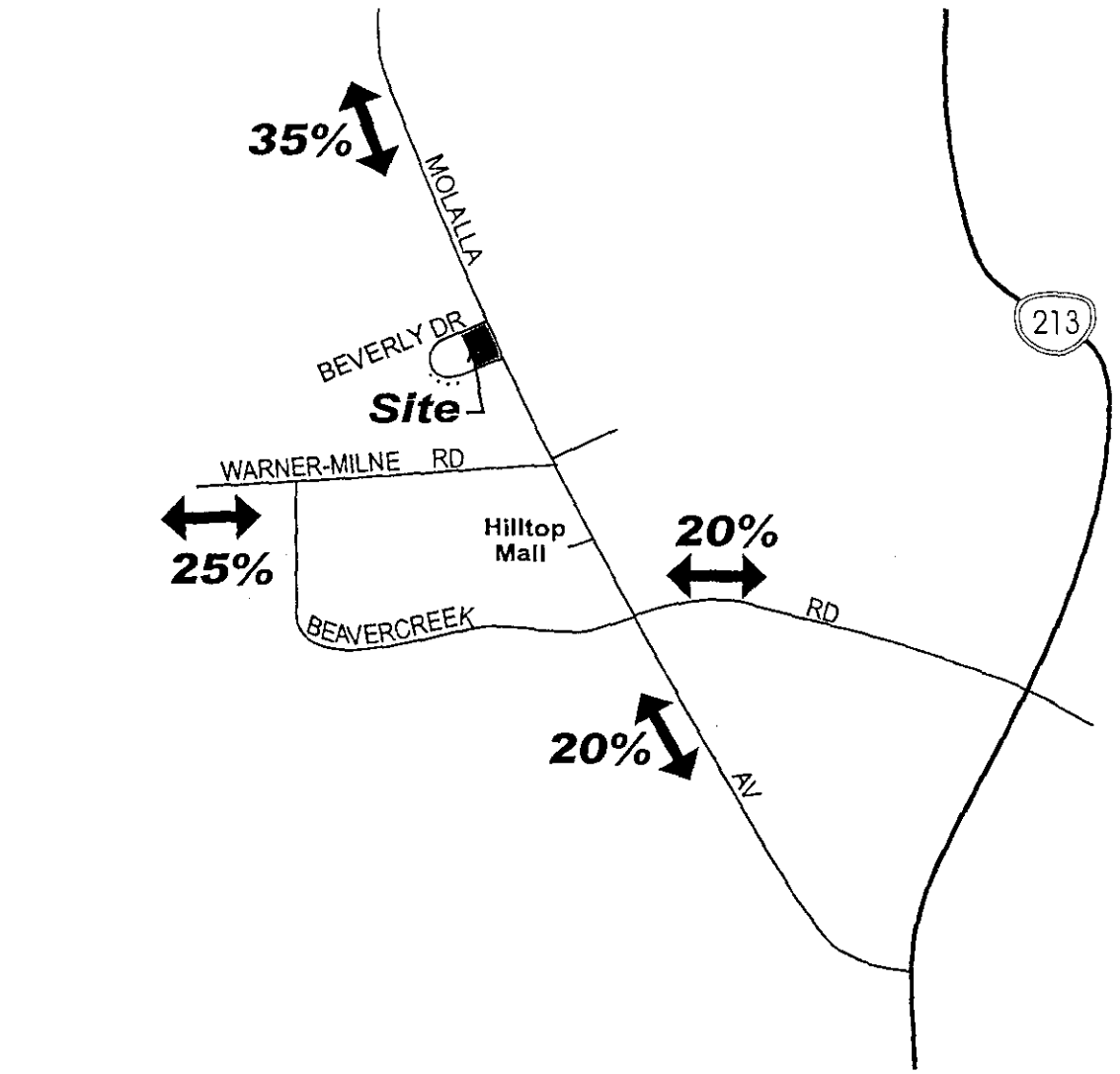
[5] Phone conversation with Jay Toll, City of Oregon City Engineering Division, December 2000.

Table 4: Existing Plus Approved Plus Project

Intersection	*Scenario*	*AM Peak*			*PM Peak*		
		Delay	*LOS*	*V/C*	*Delay*	*LOS*	*V/C*
Beverly Dr (N)/Molalla Ave	Future Background		A/C			B/D	
	Total Traffic		A/C			B/E	
Beverly Dr (S)/Molalla Ave	Future Background		A/C			B/F	
	Total Traffic		A/C			B/F	
Warner-Milne Rd/Molalla Ave	Future Background	18.2	B	0.37	20.6	C	0.58
	Total Traffic	18.5	B	0.38	20.6	C	0.58
Hilltop Mall Access/Molalla Ave	Future Background	6.3	A	0.18	6.9	A	0.40
	Total Traffic	6.3	A	0.18	6.9	A	0.40
Beavercreek Rd/Molalla Ave	Future Background	38.3	D	0.61	40.6	D	0.69
	Total Traffic	38.3	D	0.61	40.7	D	0.69

Signalized Intersection LOS:
Delay = Average vehicle delay in peak hour for entire intersection
V/C = Volume to Capacity Ratio
LOS = Level of Service

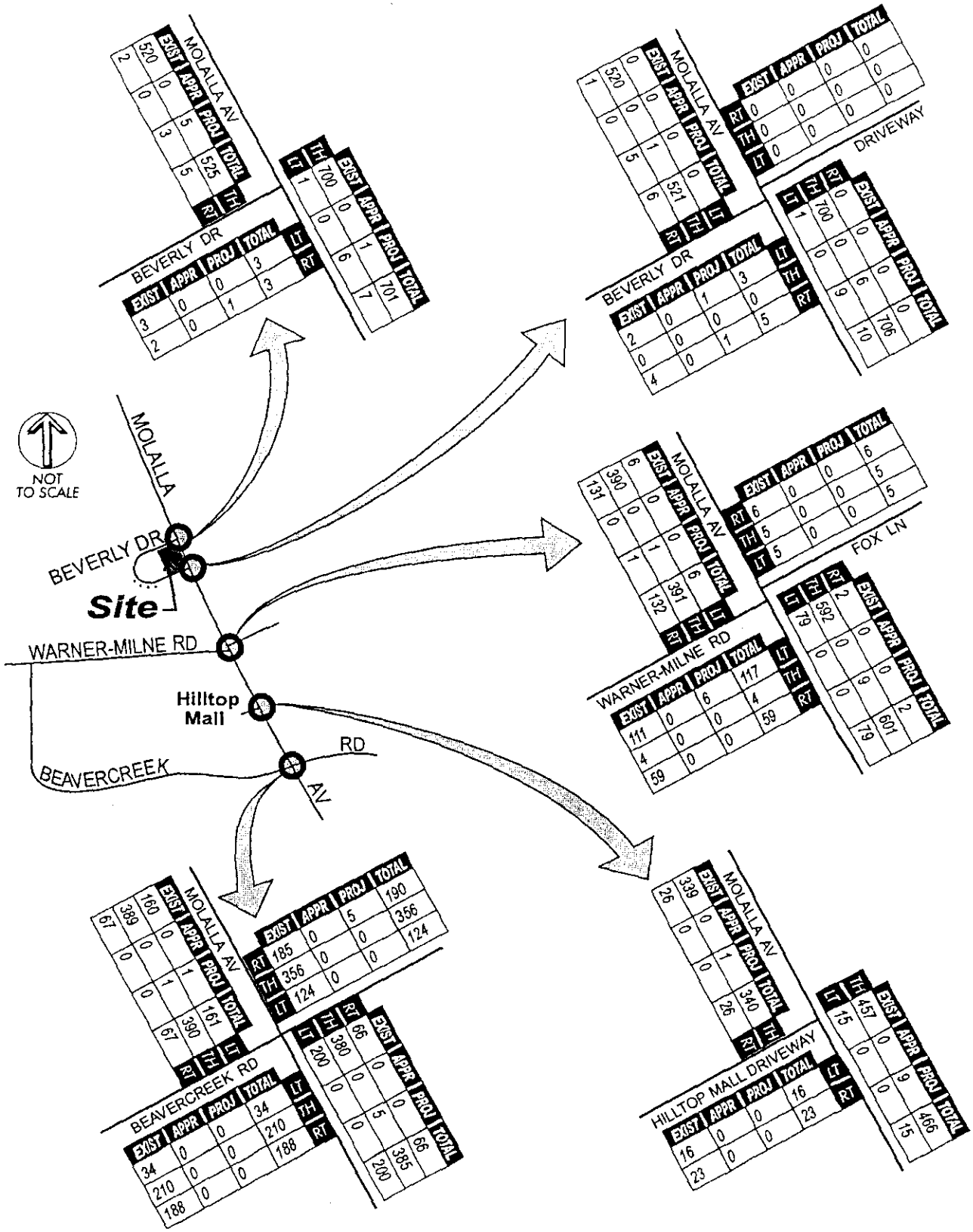
Unsignalized Intersection LOS:
A/A=Major Street turn LOS/Minor street turn LOS



LEGEND

20% - Trip Distribution Percentage

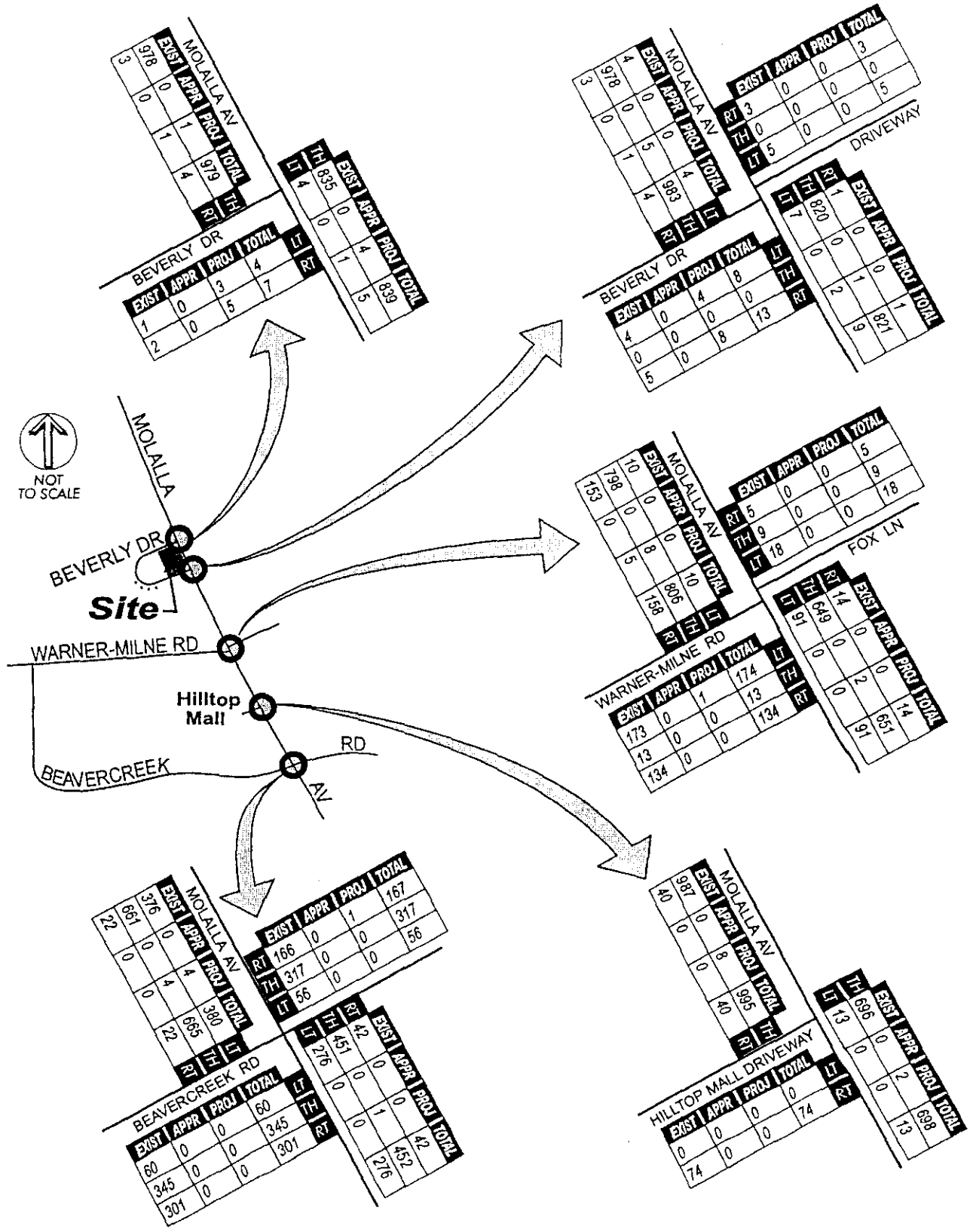
Figure 3
TRIP DISTRIBUTION



LEGEND

- Study Intersection
- EXIST - Existing
- APPR - Approved Project
- PROJ - Project Only
- TOTAL - Total Traffic (EXIST+APPR+PROJ)

Figure 4
EXISTING PLUS APPROVED PLUS PROJECT AM PEAK HOUR TRAFFIC VOLUMES



LEGEND

- Study Intersection
- EXIST - Existing
- APPR - Approved Project
- PROJ - Project Only
- TOTAL - Total Traffic (EXIST+APPR+PROJ)

Figure 5
EXISTING PLUS APPROVED PLUS PROJECT PM PEAK HOUR TRAFFIC VOLUMES

Future Year 2018 Plus Project

This long-range planning horizon for the City uses year 2018 traffic volumes. The future 2018 traffic volumes were calculated based on the City of Oregon City Draft TSP update PM Peak hour directional link volume tables[6]. The City of Oregon City Draft TSP update also identifies Molalla Avenue to the north of Warner-Milne for improvements to a 5-lane cross section[7]. Figure 6 shows the year 2018 roadway network and Figure 7 shows the traffic volumes for this scenario.

Table 5 shows the results of the capacity analysis. With the addition of year 2018 and project traffic, the Beverly Drive (North)/Molalla Avenue intersection deteriorates to a LOS of F in the PM peak hour on the minor approach. Beverly Drive (South)/Molalla Avenue continues to operate at a LOS of F in the PM peak hour for the minor approach. All other study intersections continue to operate at a LOS of D or better in the PM peak hour.

Table 5: Future Year 2018 Plus Project

Intersection	*PM Peak*		
	Delay	*LOS*	*V/C*
Beverly Dr (N)/Molalla Ave		B/F	
Beverly Dr (S)/Molalla Ave		B/F	
Warner-Milne Rd/Molalla Ave	25.7	C	0.81
Hilltop Mall Access/Molalla Ave	6.7	A	0.54
Beavercreek Rd/Molalla Ave	46.1	D	0.88

Signalized Intersection LOS:
Delay = Average vehicle delay in peak hour for entire intersection
V/C = Volume to Capacity Ratio
LOS = Level of Service

Unsignalized Intersection LOS:
A/A=Major Street turn LOS/Minor street turn LOS

[6] Provided by Jay Toll, City of Oregon City Engineering Division, December 21, 2000.
[7] *Ibid.*

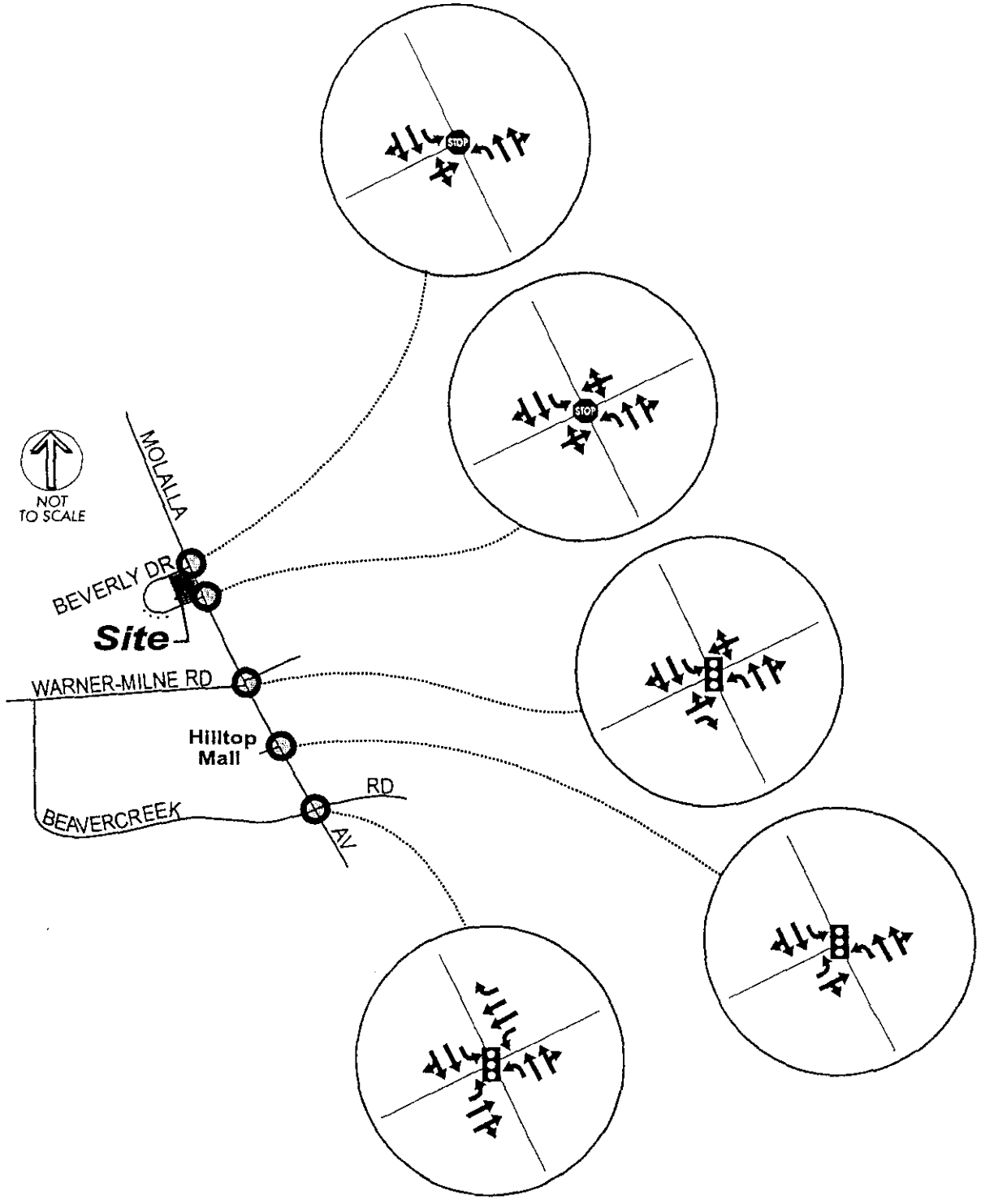
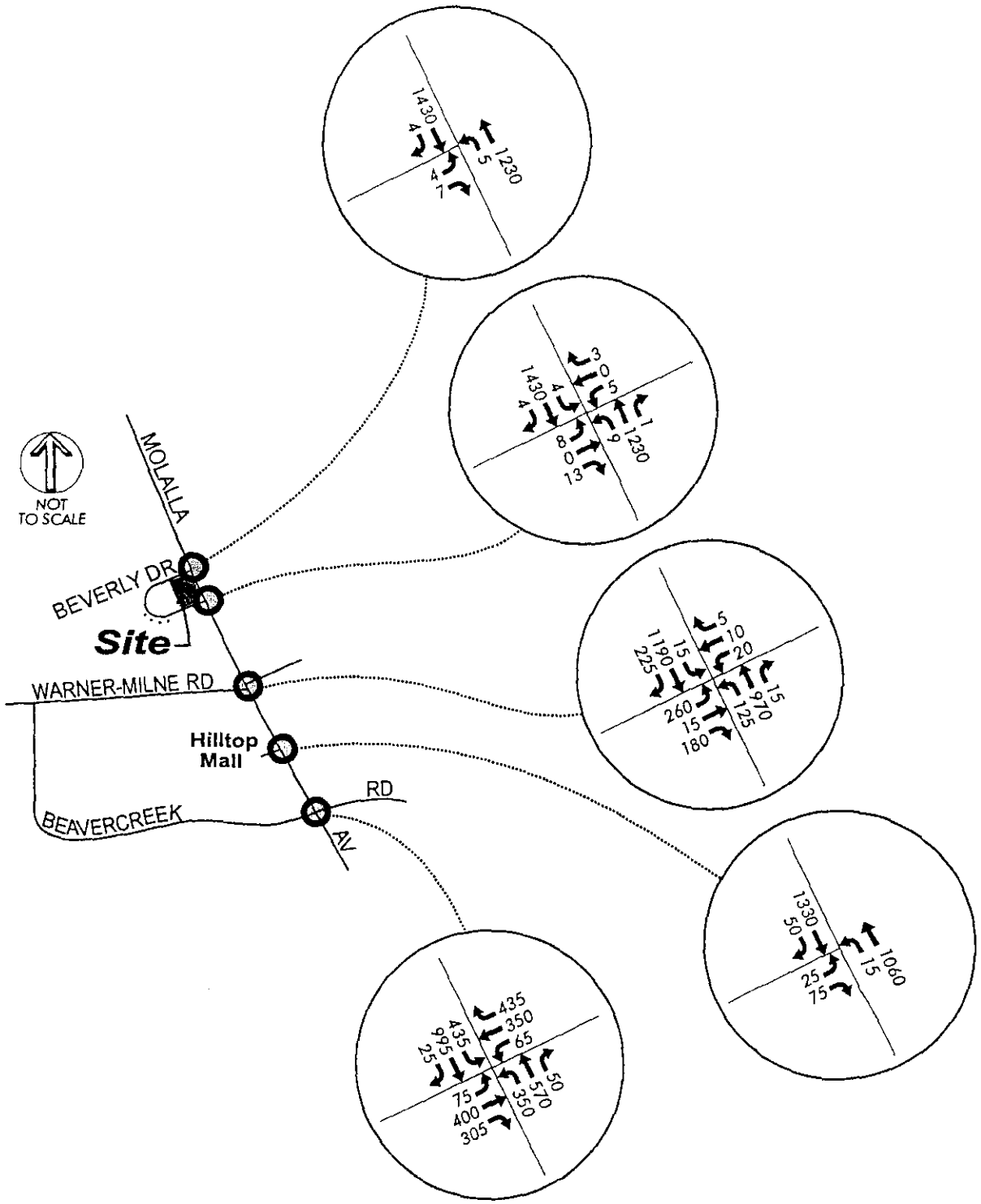


Figure 6
YEAR 2018 PM ROADWAY NETWORK



LEGEND

- Study Intersection

Figure 7
YEAR 2018 PM PEAK HOUR TRAFFIC VOLUMES

Access

Sight distance at the project driveways should be provided based on the posted speed limit. According to City of Oregon City standards, the required sight distance for these facilities shall be ten times the vehicular speed of the road. There is no posted speed limit on Beverly Drive. The assumed legal speed on the local residential roadway is 25 mph. Based on a speed of 25 mph, at least 250 feet of clear sight distance should be provided to the west of both proposed project accesses on Beverly Drive. Vegetation may need to be removed along the site frontage in order to meet sight distance requirements at both access points. No monuments or landscaping shall be positioned in the triangular areas at these intersections to block sight distance. In addition, the access points should be constructed as far to the west as possible (at least 50 feet) from Molalla Avenue.

Turn Lane Requirements

Right turn lanes warrants were checked for both Beverly Drive/Molalla Avenue intersections. Right turn lanes warrants were not met for any of the study scenarios. Turn lane warrants are attached in the appendix. Left turn lanes will be available at both Beverly Drive intersections with Molalla Avenue once the restriping project on Molalla Avenue is complete.

Traffic Signal Warrants

The intersections of Beverly Drive/Molalla Avenue were checked for traffic signal warrants during both the AM and PM peak hours. Beverly Drive does not carry enough traffic volume to warrant a traffic signal in any of the study scenarios. Signal warrants are attached in the appendix.

Mitigation

The proposed Beverly Drive Building commercial rezone project will not impact level of service at any of the signalized study intersections. The north and south Beverly Drive/Molalla Avenue intersections deteriorate to a LOS of F for the minor approach with future traffic volumes. However, peak hour traffic signal warrants at these intersections are not met. In addition, the major approach to these intersections operates at a LOS of B or better in all of the study scenarios. Therefore, a traffic signal is not recommended at either location. The following measures mitigate any impacts from the proposed project onto the local street network:

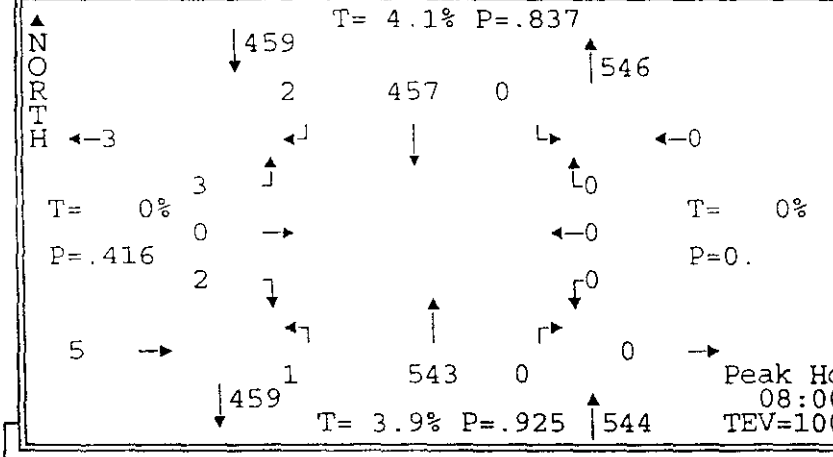
- In order to ensure safety at the project access points onto Beverly Drive, it is recommended that the access points be located as far to the west as possible (at least 50 feet) from Molalla Avenue.
- Restrict landscaping/vegetation such that it does not encroach into sight distance triangles at driveways/access roads.
- The project should construct frontage improvements on Molalla Avenue and Beverly Drive as required by the City of Oregon City's standards.

Appendix

Traffic Volumes

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
MC LLA AVENUE AT BEVERLY DRIVE .H

25756



DATE OF COUNT: 12/19/00
DAY OF WEEK: Tue
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

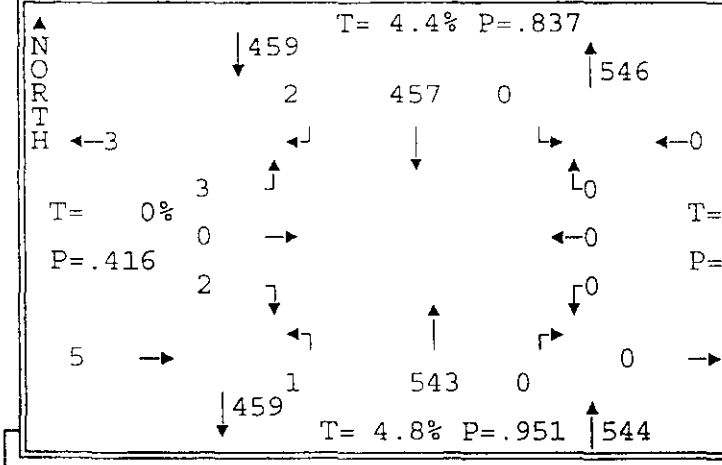
DGEE

Peak Hour
08:00-09:00
TEV=1008

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	WEST BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↰	ALL
07:00-07:05	0	0	1	0	16	0	0	38	0	0	0	0	55
07:05-07:10	0	0	0	0	18	0	0	42	0	0	0	0	60
07:10-07:15	0	0	0	0	15	0	0	43	0	0	0	0	58
07:15-07:20	0	0	0	0	17	0	0	44	0	0	0	0	61
07:20-07:25	0	0	0	0	23	0	0	36	0	0	0	0	59
07:25-07:30	0	0	0	2	25	0	0	43	0	0	0	0	70
07:30-07:35	0	0	0	0	17	0	0	38	0	0	0	0	55
07:35-07:40	0	0	1	0	23	0	0	37	0	0	0	0	61
07:40-07:45	0	0	0	0	32	0	0	51	0	0	0	0	83
07:45-07:50	0	0	0	0	18	0	0	53	0	0	0	0	71
07:50-07:55	0	0	0	0	36	0	0	63	0	0	0	0	99
07:55-08:00	0	0	0	0	36	0	1	36	0	0	0	0	73
08:00-08:05	0	0	0	0	36	0	0	51	0	0	0	0	87
08:05-08:10	0	0	0	2	32	0	0	45	0	0	0	0	79
08:10-08:15	1	0	0	0	30	0	0	46	0	0	0	0	77
08:15-08:20	0	0	1	0	38	0	0	38	0	0	0	0	77
08:20-08:25	0	0	0	0	40	0	0	39	0	0	0	0	79
08:25-08:30	0	0	2	0	33	0	0	48	0	0	0	0	83
08:30-08:35	0	0	0	0	38	0	0	39	0	0	0	0	77
08:35-08:40	0	0	0	0	38	0	0	47	0	0	0	0	85
08:40-08:45	0	0	0	0	35	0	0	48	0	0	0	0	83
08:45-08:50	1	0	0	0	48	0	0	46	0	0	0	0	95
08:50-08:55	0	0	0	0	44	0	0	53	0	0	0	0	97
08:55-09:00	0	0	0	0	45	0	1	43	0	0	0	0	89
Total Survey	2	0	5	4	733	0	2	1067	0	0	0	0	1813
PHF	.5	0	.25	.25	.83	0	.25	.92	0	0	0	0	.896
% Trucks	0	0	0	0	4.1	0	50	3.8	0	0	0	0	4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	2	0	0	6	0	0	0	0	
Hourly Totals													
07:00-08:00	0	0	2	2	276	0	1	524	0	0	0	0	805
07:15-08:15	1	0	1	4	325	0	1	543	0	0	0	0	875
07:30-08:30	1	0	4	2	371	0	1	545	0	0	0	0	924
07:45-08:45	1	0	3	2	410	0	1	553	0	0	0	0	970
08:00-09:00	2	0	3	2	457	0	1	543	0	0	0	0	1008

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
MORALLA AVENUE AT BEVERLY DRIVE NORTH



DATE OF COUNT: 12/19/00
DAY OF WEEK: Tue
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

DGEE

Peak Hour
08:00-09:00
TEV=1008

Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↰	EAST BOUND →	EAST BOUND ↱	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↰	WEST BOUND ←	WEST BOUND ↱	ALL
ALL VEHICLES													
08:00-08:15	1	0	0	2	98	0	0	142	0	0	0	0	243
08:15-08:30	0	0	3	0	111	0	0	125	0	0	0	0	239
08:30-08:45	0	0	0	0	111	0	0	134	0	0	0	0	245
08:45-09:00	1	0	0	0	137	0	1	142	0	0	0	0	281
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
08:00-08:15	0	0	0	0	3	0	0	4	0	0	0	0	7
08:15-08:30	0	0	0	0	3	0	0	5	0	0	0	0	8
08:30-08:45	0	0	0	0	7	0	0	6	0	0	0	0	13
08:45-09:00	0	0	0	0	5	0	0	7	0	0	0	0	1[illegible]
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
08:00-08:15	0	0	0	0	0	0	0	1	0	0	0	0	1
08:15-08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30-08:45	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45-09:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
08:00-08:15	0	0	0	0	0	0	0	2	0	0	0	0	2
08:15-08:30	0	0	0	0	1	0	0	1	0	0	0	0	2
08:30-08:45	0	0	0	0	1	0	0	0	0	0	0	0	1
08:45-09:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
08:00-08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15-08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30-08:45	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45-09:00	0	0	0	0	0	0	0	0	0	0	0	0	0

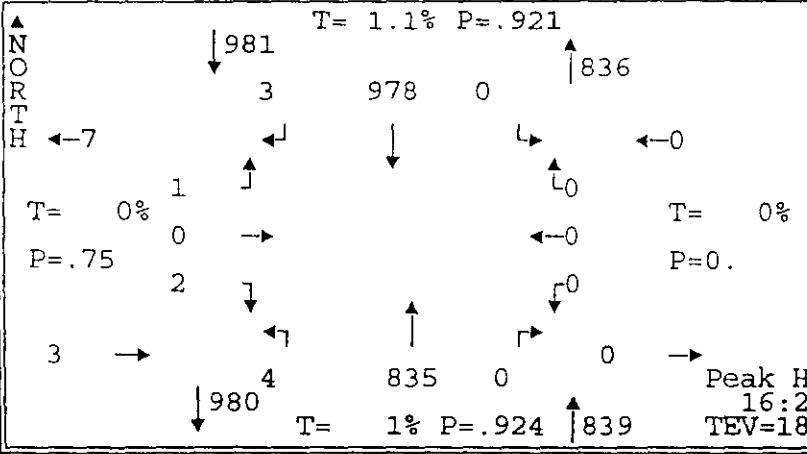
PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
08:00-08:15	0	0	1	0	1
08:15-08:30	0	0	1	0	1
08:30-08:45	0	0	2	0	2
08:45-09:00	0	0	0	0	0

Peak Hour by Movement													
PHF	.5	0	.25	.25	.83	0	.25	.96	0	0	0	0	.896
% Trucks(all)	0	0	0	0	4.4	0	0	4.8	0	0	0	0	4.6
% Trucks(M+H)	0	0	0	0	.4	0	0	.7	0	0	0	0	.6
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	

Hourly Totals													
07:00-08:00	0	0	2	2	276	0	1	524	0	0	0	0	805
07:15-08:15	1	0	1	4	325	0	1	543	0	0	0	0	87[illegible]
07:30-08:30	1	0	4	2	371	0	1	545	0	0	0	0	92[illegible]
07:45-08:45	1	0	3	2	410	0	1	553	0	0	0	0	970
08:00-09:00	2	0	3	2	457	0	1	543	0	0	0	0	1008

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
MOLALLA AVENUE AT BEVERLY DRIVE NORTH

25704



DATE OF COUNT: 12/12/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

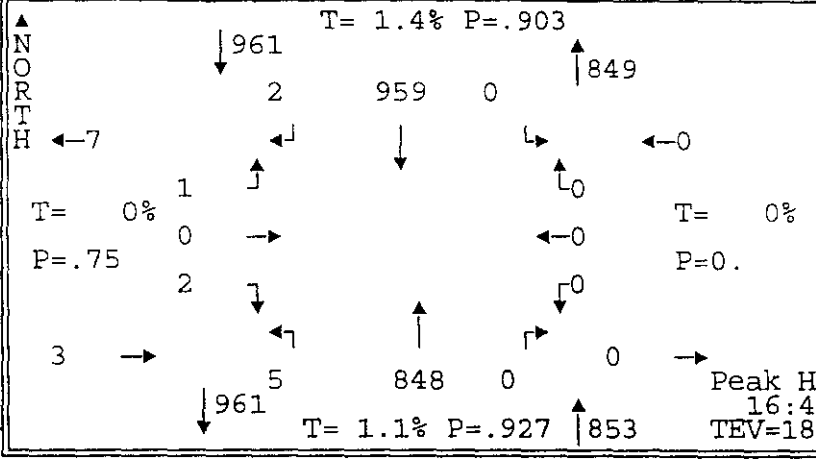
DGEB

Peak Hour
16:25-17:25
TEV=1823

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	1	0	0	1	65	0	0	86	0	0	0	0	153
16:05-16:10	0	0	0	0	69	0	0	75	0	0	0	0	144
16:10-16:15	0	0	0	0	83	0	0	74	0	0	0	0	157
16:15-16:20	0	0	0	0	73	0	0	56	0	0	0	0	129
16:20-16:25	0	0	0	0	74	0	0	57	0	0	0	0	131
16:25-16:30	1	0	0	0	90	0	0	56	0	0	0	0	147
16:30-16:35	0	0	0	0	83	0	0	71	0	0	0	0	154
16:35-16:40	0	0	0	1	65	0	0	74	0	0	0	0	140
16:40-16:45	0	0	0	0	73	0	1	71	0	0	0	0	145
16:45-16:50	0	0	0	0	78	0	0	73	0	0	0	0	151
16:50-16:55	0	0	0	1	74	0	0	69	0	0	0	0	144
16:55-17:00	0	0	0	0	75	0	1	58	0	0	0	0	134
17:00-17:05	0	0	0	0	94	0	1	78	0	0	0	0	173
17:05-17:10	0	0	1	1	84	0	0	63	0	0	0	0	149
17:10-17:15	0	0	0	0	87	0	1	84	0	0	0	0	172
17:15-17:20	0	0	0	0	93	0	0	62	0	0	0	0	155
17:20-17:25	1	0	0	0	82	0	0	76	0	0	0	0	159
17:25-17:30	0	0	0	0	61	0	0	57	0	0	0	0	118
17:30-17:35	0	0	0	0	74	0	0	91	0	0	0	0	165
17:35-17:40	0	0	0	0	78	0	2	63	0	0	0	0	143
17:40-17:45	1	0	0	0	79	0	0	74	0	0	0	0	154
17:45-17:50	0	0	0	0	81	0	0	63	0	0	0	0	144
17:50-17:55	1	0	0	0	67	0	1	77	0	0	0	0	146
17:55-18:00	1	0	0	1	73	0	2	53	0	0	0	0	130
Total Survey	6	0	1	5	1855	0	9	1661	0	0	0	0	3537
PHF	.5	0	.25	.75	.92	0	.5	.93	0	0	0	0	.922
% Trucks	0	0	0	0	1.1	0	0	1	0	0	0	0	1.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	17	0	0	6	0	0	0	0	
Hourly Totals													
16:00-17:00	2	0	0	3	902	0	2	820	0	0	0	0	1729
16:15-17:15	1	0	1	3	950	0	4	810	0	0	0	0	1769
16:30-17:30	1	0	1	3	949	0	4	836	0	0	0	0	1794
16:45-17:45	2	0	1	2	959	0	5	848	0	0	0	0	1817
17:00-18:00	4	0	1	2	953	0	7	841	0	0	0	0	1808

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
MORALLA AVENUE AT BEVERLY DRIVE NORTH



DATE OF COUNT: 12/12/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

DGEB

Traffic Smithy
(503)641-6333

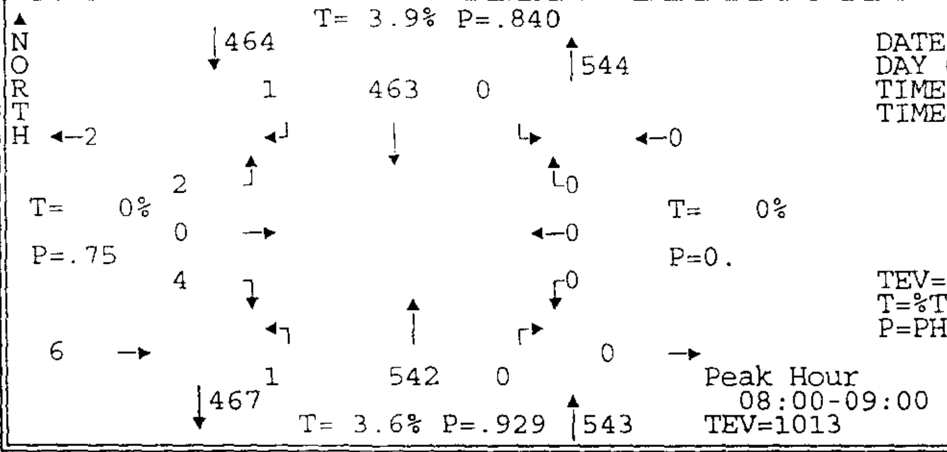
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
16:45-17:00	0	0	0	1	227	0	1	200	0	0	0	0	429
17:00-17:15	0	0	1	1	265	0	2	225	0	0	0	0	494
17:15-17:30	1	0	0	0	236	0	0	195	0	0	0	0	432
17:30-17:45	1	0	0	0	231	0	2	228	0	0	0	0	462
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
16:45-17:00	0	0	0	0	5	0	0	3	0	0	0	0	8
17:00-17:15	0	0	0	0	2	0	0	2	0	0	0	0	4
17:15-17:30	0	0	0	0	4	0	0	3	0	0	0	0	7
17:30-17:45	0	0	0	0	2	0	0	1	0	0	0	0	
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
16:45-17:00	0	2	0	0	2
17:00-17:15	0	1	1	0	2
17:15-17:30	0	3	1	0	4
17:30-17:45	0	3	1	0	4

Peak Hour by Movement													
PHF	.5	0	.25	.5	.9	0	.63	.93	0	0	0	0	.919
% Trucks(all)	0	0	0	0	1.4	0	0	1.1	0	0	0	0	1.2
% Trucks(M+H)	0	0	0	0	0	0	0	0	0	0	0	0	0
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	

Hourly Totals													
16:00-17:00	2	0	0	3	902	0	2	820	0	0	0	0	172[illegible]
16:15-17:15	1	0	1	3	950	0	4	810	0	0	0	0	17
16:30-17:30	1	0	1	3	949	0	4	836	0	0	0	0	17[illegible]
16:45-17:45	2	0	1	2	959	0	5	848	0	0	0	0	1817
17:00-18:00	4	0	1	2	953	0	7	841	0	0	0	0	1808

INTERSEC ON TURN MOVEMENT COUNT SUMMA EPORT 25752
MC LLA AVENUE AT BEVERLY DRIVE H



DATE OF COUNT: 12/19/00
DAY OF WEEK: Tue
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

LTRL

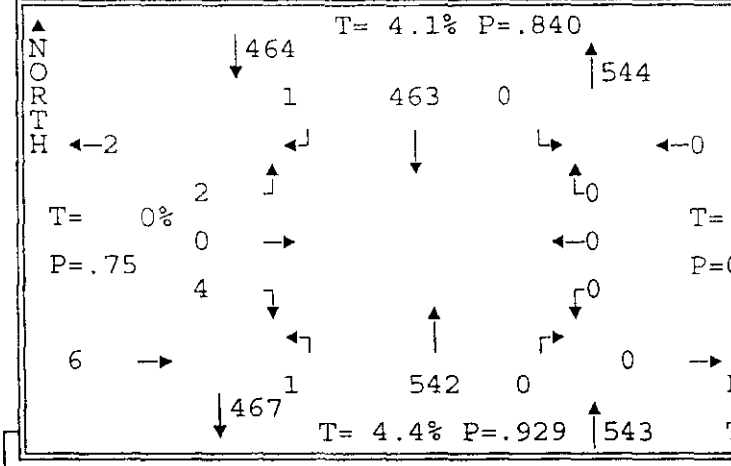
Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND			SOUTH BOUND			NORTH BOUND			WEST BOUND			ALL
	↓	→	↑	←	↓	→	←	↑	→	↓	←	↑	
07:00-07:05	0	0	0	0	15	0	0	33	0	0	0	0	48
07:05-07:10	0	0	0	0	20	0	0	42	0	0	0	0	62
07:10-07:15	0	0	0	0	17	0	0	46	0	0	0	0	63
07:15-07:20	0	0	0	0	13	0	0	46	0	0	0	0	59
07:20-07:25	0	0	0	0	22	0	0	36	0	0	0	0	58
07:25-07:30	0	0	0	0	28	0	0	39	0	0	0	0	67
07:30-07:35	0	0	0	0	18	0	0	38	0	0	0	0	56
07:35-07:40	0	0	0	0	23	0	0	40	0	0	0	0	63
07:40-07:45	0	0	1	0	30	0	0	51	0	0	0	0	82
07:45-07:50	0	0	0	0	20	0	0	52	0	0	0	0	72
07:50-07:55	0	0	1	0	39	0	0	58	0	0	0	0	98
07:55-08:00	0	0	0	0	31	0	1	44	0	0	0	0	76
08:00-08:05	1	0	0	0	40	0	0	47	0	0	0	0	88
08:05-08:10	0	0	1	0	33	0	0	51	0	0	0	0	85
08:10-08:15	0	0	0	0	27	0	0	44	0	0	0	0	71
08:15-08:20	0	0	0	0	33	0	0	39	0	0	0	0	72
08:20-08:25	1	0	0	0	44	0	0	41	0	0	0	0	86
08:25-08:30	0	0	0	0	31	0	0	46	0	0	0	0	77
08:30-08:35	0	0	0	0	36	0	0	39	0	0	0	0	75
08:35-08:40	0	0	0	0	44	0	0	50	0	0	0	0	94
08:40-08:45	1	0	0	1	37	0	0	40	0	0	0	0	79
08:45-08:50	1	0	0	0	47	0	1	51	0	0	0	0	100
08:50-08:55	0	0	0	0	45	0	0	50	0	0	0	0	95
08:55-09:00	0	0	1	0	46	0	0	44	0	0	0	0	91

Total Survey	4	0	4	1	739	0	2	1067	0	0	0	0	1817
PHF	.5	0	.5	.25	.84	0	.25	.93	0	0	0	0	.885
% Trucks	0	0	0	0	3.9	0	0	3.6	0	0	0	0	3.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	1	0	0	0	0	0	0	0	

Hourly Totals													
07:00-08:00	0	0	2	0	276	0	1	525	0	0	0	0	804
07:15-08:15	1	0	3	0	324	0	1	546	0	0	0	0	875
07:30-08:30	2	0	3	0	369	0	1	551	0	0	0	0	926
07:45-08:45	3	0	2	1	415	0	1	551	0	0	0	0	973
08:00-09:00	4	0	2	1	463	0	1	542	0	0	0	0	1013

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
MORELLA AVENUE AT BEVERLY DRIVE SOUTH



DATE OF COUNT: 12/19/00
DAY OF WEEK: Tue
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

LTRL

Peak Hour
08:00-09:00
TEV=1013

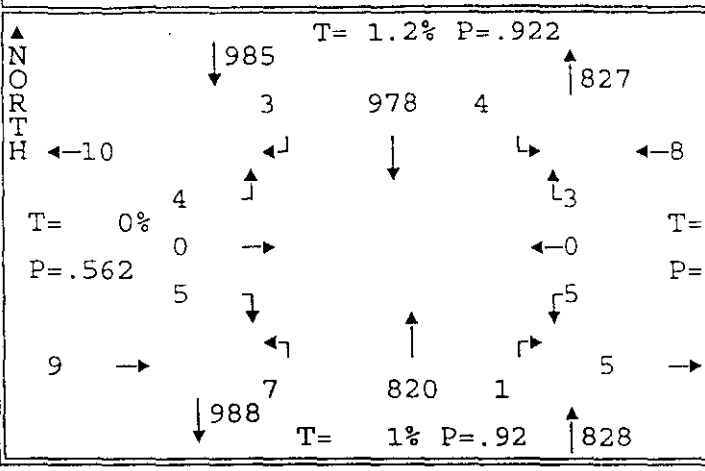
Traffic Smithy
(503)641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
08:00-08:15	1	0	1	0	100	0	0	142	0	0	0	0	244
08:15-08:30	1	0	0	0	108	0	0	126	0	0	0	0	235
08:30-08:45	1	0	0	1	117	0	0	129	0	0	0	0	248
08:45-09:00	1	0	1	0	138	0	1	145	0	0	0	0	286
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
08:00-08:15	0	0	0	0	3	0	0	3	0	0	0	0	6
08:15-08:30	0	0	0	0	2	0	0	5	0	0	0	0	7
08:30-08:45	0	0	0	0	7	0	0	5	0	0	0	0	12
08:45-09:00	0	0	0	0	5	0	0	6	0	0	0	0	[illegible]
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
08:00-08:15	0	0	0	0	0	0	0	1	0	0	0	0	1
08:15-08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30-08:45	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45-09:00	0	0	0	0	0	0	0	1	0	0	0	0	1
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
08:00-08:15	0	0	0	0	0	0	0	2	0	0	0	0	2
08:15-08:30	0	0	0	0	1	0	0	1	0	0	0	0	2
08:30-08:45	0	0	0	0	1	0	0	0	0	0	0	0	1
08:45-09:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
08:00-08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15-08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30-08:45	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45-09:00	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
08:00-08:15	0	0	0	0	0
08:15-08:30	0	0	0	0	0
08:30-08:45	0	0	0	0	0
08:45-09:00	0	0	0	0	0

Peak Hour by Movement													
PHF	1	0	.5	.25	.84	0	.25	.93	0	0	0	0	.885
% Trucks(all)	0	0	0	0	4.1	0	0	4.4	0	0	0	0	4.2
% Trucks(M+H)	0	0	0	0	.4	0	0	.9	0	0	0	0	.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
07:00-08:00	0	0	2	0	276	0	1	525	0	0	0	0	804
07:15-08:15	1	0	3	0	324	0	1	546	0	0	0	0	8[illegible]
07:30-08:30	2	0	3	0	369	0	1	551	0	0	0	0	9[illegible]
07:45-08:45	3	0	2	1	415	0	1	551	0	0	0	0	973
08:00-09:00	4	0	2	1	463	0	1	542	0	0	0	0	1013

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
MOLA AVENUE AT BEVERLY DRIVE S I



DATE OF COUNT: 12/12/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

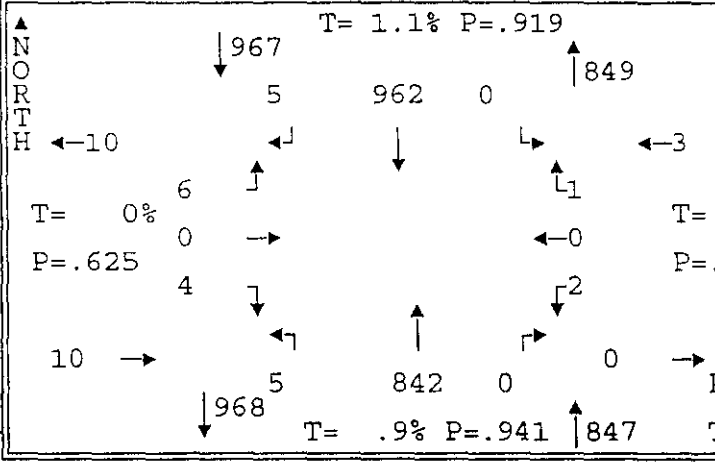
TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

GTMY

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	WEST BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	0	0	0	0	67	0	0	73	2	0	0	0	142
16:05-16:10	0	0	0	0	69	1	0	81	0	1	0	1	153
16:10-16:15	0	0	0	0	80	0	0	67	0	0	0	0	147
16:15-16:20	0	0	0	1	75	0	1	64	0	0	0	0	141
16:20-16:25	0	0	0	0	74	0	0	58	0	0	0	0	132
16:25-16:30	0	0	0	1	86	2	0	60	0	0	0	0	149
16:30-16:35	0	0	0	0	84	0	0	57	0	0	0	1	142
16:35-16:40	1	0	1	0	73	0	0	79	0	1	0	0	155
16:40-16:45	1	0	0	0	73	1	0	67	0	1	0	0	143
16:45-16:50	0	0	0	0	72	1	3	76	0	1	0	0	153
16:50-16:55	1	0	0	0	68	0	0	59	1	0	0	1	130
16:55-17:00	0	0	0	1	82	0	0	63	0	1	0	0	147
17:00-17:05	1	0	2	0	88	0	3	67	0	0	0	0	161
17:05-17:10	1	0	0	1	92	0	0	70	0	0	0	1	165
17:10-17:15	0	0	0	0	82	0	1	84	0	1	0	0	168
17:15-17:20	0	0	0	0	92	0	0	69	0	0	0	0	161
17:20-17:25	0	0	1	0	86	0	0	69	0	0	0	0	156
17:25-17:30	0	0	0	0	65	0	0	61	0	0	0	0	126
17:30-17:35	0	0	0	0	68	0	0	77	0	0	0	0	145
17:35-17:40	0	0	2	1	84	0	0	77	0	0	0	0	164
17:40-17:45	0	0	0	1	79	0	1	63	0	0	0	0	144
17:45-17:50	0	0	0	1	81	0	0	77	0	0	0	0	159
17:50-17:55	2	0	0	0	63	0	0	62	0	0	0	0	127
17:55-18:00	0	0	1	1	82	0	0	66	0	1	0	0	151
Total Survey	7	0	7	8	1865	5	9	1646	3	7	0	4	3561
PHF	.63	0	.5	.38	.92	.5	.44	.92	.25	.42	0	.75	.926
% Trucks	0	0	0	0	1.2	0	11.1	1	0	14.3	0	0	1.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	17	0	0	7	0	0	0	0	
Hourly Totals													
16:00-17:00	3	0	1	3	903	5	4	804	3	5	0	3	1734
16:15-17:15	5	0	3	4	949	4	8	804	1	5	0	3	1786
16:30-17:30	5	0	4	2	957	2	7	821	1	5	0	3	1807
16:45-17:45	3	0	5	4	958	1	8	835	1	3	0	2	1820
17:00-18:00	4	0	6	5	962	0	5	842	0	2	0	1	1827

INTERSECT N TURN MOVEMENT COUNT PEAK F REPORT
MO..LLA AVENUE AT BEVERLY DRIVE SOUTH



DATE OF COUNT: 12/12/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

GTMY

Peak Hour
17:00-18:00
TEV=1827

Traffic Smithy
(503)641-6333

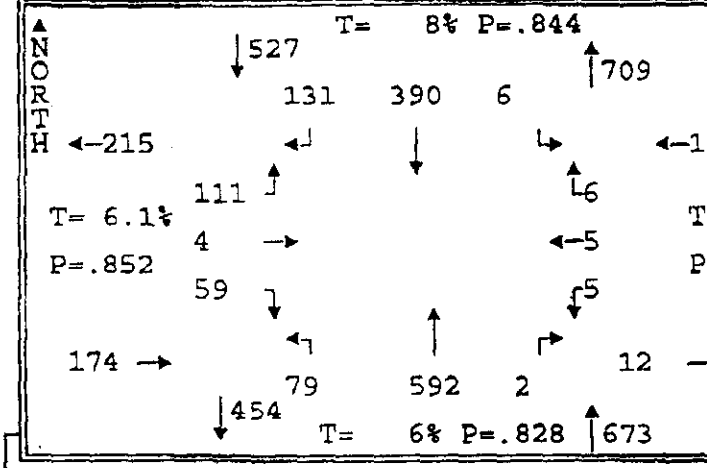
TIME PERIOD FROM - TO	EAST BOUND ↓	→	↑	SOUTH BOUND ↓	←	↑	NORTH BOUND ↑	↓	→	WEST BOUND ↓	←	↑	ALL
ALL VEHICLES													
17:00-17:15	2	0	2	1	262	0	4	221	0	1	0	1	494
17:15-17:30	0	0	1	0	243	0	0	199	0	0	0	0	443
17:30-17:45	0	0	2	2	231	0	1	217	0	0	0	0	453
17:45-18:00	2	0	1	2	226	0	0	205	0	1	0	0	437
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
17:00-17:15	0	0	0	0	2	0	1	2	0	0	0	0	5
17:15-17:30	0	0	0	0	4	0	0	3	0	0	0	0	7
17:30-17:45	0	0	0	0	2	0	0	1	0	0	0	0	3
17:45-18:00	0	0	0	0	3	0	0	1	0	0	0	0	
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
BICYCLES													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	1	0	0	0	0	1

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
17:00-17:15	0	2	1	0	3
17:15-17:30	0	3	1	0	4
17:30-17:45	0	2	3	0	5
17:45-18:00	0	1	0	0	1

Peak Hour by Movement													
PHF	.5	0	.75	.63	.92	0	.31	.95	0	.5	0	.25	.924
% Trucks(all)	0	0	0	0	1.1	0	20	.8	0	0	0	0	1
% Trucks(M+H)	0	0	0	0	0	0	0	0	0	0	0	0	0
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	3	0	1	3	903	5	4	804	3	5	0	3	1734
16:15-17:15	5	0	3	4	949	4	8	804	1	5	0	3	17
16:30-17:30	5	0	4	2	957	2	7	821	1	5	0	3	18
16:45-17:45	3	0	5	4	958	1	8	835	1	3	0	2	1820
17:00-18:00	4	0	6	5	962	0	5	842	0	2	0	1	1827

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
WERNER-MILNE ROAD AT MOLALLA AVENUE

1944



DATE OF COUNT: 04/27/99
DAY OF WEEK: Tue
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

GHNC

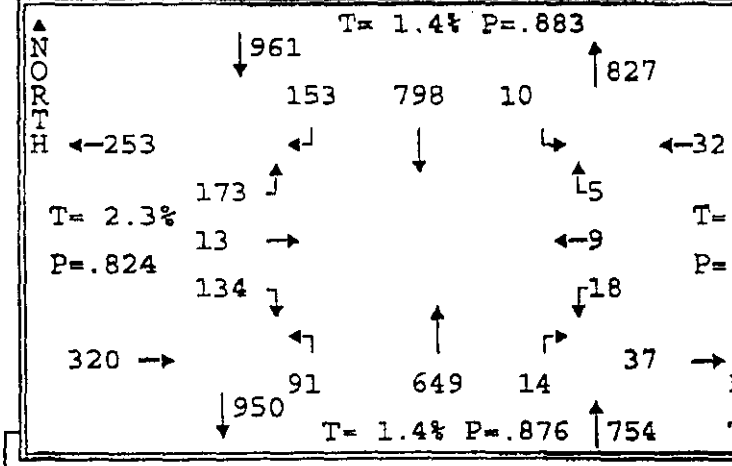
Peak Hour
07:35-08:35
TEV=1390

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
07:00-07:05	4	0	6	1	23	0	4	34	0	2	0	1	75
07:05-07:10	2	0	7	3	11	1	2	40	0	0	1	2	69
07:10-07:15	3	0	5	3	17	0	7	33	0	0	0	0	68
07:15-07:20	3	0	6	5	14	0	4	30	0	2	0	1	65
07:20-07:25	5	0	3	3	16	0	4	44	0	1	0	1	77
07:25-07:30	5	0	9	7	21	0	4	41	1	0	1	0	89
07:30-07:35	1	1	10	5	22	0	3	39	0	0	1	1	83
07:35-07:40	3	1	12	6	26	0	6	56	1	0	1	0	112
07:40-07:45	2	0	4	14	33	0	3	55	0	0	0	1	112
07:45-07:50	7	1	9	10	42	0	9	60	0	0	0	1	139
07:50-07:55	4	0	10	11	34	0	6	64	0	0	0	0	129
07:55-08:00	5	0	15	12	30	4	6	47	0	1	1	0	121
08:00-08:05	6	0	6	14	51	0	10	70	0	0	0	1	158
08:05-08:10	7	0	8	10	30	1	5	41	0	1	0	2	105
08:10-08:15	5	0	12	14	34	0	6	37	0	1	1	0	110
08:15-08:20	5	0	10	8	31	1	5	37	0	0	0	0	97
08:20-08:25	7	0	8	12	25	0	9	36	0	1	1	0	99
08:25-08:30	5	1	8	10	30	0	6	48	0	0	0	0	108
08:30-08:35	3	1	9	10	24	0	8	41	1	1	1	1	100
08:35-08:40	6	0	9	6	24	0	8	32	0	1	0	0	86
08:40-08:45	9	1	16	8	33	0	6	43	0	0	1	0	117
08:45-08:50	8	1	12	7	30	0	6	22	0	0	0	1	87
08:50-08:55	3	1	12	9	47	1	8	44	0	0	0	0	125
08:55-09:00	9	1	15	11	25	0	12	33	1	1	1	0	109
Total Survey	117	9	221	199	673	8	147	1027	4	12	10	13	2440
PHF	.82	.5	.82	.86	.85	.3	.86	.82	.5	.63	.63	.5	.851
% Trucks	8.5	0	5	8	7.7	25	8.8	5.6	25	8.3	0	30.8	6.8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	4	0	0	5	0	0	9	0	0	0	0	
Hourly Totals													
07:00-08:00	44	3	96	80	289	5	58	543	2	6	5	8	1139
07:15-08:15	53	3	104	111	353	5	66	584	2	6	5	8	1300
07:30-08:30	57	4	112	126	388	6	74	590	1	4	5	6	1373
07:45-08:45	69	4	120	125	388	6	84	556	1	6	5	5	1369
08:00-09:00	73	6	125	119	384	3	89	484	2	6	5	5	1301

INTERSEC ON TURN MOVEMENT COUNT SUMMA REPORT
MOLALLA AVENUE AT WARNER-MILNE ROAD

24055



DATE OF COUNT: 06/27/00
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

JWMB

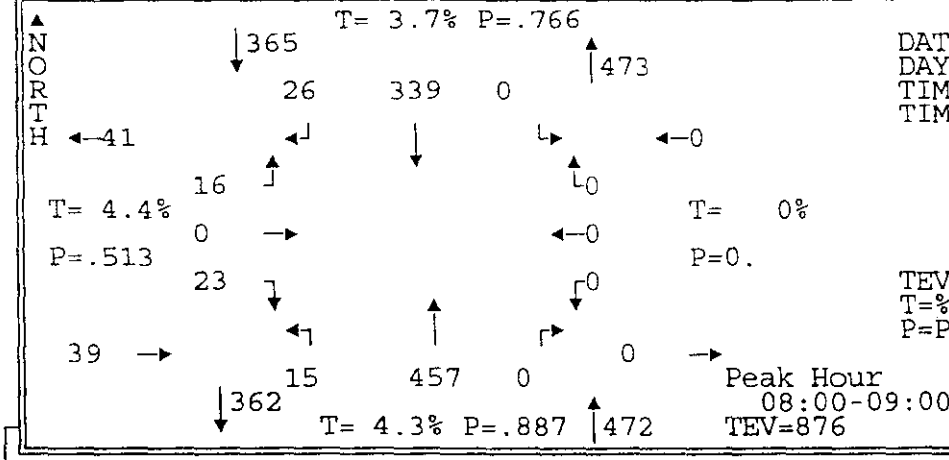
Peak Hour
16:55-17:55
TEV=2067

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	10	1	26	14	47	0	14	44	0	0	0	0	156
16:05-16:10	13	0	22	11	71	0	7	60	1	0	2	0	187
16:10-16:15	11	1	23	11	70	1	11	47	0	2	1	0	178
16:15-16:20	8	0	10	12	75	2	9	57	1	4	3	1	182
16:20-16:25	9	0	19	14	50	1	10	37	0	3	0	2	145
16:25-16:30	15	1	10	15	80	1	5	39	0	2	1	1	170
16:30-16:35	11	2	18	17	55	2	6	46	0	2	0	0	159
16:35-16:40	18	0	12	17	56	0	8	48	2	4	1	0	166
16:40-16:45	9	0	18	19	63	0	7	44	1	4	2	1	164
16:45-16:50	13	1	19	16	59	3	4	56	0	1	0	1	172
16:50-16:55	13	1	14	12	52	1	9	36	0	5	0	1	1[illegible]
16:55-17:00	7	1	10	23	63	0	5	45	1	0	0	1	1[illegible]
17:00-17:05	9	1	23	14	62	0	9	48	0	2	1	2	171
17:05-17:10	15	0	16	16	87	1	8	60	0	0	0	0	203
17:10-17:15	12	2	19	15	68	0	9	63	1	1	1	0	191
17:15-17:20	8	2	15	15	70	0	4	52	0	1	0	0	167
17:20-17:25	12	1	21	10	62	3	5	41	2	6	1	0	164
17:25-17:30	14	1	10	15	61	1	6	48	1	0	0	0	157
17:30-17:35	12	2	21	6	61	1	8	48	2	1	3	0	165
17:35-17:40	8	0	7	14	74	1	8	63	2	2	0	1	180
17:40-17:45	13	0	6	9	70	0	10	63	1	1	1	1	175
17:45-17:50	14	2	11	9	57	3	7	57	4	0	1	0	165
17:50-17:55	10	1	14	7	63	0	12	61	0	4	1	1	174
17:55-18:00	14	0	7	11	56	1	7	49	3	1	1	1	151
Total Survey	274	20	371	322	1532	22	188	1212	22	46	20	12	4041
PHF	.88	.65	.75	.72	.89	.5	.78	.89	.5	.56	.56	.63	.914
% Trucks	2.9	5	1.6	.9	1.5	0	1.1	1.5	0	0	0	0	1.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	2	0	0	5	0	0	13	0	0	1	0	
Hourly Totals													
16:00-17:00	133	8	201	181	741	11	95	559	6	27	10	6	1978
16:15-17:15	135	9	188	190	770	11	89	579	6	28	9	8	20
16:30-17:30	137	12	195	189	758	11	80	587	8	26	6	4	20[illegible]
16:45-17:45	136	12	181	165	789	11	85	623	10	20	7	5	2044
17:00-18:00	141	12	170	141	791	11	93	653	16	19	10	6	2063

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
MOL A AVENUE AT MACDONALD'S DRI Y

25707



DATE OF COUNT: 12/12/00
DAY OF WEEK: Tue
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

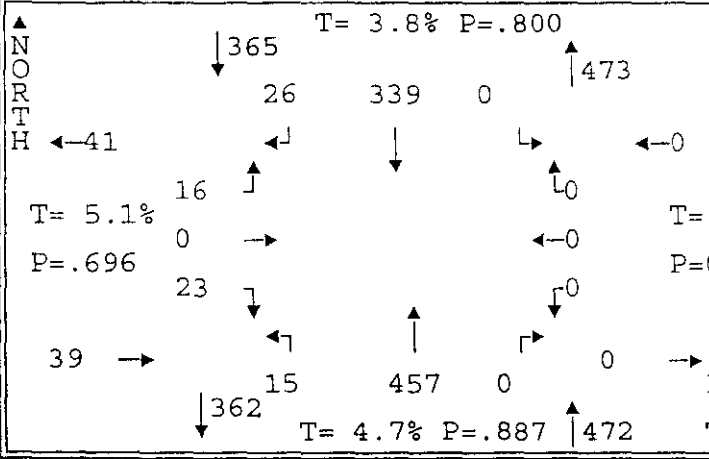
LTRI

Peak Hour
08:00-09:00
TEV=876

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	SOUTH BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
07:00-07:05	1	0	0	0	10	0	0	24	0	0	0	0	35
07:05-07:10	1	0	0	1	24	0	0	30	0	0	0	0	56
07:10-07:15	0	0	0	1	17	0	1	32	0	0	0	0	51
07:15-07:20	1	0	1	1	19	0	1	27	0	0	0	0	50
07:20-07:25	2	0	1	1	11	0	0	34	0	0	0	0	49
07:25-07:30	1	0	0	1	19	0	0	21	0	0	0	0	42
07:30-07:35	2	0	2	1	22	0	0	31	0	0	0	0	58
07:35-07:40	0	0	2	0	23	0	2	45	0	0	0	0	72
07:40-07:45	4	0	3	1	21	0	0	40	0	0	0	0	69
07:45-07:50	0	0	3	1	32	0	0	36	0	0	0	0	72
07:50-07:55	3	0	0	2	20	0	1	39	0	0	0	0	65
07:55-08:00	1	0	1	0	31	0	1	38	0	0	0	0	72
08:00-08:05	2	0	1	3	25	0	3	37	0	0	0	0	71
08:05-08:10	2	0	2	2	28	0	0	42	0	0	0	0	76
08:10-08:15	1	0	2	2	21	0	0	35	0	0	0	0	61
08:15-08:20	1	0	1	0	29	0	0	29	0	0	0	0	60
08:20-08:25	3	0	1	2	22	0	3	31	0	0	0	0	62
08:25-08:30	3	0	5	1	24	0	2	35	0	0	0	0	70
08:30-08:35	4	0	3	2	31	0	1	48	0	0	0	0	89
08:35-08:40	0	0	0	6	41	0	1	40	0	0	0	0	88
08:40-08:45	1	0	0	1	33	0	2	30	0	0	0	0	67
08:45-08:50	2	0	1	1	37	0	0	39	0	0	0	0	80
08:50-08:55	2	0	0	5	22	0	3	39	0	0	0	0	71
08:55-09:00	2	0	0	1	26	0	0	52	0	0	0	0	81
Total Survey	39	0	29	36	588	0	21	854	0	0	0	0	1567
PHF	.57	0	.44	.72	.76	0	.63	.88	0	0	0	0	.886
% Trucks	7.7	0	0	0	3.9	0	0	4.4	0	0	0	0	4.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	2	0	0	6	0	0	10	0	0	6	0	
Hourly Totals													
07:00-08:00	16	0	13	10	249	0	6	397	0	0	0	0	691
07:15-08:15	19	0	18	15	272	0	8	425	0	0	0	0	757
07:30-08:30	22	0	23	15	298	0	12	438	0	0	0	0	808
07:45-08:45	21	0	19	22	337	0	14	440	0	0	0	0	853
08:00-09:00	23	0	16	26	339	0	15	457	0	0	0	0	876

INTERSECTION TURN MOVEMENT COUNT PEAK HOUR REPORT
MOLALLA AVENUE AT MACDONALD'S DRIVEWAY



DATE OF COUNT: 12/12/00
DAY OF WEEK: Tue
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

LTRI

Peak Hour
08:00-09:00
TEV=876

Traffic Smithy
(503)641-6333

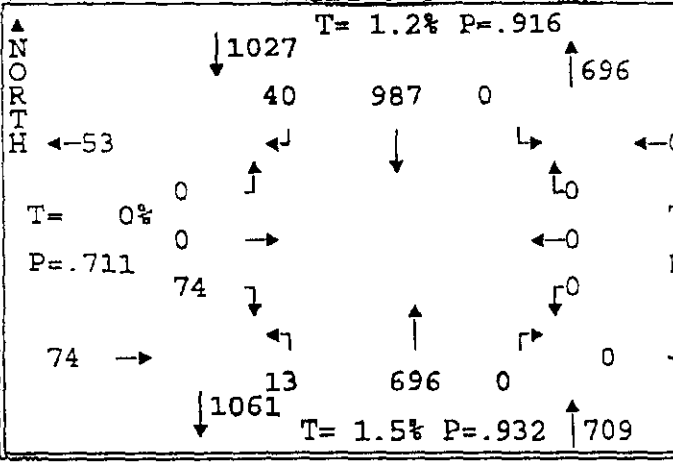
TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
ALL VEHICLES													
08:00-08:15	5	0	5	7	74	0	3	114	0	0	0	0	208
08:15-08:30	7	0	7	3	75	0	5	95	0	0	0	0	192
08:30-08:45	5	0	3	9	105	0	4	118	0	0	0	0	244
08:45-09:00	6	0	1	7	85	0	3	130	0	0	0	0	232
LIGHT TRUCKS (SINGLE UNIT 2 AXLES)													
08:00-08:15	0	0	0	0	2	0	0	4	0	0	0	0	6
08:15-08:30	1	0	0	0	1	0	0	4	0	0	0	0	6
08:30-08:45	1	0	0	0	3	0	0	5	0	0	0	0	9
08:45-09:00	0	0	0	0	4	0	0	2	0	0	0	0	6
MEDIUM TRUCKS (SINGLE UNIT > 2 AXLES)													
08:00-08:15	0	0	0	0	0	0	0	1	0	0	0	0	1
08:15-08:30	0	0	0	0	1	0	0	0	0	0	0	0	1
08:30-08:45	0	0	0	0	0	0	0	1	0	0	0	0	1
08:45-09:00	0	0	0	0	1	0	0	1	0	0	0	0	2
HEAVY TRUCKS (SEMI-TRACTOR TRAILER)													
08:00-08:15	0	0	0	0	0	0	0	1	0	0	0	0	1
08:15-08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30-08:45	0	0	0	0	1	0	0	0	0	0	0	0	1
08:45-09:00	0	0	0	0	1	0	0	3	0	0	0	0	4
BICYCLES													
08:00-08:15	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15-08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30-08:45	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45-09:00	0	0	0	0	0	0	0	0	0	0	0	0	0

PEDESTRIANS	CROSSWALK USEAGE SOUTH	WEST	EAST	NORTH	ALL
08:00-08:15	0	2	1	1	4
08:15-08:30	0	2	1	2	5
08:30-08:45	0	1	0	0	1
08:45-09:00	1	0	1	0	2

Peak Hour by Movement													
PHF	.82	0	.57	.72	.81	0	.75	.88	0	0	0	0	.897
% Trucks(all)	8.7	0	0	0	4.1	0	0	4.8	0	0	0	0	4.3
% Trucks(M+H)	0	0	0	0	1.2	0	0	1.5	0	0	0	0	1.3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
07:00-08:00	16	0	13	10	249	0	6	397	0	0	0	0	691
07:15-08:15	19	0	18	15	272	0	8	425	0	0	0	0	757
07:30-08:30	22	0	23	15	298	0	12	438	0	0	0	0	8
07:45-08:45	21	0	19	22	337	0	14	440	0	0	0	0	853
08:00-09:00	23	0	16	26	339	0	15	457	0	0	0	0	876

INTERSEC ON TURN MOVEMENT COUNT SUMMA REPORT
MCDC LDS/BANK DRIVEWAY AT MOLLALA VENUE

185 7.1



DATE OF COUNT: 01/19/99
DAY OF WEEK: Tue
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

DJAP

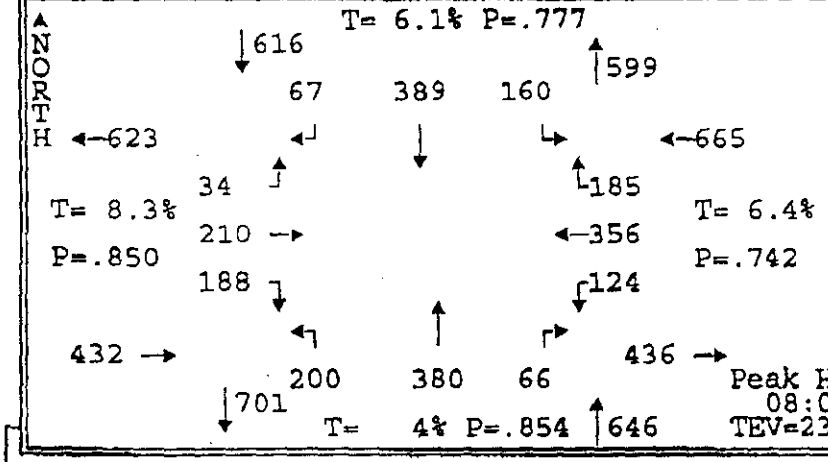
Peak Hour
16:25-17:25
TEV=1810

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	9	0	0	8	80	0	2	66	0	0	0	0	165
16:05-16:10	5	0	0	3	70	0	2	54	0	0	0	0	134
16:10-16:15	3	0	0	4	81	0	0	60	0	0	0	0	148
16:15-16:20	8	0	0	3	69	0	1	54	0	0	0	0	135
16:20-16:25	5	0	0	3	74	0	1	59	0	0	0	0	142
16:25-16:30	5	0	0	7	79	0	6	50	0	0	0	0	147
16:30-16:35	11	0	0	1	72	0	0	55	0	0	0	0	139
16:35-16:40	5	0	0	7	86	0	1	59	0	0	0	0	158
16:40-16:45	6	0	0	1	102	0	1	71	0	0	0	0	181
16:45-16:50	9	0	0	6	70	0	2	56	0	0	0	0	143
16:50-16:55	5	0	0	5	74	0	0	56	0	0	0	0	140
16:55-17:00	12	0	0	3	73	0	0	70	0	0	0	0	158
17:00-17:05	7	0	0	2	73	0	1	51	0	0	0	0	134
17:05-17:10	2	0	0	1	90	0	0	65	0	0	0	0	158
17:10-17:15	4	0	0	2	92	0	1	56	0	0	0	0	155
17:15-17:20	3	0	0	2	93	0	0	55	0	0	0	0	153
17:20-17:25	5	0	0	3	83	0	1	52	0	0	0	0	144
17:25-17:30	5	0	0	5	68	0	0	57	0	0	0	0	135
17:30-17:35	8	0	0	4	64	0	3	52	0	0	0	0	131
17:35-17:40	5	0	0	1	79	0	4	53	0	0	0	0	142
17:40-17:45	6	0	0	1	68	0	2	47	0	0	0	0	124
17:45-17:50	3	0	0	4	69	0	2	37	0	0	0	0	115
17:50-17:55	4	0	0	2	76	0	1	55	0	0	0	0	138
17:55-18:00	3	0	0	0	66	0	2	48	0	0	0	0	119
Total Survey	138	0	0	78	1851	0	33	1338	0	0	0	0	3438
PHF	.71	0	0	.67	.9	0	.46	.94	0	0	0	0	.938
% Trucks	0	0	0	0	1.3	0	0	1.6	0	0	0	0	1.3
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Totals													
16:00-17:00	83	0	0	51	930	0	16	710	0	0	0	0	1790
16:15-17:15	79	0	0	41	954	0	14	702	0	0	0	0	1790
16:30-17:30	74	0	0	38	976	0	7	703	0	0	0	0	1798
16:45-17:45	71	0	0	35	927	0	14	670	0	0	0	0	1717
17:00-18:00	55	0	0	27	921	0	17	628	0	0	0	0	1648

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
MOLLALA AVENUE AT BEAVERCREEK ROAD

19443



DATE OF COUNT: 04/27/99
DAY OF WEEK: Tue
TIME STARTED: 07:00
TIME ENDED: 09:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

JWDN

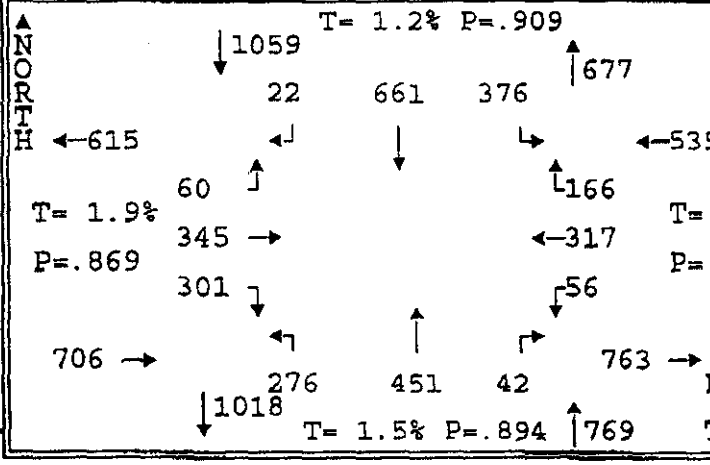
Peak Hour
08:00-09:00
TEV=2359

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↵	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	WEST BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
07:00-07:05	7	11	0	0	15	5	6	28	3	3	16	16	110
07:05-07:10	12	12	3	0	8	4	6	25	5	3	21	14	113
07:10-07:15	5	7	0	1	9	10	5	23	5	3	14	14	96
07:15-07:20	9	7	1	0	11	6	13	24	2	0	19	6	98
07:20-07:25	9	11	0	0	9	9	11	34	3	3	15	17	121
07:25-07:30	6	5	1	2	12	16	15	32	4	2	23	19	137
07:30-07:35	10	9	0	1	12	9	11	23	4	4	27	23	133
07:35-07:40	9	11	0	1	19	11	8	40	0	2	13	16	130
07:40-07:45	10	15	1	1	27	6	15	41	1	2	11	19	149
07:45-07:50	25	19	3	1	23	18	22	34	6	1	32	25	209
07:50-07:55	12	10	0	3	31	21	15	45	0	5	17	22	18
07:55-08:00	20	13	2	2	20	17	13	44	2	1	32	22	18
08:00-08:05	8	17	4	2	24	23	19	31	2	5	40	22	197
08:05-08:10	15	13	1	2	27	13	12	19	2	3	38	10	155
08:10-08:15	12	13	1	0	33	18	14	32	2	2	18	22	167
08:15-08:20	17	16	3	5	33	11	19	28	1	3	27	11	174
08:20-08:25	28	22	2	3	34	11	24	36	9	3	30	11	213
08:25-08:30	16	22	1	2	46	11	20	29	5	2	27	16	197
08:30-08:35	8	13	2	1	19	15	19	25	2	4	31	10	149
08:35-08:40	13	15	7	2	29	10	16	47	10	24	25	11	209
08:40-08:45	15	20	7	1	27	16	16	17	1	4	29	13	166
08:45-08:50	14	30	2	17	32	12	19	25	1	40	23	9	224
08:50-08:55	24	9	1	12	41	8	10	41	9	3	29	12	199
08:55-09:00	18	20	3	20	44	12	12	50	22	31	39	38	309
Total Survey	322	340	45	79	585	292	340	773	101	153	596	398	4024
PHF	.77	.81	.53	.34	.83	.74	.79	.82	.52	.42	.93	.78	.805
% Trucks	4	12.6	6.7	5.1	3.6	11.3	3.8	3.8	5.9	4.6	6	7.5	5.9
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	2	0	0	2	0	0	3	0	0	3	0	
Hourly Totals													
07:00-08:00	134	130	11	12	196	132	140	393	35	29	240	213	1665
07:15-08:15	145	143	14	15	248	167	168	399	28	30	285	223	18
07:30-08:30	182	180	18	23	329	169	192	402	34	33	312	219	209
07:45-08:45	189	193	33	24	346	184	209	387	42	57	346	195	2205
08:00-09:00	188	210	34	67	389	160	200	380	66	124	356	185	2359

INTERSECTION TURN MOVEMENT COUNT SUMMARY REPORT
BEAVERCREEK ROAD AT MOLALLA AVENUE

24058



DATE OF COUNT: 6/22/00
DAY OF WEEK: Thu
TIME STARTED: 16:00
TIME ENDED: 18:00

TEV=TOTAL ENTRY VOLUME
T=%TRUCKS BY APPROACH
P=PHF BY APPROACH

gtkf

Peak Hour
16:20-17:20
TEV=3073

Traffic Smithy
(503) 641-6333

TIME PERIOD FROM - TO	EAST BOUND ↓	EAST BOUND →	EAST BOUND ↑	SOUTH BOUND ↲	SOUTH BOUND ↓	SOUTH BOUND ↳	NORTH BOUND ↰	NORTH BOUND ↑	NORTH BOUND ↱	WEST BOUND ↓	WEST BOUND ←	WEST BOUND ↑	ALL
16:00-16:05	23	19	0	4	58	19	14	46	1	5	22	14	225
16:05-16:10	21	31	16	0	32	38	19	37	1	6	34	17	252
16:10-16:15	28	32	3	3	62	26	22	37	4	5	16	16	254
16:15-16:20	28	22	4	3	52	23	16	32	3	7	19	14	223
16:20-16:25	17	27	1	1	52	38	17	42	2	7	22	19	245
16:25-16:30	29	25	5	2	53	27	23	30	6	2	22	11	235
16:30-16:35	21	23	4	3	50	31	30	28	3	4	29	14	240
16:35-16:40	31	41	7	0	46	19	25	30	2	4	25	11	241
16:40-16:45	30	27	4	4	53	38	18	35	6	3	22	12	252
16:45-16:50	29	28	6	1	62	41	25	33	3	3	21	15	267
16:50-16:55	23	25	5	4	58	28	20	37	2	6	40	19	267
16:55-17:00	21	24	4	2	62	33	31	26	4	4	32	14	257
17:00-17:05	21	36	2	1	56	22	29	46	1	8	29	12	263
17:05-17:10	24	30	10	3	58	34	16	37	7	8	28	13	268
17:10-17:15	35	35	9	0	50	32	17	49	2	3	27	14	273
17:15-17:20	20	24	3	1	61	33	25	58	4	4	20	12	265
17:20-17:25	18	11	1	1	58	39	13	27	3	7	31	14	223
17:25-17:30	22	20	4	1	38	42	28	28	5	8	22	15	233
17:30-17:35	15	32	0	0	67	32	19	31	1	4	31	11	243
17:35-17:40	21	24	4	4	71	20	24	46	4	1	27	12	258
17:40-17:45	17	35	4	1	32	28	21	32	3	4	24	14	215
17:45-17:50	22	18	5	0	53	26	28	47	4	6	11	13	233
17:50-17:55	21	18	3	0	54	28	21	34	0	2	20	17	218
17:55-18:00	20	18	1	2	63	25	13	36	4	5	19	15	221
Total Survey	557	625	105	41	1301	722	514	884	75	116	593	338	5871
PHF	.84	.85	.68	.61	.91	.88	.86	.78	.81	.7	.78	.86	.953
% Trucks	2.2	1.9	1	9.8	1.2	.8	1.2	1.4	5.3	1.7	2.5	1.5	1.6
Stopped Buses	0	1	0	0	0	0	0	0	0	0	0	0	
Peds	0	9	0	0	35	0	0	8	0	0	13	0	
Hourly Totals													
16:00-17:00	301	324	59	27	640	361	260	413	37	56	304	176	2958
16:15-17:15	309	343	61	24	652	366	267	425	41	59	316	168	3031
16:30-17:30	295	324	59	21	652	392	277	434	42	62	326	165	3049
16:45-17:45	266	324	52	19	673	384	268	450	39	60	332	165	3032
17:00-18:00	256	301	46	14	661	361	254	471	38	60	289	162	2913

Level of Service Definitions

TRAFFIC LEVELS OF SERVICE

Analysis of traffic volumes is useful in understanding the general nature of traffic in an area, but by itself indicates neither the ability of the street network to carry additional traffic nor the quality of service afforded by the street facilities. For this, the concept of *level of service* has been developed to subjectively describe traffic performance. Level of service can be measured at intersections and along key roadway segments.

Level of service categories are similar to report card ratings for traffic performance. Intersections are typically the controlling bottlenecks of traffic flow and the ability of a roadway system to carry traffic efficiently is generally diminished in their vicinities. Levels of Service A, B and C indicate conditions where traffic moves without significant delays over periods of peak travel demand. Level of service D and E are progressively worse peak hour operating conditions and F conditions represent where demand exceeds the capacity of an intersection. Most urban communities set level of service D as the minimum acceptable level of service for peak hour operation and plan for level of service C or better for all other times of the day. The *Highway Capacity Manual* provides level of service calculation methodology for both intersections and arterials.[1] The following three sections provide interpretations of the analysis approaches.

---

[1] *1994 Highway Capacity Manual*, Special Report 209, Transportation Research Board, Washington D.C., 1985, Chapters 9, 10, 11.

SIGNALIZED INTERSECTIONS

For signalized intersections, level of service is evaluated based upon average vehicle delay experienced by vehicles entering an intersection. As delay increases, the level of service decreases. Calculations for signalized and unsignalized intersections are different due to the variation in traffic control. The *1994 Highway Capacity Manual* provides the basis for these calculations.

Level of Service Definitions
Signalized Intersections

Level of Service	Vehicle Delay (secs.)	Description
A	$\leq$5.00	**Free Flow/Insignificant Delays:** No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Most vehicles do not stop at all. Progression is extremely favorable and most vehicles arrive during the green phase.
B	5.1-15.0	**Stable Operation/Minimal Delays:** An occasional approach phase is fully utilized. Many drivers begin to feel somewhat restricted within platoons of vehicles. This level generally occurs with good progression, short cycle lengths, or both.
C	15.1-25.0	**Stable Operation/Acceptable Delays:** Major approach phases fully utilized. Most drivers feel somewhat restricted. Higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level, and the number of vehicles stopping is significant.
D	25.1-40.0	**Approaching Unstable/Tolerable Delays:** The influence of congestion becomes more noticeable. Drivers may have to wait through more than one red signal indication. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. The proportion of vehicles not stopping declines, and individual cycle failures are noticeable.
E	40.1-60.0	**Unstable Operation/Significant Delays:** Volumes at or near capacity. Vehicles may wait though several signal cycles. Long queues form upstream from intersection. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are a frequent occurrence.
F	$\geq$60.0	**Forced Flow/Excessive Delays:** Represents jammed conditions. Queues may block upstream intersections. This level occurs when arrival flow rates exceed intersection capacity, and is considered to be unacceptable to most drivers. Poor progression, long cycle lengths, and v/c ratios approaching 1.0 may contribute to these high delay levels.

Source: *Highway Capacity Manual*, Transportation Research Board, Special Report No.209 (Third Edition), Washington D.C., 1994.

UNSIGNALIZED INTERSECTIONS (Two-Way Stop Controlled)

Unsignalized intersection level of service is reported for the major street and minor street (generally, left turn movements). The method assesses available and critical gaps in the traffic stream which make it possible for side street traffic to enter the main street flow. The *1994 Highway Capacity Manual* describes the detailed methodology. It is not unusual for an intersection to experience level of service E or F conditions for the minor street left turn movement. It should be understood that, often, a poor level of service is experienced by only a few vehicles and the intersection as a whole operates acceptably.

Unsignalized intersection levels of service are described in the following table.

Level of Service Definitions
Unsignalized Intersections

Level of Service	Expected Delay	Avg Total Delay (Sec/Veh)
A	Little or no delay	≤ 5.0
B	Short traffic delay	5.1-10.0
C	Average traffic delays	10.1-20.0
D	Long traffic delays	20.1-30.0
E	Very long traffic delays	30.1-45.0
F	Extreme delays potentially affecting other traffic movements in the intersection	> 45

Source: *Highway Capacity Manual*, Special Report 209 (Third Edition), Transportation Research Board Washington, D.C., 1994.

Level of Service Calculations

Scenario Report

Scenario:	AM Existing
Command:	AM Existing
Volume:	AM Existing
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	AM Proposed
Trip Distribution:	Dist
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 1 Molalla/Beverly N.	C	15.7	0.000	C	15.7	0.000	+ 0.000 V/C
# 2 Molalla/Beverly S	B	13.2	0.000	B	13.2	0.000	+ 0.000 V/C
# 3 Molalla/Warner-Milne	B	18.2	0.374	B	18.2	0.374	+ 0.000 D/V
# 4 Molalla/Hilltop Shoppiing Cent	A	6.3	0.177	A	6.3	0.177	+ 0.000 D/V
# 5 Molalla/Beaver Creek	D	38.3	0.612	D	38.3	0.612	+ 0.000 D/V

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Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Molalla/Beverly N.

Average Delay (sec/veh): 15.7 Worst Case Level Of Service: C

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	1	0	1	0		0	1	0	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	1	700		0			0	520		2			3		0		2		0		0		0	
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	1	700		0			0	520		2			3		0		2		0		0		0	
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	0.90	0.90		0.90			0.90	0.90		0.90			0.90		0.90		0.90		0.90		0.90		0.90	
PHF Volume:	1	778		0			0	578		2			3		0		2		0		0		0	
Reduct Vol:	0	0		0			0	0		0			0		0		0		0		0		0	
Final Vol.:	1	778		0			0	578		2			3		0		2		0		0		0	
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx							6.8	xxxx		6.9	xxxxx	xxxx	xxxxx					
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx							3.5	xxxx		3.3	xxxxx	xxxx	xxxxx					
Capacity Module:																								
Cnflict Vol:	580	xxxx	xxxxx	xxxx	xxxx	xxxxx							970	xxxx		290	xxxx	xxxx	xxxxx					
Potent Cap.:	1004	xxxx	xxxxx	xxxx	xxxx	xxxxx							254	xxxx		713	xxxx	xxxx	xxxxx					
Move Cap.:	1004	xxxx	xxxxx	xxxx	xxxx	xxxxx							254	xxxx		713	xxxx	xxxx	xxxxx					
Level Of Service Module:																								
Stopped Del:	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*												
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	342	xxxxx	xxxx	0	xxxxx												
Shrd StpDel:	8.6	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	15.7	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	A	*	*	A	*	*	*	C	*	*	*	*												
ApproachDel:	xxxxxx			xxxxxx				15.7			xxxxxx													
ApproachLOS:	*			*				C			*													

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 Molalla/Beverly S

Average Delay (sec/veh): 13.2 Worst Case Level Of Service: B

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	1	0	1	0		0	1	0	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	1	700		0			0	520		1			2		0		4		0		0		0	
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	1	700		0			0	520		1			2		0		4		0		0		0	
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	0.90	0.90		0.90			0.90	0.90		0.90			0.90		0.90		0.90		0.90		0.90		0.90	
PHF Volume:	1	778		0			0	578		1			2		0		4		0		0		0	
Reduct Vol:	0	0		0			0	0		0			0		0		0		0		0		0	
Final Vol.:	1	778		0			0	578		1			2		0		4		0		0		0	
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx							6.8	xxxx		6.9	xxxxx	xxxx	xxxxx					
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx							3.5	xxxx		3.3	xxxxx	xxxx	xxxxx					
Capacity Module:																								
Cnflict Vol:	579	xxxx	xxxxx	xxxx	xxxx	xxxxx							969	xxxx		289	xxxx	xxxx	xxxxx					
Potent Cap.:	1005	xxxx	xxxxx	xxxx	xxxx	xxxxx							254	xxxx		713	xxxx	xxxx	xxxxx					
Move Cap.:	1005	xxxx	xxxxx	xxxx	xxxx	xxxxx							254	xxxx		713	xxxx	xxxx	xxxxx					
Level Of Service Module:																								
Stopped Del:	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*												
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	445	xxxxx	xxxx	0	xxxxx												
Shrd StpDel:	8.6	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	13.2	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	A	*	*	A	*	*	*	B	*	*	*	*												
ApproachDel:	xxxxxx			xxxxxx				13.2			xxxxxx													
ApproachLOS:	*			*				B			*													

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #3 Molalla/Warner-Milne

Cycle (sec):	100	Critical Vol./Cap. (X):	0.374
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	18.2
Optimal Cycle:	41	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	0	1 0	0 1	0	0 1!	0 0
Volume Module:												
Base Vol:	79	592	2	6	390	131	111	4	59	5	5	6
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	79	592	2	6	390	131	111	4	59	5	5	6
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	93	696	2	7	458	154	130	5	69	6	6	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	93	696	2	7	458	154	130	5	69	6	6	7
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	93	696	2	7	458	154	130	5	69	6	6	7
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.91	0.91	0.95	0.95	0.85	0.84	0.84	0.84
Lanes:	1.00	1.99	0.01	1.00	1.50	0.50	0.96	0.04	1.00	0.31	0.32	0.37
Final Sat.:	1805	3600	10	1805	2599	874	1745	67	1615	502	502	585
Capacity Analysis Module:												
Vol/Sat:	0.05	0.19	0.19	0.00	0.18	0.18	0.07	0.07	0.04	0.01	0.01	0.01
Crit Moves:	****				****			****			****	
Green/Cycle:	0.14	0.60	0.60	0.01	0.47	0.47	0.20	0.20	0.20	0.03	0.03	0.03
Volume/Cap:	0.37	0.32	0.32	0.32	0.37	0.37	0.37	0.37	0.21	0.37	0.37	0.37
Uniform Del:	39.2	10.1	10.1	49.0	17.0	17.0	34.7	34.7	33.5	47.4	47.4	47.4
IncremntDel:	0.9	0.1	0.1	8.5	0.1	0.1	0.7	0.7	0.3	4.6	4.6	4.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	40.1	10.2	10.2	57.5	17.1	17.1	35.3	35.3	33.8	52.0	52.0	52.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.1	10.2	10.2	57.5	17.1	17.1	35.3	35.3	33.8	52.0	52.0	52.0
DesignQueue:	5	16	0	0	14	5	6	0	3	0	0	0

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #4 Molalla/Hilltop Shoppiing Center

Cycle (sec):	120	Critical Vol./Cap. (X):	0.177
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	6.3
Optimal Cycle:	27	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 0	1 0	0	0 1!	0 0
Volume Module:												
Base Vol:	15	457	0	0	339	26	16	0	23	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	457	0	0	339	26	16	0	23	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
PHF Volume:	17	516	0	0	383	29	18	0	26	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	17	516	0	0	383	29	18	0	26	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	17	516	0	0	383	29	18	0	26	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	1.00	0.94	0.94	0.95	1.00	0.85	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	1.00	1.86	0.14	1.00	0.00	1.00	0.00	1.00	0.00
Final Sat.:	1805	3610	0	1900	3322	252	1805	0	1615	0	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.14	0.00	0.00	0.12	0.12	0.01	0.00	0.02	0.00	0.00	0.00
Crit Moves:		****		****					****			
Green/Cycle:	0.06	0.81	0.00	0.00	0.75	0.75	0.09	0.00	0.09	0.00	0.00	0.00
Volume/Cap:	0.15	0.18	0.00	0.00	0.15	0.15	0.11	0.00	0.18	0.00	0.00	0.00
Uniform Del:	53.4	2.6	0.0	0.0	4.3	4.3	50.1	0.0	50.4	0.0	0.0	0.0
IncremntDel:	0.7	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.6	0.0	0.0	0.0
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	54.0	2.6	0.0	0.0	4.3	4.3	50.4	0.0	51.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.0	2.6	0.0	0.0	4.3	4.3	50.4	0.0	51.0	0.0	0.0	0.0
DesignQueue:	1	7	0	0	7	1	1	0	2	0	0	0

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #5 Molalla/Beaver Creek

Cycle (sec):	120	Critical Vol./Cap. (X):	0.612
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	38.3
Optimal Cycle:	61	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	2	0 1
Volume Module:												
Base Vol:	200	380	66	160	389	67	34	210	188	124	356	185
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	200	380	66	160	389	67	34	210	188	124	356	185
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
PHF Volume:	248	472	82	199	483	83	42	261	234	154	442	230
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	248	472	82	199	483	83	42	261	234	154	442	230
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	248	472	82	199	483	83	42	261	234	154	442	230
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.93	0.93	0.95	0.88	0.88	0.95	0.95	0.85
Lanes:	1.00	1.70	0.30	1.00	1.71	0.29	1.00	1.05	0.95	1.00	2.00	1.00
Final Sat.:	1805	3008	523	1805	3013	518	1805	1768	1585	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.14	0.16	0.16	0.11	0.16	0.16	0.02	0.15	0.15	0.09	0.12	0.14
Crit Moves:	****				****			****		****		
Green/Cycle:	0.22	0.29	0.29	0.20	0.26	0.26	0.06	0.24	0.24	0.14	0.32	0.52
Volume/Cap:	0.61	0.55	0.55	0.55	0.61	0.61	0.38	0.61	0.61	0.61	0.38	0.27
Uniform Del:	41.8	36.3	36.3	43.1	38.9	38.9	54.2	40.5	40.5	48.6	31.6	16.1
IncremntDel:	2.8	0.6	0.6	1.8	1.2	1.2	2.2	1.4	1.4	4.4	0.2	0.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	44.6	37.0	37.0	44.9	40.2	40.2	56.4	41.9	41.9	53.0	31.9	16.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.6	37.0	37.0	44.9	40.2	40.2	56.4	41.9	41.9	53.0	31.9	16.3
DesignQueue:	13	23	4	11	25	4	3	14	12	9	21	8

Scenario Report

Scenario:	PM Existing
Command:	PM Existing
Volume:	PM Existing
Geometry:	Default Geometry
Impact Fee:	Default Impact Fee
Trip Generation:	PM Proposed
Trip Distribution:	Dist
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in	
# 1 Molalla/Beverly N.	C	20.9	0.000	C	20.9	0.000	+ 0.000	V/C
# 2 Molalla/Beverly S	D	33.3	0.000	D	33.3	0.000	+ 0.000	V/C
# 3 Molalla/Warner-Milne	C	20.6	0.576	C	20.6	0.576	+ 0.000	D/V
# 4 Molalla/Hilltop Shoppiing Cent	A	6.9	0.402	A	6.9	0.402	+ 0.000	D/V
# 5 Molalla/Beaver Creek	D	40.6	0.691	D	40.6	0.691	+ 0.000	D/V

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Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Molalla/Beverly N.

Average Delay (sec/veh): 20.9 Worst Case Level Of Service: C

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	1	0	1	0		0	1	0	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	4	835	0				0	978	3				1	0	2				0	0	0			
Growth Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
Initial Bse:	4	835	0				0	978	3				1	0	2				0	0	0			
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	0.92	0.92	0.92				0.92	0.92	0.92				0.92	0.92	0.92				0.92	0.92	0.92			
PHF Volume:	4	906	0				0	1061	3				1	0	2				0	0	0			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
Final Vol.:	4	906	0				0	1061	3				1	0	2				0	0	0			
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx							6.8	xxxx		6.9	xxxxx	xxxx	xxxxx					
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx							3.5	xxxx		3.3	xxxxx	xxxx	xxxxx					
Capacity Module:																								
Cnflict Vol:	1064	xxxx	xxxxx	xxxx	xxxx	xxxxx							1524	xxxx		532	xxxx	xxxx	xxxxx					
Potent Cap.:	662	xxxx	xxxxx	xxxx	xxxx	xxxxx							111	xxxx		497	xxxx	xxxx	xxxxx					
Move Cap.:	662	xxxx	xxxxx	xxxx	xxxx	xxxxx							110	xxxx		497	xxxx	xxxx	xxxxx					
Level Of Service Module:																								
Stopped Del:	10.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	B	*	*	*	*	*	*	*	*	*	*	*												
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	229	xxxxx	xxxx	0	xxxxx												
Shrd StpDel:	10.5	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	20.9	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	B	*	*	A	*	*	*	C	*	*	*	*												
ApproachDel:	xxxxxx			xxxxxx			20.9			xxxxxx														
ApproachLOS:	*			*			C			*														

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 Molalla/Beverly S

Average Delay (sec/veh): 33.3 Worst Case Level Of Service: D

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	1	0	1	0		0	1	0	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	7	820	1				4	978	3				4	0	5				5	0	3			
Growth Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
Initial Bse:	7	820	1				4	978	3				4	0	5				5	0	3			
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	0.93	0.93	0.93				0.93	0.93	0.93				0.93	0.93	0.93				0.93	0.93	0.93			
PHF Volume:	8	886	1				4	1056	3				4	0	5				5	0	3			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
Final Vol.:	8	886	1				4	1056	3				4	0	5				5	0	3			
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx				4.1	xxxx	xxxxx				7.5	xxxx		6.9			7.5	xxxx		6.9		
FollowUpTim:	2.2	xxxx	xxxxx				2.2	xxxx	xxxxx				3.5	xxxx		3.3			3.5	xxxx		3.3		
Capacity Module:																								
Cnflict Vol:	1059	xxxx	xxxxx				887	xxxx	xxxxx				1524	xxxx		530			1438	xxxx		443		
Potent Cap.:	665	xxxx	xxxxx				772	xxxx	xxxxx				82	xxxx		499			96	xxxx		568		
Move Cap.:	665	xxxx	xxxxx				772	xxxx	xxxxx				81	xxxx		499			93	xxxx		568		
Level Of Service Module:																								
Stopped Del:	10.4	xxxx	xxxxx				9.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx									
LOS by Move:	B	*	*				A	*	*	*	*	*	*	*	*									
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx	xxxx	151	xxxxx	xxxx	136	xxxxx									
Shrd StpDel:	10.5	xxxx	xxxxx				9.7	xxxx	xxxxx	xxxxx	30.4	xxxxx	xxxxx	33.3	xxxxx									
Shared LOS:	B	*	*				A	*	*	*	D	*	*	D	*									
ApproachDel:	xxxxxx						xxxxxx				30.4			33.3										
ApproachLOS:	*						*				D			D										

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #3 Molalla/Warner-Milne

Cycle (sec):	100		Critical Vol./Cap. (X):	0.576		
Loss Time (sec):	16	(Y+R = 4 sec)	Average Delay (sec/veh):	20.6		
Optimal Cycle:	55		Level Of Service:	C		

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	0	1 0	0 1	0	0 1!	0 0
Volume Module:												
Base Vol:	91	649	14	10	798	153	173	13	134	18	9	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	91	649	14	10	798	153	173	13	134	18	9	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	100	710	15	11	873	167	189	14	147	20	10	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	100	710	15	11	873	167	189	14	147	20	10	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	100	710	15	11	873	167	189	14	147	20	10	5
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.93	0.93	0.96	0.96	0.85	0.86	0.86	0.86
Lanes:	1.00	1.96	0.04	1.00	1.68	0.32	0.93	0.07	1.00	0.57	0.29	0.14
Final Sat.:	1805	3525	74	1805	2958	566	1691	125	1615	930	465	232
Capacity Analysis Module:												
Vol/Sat:	0.06	0.20	0.20	0.01	0.30	0.30	0.11	0.11	0.09	0.02	0.02	0.02
Crit Moves:	****				****			****			****	
Green/Cycle:	0.10	0.59	0.59	0.02	0.51	0.51	0.19	0.19	0.19	0.04	0.04	0.04
Volume/Cap:	0.58	0.34	0.34	0.34	0.58	0.58	0.58	0.58	0.47	0.58	0.58	0.58
Uniform Del:	43.2	10.5	10.5	48.5	16.9	16.9	36.6	36.6	35.7	47.4	47.4	47.4
IncremntDel:	4.7	0.1	0.1	6.2	0.5	0.5	2.3	2.3	1.1	12.9	12.9	12.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	47.9	10.6	10.6	54.7	17.3	17.3	38.9	38.9	36.8	60.2	60.2	60.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	47.9	10.6	10.6	54.7	17.3	17.3	38.9	38.9	36.8	60.2	60.2	60.2
DesignQueue:	5	17	0	1	25	5	9	1	7	1	1	0

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #4 Molalla/Hilltop Shoppiing Center

Cycle (sec):	120		Critical Vol./Cap. (X):	0.402		
Loss Time (sec):	12	(Y+R = 4 sec)	Average Delay (sec/veh):	6.9		
Optimal Cycle:	36		Level Of Service:	A		

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 0	1 0	0	0 1!	0 0
Volume Module:												
Base Vol:	13	696	0	0	987	40	0	0	74	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	696	0	0	987	40	0	0	74	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	14	742	0	0	1052	43	0	0	79	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	14	742	0	0	1052	43	0	0	79	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	14	742	0	0	1052	43	0	0	79	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	1.00	0.94	0.94	1.00	1.00	0.85	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	1.00	1.92	0.08	1.00	0.00	1.00	0.00	1.00	0.00
Final Sat.:	1805	3610	0	1900	3447	141	1900	0	1615	0	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.21	0.00	0.00	0.31	0.31	0.00	0.00	0.05	0.00	0.00	0.00
Crit Moves:	****				****				****			
Green/Cycle:	0.02	0.78	0.00	0.00	0.76	0.76	0.00	0.00	0.12	0.00	0.00	0.00
Volume/Cap:	0.40	0.26	0.00	0.00	0.40	0.40	0.00	0.00	0.40	0.00	0.00	0.00
Uniform Del:	58.2	3.7	0.0	0.0	5.0	5.0	0.0	0.0	48.7	0.0	0.0	0.0
IncremntDel:	7.4	0.1	0.0	0.0	0.1	0.1	0.0	0.0	1.3	0.0	0.0	0.0
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	65.6	3.8	0.0	0.0	5.1	5.1	0.0	0.0	50.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	65.6	3.8	0.0	0.0	5.1	5.1	0.0	0.0	50.0	0.0	0.0	0.0
DesignQueue:	1	12	0	0	18	1	0	0	5	0	0	0

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #5 Molalla/Beaver Creek

Cycle (sec): 120 Critical Vol./Cap. (X): 0.691
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 40.6
Optimal Cycle: 71 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	2	0 1
Volume Module:												
Base Vol:	276	451	42	376	661	22	60	345	301	56	317	166
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	276	451	42	376	661	22	60	345	301	56	317	166
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	290	473	44	395	694	23	63	362	316	59	333	174
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	290	473	44	395	694	23	63	362	316	59	333	174
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	290	473	44	395	694	23	63	362	316	59	333	174
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.95	0.95	0.95	0.88	0.88	0.95	0.95	0.85
Lanes:	1.00	1.83	0.17	1.00	1.94	0.06	1.00	1.07	0.93	1.00	2.00	1.00
Final Sat.:	1805	3260	303	1805	3477	115	1805	1793	1565	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.16	0.15	0.15	0.22	0.20	0.20	0.03	0.20	0.20	0.03	0.09	0.11
Crit Moves:		****		****				****		****		
Green/Cycle:	0.23	0.21	0.21	0.32	0.29	0.29	0.09	0.29	0.29	0.05	0.25	0.56
Volume/Cap:	0.68	0.69	0.69	0.69	0.68	0.68	0.37	0.69	0.69	0.69	0.37	0.19
Uniform Del:	41.8	43.8	43.8	35.8	37.6	37.6	51.1	37.6	37.6	56.3	37.5	12.8
IncremntDel:	4.6	2.8	2.8	3.6	1.9	1.9	1.4	2.1	2.1	21.4	0.3	0.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	46.4	46.6	46.6	39.4	39.5	39.5	52.5	39.8	39.8	77.7	37.8	12.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.4	46.6	46.6	39.4	39.5	39.5	52.5	39.8	39.8	77.7	37.8	12.9
DesignQueue:	15	26	2	19	34	1	4	18	16	4	17	5

Scenario Report

Scenario:	AM Existing Plus Approved
Command:	AM Existing Plus Approved
Volume:	AM Existing
Geometry:	Approved
Impact Fee:	Default Impact Fee
Trip Generation:	AM Proposed
Trip Distribution:	Dist
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 1 Molalla/Beverly N.	C	21.2	0.000	C	21.2	0.000	+ 0.000 V/C
# 2 Molalla/Beverly S	C	17.1	0.000	C	17.1	0.000	+ 0.000 V/C
# 3 Molalla/Warner-Milne	B	18.2	0.374	B	18.2	0.374	+ 0.000 D/V
# 4 Molalla/Hilltop Shoppiing Cent	A	6.3	0.177	A	6.3	0.177	+ 0.000 D/V
# 5 Molalla/Beaver Creek	D	38.3	0.612	D	38.3	0.612	+ 0.000 D/V

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Molalla/Beverly N.

Average Delay (sec/veh): 21.2 Worst Case Level Of Service: C

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	1	0	0	1	0		1	0	0	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	1	700		0		0	520		2		3		0		2		0		0		0			
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00			
Initial Bse:	1	700		0		0	520		2		3		0		2		0		0		0			
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00			
PHF Adj:	0.90	0.90		0.90		0.90	0.90		0.90		0.90		0.90		0.90		0.90		0.90		0.90			
PHF Volume:	1	778		0		0	578		2		3		0		2		0		0		0			
Reduct Vol:	0	0		0		0	0		0		0		0		0		0		0		0			
Final Vol.:	1	778		0		0	578		2		3		0		2		0		0		0			
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx		6.4	xxxx		6.2	xxxxx	xxxx	xxxxx										
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx		3.5	xxxx		3.3	xxxxx	xxxx	xxxxx										
Capacity Module:																								
Cnflict Vol:	580	xxxx	xxxxx	xxxx	xxxx	xxxxx		1359	xxxx		579	xxxx	xxxx	xxxxx										
Potent Cap.:	1004	xxxx	xxxxx	xxxx	xxxx	xxxxx		166	xxxx		519	xxxx	xxxx	xxxxx										
Move Cap.:	1004	xxxx	xxxxx	xxxx	xxxx	xxxxx		165	xxxx		519	xxxx	xxxx	xxxxx										
Level Of Service Module:																								
Stopped Del:	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*												
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT														
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	227	xxxxx	xxxx	0	xxxxx												
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	21.2	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	*	*	*	*	*	*	*	C	*	*	*	*												
ApproachDel:	xxxxxx			xxxxxx			21.2			xxxxxx														
ApproachLOS:	*			*			C			*														

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 Molalla/Beverly S

Average Delay (sec/veh): 17.1 Worst Case Level Of Service: C

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	1	0	0	1	0		1	0	0	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	1	700		0		0	520		1		2		0		4		0		0		0			
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00			
Initial Bse:	1	700		0		0	520		1		2		0		4		0		0		0			
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00			
PHF Adj:	0.90	0.90		0.90		0.90	0.90		0.90		0.90		0.90		0.90		0.90		0.90		0.90			
PHF Volume:	1	778		0		0	578		1		2		0		4		0		0		0			
Reduct Vol:	0	0		0		0	0		0		0		0		0		0		0		0			
Final Vol.:	1	778		0		0	578		1		2		0		4		0		0		0			
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx		6.4	xxxx		6.2	xxxxx	xxxx	xxxxx										
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx		3.5	xxxx		3.3	xxxxx	xxxx	xxxxx										
Capacity Module:																								
Cnflict Vol:	579	xxxx	xxxxx	xxxx	xxxx	xxxxx		1358	xxxx		578	xxxx	xxxx	xxxxx										
Potent Cap.:	1005	xxxx	xxxxx	xxxx	xxxx	xxxxx		166	xxxx		519	xxxx	xxxx	xxxxx										
Move Cap.:	1005	xxxx	xxxxx	xxxx	xxxx	xxxxx		165	xxxx		519	xxxx	xxxx	xxxxx										
Level Of Service Module:																								
Stopped Del:	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*												
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT														
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	303	xxxxx	xxxx	0	xxxxx												
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	17.1	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	*	*	*	*	*	*	*	C	*	*	*	*												
ApproachDel:	xxxxxx			xxxxxx			17.1			xxxxxx														
ApproachLOS:	*			*			C			*														

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #3 Molalla/Warner-Milne

Cycle (sec): 100 Critical Vol./Cap. (X): 0.374
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 18.2
Optimal Cycle: 41 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	0	1 0	0 1	0	0 1!	0 0
Volume Module:												
Base Vol:	79	592	2	6	390	131	111	4	59	5	5	6
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	79	592	2	6	390	131	111	4	59	5	5	6
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	93	696	2	7	458	154	130	5	69	6	6	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	93	696	2	7	458	154	130	5	69	6	6	7
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	93	696	2	7	458	154	130	5	69	6	6	7
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.91	0.91	0.95	0.95	0.85	0.84	0.84	0.84
Lanes:	1.00	1.99	0.01	1.00	1.50	0.50	0.96	0.04	1.00	0.31	0.32	0.37
Final Sat.:	1805	3600	10	1805	2599	874	1745	67	1615	502	502	585
Capacity Analysis Module:												
Vol/Sat:	0.05	0.19	0.19	0.00	0.18	0.18	0.07	0.07	0.04	0.01	0.01	0.01
Crit Moves:	****				****			****			****	
Green/Cycle:	0.14	0.60	0.60	0.01	0.47	0.47	0.20	0.20	0.20	0.03	0.03	0.03
Volume/Cap:	0.37	0.32	0.32	0.32	0.37	0.37	0.37	0.37	0.21	0.37	0.37	0.37
Uniform Del:	39.2	10.1	10.1	49.0	17.0	17.0	34.7	34.7	33.5	47.4	47.4	47.4
IncremntDel:	0.9	0.1	0.1	8.5	0.1	0.1	0.7	0.7	0.3	4.6	4.6	4.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	40.1	10.2	10.2	57.5	17.1	17.1	35.3	35.3	33.8	52.0	52.0	52.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.1	10.2	10.2	57.5	17.1	17.1	35.3	35.3	33.8	52.0	52.0	52.0
DesignQueue:	5	16	0	0	14	5	6	0	3	0	0	0

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #4 Molalla/Hilltop Shoppiing Center

Cycle (sec): 120 Critical Vol./Cap. (X): 0.177
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 6.3
Optimal Cycle: 27 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 0	1 0	0	0 1!	0 0
Volume Module:												
Base Vol:	15	457	0	0	339	26	16	0	23	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	457	0	0	339	26	16	0	23	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
PHF Volume:	17	516	0	0	383	29	18	0	26	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	17	516	0	0	383	29	18	0	26	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	17	516	0	0	383	29	18	0	26	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	1.00	0.94	0.94	0.95	1.00	0.85	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	1.00	1.86	0.14	1.00	0.00	1.00	0.00	1.00	0.00
Final Sat.:	1805	3610	0	1900	3322	252	1805	0	1615	0	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.14	0.00	0.00	0.12	0.12	0.01	0.00	0.02	0.00	0.00	0.00
Crit Moves:		****		****					****			
Green/Cycle:	0.06	0.81	0.00	0.00	0.75	0.75	0.09	0.00	0.09	0.00	0.00	0.00
Volume/Cap:	0.15	0.18	0.00	0.00	0.15	0.15	0.11	0.00	0.18	0.00	0.00	0.00
Uniform Del:	53.4	2.6	0.0	0.0	4.3	4.3	50.1	0.0	50.4	0.0	0.0	0.0
IncremntDel:	0.7	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.6	0.0	0.0	0.0
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	54.0	2.6	0.0	0.0	4.3	4.3	50.4	0.0	51.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.0	2.6	0.0	0.0	4.3	4.3	50.4	0.0	51.0	0.0	0.0	0.0
DesignQueue:	1	7	0	0	7	1	1	0	2	0	0	0

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #5 Molalla/Beaver Creek

Cycle (sec):	120	Critical Vol./Cap. (X):	0.612
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	38.3
Optimal Cycle:	61	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	200	380	66	160	389	67	34	210	188	124	356	185
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	200	380	66	160	389	67	34	210	188	124	356	185
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
PHF Volume:	248	472	82	199	483	83	42	261	234	154	442	230
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	248	472	82	199	483	83	42	261	234	154	442	230
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	248	472	82	199	483	83	42	261	234	154	442	230
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.93	0.93	0.95	0.88	0.88	0.95	0.95	0.85
Lanes:	1.00	1.70	0.30	1.00	1.71	0.29	1.00	1.05	0.95	1.00	2.00	1.00
Final Sat.:	1805	3008	523	1805	3013	518	1805	1768	1585	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.14	0.16	0.16	0.11	0.16	0.16	0.02	0.15	0.15	0.09	0.12	0.14
Crit Moves:	****				****			****		****		
Green/Cycle:	0.22	0.29	0.29	0.20	0.26	0.26	0.06	0.24	0.24	0.14	0.32	0.52
Volume/Cap:	0.61	0.55	0.55	0.55	0.61	0.61	0.38	0.61	0.61	0.61	0.38	0.27
Uniform Del:	41.8	36.3	36.3	43.1	38.9	38.9	54.2	40.5	40.5	48.6	31.6	16.1
IncremntDel:	2.8	0.6	0.6	1.8	1.2	1.2	2.2	1.4	1.4	4.4	0.2	0.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	44.6	37.0	37.0	44.9	40.2	40.2	56.4	41.9	41.9	53.0	31.9	16.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.6	37.0	37.0	44.9	40.2	40.2	56.4	41.9	41.9	53.0	31.9	16.3
DesignQueue:	13	23	4	11	25	4	3	14	12	9	21	8

Scenario Report

Scenario:	PM Existing Plus Approved
Command:	PM Existing Plus Approved
Volume:	PM Existing
Geometry:	Approved
Impact Fee:	Default Impact Fee
Trip Generation:	PM Proposed
Trip Distribution:	Dist
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 1 Molalla/Beverly N.	D	31.9	0.000	D	31.9	0.000	+ 0.000 V/C
# 2 Molalla/Beverly S	F	65.5	0.000	F	65.5	0.000	+ 0.000 V/C
# 3 Molalla/Warner-Milne	C	20.6	0.576	C	20.6	0.576	+ 0.000 D/V
# 4 Molalla/Hilltop Shoppiing Cent	A	6.9	0.402	A	6.9	0.402	+ 0.000 D/V
# 5 Molalla/Beaver Creek	D	40.6	0.691	D	40.6	0.691	+ 0.000 D/V

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Molalla/Beverly N.

Average Delay (sec/veh): 31.9 Worst Case Level Of Service: D

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	1	0	0	1	0		1	0	0	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	4	835	0				0	978	3				1	0	2				0	0	0			
Growth Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
Initial Bse:	4	835	0				0	978	3				1	0	2				0	0	0			
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	0.92	0.92	0.92				0.92	0.92	0.92				0.92	0.92	0.92				0.92	0.92	0.92			
PHF Volume:	4	906	0				0	1061	3				1	0	2				0	0	0			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
Final Vol.:	4	906	0				0	1061	3				1	0	2				0	0	0			
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx							6.4	xxxx		6.2	xxxxx	xxxx	xxxxx					
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx							3.5	xxxx		3.3	xxxxx	xxxx	xxxxx					
Capacity Module:																								
Cnflict Vol:	1064	xxxx	xxxxx	xxxx	xxxx	xxxxx							1977	xxxx		1062	xxxx	xxxx	xxxxx					
Potent Cap.:	662	xxxx	xxxxx	xxxx	xxxx	xxxxx							69	xxxx		274	xxxx	xxxx	xxxxx					
Move Cap.:	662	xxxx	xxxxx	xxxx	xxxx	xxxxx							69	xxxx		274	xxxx	xxxx	xxxxx					
Level Of Service Module:																								
Stopped Del:	10.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	B	*	*	*	*	*	*	*	*	*	*	*												
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	137	xxxxx	xxxx	0	xxxxx												
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	31.9	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	*	*	*	*	*	*	*	D	*	*	*	*												
ApproachDel:	xxxxxx			xxxxxx			31.9			xxxxxx														
ApproachLOS:	*			*			D			*														

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 Molalla/Beverly S

Average Delay (sec/veh): 65.5 Worst Case Level Of Service: F

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	1	0	0	1	0		1	0	0	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	7	820	1				4	978	3				4	0	5				5	0	3			
Growth Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
Initial Bse:	7	820	1				4	978	3				4	0	5				5	0	3			
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	0.93	0.93	0.93				0.93	0.93	0.93				0.93	0.93	0.93				0.93	0.93	0.93			
PHF Volume:	8	886	1				4	1056	3				4	0	5				5	0	3			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
Final Vol.:	8	886	1				4	1056	3				4	0	5				5	0	3			
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx				4.1	xxxx	xxxxx				7.1	xxxx		6.2			7.1	xxxx		6.2		
FollowUpTim:	2.2	xxxx	xxxxx				2.2	xxxx	xxxxx				3.5	xxxx		3.3			3.5	xxxx		3.3		
Capacity Module:																								
Cnflict Vol:	1059	xxxx	xxxxx				887	xxxx	xxxxx				1969	xxxx		1058			1970	xxxx		886		
Potent Cap.:	665	xxxx	xxxxx				772	xxxx	xxxxx				48	xxxx		276			47	xxxx		346		
Move Cap.:	665	xxxx	xxxxx				772	xxxx	xxxxx				46	xxxx		276			46	xxxx		346		
Level Of Service Module:																								
Stopped Del:	10.5	xxxx	xxxxx				9.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx									
LOS by Move:	B	*	*				A	*	*	*	*	*	*	*	*									
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx	xxxx	86	xxxxx	xxxx	68	xxxxx									
Shrd StpDel:	xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx	xxxxx	51.9	xxxxx	xxxxx	65.5	xxxxx									
Shared LOS:	*	*	*				*	*	*	*	F	*	*	F	*									
ApproachDel:	xxxxxx						xxxxxx			51.9			65.5											
ApproachLOS:	*						*			F			F											

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #3 Molalla/Warner-Milne

Cycle (sec):	100	Critical Vol./Cap. (X):	0.576
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	20.6
Optimal Cycle:	55	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	0	1 0	0 1	0	0 1!	0 0
Volume Module:												
Base Vol:	91	649	14	10	798	153	173	13	134	18	9	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	91	649	14	10	798	153	173	13	134	18	9	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	100	710	15	11	873	167	189	14	147	20	10	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	100	710	15	11	873	167	189	14	147	20	10	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	100	710	15	11	873	167	189	14	147	20	10	5
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.93	0.93	0.96	0.96	0.85	0.86	0.86	0.86
Lanes:	1.00	1.96	0.04	1.00	1.68	0.32	0.93	0.07	1.00	0.57	0.29	0.14
Final Sat.:	1805	3525	74	1805	2958	566	1691	125	1615	930	465	232
Capacity Analysis Module:												
Vol/Sat:	0.06	0.20	0.20	0.01	0.30	0.30	0.11	0.11	0.09	0.02	0.02	0.02
Crit Moves:	****				****			****			****	
Green/Cycle:	0.10	0.59	0.59	0.02	0.51	0.51	0.19	0.19	0.19	0.04	0.04	0.04
Volume/Cap:	0.58	0.34	0.34	0.34	0.58	0.58	0.58	0.58	0.47	0.58	0.58	0.58
Uniform Del:	43.2	10.5	10.5	48.5	16.9	16.9	36.6	36.6	35.7	47.4	47.4	47.4
IncremntDel:	4.7	0.1	0.1	6.2	0.5	0.5	2.3	2.3	1.1	12.9	12.9	12.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	47.9	10.6	10.6	54.7	17.3	17.3	38.9	38.9	36.8	60.2	60.2	60.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	47.9	10.6	10.6	54.7	17.3	17.3	38.9	38.9	36.8	60.2	60.2	60.2
DesignQueue:	5	17	0	1	25	5	9	1	7	1	1	0

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #4 Molalla/Hilltop Shoppiing Center

Cycle (sec):	120	Critical Vol./Cap. (X):	0.402
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	6.9
Optimal Cycle:	36	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 0	1 0	0	0 1!	0 0
Volume Module:												
Base Vol:	13	696	0	0	987	40	0	0	74	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	696	0	0	987	40	0	0	74	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	14	742	0	0	1052	43	0	0	79	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	14	742	0	0	1052	43	0	0	79	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	14	742	0	0	1052	43	0	0	79	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	1.00	0.94	0.94	1.00	1.00	0.85	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	1.00	1.92	0.08	1.00	0.00	1.00	0.00	1.00	0.00
Final Sat.:	1805	3610	0	1900	3447	141	1900	0	1615	0	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.21	0.00	0.00	0.31	0.31	0.00	0.00	0.05	0.00	0.00	0.00
Crit Moves:	****				****				****			
Green/Cycle:	0.02	0.78	0.00	0.00	0.76	0.76	0.00	0.00	0.12	0.00	0.00	0.00
Volume/Cap:	0.40	0.26	0.00	0.00	0.40	0.40	0.00	0.00	0.40	0.00	0.00	0.00
Uniform Del:	58.2	3.7	0.0	0.0	5.0	5.0	0.0	0.0	48.7	0.0	0.0	0.0
IncremntDel:	7.4	0.1	0.0	0.0	0.1	0.1	0.0	0.0	1.3	0.0	0.0	0.0
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	65.6	3.8	0.0	0.0	5.1	5.1	0.0	0.0	50.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	65.6	3.8	0.0	0.0	5.1	5.1	0.0	0.0	50.0	0.0	0.0	0.0
DesignQueue:	1	12	0	0	18	1	0	0	5	0	0	0

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #5 Molalla/Beaver Creek

Cycle (sec):	120	Critical Vol./Cap. (X):	0.691
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	40.6
Optimal Cycle:	71	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	276	451	42	376	661	22	60	345	301	56	317	166
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	276	451	42	376	661	22	60	345	301	56	317	166
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	290	473	44	395	694	23	63	362	316	59	333	174
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	290	473	44	395	694	23	63	362	316	59	333	174
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	290	473	44	395	694	23	63	362	316	59	333	174
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.95	0.95	0.95	0.88	0.88	0.95	0.95	0.85
Lanes:	1.00	1.83	0.17	1.00	1.94	0.06	1.00	1.07	0.93	1.00	2.00	1.00
Final Sat.:	1805	3260	303	1805	3477	115	1805	1793	1565	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.16	0.15	0.15	0.22	0.20	0.20	0.03	0.20	0.20	0.03	0.09	0.11
Crit Moves:		****		****				****		****		
Green/Cycle:	0.23	0.21	0.21	0.32	0.29	0.29	0.09	0.29	0.29	0.05	0.25	0.56
Volume/Cap:	0.68	0.69	0.69	0.69	0.68	0.68	0.37	0.69	0.69	0.69	0.37	0.19
Uniform Del:	41.8	43.8	43.8	35.8	37.6	37.6	51.1	37.6	37.6	56.3	37.5	12.8
IncremntDel:	4.6	2.8	2.8	3.6	1.9	1.9	1.4	2.1	2.1	21.4	0.3	0.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	46.4	46.6	46.6	39.4	39.5	39.5	52.5	39.8	39.8	77.7	37.8	12.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.4	46.6	46.6	39.4	39.5	39.5	52.5	39.8	39.8	77.7	37.8	12.9
DesignQueue:	15	26	2	19	34	1	4	18	16	4	17	5

Scenario Report

Scenario:	AM Total
Command:	AM Total
Volume:	AM Existing
Geometry:	Approved
Impact Fee:	Default Impact Fee
Trip Generation:	AM Proposed
Trip Distribution:	Dist
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 1 Molalla/Beverly N.	C	21.2	0.000	C	20.2	0.000	+ 0.000 V/C
# 2 Molalla/Beverly S	C	17.1	0.000	C	18.4	0.000	+ 0.000 V/C
# 3 Molalla/Warner-Milne	B	18.2	0.374	B	18.5	0.379	+ 0.257 D/V
# 4 Molalla/Hilltop Shoppiing Cent	A	6.3	0.177	A	6.3	0.180	-0.070 D/V
# 5 Molalla/Beaver Creek	D	38.3	0.612	D	38.3	0.613	-0.015 D/V

Level Of Service Computation Report
1997 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Molalla/Beverly N.

Average Delay (sec/veh): 20.2 Worst Case Level Of Service: C

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	1	0	0	1	0		1	0	0	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	1	700	0				0	520	2				3		0		2		0		0		0	
Growth Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	1	700	0				0	520	2				3		0		2		0		0		0	
Added Vol:	6	1	0				0	5	3				0		0		1		0		0		0	
PasserByVol:	0	0	0				0	0	0				0		0		0		0		0		0	
Initial Fut:	7	701	0				0	525	5				3		0		3		0		0		0	
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	0.90	0.90	0.90				0.90	0.90	0.90				0.90		0.90		0.90		0.90		0.90		0.90	
PHF Volume:	8	779	0				0	583	6				3		0		3		0		0		0	
Reduct Vol:	0	0	0				0	0	0				0		0		0		0		0		0	
Final Vol.:	8	779	0				0	583	6				3		0		3		0		0		0	
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx		6.4	xxxx		6.2	xxxxx	xxxx	xxxxx										
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx		3.5	xxxx		3.3	xxxxx	xxxx	xxxxx										
Capacity Module:																								
Cnflict Vol:	589	xxxx	xxxxx	xxxx	xxxx	xxxxx		1381	xxxx		586	xxxx	xxxx	xxxxx										
Potent Cap.:	996	xxxx	xxxxx	xxxx	xxxx	xxxxx		161	xxxx		514	xxxx	xxxx	xxxxx										
Move Cap.:	996	xxxx	xxxxx	xxxx	xxxx	xxxxx		160	xxxx		514	xxxx	xxxx	xxxxx										
Level Of Service Module:																								
Stopped Del:	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*												
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT														
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	244	xxxxx	xxxx	0	xxxxx												
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	20.2	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	*	*	*	*	*	*	*	C	*	*	*	*												
ApproachDel:	xxxxxx			xxxxxx			20.2			xxxxxx														
ApproachLOS:	*			*			C			*														

Level Of Service Computation Report
1997 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Molalla/Beverly S

Average Delay (sec/veh): 18.4 Worst Case Level Of Service: C

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	1	0	0	1	0		1	0	0	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	1	700	0				0	520	1				2		0		4		0		0		0	
Growth Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	1	700	0				0	520	1				2		0		4		0		0		0	
Added Vol:	9	6	0				0	1	5				1		0		1		0		0		0	
PasserByVol:	0	0	0				0	0	0				0		0		0		0		0		0	
Initial Fut:	10	706	0				0	521	6				3		0		5		0		0		0	
User Adj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	0.90	0.90	0.90				0.90	0.90	0.90				0.90		0.90		0.90		0.90		0.90		0.90	
PHF Volume:	11	784	0				0	579	7				3		0		6		0		0		0	
Reduct Vol:	0	0	0				0	0	0				0		0		0		0		0		0	
Final Vol.:	11	784	0				0	579	7				3		0		6		0		0		0	
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx		6.4	xxxx		6.2	xxxxx	xxxx	xxxxx										
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx		3.5	xxxx		3.3	xxxxx	xxxx	xxxxx										
Capacity Module:																								
Cnflict Vol:	586	xxxx	xxxxx	xxxx	xxxx	xxxxx		1389	xxxx		582	xxxx	xxxx	xxxxx										
Potent Cap.:	999	xxxx	xxxxx	xxxx	xxxx	xxxxx		159	xxxx		516	xxxx	xxxx	xxxxx										
Move Cap.:	999	xxxx	xxxxx	xxxx	xxxx	xxxxx		157	xxxx		516	xxxx	xxxx	xxxxx										
Level Of Service Module:																								
Stopped Del:	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*												
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT														
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	278	xxxxx	xxxx	0	xxxxx												
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	18.4	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	*	*	*	*	*	*	*	C	*	*	*	*												
ApproachDel:	xxxxxx			xxxxxx			18.4			xxxxxx														
ApproachLOS:	*			*			C			*														

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #3 Molalla/Warner-Milne

Cycle (sec):	100			Critical Vol./Cap. (X):		0.379	
Loss Time (sec):	16	(Y+R =	4 sec)	Average Delay (sec/veh):		18.5	
Optimal Cycle:	42			Level Of Service:		B	

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	0 1	0 0	1!	0 0
Volume Module:												
Base Vol:	79	592	2	6	390	131	111	4	59	5	5	6
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	79	592	2	6	390	131	111	4	59	5	5	6
Added Vol:	0	9	0	0	1	1	6	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	79	601	2	6	391	132	117	4	59	5	5	6
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	93	706	2	7	459	155	137	5	69	6	6	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	93	706	2	7	459	155	137	5	69	6	6	7
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	93	706	2	7	459	155	137	5	69	6	6	7
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.91	0.91	0.95	0.95	0.85	0.84	0.84	0.84
Lanes:	1.00	1.99	0.01	1.00	1.50	0.50	0.96	0.04	1.00	0.31	0.32	0.37
Final Sat.:	1805	3600	10	1805	2596	877	1749	64	1615	502	502	585
Capacity Analysis Module:												
Vol/Sat:	0.05	0.20	0.20	0.00	0.18	0.18	0.08	0.08	0.04	0.01	0.01	0.01
Crit Moves:	****				****			****			****	
Green/Cycle:	0.14	0.59	0.59	0.01	0.47	0.47	0.21	0.21	0.21	0.03	0.03	0.03
Volume/Cap:	0.38	0.33	0.33	0.33	0.38	0.38	0.38	0.38	0.21	0.38	0.38	0.38
Uniform Del:	39.4	10.4	10.4	49.0	17.3	17.3	34.2	34.2	32.9	47.5	47.5	47.5
IncremntDel:	1.0	0.1	0.1	9.1	0.1	0.1	0.6	0.6	0.3	4.8	4.8	4.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	40.4	10.5	10.5	58.1	17.5	17.5	34.8	34.8	33.2	52.2	52.2	52.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.4	10.5	10.5	58.1	17.5	17.5	34.8	34.8	33.2	52.2	52.2	52.2
DesignQueue:	5	17	0	0	14	5	6	0	3	0	0	0

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #4 Molalla/Hilltop Shoppling Center

Cycle (sec):	120			Critical Vol./Cap. (X):		0.180	
Loss Time (sec):	12	(Y+R =	4 sec)	Average Delay (sec/veh):		6.3	
Optimal Cycle:	27			Level Of Service:		A	

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	0 0	1!	0 0
Volume Module:												
Base Vol:	15	457	0	0	339	26	16	0	23	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	457	0	0	339	26	16	0	23	0	0	0
Added Vol:	0	9	0	0	1	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	15	466	0	0	340	26	16	0	23	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
PHF Volume:	17	526	0	0	384	29	18	0	26	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	17	526	0	0	384	29	18	0	26	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	17	526	0	0	384	29	18	0	26	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	1.00	0.94	0.94	0.95	1.00	0.85	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	1.00	1.86	0.14	1.00	0.00	1.00	0.00	1.00	0.00
Final Sat.:	1805	3610	0	1900	3323	251	1805	0	1615	0	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.15	0.00	0.00	0.12	0.12	0.01	0.00	0.02	0.00	0.00	0.00
Crit Moves:		****		****					****			
Green/Cycle:	0.06	0.81	0.00	0.00	0.75	0.75	0.09	0.00	0.09	0.00	0.00	0.00
Volume/Cap:	0.15	0.18	0.00	0.00	0.15	0.15	0.11	0.00	0.18	0.00	0.00	0.00
Uniform Del:	53.4	2.5	0.0	0.0	4.3	4.3	50.2	0.0	50.5	0.0	0.0	0.0
IncremntDel:	0.7	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.6	0.0	0.0	0.0
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	54.1	2.6	0.0	0.0	4.3	4.3	50.5	0.0	51.1	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.1	2.6	0.0	0.0	4.3	4.3	50.5	0.0	51.1	0.0	0.0	0.0
DesignQueue:	1	7	0	0	7	0	1	0	2	0	0	0

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #5 Molalla/Beaver Creek

Cycle (sec):	120	Critical Vol./Cap. (X):	0.613
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	38.3
Optimal Cycle:	61	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	2	0 1
Volume Module:												
Base Vol:	200	380	66	160	389	67	34	210	188	124	356	185
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	200	380	66	160	389	67	34	210	188	124	356	185
Added Vol:	0	5	0	1	1	0	0	0	0	0	0	5
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	200	385	66	161	390	67	34	210	188	124	356	190
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
PHF Volume:	248	478	82	200	484	83	42	261	234	154	442	236
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	248	478	82	200	484	83	42	261	234	154	442	236
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	248	478	82	200	484	83	42	261	234	154	442	236
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.93	0.93	0.95	0.88	0.88	0.95	0.95	0.85
Lanes:	1.00	1.71	0.29	1.00	1.71	0.29	1.00	1.05	0.95	1.00	2.00	1.00
Final Sat.:	1805	3014	517	1805	3014	517	1805	1768	1585	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.14	0.16	0.16	0.11	0.16	0.16	0.02	0.15	0.15	0.09	0.12	0.15
Crit Moves:	****				****			****		****		
Green/Cycle:	0.22	0.29	0.29	0.20	0.26	0.26	0.06	0.24	0.24	0.14	0.32	0.52
Volume/Cap:	0.61	0.55	0.55	0.55	0.61	0.61	0.38	0.61	0.61	0.61	0.38	0.28
Uniform Del:	41.9	36.3	36.3	43.2	38.9	38.9	54.2	40.6	40.6	48.6	31.7	16.2
IncremntDel:	2.8	0.7	0.7	1.9	1.2	1.2	2.2	1.4	1.4	4.4	0.2	0.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	44.6	37.0	37.0	45.1	40.1	40.1	56.4	42.0	42.0	53.0	31.9	16.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.6	37.0	37.0	45.1	40.1	40.1	56.4	42.0	42.0	53.0	31.9	16.4
DesignQueue:	13	24	4	11	25	4	3	14	12	9	21	8

Scenario Report

Scenario:	PM Total
Command:	PM Total
Volume:	PM Existing
Geometry:	Approved
Impact Fee:	Default Impact Fee
Trip Generation:	PM Proposed
Trip Distribution:	Dist
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 1 Molalla/Beverly N.	D	31.9	0.000	E	35.5	0.000	+ 0.000 V/C
# 2 Molalla/Beverly S	F	65.5	0.000	F	69.5	0.000	+ 0.000 V/C
# 3 Molalla/Warner-Milne	C	20.6	0.576	C	20.6	0.582	-0.001 D/V
# 4 Molalla/Hilltop Shoppiing Cent	A	6.9	0.402	A	6.8	0.405	-0.027 D/V
# 5 Molalla/Beaver Creek	D	40.6	0.691	D	40.7	0.694	+ 0.041 D/V

Level Of Service Computation Report
1997 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Molalla/Beverly N.

Average Delay (sec/veh): 35.5 Worst Case Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	0	1 0	1 0	0	1 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	4	835	0	0	978	3	1	0	2	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	835	0	0	978	3	1	0	2	0	0	0
Added Vol:	1	4	0	0	1	1	3	0	5	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	839	0	0	979	4	4	0	7	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	5	910	0	0	1062	4	4	0	8	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	5	910	0	0	1062	4	4	0	8	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1066	xxxx	xxxxx	xxxx	xxxx	xxxxx	1985	xxxx	1064	xxxx	xxxx	xxxxx
Potent Cap.:	661	xxxx	xxxxx	xxxx	xxxx	xxxxx	68	xxxx	273	xxxx	xxxx	xxxxx
Move Cap.:	661	xxxx	xxxxx	xxxx	xxxx	xxxxx	68	xxxx	273	xxxx	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	10.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	B	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	130	xxxxx	xxxx	0	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	35.5	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	E	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			35.5			xxxxxx		
ApproachLOS:	*			*			E			*		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Molalla/Beverly S

Average Delay (sec/veh): 69.5 Worst Case Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	0	1 0	1 0	0	1 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	7	820	1	4	978	3	4	0	5	5	0	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	7	820	1	4	978	3	4	0	5	5	0	3
Added Vol:	2	1	0	0	5	1	4	0	8	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	9	821	1	4	983	4	8	0	13	5	0	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	10	887	1	4	1062	4	9	0	14	5	0	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	10	887	1	4	1062	4	9	0	14	5	0	3
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	xxxx	6.2	7.1	xxxx	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	xxxx	3.3	3.5	xxxx	3.3
Capacity Module:												
Cnflict Vol:	1066	xxxx	xxxxx	888	xxxx	xxxxx	1981	xxxx	1064	1986	xxxx	887
Potent Cap.:	661	xxxx	xxxxx	771	xxxx	xxxxx	47	xxxx	273	46	xxxx	346
Move Cap.:	661	xxxx	xxxxx	771	xxxx	xxxxx	45	xxxx	273	43	xxxx	346
Level Of Service Module:												
Stopped Del:	10.5	xxxx	xxxxx	9.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	B	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	94	xxxxx	xxxx	64	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	55.1	xxxxx	xxxxx	69.5	xxxxx
Shared LOS:	*	*	*	*	*	*	*	F	*	*	F	*
ApproachDel:	xxxxxx			xxxxxx			55.1			69.5		
ApproachLOS:	*			*			F			F		

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #3 Molalla/Warner-Milne

Cycle (sec): 100 Critical Vol./Cap. (X): 0.582
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 20.6
Optimal Cycle: 56 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	0	1 0	0 1	0	0 1!	0 0
Volume Module:												
Base Vol:	91	649	14	10	798	153	173	13	134	18	9	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	91	649	14	10	798	153	173	13	134	18	9	5
Added Vol:	0	2	0	0	8	5	1	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	91	651	14	10	806	158	174	13	134	18	9	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	100	712	15	11	882	173	190	14	147	20	10	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	100	712	15	11	882	173	190	14	147	20	10	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	100	712	15	11	882	173	190	14	147	20	10	5
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.93	0.93	0.96	0.96	0.85	0.86	0.86	0.86
Lanes:	1.00	1.96	0.04	1.00	1.67	0.33	0.93	0.07	1.00	0.57	0.29	0.14
Final Sat.:	1805	3525	74	1805	2943	577	1692	125	1615	930	465	232
Capacity Analysis Module:												
Vol/Sat:	0.06	0.20	0.20	0.01	0.30	0.30	0.11	0.11	0.09	0.02	0.02	0.02
Crit Moves:	****				****			****			****	
Green/Cycle:	0.10	0.59	0.59	0.02	0.51	0.51	0.19	0.19	0.19	0.04	0.04	0.04
Volume/Cap:	0.58	0.34	0.34	0.34	0.58	0.58	0.58	0.58	0.47	0.58	0.58	0.58
Uniform Del:	43.3	10.4	10.4	48.5	16.8	16.8	36.7	36.7	35.8	47.4	47.4	47.4
IncremntDel:	5.0	0.1	0.1	6.2	0.5	0.5	2.5	2.5	1.1	13.7	13.7	13.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	48.3	10.5	10.5	54.7	17.3	17.3	39.2	39.2	37.0	61.1	61.1	61.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.3	10.5	10.5	54.7	17.3	17.3	39.2	39.2	37.0	61.1	61.1	61.1
DesignQueue:	5	17	0	1	26	5	9	1	7	1	1	0

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #4 Molalla/Hilltop Shoppiing Center

Cycle (sec): 120 Critical Vol./Cap. (X): 0.405
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 6.8
Optimal Cycle: 36 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 0	1 0	0	0 1!	0 0
Volume Module:												
Base Vol:	13	696	0	0	987	40	0	0	74	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	696	0	0	987	40	0	0	74	0	0	0
Added Vol:	0	2	0	0	8	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	13	698	0	0	995	40	0	0	74	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	14	744	0	0	1061	43	0	0	79	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	14	744	0	0	1061	43	0	0	79	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	14	744	0	0	1061	43	0	0	79	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	1.00	0.94	0.94	1.00	1.00	0.85	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	1.00	1.92	0.08	1.00	0.00	1.00	0.00	1.00	0.00
Final Sat.:	1805	3610	0	1900	3449	140	1900	0	1615	0	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.21	0.00	0.00	0.31	0.31	0.00	0.00	0.05	0.00	0.00	0.00
Crit Moves:	****				****				****			
Green/Cycle:	0.02	0.78	0.00	0.00	0.76	0.76	0.00	0.00	0.12	0.00	0.00	0.00
Volume/Cap:	0.40	0.26	0.00	0.00	0.40	0.40	0.00	0.00	0.40	0.00	0.00	0.00
Uniform Del:	58.2	3.7	0.0	0.0	5.0	5.0	0.0	0.0	48.8	0.0	0.0	0.0
IncremntDel:	7.6	0.1	0.0	0.0	0.1	0.1	0.0	0.0	1.4	0.0	0.0	0.0
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	65.7	3.7	0.0	0.0	5.1	5.1	0.0	0.0	50.1	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	65.7	3.7	0.0	0.0	5.1	5.1	0.0	0.0	50.1	0.0	0.0	0.0
DesignQueue:	1	12	0	0	18	1	0	0	5	0	0	0

Level Of Service Computation Report
1997 HCM Operations Method (Future Volume Alternative)

Intersection #5 Molalla/Beaver Creek

Cycle (sec):	120	Critical Vol./Cap. (X):	0.694
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	40.7
Optimal Cycle:	71	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	2	0 1
Volume Module:												
Base Vol:	276	451	42	376	661	22	60	345	301	56	317	166
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	276	451	42	376	661	22	60	345	301	56	317	166
Added Vol:	0	1	0	4	4	0	0	0	0	0	0	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	276	452	42	380	665	22	60	345	301	56	317	167
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	290	474	44	399	698	23	63	362	316	59	333	175
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	290	474	44	399	698	23	63	362	316	59	333	175
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	290	474	44	399	698	23	63	362	316	59	333	175
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.95	0.95	0.95	0.88	0.88	0.95	0.95	0.85
Lanes:	1.00	1.83	0.17	1.00	1.94	0.06	1.00	1.07	0.93	1.00	2.00	1.00
Final Sat.:	1805	3260	303	1805	3477	115	1805	1793	1565	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.16	0.15	0.15	0.22	0.20	0.20	0.03	0.20	0.20	0.03	0.09	0.11
Crit Moves:		****		****				****		****		
Green/Cycle:	0.23	0.21	0.21	0.32	0.29	0.29	0.09	0.29	0.29	0.05	0.25	0.56
Volume/Cap:	0.68	0.69	0.69	0.69	0.68	0.68	0.38	0.69	0.69	0.69	0.38	0.19
Uniform Del:	41.8	43.9	43.9	35.8	37.5	37.5	51.2	37.8	37.8	56.3	37.6	12.8
IncremntDel:	4.6	2.8	2.8	3.7	1.9	1.9	1.4	2.2	2.2	21.9	0.3	0.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	46.4	46.7	46.7	39.4	39.4	39.4	52.6	39.9	39.9	78.2	37.9	12.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.4	46.7	46.7	39.4	39.4	39.4	52.6	39.9	39.9	78.2	37.9	12.9
DesignQueue:	15	26	2	19	35	1	4	18	16	4	17	5

Scenario Report

Scenario:	2020 Plus Project
Command:	2020 Plus Project
Volume:	2020
Geometry:	2020
Impact Fee:	Default Impact Fee
Trip Generation:	PM Proposed
Trip Distribution:	Dist
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 1 Molalla/Beverly N.	F	58.7	0.000	F	58.7	0.000	+ 0.000 V/C
# 2 Molalla/Beverly S	F	132.7	0.000	F	132.7	0.000	+ 0.000 V/C
# 3 Molalla/Warner-Milne	C	25.7	0.808	C	25.7	0.808	+ 0.000 D/V
# 4 Molalla/Hilltop Shoppiing Cent	A	6.7	0.543	A	6.7	0.543	+ 0.000 D/V
# 5 Molalla/Beaver Creek	D	46.1	0.877	D	46.1	0.877	+ 0.000 D/V

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Molalla/Beverly N.

Average Delay (sec/veh): 58.7 Worst Case Level Of Service: F

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	1	0	1	1	0		1	0	1	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	5	1230		0			0	1430		4			4		0		7		0		0		0	
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	5	1230		0			0	1430		4			4		0		7		0		0		0	
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	0.90	0.90		0.90			0.90	0.90		0.90			0.90		0.90		0.90		0.90		0.90		0.90	
PHF Volume:	6	1367		0			0	1589		4			4		0		8		0		0		0	
Reduct Vol:	0	0		0			0	0		0			0		0		0		0		0		0	
Final Vol.:	6	1367		0			0	1589		4			4		0		8		0		0		0	
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx		6.8	xxxx		6.9	xxxxx	xxxx	xxxxx										
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx		3.5	xxxx		3.3	xxxxx	xxxx	xxxxx										
Capacity Module:																								
Cnflict Vol:	1593	xxxx	xxxxx	xxxx	xxxx	xxxxx	2286	xxxx		797	xxxx	xxxx	xxxxx											
Potent Cap.:	417	xxxx	xxxxx	xxxx	xxxx	xxxxx	34	xxxx		334	xxxx	xxxx	xxxxx											
Move Cap.:	417	xxxx	xxxxx	xxxx	xxxx	xxxxx	34	xxxx		334	xxxx	xxxx	xxxxx											
Level Of Service Module:																								
Stopped Del:	13.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	B	*	*	*	*	*	*	*	*	*	*	*												
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT												
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	79	xxxxx	xxxx	0	xxxxx												
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	58.7	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	*	*	*	*	*	*	*	F	*	*	*	*												
ApproachDel:	xxxxxx			xxxxxx			58.7			xxxxxx														
ApproachLOS:	*			*			F			*														

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 Molalla/Beverly S

Average Delay (sec/veh): 132.7 Worst Case Level Of Service: F

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	1	0	1	1	0		1	0	1	1	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	9	1230		1			4	1430		4			8		0		13		5		0		3	
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	9	1230		1			4	1430		4			8		0		13		5		0		3	
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	0.90	0.90		0.90			0.90	0.90		0.90			0.90		0.90		0.90		0.90		0.90		0.90	
PHF Volume:	10	1367		1			4	1589		4			9		0		14		6		0		3	
Reduct Vol:	0	0		0			0	0		0			0		0		0		0		0		0	
Final Vol.:	10	1367		1			4	1589		4			9		0		14		6		0		3	
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx		4.1	xxxx	xxxxx		7.5	xxxx		6.9		7.5	xxxx		6.9							
FollowUpTim:	2.2	xxxx	xxxxx		2.2	xxxx	xxxxx		3.5	xxxx		3.3		3.5	xxxx		3.3							
Capacity Module:																								
Cnflict Vol:	1593	xxxx	xxxxx		1368	xxxx	xxxxx		2303	xxxx		797		2191	xxxx		684							
Potent Cap.:	417	xxxx	xxxxx		509	xxxx	xxxxx		21	xxxx		334		26	xxxx		396							
Move Cap.:	417	xxxx	xxxxx		509	xxxx	xxxxx		21	xxxx		334		24	xxxx		396							
Level Of Service Module:																								
Stopped Del:	13.8	xxxx	xxxxx		12.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx											
LOS by Move:	B	*	*		B	*	*	*	*	*	*	*	*											
Movement:	LT -	LTR -	RT		LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT											
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	xxxx	49	xxxxx	xxxx	37	xxxxx											
Shrd StpDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	xxxxx	133	xxxxx	xxxxx	129	xxxxx											
Shared LOS:	*	*	*		*	*	*	*	F	*	*	F	*											
ApproachDel:	xxxxxx				xxxxxx			132.7			129.4													
ApproachLOS:	*				*			F			F													

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #3 Molalla/Warner-Milne

Cycle (sec):	100	Critical Vol./Cap. (X):	0.808
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	25.7
Optimal Cycle:	88	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 1	0	0 1	0 0	1!	0 0
Volume Module:												
Base Vol:	125	970	15	15	1190	225	260	15	180	20	10	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	125	970	15	15	1190	225	260	15	180	20	10	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	132	1021	16	16	1253	237	274	16	189	21	11	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	132	1021	16	16	1253	237	274	16	189	21	11	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	132	1021	16	16	1253	237	274	16	189	21	11	5
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.93	0.93	0.96	0.96	0.85	0.86	0.86	0.86
Lanes:	1.00	1.97	0.03	1.00	1.68	0.32	0.94	0.06	1.00	0.57	0.30	0.13
Final Sat.:	1805	3547	56	1805	2963	560	1714	100	1615	924	484	220
Capacity Analysis Module:												
Vol/Sat:	0.07	0.29	0.29	0.01	0.42	0.42	0.16	0.16	0.12	0.02	0.02	0.02
Crit Moves:	****				****			****				****
Green/Cycle:	0.09	0.60	0.60	0.02	0.52	0.52	0.20	0.20	0.20	0.03	0.03	0.03
Volume/Cap:	0.81	0.48	0.48	0.48	0.81	0.81	0.81	0.81	0.59	0.81	0.81	0.81
Uniform Del:	44.6	11.5	11.5	48.6	19.7	19.7	38.3	38.3	36.4	48.3	48.3	48.3
IncremntDel:	24.9	0.2	0.2	10.7	2.8	2.8	12.7	12.7	2.9	65.2	65.2	65.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	69.5	11.6	11.6	59.3	22.4	22.4	51.0	51.0	39.4	113.5	114	113.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	69.5	11.6	11.6	59.3	22.4	22.4	51.0	51.0	39.4	113.5	114	113.5
DesignQueue:	7	25	0	1	37	7	13	1	9	1	1	0

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #4 Molalla/Hilltop Shoppiing Center

Cycle (sec):	120	Critical Vol./Cap. (X):	0.543
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	6.7
Optimal Cycle:	45	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	0 0	1!	0 0
Volume Module:												
Base Vol:	15	1060	0	0	1330	50	25	0	75	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	1060	0	0	1330	50	25	0	75	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	17	1178	0	0	1478	56	28	0	83	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	17	1178	0	0	1478	56	28	0	83	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	17	1178	0	0	1478	56	28	0	83	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	1.00	0.94	0.94	0.95	1.00	0.85	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	1.00	1.93	0.07	1.00	0.00	1.00	0.00	1.00	0.00
Final Sat.:	1805	3610	0	1900	3457	131	1805	0	1615	0	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.33	0.00	0.00	0.43	0.43	0.02	0.00	0.05	0.00	0.00	0.00
Crit Moves:	****				****				****			
Green/Cycle:	0.02	0.81	0.00	0.00	0.79	0.79	0.09	0.00	0.09	0.00	0.00	0.00
Volume/Cap:	0.54	0.41	0.00	0.00	0.54	0.54	0.16	0.00	0.54	0.00	0.00	0.00
Uniform Del:	58.5	3.4	0.0	0.0	4.7	4.7	49.9	0.0	51.8	0.0	0.0	0.0
IncremntDel:	18.0	0.1	0.0	0.0	0.2	0.2	0.5	0.0	3.9	0.0	0.0	0.0
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	76.5	3.5	0.0	0.0	4.9	4.9	50.4	0.0	55.8	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	76.5	3.5	0.0	0.0	4.9	4.9	50.4	0.0	55.8	0.0	0.0	0.0
DesignQueue:	1	17	0	0	23	1	2	0	5	0	0	0

Level Of Service Computation Report
1997 HCM Operations Method (Base Volume Alternative)

Intersection #5 Molalla/Beaver Creek

Cycle (sec):	120	Critical Vol./Cap. (X):	0.877
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	46.1
Optimal Cycle:	118	Level Of Service:	D

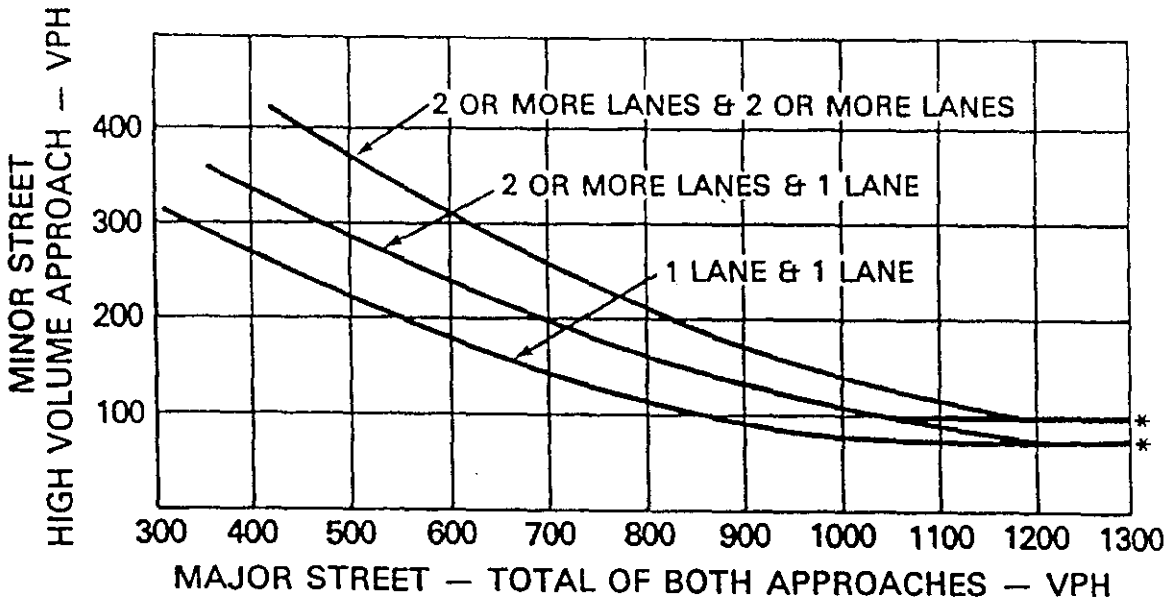
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	2	0 1
Volume Module:												
Base Vol:	350	570	50	435	995	25	75	400	305	65	350	435
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	350	570	50	435	995	25	75	400	305	65	350	435
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	368	600	53	458	1047	26	79	421	321	68	368	458
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	368	600	53	458	1047	26	79	421	321	68	368	458
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	368	600	53	458	1047	26	79	421	321	68	368	458
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.95	0.95	0.95	0.89	0.89	0.95	0.95	0.85
Lanes:	1.00	1.84	0.16	1.00	1.95	0.05	1.00	1.13	0.87	1.00	2.00	1.00
Final Sat.:	1805	3277	289	1805	3508	87	1805	1915	1460	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.20	0.18	0.18	0.25	0.30	0.30	0.04	0.22	0.22	0.04	0.10	0.28
Crit Moves:	****				****			****		****		
Green/Cycle:	0.23	0.24	0.24	0.33	0.34	0.34	0.09	0.25	0.25	0.04	0.21	0.54
Volume/Cap:	0.88	0.76	0.76	0.76	0.88	0.88	0.50	0.88	0.88	0.88	0.50	0.53
Uniform Del:	44.4	42.4	42.4	35.8	37.2	37.2	52.2	43.2	43.2	57.1	42.2	17.9
IncremntDel:	18.4	4.1	4.1	5.7	7.4	7.4	2.4	10.2	10.2	62.4	0.5	0.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	62.8	46.5	46.5	41.5	44.6	44.6	54.6	53.4	53.4	119.5	42.7	18.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	62.8	46.5	46.5	41.5	44.6	44.6	54.6	53.4	53.4	119.5	42.7	18.5
DesignQueue:	20	32	3	22	50	1	5	22	17	4	20	15

Site Plan

= 20'

FIGURE 4-6. PEAK HOUR VOLUME WARRANT

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



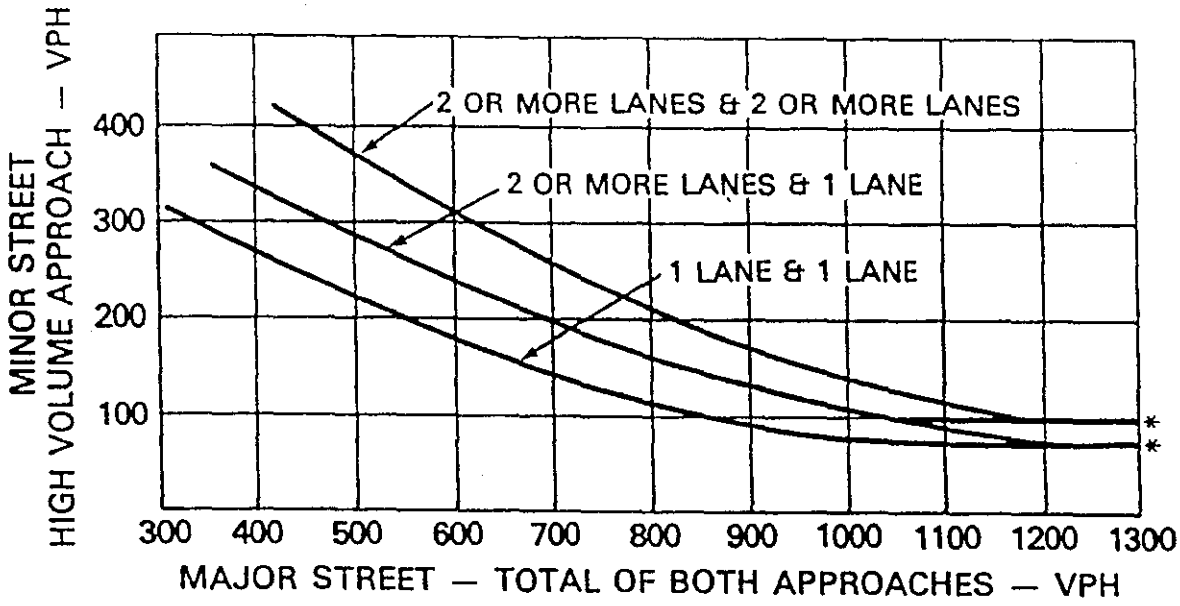
*NOTE: 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Beverly Drive (N) / Melville Ave

Intersection	Analysis Period	Major Street Volume (VPH)	Minor Street High Vol. Approach (VPH)	Is Signal Warranted? (Yes or No)
Total	AM Peak	1232	6	No
Total	PM Peak	1827	11	No
2018	PM Peak	2669	11	No
[illegible]				

FIGURE 4-6. PEAK HOUR VOLUME WARRANT

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)

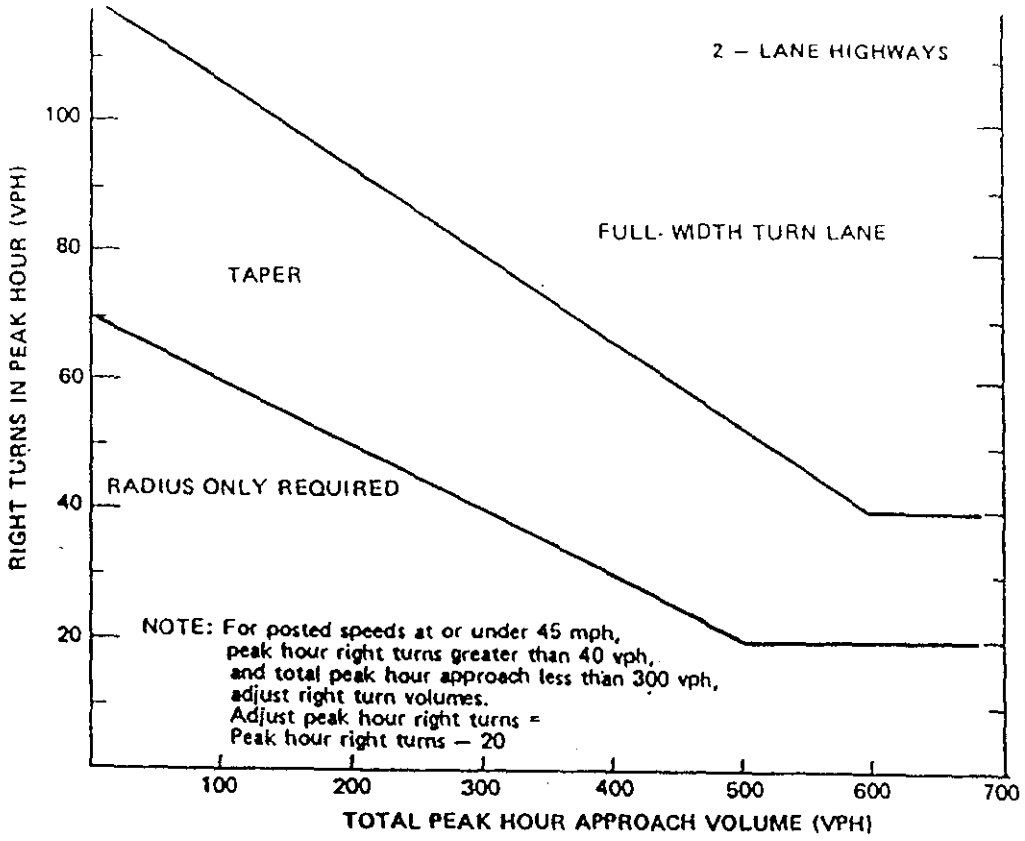


*NOTE: 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Beverly Drive (S) / Mobile Ave

Intersection	Analysis Period	Major Street Volume (VPH)	Minor Street High Vol. Approach (VPH)	Is Signal Warranted? (Yes or No)
Total	AM Peak	1243	8	No
Total	PM Peak	1822	21	No
2018	PM Peak	2678	21	No

Right Turn Lane Warrant for 2 –Lane Highways

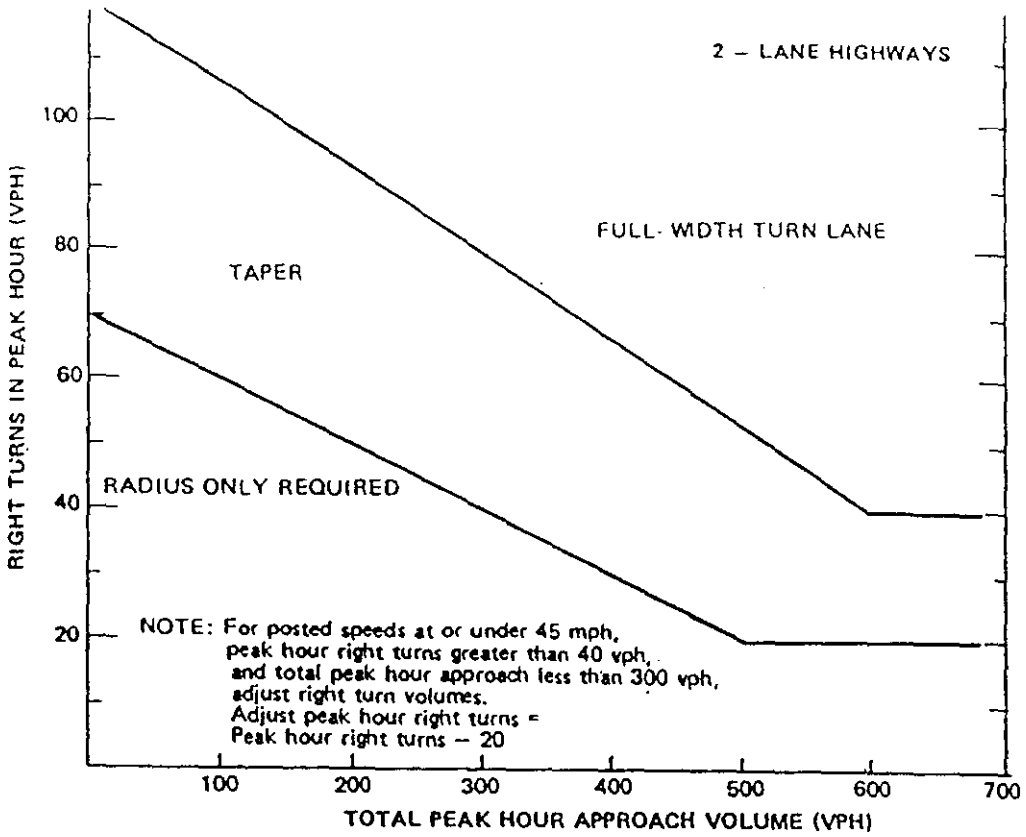


Beverly Drive (N)/Molella Ave

Symbol	Intersection	Total Peak Hour Approach Volume	Right Turns in Peak Hour	Warrant
①	Total - AM	530	5	No
②	Total - PM	983	4	No
③	2018 - PM	1434	4	No

Notes:

Right Turn Lane Warrant for 2 –Lane Highways



Beverly Drive (S) / Molalla Ave

Symbol	Intersection	Total Peak Hour Approach Volume	Right Turns in Peak Hour	Warrant
①	Total - AM	527	6	No
②	Total - PM	987	4	No
③	2018 - PM	1434	4	No

Notes:

ANALYSIS AND FINDINGS

The applicant has proposed to construct a 97,600 S.F. concrete tilt-up office building and parking area. The site is located at 108 Beverly Drive (Tax Map 3-2E-5CA, TL 400) and 194 Beverly Drive (Tax Map 3-2E-5CA, TL 300). There are existing structures on both lots that will require removing prior to constructing the proposed office building. Part of the proposed site improvement includes 16 parking spaces, which includes one handicapped space.

Staff recommends approval of the proposed project provided the following recommendations and conditions of approval are followed:

PROVISION OF PUBLIC SERVICES:

WATER.

There is an existing Oregon City (City) 6-inch cast iron on the west side of Molalla Avenue and a City 15-inch steel water line on the east side of Molalla Avenue. There is a fire hydrant at the intersection of Beverly Drive (southern Beverly Drive) and Molalla Avenue. The Applicant has proposed to connect to the existing 6-inch water line in Beverly Drive. Staff will direct connection to the 15-inch water line in Molalla Avenue during plan review unless the Applicant can provide documentation that the existing 6-inch water line will provide adequate service and fire flows. The Applicant has proposed a water system that appears to meet City code with a few modifications.

SANITARY SEWER.

There is an existing City 8-inch gravity sanitary sewer line in Molalla Avenue. The Applicant has proposed a sanitary sewer lateral that appears to meet City code.

STORM SEWER/DETENTION AND OTHER DRAINAGE FACILITIES.

The site is located in the Newell Drainage Basin as designated in the City's Drainage Master Plan. The submitted site plan proposes to connect the sites proposed detention system to an existing 12-inch storm line in Molalla Avenue. Hydrology/detention and water quality calculations have not been submitted to the City for review. The Applicant has proposed a storm management plan that appears to meet the City code with some revisions.

DEDICATIONS AND EASEMENTS.

Molalla Avenue is classified as a Major Arterial in the Oregon City Transportation Master Plan, which requires a minimum right-of-way width of 80 to 100 feet. Currently the right-of-way width

fronting Molalla Avenue is 60 feet. Beverly Drive is classified as a Local Street in the Oregon City Transportation Master Plan, which requires a minimum right-of-way width of 40 to 50 feet. Currently the right-of-way width fronting Beverly Road is 60 feet.

Conditions:

1. The applicant shall provide a 10-foot wide dedication along the property fronting Molalla Avenue. The applicant shall provide dedications free of easements and encumbrances.

STREETS.

The Applicant proposes to access the site via two driveways located on Beverly Drive and as far away from Molalla Avenue as reasonable. The Applicant has proposed a 10-foot wide dedication along Molalla Avenue, wheel chair ramps, sidewalks and curbs along Beverly Drive. The recently adopted Molalla Avenue Improvement Plan discusses the need for increased access control along Molalla Avenue. The two site accesses onto either side of Beverly Drive conform to the intent of the Molalla Avenue Improvement Plan by not proposing further access to Molalla Avenue.

Conditions:

2. The Applicant proposed only to widening Beverly Drive, therefore the applicant shall verify that the existing structural section of Beverly Drive meets the City's current design standards.
3. This site shall not have any driveway openings to Molalla Avenue.

GRADING AND EROSION CONTROL.

The Applicant has provided a preliminary grading and erosion control plan that appears to meet the City requirements.

GEOTECHNICAL CONSIDERATIONS.

This site is not located in a hydrological, geological, or geotechnical hazard area according to the Geological Hazards Map, therefore no geotechnical report is required at this time.

TRAFFIC AND TRANSPORTATION.

An unknown author prepared a draft of a Traffic Impact Study for this site with DKS Associates. The applicant's traffic study appears to meet most of the City's requirements. The traffic study indicates that the proposed office building will not have a significant impact on the three signalized intersections along Molalla Avenue at Warner-Milne Road, Hilltop Mall, and Beavercreek Road. The study also points out that left turns from Beverly Drive onto Molalla Avenue will experience long delays and lower level of service.

Conditions:

4. The Applicant shall provide a final Traffic Impact Study signed and sealed by a qualified Professional Engineer. The final study shall include the appendices and traffic count data referenced in the report, and intersection calculations for level of service. The study shall also include the documentation to evaluate turn lanes and signal warrants.

ENGINEERING REQUIREMENTS.

Conditions:

5. The Applicant shall sign a Non-Remonstrance Agreement for the purpose of making sanitary sewer, storm sewer, water or street improvements in the future that benefit the Property and assessing the cost to benefited properties pursuant to the City's capital improvement regulations in effect at the time of such improvement.
6. The Applicant is responsible for this project's compliance to Engineering Policy 00-01 (attached). The policies pertain to any land use decision requiring the applicant to provide any public improvements.

H:\WRDFILES\DEAN\STAFFRPT\SP01-02.DOC

DAVID EVANS AND ASSOCIATES, INC.

2828 SW Corbett Avenue
Portland, Oregon 97201
Tel: 503.223.6663
Fax: 503.223.2701

March 16, 2001

Mr. Colin Cooper
Planning Department
City of Oregon City
PO Box 351
Oregon City, OR 97045

SUBJECT: REVIEW OF TRAFFIC IMPACT STUDY
BEVERLY DRIVE OFFICE BUILDING (CARTWILL) – SP01-02 AND ZC01-01

Dear Mr. Cooper:

In response to your request, David Evans and Associates, Inc. has reviewed the 12/28/00 draft Traffic Impact Study (TIS) prepared by an unnamed person from DKS Associates for a proposed office building on Beverly Drive. The site would consist of an office building on Beverly Drive adjacent to Molalla Avenue. The report evaluates three different development scenarios representing different intensities of development. The scenarios involve development under current zoning; the proposed office development (7,600 square feet); and a worst case office development (11,600 square feet).

The applicant analyzed the existing conditions and has done a good job of evaluating near-term conditions by accounting for the plan to restripe Molalla Avenue. I find the report uses reasonable assumptions for distribution of traffic and for trip generation. The report correctly identifies the minor impact of the proposed rezoning and accounts for the predicted increase in the number of vehicle trips that will occur if the proposal is approved.

I agree with the applicant's conclusions that the proposed office development will not have a significant impact on any of the three signalized intersections along Molalla Avenue (Warner-Milne, Hilltop Mall, and Beavercreek). The report points out that left turns from the minor streets (Beverly Drive) onto Molalla Avenue will experience long delays and poor levels of service.

The applicant determined that the intersections would suffer degradation in the level of service by year 2018, but that LOS D or better will be achieved at each of the signalized intersections during the PM peak hour.

The applicant reports evaluating the traffic signal warrants and the need for turn lanes. The appendices referenced in the report were not provided for review, but based on the traffic volumes in the report, I think this is a reasonable conclusion.

I agree with the applicant's suggested mitigation measures. These include locating the site access as far as possible from Molalla Avenue; ensuring that adequate sight distance is maintained through landscaping design and vegetation control; and the construction of frontage improvements on Molalla Avenue and Beverly Drive.

The applicant does need to provide a final report, signed and sealed by a qualified Professional Engineer. The applicant must also provide the appendices referenced in the report including the traffic count data, the intersection calculations for level of service, the materials relating to evaluation of turn lanes and signal warrants. The applicant should refer to city procedures to ensure that all documentation is provided.

EXHIBIT 36

Assuming that such materials are provided and are consistent with the definitive statements in the report, I find that the applicant's traffic impact analysis meets the City's requirements. The applicant should be certain that his analysis and conclusions as stated in the report are fully supported by the background materials and appendices.

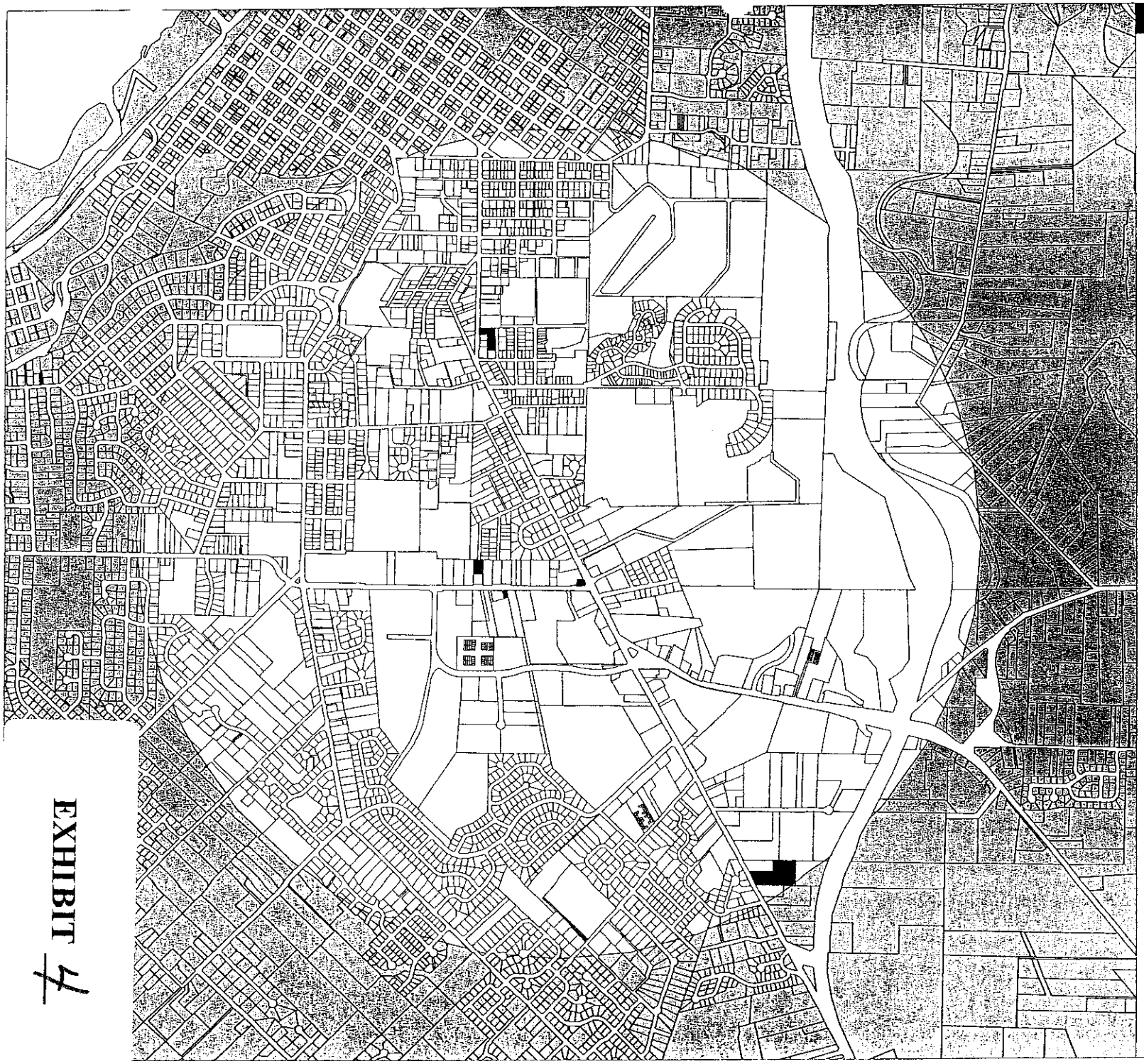
If you have any questions or need any further information concerning this review, please call me at 503-223-6663.

Sincerely,

DAVID EVANS AND ASSOCIATES, INC.

John Replinger, PE
Senior Transportation Engineer

JGRE:jr
o:\project\o\orct0009\correspo\SP01-02.doc



VACANT LO

WITHIN ONE MILE OF THE SITE
SITE MAP# 3S-2E-05CA
TAX LOT 400

VACANT LO

0 500 1000 1500 2000 2500 Feet

1"= 1749 feet

This map is based on digital databases from Metro. Metro cannot accept any responsibility for errors, ommissions, or positional accuracy. There are no warranties, expressed or implied.

Plot date: Aug 19, 2001; gil

EXHIBIT 4

March 15, 2001

2001 MAR 19 PM 5:16
CITY OF OREGON CITY
RECEIVED

To Whom It Concerns;

I have grave concerns Regarding the Re-zoning of the Beverly Drive property and the Alleged proposal to build an office Complex in the midst of A neighborhood Area.

Traffic being one of those concerns. Adding more cars in our small residential area with NO other outlets will Add congestion. At times during "daytime hours", the waiting time to blend into the Molalla Ave. traffic can be up to ten or fifteen minutes. Adding more cars will make entering and exiting Beverly Dr. more difficult and potentially more dangerous. It will also increase the danger for small Children catching the school bus on Molalla Ave at Beverly Drive.

If the entrance of this complex is on Beverly Drive, it will impact traffic of our road but also impact the liveability of the neighborhood.

EXHIBIT 5

I am sadden that growth usally impacts the neighborhoods in ~~a~~ a negative way.

Cindy Hess

Cindy Hess
126 Beverly Dr.
Oregon City, OR
97045

THE RESIDENTS OF BEVERLY DR.

114 BEVERLY DR.
O.C. ORE. 97045
CONTACT PERSON
MARK MILLER
503-655-4798

01 MAR 19 AM 10:38
RECEIVED
CITY OF OREGON CITY

March 16, 2001

TO: CITY OF OREGON CITY,

WE THE FAMILIES ON BEVERLY DR. IN THE GREAT CITY OF OREGON CITY. STRONGLY DISAGREE THAT ANY COMMERCIAL BUILDING BE BUILT IN OUR NEIGHBORHOOD.

WE BELIEVE THAT ANY COMMERCIALIZATION WILL CAUSE THE DECLINE IN OUR FAMILY ATMOSPHERE THAT WE HAVE AND ENJOY. WE ALSO BELIEVE THIS IS A NECESSITY IN OREGON CITY.

OUR CONCERNES ARE :

1. THIS BUISENESS WILL INCREASE TRAFFIC ON OUR ST. AT BEVERLY DR. ; THEREFORE, PUTTING OUR CHILDREN AT GREATER RISK.
2. RIGHT NOW IT IS DIFFICULT TO ENTER TRAFFIC ONTO MOLLALA AVE. FROM BEVERLY DR. , ADDING A BUISENESS WILL MAKE IT EVEN MORE DIFFICULT AND DANGEROUS.
3. THE NOISE LEVEL WILL INCREASE ALSO.
4. ANOTHER MAJOR CONCERN THAT WE HAVE IS IT WILL LOWER THE PROPERTY VALUES IN OUR NEIGHBORHOOD.
5. WE WOULD LIKE TO ADD, WE STRONGLY BELIEVE THERE ARE BETTER SITES MORE SUITABLE FOR THIS BUILDING TO BE BUILT OTHER THAN OUR NEIGHBORHOOD.

THIS IS OUR NEIGHBORHOOD. OUR FAMILIESLIVE HERE AND WE SHOULD HAVE THE LAST SAY. NO BUISENESS TO BE BUILT HERE!

SIGNED , CITIZENS OF BEVERLY DR.

[signature]	114 Beverly DR
Sophia Meade	182 Beverly DR.
Myrtle M. Hefl	119 Beverly Dr.
Lucille F. Imbrock	119 Beverly Dr.
Frieda Lehman	133 Beverly Dr
James Bobbett	137 Beverly Dr.
Fred Hagedorn	142 BEVERLY DR.
Denise Simpkins	143 Beverly Dr.
[signature]	143 Beverly Dr.
Ray Isoonover	153 Beverly DR.
Patricia Johnson	154 Beverly DR.
Kenneth Bobbett	159 Beverly DR.
Lydia Epperson	163 Beverly Dr.
Mike Sarsfield	172 Beverly Dr.
Mark Mendel	181 Beverly DR

EXHIBIT 6

Oregon City Ore
~~March~~ March 17th
2001

To whom it may Concern
I'm against a Business ~~[illegible]~~
going on the street, we have
a hard time trying to
get on ~~[illegible]~~ Molalla. Have
to wait some times as long
as 5 to 10 minutes before
we are able to get on. We
have no other outlet, Children
playing on the street, Seniors
taking walks. You will
be making a hardship for
all of us.

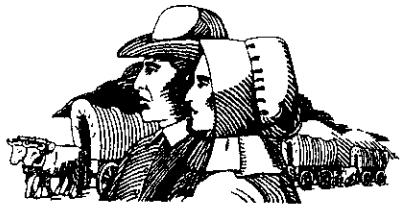
Thank You
Frieda A. Lehman
133 Beverly Dr
Oregon City Ore.

EXHIBIT 7

CITY OF OREGON CITY

PLANNING COMMISSION

320 WARNER MILNE ROAD OREGON CITY, OREGON 97045
TEL 657-0891 FAX 657-7892



STAFF REPORT
Date: April 16, 2001

FILE NO.:	PZ 00-01
HEARING DATE:	April 23, 2001 7:00 p.m., City Hall 320 Warner Milne Road Oregon City, OR 97045
APPLICANT	Morris Womack 19988 Molalla Avenue Oregon City, OR.
OWNER:	Same
REQUEST:	Comprehensive Plan Map Amendment from "I" Industrial to "O" Limited Office. A corresponding request to Rezone the subject site from "C-I" Campus Industrial to "LO" Limited Office is being processed currently (ZC 00-04).
LOCATION:	19988 S. Molalla Avenue, Clackamas County Map 3S-1E-9C, Tax Lots 500 and 501
REVIEWER:	Colin Cooper, AICP, Senior Planner Jay Toll, Senior Engineer
RECOMMENDATION:	**Staff recommends approval of PZ 00-01**

CRITERIA:

Comprehensive Plan:
Section "B" Citizen Participation
Section "D" Commerce and Industry
Section "G" Growth and Urbanization
Section "I" Community Facilities
Section "O" Plan Maintenance and Update

Municipal Code:
Chapter 17. 50 Administration and Procedures

SUMMARY OF ISSUES:

Scope of the Request: The purpose of this application is request a Comprehensive Plan Map Amendment from "I" Industrial to "O" Limited Office. A single-family dwelling and outbuilding currently occupy the subject site. The site was zoned "C-I" Campus Industrial as part of the "South Plateau" Campus Industrial rezone in 1990.

The subject property is approximately one and a half acres in size. The property is located at the northeast corner of the intersection of Highway 213 and Glen Oak Road. Constraints for development of the property include Caufield Creek that runs across the eastern portion of the property, limited access, and relatively small size. Because of these constraints, the applicant concludes that the development of the parcel for industrial land uses is not considered viable.

The subject property contains a single-family dwelling and out buildings. It is anticipated that future development of the property will require that the single-family dwelling be removed.

Summary of Analysis: Given the size of the subject property and the established land use pattern in the vicinity of the site, the proposed Comprehensive Plan Map amendment is a logical change.

The increase in the City's population and residential growth in the southern and southwestern portion of the City provide a growing need for office space in this area. The objective of this request is to provide a Comprehensive Plan designation that allows for a viable and needed commercial land uses not industrial uses, on a constrained property.

Staff has not received a specific development proposal to date. However, the applicant has indicated that potential purchaser of the property would like to build a small medical office building. Upon application for development, the City will require the applicant to meet appropriate standards and provide necessary improvements and facilities to accommodate site development.

BASIC FACTS:

1. The subject property is approximately one and half acres in area and is located at the northeast corner of the intersection of Highway 213 and Glen Oak Road (Exhibit 1). The property is presently designated as "I" Industrial and is zoned "C-I" Campus Industrial District. In addition, the site falls within the Water Quality Resource Overlay Zone.

2. A single-family residence and out building occupies the subject property. Caufield Creek traverses Tax Lot 501 in a south to north direction. The two tax lots subject to this request are cut off from properties to the east and north by Caufield Creek. A Water Resource Review has not been required as part of the proposed Comprehensive Plan Map and Zone Map Amendments. However, any future development of the property will have to comply fully with Oregon City Municipal Code Section 17.49, Water Resource Overlay District.

3. Transmittals on the proposal were sent to various City departments, affected agencies, property owners within 300 feet, and the Citizen Involvement Committee Council (CICC), and the Caufield Neighborhood Association. No written comments have been submitted to the record at the time the staff report was made available.

   The City's Engineering Division (Exhibit 4a), the Traffic Engineer (Exhibit 4b), the Public Works Division Engineer (Exhibit 4c), and the Tualatin Valley Fire & Rescue reviewed the proposal and provided their comments. The received comments are incorporated into the analysis and findings section below.

ANALYSIS AND FINDINGS:

A. Oregon City Comprehensive Plan, Section "O" Plan Maintenance and Update

Section "O" of the Oregon City Comprehensive Plan provides criteria for Comprehensive Plan amendments.

Criterion 1: Does the proposed change conform to State Planning Goals and local goals and policies?

The following Statewide Planning Goals are applicable to this request:

Goal 1 Citizen *Involvement*

The public hearing was advertised and noticed as prescribed by law to be heard by the Planning Commission on April 23, 2001. The public hearing will provide an opportunity for comment and testimony from interested parties.

Goal 2 *Land Use Planning*

The Oregon City Comprehensive Plan was acknowledged by the Land Conservation and Development Commission on April 16, 1982. The applicant's proposal is made under the provisions of that plan and its implementing ordinances. The Comprehensive Plan Designation for the site was changed in 1990 as part of the Periodic Review Process to update the Comprehensive Plan, Ordinance No. 90-158 (Exhibit 6). Notice of proposed amendment to the acknowledged Comprehensive Plan was sent to Department of Land Conservation and Development pursuant to Oregon Revised Statutes 197.610.

Goal 9 *Economic Development*

This goal requires the City to provide for an adequate supply of commercial land to accommodate a variety of commercial uses. The 1996 City of Oregon City Metro Compliance Report indicates that there are approximately 33.3 acres of available Campus Industrial Land and approximately 27 acres of Industrial land available. The same report indicates that there are approximately 7.7 acres of "LO" zoned land available for development within the City of Oregon City Urban Growth Boundary. Staff finds that the redesignation of approximately 1.5 acres of "I" Industrial land to "O" Limited Office will not decrease the opportunity to provide employment opportunities within the City.

The information provided by the applicant ("Public Need Analysis", Exhibit 3) indicates that there is inadequate supply of commercial land located in the area south of the intersections of Beavercreek Road and Highway 213 and Molalla Avenue to service the southern portion of the City of Oregon City.

The applicant states that the population of Oregon City has grown substantially since the adoption of the Oregon City Comprehensive Plan in 1982. Based on Portland State University Center for Population Research data, the City's population has grown from 14,698 to 24,940 or 69.68 percent increase in 10 years. This increase justifies the need for more commercial office land supply in Oregon City.

Given the size of the subject property and the fact that it is physically separated from adjoining properties that are identified as Industrial on the Plan Map, the proposed Comprehensive Plan Map amendment is a logical choice to allow commercial land use with limited impacts.

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Given the size of the subject property and the fact that it is physically separated from adjoining properties that are identified as Industrial on the Plan Map, the proposed Comprehensive Plan Map amendment is a logical choice to allow commercial land use with limited impacts.

The City's Transportation Engineer recommends that Glen Oak Road will have to be improved to allow for left-hand turn access into the site. These improvements will be required prior to approval of any future development. No specific traffic facility improvements are required at this time.

The Engineering Division noted that Glen Oak Road is classified by the existing City Transportation Plan and newly adopted Transportation System Plan as a Collector. Upon future development of the subject property, sidewalks and bike lanes will need to be provided along the entire Glen Oak Road frontage. This would restrict on-street parking within the vicinity of the subject property.

Conclusion: Based on the above analysis, the proposal, as presented by the applicant, has satisfied Criterion 1.

Criterion 2: Is there a public need to be fulfilled by the change?

The applicant has submitted a general statement regarding the public need for the proposed Comprehensive Plan Map as part of the application narrative (Exhibit 2).

In the submitted analysis the applicant points out that the increase in the City's population, coupled with the residential growth pattern in the southern and southwestern portion of the City requires the addition of more office space in this area. The objective of this request is to provide a viable commercial use for constrained land at the intersection of Highway 213 and Glen Oak Road.

Conclusion: Based on the need analysis provided by the applicant, the proposed amendment to the Comprehensive Plan Map would fulfill the need for more medical office space in Oregon City.

Criterion 3: Is the public need best satisfied by the particular change being proposed?

The applicant states that the subject property is best suited for the proposed change because of locational constraints the subject property would have the least impact on the surrounding environmentally sensitive land. The development of the subject property provides for an economy of scale for servicing the growing residential area in southern Oregon City, and for supporting future employment areas in the surrounding industrially-zoned land.

Conclusion: Based on the above analysis, staff finds that the proposed change has satisfied Criterion 3.

Goal 11 *Public Facilities and Services*

This goal requires the City to plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve development in the City.

The City Engineering Division (Exhibit 4a), the Public Works Division (Exhibit 4b), and the Building Division (Exhibit 4d) reviewed the proposal for availability of public services and facilities and utilities.

The Engineering Division indicated that since no new development is proposed, there is no need for additional facilities.

Goal 12 *Transportation*

This goal requires that the City insure a transportation system that supports the City's land uses and provides appropriate facilities to accommodate transportation movements.

The applicant submitted a Traffic Analysis Report (TAR) that was evaluated by the City's Traffic Engineer, who determined that the submitted TAR featuring the worst case scenario is a remote possibility for actual future development. The City's Traffic Engineer reports that the proposed medical office building is in fact a reasonable high traffic generator under the limited office zone proposed.

As previously stated in this report, the applicant has not submitted a specific site development application at this time. The request involves a change in the Comprehensive Plan Map from "I" Industrial to "O" "Limited Office" with a concurrent zone change from the "C-I" Campus Industrial District to the "LO" Limited Office District.

The range of uses allowed in the "LO" zone is limited to office uses and high density residential uses (OCMC Chapter 17.22). Given the size of the subject property, the City's current development standards, and the constraints placed on the property by the Water Resource Overlay Zone, it is unlikely that the subject property could accommodate industrial development.

Criterion 4: Will the change adversely affect the public health, safety, and welfare?

As previously discussed in this report, the public health, safety, and welfare would be positively affected by the proposed amendment due to the concentration of services in this area of the City.

Conclusion: Based on the above analysis, staff finds that the proposed change has satisfied Criterion 4.

Criterion 5: Does the factual information base in the Comprehensive Plan support the change?

The factual information base in the Comprehensive Plan supports the proposed amendment because it would add an opportunity for office development in the southern portion of the City. Section "M" of the Oregon City Comprehensive Plan, Neighborhood Map, states that "Limited Office" areas are planned for medical facilities and limited offices that can serve as a buffer between commercial and residential areas.

Ordinance No. 90-1034

The above cited ordinance was adopted in 1990 as part of the City of Oregon City Periodic Review and amended Section "D" of the Comprehensive Plan by adding locational criteria for siting and design of new Commercial, Limited Commercial, Office, Industrial, and Campus Industrial Areas.

Section "D" Commerce and Industry
Policy 11. (c)

1. ***Office districts are intended for medical facilities, offices, and high density residentially uses.***

No specific uses are proposed current with the proposed rezone. OCMC Section 17.22, limits the permitted uses to professional service office uses. Therefore, any future development proposed for the site would meet this policy.

2. ***Office districts should result in concentrated groupings of uses.***

As described above the subject property is somewhat isolated because it is physically separated from other sites to the north and east by Caufield Creek. The likelihood of assembling this property with those surrounding properties is greatly diminished by the requirements to protect Caufield Creek and to provide a vegetative buffer to the Caufield Creek.

3. ***Office districts should be located along arterial or collector streets and should provide good access.***

The site is located with frontage on State Highway 213, which is classified as a Major Arterial in the City's Transportation Master Plan (TMP). The site also has frontage on Glen Oak Road which is designated as a Collector Street in the City's TMP.

4. ***Use in Office districts shall be designed to protect surrounding residential and historic properties.***

Because no specific development is proposed concurrently with the Comprehensive Plan Map Amendment, Site Plan and Design Review of any development proposed in the future will implement this policy.

Conclusion: Based on the above analysis, staff finds that the proposed change has satisfied Criterion 5.

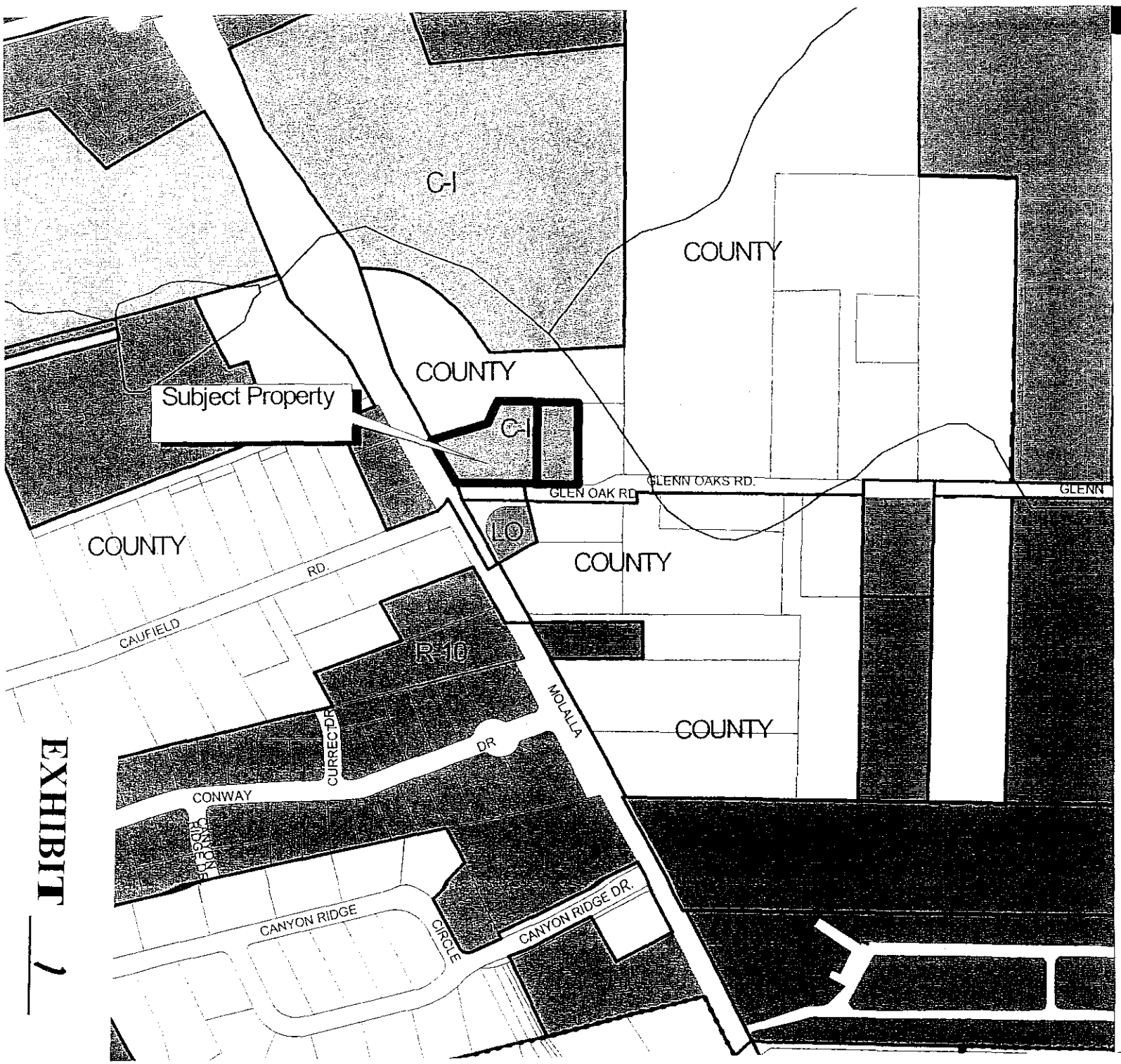
CONCLUSION AND RECOMMENDATION:

Based on the analysis and findings presented in the report, the proposed Comprehensive Plan Map Amendment from "Industrial" to "Office" satisfies the requirements as described in the Oregon City Comprehensive Plan.

Staff recommends that the Planning Commission recommend that the City Commission approve the requested Comprehensive Plan Map Amendment from "Industrial" to "Limited Office", affecting the property identified as Clackamas County Map 3S-2E-9C, Tax Lots 500 & 501.

EXHIBITS:

1. Vicinity Map
2. Applicant's Narrative
3. Applicant's Traffic Analysis
4. Applicant's Site Plan
5. Agency Comments
   a. City Engineering Division
   b. Traffic Engineer
   c. Public Works Division (on file)
   d. Building Division (on file)
   e. Tualatin Valley & Fire Rescue (on file)
6. Ordinance 90-1058



City of Oregon City

GEOGRAPHIC INFORMATION SYSTEM

Vicinity Map

ZC 00-04

0 50 100 150 200 250 Feet

MAP FOR REFERENCE PURPOSES ONLY.
The information on this map is derived from Oregon City's digital database. However, there may be map errors or omissions. Please contact Oregon City directly to verify map information. Notification of any errors will be appreciated.

City of Oregon City
320 Warner Milne Road | Oregon City, Oregon 97045
503 657-0891

Plot date: Apr 3, 2001; g:\gis\users\sean\czone.apr

EXHIBIT 1

...with colored office grade paper.

Ken HOFFMAN INC.
REALTORS®

PROPOSAL: ZONE CHANGE C1 TO LO

Legal Description: map 35-2E-09C tax lots 500 and 501 Clackamas Co.

Applicant: Mr. and Mrs. Morris Womack

Date of Application : 01/01

General information:

A. This is a request for a zoning change from C1 to L.O. District

B. Location: 19988 Molalla Ave. Oregon City, Or. 97045 N.E. corner of Molalla Ave. and Glen Oak road.

C. Property is now zoned Campus Industrial on the Comprehensive Plan Maps.

D. Site information: the property consists of two tax lots of approximately one and one half acres with a 1940's home. There is also one out-building. The structures are of little value and would need to be removed. The property is level with a slight slop to the second tax lot which lies to the east. The property around this location consists of vacant land, residents, and commercial development. The property directly across Glen Oak road to the south is presently zoned L.O. District.

EXHIBIT 2

(503) 655-1711 · Fax 655-2216 · Toll Free 1-888-608-4800 · 9123 SE St. Helens St, Suite 100 · Clackamas, Oregon 97015

Ken HOFFMAN INC.
REALTORS®

Oregon City Comprehensive Plan

Citizen Participation:

This property is subject to the zoning laws of the city of Oregon City. In this process the planning staff and the city commissioners, who are hired by and work for the people of Oregon City, will determine land use. this process allows for public input and open discussions as to the requested land use.

It should be noted that this zoning change is being requested so that a potential buyer would be allowed to construct a medical clinic on the property. The doctors who would be actively using the clinic are servicing Willamette Falls Hospital. They need a clinic close to the hospital so that they can continue to serve the Oregon City and surrounding areas.

Commerce and Industry:

As the population of Oregon City continues to grow, goods and services needs to match this growth as well. The Oregon City Comprehensive Plan addresses this concept by allowing changes and addition to existing land and expanded boundaries. Specifically noted was the land along Molalla Ave. and Hwy 213. This area was mentioned as desirable for commercial services and commerce. To fully serve the people of Oregon City more Office space would fall into this area of expansion. The Comprehensive Plan generally puts aside 20.9% of the usable land in Oregon City for Industry and commercial. Since a change from Campus Industrial to Limited Office District would not affect this percentage, no additional land would need to be found to keep the same percentages as per the Comprehensive Plan. The Comprehensive Plan also notes that additional land designated "Limited Office District" will be needed. The Goals of the Comprehensive Plan also state the following.

A. use of mass transit will be encouraged and this location would be ideal for that pur pose.

B. The type of services being provided from this development are within the Environmental standards as far as air quality, and water standards.

C. This helps promote expansion of the industrial development within the comm- unity, while providing needed services and facilities.

D. Office Districts are intended to be used for many service, including Medical and that is the purpose for this request for zoning change.

(503) 655-1711 · Fax 655-2216 · Toll Free 1-888-608-4800 · 9123 SE St. Helens St, Suite 100 · Clackamas, Oregon 97015

E. Zoning regulation should result in concentrated grouping which help keep business and industry in a given area. Since the property directly across Glen Oak from the subject property is already zoned "Limited Office District" it makes sense to group offices together.

F . Limited Office Districts should be located along arterial or collector streets that provide good access.

G. Limited Office Districts offer a buffer between residents and the busy commercial areas along Molalla Ave.

Natural Resources

The zoning change from Campus Industrial to Limited Office District should really have a beneficial impact on the natural resources. The types of businesses that are allowed in an industrial zoning area are much harder on the environment and natural resources than any other zoning category.

The subject property is a combination of two tax lots. The building sit for the medical clinic is only on the lot that directly boundaries Molalla Ave. The second lot that lies to the East has a small portion of Cauflied creek cuts across the N.E. corner. This would not be effected by any development planned for this sit. All Federal and State clean air and water regulations will be meet without interference

The proposed Medical Clinic would have less of an impact on air standards, water quality, and scenic view than an Industrial sit . This property is not in a flood plan, a landslide area, nor is there any greater concern from seismic activity. The Medical Clinic would not be offensive to the public has far as sight or noise is concerned.

Growth and Urbanization Goals

The request for a zone change for the subject property is consistent with the Comprehensive Plan in all areas. The Plan list six goals and polices that need to be addressed.

1. The plan needs to provide land within the city to accommodate population growth. Our plan would use land that has been scheduled for expansion by the city and to use it in a manner for the good of the public. This Medical Clinic would provide services for the community.

Ken HOFFMAN INC.
REALTORS®

Solid waste disposal: To be handled by the waste management transfer station.

Sewage Systems: The new sewage system is in place along Hwy 213 and is easily accessible to the developer for hook-up. To be done according to building permit.

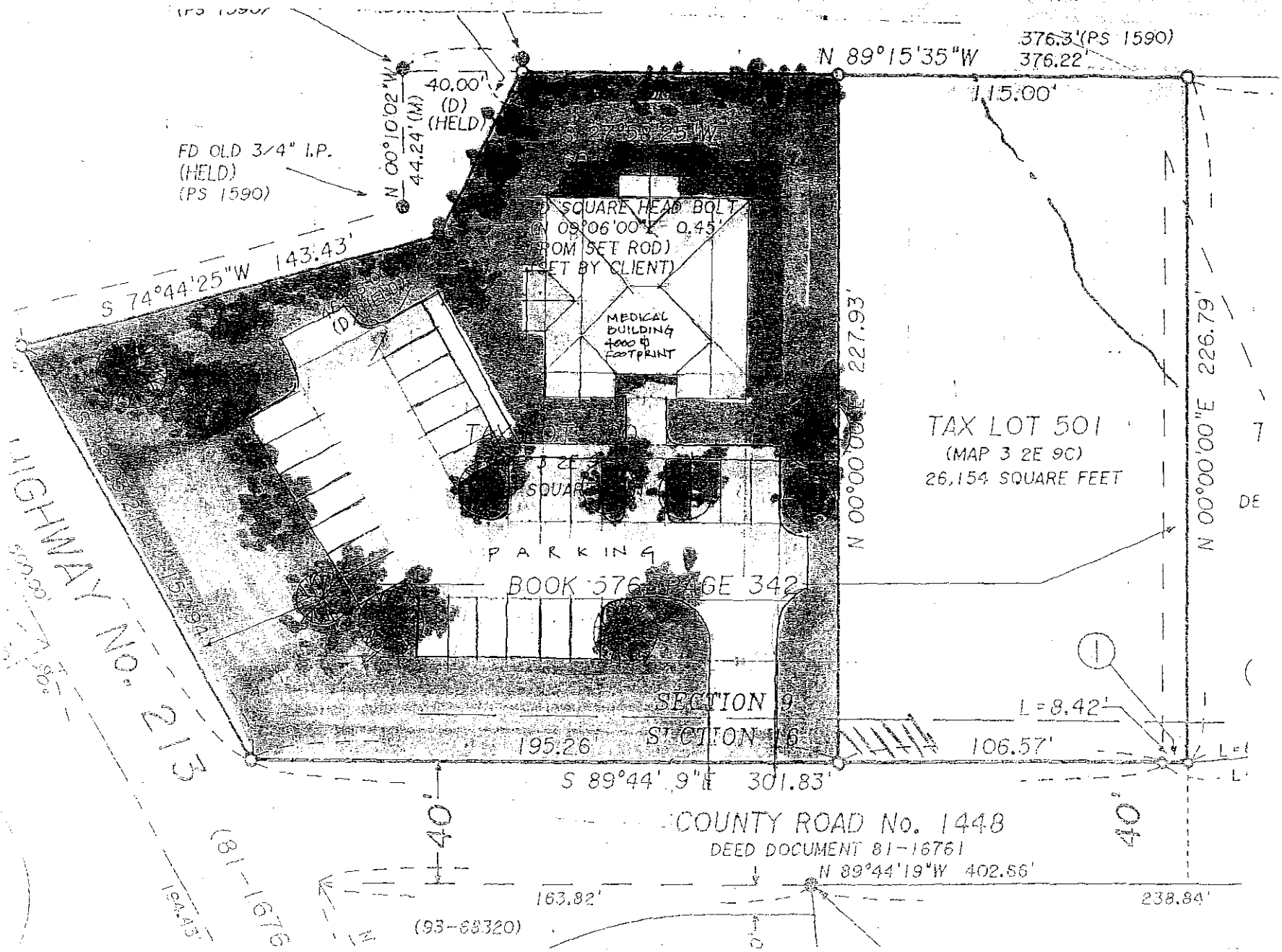
Electricity, Gas, and Telephone: as to building permit, but all utilities are already on the property.

Fire Department: A sub-station is located along Molalla Ave. near the community college. This station is approx. two miles away and is easily accessible on Hwy 213.

Transportation

Since Hwy 213 is now completed up to the Community College entrance, traffic flows south at a faster and easier rate.Mass transit has increased usage along Hwy 213 which makes it easy to access commercial business with less congestion. Hwy 213 has a left hand turn lane on to Glen oak road and the proposed medical clinic will have all off street parking.

HWY 213
OREGON CITY - MOLALLA HWY.
MEYERS RD
RA-2
C-1
C-1
GLEN OAK RD.
GLEN OAK RD.
HWY 213
CAUFIELD
TRAIL
DR


N 89°15'35"W
376.3'(PS 1590)
376.22'
115.00'
N 00°10'02"W
40.00'
(D)
(HELD)
44.24'(M)
FD OLD 3/4" I.P.
(HELD)
(PS 1590)
S 27°55'25"W
"SQUARE HEAD" BOLT
N 09°06'00"E 0.45'
(FROM SET ROD)
(SET BY CLIENT)
MEDICAL BUILDING
4000 ± SQ FT
FOOTPRINT
S 74°44'25"W 143.43'
(D)
TAX LOT 501
(MAP 3 2E 9C)
26,154 SQUARE FEET
227.93'
N 00°00'00"E 226.79'
PARKING
BOOK 576 PAGE 342
SECTION 9
SECTION 16
L=8.42'
195.26'
106.57'
S 89°44'19"E 301.83'
40'
COUNTY ROAD No. 1448
DEED DOCUMENT 81-16761
N 89°44'19"W 402.56'
163.82'
238.84'
(93-68320)
HIGHWAY No. 213
(81-1676)

T

MAJOR ARTERIALS PLANNED

Pacific Highway 99E (McLoughlin Boulevard) is not proposed to change significantly. Beautification improvements are needed in the Downtown area.

Oregon City By-Pass (New Route 213) is the major construction proposal. It would accommodate much of the traffic now passing through Oregon City connecting the Portland area with Beavercreek and Molalla. Some local traffic would also make use of the By-Pass, particularly to and from the Hilltop Neighborhood (which includes industrial, commercial and residential uses). While the By-Pass could act as a major stimulus to growth Southeast of the City, the regional allocation of funds to this project specified that efforts be made to limit the growth inducement generated by the By-Pass.

If the road system is planned as a whole and changes made when the By-Pass is completed, there could be a major benefit in reducing traffic through the older McLoughlin residential area, also a benefit to Ely and Rivercrest area residences. There could also be benefits to businesses along Molalla Avenue and 7th Street through traffic safety improvements.

Singer Hill - 7th Street - Molalla Avenue will continue to function as a major arterial even after completion of the By-Pass, due to the amount of traffic generated along this route. Improvements should be made on Singer Hill (such as the improvements at the top as recommended by the TPM Report) in order to have Singer Hill replace Washington Street as the main route. Improvements along Molalla Avenue are detailed in the Commerce and Industry section of this plan analysis. 7th Street is chosen to remain the major route in the older area because it impacts residential development much less negatively than alternative routes.

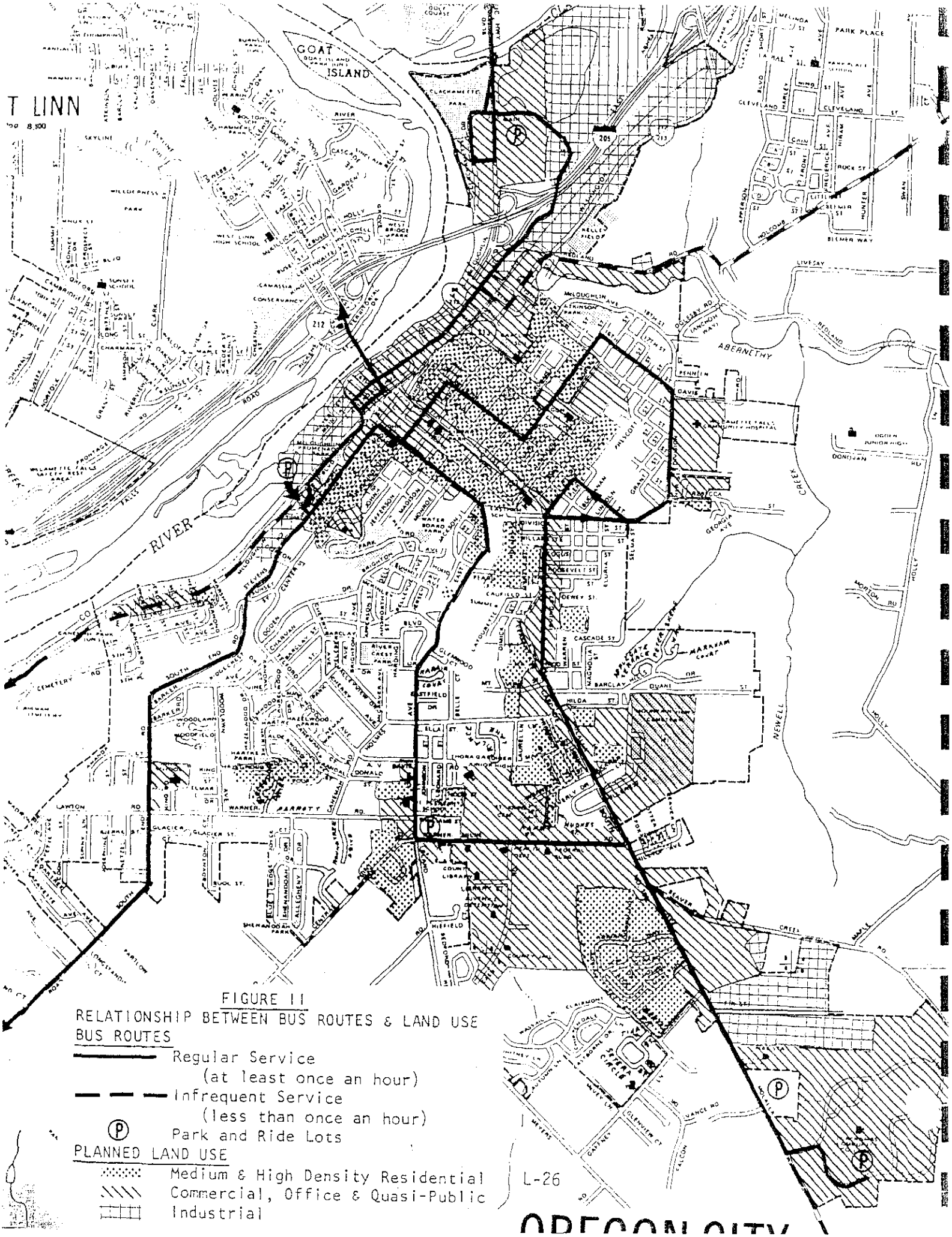


FIGURE 11

RELATIONSHIP BETWEEN BUS ROUTES & LAND USE

BUS ROUTES

——— Regular Service (at least once an hour)

– – – Infrequent Service (less than once an hour)

Ⓟ Park and Ride Lots

PLANNED LAND USE

Medium & High Density Residential

Commercial, Office & Quasi-Public

Industrial

M A S S T R A N S I T

In the "Land Use Policies Plan", Oregon City adopted a general transportation policy to "improve the systems of movement of people and products in accordance with land use planning, energy conservation, neighborhood groups and appropriate public and private agencies". Corresponding to this local goal are the State-wide goals "to provide and encourage a safe, convenient, and economic transportation system", and "to avoid principal reliance on any one mode of transportation". Mass transit, as defined in LCDC Goal 12, "refers to any form of passenger transportation which carries members of the public on a regular and continuing basis".

The need for public transit in Oregon City is based upon the desire to relieve traffic congestion, reduce hazardous auto emissions and conserve fuel by removing numbers of automobiles from the streets. This can be accomplished through a multi-modal transit system, with interfaces between automobile, bus, rail, bicycle, and pedestrian modes of transportation. A single, centralized transit station could provide the needed transferability between these modes.

Incentives to mass transit ridership and disincentives to automobile usage need to be identified and implemented for a transit system to operate effectively. Construction of park-and-ride lots, shelters and lighting along transit routes provides patrons with both convenience and safety. Negative impact of bus service might be reduced by the use of economical mini-buses within the City. These would serve lower density developments and local transit needs.

Continued development of transit should occur as an alternative to Downtown parking. The current Tri-Met reduced fare pass between the Oregon City Shopping Center Park-and Ride lot and Downtown is an example. Future

11. Local public transportation services and transit routes that connect Oregon City to the proposed transit improvements on the McLoughlin Boulevard corridor will be encouraged by the City.

12. Aesthetic improvements will be undertaken on Highway 99E as funding becomes available.

13. Improvements will be made on Singer Hill as funding becomes available in order to have Singer Hill replace Washington Street as the primary traffic route through the McLoughlin Neighborhood.

14. The bikeway on South End Road will be extended to South End School as funding becomes available.

15. An extension from Lawton Road to 99E will be considered to provide sufficient access between the City and Highway.

16. As funding becomes available, the City will develop a three-block long connection between Eluria and Magnolia Streets.

17. Tri-Met will be encouraged to create a multi-modal transportation system which will encourage systems other than automobile usage.

18. Tri-Met will be encouraged to relate mass transit to: high and low density development, needs of low-income and limited mobility persons, and to utilize existing rights-of-way wherever possible.

19. The City will maintain a commitment to a metropolitan-wide public transportation system.

20. The City will cooperate with Tri-Met to improve and expand the public transportation system for Oregon City.

21. Operation of the municipal elevator will be continued and connect with any future transit system.

22. Expansion of rail facilities will relate to areas of industrial land use.

TRANSPORTATION GOALS AND POLICIES

Goal

Improve the systems for movement of people and products in accordance with land use planning, energy conservation, neighborhood groups and appropriate public and private agencies.

Policies

1. The requirements stipulated in the Manual on Uniform Traffic Control Devices and the Oregon Supplement will be followed when installing all new traffic control devices and signing required for construction and maintenance work.

2. The City will consider restricting on-street parking on major arterials, and on-street parking will be prohibited on new major arterials.

3. The provision for adequate off-street parking will be mandatory for all new building construction, and remodeling projects, if appropriate.

4. Curb cuts for vehicle use along new or redeveloped arterial streets will be discouraged.

5. New developments will include sidewalks in their design, where needed.

6. Sidewalks will be of sufficient width to accommodate pedestrian traffic.

7. Use of additional easements or underground utilities for utility poles will be encouraged.

8. Sidewalks will be provided at the minimum along one side of every arterial and collector.

9. Sidewalks will be constructed near schools within the City, and where an existing major thoroughfare is near the school, school crossing signals with pedestrian-actuated buttons will be provided.

10. Extension of the I-205 bikeway South to Oregon City will be considered.

C/F

problems and the extreme difficulties arising from the moratorium on new sewer conditions, the City should give top priority to the solution and implementation of sewer system improvements.

WATER

In contrast to Oregon City's inadequate sewer system, the water system is sufficient. Many of the repairs and new construction recommended in the 1966 Water System Study for Oregon City and the 1974 South Fork Water Board's Water Supply Study have been completed. A map of the system is on file at the Oregon City Planning Department. The current program for updating and expansion of the system should continue. Existing funding mechanisms should be maintained for this purpose.

Water for Oregon City and the Clairmont, Park Place and Holcomb Outlook water districts is supplied by the South Fork Water Board and comes from two major sources: a gravity line from the South Fork of the Clackamas River, and a Park Place treatment plant. The mountain supply may be abandoned in the future due to its age, water quality and maintenance cost.

The South Fork system is owned by the cities of Oregon City and West Linn and is staffed by Oregon City personnel.

Water supply from both sources averaged 4.52 million gallons per day (MGD) in 1978 (2.35 from the plant, 2.16 from the mountain line). Treatment plant capacity was recently increased to 20.0 MGD, sufficient to handle South Fork's future needs (see Table I).

T A B L E I*

SOUTH FORK TREATMENT PLANT WATER SUPPLY

	1978	1994
Average Daily Flow	2.35	8.2
Peak Daily Flow	8.23	20.0
Design Capacity	20.0	20.0

* Figures in Million Gallons per Day (MGD)

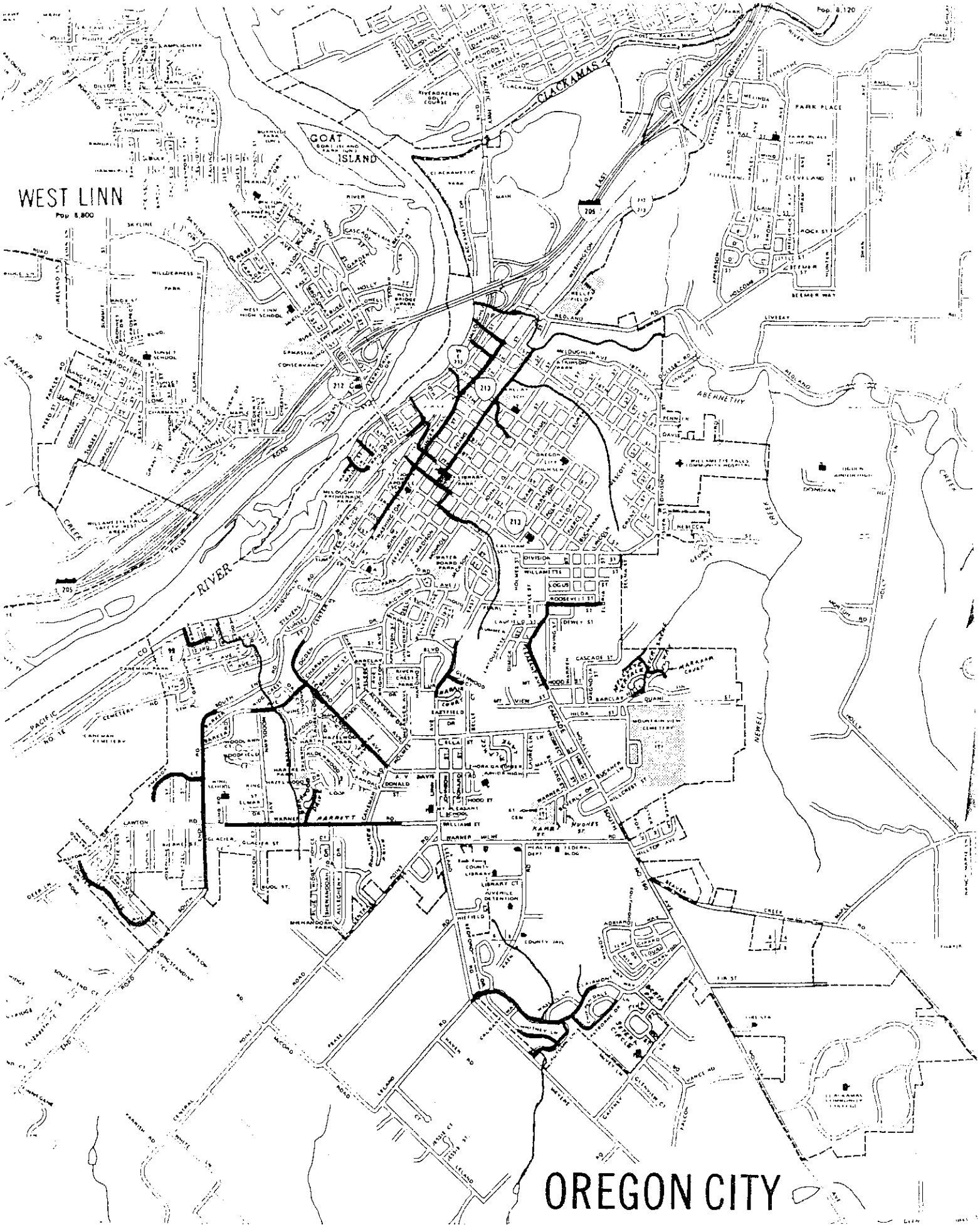
Expansion of the City to the South would largely be in the area served by the Clairmont Water District. If the City expands into the Clackamas Heights area, the Holcomb Outlook and Park Place Water District would also be affected. These districts have different operating and equipment standards than Oregon City's current system. Materials used by the Clairmont, Holcomb Outlook and Park Place Districts for water lines, sizes of lines and types of hydrants are among the system components that should conform with Oregon City's system in order to allow future conversion from rural to urban systems. This is presently not the case. Clackamas County could assist by specifying city-type standards for utilities in new subdivisions, within the City's growth area. Planning and coordination between the City and these districts is necessary to provide an orderly and efficient water system to serve the urbanizable area. This serious problem requires further study at technical, financial and management levels. Failure to coordinate the City's growth with the future of the water districts will lead to increasingly serious problems for all concerned.

STORMWATER DRAINAGE

Extensive urbanization in Oregon City has disrupted the natural flow of storm water along established creeks and gullies leading to the Willamette River. Placement of extensive impervious surfaces has reduced the capacity of the natural drainage system to remove heavy rain water, resulting in higher groundwater tables, periodic flooding and the need for a manmade drainage system.

Oregon City's current sewer system features both combined waste water and storm drainage pipes and separate storm drainage systems linked to natural drainage ways (see Map I-2). During prolonged periods of heavy rain or snow melt, the system tends to overflow into the Willamette River. In addition, a major problem exists in the southern part of the City where storm water drains into the Urban Growth Boundary area administered by Clackamas County.

To alleviate the effects of urban storm water drainage in the future, Oregon City has cooperated with Clackamas County and the cities of West Linn and Gladstone to form the Tri-City Service District. The District will coordinate with Oregon City over a ten-year period to assist in separating the existing combined waste water and storm drainage pipes inside the City. Beyond that effort, the City will require all new residential, commercial and industrial projects to incorporate on-site, separate storm water facilities. The City's overall storm water strategy is to develop a totally separate drainage system that utilizes in-ground pipe linked to the natural drainage ways that flow into the Willamette River.



STORM WATER SYSTEM

FIGURE III

1988 ENGINEERING DEPARTMENT SURVEY

SOLID WASTE (TRASH) DISPOSAL

As outlined in the Metropolitan Service District's (METRO), Solid Waste Management Plan Summary (February, 1977), Oregon City's Rossman Landfill site (Figure III) is currently one of the two sites serving the entire Portland Metropolitan area and can be expected to remain operative until 1981-82. The Metropolitan Service District is being faced with the regional problem of future solid waste disposal sites for the metropolitan area.

A proposal by METRO and Publishers Paper Company has been granted on a conditional use permit by the Oregon City Planning Commission. The proposal is for a resource recovery plant located near the Rossman Landfill. (Figure III)

ELECTRICITY, GAS AND TELEPHONE FACILITIES

Utilities serving or impacting Oregon City are: Portland General Electric, Bonneville Power Administration, Northwest Natural Gas, and Pacific Northwest Bell.

These utilities, which provide electricity, natural gas and telephone services, adequately serve Oregon City's needs. Future expansion of the facilities should be located underground wherever economically and technically feasible to preserve the aesthetic qualities of the area. Local service lines in new subdivisions should be underground. Development of a new program to bury existing power and telephone lines should be encouraged. Such a program will need to be done on a cooperative basis with the utility companies, to determine feasibility both from an economic and technological standpoint.

Sub-stations should be allowed as a conditional use.

The problem of utility poles obstructing city sidewalks, often due to inadequate rights-of-way, is raised in the Transportation section of this Plan.

A map of Portland General Electric facilities is on file at the Oregon City Planning Department.

CLACKAMAS COMMUNITY COLLEGE

Enrollment at Clackamas Community College currently stands at 3,433 students and is projected by the College to double in the next eight years. Expansion of facilities will be necessary to meet the increased demand for higher education. The October 1977 Master Plan Report from the College discussed alternatives to meet this growth.

The College is an asset to the community, providing needed training and enhanced opportunities and understanding. The City encourages the Community College to plan in the future to handle increased traffic load generated by the doubling of the size of the College. The City should support expansion, if it is consistent with good site planning and compatible design. Increased ties to existing and future industries should be encouraged. This could, in turn, increase industrial and commercial job opportunities in the City.

GOVERNMENTAL SERVICES

FIRE DEPARTMENT

The Oregon City Fire Department currently operates two fire stations: the main station at the old City Hall in the McLoughlin Neighborhood, and a sub-station along Molalla Avenue near the Community College.

A new station is desirable to replace the older City Hall facility, which hinders emergency response due to inadequate door widths. However, remodeling of the current facilities should be considered. A new station should be located in the McLoughlin area, at suitable location, including considering the current site. As the City expands to the South, a new station may be needed near South End or Central Point Roads to supplement the service provided by the Molalla Avenue station.

ENERGY CONSERVATION GOALS AND POLICIES

Goal

Plan urban land development which encourages public and private efforts towards conservation of energy.

Policies

1. Promote design (i.e., plat lay-out) of new subdivisions in order to maximize energy conservation efforts. Consideration should be given to Planned Unit Developments or cluster developments. Utilize landscaping to increase the potential for solar benefits.

2. Design transportation systems to conserve energy by considering:
   1) the location of transit services
   2) the construction materials for new streets
   3) the location of commercial uses.

3. Encourage use of carpools and incentive-producing traffic lanes in cooperation with Tri-Met and other state and regional transportation agencies.

4. Encourage the re-use of the existing building stock.

5. Encourage non-petroleum means of transportation by constructing bikeways and sidewalks.

5. Encourage the recycling and resource recovery of materials in the City's operation as well as throughout the community.

GROWTH AND URBANIZATION GOALS AND POLICIES

Goal

Preserve and enhance the natural and developed character of Oregon City and its urban growth area.

Policies

1. Provide land use opportunities within the City and the Urban Growth Boundary to accommodate the projected population increase to the year 2000.

2. Ensure that Oregon City will be responsible for providing the full range of urban services for land annexed to the City within the Urban Growth Boundary.

3. Promote cooperation between the city, county and regional agencies to ensure that urban development is coordinated with public facilities and services within the Urban Growth Boundary.

4. Coordinate land use planning with Clackamas County in accordance with the approved Dual Interest Area Agreement.

5. Urban development proposals on land annexed to the City from Clackamas County will be consistent with the land use classifications and zoning approved in the County's Comprehensive Plan. Rezone requests may be accepted and approved by the City under conditions outlined in this section of the Plan.

6. Rezoning requests involving land annexed to the City from Clackamas County will be processed under the regulations, notification requirements, and hearing procedures used for all zone change requests. However, the burden of proof for a zone change from the land use pattern established by Clackamas County in its Comprehensive Plan will be on the petitioner. The applicant must show that the requested change is (1) consistent and supportive of the County's Comprehensive Plan Goals and Policies; (2) compatible with the general land use pattern for the Urban Growth Boundary area established in the County's Comprehensive Plan Map;

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MR

Potential impacts: Water runoff from paved areas and other pollutants such as oil from cars could be a problem. Removal of perimeter vegetation could also be a potential problem. New construction in any of the areas of the creek should have a setback of 25-30, no structure or non-native vegetation should be constructed or introduced into the transition area. Water runoff problems can be minimize through the requirements of the state plumbing code. Uses allowed within the various zoning districts can be allowed without impacting the resource, provided that transition boundaries and setback requirements are met.

2. Beavercreek and tributaries: (3-2E-17, 17A tl 1002)

Description: It a large stream with several tributaries which include Caufiled Creek, and Little Beavercreek and Camus Creek. Beavercreek cuts across through a canyon at tl 1002 . This property is steep and wooded. It is also located within the urban growth boundary. It is highly unlikely that this property will ever and should ever be developed. Access is very limited and a close inspection of this area was not possible due to the steep terrain.

Potential Conflicts: Development or access to this area of the Beavercreek canyon area may cause serious environmental damage. Access and development should be limited with the criteria as described in the proposed Water Resources Ordinance. All other uses should be minimized.

3. Caufield Creek and tributaries: (3-2E-8,9,17)

Description: Caufield Creek seperates from Beavercreek in the area just north of South Warnock Road. This creek comes into the city limits/urban growth boundary just south of Meyers Road and intersects with a pond on the Tooze property. The creek then proceeds easterly under Highway 213 (in a culvert) and south to properties along South Glen Oak Road. Within the planning boundary, the Tooze pond has been identified as a significant water resource. The area east of Highway 213, the land adjacent to the creek is alder, birch, fir, blackberries, and grasses. The general habitat in the area would provide food sources, roosting, perching and nesting sites. The zoning of properties along the creek are single-family residential on the west side of Highway 213 and on the east side a future industrial area on the north side of S. Glen Oak Road and single family residential on the south side of Glen Oak Road.

Potential conflicts: A future industrial development could utilize Caufield Creek as part of its open space landscaped area and leave the creek intact as a natural area. Potential conflicts would be storm water runoff, public facilities such as a road or public utilities that may be needed to cross the creek. Although a master plan for the industrial areas has not been completed. It is apparent that a preliminary plan should be developed that would show the proposed lay out and location of future roads and other facilities that might have an impact on this resource. This plan could be developed to avoid all areas adjacent to the resource.

COMMERCE AND INDUSTRY

PURPOSE

In 1975, the Land Conservation and Development Commission (LCDC) mandated Statewide Planning Goals. Goal Number 9 seeks to "diversify and improve the economy of the State".

In 1976, Land Use Policies for Oregon City presented the goal for Commerce and Industry to "maintain a healthy and diversified economic community for the supply of goods, services, and employment opportunity". This section will present data and analysis leading to the Comprehensive Plan maps and the implementation ordinances.

HISTORICAL PERSPECTIVE

Oregon City has long had a prominent place in the history of the commerce of Oregon and the Willamette River Valley. From early times, portaging at the Falls created a situation for development. By 1846, both the Barlow Road to The Dalles and the Applegate Route to California were in use. With regular river steamer service in 1850, the City was a hub for the exchange and transfer of goods from the upper and lower River and the land routes on the East side of the River. By 1860, a local railroad went from Canemah to Downtown and to Salem by 1870. Soon after, in 1873, work began on a system of locks to serve boat traffic around the Falls. The first large industry was based on water power; in 1865, the Oregon City Woolen Mill was established. National rail service and the upgrading of other transportation systems, particularly the Interstate Highway system, has created the current fabric for industry and commerce in Oregon City. A principal constraint is the unique topography of the City, which has limited the transportation systems, and constrained growth possibilities of established commercial and industrial sites.

EMPLOYERS IN OREGON CITY

Oregon City is a part of the Portland regional picture, but unlike many cities, it is not principally a "bedroom" for Portland. Employment is strong and diversified. No single employer or sector dominates the picture. Despite a widespread image as a "mill town", both County government and Community College employ more people than the lumber/paper mill. Compared to the entire Portland area, the City is significantly higher in percentage of jobs in government and retail businesses. The City has fewer opportunities available in manufacturing and wholesale places of employment, compared to region-wide employment.

T A B L E I

EMPLOYMENT BY SECTOR IN OREGON CITY

	Total Headquartered in City	%	Total in City	%	Portland[3] SMSA '76 (%)
MANUFACTURING	821	12	821	11	21
CONSTRUCTION	124	2	613	8	4
TRANSPORTATION/ COMMUNICATIONS/UTILITIES[1]	110	2	160	2	7
WHOLESALE	30	0.5	62	1	8
RETAIL	1,700	26	1,764	25	17
FINANCIAL/INSURANCE[2]	239	3.5	239	3	7
SERVICES	1,348	21	1,487	20	20
GOVERNMENT[2]	2,145	33	2,145	30	16
	6,517	100	7,291	100	100

* Includes firms doing business intermittently within the City, especially construction trades and services.

PRIMARY SOURCE: Oregon City Business License Survey, 1978

Note: If there is any inaccuracy in these numbers, they may be understated, since the business license fee is increased if the number of employees reported are increased.

OTHER SOURCES: [1]CRAG Preliminary Employment 75-76 (May 1977)

[2]Direct Survey (No business license required)

[3]Oregon Division of Employment 1976 (no business license required)

GOVERNMENT

In total, 2,145 public employees work in Oregon City in six governmental agencies. The largest non-manufacturing employer in Oregon City is Clackamas Community College, with a range of 750 employees to 850 or more seasonally. Next is Clackamas County, with 630 employees, located at three sites in Oregon City: Red Soils, the County Courthouse, and Abernethy Road offices. Oregon City Schools employ 352 persons and the State of Oregon, 170. The City of Oregon City employs 165, and the Federal Government, 78. The continuation of Oregon City as the focus for County employment and the location of the Community College should assure the strength and continuation of the City's largest employment sector.

HEALTH SERVICES

The Willamette Falls Hospital, located on Division Street in the Buena Vista area, provides employment for 423 people. The location of ten other private physicians, clinics and health care facilities brings the total to 608 employees in the Division Street area.

Many additional medical offices and health support services are located in the McLoughlin Neighborhood. The capital investment in these properties should assure the continuation of these services, but there is pressure to find sites with more land available for expansion and off-street parking. Land has been provided in the Plan, primarily along Molalla Avenue, Division Street, and Warner Milne Road to accommodate the move of some of the medical facilities to larger sites within the community if they so desire.

The historical location of regional health services in Oregon City, including the Willamette Falls Hospital, should guarantee strong health service employment into the future.

RETAIL SALES

Oregon City has traditionally been the centrally located commercial area for Clackamas County. However, the increased use of the automobile and improved transportation systems have increased the traveling distance for the average consumer. New regional shopping centers have pulled business from older established areas with the attraction of malls and free, easy parking. In the face of this movement, Oregon City has so far retained a large retail employment. The retail sector is only second to government in total employment opportunities in Oregon City.

The single largest retail employer is Danielson's Thriftway Complex in Hilltop, with 119 employees. The growth of this complex and the development of Southridge Shopping Center and Fred Meyer's in the same area will provide a strong anchor to the southern development of Molalla Avenue, and continued employment opportunity in the Hilltop Neighborhood.

The Oregon City Shopping Center, located along McLoughlin Boulevard, between I-205 and the Clackamas River Bridge, has a total employment of 374. J.C. Penney's and Payless Drugs, with 114 and 55 employees respectively, are the two largest employers. This is strategically located at the intersection of the Interstate Highway and the principal arterial, but growth (expansion) has stagnated due to the adjacent land not being under the same ownership.

Other significant retail employment is in small to medium-sized businesses, principally in Downtown and along Highway 213.

OTHER OFFICES

Along with health services, Oregon City's office sector contains 23% of the City's employment. Financial institutions, insurance agencies and many services are included in this sector. Many offices, such as law or title insurance offices, are related to the large governmental sector in town.

PROJECTED LAND USE NEEDS

A prime objective of long-range planning is to provide sufficient locations for the desired amount and type of future development. An understanding of current use is the beginning of that process. The current total of commercial and industrial land uses is 203.3 acres, which is 6.7% of the total 3,013 acres in the City.

This proposed Comprehensive Plan designates approximately 629 acres within current City limits for commercial and industrial use.

T A B L E I I I

PROPOSED LAND USE BY PLAN CATEGORY

	ACRES	% OF CITY LAND
LIMITED COMMERCIAL (LC)	25	0.8%
GENERAL COMMERCIAL (C)	292	9.7%
Total Commercial:	317	10.5%
INDUSTRIAL (I)	312	10.4%
Total Commercial & Industrial:	629	20.9%

The proposed Plan also designates 107 acres (3.6%) for Limited Office (O) uses. Additional land for these purposes is projected in the Oregon City area outside the current City limits.

Two projections are developed in this section to ascertain the amount of land which should be reserved for commerce and industry. These types of projections are neither an exact science nor is the data base infallibly accurate. They are intended to give a general picture of the future if current trends in employment and the economy continue.

COMMERCE AND INDUSTRY GOALS AND POLICIES

Goal

Maintain a healthy and diversified economic community for the supply of goods, services and employment opportunity.

Policies

1. As funds and opportunities become available, transportation access to industrial and commercial areas shall be improved to facilitate flow of goods and increase potential customers. Particular attention will focus on relieving congestion on McLoughlin Boulevard (Highway 99E) and Cascade Highway/Molalla Avenue (Highway 213).

2. Use of mass transit will be encouraged between residential and employment areas through coordination with Tri-Met and local employers.

3. Industrial and commercial operations will meet local, regional, State and Federal water and air quality standards, as required by law.

4. Encourage new non-polluting industrial uses (such as those on the State's Target Industries list), particularly along Fir Street.

5. Promote expansion of industrial development within the community's ability to provide adequate facilities and services.

6. Development of industrial areas will include planning for increased truck traffic, landscaping and buffers to separate industry from other land uses.

7. Permit industrial development in the flood plain and on landfills only when the structures are above the one-hundred year flood level or adequately protected, and when specific engineering studies determine structural adequacy on landfills.

8. Encourage continued retail growth by:
    a. Designating land for retail use in areas along or near major arterials and transit lines;
    b. Developing and implementing a Downtown improvement plan to help Downtown retain its position as a major retail district.

(5) Design review standards, including aesthetic signing, should be developed for the commercial areas of the City with particular attention given to the entrances into the community.

(6) Uses in Commercial districts shall be designed to protect surrounding residential properties.

b. Limited Commercial

(1) Limited Commercial districts are intended to provide convenience goods and services, Historic Commercial uses, and Limited Commercial and Office uses within the McLoughlin Neighborhood.

(2) Limited Commercial districts should be located adjacent to arterial or collector streets and should serve adjacent residential areas.

(3) Uses in Limited Commercial districts shall be designed to protect surrounding residential and historic properties.

c. Office

(1) Office districts are intended for medical facilities, offices, and high density residential uses.

(2) Office districts should result in concentrated groupings of uses.

(3) Office districts should be located along arterial or collector streets and should provide good access.

(4) Use in Office districts shall be designed to protect surrounding residential and historic properties.

d. Industrial

(1) Industrial areas are intended for the manufacture, processing and distribution of goods.

(2) Industrial zones shall prohibit Commercial and Offices uses other than those that are clearly accessory uses. Office uses shall be allowed in the Campus Industrial District.

ORDINANCE NO. 90-1034

AN ORDINANCE AMENDING THE POLICIES IN THE COMMERCE AND INDUSTRY ELEMENT OF THE COMPREHENSIVE PLAN TO ADD LOCATIONAL POLICIES FOR COMMERCIAL, LIMITED COMMERCIAL, OFFICE, INDUSTRIAL AND CAMPUS INDUSTRIAL USES AT PAGE D-24.

WHEREAS, ORS 197.640 requires local governments to enact measures to bring their Comprehensive Plans and regulations into compliance with the Periodic review Factors; and

WHEREAS, the Oregon City Planning Commission on May 10, 1990 conducted a public hearing to consider the adoption of the new policies; and

WHEREAS, the Oregon City Planning Commission has recommended the approval of these amendments to meet Periodic Review requirements; and

WHEREAS, the proposed amendments to the Commerce and Industrial Element of the Comprehensive Plan is designed to best meet the land use planning needs of the City.

OREGON CITY ORDAINS AS FOLLOWS:

That the Commerce and Industry Element of the Oregon City Comprehensive Plan, at Page D-24, is hereby amended to add Policy 11 to read as follows:

11. The following policies shall govern the location, siting and design of new Commercial, Limited Commercial, Office Industrial and Campus Industrial areas:

    a. Commercial

        (1) Commercial districts are intended to serve the retail, service, and office needs of the greater Oregon City area.

        (2) Commercial districts should offer good visibility and access and should be located along major arterials and transit lines.

        (3) Commercial districts should result in concentrated groupings of retail, service, and office uses.

        (4) Commercial districts that result in numerous small lots with individual street access points shall be discouraged.

TRAFFIC ANALYSIS REPORT

FOR

GLEN OAK ROAD MEDICAL OFFICE

Cascade Highway (Hwy 213) & Glen Oak Road

City of Oregon City

Prepared By

Charbonneau Engineering LLC

9370 SW Greenburg Rd., Suite 411, Portland, OR 97223
(503) 293-1118 • FAX (503) 293-1119

Expires
12/31/01

February 2001

Project 01-02

EXHIBIT 3

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- Trip Generation Assumptions for Zone Change (2/14/01 letter to City)
- Capacity Analysis Worksheets

INTRODUCTION

A traffic study for the project site was conducted to determine impacts to the existing roadway system in Oregon City. The proposed use will consist of a medical type office building totaling 4,000 square feet, located in the northeast intersection corner of Glen Oak Road and Highway 213. The development will be situated on the north side of Glen Oak Road and have one driveway access point on Glen Oak Road. A vicinity map is provided in the report's Appendix.

Throughout the study the consultant discussed the project scoping with several members of the City's staff. Both the engineering and planning departments were contacted. As the intended use proposes to rezone the property from campus industrial to limited office the City's staff required an evaluation of both types of zoning and the associated traffic impacts. Therefore, a trip generation summary considering several alternative uses was submitted to the City on 2/14/01. On 2/22/01 the City responded and confirmed the alternative uses and trip rates were appropriate to use in the traffic study analysis.

The City determined that this analysis should compare the impacts associated with the most intense uses permitted under both types of zoning as well as the proposed medical office use. Therefore, the analysis considered the highest trip generation possible for the following scenarios.

Current Zoning:	Campus Industrial 45,000 square foot Junior/Community College
Proposed Zoning:	Limited Office 33,000 square foot State DMV Facility
	Limited Office 4,000 square foot Medical-Dental Office

In establishing the project scope and analysis, a number of steps were identified to complete the study, including the following items.

- Accounting for projected traffic from the land use zoning scenarios listed above. The study analyzed the traffic flow conditions for existing, background (buildout year 2003), total traffic (year 2003) in the AM & PM peak hours, and year 2020 for the PM peak traffic hour.
- Trip generation for the study was based on ITE standards (**Trip Generation Manual**, 6th edition, 1997).
- Traffic for Oregon City's new high school was also included in the analysis as in-process traffic. Data from the high school's traffic study was reviewed as recommended by the City.
- For future traffic conditions, growth rates were determined from the City's Transportation System Plan Draft (TSP).
- Trip distribution patterns for the proposed development and alternative uses were based on existing traffic counts, site orientation, street classification, surrounding land uses, and engineering judgement.
- Analysis of impacts to the critical intersections on Highway 213 at Molalla Avenue, Meyers Road, Glen Oak/Caufield Road, and Henrici Road and Glen OaK Road at the site access and Beavercreek Road.

An appendix to the report contains technical data including vicinity map, site plan, traffic flow mapping, trip generation summary for alternative uses, signal warrants, left turn lane warrants, and capacity analyses.

SITE DESCRIPTION AND STREETS

The proposed development will consist of one medical type office building totaling 4,000 square feet. Currently the property is vacant. One driveway access to Glen Oak Road is proposed to serve the site on the north side. The driveway will be located at a distance of 170 east of Highway 213. There will be one lane for inbound traffic and two lanes for outbound traffic at the site access. Sight distance at the proposed access is excellent and meets the allowable standards.

Existing streets in the immediate area which will be directly impacted by the project include Highway 213, Glen Oak Road, and Beavercreek Road. **Highway 213** is a state highway and classified as a major arterial by the City. The travel speed is posted at 45 miles per hour. North of Meyers Road, Highway 213 consists of four travel lanes with a raised median curb and eight foot wide paved shoulders. South of Meyers Road the highway narrows to two travel lanes with no raised median. There are bike lanes and paved shoulders.

Glen Oak Road easterly of Highway 213 consists of an 18-20 foot wide paved section with no shoulders. This street is classified by the City as a collector street and is posted at 35 miles per hour. Pavement surfacing near the proposed access point is in rough to fair condition. The street contains a vertical sag curve east of Highway 213. However, the proposed access will have adequate sight distance, exceeding 350 feet in both directions. Segments of Glen Oak Road (near Quinalt and Coquille Streets and closer to Beavercreek Road) have been improved in conjunction with adjacent housing developments.

The following intersections were designated as study locations and are depicted on Figure No. 1 (Existing Lane Configurations and Intersection Control) in the appendix.

The intersection of **Molalla Avenue at Highway 213** is controlled by a traffic signal. All approaches have separate right and left turn lanes. Highway 213 contains two through lanes on the northbound and southbound approaches.

The intersection of **Meyers Road at Highway 213** is configured as a tee shaped intersection with traffic signal control. There is a separate northbound left turn lane and southbound right turn lane on Highway 213. **Highway 213 at Caufield Road and Glen Oak Road** is controlled by stop signing on side street approaches to the highway. There is a southbound left turn lane on Highway 213. **Highway 213 at Henrici Road** is configured as a tee shaped intersection with stop control on the westbound approach. There is a southbound left turn lane on Highway 213. **Glen Oak Road at Beavercreek Road** (classified as major arterial) is a tee shaped intersection controlled by stop signing on the eastbound approach. A northbound left turn lane exists on Beavercreek Road.

TRAFFIC FLOW ANALYSIS

The study intersections and site access on Highway 213 and Glen Oak Road were analyzed for level of service (LOS) conditions as stipulated in the project scoping established with the City. LOS analyses were completed for the AM and PM peak hourly periods under several scenarios:

- Existing traffic
- Background traffic year 2003
- Total traffic year 2003
- Year 2020

In order to perform a LOS analysis at the critical intersections manual traffic counts were performed during the AM peak (7:00-9:00 AM) and PM peak (4:00 -6:00 PM) traffic hours. In some cases recent historical count data from year 2000 was also used. The existing traffic volumes are shown on Figures No. 2 & 3 in the report's appendix.

In-process traffic was included in the analysis to account for traffic from the City's new high school site. Traffic data from the school's traffic study report was obtained from Lancaster Engineering. The in-process traffic is shown on Figures No. 4 & 5.

Background traffic is comprised of the existing traffic, in-process traffic, and the application of traffic growth rates established from the City's TSP. For this project annual growth rates were applied to Highway 213 (1.0%), Molalla Avenue (1.3%), Glen Oak Road (1.0%), and Beavercreek Road (2.0%). Background traffic volumes are shown on Figures No. 6 & 7 in the report's appendix.

The total traffic scenario was derived from the summation of the background and site generated traffic. The total traffic scenarios are depicted on Figures No. 10-11 (proposed medical office), Figure No. 15 (current zoning campus industrial), and Figure No. 16 (proposed zoning DMV) in the report's appendix.

VEHICLE TRIP GENERATION

Vehicle trip generation rates were calculated based on historical data contained in the **ITE Trip Generation** manual (6th Edition, 1997) for the proposed land use (medical/dental code 720) and the alternative scenarios (State DMV code 731 & Junior/Community College code 540).

Under the medical-dental proposed use and over a 24-hour weekday period a total of 145 trip ends are projected to be generated when the project is completed. During the AM peak hour a total of 10 trip ends will be generated. During the PM peak hour there will be 15 trips generated. **Table No. 1** shown below exhibits the trip generation rates and projections for the medical-dental office project. Site generated traffic flows are illustrated on Figures No. 8, 9, 13, & 14 in the appendix.

Table 1. Projected trip generation for 4,000 sq.ft. medical office building.

ITE Land Use	Units (sq. ft.)	Weekday						
		ADT	AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
			Total	Enter	Exit	Total	Enter	Exit
Medical-Dental Office Building (#720)	4,000							
Generation Rate [1]		36.13	2.43	80%	20%	3.66	27%	73%
Site Trips		145	10	8	2	15	4	11

[1] Source: *Trip Generation*, 6th Edition, ITE, 1997. Average rates used.

For comparison purposes the trip generation totals for the alternative campus industrial and limited office uses were also calculated. **Tables No. 2 & 3** below illustrate the trip generation for each use. For the campus industrial use (junior/community college) the ADT will be 826 trips per day with 75 trip ends during the PM peak hour. For the alternative limited office use (state DMV) the ADT will be 3,339 trips per day with 564 trips in the PM peak hour.

Table 2. Trip generation for maximized use of current zoning.

ITE Land Use	Square Feet	Weekday						
		ADT	AM Peak Hour of Generator			PM Peak Hour of Generator		
			Total	Enter	Exit	Total	Enter	Exit
Junior/Community College (540)	45,000							
Generation Rate [1]		18.36	1.78	80%	20%	1.66	46%	54%
Site Trips		826	80	64	16	75	35	40

[1] Source: *Trip Generation*, 6th Edition, ITE, 1997. No fitted curve equation given.

Table 3. Trip generation for maximized use of proposed zoning.

ITE Land Use	Units (sq. ft.)	Weekday						
		ADT	AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
			Total	Enter	Exit	Total	Enter	Exit
State DMV (#731)	33,000							
Generation Rate [1]		101.19	7.48	50%	50%	17.09	50%	50%
Site Trips		3339	247	123	124	564	282	282

[1] Source: *Trip Generation*, 6th Edition, ITE, 1997. Fitted curve equations used. Average rate back-calculated.

ADT equation: $Ln(T) = 0.569\ Ln(X) + 6.124$

AM equation: $Ln(T) = 0.767\ Ln(X) + 2.827$

PM equation: Not given. Average rate used.

In order to determine the traffic impacts at the study intersections, site traffic for all scenarios were distributed over the street system and calculations performed to measure the traffic impacts and service levels for the peak hours.

TRIP DISTRIBUTION

Trip distribution for the development was based on several important considerations.

- Site location, orientation, and location of existing streets, and highways
- Street classification, and type of intersection traffic control
- Review of current turning movement traffic counts
- Access considerations
- Engineering judgement

The trip distribution is shown on the site generated mapping (Figures No. 8, 9, 13, & 14) in the report's appendix.

CAPACITY ANALYSIS

Capacity analyses for the surrounding intersections were performed to determine the levels of service during the peak hours. The study intersections on Highway 213 and Glen Oak Road were analyzed for the existing, background, year 2003 total. and year 2020 total traffic conditions. The 1994 highway capacity software (HCS) for signalized and unsignalized intersections were applied. For comparison purposes the SIGCAP software program was also used for analysis of the signalized intersections on Highway 213 since this highway is under the jurisdiction of ODOT. All LOS printouts are attached in the appendix.

The following section presents summaries of the level of service (L.O.S.) analyses. Figure No. 1A (Existing and Future Lane Configurations & Intersection Control) depicts the intersection improvements described in the City's Draft TSP. Figure No. 1B (Year 2020 Required Lane Configurations & Intersection Control) presents the year 2020 intersection improvements that are necessary beyond those identified in the TSP.

Highway 213 at Molalla Avenue will operate at acceptable service levels through the year 2020 total traffic scenario under both the proposed and current zoning alternatives and implementation of the street improvements listed in the City's Draft TSP. Reference **Table 4** below.

Table 4. LOS results for the signalized intersection of Highway 213 & Molalla Avenue.

Traffic Scenario	1994 HCM Methodology						ODOT SIGCAP Methodology			
	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Delay	V/C	LOS	Delay	V/C	LOS	V/C	LOS	V/C
Existing (2001) [1]	C	18.8	0.621	C	23.0	0.795	C	0.606	D	0.778
Background at Build-out (2003) [1]	C	18.7	0.635	C	24.2	0.827	C	0.620	D	0.810
Total at Build-out (2003) [1]	C	18.7	0.635	C	24.3	0.828	C	0.620	D	0.811
Base (2020) [2]				D	32.3	0.970			E *	0.948
Total (2020) - Current Zoning (C.I.) Maximized [2]				D	33.7	0.982			E *	0.960
Total (2020) - Proposed Zoning (L.O.) Maximized [2]				D	37.0	1.003			E - F *	0.980

Notes: [1] Analysis based on existing control and lane configurations, [2] Analysis based on future control and lane configurations outlined in 11/2000 Draft TSP, * Mitigation will require eastbound right-turn merge lane, HCM - Highway Capacity Manual, LOS - Level of Service, Delay - Average Delay (sec/veh), V/C - Critical Volume-to-Capacity Ratio, C.I. - Campus Industrial, L.O. - Limited Office.

Highway 213 at Meyers Road will operate at acceptable service levels through the year 2020 total traffic scenario under both the current and proposed zoning and implementation of the improvements listed in the TSP. Future improvements identified in the TSP include the addition of a second northbound through travel lane. Reference **Table 5** below.

Table 5. LOS results for the signalized intersection of Highway 213 & Meyers Road.

Traffic Scenario	1994 HCM Methodology						ODOT SIGCAP Methodology			
	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Delay	V/C	LOS	Delay	V/C	LOS	V/C	LOS	V/C
Existing (2001) [1]	D	25.9	0.989	B	11.3	0.713	E-F	0.989	C	0.689
Background at Build-out (2003) [1]	D	34.9	1.039	B	12.8	0.767	F	1.039	D	0.742
Total at Build-out (2003) [1]	D	35.0	1.040	B	12.9	0.770	F	1.040	D	0.745
Mitigated w/ add. NB thru-lane							C	0.601		
Base (2020) [2]				C	20.7	0.959			E *	0.928
Total (2020) - Current Zoning (C.I.) Maximized [2]				C	22.0	0.972			E *	0.940
Total (2020) - Proposed Zoning (L.O.) Maximized [2]				D	35.6	1.053			F *	1.019

Notes: [1] Analysis based on existing control and lane configurations, [2] Analysis based on future control and lane configurations outlined in 11/2000 Draft TSP, * Mitigation will require additional southbound thru-lane (3 total), HCM - Highway Capacity Manual, LOS - Level of Service, Delay - Average Delay (sec/veh), V/C - Critical Volume-to-Capacity Ratio, C.I. - Campus Industrial, L.O. - Limited Office.

Highway 213 at Glen Oak & Caufield Roads currently experiences failing LOS conditions. This intersection will operate at acceptable LOS conditions under both the current and proposed zoning when the intersection is upgraded according to the City's Draft TSP. Future improvements identified in the TSP include realignment of the intersection offset, signalization, and providing separate left turn lanes on all approaches. Reference **Table 6** below.

Table 6. LOS results for the unsignalized intersection of Highway 213 & Glen Oak/Caufield Rd.

Traffic Scenario	1994 HCM Methodology								ODOT SIGCAP Methodology			
	Weekday AM Peak Hour				Weekday PM Peak Hour				Weekday AM Peak Hour		Weekday PM Peak Hour	
	Critical Movement	LOS	Delay	V/C	Critical Movement	LOS	Delay	V/C	LOS	V/C	LOS	V/C
Existing (2001) [1]	EB	F	> 45		EB	F	> 45					
Background at Build-out (2003) [1]	EB	F	> 45		EB	F	> 45					
Total at Build-out (2003) [1]	EB	F	> 45		EB	F	> 45					
Mitigated - signal [2]		B	13.3	0.695		B	8.1	0.583	C	0.675	B	0.560
Base (2020) [2]						B	8.5	0.719			C	0.689
Total (2020) - Current Zoning (C.I.) Maximized [2]						B	9.7	0.738			C - D	0.704
Total (2020) - Proposed Zoning (L.O.) Maximized [2]						C	18.1	0.856			D	0.827

Notes: [1] Analysis based on existing control and lane configurations, [2] Analysis based on future control and lane configurations outlined in 11/2000 Draft TSP, HCM - Highway Capacity Manual, LOS - Level of Service, Delay - Average Delay (sec/veh), V/C - Critical Volume-to-Capacity Ratio, EB - Eastbound, C.I. - Campus Industrial, L.O. - Limited Office

Highway 213 at Henrici Road currently fails according to the analysis. However, the intersection will operate at acceptable LOS under both the current and proposed zoning when a signal is added as described in the TSP. It is noted that for the year 2020 proposed zoning and maximum density scenario (DMV office) a second southbound through lane will also be necessary in addition to the signal identified in the TSP. Reference **Table 7** below.

Table 7. LOS results for the unsignalized intersection of Highway 213 & Henrici Rd.

Traffic Scenario	1994 HCM Methodology								ODOT SIGCAP Methodology			
	Weekday AM Peak Hour				Weekday PM Peak Hour				Weekday AM Peak Hour		Weekday PM Peak Hour	
	Critical Movement	LOS	Delay	V/C	Critical Movement	LOS	Delay	V/C	LOS	V/C	LOS	V/C
Existing (2001) [1]	WB LT	D	29		WB LT	F	> 45					
Background at Build-out (2003) [1]	WB LT	E	31.4		WB LT	F	> 45					
Total at Build-out (2003) [1]	WB LT	E	31.5		WB LT	F	> 45					
Mitigated - signal [2]		B	10.2	0.825		B	9.8	0.846	D	0.825	D - E	0.846
Base (2020) [2]						D	35.1	1.065			F *	1.065
Total (2020) - Current Zoning (C.I.) Maximized [2]						D	36.8	1.071			F *	1.071
Total (2020) - Proposed Zoning (L.O.) Maximized [2]						E *	48.6	1.113			F *	1.113

Notes: [1] Analysis based on existing control and lane configurations, [2] Analysis based on future control and lane configurations outlined in 11/2000 Draft TSP, * Mitigation will require additional southbound thru-lane (2 total), HCM - Highway Capacity Manual, LOS - Level of Service, Delay - Average Delay (sec/veh), V/C - Critical Volume-to-Capacity Ratio, WB LT - Westbound Left-turn, C.I. - Campus Industrial, L.O. - Limited Office.

Beavercreek Road at Glen Oak Road will operate at acceptable LOS conditions through the year 2020 total traffic scenario under both the proposed and current zoning alternatives and implementation of the street improvements listed in the City's Draft TSP. The proposed TSP improvement includes signalization at this intersection. Reference **Table 8** below.

Table 8. LOS results for the unsignalized intersection of Beavercreek Rd & Glen Oak Rd.

Traffic Scenario	1994 HCM Methodology						
	Weekday AM Peak Hour			Weekday PM Peak Hour			
	Critical Movement	LOS	Delay	Critical Movement	LOS	Delay	V/C
Existing (2001) [1]	EB Left	C	16.9	EB Left	D	22.8	
Background at Build-out (2003) [1]	EB Left	D	24.0	EB Left	D	27.1	
Total at Build-out (2003) [1]	EB Left	D	24.1	EB Left	D	27.1	
Base (2020) [2]					B	5.4	0.833
Total (2020) - Current Zoning (C.I.) Maximized [2]					B	5.7	0.836
Total (2020) - Proposed Zoning (L.O.) Maximized [2]					B	9.0	0.858

Notes: [1] Analysis based on existing control and lane configurations, [2] Analysis based on future signalized control and lane configurations outlined in 11/2000 Draft TSP, HCM - Highway Capacity Manual, LOS - Level of Service, Delay - Average Delay (sec/veh), V/C - Critical Volume-to-Capacity Ratio, EB Left- Eastbound Left-Turn, C.I. - Campus Industrial, L.O. - Limited Office

Glen Oak Road at the site access will function at acceptable LOS conditions under stop sign control on the site access approach under both the current and proposed zoning scenarios. For the year 2020 conditions and the maximum densities an eastbound left turn lane on Glen Oak Road at the site access is warranted. Reference **Table 9** below.

Table 9. LOS results for the unsignalized intersection of the site access on Glen Oak Rd.

Traffic Scenario	1994 HCM Methodology					
	Weekday AM Peak Hour			Weekday PM Peak Hour		
	Critical Movement	LOS	Delay	Critical Movement	LOS	Delay
Total at Build-out (2003)	SB	A	3.2	SB	A	3.3
Total (2020) - Current Zoning (C.I.) Maximized				SB	A	3.5
Total (2020) - Proposed Zoning (L.O.) Maximized				SB	B	5.1

Notes: HCM - Highway Capacity Manual, LOS - Level of Service, Delay - Average Delay (sec/veh), V/C - Critical Volume-to-Capacity Ratio, SB - Southbound, C.I. - Campus Industrial, L.O. - Limited Office

Generally, LOS 'A', 'B', 'C', and 'D' are desirable service levels ranging from no vehicle delays to average or longer than average delays in the peak hours. Level 'E' represents long delays indicating signalization warrants need to be reviewed and signals considered only if warrants are met. Level 'F' indicates that intersection improvements, such as widening and signalization, may be required. By definition, and according to the Highway Capacity Manual (HCM), the following delay times are associated with the LOS at stop controlled (unsignalized) and signalized intersections.

Level of Service Criteria according to the 1994 *Highway Capacity Manual*

Level of Service (LOS)	Unsignalized Control Stopped Delay (sec/veh)	Signalized Control Stopped Delay (sec/veh)
A	≤ 5	≤ 5
B	> 5 and ≤ 10	> 5 and ≤ 15
C	> 10 and ≤ 20	> 15 and ≤ 25
D	> 20 and ≤ 30	> 25 and ≤ 40
E	> 30 and ≤ 45	> 40 and ≤ 60
F	> 45	> 60

TRAFFIC SIGNAL WARRANTS

The peak hour signal warrant (**Manual On Uniform Traffic Control Devices**) was reviewed for the following intersections for all scenarios during the AM and PM peak hours. The plots for each scenario is included in the appendix. The results are summarized below.

Highway 213 at Glen Oak Road
Traffic signal warrant met for background & total traffic year 2003. Also met for year 2020 scenarios under the maximum density for both the current and proposed zoning.

Highway 213 at Henrici Road
Traffic signal warrant not met under any scenario.

Beavercreek Road at Glen Oak Road
Traffic signal warrant not met under any scenario.

Glen Oak Road at site access
Traffic signal warrant not met under any scenario.

TRAFFIC ACCIDENT EXPERIENCE

Traffic accident data was researched from data furnished by the City. The City furnished accident reports covering the 1997-99 three-year period for the study intersections on Highway 213 and Glen Oak Road.

Listed below (**Table No. 10**) are the accident totals and rates. It is noted that all of the intersections have accident rates below the threshold level of 1.0 accident per million entering vehicles per year. Therefore, the accident analysis indicates no safety mitigation is necessary.

Table 10. Accident rate calculations.

Intersection	Accident History (# yrs.)	# Accidents	Annual # of Accidents	Annual Traffic Entering (veh/yr)	Accident Rate per M.E.V.*
Highway 213 & Molalla Ave/Douglas Lp	3	26	8.667	10891457	0.796
Highway 213 & Meyers Rd	3	8	2.667	9766518	0.273
Highway 213 & Glen Oak/Caulfield Rd	3	5	1.667	8203290	0.203
Highway 213 & Henrici Rd	3	1	0.333	6753288	0.049
Beavercreek Rd & Glen Oak Rd	3	2	0.667	4401142	0.151

* M.E.V. - million entering vehicles

STREET IMPROVEMENTS ON GLEN OAK ROAD

The proposed site access on Glen Oak Road will require one inbound lane and two outbound lanes. A separate eastbound left turn lane on Glen Oak Road at the site access is not required under the proposed medical-dental office use. Under the year 2020 maximum density scenarios for the current and proposed zoning an eastbound left turn lane is warranted. The left turn lane warrant curve for this determination is contained in the report's appendix.

According to the City's Draft TSP, future improvements identified on Glen Oak Road between Highway 213 and Beavercreek include curb and sidewalk on both sides. Therefore, it is anticipated that the frontage improvements adjacent to the project site associated with the site's development will need to conform to City standards and the future conditions listed in the TSP.

PEDESTRIAN & TRANSIT CONSIDERATIONS

Presently there are no sidewalks in the immediate area along Highway 213 and Glen Oak Road. There are bike lanes along both sides of Highway 213. There are no shoulders on Glen Oak Road except for limited segments near recent developments east of the project site. It is anticipated that the proposed project will develop sidewalk along the immediate property frontage on the north side of Glen Oak Road. It is noted that the City's Draft TSP proposes sidewalk be installed along Glen Oak Road on both sides from Highway 213 to Beavercreek Road.

Tri-Met provides bus service to the Clackamas Community College area from downtown Oregon City. Route No. 32 (Oatfield) provides service along Beavercreek Road. Route No. 33 (McLoughlin) provides service along Highway 213. No transit service is provided on Glen Oak Road.

SUMMARY AND RECOMMENDATIONS

The project proposes to develop a 4,000 square foot medical-dental office in the northeast corner of the intersection of Highway 213 and Glen Oak Road. One driveway access to Glen Oak Road is planned.

Since this project involves a rezone from campus industrial zoning to limited office zoning the City required a comparison of the traffic impacts based on the proposed use and the most intense uses permitted under both types of zoning. Therefore, the analysis considered the trip generation for the following scenarios.

Current Zoning:	Campus Industrial 45,000 square foot Junior/Community College
Proposed Zoning:	Limited Office 33,000 square foot State DMV Facility
	Limited Office 4,000 square foot Medical-Dental Office

The proposed medical-dental office will generate 145 trips per day and 15 trips during the PM peak hour. The most intense limited office use (state DMV type office) would generate 3,339 trips per day and 564 trips during the PM peak hour. For the campus industrial use (junior/community college) a total of 826 trips per day will occur and 75 trips will occur in the PM peak hour.

None of the alternative uses studied will result in unexpected impacts to the transportation system. As identified in the capacity analysis section of the report, mitigation will be required with each of the uses. These improvements are consistent with the recommendations identified in the City's Draft Transportation System Plan (November 2000). The only improvement identified beyond those contained in the City's TSP is the need to add a second southbound through lane on Highway 213 at the intersection with Henrici Road under the proposed zoning, maximum density (DMV), year 2020 alternative. Figures No. 1A & 1B illustrate the required improvements for all scenarios studied.

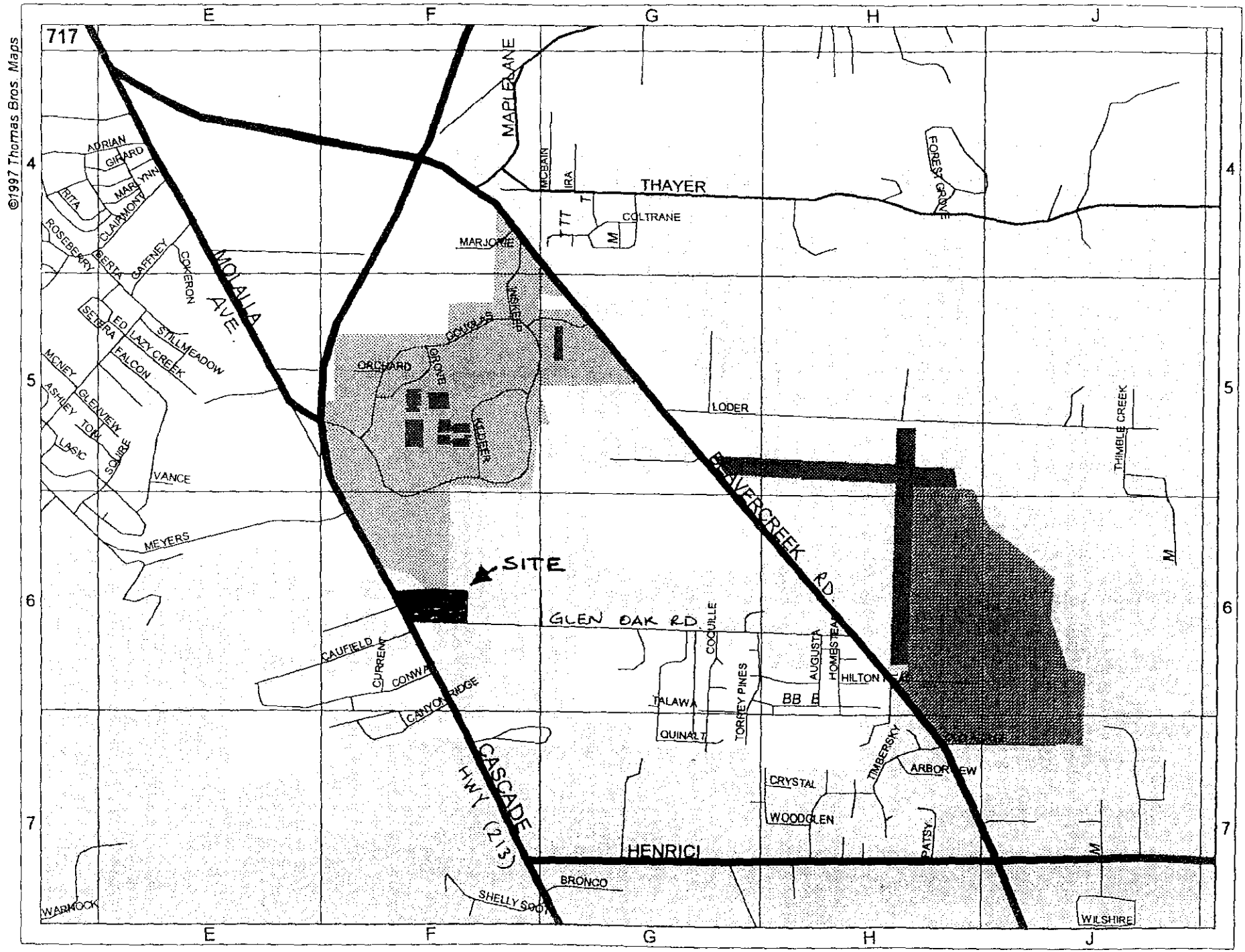
In conjunction with the proposed project it will be necessary to accomplish the following.

- Maintenance of the existing and adequate sight distance along Glen Oak Road at the proposed driveway is essential. Obstruction by landscaping, signing, parking, buildings, or other objects would be unsafe.

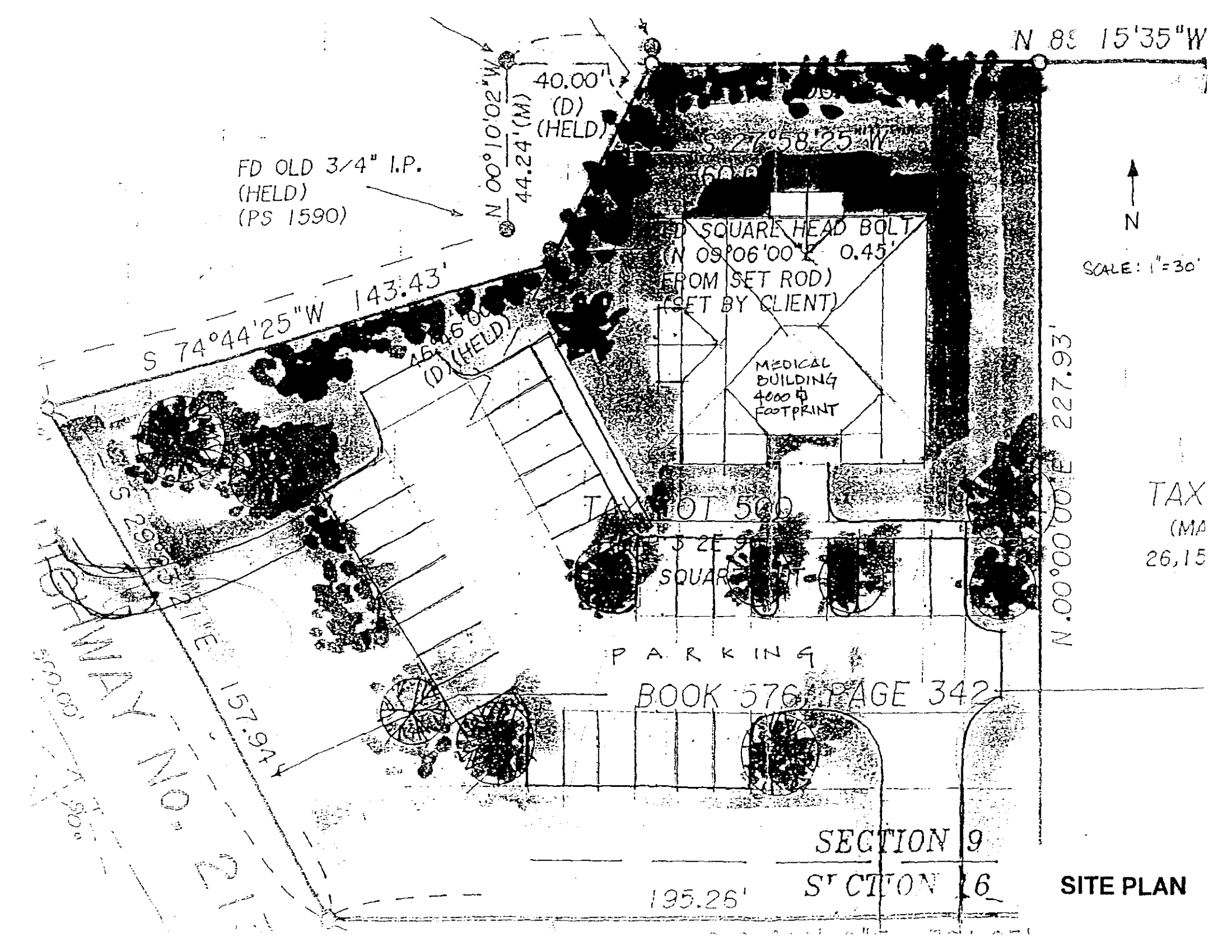
- Implement standard traffic control devices, including pavement markings and signing as per City standards and the Manual On Uniform Traffic Control Devices at the site access.

APPENDIX

- Vicinity Map
- Site Plan
- Figure 1A Existing & Future Lane Configurations/Traffic Control
- Figure 1B Year 2020 Required Lane Configurations & Intersection Control
- Traffic Flow Diagrams (Figures No. 2 through 16)
- Peak Hour Signal Warrant Curves
- Left Turn Warrant Curve
- Trip Generation Summary of Alternative Uses (letter to City dated 2/14/01)
- Capacity Analysis Worksheets



VICINITY MAP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FD OLD 3/4" I.P.
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S 27°58'25"W
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FD SQUARE HEAD BOLT
(N 09°06'00"E 0.45'
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(SET BY CLIENT)
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SCALE: 1"=30'
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(D)(HELD)
MEDICAL
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SITE PLAN

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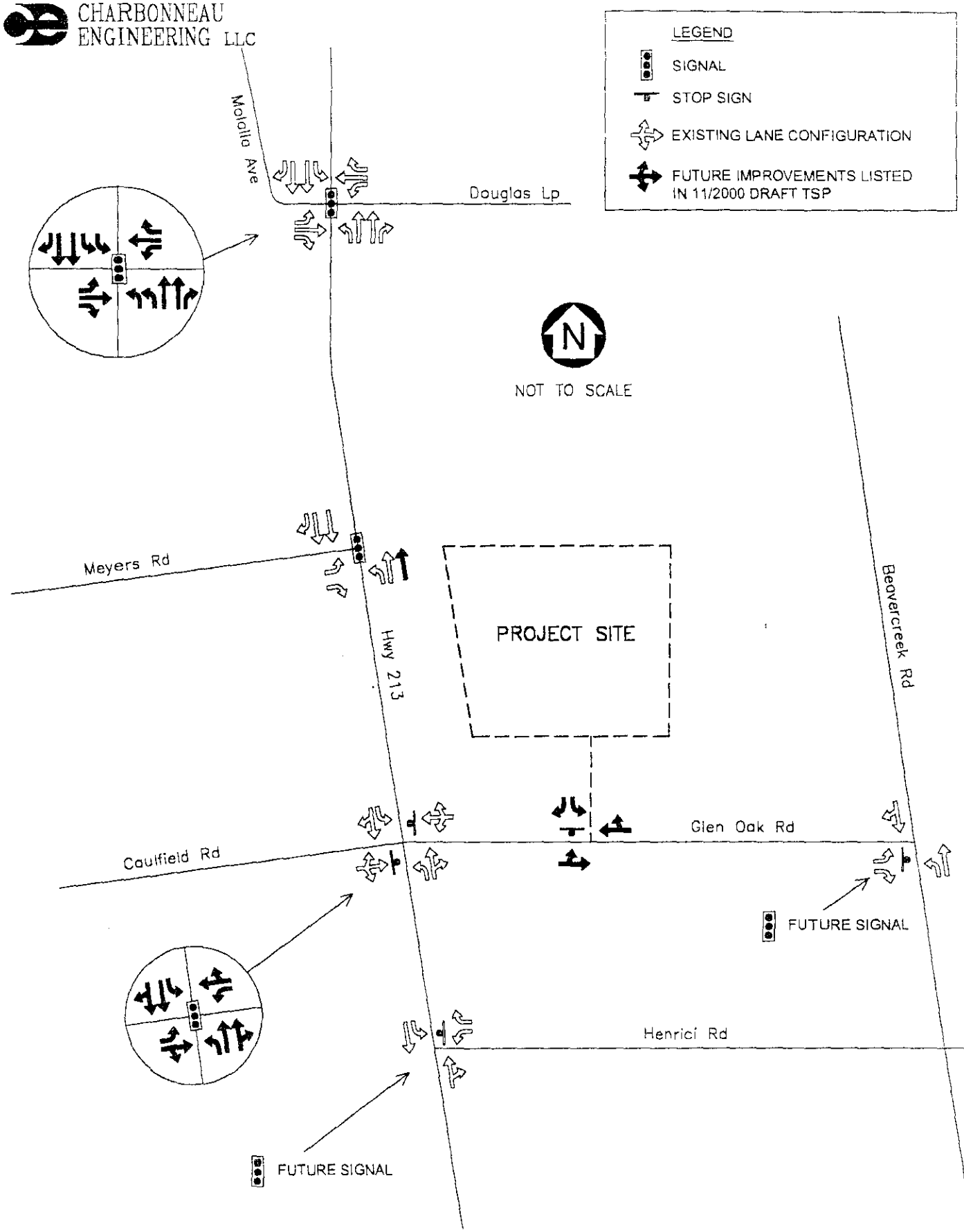

Date: 3/2/01 Project: 01-02 File: 0102flow.dwg	Notes: * Future improvements are based on the 11/2000 Draft TSP.	Existing & Future * Lane Configurations & Intersection Control	Figure 1 A

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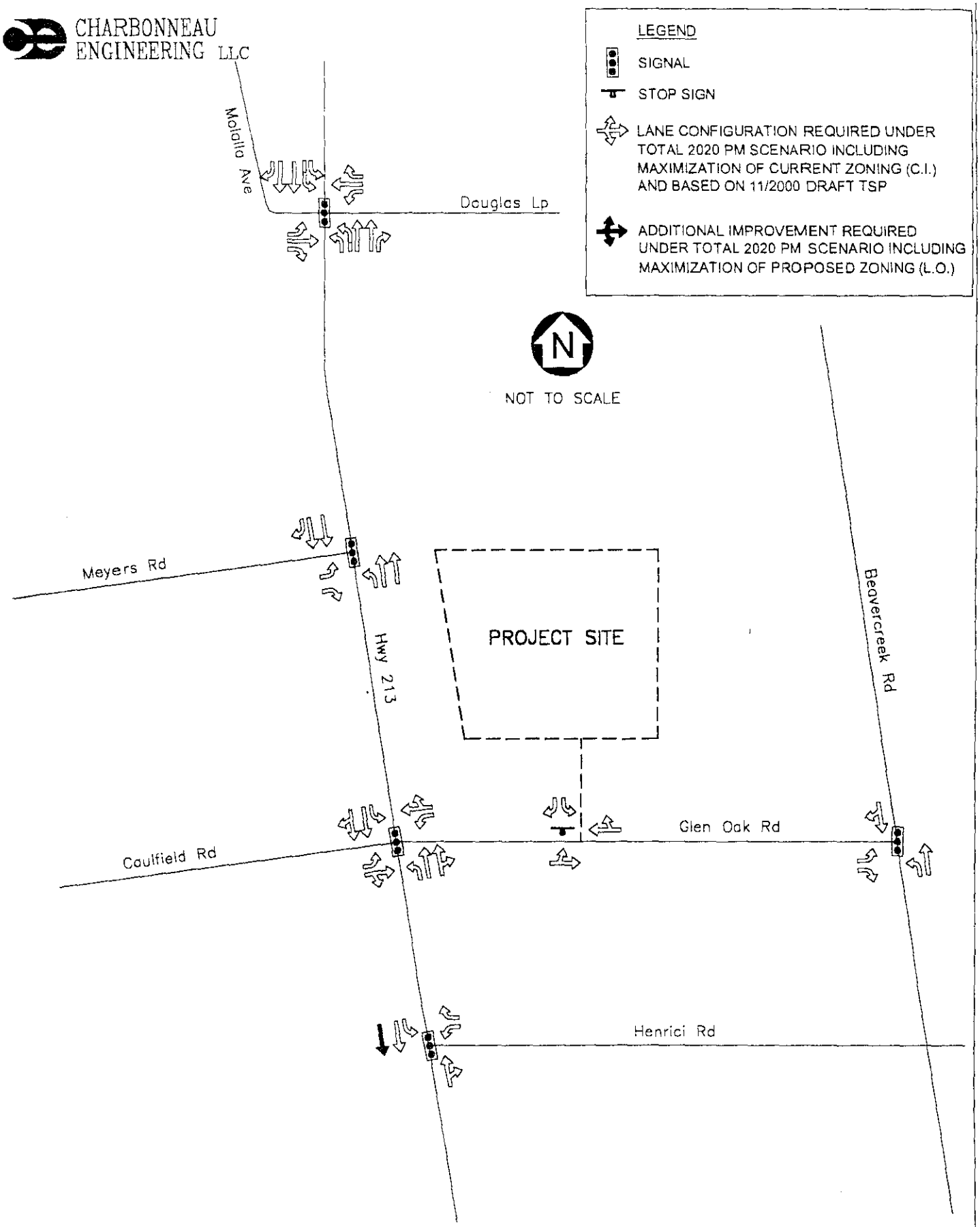

Date: 3/2/01	Notes:	Year 2020 - Required Lane Configurations & Intersection Control	Figure 1 B
Project: 01-02			
File: 0102flow.dwg			

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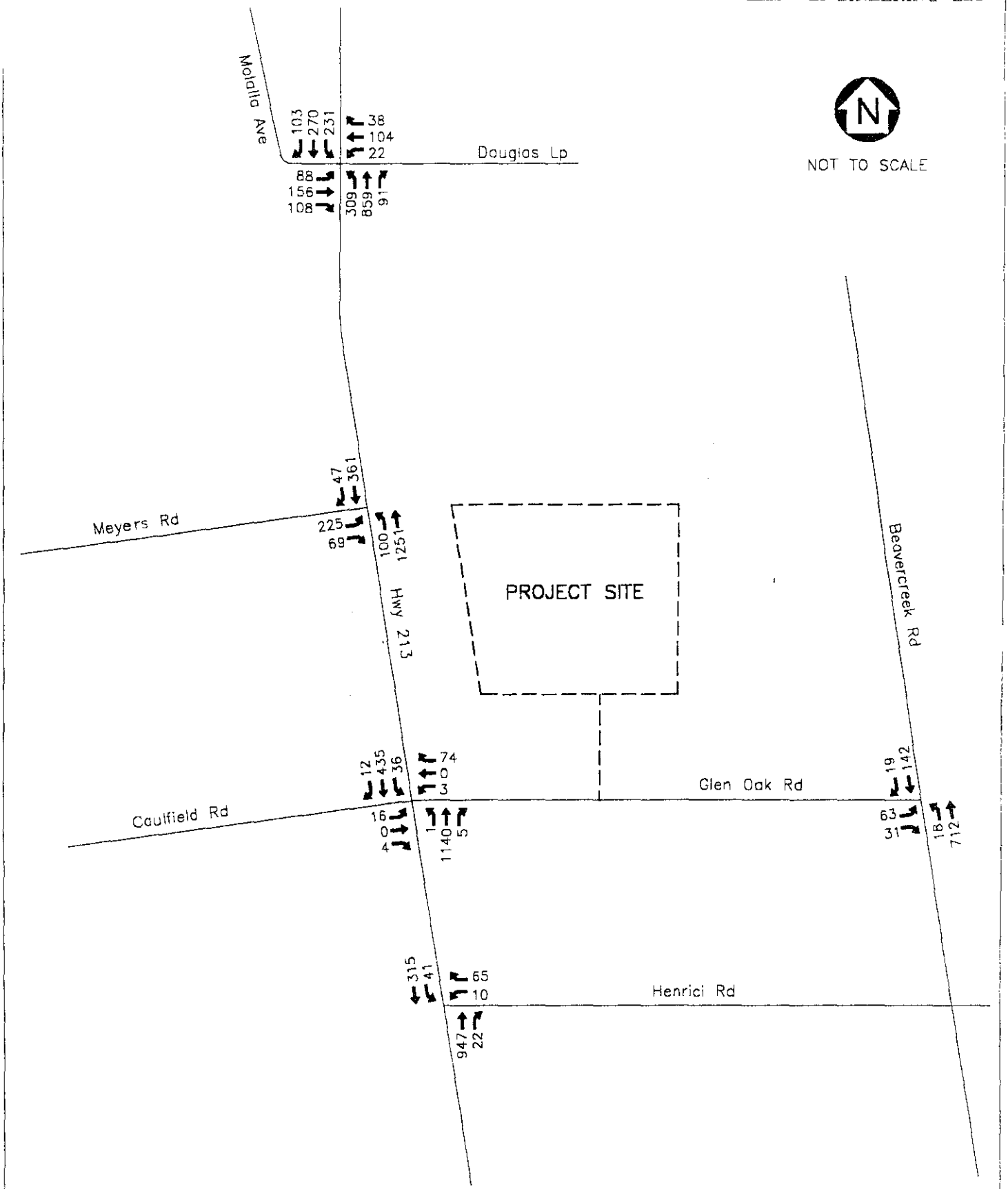

Date: 2/9/01	Notes:	2001 Existing Traffic Weekday AM Peak Hour	Figure
Project: 01-02			2
File: 0102flow.dwg			

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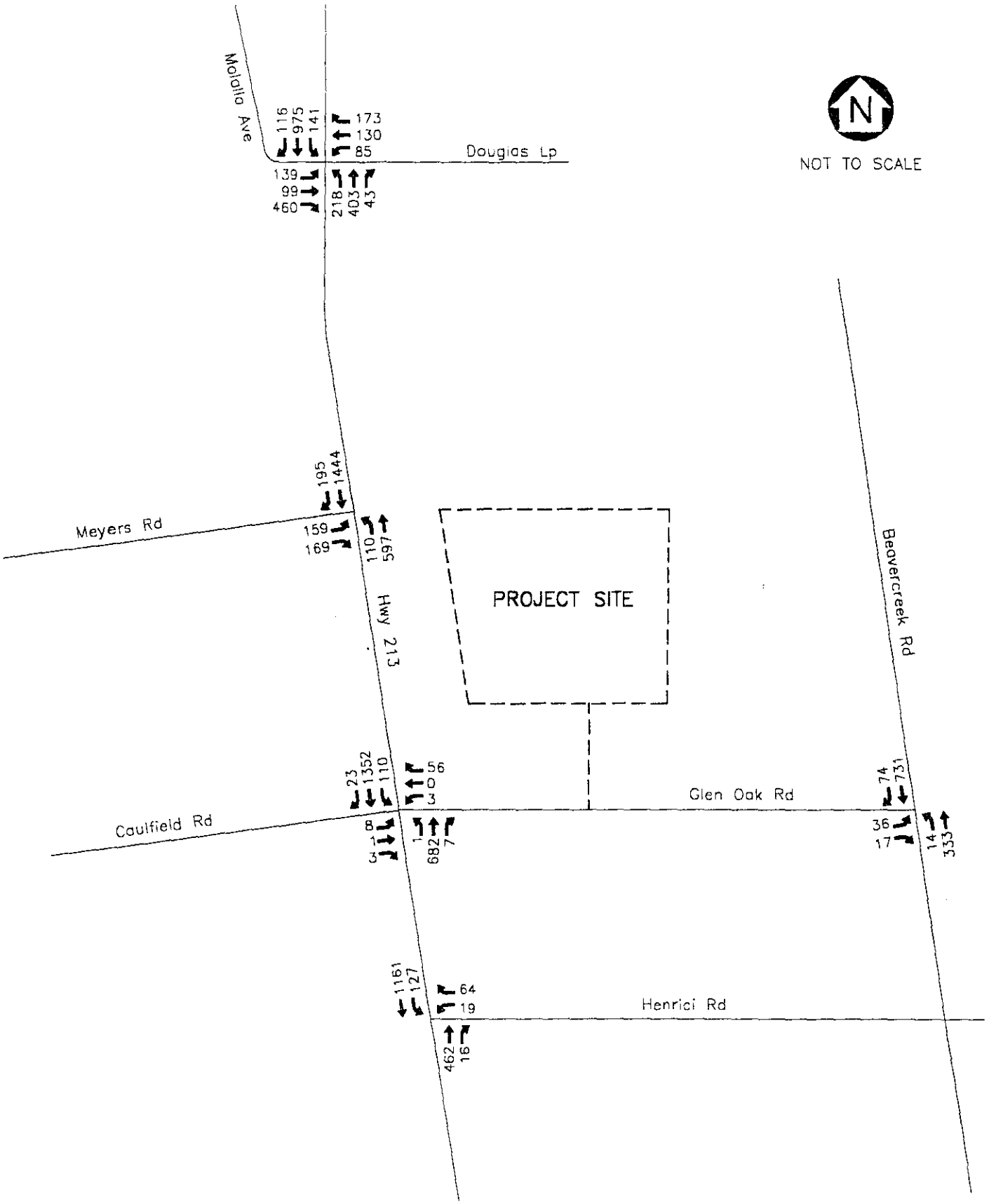

Date: 2/9/01	Notes:	2001 Existing Traffic Weekday PM Peak Hour	Figure
Project: 01-02			3
File: 0102flow.dwg			

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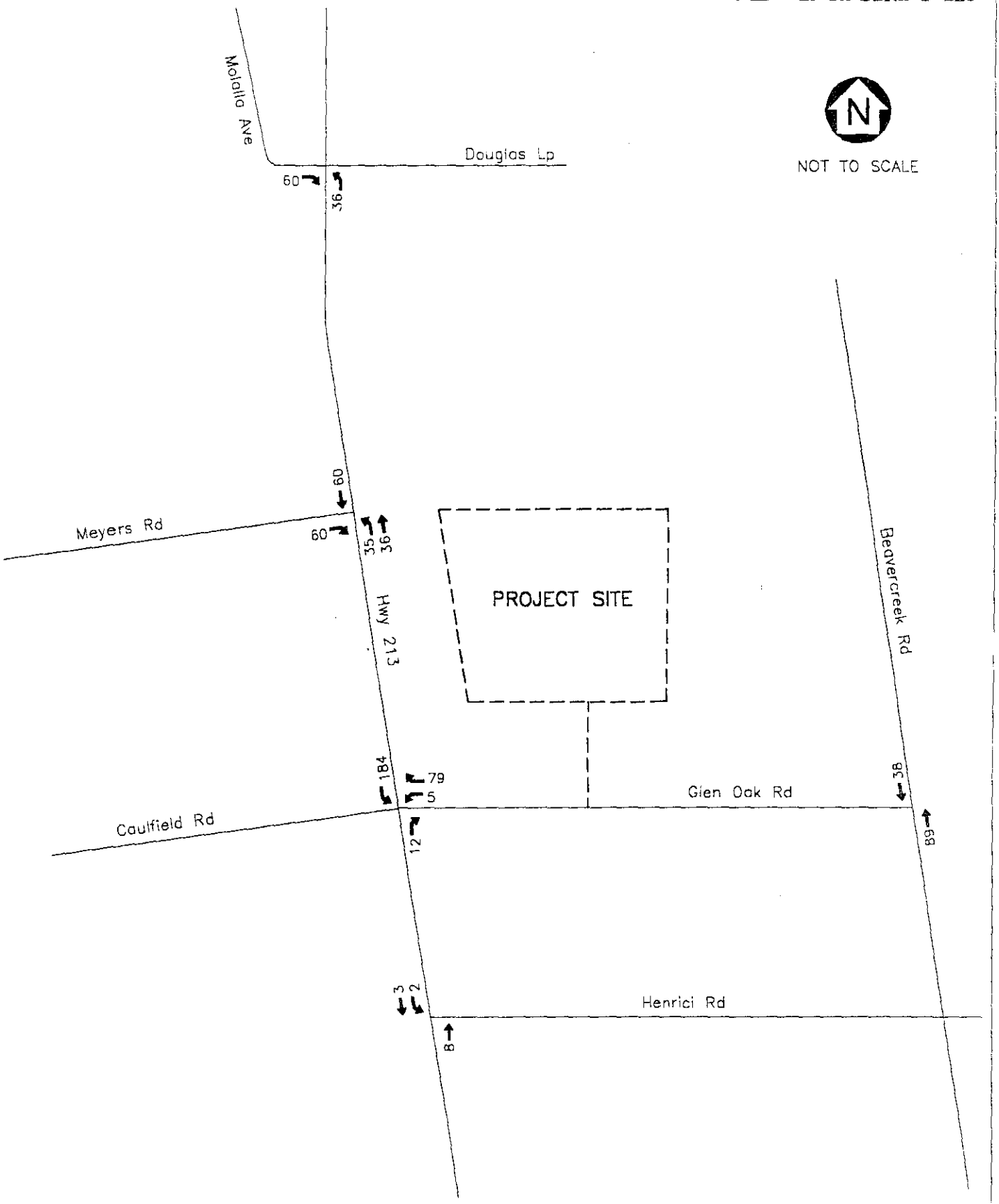

Date: 2/9/01 Project: 01-02 File: 0102flow.dwg	Notes: In-Process Traffic accounts for the new Oregon City High School trip generation and trip redistribution.	In-Process Traffic Weekday AM Peak Hour	Figure 4

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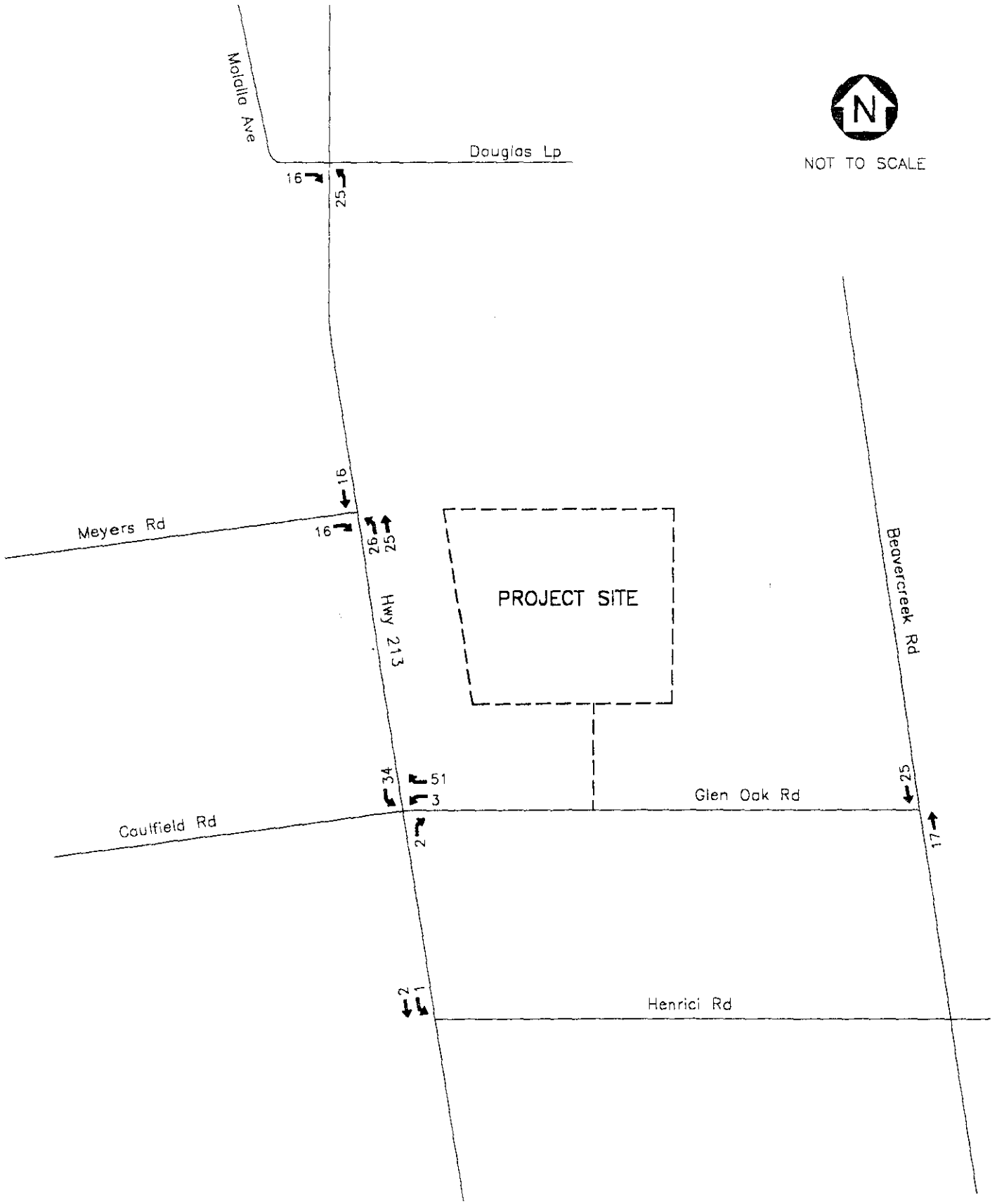

Date: 2/9/01 Project: 01-02 File: 0102flow.dwg	Notes: In-Process Traffic accounts for the new Oregon City High School trip generation and trip redistribution.	In-Process Traffic Weekday PM Peak Hour	Figure 5

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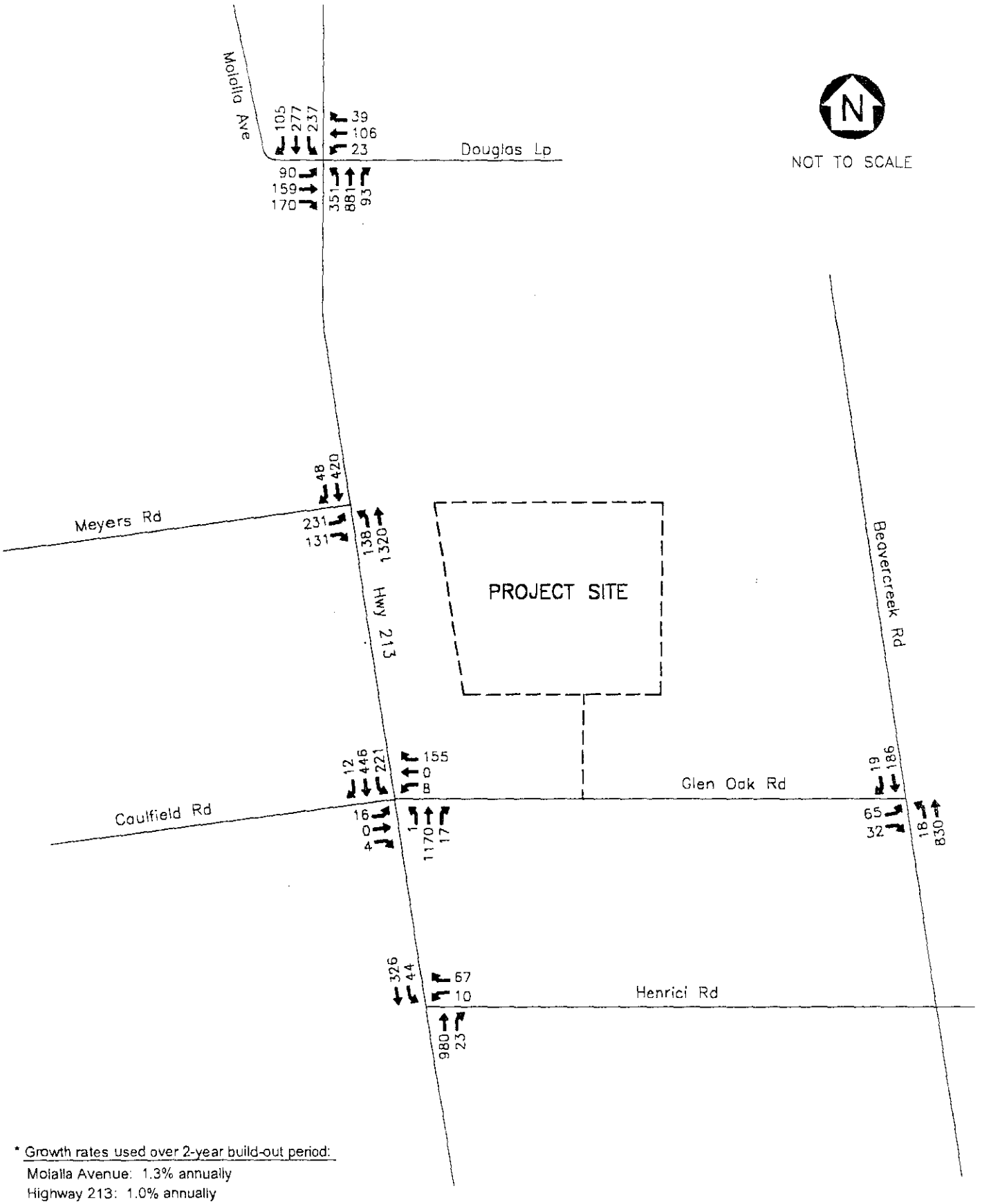

* Growth rates used over 2-year build-out period:
Molalla Avenue: 1.3% annually
Highway 213: 1.0% annually
Beavercreek Road: 2.0% annually
(rates based on Nov. 2000 Draft TSP)

Date: 2/9/01 Project: 01-02 File: 0102flow.dwg	Notes: Background Traffic = Existing Traffic + growth * + In-Process Traffic	Background Traffic at Build-out (2003) Weekday AM Peak Hour	Figure 6

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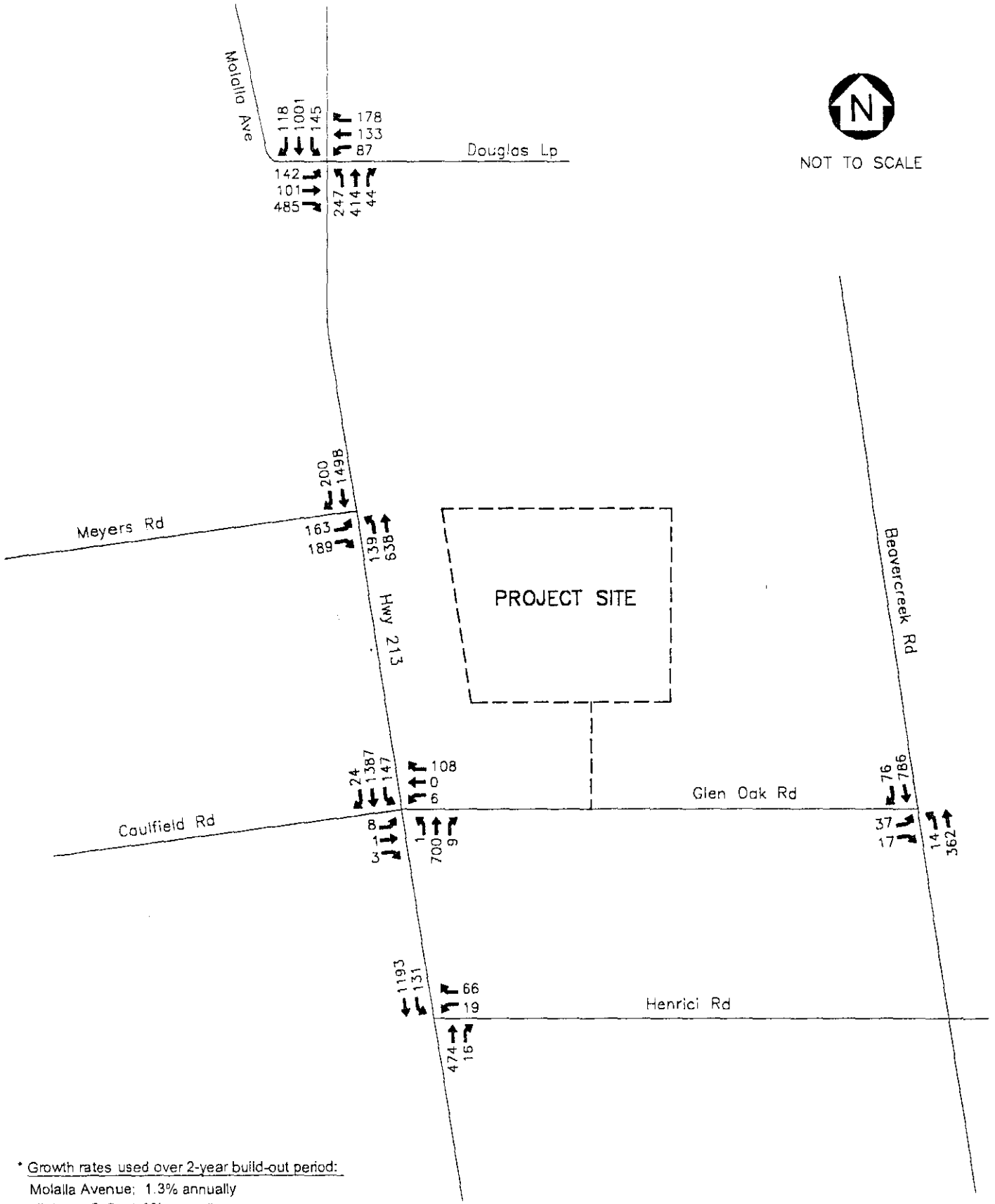

* Growth rates used over 2-year build-out period:
Molalla Avenue: 1.3% annually
Highway 213: 1.0% annually
Beavercreek Road: 2.0% annually
(rates based on Nov. 2000 Draft TSP)

Date: 2/9/01 Project: 01-02 File: 0102flow.dwg	Notes: Background Traffic = Existing Traffic + growth * + In-Process Traffic	Background Traffic at Build-out (2003) Weekday PM Peak Hour	Figure 7

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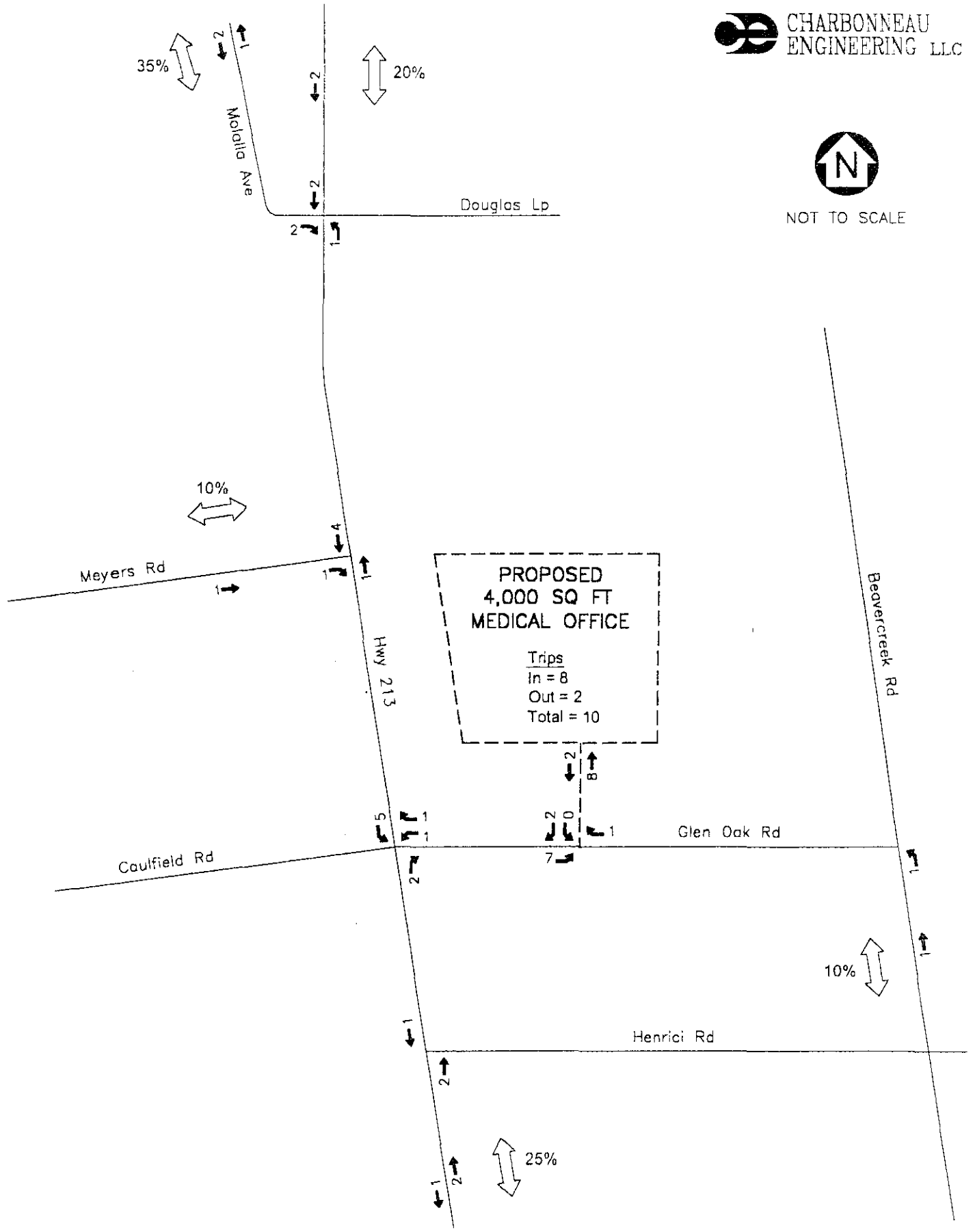

Date: 2/9/01	Notes:	Site Generated Traffic	Figure
Project: 01-02	Reference Table 1 for details on the trip generation.	Weekday AM Peak Hour	8
File: 0102flow.dwg			

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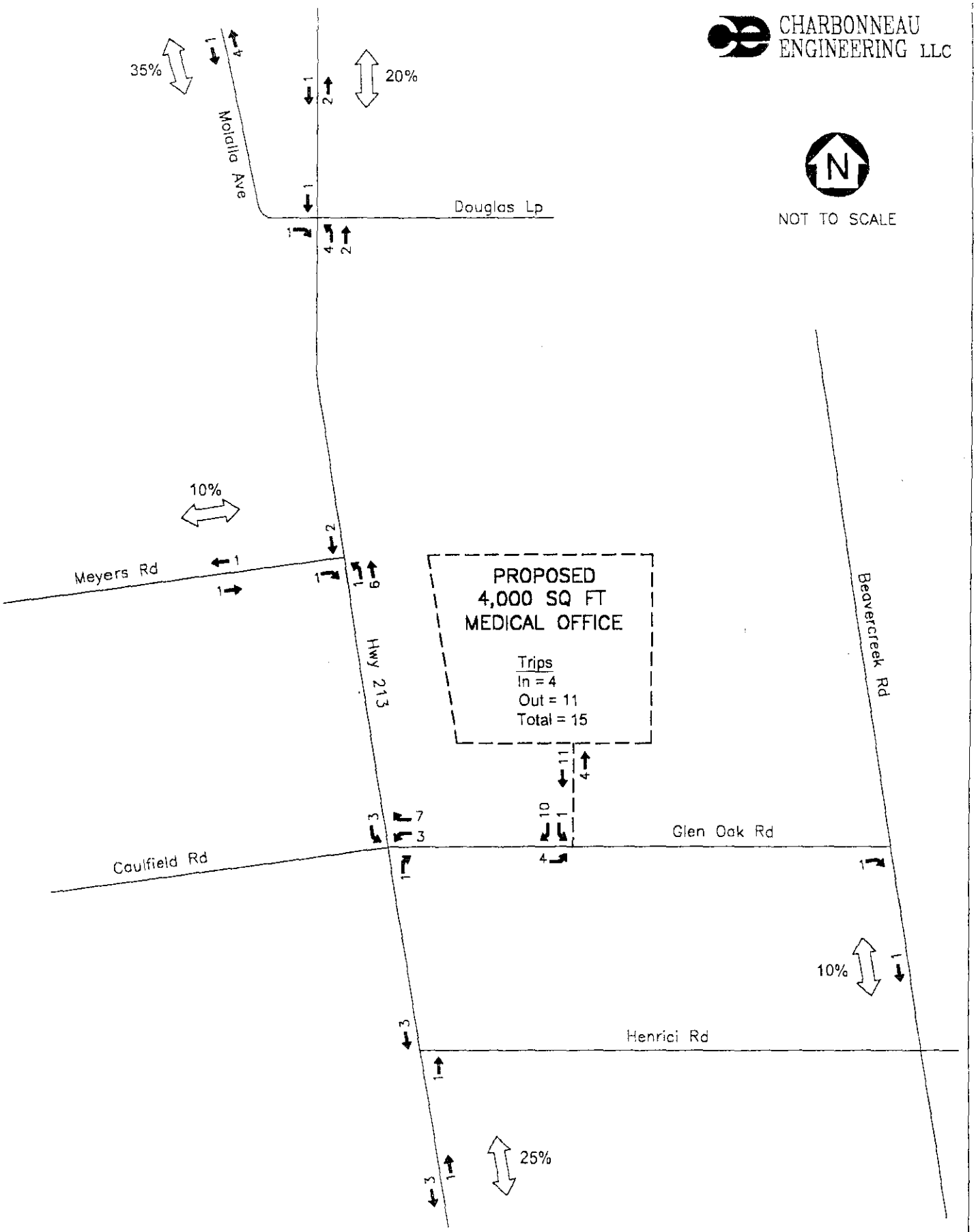
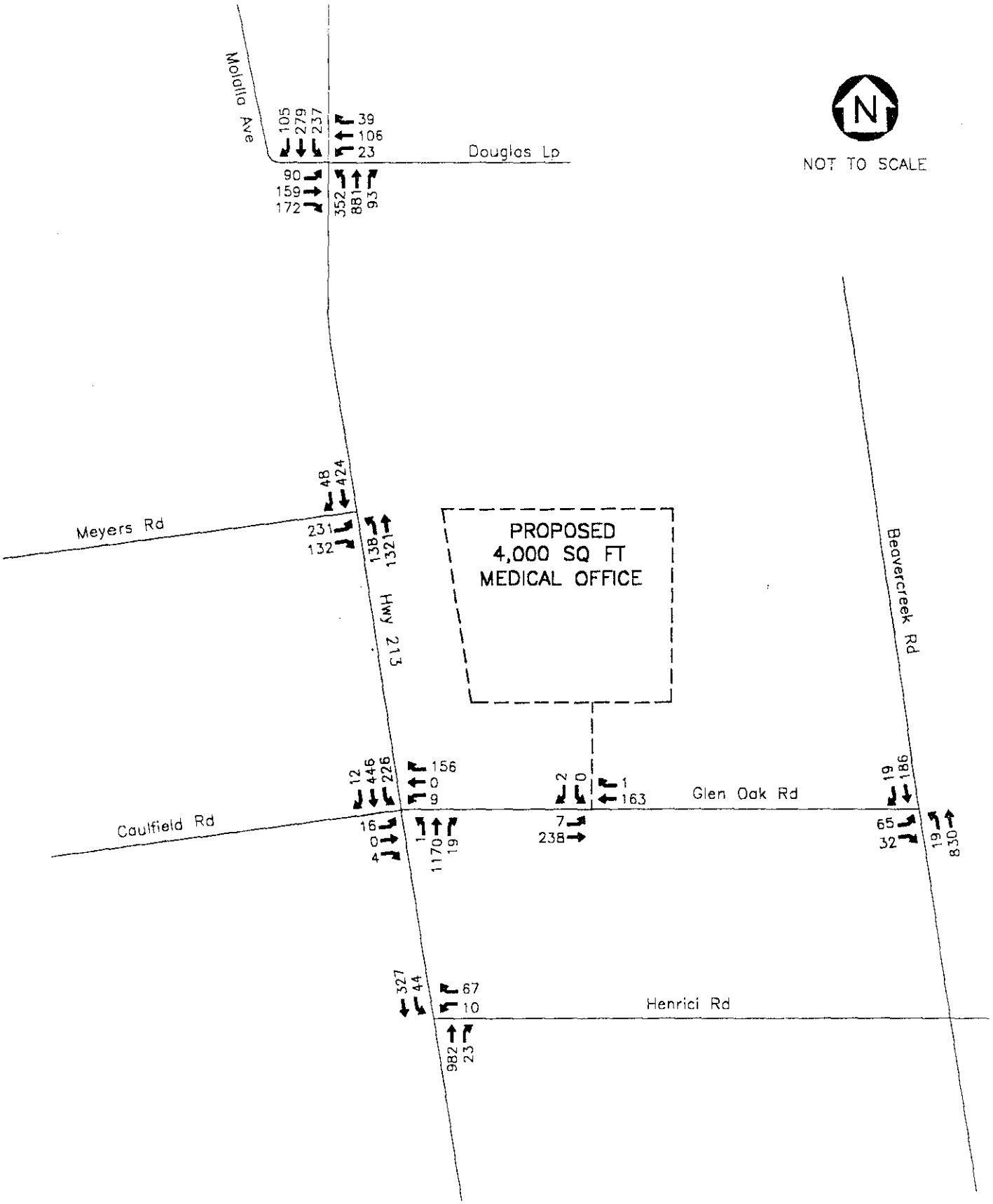


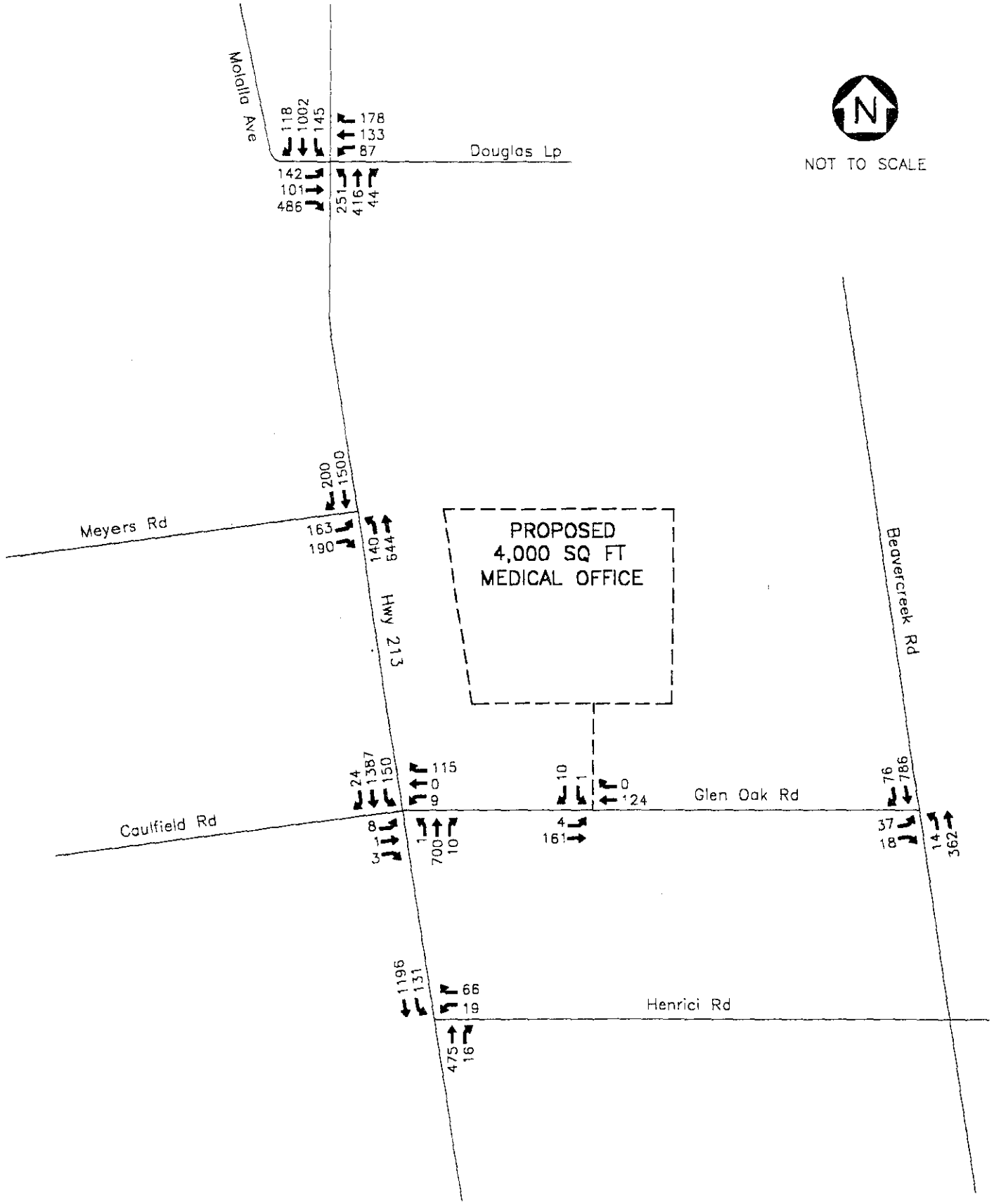
Date: 2/9/01 Project: 01-02 File: 0102flow.dwg	Notes: Reference Table 1 for details on the trip generation.	Site Generated Traffic Weekday PM Peak Hour	Figure 9

CHARBONNEAU ENGINEERING LLC



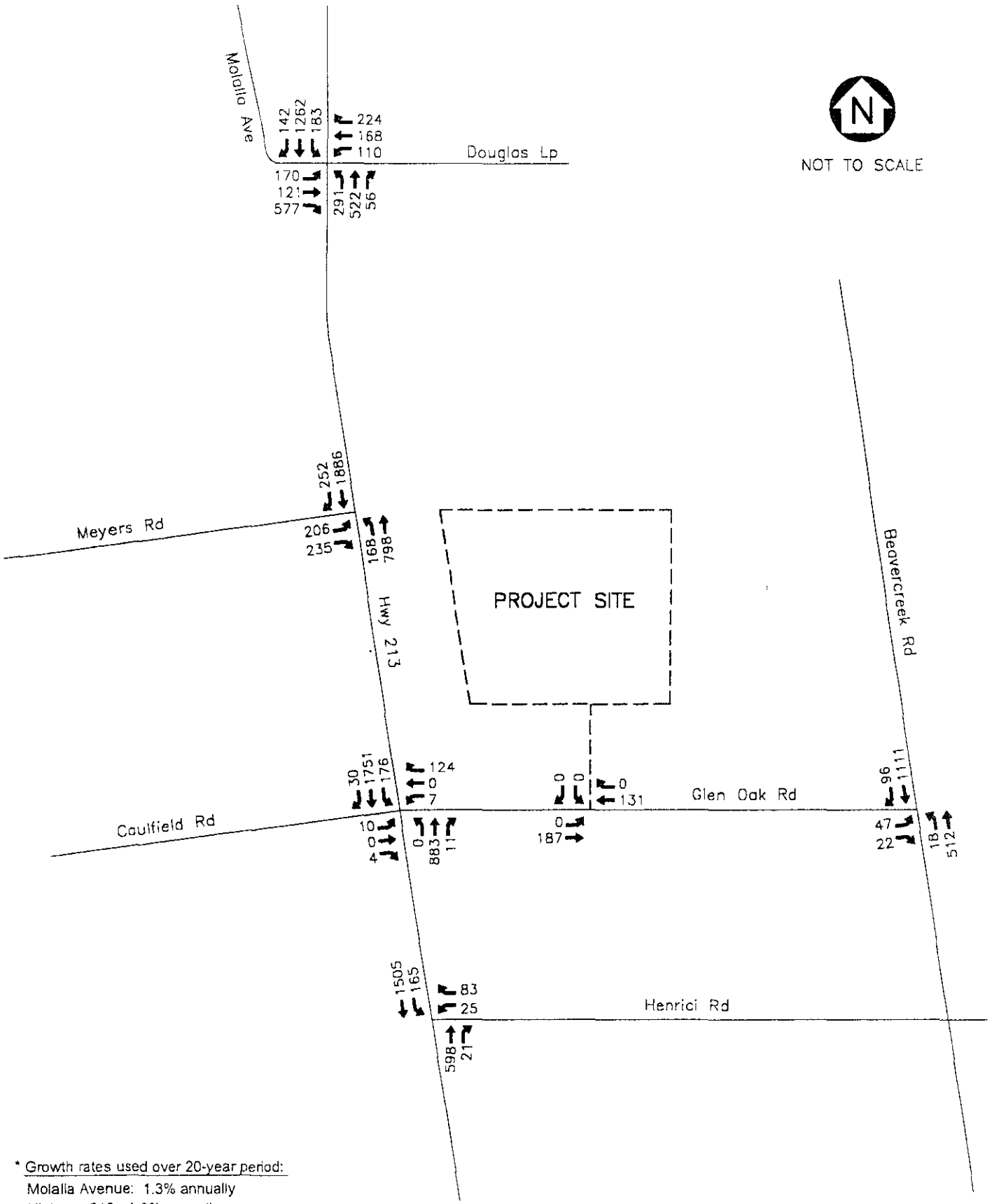
Date: 2/9/01 Project: 01-02 File: 0102flow.dwg	Notes: Total Traffic = Background Traffic + Site Generated Traffic from 4,000 sf medical office	Total Traffic at Build-out (2003) Weekday AM Peak Hour	Figure 10

CHARBONNEAU ENGINEERING LLC



Date: 2/9/01	Notes:	Total Traffic at Build-out (2003)	Figure
Project: 01-02	Total Traffic = Background Traffic + Site Generated Traffic from 4,000 sf medical office	Weekday PM Peak Hour	11
File: 0102flow.dwg			

CHARBONNEAU ENGINEERING LLC

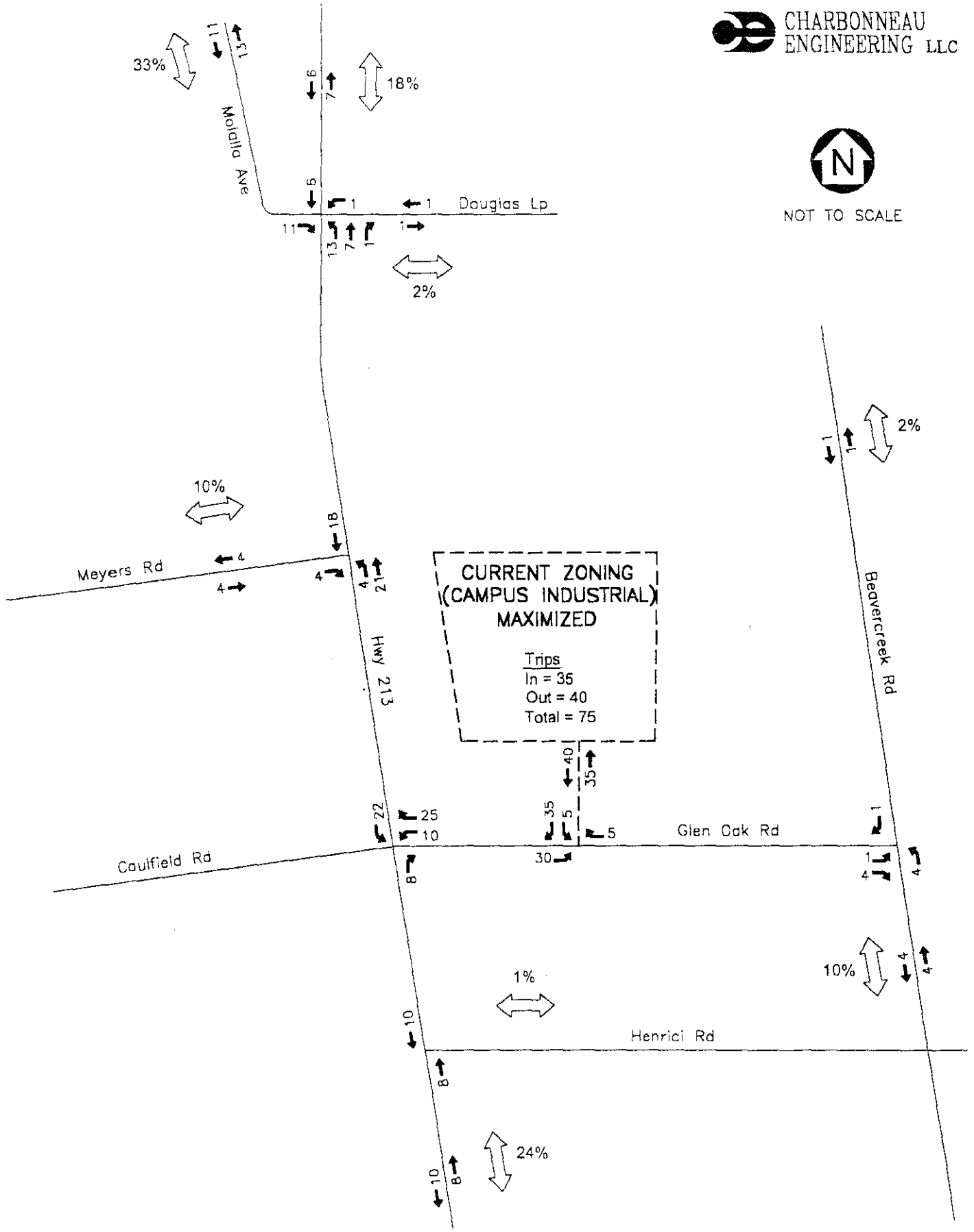


NOT TO SCALE

* Growth rates used over 20-year period:
Molalla Avenue: 1.3% annually
Highway 213: 1.0% annually
Beavercreek Road: 2.0% annually
(rates based on Nov. 2000 Draft TSP)

Date: 2/9/01 Project: 01-02 File: 0102flow.dwg	Notes: Base Traffic Year 2020 = Existing Traffic + growth * + In-Process Traffic	Base Traffic Year 2020 Weekday PM Peak Hour	Figure 12

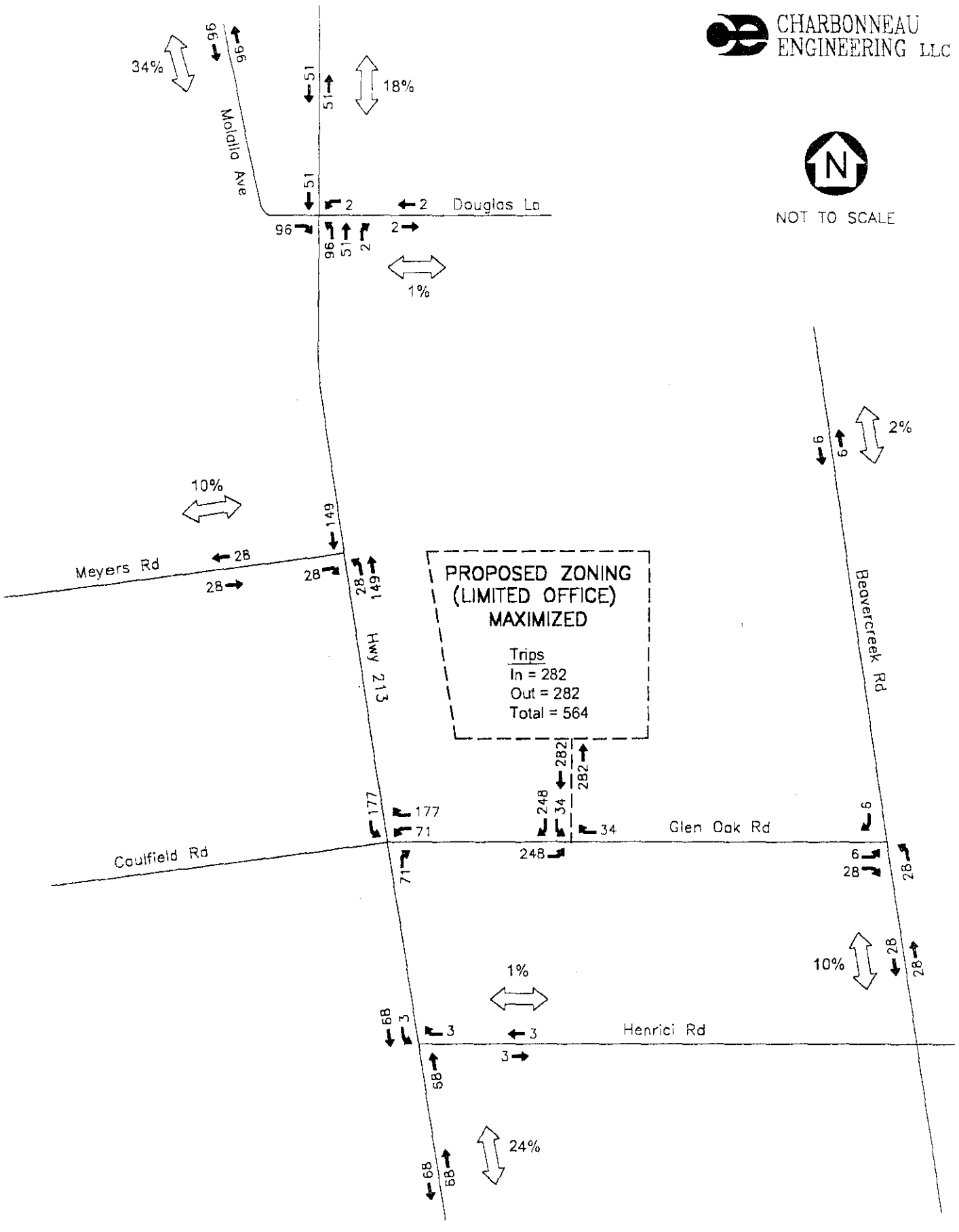
CHARBONNEAU ENGINEERING LLC



Maximized Use of Current Zoning (Campus Industrial)

Date: 3/1/01	Notes:	Site Generated Traffic	Figure
Project: 01-02	Reference Table 2 for details on the trip generation.	Weekday PM Peak Hour	13
File: 0102flow.dwg			

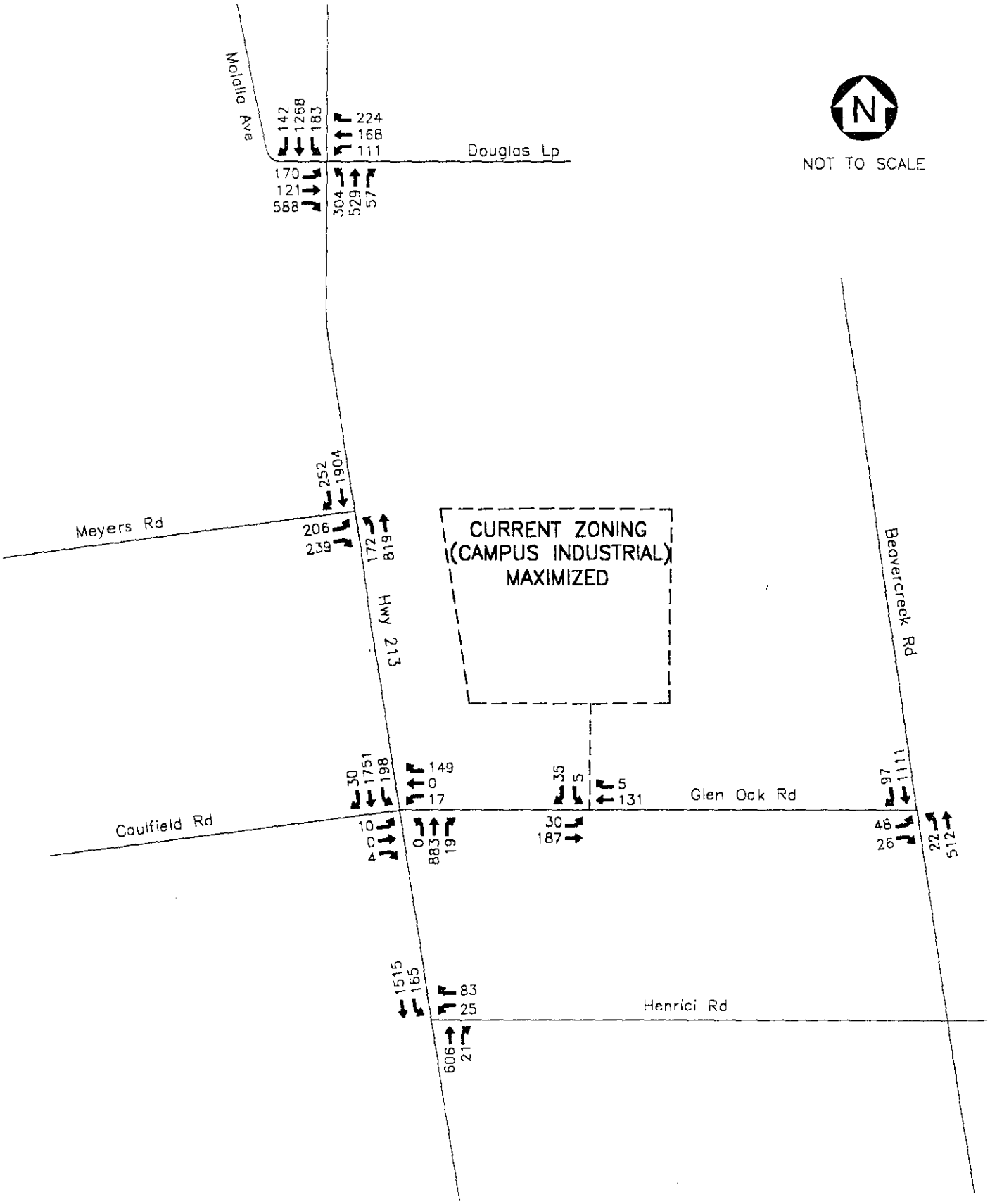
CHARBONNEAU ENGINEERING LLC



Maximized Use of Proposed Zoning (Limited Office)

Date: 3/1/01	Notes:	Site Generated Traffic	Figure
Project: 01-02	Reference Table 3 for details on the trip generation.	Weekday PM Peak Hour	14
File: 0102flow.dwg			

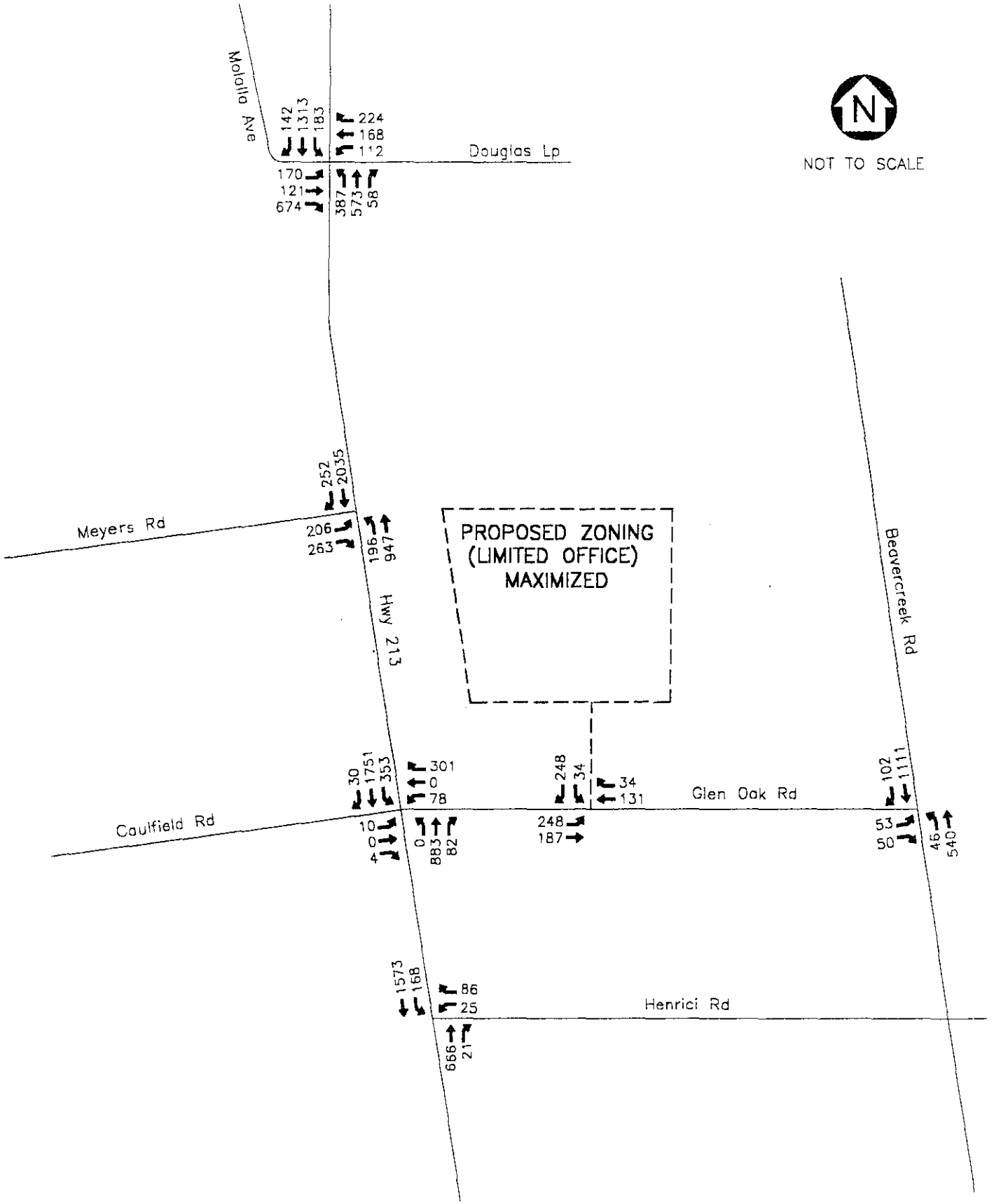
CHARBONNEAU ENGINEERING LLC



Maximized Use of Current Zoning (Campus Industrial)

Date: 3/1/01 Project: 01-02 File: 0102flow.dwg	Notes: Total Traffic Year 2020 = Base Traffic Year 2020 + Site Generated Traffic from maximized use of current zoning	Total Traffic Year 2020 Weekday PM Peak Hour	Figure 15

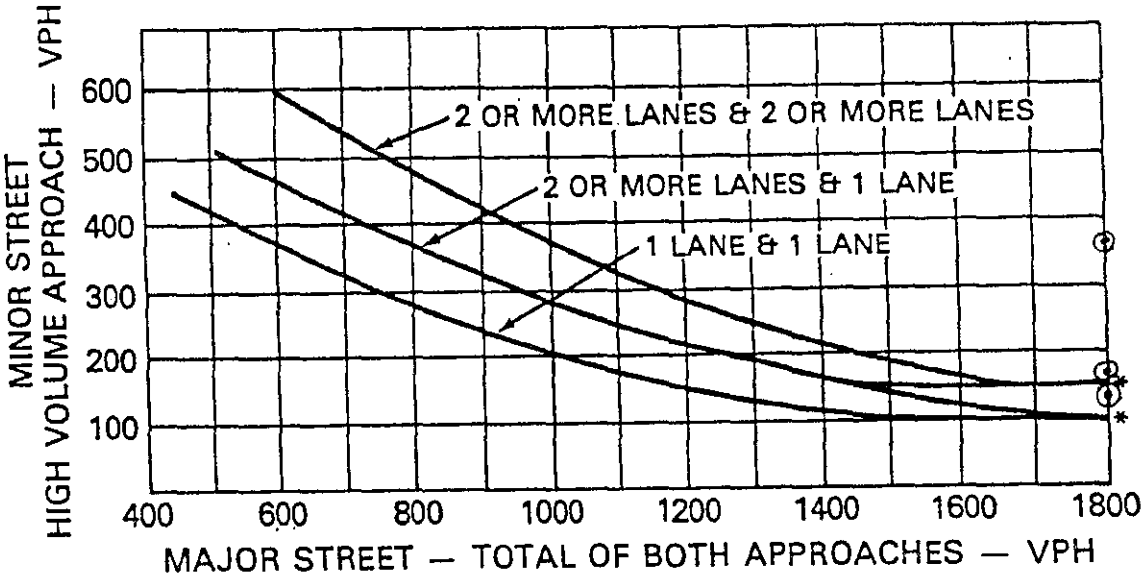
CHARBONNEAU ENGINEERING LLC



Maximized Use of Proposed Zoning (Limited Office)

Date: 3/1/01 Project: 01-02 File: 0102flow.dwg	Notes: Total Traffic Year 2020 = Base Traffic Year 2020 + Site Generated Traffic from maximized use of proposed zoning	Total Traffic Year 2020 Weekday PM Peak Hour	Figure 16

FIGURE 4-5. PEAK HOUR VOLUME WARRANT



*NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

4C-9

Rev. 3/89

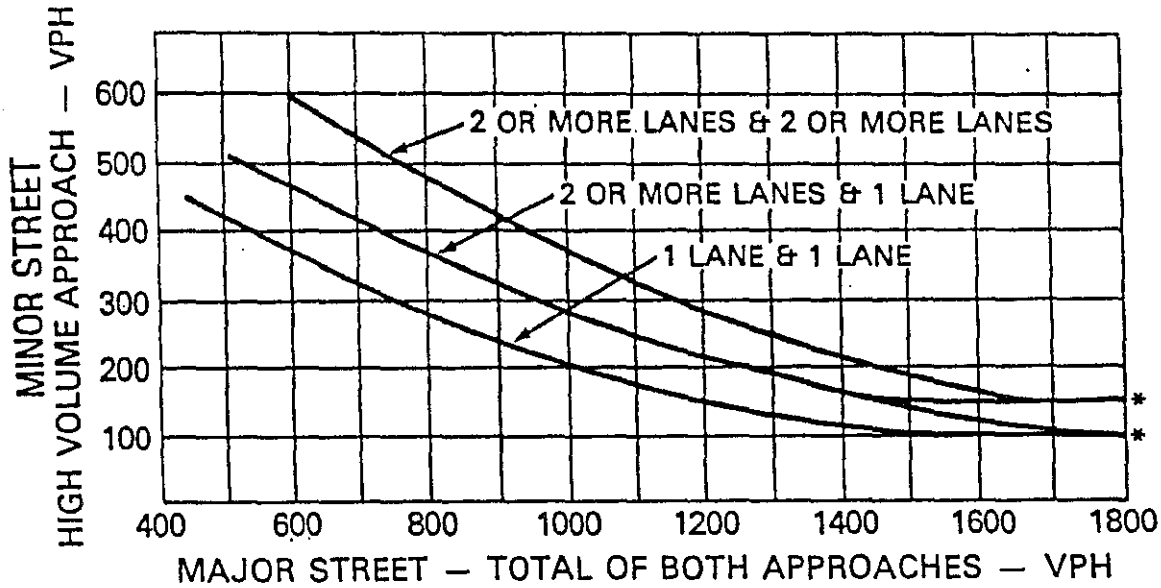
PEAK HOUR VOLUME WARRANT DATA

Intersection	Analysis Period	Major Street		Minor Street High Volume Approach		Signal Warranted?	
		Volume (vph)	Lanes (#)	Volume (vph)	Lanes (#)		
Hwy. 213 at Glen Oak Road	Exist. AM '01	1617	2	77	1	NO	
"	Exist. PM '01	2195	2	59	1	NO	
	Yr. 2003						
"	Background AM	1867	2	163	1	Yes	
"	Background PM	2268	2	114	1	Yes	(NO 2 Lanes
	Yr. 2003						
"	Total AM	1874	2	165	1	Yes	
"	Total PM	2292		124	1	Yes	(NO 2 Lanes
	Year 2020						
"	Base PM	2851	2	131	2	NO	
"	TOTAL PM - Max. Current Zoning	2881	2	166	2	YES	
"	Total PM - Max. Proposed Zoning	3099	2	379	2	YES	

4C-9 Medical Office

Rev. 3/89

FIGURE 4-5. PEAK HOUR VOLUME WARRANT



*NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

4C-9

Rev. 3/89

PEAK HOUR VOLUME WARRANT DATA

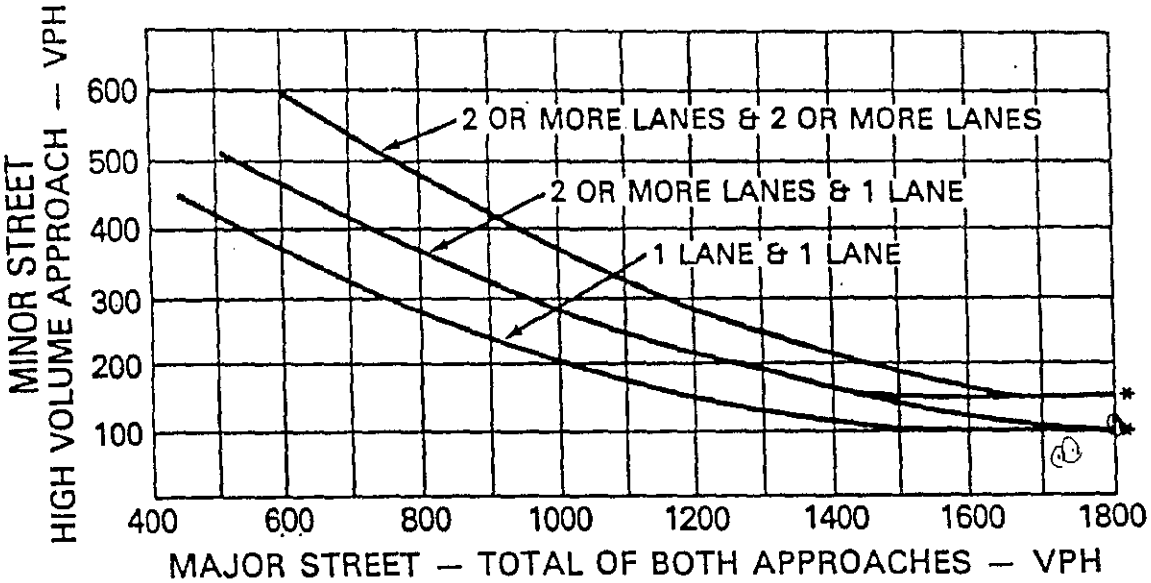
Intersection	Analysis Period	Major Street		Minor Street High Volume Approach		Signal Warranted?
		Volume (vph)	Lanes (#)	Volume (vph)	Lanes (#)	
Hwy. 213 at Henrici Road	Exist. AM '01	1325	2	75	1	NO
"	Exist. PM '01	1766	2	83	1	NO
" '03	Background AM	1373	2	77	1	NO
" '03	Background PM	1814	2	85	1	NO
" '03	Total AM	1376	2	77	1	NO
" '03	Total PM	1818	2	85	1	NO
" 2020	Base PM	2289	2	108	2	NO
" 2020	Total PM - max. current zoning	2307	2	108	2	NO
" 2020	Total PM - max. proposed zoning	2428	2	111	2	NO

Medical Office

4C-9

Rev. 3/89

FIGURE 4-5. PEAK HOUR VOLUME WARRANT



*NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

4C-9

Rev. 3/89

PEAK HOUR VOLUME WARRANT DATA

Intersection	Analysis Period	Major Street		Minor Street High Volume Approach		Signal Warranted?
		Volume (vph)	Lanes (#)	Volume (vph)	Lanes (#)	
Beavercreek Road at						
Glen Oak Road	Exist. AM '01	891	2	94	2	NO
"	Exist. PM '01	1152	2	53	2	NO
" '03	Background AM	1053	2	97	2	NO
" '03	Background PM	1238	2	54	2	NO
" '03	Total AM	1054	2	97	2	NO
" '03	Total PM	1238	2	55	2	NO
" 2020	Base PM	1737	2	69	2	NO
" 2020	Total PM - Max. Current Zoning	1742	2	74	2	NO
" 2020	Total PM - Max. Proposed Zoning	1799	2	103	2	NO

4C-9 Medical — Office —

Rev. 3/89

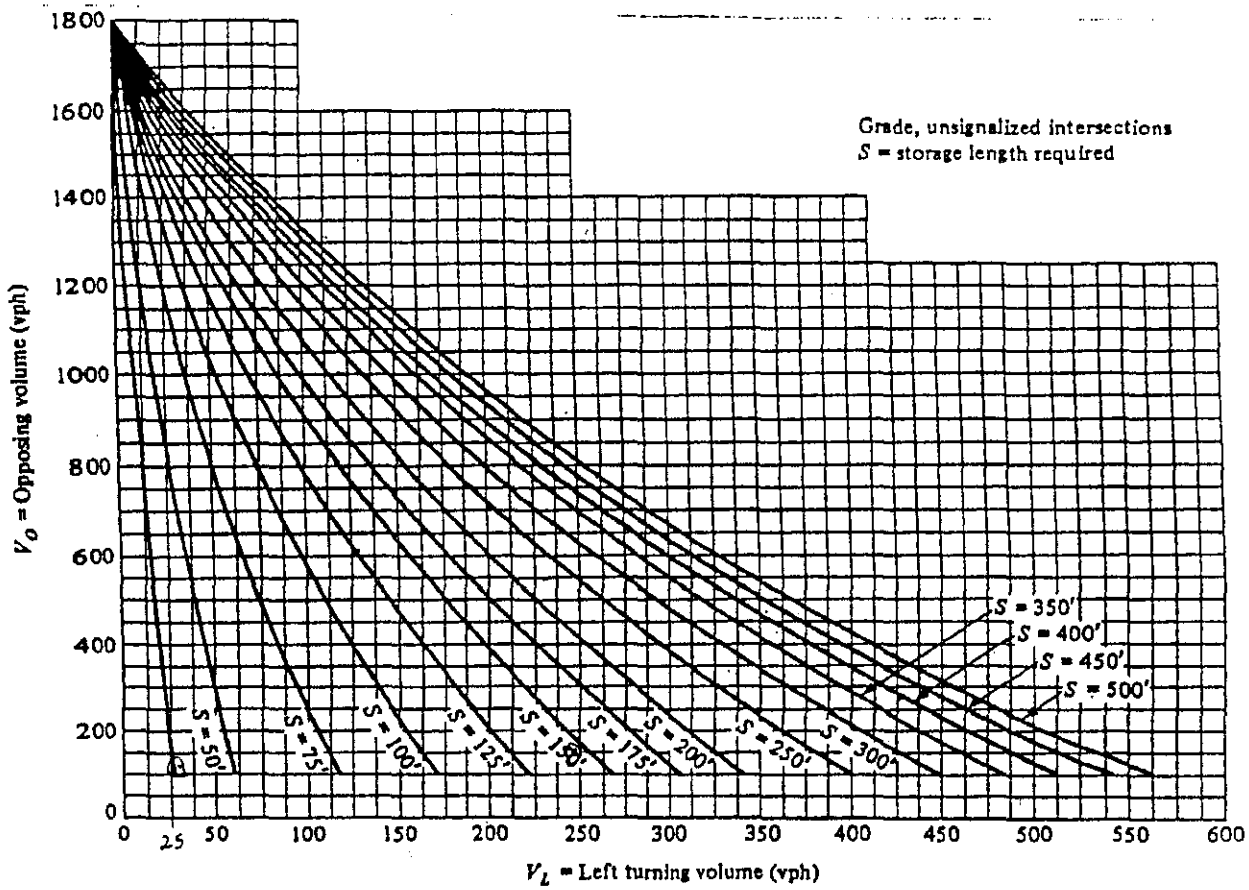


Figure 5-15 Nomograph for left-turn storage at nonsignalized intersections. The nomograph is used by reading horizontally from the opposing traffic volume, V_O, on the vertical axis and reading vertically from the left-turn volume, V_L, on the horizontal axis and locating the minimum storage length, S, at the point where the horizontal and vertical lines cross. For example, 100 left-turning vehicles per hour, V_L, with an opposing through volume, V_O, of 950 vph, will require a minimum storage length of about 150 feet. SOURCE: M. D. Hamelink [12]. **Source:** ***Transportation and Land Development***, **ITE, Prentice Hall, 1988, p. 138.**

LEFT-TURN STORAGE REQUIREMENTS AT UNSIGNALIZED INTERSECTIONS

Intersection	Movement	Analysis Period	Opposing Vol. V_O (vph)	Left-Turning Vol. V_L (vph)	Storage Req'd (ft)
Medical office — Site Access/Glen Oak	EB Left	Total AM (2003)	164	7	0
Site Access/Glen Oak	EB Left	Total PM	124	4	0
"	EB Left	Total (2020) PM - Max. Current Zoning	136	30	25-50'
"	EB Left	Total (2020) PM - Max. Proposed Zoning	165	248	125-150'

CHARBONNEAU ENGINEERING LLC

FAX MEMORANDUM

0102fax.doc

DATE ~~January~~ February 14, 2001

TO Colin Cooper
City of Oregon City
320 Warner Milne Rd
Oregon City, OR 97045-3040

FAX # (503) 657-7892

FROM Ty Reynolds
Traffic Analyst

 # OF PAGES 2

SUBJECT **Morris Womack Property** - Highway 213 & Glen Oak Rd

Trip Generation Assumptions for Zone Change/Traffic Impact Study

As per your request, the following memo describes what we propose to use for trip generation assumptions in the Traffic Impact/Zone Change Study for Mr. Womack's property.

The maximum building sizes under each zoning type were calculated by Dane Segrin at Hoffman Realtors, and have been based on the City building codes. We have reviewed the assumptions and calculations, and they seem reasonable to us. If you would like the details regarding the assumptions and calculations made in determining these maximum building sizes, I can provide this information to you.

Current zoning: Campus Industrial
Max. building size that would fit on the property: 45,000 sq.ft. (2 floors at 22,500 sq.ft. each)

The I.T.E. Trip Generation manual (6th Edition) codes that closely correspond to the permitted uses listed under the City Code 17.37.020 were reviewed. Based on the rates provided in the Trip Generation manual, we believe that the most intense use is "Trade School", which we have approximated with ITE Code #540 (Junior/Community College). The following table summarizes the resulting trip generation.

Table 1. Trip generation for 45,000 sq.ft. Junior/Community College

ITE Land Use	Square Feet	Weekday						
		ADT	AM Peak Hour of Generator			PM Peak Hour of Generator		
			Total	Enter	Exit	Total	Enter	Exit
Junior/Community College (540)	45,000							
Generation Rate [1]		18.36	1.78	80%	20%	1.66	46%	54%
Site Trips		826	80	64	16	75	35	40

[1] Source: *Trip Generation*, 6th Edition, ITE, 1997. No fitted curve equation given.

Proposed zoning: Limited Office
Max. building size that would fit on the property: 33,000 sq.ft. (3 floors at 11,000 sq.ft. each)

The I.T.E. Trip Generation manual (6th Edition) codes that closely correspond to the permitted uses listed under the City Code 17.22.020 were reviewed. Based on the rates provided in the Trip Generation manual, we believe that the most intense use is "Governmental Services and Agencies", which we have approximated with ITE Code #731 (State Motor Vehicle Department). The following table summarizes the resulting trip generation.

Table 2. Projected trip generation for State Motor Vehicles Department.

ITE Land Use	Units (sq. ft.)	Weekday						
		ADT	AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
			Total	Enter	Exit	Total	Enter	Exit
State DMV (#731)	33,000							
Generation Rate [1]		101.19	7.48	NA	NA	17.09	NA	NA
Site Trips		3339	247			564		

[1] Source: *Trip Generation*, 6th Edition, ITE, 1997. Fitted curve equations used. Average rate back-calculated.
ADT equation: Ln(T) = 0.569 Ln(X) + 6.124
AM equation: Ln(T) = 0.767 Ln(X) + 2.827
PM equation: Not given. Average rate used.
NA - Entering/exiting split not provided in ITE manual.

The actual size of the proposed dental office building is 4,000 sq.ft. The following table summarizes the projected trip generation for the proposed building.

Table 3. Projected trip generation for 4,000 sq.ft. dental office building.

ITE Land Use	Units (sq. ft.)	Weekday						
		ADT	AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
			Total	Enter	Exit	Total	Enter	Exit
Medical-Dental Office Building (#720)	4,000							
Generation Rate [1]		36.13	2.43	80%	20%	3.66	27%	73%
Site Trips		145	10	8	2	15	4	11

[1] Source: *Trip Generation*, 6th Edition, ITE, 1997. Average rates used.

Thanks in advance for reviewing this information, and letting us know if this looks reasonable and/or acceptable. Please call if you have any questions (503) 293-1118.

CC: Dane Segrin, Hoffman Realtors
Morris Womack, subject property owner

9370 SW Greenburg Rd., Suite 411, Portland, OR 97223 • Phone (503) 293-1118 • FAX (503) 293-1119

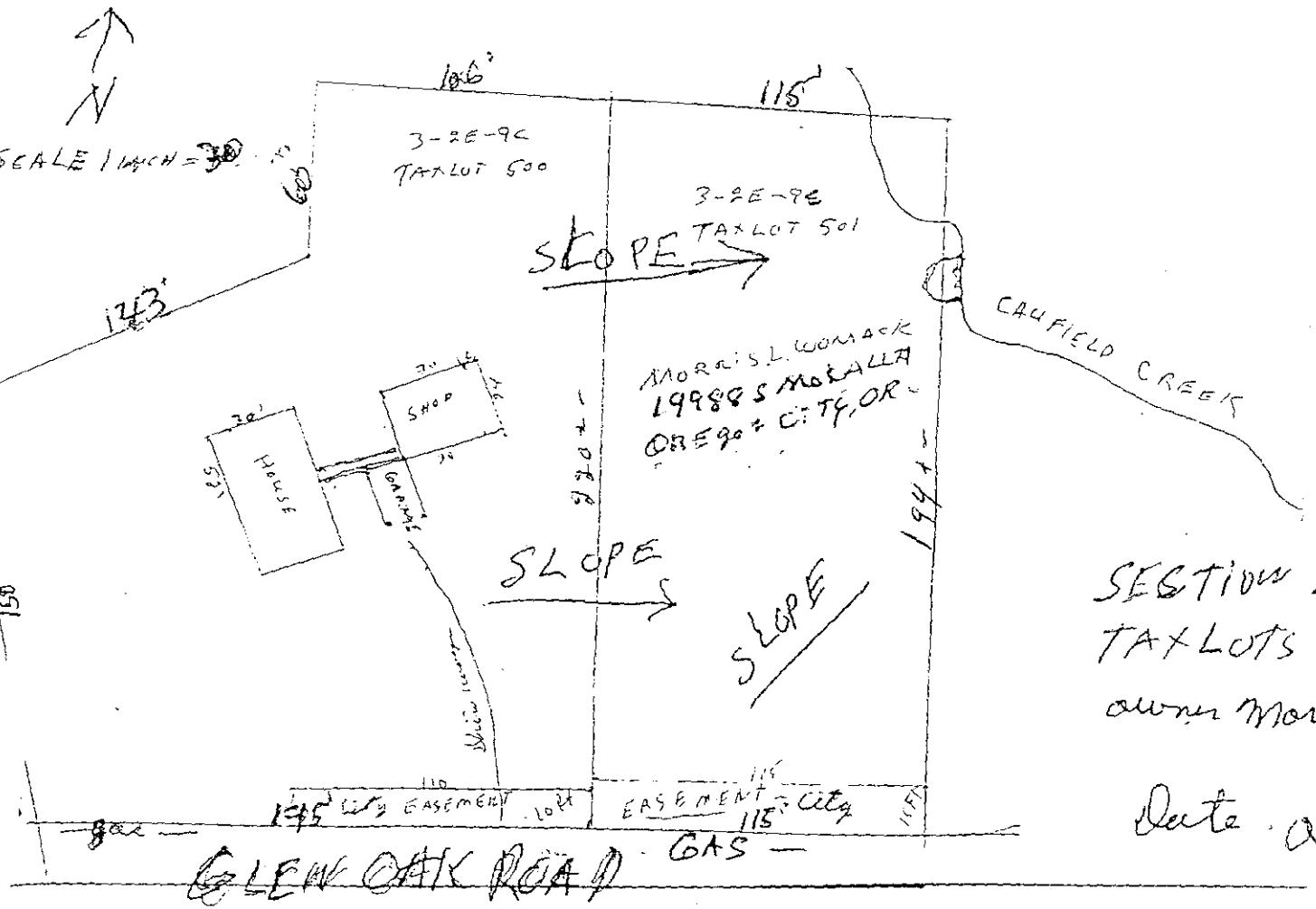


EXHIBIT 4

SECTION 3S 2E 09 C
TAX LOTS 500 & 501
owner Morris & Patricia Womack
Date Oct 23, 2000

ANALYSIS AND FINDINGS

The applicant has proposed a zone change for the property located at the northeast corner of the intersection of Hwy. 213/Glen Oak Road from Campus Industrial to Limited Office. Applicant is proposing to construct a medical clinic on the property to provide service to Willamette Falls Hospital.

Staff recommends approval of the proposed zone change as long as the following recommendations and conditions of approval are followed:

PROVISION OF PUBLIC SERVICES:

WATER.

There is an existing 8-inch Clackamas River Water (CRW) water main in Glen Oak Road, and an existing 16-inch City water main in Hwy 213.

Future development of this property will require a new 16-inch water main in Glen Oak Road to replace the existing 8-inch (CRW) water main along the site frontage.

SANITARY SEWER.

There is an existing 15-inch sanitary sewer main in Hwy. 213. There is no sanitary sewer main in Glen Oak Road at this location.

Future development of this property may require new sanitary sewer lines along the north and east property lines according to the Sanitary Master Plan.

STORM SEWER/DETENTION AND OTHER DRAINAGE FACILITIES.

This site is in the Caufield Drainage Basin as designated in the City's Drainage Master Plan. Drainage impacts to this site are significant. This site drains to Caufield Creek to the north and east of the site. Caufield Creek drains across Hwy. 213 to a pond. The entire project site is located within the Water Quality Resource Area Overlay District. Erosion and water quality controls are critical for the development of this site.

EXHIBIT 5a

Future development of this property will require detention and water quality treatment as well as meeting requirements to the Caufield Basin Master Plan.

DEDICATIONS AND EASEMENTS.

Glen Oak Road is classified as a Collector in the Oregon City Transportation System Plan, which requires a right-of-way (ROW) width of 35 to 85 feet. Currently, Glen Oak Road appears to have a 50-foot wide ROW along most of the site frontage and a 60-foot wide ROW to the west, with 25-feet on the project site side of the centerline.

Highway 213 is classified as a Major Arterial in the Oregon City Transportation System Plan, which requires a ROW width of 39 to 123 feet. Currently, Hwy. 213 appears to have a 75-foot wide ROW along the site frontage, with 30 feet on the project site side of the centerline. Hwy. 213 is under Oregon Department of Transportation (ODOT) jurisdiction.

Future development of this property will require dedication of ROW along Glen Oak Road to meet City requirements, and dedication of ROW along Hwy. 213 to meet ODOT requirements. A right turn lane may be required for west bound traffic on Glen Oak Road requiring extra ROW width.

STREETS.

Glen Oak Road is classified as a Collector in the Oregon City Transportation System Plan, which requires a pavement width of 22 to 62 feet. Currently, Glen Oak Road appears to have a pavement width of approximately 16 feet.

Highway 213 is classified as a Major Arterial in the Oregon City Transportation System Plan, which requires a pavement width of 24 to 98 feet. Currently, Hwy. 213 appears to have a pavement width of approximately 46 feet. Hwy. 213 is under Oregon Department of Transportation (ODOT) jurisdiction.

Future development of this property will require half street improvements along the site frontage with Glen Oak Road to meet City requirements, and highway improvements along the site frontage with Hwy. 213 to meet ODOT requirements. A right turn lane may be required for west bound traffic on Glen Oak Road requiring extra pavement width.

TRAFFIC AND TRANSPORTATION.

A traffic analysis for this site, prepared by Charbonneau Engineering LLC and dated February 2001, was submitted to the City for review. The City's traffic engineer concluded that the applicant's traffic study meets the City's requirements. The proposed development will have little impact on the transportation system, but in combination with other developments, the traffic overwhelms the transportation system. Immediate needs are for improvements to the Hwy. 213/Glen Oak Road/Caufield Road intersection. Longer-term needs are from capacity improvements to the Hwy. 213 corridor.

Future development of this property will require applicant to contribute to the improvements in the corridor in proportion to the traffic generated.

DAVID EVANS AND ASSOCIATES, INC.

2828 SW Corbett Avenue
Portland, Oregon 97201
Tel: 503.223.6663
Fax: 503.223.2701

April 2, 2001

Mr. Colin Cooper
City of Oregon City
PO Box 3040
Oregon City, OR 97045

SUBJECT: REVIEW OF TRAFFIC IMPACT STUDY
GLEN OAK ROAD MEDICAL OFFICE BUILDING – ZC 00-04
WOMACK PROPERTY

Dear Mr. Cooper:

In response to your request, David Evans and Associates, Inc. has reviewed the Traffic Analysis Report (TAR) prepared by Frank Charbonneau, PE (Charbonneau Engineering) for the Glen Oak Road Medical Office Building located adjacent to Glen Oak Road and Highway 213. The site is in the northeast quadrant of the intersection on a site of approximately 1½ acres. The TAR is dated February 2001.

The TAR compared the impact of development under three conditions: the current zoning, maximum intensity of the proposed zoning and the medical office building proposal. I concur with the report's conclusion that a 4000 square foot medical office building would have a lesser impact than the most intense use possible on the site. I question whether the most intense use evaluated for the site could reasonably occur. For the most intense use, both options require multi-story buildings and, probably, multi-level parking. This does not seem likely for any site this far from the city's principal activity centers. In actuality, the medical office building seems a reasonable high traffic generator under the limited office zoning category.

The applicant analyzed the existing conditions and accounted for in-process traffic including the proposed expansion of the Oregon City High School on Glen Oak Road. I find the report uses reasonable assumptions for distribution of traffic and for trip generation.

The analysis does address other modes of transportation and mentions the need to accommodate pedestrians on Glen Oak Road.

The analysis includes an assessment of five key intersections – four on Highway 213 and one on Beavercreek Road. They consist of Highway 213 with Molalla/Douglas, with Meyers Road, with Glen Oak/Caufield, and with Henrici; and Beavercreek with Glen Oak.

According to the report, both short-term and long-term projects are need to mitigate for traffic from this and other developments. I concur with the conclusions stated by the applicant in the TAR as summarized below.

- The report concludes that the intersection of Highway 213 and Molalla Avenue/Douglas Loop will continue to operate at an acceptable level of service in 2003. By year 2020, the intersection will be at or approaching capacity under either zoning category.

EXHIBIT 56

- The report concludes that the intersection of Highway 213 and Meyers Road will continue to operate at an acceptable level of service in 2003. By year 2020, the intersection will require mitigation. The intersection will require the addition of through lanes on Highway 213 in both directions (as indicated in the City's draft TSP) and may require an additional southbound through lane to achieve adequate operations.

- The report concludes that the intersection of Highway 213 and Glen Oak Road/Caufield Road is failing currently, assuming the addition of traffic from the high school. It concludes that adequate operations will be achieved with the installation of a traffic signal and with reconfiguration of the intersection (a standard 4-leg intersection without an offset as it is currently configured.) With the improvements specified in the TSP (a five-lane cross-section on Highway 213), long-term operations are also expected to be at an adequate level of service.

- The report concludes that the intersection of Highway 213 and Henrici Road will continue to operate with a poor level of service for the westbound left turn movement until a traffic signal is installed. By year 2020, the signalized intersection is expected to operate at or near capacity.

- The report concludes that the intersection of Beavercreek Road and Glen Oak Road will operate at an acceptable level of service through year 2020 with the installation of a traffic signal.

- The report concludes that warrants for the installation of a traffic signal will be met for background traffic and total year 2003 traffic for the intersection of Highway 213 with Glen Oak Road. It also states that the warrants are not met for either of the other two unsignalized intersections.

The report also addresses the proposed site access onto Glen Oak Road. The proposed access is located approximately 170 feet from Highway 213. The TAR also addresses the demand for left turns into the site from eastbound Glen Oak Road. The remedy proposed is for a left turn lane from eastbound Glen Oak Road. This site access could be problematic because of the proximity to the intersection with Highway 213. This situation is probably directly attributable to the zone change request. Although it is not a certainty, it seems likely that development of this parcel under the campus industrial zoning would include integrated development of several parcels. In the event that several parcels were developed as one, the site access could have been situated much further from the intersection. The reason that this proximity is a problem is that the queue storage for westbound traffic will regularly back up to the site driveway during peak hours. To provide a space for eastbound traffic entering the site to queue for an opening in westbound traffic, a second eastbound lane would be required. Thus, the street cross-section for Glen Oak Road should probably be designed for four lanes plus bike lanes with a total curb-to-curb width of approximately 60 feet. Right-of-way would need to be adjusted accordingly. Alternatively, the site access could be restricted to right-in, right-out operation. In this case, a barrier median would separate eastbound from westbound traffic on Glen Oak Road. Without a second eastbound lane, a full-movement access might be permitted initially, but the city should retain the right to require the developer to pay for the construction of a barrier median if such proved to be necessary. In the event that a full-movement site access is desired, the developer may need to pay for the addition of a second eastbound lane on Glen Oak Road.

There are two issues that need to be addressed to allow the development to proceed. First, this TAR emphasizes the immediate need to address traffic growth on Glen Oak Road. The existing transportation system cannot support this project and others that induce traffic on Glen Oak Road unless mitigation is undertaken. To provide an adequate level of service, mitigation must be undertaken that provides for the signalization and reconfiguration of the intersection of Highway 213 and Glen Oak Road. A secondary issue relating to this intersection and the site driveway involves the configuration of Glen Oak Road itself. To accommodate full movements at the site driveway, a second eastbound lane would be needed between the intersection of Highway 213 and the site driveway with appropriate tapers to the east. Alternatively, a right-in, right-out only access could be permitted.

The applicant needs to commit to improvements to this intersection and to upgrading the roads on which the parcel fronts in conformance with the city's adopted plans.

In conclusion, I find that the applicant's traffic analysis meets the City's requirements. The proposed development will cause relatively little impact on the transportation system, but in combination with other developments currently under consideration, the traffic overwhelms the current transportation system. The immediate need is for improvements to address the Highway 213/Glen Oak Road/Caufield intersection. A longer-term problem is to improve capacity in the Highway 213 corridor. This development should contribute to the improvements in the corridor in proportion to the traffic generated.

If you have any questions or need any further information concerning this review, please call me at 223-6663.

Sincerely,

DAVID EVANS AND ASSOCIATES, INC.

John Replinger, PE
Senior Transportation Engineer

JGRE:
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ORDINANCE NO. 90-1058

AN ORDINANCE AMENDING TITLE XI: CHAPTER 2 SECTION 3, OF THE 1963 CITY CODE, ZONING MAP OF OREGON CITY, BY CHANGING CERTAIN DISTRICTS

WHEREAS, ORS 197.640 requires local governments to enact measures to bring their comprehensive Plans and regulations into compliance with the Periodic Review Factors; and

WHEREAS, the Oregon City Planning Commission and Periodic Review Advisory Committee completed an analysis of future land needs for the City, and

WHEREAS, upon adoption of the final Periodic Review Order the land needs inventory will be completed; and

WHEREAS, the Periodic Review Order of Oregon City requires changes in certain districts and plan designations, which changes have been recommended for approval by the Planning Commission after public notice and hearing on October 11, 1990;

OREGON CITY ORDAINS AS FOLLOWS:

That the following properties as described in Exhibit "A" and depicted on Exhibit "B" are hereby changed as specified on Exhibits "A" and "B". The City Commission finds that the Comprehensive Plan and zoning designations as specified on Exhibits "A" and "B" are compatible with the Comprehensive Plan, and that the findings of the Planning Commission are hereby adopted.

Read first time at a regular meeting of the City Commission held on the 17th day of October, 1990, and the foregoing ordinance was finally enacted by the City Commission this 17th day of October, 1990.

Jean K. Elliott

JEAN K. ELLIOTT, City Recorder

ATTESTED this 17th day of October, 1990.

David D. Spear

DAVID D. SPEAR, Mayor

ORDINANCE NO. 90-1058
Effective Date: November 16, 1990.

EXHIBIT 6

ORDINANCE NO. 90-1058

EXHIBIT "A"

1. 2-2E-29, Tax Lot 1503, and 2-2E-20, Tax Lots 502 and 503, are hereby changed from "I", Industrial/"M-2", Heavy Industrial to "P", Park/ "R-10", Single-Family Dwelling District for a portion of the property 150 feet wide along the Clackamas River.

2. 2-2E-30, Tax Lot 100 is hereby changed from "C", Commercial/"C" General Commercial to "P", Park/"R-10", Single-Family Dwelling District.

3. 2-2E-30, Tax Lots 300, 500 and 600 are hereby changed from "QP", Quasi Public/"R-10", Single-Family Dwelling District to "C", Commercial/"C", General Commercial.

4. 3-2E-5C, Tax Lot 402 is hereby changed from "HR", High Density Residential/"RA-2", Multiple-Family Dwelling District to "MR", Medium Density Residential [MHP]/"RD-4", Two-Family Dwelling District.

5. 3-2E-5D, Tax Lots 1201 and 1202 are hereby changed from "I", Industrial/"M-1", Light Industrial to "C", Commercial/"C", General Commercial.

6. 3-2E-6DA, Tax Lot 200 is hereby changed from "O", Office/"LO", Limited Office to "HR", High Density Residential/"RA-2", Multiple-Family Dwelling District for a portion of the property.

7. 3-2E-6DC, Tax Lots 2301 and 2302 are hereby changed from "HR", High Density Residential/"RA-2", Multiple-Family Dwelling District to "MR", Medium Density Residential [MHP]/"RD-4", Two-Family Dwelling District.

8. 3-2E-8AC, Tax Lots 100 through 1200, and Tax Lots 1400 through 3700 are hereby changed from "MR", Medium Density Residential to "LR" Low Density Residential/"R-6", Single-Family Dwelling District.

9. 3-2E-9B, Tax Lot 200; Tax Lots 204 through 206; Tax Lots 270 and 280; and Tax Lots 1202, 1300, 1302, 1303, 1400, 1401, and 1502 are hereby changed from "I", Industrial/"M-1", Light Industrial to "C", Commercial/"C", General Commercial.

10. 3-2E-9B, Tax Lots 1500 and 1501 are hereby changed from "I", Industrial/"M-1", Light Industrial to "C", Commercial/"C". General Commercial for a portion of the property along Molalla Avenue.

11. 3-2E-9C, Tax Lots 500 and 501 are hereby changed from "LR", Low Density Residential/"R-10", Single-Family Dwelling District to "I", Industrial/"CI", Campus Industrial.

CITY OF OREGON CITY

INCORPORATED 1844

COMMISSION REPORT

FOR AGENDA DATED

October 17, 199

TO THE HONORABLE MAYOR AND COMMISSIONERS

Subject: Proposed Changes to Zoning Districts and Plan Designations - Public Hearing

Report No. 90-261

If Approved, Proposed Ordinance No. 90-1058, An Ordinance Amending Title XI: Chapter 2 Section 3, of the 1963 City Code, Zoning Map of Oregon City, By Changing Certain Districts

The City's Periodic Review order outlined several changes that needed to b made to City Codes to bring them into compliance with requirements outline in the order. The changes were reviewed and discussed by the Plannin Commission and Periodic Review Advisory Committee.

During the work sessions on the City's Periodic Review order, Factor Tw outlined new or amended goals or rules adopted since acknowledgement. Th Planning Commission and Periodic Review Advisory Committee identified lan needs for commercial, industrial, office and multiple-family uses.

The number and acreage of sites were identified in each category. The site shown on the Exhibit "A", if approved, will enable the City to meet th Periodic Review requirements.

On October 11, 1990, the Planning Commission held a public hearing t consider the changes. The Planning Commission voted 4-0, to recommen approval of the changes as outlined in Exhibit "A" and "B". Attached i proposed Ordinance No. 90-1058, which will change the plan and zonin designations to meet Periodic Review Requirements.

Attached for Commission review are the following documents:

1. Ordinance No. 90-1058
2. Staff Report
3. Public Notice

If the Commission agrees and the changes are approved, attached is Ordinanc No. 90-1058, which will enact the changes.

CITY OF OREGON CITY

INCORPORATED 1844

COMMISSION REPORT

FOR AGENDA DATED

October 17, 1990

TO THE HONORABLE MAYOR AND COMMISSIONERS

Subject: Proposed Changes to Zoning Districts and Plan Designations - Public Hearing

Report No. 90-261

If Approved, Proposed Ordinance No. 90-1058, An Ordinance Amending Title XI: Chapter 2 Section 3, of the 1963 City Code, Zoning Map of Oregon City, By Changing Certain Districts

Notice of proposed Ordinance No. 90-1058 has been posted at City Hall, 320 Warner-Milne Road; Courthouse, 807 Main Street; and, Senior Center, 615-5th Street, by direction of the City Recorder. It is recommended that first and second readings be approved ~~unanimously~~ for final enactment to become effective ~~October 17,~~ 1990.

10/17/90

CHARLES LEESON
City Manager

JOHN G. BLOCK
Manager Pro-tem

JGB/im

attach.

cc: Development Services Director
Principal Planner

N O T I C E

NOTICE IS HEREBY GIVEN that proposed ORDINANCE NO. 90-1058 of the City of Oregon City, Clackamas County, Oregon, three copies of which are available for public inspection at the office of the City Recorder, 320 Warner Milne Road, Oregon City, Oregon.

Said Ordinance will be considered by the City Commission at its meeting on the 17th day of October, 1990, at the hour of 8:00 o'clock p.m. The title of said Ordinance is as follows:

AN ORDINANCE AMENDING TITLE XI: CHAPTER 2, SECTION 3, OF THE 1963 CITY CODE, ZONING MAP OF OREGON CITY, BY CHANGING CERTAIN DISTRICTS.

POSTED this 10th day of October, 1990, by direction of the City Recorder. Places of posting are as follows:

1. City Hall, 320 Warner Milne Road, Oregon City, Oregon.
2. Courthouse, 807 Main Street, Oregon City, Oregon.
3. Senior Center, 615 5th Street, Oregon City, Oregon.

JEAN K. ELLIOTT, City Recorder

DO NOT REMOVE PRIOR TO OCTOBER 18, 1990

CITY OF OREGON CITY

Incorporated 1844

STAFF REPORT
PLANNING COMMISSION
October 11, 1990

DEVELOPMENT SERVICES DEPARTMENT
Planning, Building, Engineering
320 Warner Milne Road
Oregon City, OR 97045
(503) 657-0895

FILE NO.: PZ-90-10

HEARING DATE: Thursday, October 11, 1990
7:00 P.M., City Hall
320 Warner-Milne Road
Oregon City

APPLICANT: City of Oregon City
320 Warner-Milne Road
Oregon City, Oregon 97045

PROPERTY OWNERS: Various

REQUEST:

a) Change the City's Plan and Zoning Map designations for certain properties to comply with Periodic Review Factor 2.

b) Change Comprehensive Plan Map to add Oregon City plan designations on properties within the Urban Growth Boundary.

LOCATION: City Limits and Urban Growth Boundary.

REVIEWER: Denyse C. McGriff

During the work sessions on the City's Periodic Review order, Factor Two outlined new or amended goals or rules adopted since acknowledgment. The Planning Commission and Periodic Review Advisory Committee identified land needs for commercial, industrial, office and multiple-family uses.

The number and acreage of sites were identified in each category. Those sites are shown on Exhibit "A". The sites shown on the Exhibit "A", if approved, will enable the City to meet the requirements.

The second part of this request involves the City's Urban Growth Boundary. The current Oregon City Comprehensive Plan deals only with the incorporated area. The process and requirements of Periodic Review require the City to look beyond the City limits for facilities planning in the Urban Growth Boundary. The City has had discussions with the County regarding an Urban Growth Boundary Plan. This has been included within the new Urban Growth Boundary Management Agreement to be adopted by both jurisdictions.

A. The proposed changes within the City are:

1. Area along the Clackamas River to Park Place exit (150 foot strip): I/M-2 to P/R-10. The City has requested this change to accommodate a future greenway/river access trail along the Clackamas River.

2. Old Sewer Treatment Plant Property: QP/R-10 to C/C. The voters elected to allow the sale of this property. This property was identified for a commercial land use designation during the periodic review process.

3. Penrod Property: C/C to P/R-10. This property was purchased for an addition to and expansion of Clackamette Park. The change in designation will accommodate future park usage.

4. First Presbyterian Church property (Warner-Milne Road): O/LO to HR/RA-2. This change was requested by the church during periodic review. The Planning Commission and PRAC reviewed this property and evaluated the property against the locational criteria and recommended this parcel.

5. Mt. Pleasant and Clairmont Mobile Home Parks: HR/RA-2 to MR/RD-4. This change is a housekeeping element. Both parks are not developed and will not be developed to the RA-2 density. The density of the parks is closer to 10 units per acre (11-11-7)(B). The change would result in the zoning that would more closely reflect the actual density of the development. In addition, some additional density would become available in the RA-2 zoning classification.

6. Stillmeadow Terrace: MR/RD-4 to LR/R-6 - This property was planned for medium density uses in Clackamas County. When the property was annexed the zoning corresponded with the plan. The property was developed as a single-family residential development the average with lot size of 6,000 square feet.

   The existing lots cannot be developed for two-family uses. This is a housekeeping change.

7. Womack Property: LR/R-10 to I/C1 - This property was identified as industrial during the periodic review workshops.

8. Frontage Adjacent to Fir Street Industrial Area (TL 1300, 1302, 1303, 1202, 1401, 1400, 1502, a portion of 1500 and 1501.

These properties developed under the old M-1 zone which allowed commercial uses. All of the existing development was build under the previous requirements. The properties provide additional acreage under the commercial land needs analysis.

9. Berryhill and Fred Meyer Shopping Center: I/M-1 to C/C.

Berryhill and Fred Meyer were both developed under the old M-1 zone which allowed commercial uses. Both developments have become non-conforming uses in the current zone. The periodic review order also recommends these two properties be changed.

B. The proposed changes in the Urban Growth Boundary are:

1. All of the Plan designations are the same as currently existing in the County except four.

2. Cherry Lane Mobile Home Park plus two lots: LR to MR (MHP). The change will allow for further development of needed mobile home housing in the future.

3. Glen Oak Road: LR to I - This area was identified as a future industrial/campus industrial park area. The County initially pursued this change and then dropped it. The City would like to see this area eventually develop into a campus industrial area in the future.

4. Country Village: LR to MR (MHP). This change will allow for further development of the existing mobile home park.

The recommendation of staff is that the Planning Commission approve the recommended changes and forward your decision to the City Commission.

NOTICE OF PUBLIC HEARINGS

HEARING DATES:

Oregon City Planning Commission - Thursday, October 11, 1990; 7:00 PM; City Hall, 320 Warner Milne Road, Oregon City

Oregon City City Commission - Wednesday, October 17, 1990; 8:00 PM; City Hall, 320 Warner Milne Road, Oregon City

Subject: Comprehensive Plan and Zoning Map Changes to Comply with Periodic Review

File No.: PZ90-10

Applicant: City of Oregon City

Proposal: Change the City's Plan and Zoning Map designations to comply with the Periodic Review Notice; Map changes to place Oregon City plan designations on properties within the Urban Growth Boundary

Location: Various locations within the City limits and Urban Growth Boundary of OregonCity

Planning Division Staff Contact: Denyse C. McGriff (657-0891)

Publish Date: Friday, September 21, 1990.

The maps are available for inspection at the Oregon City Planning Division, City Hall. The staff report also is available for inspection seven days prior to the hearing. Copies of the staff report may be obtained in advance of the hearing.

All interested citizens may testify at the public hearing or submit written testimony prior to the hearing. The procedures for conduct of hearings are posted in Commission Chambers.

Pleased be advised that the failure to raise an issue, in person or by mail, with sufficient detail to afford the Planning Commission and the parties an opportunity to respond, precludes appeal of that issue to the Land Use Board of Appeals.

THIS IS AN EXAMPLE OF THE INDIVUDUAL NOTICE SENT TO AFFECTED PROPERTY OWNER

CITY OF OREGON CITY

Incorporated 1844

DEVELOPMENT SERVICES DEPARTMENT
Planning, Building, Engineering
320 Warner Milne Road
Oregon City, OR 97045
(503) 657-0895

September 26, 1990

Bernard Kuo-Wei Hwang
19525 Lazy Creek Lane
Oregon City, Oregon

RE: 3-2E-8AC, Tax Lot 3700

Dear Resident/Property Owner

The City of Oregon City is in the final phase of the completion of its Periodic Review of the Comprehensive Plan and implementing ordinances. The Periodic Review is an up date of the City's Plan, and is the opportunity for the City to identify and address changing circumstances and needs.

As part of the review of the Plan and ordinances, your property was identified for a change. The recommended change is "MR", Medium Density Residential to "LR" Low Density Residential/"R-6", Single-Family Dwelling District.

Attached is a copy of the public hearing notice. If you have any questions, please call me at 657-0891 or come by City Hall, 320 Warner-Milne Road, Oregon City.

Sincerely,

DENYSE C. McGRIFF
Principal Planner

DCM/im

T.N. TOLLS COMPANY REALTORS
Commercial - Industrial Brokerage
Post Office Box 577
Portland, Oregon 97207-0577
[503] 295-0188

October 2, 1990

Denyse McGriff, Principal Planner
Development Services Department
City of Oregon City
320 Warner Milne Road
Oregon City, Oregon 97045

Re: 3-2E-9B, Tax Lot 1501 (Lee Kronberg Property) as it relates to the letter dated 9/25/90, McGriff to Kronberg

Dear Denyse:

Lee and I have discussed the City's Periodic Review and certainly have no objection to the changes you have proposed. Without a specific tenant in mind it would be most difficult to say, in advance, exactly how deep the newly proposed commercial zoning should be. At this point we would have to say your suggestion is probably as accurate as any educated guess we might make.

Thank you for keeping us advised as to the status of the process. Please copy both Lee Kronberg and myself on the final results of this review.

Very truly yours,

Terry N. Tolls

cc: Lee Kronberg
Doug Kolberg

CITY OF OREGON CITY

PLANNING COMMISSION

320 WARNER MILNE ROAD OREGON CITY, OREGON 97045
TEL 657-0891 FAX 657-7892

STAFF REPORT
Date April 16, 2001

FILE NO.:	ZC 00-04
APPLICATION TYPE:	Quasi-Judicial/Type IV
HEARING DATE:	April 23, 2000 7:00 p.m., City Hall 320 Warner Milne Road Oregon City, OR 97045
APPLICANT	Morris Womack 19988 Molalla Avenue Oregon City, OR.
OWNER:	Morris Womack 19988 Molalla Avenue Oregon City, OR.
REQUEST:	Zone Change from "C-I" Campus Industrial District to "LO" Limited-Office District.
LOCATION:	19988 S. Molalla Avenue, Clackamas County Map 3S-1E-9C, Tax Lots 500 and 501
REVIEWER:	Colin Cooper, AICP, Senior Planner Jay Toll, Engineering Manager
RECOMMENDATION:	**Staff recommends approval of ZC 00-04**

CRITERIA:

Comprehensive Plan:
Section "D" Commerce and Industry
Section "G" Growth and Urbanization
Section "I" Community Facilities
Section "L" Transportation
Section "N" Neighborhood Map
Municipal Code:
Chapter 17.22 "LO" Limited Office District
Chapter 17.50 Administration and Procedures
Chapter 17.68 Zoning Changes and Amendments

SUMMARY OF ISSUES:

Scope of the Request: The applicant is requesting a zone change from "C-I" Campus Industrial District to "LO" Limited Office District for two tax lots that are approximately 1.5 acres in size located at 19988 S. Molalla Avenue, Clackamas County 3S-1E-9C, Tax Lots 500 and 501 (Exhibit 1). If the Planning Commission approves this request, the applicant's intention is to consolidate the tax lots and to offer the subject property for sale and development.

The zone change request is reviewed by the Planning Commission and the City Commission as a Type IV quasi-judicial application.

Summary of Analysis: Based on the analysis and findings contained in this staff report, there is sufficient evidence to show that the proposed Zone Change ZC 00-04 satisfies the Oregon City Municipal Code criteria.

No limitation on capacity of public facilities has been identified that cannot be overcome through construction of improvements as required by the City.

Upon application for development, the City will require the applicant to meet appropriate standards and provide necessary improvements and facilities to accommodate site development.

BASIC FACTS:

1. The subject property is approximately 1.5 acres in area. It is located at the northeast corner of the intersection of Highway 213 and Glen Oak Road (Exhibit 1). The property is designated "I" Industrial on the Oregon City Comprehensive Plan Map. Concurrent with this application the applicant is

requesting a Comprehensive Plan Map Amendment from "I" Industrial to "O" Limited Office (File No. PZ 00-01).

2. A single-family residence and out buildings occupies the subject property. The surrounding properties to the north and northeast of the subject property are in Clackamas County and carry a "FU-10" Future Urbanizable 10 Acre minimum. Based Oregon City Municipal Code Section 17.06.50, Zoning of Annexed Land, if the properties where annexed they would are required to come into the City as "R-10" Single-Family Dwelling District. The property directly south to the south across Glen Oak Road is zoned "LO" Limited Office. To the west across Highway 213 the property is zoned "R-10" Single Family Dwelling District.

3. An "LO" Limited Office District district is designed to accommodate a limited number of offices and medical buildings as well as high-density housing. These areas can act as buffer between residential and non-residential areas.

4. Transmittals on the proposal were sent to various City departments, affected agencies, property owners within 300 feet, and the Citizen Involvement Committee Council (CICC), and the Caufield Neighborhood Association. No comments have been received.

   The City's Engineering Division (5a), the Traffic Engineer (Exhibit 5b), and the Public Works Division (Exhibit 5c) reviewed the proposal and provided their comments. The received comments are incorporated into the analysis and findings section below.

ANALYSIS AND FINDINGS:

Oregon City Municipal Code Chapter 17.68.

Criteria for a zone change are set forth is Section 17.68.020 and are as follows:

Criterion A. The proposal shall be consistent with the goals and policies of the comprehensive plan.

The following goals and policies of the City of Oregon City Comprehensive Plan are applicable to the requested change:

Citizen Participation
Goal:

The public hearing was advertised and notice was provided as prescribed by law to be heard by the Planning Commission on April 23, 2001. The public hearing will provide an opportunity for comment and testimony from interested parties.

Conclusion: The proposal is in conformance with the Citizen Involvement Goal of the Comprehensive Plan.

Commerce and Industry Goal:

This goal requires that the City maintain a healthy and diversified economic community for the supply of goods, service and employment.

The proposal is to amend the Zoning Map by changing the zoning on two parcels from "C-I" Campus Industrial to "LO" Limited Office. The proposal seeks to amend the Zone Map in a manner that will provide a set of allowed commercial uses that are more feasible on a constrained site.

Conclusion: The proposal helps to diversify service and employment opportunities and thus, is in conformance with the Commerce and Industry Goal of the Comprehensive Plan.

Community Facilities Goal: This goal requires the City to plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve development in the City.

The City Engineering Division (Exhibit 5a), the City Traffic Engineer (Exhibit 5b), and the Public Works Division (Exhibit 5c) reviewed the proposal for availability of public services and facilities and utilities.

The Engineering Division notes that all public services such as water, sanitary sewer, and storm sewer are available to the site. Tualatin Valley Fire and Rescue has reviewed the proposed Zone Map amendment and has no objection. The Engineering Division has indicated that additional transportation improvements to the intersection of Glen Oak Road and Highway 213 will be required at the time a specific development is proposed.

Conclusion: This site can be served by urban services or services can be made available to the site. Therefore, the proposed zone change complies with the Public Facilities Goal of the Comprehensive Plan. Upon application for development, the City will require the applicant to meet appropriate standards and provide necessary improvements and facilities to accommodate site development.

Transportation Goal:

This goal requires that the City insure a transportation system that supports the City's land uses and provide appropriate facilities to accommodate transportation movements.

The applicant submitted a Traffic Analysis Report (TAR) that was evaluated by the City's Traffic Engineer (Exhibit 5b). The City's Traffic Engineer determined that the proposed rezone alone will not have a significant negative impact on the function of the intersection. However, left hand turning movements into the site from eastbound traffic on Glen Oak Road is problematic. To address this issue a condition of approval that requires any future development of the site to provide an additional eastbound lane is required.

In conclusion, the Traffic Engineer found that the applicant's traffic impact analysis meets the City's requirements and that the impacts on the transportation system can be mitigated with improvements required with future development of the site.

Conclusion: No specific traffic facility improvements are required by approval of the zone change request. Upon future development of the subject property, the City would require half-street improvements on Glen Oak Road along the entire property frontage. In addition, improvements as required by the newly adopted Transportation System Plan will be required for the Highway 213 frontage with any future development.

Conclusion for Criterion A:

Based on the above analysis, the proposal, as presented by the applicant, has satisfied Criterion A.

Criterion B. **That public facilities and services (water, sewer, storm drainage, transportation, schools, and police and fire protection) are presently capable of supporting the uses allowed by the zone, or can be made available prior to issuing a certificate of occupancy. Service shall be sufficient to support the range of uses and development allowed by the zone.**

The Engineering and Operation Divisions have reviewed the proposed rezone and find that the essential public services of water, sanitary sewer, and storm sewer are available to allow the proposed Zone Map amendment. As noted in the discussion for Criterion "A" capacity improvements are required for any future development of the site.

Conclusion for Criterion B:

Upon application for development, the City will require the applicant to meet appropriate standards and provide necessary improvements and facilities to accommodate site development, including the notations of the Engineering Division. As discussed earlier in this report, this site can be served by urban services or services can be made available to the site. Therefore, the proposed zone change complies with Criterion B.

Criterion C. **The land uses authorized by the proposal are consistent with the existing or planned function, capacity and level of service of the transportation system serving the proposed zoning district.**

If approved by the Planning Commission, the proposed zone change from "C-I" to "LO" would not result in a significant increase of commercial or industrial development of the site. To the north and east of the site the land is designated Clackamas County "FU-10" Future Urbanizable 10-acre minimum. Across Glen Oak Road to the south the land is zoned "LO". To the west across Highway 213 the land is zoned "R-10" Single Family Dwelling District. The rezone of this property would allow the property to be developed with a professional office building.

Conclusion for Criterion C:

As previously discussed in this report, proposed development upon this site alone will not have a significant impact on the existing capacity and level of service of the transportation system serving the subject site and surrounding area. Mitigation is requires with any specific use proposal on the subject site.

Criterion D **Statewide planning goals shall be addressed if the Comprehensive Plan does not contain specific policies or provisions, which control the amendment.**

The following Statewide Planning Goals are applicable to this request: Goal 1 Citizen Involvement; Goal 2 Land Use Planning; Goal 9 Economic Development; Goal 11 Public Facilities and Services; and Goal 12 Transportation.

Conclusion for Criterion D:

The Oregon City Comprehensive Plan was acknowledged by the Land Conservation and Development Commission on April 16, 1982. The acknowledged City Comprehensive Plan includes

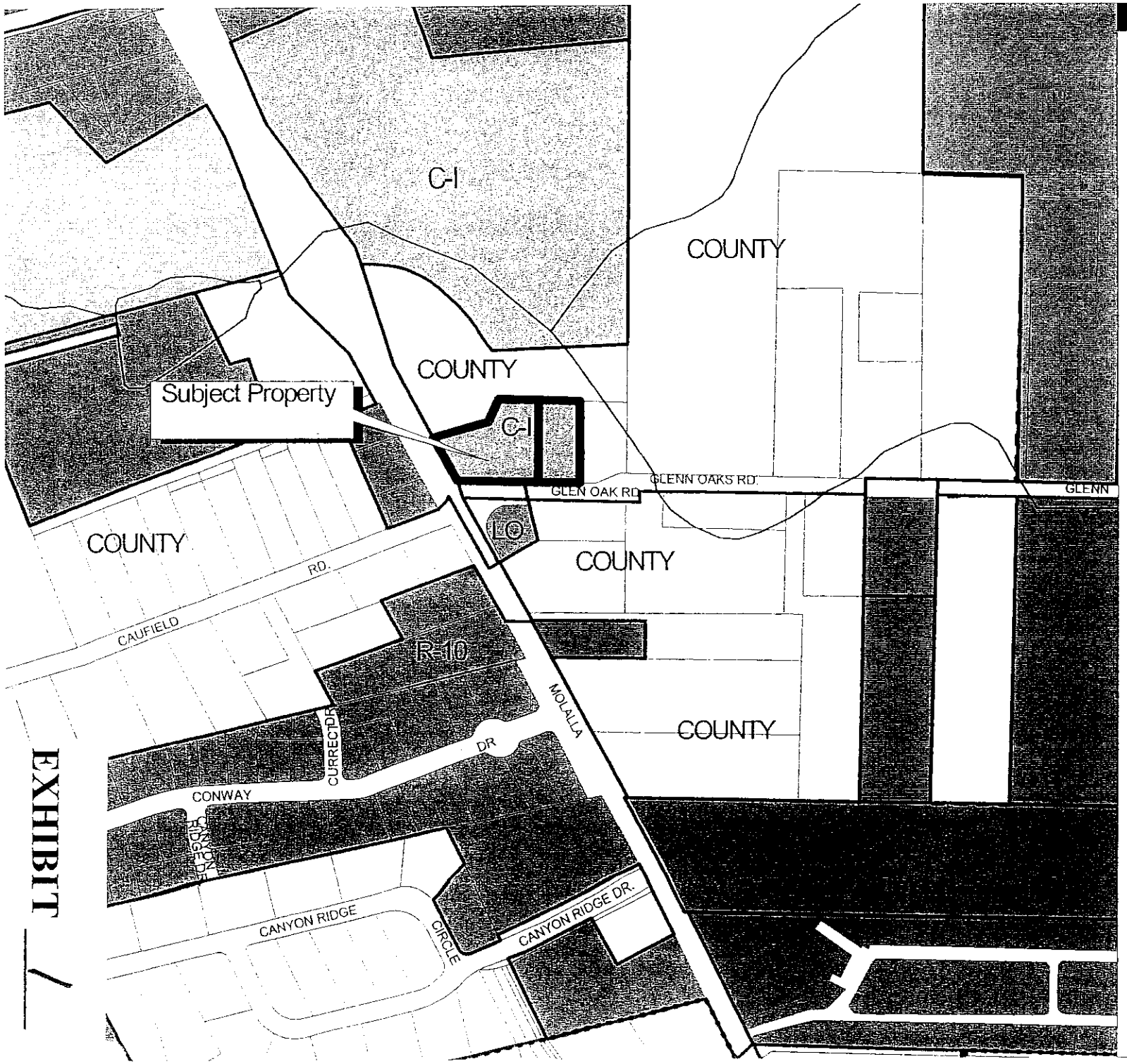
CONCLUSION AND RECOMMENDATION:

Based on the analysis and findings presented in the report, the proposed Zone Change from "C-I" Campus Industrial District to "LO" Limited Office District satisfies the requirements as described in the Oregon City Comprehensive Plan and the Oregon City Municipal Code.

Staff recommends the Planning Commission recommend to the City Commission approve the requested Zone Change from "C-I" Campus Industrial District to "LO" Limited Office District for the property identified as Clackamas County Map 3S-2E-9C, Tax Lots 500 and 501.

EXHIBITS:

1. Vicinity Map
2. Applicant's Narrative
3. Applicant's Traffic Report
4. Applicant's Site Plan
5. Agency Comments
   a. City Engineering Division
   b. Traffic Engineer
   c. Public Works Division (on-file)



EXHIBIT

City of Oregon City

GEOGRAPHIC INFORMATION SYSTEM

Vicinity Map

ZC 00-04

0 50 100 150 200 250 Feet

MAP FOR REFERENCE PURPOSES ONLY.
The information on this map is derived from Oregon City's digital database. However, there may be map errors or omissions. Please contact Oregon City directly to verify map information. Notification of any errors will be appreciated.

City of Oregon City
320 Warner Milne Road | Oregon City, Oregon 97045
503 657-0891

...colored office grade paper.

Plot date: Apr 3, 2...

Ken HOFFMAN INC.
REALTORS®

PROPOSAL: ZONE CHANGE C1 TO LO

Legal Description: map 35-2E-09C tax lots 500 and 501 Clackamas Co.

Applicant: Mr. and Mrs. Morris Womack

Date of Application : 01/01

General information:

A. This is a request for a zoning change from C1 to L.O. District

B. Location: 19988 Molalla Ave. Oregon City, Or. 97045 N.E. corner of Molalla Ave. and Glen Oak road.

C. Property is now zoned Campus Industrial on the Comprehensive Plan Maps.

D. Site information: the property consists of two tax lots of approximately one and one half acres with a 1940's home. There is also one out-building. The structures are of little value and would need to be removed. The property is level with a slight slop to the second tax lot which lies to the east. The property around this location consists of vacant land, residents, and commercial development. The property directly across Glen Oak road to the south is presently zoned L.O. District.

EXHIBIT 2.

(503) 655-1711 • Fax 655-2216 • Toll Free 1-888-608-4800 • 9123 SE St. Helens St, Suite 100 • Clackamas, Oregon 97015

Ken HOFFMAN INC.
REALTORS®

Oregon City Comprehensive Plan

Citizen Participation:

This property is subject to the zoning laws of the city of Oregon City. In this process the planning staff and the city commissioners, who are hired by and work for the people of Oregon City, will determine land use. this process allows for public input and open discussions as to the requested land use.

It should be noted that this zoning change is being requested so that a potential buyer would be allowed to construct a medical clinic on the property. The doctors who would be actively using the clinic are servicing Willamette Falls Hospital. They need a clinic close to the hospital so that they can continue to serve the Oregon City and surrounding areas.

Commerce and Industry:

As the population of Oregon City continues to grow, goods and services needs to match this growth as well. The Oregon City Comprehensive Plan addresses this concept by allowing changes and addition to existing land and expanded boundaries. Specifically noted was the land along Molalla Ave. and Hwy 213. This area was mentioned as desirable for commercial services and commerce. To fully serve the people of Oregon City more Office space would fall into this area of expansion. The Comprehensive Plan generally puts aside 20.9% of the usable land in Oregon City for Industry and commercial. Since a change from Campus Industrial to Limited Office District would not affect this percentage, no additional land would need to be found to keep the same percentages as per the Comprehensive Plan. The Comprehensive Plan also notes that additional land designated "Limited Office District" will be needed. The Goals of the Comprehensive Plan also state the following.

A. use of mass transit will be encouraged and this location would be ideal for that pur pose.

B. The type of services being provided from this development are within the Environmental standards as far as air quality, and water standards.

C. This helps promote expansion of the industrial development within the community, while providing needed services and facilities.

D. Office Districts are intended to be used for many service, including Medical and that is the purpose for this request for zoning change.

(503) 655-1711 · Fax 655-2216 · Toll Free 1-888-608-4800 · 9123 SE St. Helens St, Suite 100 · Clackamas, Oregon 97015

E. Zoning regulation should result in concentrated grouping which help keep business and industry in a given area. Since the property directly across Glen Oak from the subject property is already zoned "Limited Office District" it makes sense to group offices together.

F. Limited Office Districts should be located along arterial or collector streets that provide good access.

G. Limited Office Districts offer a buffer between residents and the busy commercial areas along Molalla Ave.

Natural Resources

The zoning change from Campus Industrial to Limited Office District should really have a beneficial impact on the natural resources. The types of businesses that are allowed in an industrial zoning area are much harder on the environment and natural resources than any other zoning category.

The subject property is a combination of two tax lots. The building sit for the medical clinic is only on the lot that directly boundaries Molalla Ave. The second lot that lies to the East has a small portion of Cauflied creek cuts across the N.E. corner. This would not be effected by any development planned for this sit. All Federal and State clean air and water regulations will be meet without interference

The proposed Medical Clinic would have less of an impact on air standards, water quality, and scenic view than an Industrial sit . This property is not in a flood plan, a landslide area, nor is there any greater concern from seismic activity. The Medical Clinic would not be offensive to the public has far as sight or noise is concerned.

Growth and Urbanization Goals

The request for a zone change for the subject property is consistent with the Comprehensive Plan in all areas. The Plan list six goals and polices that need to be addressed.

1. The plan needs to provide land within the city to accommodate population growth. Our plan would use land that has been scheduled for expansion by the city and to use it in a manner for the good of the public. This Medical Clinic would provide services for the community.

Ken HOFFMAN INC.
REALTORS®

Solid waste disposal: To be handled by the waste management transfer station.

Sewage Systems: The new sewage system is in place along Hwy 213 and is easily accessible to the developer for hook-up. To be done according to building permit.

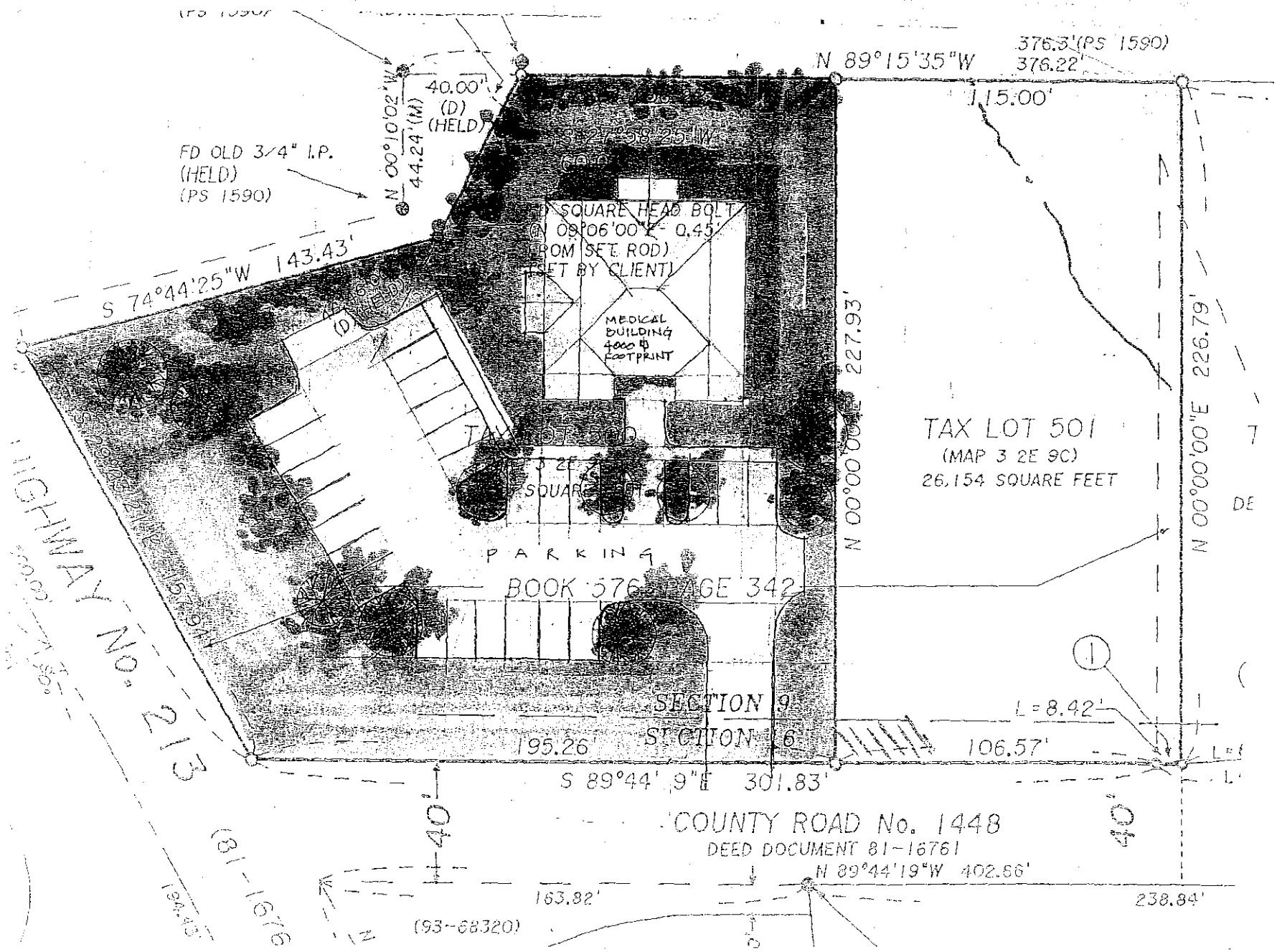
Electricity, Gas, and Telephone: as to building permit, but all utilities are already on the property.

Fire Department: A sub-station is located along Molalla Ave. near the community college. This station is approx. two miles away and is easily accessible on Hwy 213.

Transportation

Since Hwy 213 is now completed up to the Community College entrance, traffic flows south at a faster and easier rate. Mass transit has increased usage along Hwy 213 which makes it easy to access commercial business with less congestion. Hwy 213 has a left hand turn lane on to Glen oak road and the proposed medical clinic will have all off street parking.

HWY 213
OREGON CITY - MOLALLA HWY.
MEYERS RD
RA-2
C-1
C-1
GLEN OAK RD
GLEN OAK RD.
HWY 213
CAUFIELD
TRAIL
DR


N 89°15'35"W 376.22'
376.3'(PS 1590)
115.00'
40.00'
(D)
(HELD)
N 00°10'02"W
44.24'(M)
FD OLD 3/4" I.P.
(HELD)
(PS 1590)
S 74°44'25"W 143.43'
SQUARE HEAD BOLT
(N 09°06'00"E 0.45'
FROM SET ROD)
(SET BY CLIENT)
MEDICAL
BUILDING
4000 ± SQ FT
FOOTPRINT
N 00°00'00"E 227.93'
TAX LOT 501
(MAP 3 2E 9C)
26,154 SQUARE FEET
N 00°00'00"E 226.79'
PARKING
BOOK 576 PAGE 342
SECTION 9
SECTION 16
L=8.42'
195.26'
106.57'
S 89°44'19"E 301.83'
40'
40'
COUNTY ROAD No. 1448
DEED DOCUMENT 81-16761
N 89°44'19"W 402.66'
163.82'
238.84'
(93-68320)
HIGHWAY No. 213
(81-1616)

MAJOR ARTERIALS PLANNED

Pacific Highway 99E (McLoughlin Boulevard) is not proposed to change significantly. Beautification improvements are needed in the Downtown area.

Oregon City By-Pass (New Route 213) is the major construction proposal. It would accommodate much of the traffic now passing through Oregon City connecting the Portland area with Beavercreek and Molalla. Some local traffic would also make use of the By-Pass, particularly to and from the Hilltop Neighborhood (which includes industrial, commercial and residential uses). While the By-Pass could act as a major stimulus to growth Southeast of the City, the regional allocation of funds to this project specified that efforts be made to limit the growth inducement generated by the By-Pass.

If the road system is planned as a whole and changes made when the By-Pass is completed, there could be a major benefit in reducing traffic through the older McLoughlin residential area, also a benefit to Ely and Rivercrest area residences. There could also be benefits to businesses along Molalla Avenue and 7th Street through traffic safety improvements.

Singer Hill - 7th Street - Molalla Avenue will continue to function as a major arterial even after completion of the By-Pass, due to the amount of traffic generated along this route. Improvements should be made on Singer Hill (such as the improvements at the top as recommended by the TPM Report) in order to have Singer Hill replace Washington Street as the main route. Improvements along Molalla Avenue are detailed in the Commerce and Industry section of this plan analysis. 7th Street is chosen to remain the major route in the older area because it impacts residential development much less negatively than alternative routes.

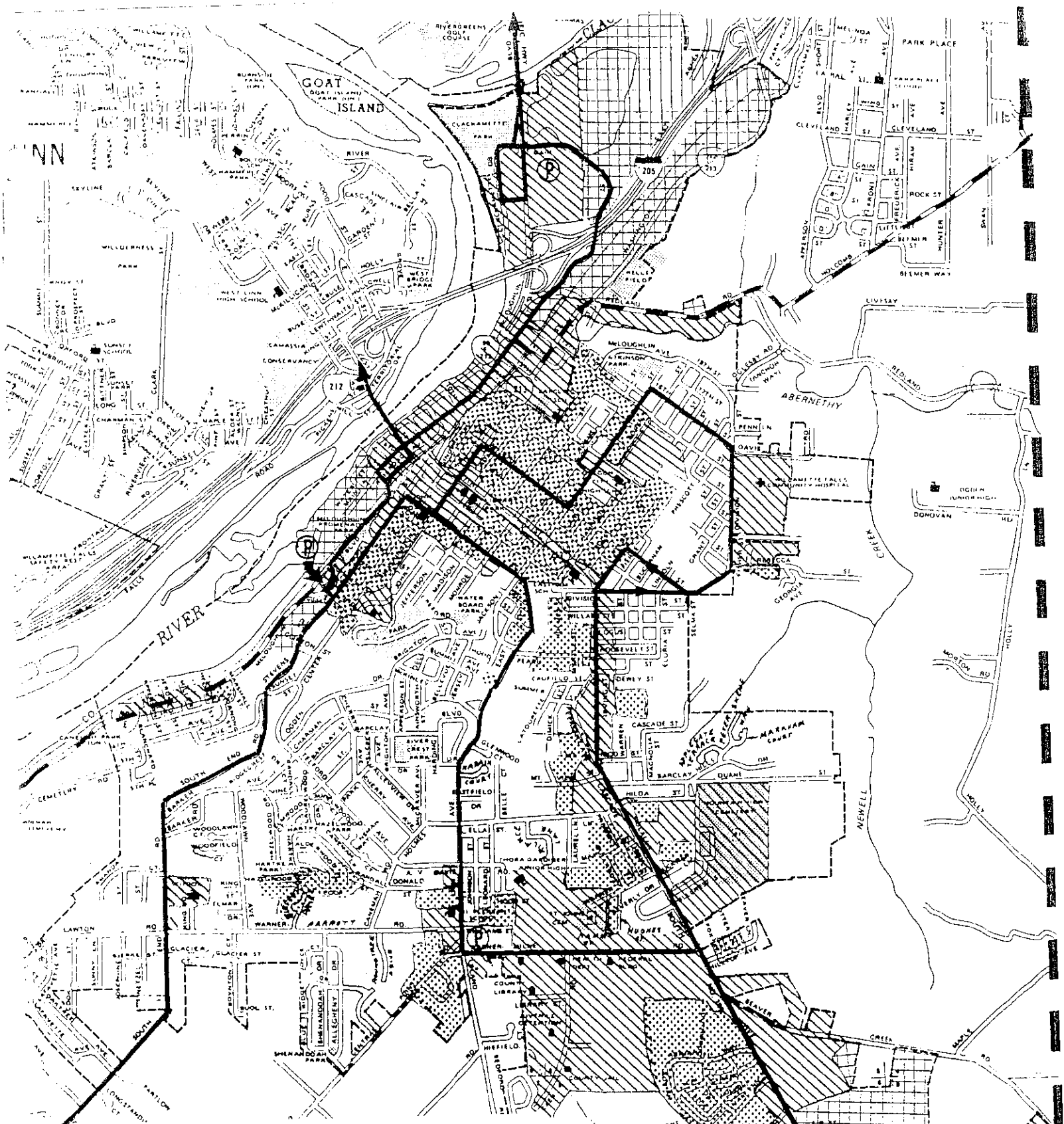


FIGURE 11

RELATIONSHIP BETWEEN BUS ROUTES & LAND USE

BUS ROUTES

——— Regular Service (at least once an hour)

– – – Infrequent Service (less than once an hour)

Ⓟ Park and Ride Lots

PLANNED LAND USE

Medium & High Density Residential

Commercial, Office & Quasi-Public

Industrial

M A S S T R A N S I T

In the "Land Use Policies Plan", Oregon City adopted a general transportation policy to "improve the systems of movement of people and products in accordance with land use planning, energy conservation, neighborhood groups and appropriate public and private agencies". Corresponding to this local goal are the State-wide goals "to provide and encourage a safe, convenient, and economic transportation system", and "to avoid principal reliance on any one mode of transportation". Mass transit, as defined in LCDC Goal 12, "refers to any form of passenger transportation which carries members of the public on a regular and continuing basis".

The need for public transit in Oregon City is based upon the desire to relieve traffic congestion, reduce hazardous auto emissions and conserve fuel by removing numbers of automobiles from the streets. This can be accomplished through a multi-modal transit system, with interfaces between automobile, bus, rail, bicycle, and pedestrian modes of transportation. A single, centralized transit station could provide the needed transferability between these modes.

Incentives to mass transit ridership and disincentives to automobile usage need to be identified and implemented for a transit system to operate effectively. Construction of park-and-ride lots, shelters and lighting along transit routes provides patrons with both convenience and safety. Negative impact of bus service might be reduced by the use of economical mini-buses within the City. These would serve lower density developments and local transit needs.

Continued development of transit should occur as an alternative to Downtown parking. The current Tri-Met reduced fare pass between the Oregon City Shopping Center Park-and Ride lot and Downtown is an example. Future

11. Local public transportation services and transit routes that connect Oregon City to the proposed transit improvements on the McLoughlin Boulevard corridor will be encouraged by the City.

12. Aesthetic improvements will be undertaken on Highway 99E as funding becomes available.

13. Improvements will be made on Singer Hill as funding becomes available in order to have Singer Hill replace Washington Street as the primary traffic route through the McLoughlin Neighborhood.

14. The bikeway on South End Road will be extended to South End School as funding becomes available.

15. An extension from Lawton Road to 99E will be considered to provide sufficient access between the City and Highway.

16. As funding becomes available, the City will develop a three-block long connection between Eluria and Magnolia Streets.

17. Tri-Met will be encouraged to create a multi-modal transportation system which will encourage systems other than automobile usage.

18. Tri-Met will be encouraged to relate mass transit to: high and low density development, needs of low-income and limited mobility persons, and to utilize existing rights-of-way wherever possible.

19. The City will maintain a commitment to a metropolitan-wide public transportation system.

20. The City will cooperate with Tri-Met to improve and expand the public transportation system for Oregon City.

21. Operation of the municipal elevator will be continued and connect with any future transit system.

22. Expansion of rail facilities will relate to areas of industrial land use.

TRANSPORTATION GOALS AND POLICIES

Goal

Improve the systems for movement of people and products in accordance with land use planning, energy conservation, neighborhood groups and appropriate public and private agencies.

Policies

1. The requirements stipulated in the Manual on Uniform Traffic Control Devices and the Oregon Supplement will be followed when installing all new traffic control devices and signing required for construction and maintenance work.

2. The City will consider restricting on-street parking on major arterials, and on-street parking will be prohibited on new major arterials.

3. The provision for adequate off-street parking will be mandatory for all new building construction, and remodeling projects, if appropriate.

4. Curb cuts for vehicle use along new or redeveloped arterial streets will be discouraged.

5. New developments will include sidewalks in their design, where needed.

6. Sidewalks will be of sufficient width to accommodate pedestrian traffic.

7. Use of additional easements or underground utilities for utility poles will be encouraged.

8. Sidewalks will be provided at the minimum along one side of every arterial and collector.

9. Sidewalks will be constructed near schools within the City, and where an existing major thoroughfare is near the school, school crossing signals with pedestrian-actuated buttons will be provided.

10. Extension of the I-205 bikeway South to Oregon City will be considered.

C/F

problems and the extreme difficulties arising from the moratorium on new sewer conditions, the City should give top priority to the solution and implementation of sewer system improvements.

WATER

In contrast to Oregon City's inadequate sewer system, the water system is sufficient. Many of the repairs and new construction recommended in the 1966 Water System Study for Oregon City and the 1974 South Fork Water Board's Water Supply Study have been completed. A map of the system is on file at the Oregon City Planning Department. The current program for updating and expansion of the system should continue. Existing funding mechanisms should be maintained for this purpose.

Water for Oregon City and the Clairmont, Park Place and Holcomb Outlook water districts is supplied by the South Fork Water Board and comes from two major sources: a gravity line from the South Fork of the Clackamas River, and a Park Place treatment plant. The mountain supply may be abandoned in the future due to its age, water quality and maintenance cost.

The South Fork system is owned by the cities of Oregon City and West Linn and is staffed by Oregon City personnel.

Water supply from both sources averaged 4.52 million gallons per day (MGD) in 1978 (2.35 from the plant, 2.16 from the mountain line). Treatment plant capacity was recently increased to 20.0 MGD, sufficient to handle South Fork's future needs (see Table I).

TABLE I*

SOUTH FORK TREATMENT PLANT WATER SUPPLY

	1978	1994
Average Daily Flow	2.35	8.2
Peak Daily Flow	8.23	20.0
Design Capacity	20.0	20.0

* Figures in Million Gallons per Day (MGD)

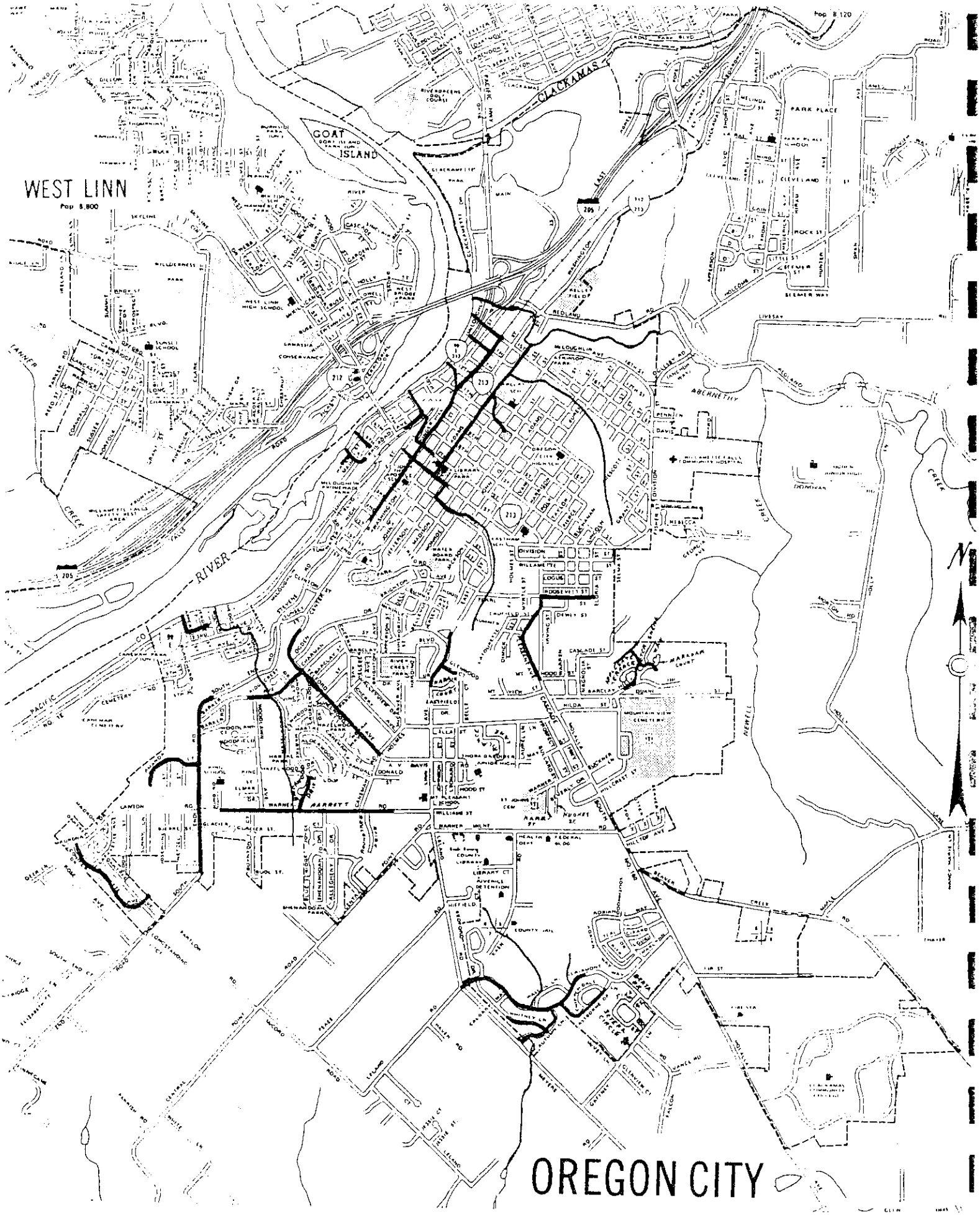
Expansion of the City to the South would largely be in the area served by the Clairmont Water District. If the City expands into the Clackamas Heights area, the Holcomb Outlook and Park Place Water District would also be affected. These districts have different operating and equipment standards than Oregon City's current system. Materials used by the Clairmont, Holcomb Outlook and Park Place Districts for water lines, sizes of lines and types of hydrants are among the system components that should conform with Oregon City's system in order to allow future conversion from rural to urban systems. This is presently not the case. Clackamas County could assist by specifying city-type standards for utilities in new subdivisions, within the City's growth area. Planning and coordination between the City and these districts is necessary to provide an orderly and efficient water system to serve the urbanizable area. This serious problem requires further study at technical, financial and management levels. Failure to coordinate the City's growth with the future of the water districts will lead to increasingly serious problems for all concerned.

STORMWATER DRAINAGE

Extensive urbanization in Oregon City has disrupted the natural flow of storm water along established creeks and gullies leading to the Willamette River. Placement of extensive impervious surfaces has reduced the capacity of the natural drainage system to remove heavy rain water, resulting in higher groundwater tables, periodic flooding and the need for a manmade drainage system.

Oregon City's current sewer system features both combined waste water and storm drainage pipes and separate storm drainage systems linked to natural drainage ways (see Map I-2). During prolonged periods of heavy rain or snow melt, the system tends to overflow into the Willamette River. In addition, a major problem exists in the southern part of the City where storm water drains into the Urban Growth Boundary area administered by Clackamas County.

To alleviate the effects of urban storm water drainage in the future, Oregon City has cooperated with Clackamas County and the cities of West Linn and Gladstone to form the Tri-City Service District. The District will coordinate with Oregon City over a ten-year period to assist in separating the existing combined waste water and storm drainage pipes inside the City. Beyond that effort, the City will require all new residential, commercial and industrial projects to incorporate on-site, separate storm water facilities. The City's overall storm water strategy is to develop a totally separate drainage system that utilizes in-ground pipe linked to the natural drainage ways that flow into the Willamette River.



STORM WATER SYSTEM

FIGURE III

1980 ENGINEERING DEPARTMENT SURVEY

SOLID WASTE (TRASH) DISPOSAL

As outlined in the Metropolitan Service District's (METRO), Solid Waste Management Plan Summary (February, 1977), Oregon City's Rossman Landfill site (Figure III) is currently one of the two sites serving the entire Portland Metropolitan area and can be expected to remain operative until 1981-82. The Metropolitan Service District is being faced with the regional problem of future solid waste disposal sites for the metropolitan area.

A proposal by METRO and Publishers Paper Company has been granted on a conditional use permit by the Oregon City Planning Commission. The proposal is for a resource recovery plant located near the Rossman Landfill. (Figure III)

ELECTRICITY, GAS AND TELEPHONE FACILITIES

Utilities serving or impacting Oregon City are: Portland General Electric, Bonneville Power Administration, Northwest Natural Gas, and Pacific Northwest Bell.

These utilities, which provide electricity, natural gas and telephone services, adequately serve Oregon City's needs. Future expansion of the facilities should be located underground wherever economically and technically feasible to preserve the aesthetic qualities of the area. Local service lines in new subdivisions should be underground. Development of a new program to bury existing power and telephone lines should be encouraged. Such a program will need to be done on a cooperative basis with the utility companies, to determine feasibility both from an economic and technological standpoint.

Sub-stations should be allowed as a conditional use.

The problem of utility poles obstructing city sidewalks, often due to inadequate rights-of-way, is raised in the Transportation section of this Plan.

A map of Portland General Electric facilities is on file at the Oregon City Planning Department.

CLACKAMAS COMMUNITY COLLEGE

Enrollment at Clackamas Community College currently stands at 3,433 students and is projected by the College to double in the next eight years. Expansion of facilities will be necessary to meet the increased demand for higher education. The October 1977 Master Plan Report from the College discussed alternatives to meet this growth.

The College is an asset to the community, providing needed training and enhanced opportunities and understanding. The City encourages the Community College to plan in the future to handle increased traffic load generated by the doubling of the size of the College. The City should support expansion, if it is consistent with good site planning and compatible design. Increased ties to existing and future industries should be encouraged. This could, in turn, increase industrial and commercial job opportunities in the City.

GOVERNMENTAL SERVICES

FIRE DEPARTMENT

The Oregon City Fire Department currently operates two fire stations: the main station at the old City Hall in the McLoughlin Neighborhood, and a sub-station along Molalla Avenue near the Community College.

A new station is desirable to replace the older City Hall facility, which hinders emergency response due to inadequate door widths. However, remodeling of the current facilities should be considered. A new station should be located in the McLoughlin area, at suitable location, including considering the current site. As the City expands to the South, a new station may be needed near South End or Central Point Roads to supplement the service provided by the Molalla Avenue station.

ENERGY CONSERVATION GOALS AND POLICIES

Goal

Plan urban land development which encourages public and private efforts towards conservation of energy.

Policies

1. Promote design (i.e., plat lay-out) of new subdivisions in order to maximize energy conservation efforts. Consideration should be given to Planned Unit Developments or cluster developments. Utilize landscaping to increase the potential for solar benefits.

2. Design transportation systems to conserve energy by considering:
   1) the location of transit services
   2) the construction materials for new streets
   3) the location of commercial uses.

3. Encourage use of carpools and incentive-producing traffic lanes in cooperation with Tri-Met and other state and regional transportation agencies.

4. Encourage the re-use of the existing building stock.

5. Encourage non-petroleum means of transportation by constructing bikeways and sidewalks.

5. Encourage the recycling and resource recovery of materials in the City's operation as well as throughout the community.

GROWTH AND URBANIZATION GOALS AND POLICIES

Goal

Preserve and enhance the natural and developed character of Oregon City and its urban growth area.

Policies

1. Provide land use opportunities within the City and the Urban Growth Boundary to accommodate the projected population increase to the year 2000.

2. Ensure that Oregon City will be responsible for providing the full range of urban services for land annexed to the City within the Urban Growth Boundary.

3. Promote cooperation between the city, county and regional agencies to ensure that urban development is coordinated with public facilities and services within the Urban Growth Boundary.

4. Coordinate land use planning with Clackamas County in accordance with the approved Dual Interest Area Agreement.

5. Urban development proposals on land annexed to the City from Clackamas County will be consistent with the land use classifications and zoning approved in the County's Comprehensive Plan. Rezone requests may be accepted and approved by the City under conditions outlined in this section of the Plan.

6. Rezoning requests involving land annexed to the City from Clackamas County will be processed under the regulations, notification requirements, and hearing procedures used for all zone change requests. However, the burden of proof for a zone change from the land use pattern established by Clackamas County in its Comprehensive Plan will be on the petitioner. The applicant must show that the requested change is (1) consistent and supportive of the County's Comprehensive Plan Goals and Policies; (2) compatible with the general land use pattern for the Urban Growth Boundary area established in the County's Comprehensive Plan Map;

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N/R

Potential impacts: Water runoff from paved areas and other pollutants such as oil from cars could be a problem. Removal of perimeter vegetation could also be a potential problem. New construction in any of the areas of the creek should have a setback of 25-30, no structure or non-native vegetation should be constructed or introduced into the transition area. Water runoff problems can be minimize through the requirements of the state plumbing code. Uses allowed within the various zoning districts can be allowed without impacting the resource, provided that transition boundaries and setback requirements are met.

2. Beavercreek and tributaries: (3-2E-17, 17A tl 1002)

Description: It a large stream with several tributaries which include Caufiled Creek, and Little Beavercreek and Camus Creek. Beavercreek cuts across through a canyon at tl 1002 . This property is steep and wooded. It is also located within the urban growth boundary. It is highly unlikely that this property will ever and should ever be developed. Access is very limited and a close inspection of this area was not possible due to the steep terrain.

Potential Conflicts: Development or access to this area of the Beavercreek canyon area may cause serious environmental damage. Access and development should be limited with the criteria as described in the proposed Water Resources Ordinance. All other uses should be minimized.

3. Caufield Creek and tributaries: (3-2E-8,9,17)

Description: Caufield Creek seperates from Beavercreek in the area just north of South Warnock Road. This creek comes into the city limits/urban growth boundary just south of Meyers Road and intersects with a pond on the Tooze property. The creek then proceeds easterly under Highway 213 (in a culvert) and south to properties along South Glen Oak Road. Within the planning boundary, the Tooze pond has been identified as a significant water resource. The area east of Highway 213, the land adjacent to the creek is alder, birch, fir, blackberries, and grasses. The general habitat in the area would provide food sources, roosting, perching and nesting sites. The zoning of properties along the creek are single-family residential on the west side of Highway 213 and on the east side a future industrial area on the north side of S. Glen Oak Road and single family residential on the south side of Glen Oak Road.

Potential conflicts: A future industrial development could utilize Caufield Creek as part of its open space landscaped area and leave the creek intact as a natural area. Potential conflicts would be storm water runoff, public facilities such as a road or public utilities that may be needed to cross the creek. Although a master plan for the industrial areas has not been completed. It is apparent that a preliminary plan should be developed that would show the proposed lay out and location of future roads and other facilities that might have an impact on this resource. This plan could be developed to avoid all areas adjacent to the resource.

COMMERCE AND INDUSTRY

PURPOSE

In 1975, the Land Conservation and Development Commission (LCDC) mandated Statewide Planning Goals. Goal Number 9 seeks to "diversify and improve the economy of the State".

In 1976, Land Use Policies for Oregon City presented the goal for Commerce and Industry to "maintain a healthy and diversified economic community for the supply of goods, services, and employment opportunity". This section will present data and analysis leading to the Comprehensive Plan maps and the implementation ordinances.

HISTORICAL PERSPECTIVE

Oregon City has long had a prominent place in the history of the commerce of Oregon and the Willamette River Valley. From early times, portaging at the Falls created a situation for development. By 1846, both the Barlow Road to The Dalles and the Applegate Route to California were in use. With regular river steamer service in 1850, the City was a hub for the exchange and transfer of goods from the upper and lower River and the land routes on the East side of the River. By 1860, a local railroad went from Canemah to Downtown and to Salem by 1870. Soon after, in 1873, work began on a system of locks to serve boat traffic around the Falls. The first large industry was based on water power; in 1865, the Oregon City Woolen Mill was established. National rail service and the upgrading of other transportation systems, particularly the Interstate Highway system, has created the current fabric for industry and commerce in Oregon City. A principal constraint is the unique topography of the City, which has limited the transportation systems, and constrained growth possibilities of established commercial and industrial sites.

EMPLOYERS IN OREGON CITY

Oregon City is a part of the Portland regional picture, but unlike many cities, it is not principally a "bedroom" for Portland. Employment is strong and diversified. No single employer or sector dominates the picture. Despite a widespread image as a "mill town", both County government and Community College employ more people than the lumber/paper mill. Compared to the entire Portland area, the City is significantly higher in percentage of jobs in government and retail businesses. The City has fewer opportunities available in manufacturing and wholesale places of employment, compared to region-wide employment.

T A B L E I

EMPLOYMENT BY SECTOR IN OREGON CITY

	Total Headquartered in City	%	Total in City	%	Portland[3] SMSA '76 (%)
MANUFACTURING	821	12	821	11	21
CONSTRUCTION	124	2	613	8	4
TRANSPORTATION/ COMMUNICATIONS/UTILITIES[1]	110	2	160	2	7
WHOLESALE	30	0.5	62	1	8
RETAIL	1,700	26	1,764	25	17
FINANCIAL/INSURANCE[2]	239	3.5	239	3	7
SERVICES	1,348	21	1,487	20	20
GOVERNMENT[2]	2,145	33	2,145	30	16
	6,517	100	7,291	100	100

* Includes firms doing business intermittently within the City, especially construction trades and services.

PRIMARY SOURCE: Oregon City Business License Survey, 1978

Note: If there is any inaccuracy in these numbers, they may be understated, since the business license fee is increased if the number of employees reported are increased.

OTHER SOURCES: [1]CRAG Preliminary Employment 75-76 (May 1977)

[2]Direct Survey (No business license required)

[3]Oregon Division of Employment 1976 (no business license required)

GOVERNMENT

In total, 2,145 public employees work in Oregon City in six governmental agencies. The largest non-manufacturing employer in Oregon City is Clackamas Community College, with a range of 750 employees to 850 or more seasonally. Next is Clackamas County, with 630 employees, located at three sites in Oregon City: Red Soils, the County Courthouse, and Abernethy Road offices. Oregon City Schools employ 352 persons and the State of Oregon, 170. The City of Oregon City employs 165, and the Federal Government, 78. The continuation of Oregon City as the focus for County employment and the location of the Community College should assure the strength and continuation of the City's largest employment sector.

HEALTH SERVICES

The Willamette Falls Hospital, located on Division Street in the Buena Vista area, provides employment for 423 people. The location of ten other private physicians, clinics and health care facilities brings the total to 608 employees in the Division Street area.

Many additional medical offices and health support services are located in the McLoughlin Neighborhood. The capital investment in these properties should assure the continuation of these services, but there is pressure to find sites with more land available for expansion and off-street parking. Land has been provided in the Plan, primarily along Molalla Avenue, Division Street, and Warner Milne Road to accommodate the move of some of the medical facilities to larger sites within the community if they so desire.

The historical location of regional health services in Oregon City, including the Willamette Falls Hospital, should guarantee strong health service employment into the future.

RETAIL SALES

Oregon City has traditionally been the centrally located commercial area for Clackamas County. However, the increased use of the automobile and improved transportation systems have increased the traveling distance for the average consumer. New regional shopping centers have pulled business from older established areas with the attraction of malls and free, easy parking. In the face of this movement, Oregon City has so far retained a large retail employment. The retail sector is only second to government in total employment opportunities in Oregon City.

The single largest retail employer is Danielson's Thriftway Complex in Hilltop, with 119 employees. The growth of this complex and the development of Southridge Shopping Center and Fred Meyer's in the same area will provide a strong anchor to the southern development of Molalla Avenue, and continued employment opportunity in the Hilltop Neighborhood.

The Oregon City Shopping Center, located along McLoughlin Boulevard, between I-205 and the Clackamas River Bridge, has a total employment of 374. J.C. Penney's and Payless Drugs, with 114 and 55 employees respectively, are the two largest employers. This is strategically located at the intersection of the Interstate Highway and the principal arterial, but growth (expansion) has stagnated due to the adjacent land not being under the same ownership.

Other significant retail employment is in small to medium-sized businesses, principally in Downtown and along Highway 213.

OTHER OFFICES

Along with health services, Oregon City's office sector contains 23% of the City's employment. Financial institutions, insurance agencies and many services are included in this sector. Many offices, such as law or title insurance offices, are related to the large governmental sector in town.

PROJECTED LAND USE NEEDS

A prime objective of long-range planning is to provide sufficient locations for the desired amount and type of future development. An understanding of current use is the beginning of that process. The current total of commercial and industrial land uses is 203.3 acres, which is 6.7% of the total 3,013 acres in the City.

This proposed Comprehensive Plan designates approximately 629 acres within current City limits for commercial and industrial use.

T A B L E I I I

PROPOSED LAND USE BY PLAN CATEGORY

	ACRES	% OF CITY LAND
LIMITED COMMERCIAL (LC)	25	0.8%
GENERAL COMMERCIAL (C)	292	9.7%
Total Commercial:	317	10.5%
INDUSTRIAL (I)	312	10.4%
Total Commercial & Industrial:	629	20.9%

The proposed Plan also designates 107 acres (3.6%) for Limited Office (O) uses. Additional land for these purposes is projected in the Oregon City area outside the current City limits.

Two projections are developed in this section to ascertain the amount of land which should be reserved for commerce and industry. These types of projections are neither an exact science nor is the data base infallibly accurate. They are intended to give a general picture of the future if current trends in employment and the economy continue.

COMMERCE AND INDUSTRY GOALS AND POLICIES

Goal

Maintain a healthy and diversified economic community for the supply of goods, services and employment opportunity.

Policies

1. As funds and opportunities become available, transportation access to industrial and commercial areas shall be improved to facilitate flow of goods and increase potential customers. Particular attention will focus on relieving congestion on McLoughlin Boulevard (Highway 99E) and Cascade Highway/Molalla Avenue (Highway 213).

2. Use of mass transit will be encouraged between residential and employment areas through coordination with Tri-Met and local employers.

3. Industrial and commercial operations will meet local, regional, State and Federal water and air quality standards, as required by law.

4. Encourage new non-polluting industrial uses (such as those on the State's Target Industries list), particularly along Fir Street.

5. Promote expansion of industrial development within the community's ability to provide adequate facilities and services.

6. Development of industrial areas will include planning for increased truck traffic, landscaping and buffers to separate industry from other land uses.

7. Permit industrial development in the flood plain and on landfills only when the structures are above the one-hundred year flood level or adequately protected, and when specific engineering studies determine structural adequacy on landfills.

8. Encourage continued retail growth by:
    a. Designating land for retail use in areas along or near major arterials and transit lines;
    b. Developing and implementing a Downtown improvement plan to help Downtown retain its position as a major retail district.

(5) Design review standards, including aesthetic signing, should be developed for the commercial areas of the City with particular attention given to the entrances into the community.

(6) Uses in Commercial districts shall be designed to protect surrounding residential properties.

b. Limited Commercial

(1) Limited Commercial districts are intended to provide convenience goods and services, Historic Commercial uses, and Limited Commercial and Office uses within the McLoughlin Neighborhood.

(2) Limited Commercial districts should be located adjacent to arterial or collector streets and should serve adjacent residential areas.

(3) Uses in Limited Commercial districts shall be designed to protect surrounding residential and historic properties.

c. Office

(1) Office districts are intended for medical facilities, offices, and high density residential uses.

(2) Office districts should result in concentrated groupings of uses.

(3) Office districts should be located along arterial or collector streets and should provide good access.

(4) Use in Office districts shall be designed to protect surrounding residential and historic properties.

d. Industrial

(1) Industrial areas are intended for the manufacture, processing and distribution of goods.

(2) Industrial zones shall prohibit Commercial and Offices uses other than those that are clearly accessory uses. Office uses shall be allowed in the Campus Industrial District.

ORDINANCE NO. 90-1034

AN ORDINANCE AMENDING THE POLICIES IN THE COMMERCE AND INDUSTRY ELEMENT OF THE COMPREHENSIVE PLAN TO ADD LOCATIONAL POLICIES FOR COMMERCIAL, LIMITED COMMERCIAL, OFFICE, INDUSTRIAL AND CAMPUS INDUSTRIAL USES AT PAGE D-24.

WHEREAS, ORS 197.640 requires local governments to enact measures to bring their Comprehensive Plans and regulations into compliance with the Periodic review Factors; and

WHEREAS, the Oregon City Planning Commission on May 10, 1990 conducted a public hearing to consider the adoption of the new policies; and

WHEREAS, the Oregon City Planning Commission has recommended the approval of these amendments to meet Periodic Review requirements; and

WHEREAS, the proposed amendments to the Commerce and Industrial Element of the Comprehensive Plan is designed to best meet the land use planning needs of the City.

OREGON CITY ORDAINS AS FOLLOWS:

That the Commerce and Industry Element of the Oregon City Comprehensive Plan, at Page D-24, is hereby amended to add Policy 11 to read as follows:

11. The following policies shall govern the location, siting and design of new Commercial, Limited Commercial, Office Industrial and Campus Industrial areas:

    a. Commercial

        (1) Commercial districts are intended to serve the retail, service, and office needs of the greater Oregon City area.

        (2) Commercial districts should offer good visibility and access and should be located along major arterials and transit lines.

        (3) Commercial districts should result in concentrated groupings of retail, service, and office uses.

        (4) Commercial districts that result in numerous small lots with individual street access points shall be discouraged.

TRAFFIC ANALYSIS REPORT

FOR

GLEN OAK ROAD MEDICAL OFFICE

Cascade Highway (Hwy 213) & Glen Oak Road

City of Oregon City

Prepared By

Charbonneau Engineering LLC

9370 SW Greenburg Rd., Suite 411, Portland, OR 97223
(503) 293-1118 • FAX (503) 293-1119

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EXHIBIT 3

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INTRODUCTION

A traffic study for the project site was conducted to determine impacts to the existing roadway system in Oregon City. The proposed use will consist of a medical type office building totaling 4,000 square feet, located in the northeast intersection corner of Glen Oak Road and Highway 213. The development will be situated on the north side of Glen Oak Road and have one driveway access point on Glen Oak Road. A vicinity map is provided in the report's Appendix.

Throughout the study the consultant discussed the project scoping with several members of the City's staff. Both the engineering and planning departments were contacted. As the intended use proposes to rezone the property from campus industrial to limited office the City's staff required an evaluation of both types of zoning and the associated traffic impacts. Therefore, a trip generation summary considering several alternative uses was submitted to the City on 2/14/01. On 2/22/01 the City responded and confirmed the alternative uses and trip rates were appropriate to use in the traffic study analysis.

The City determined that this analysis should compare the impacts associated with the most intense uses permitted under both types of zoning as well as the proposed medical office use. Therefore, the analysis considered the highest trip generation possible for the following scenarios.

Current Zoning:	Campus Industrial 45,000 square foot Junior/Community College
Proposed Zoning:	Limited Office 33,000 square foot State DMV Facility
	Limited Office 4,000 square foot Medical-Dental Office

In establishing the project scope and analysis, a number of steps were identified to complete the study, including the following items.

- Accounting for projected traffic from the land use zoning scenarios listed above. The study analyzed the traffic flow conditions for existing, background (buildout year 2003), total traffic (year 2003) in the AM & PM peak hours, and year 2020 for the PM peak traffic hour.
- Trip generation for the study was based on ITE standards (**Trip Generation Manual**, 6th edition, 1997).
- Traffic for Oregon City's new high school was also included in the analysis as in-process traffic. Data from the high school's traffic study was reviewed as recommended by the City.
- For future traffic conditions, growth rates were determined from the City's Transportation System Plan Draft (TSP).
- Trip distribution patterns for the proposed development and alternative uses were based on existing traffic counts, site orientation, street classification, surrounding land uses, and engineering judgement.
- Analysis of impacts to the critical intersections on Highway 213 at Molalla Avenue, Meyers Road, Glen Oak/Caufield Road, and Henrici Road and Glen OaK Road at the site access and Beavercreek Road.

An appendix to the report contains technical data including vicinity map, site plan, traffic flow mapping, trip generation summary for alternative uses, signal warrants, left turn lane warrants, and capacity analyses.

SITE DESCRIPTION AND STREETS

The proposed development will consist of one medical type office building totaling 4,000 square feet. Currently the property is vacant. One driveway access to Glen Oak Road is proposed to serve the site on the north side. The driveway will be located at a distance of 170 east of Highway 213. There will be one lane for inbound traffic and two lanes for outbound traffic at the site access. Sight distance at the proposed access is excellent and meets the allowable standards.

Existing streets in the immediate area which will be directly impacted by the project include Highway 213, Glen Oak Road, and Beavercreek Road. **Highway 213** is a state highway and classified as a major arterial by the City. The travel speed is posted at 45 miles per hour. North of Meyers Road, Highway 213 consists of four travel lanes with a raised median curb and eight foot wide paved shoulders. South of Meyers Road the highway narrows to two travel lanes with no raised median. There are bike lanes and paved shoulders.

Glen Oak Road easterly of Highway 213 consists of an 18-20 foot wide paved section with no shoulders. This street is classified by the City as a collector street and is posted at 35 miles per hour. Pavement surfacing near the proposed access point is in rough to fair condition. The street contains a vertical sag curve east of Highway 213. However, the proposed access will have adequate sight distance, exceeding 350 feet in both directions. Segments of Glen Oak Road (near Quinalt and Coquille Streets and closer to Beavercreek Road) have been improved in conjunction with adjacent housing developments.

The following intersections were designated as study locations and are depicted on Figure No. 1 (Existing Lane Configurations and Intersection Control) in the appendix.

The intersection of **Molalla Avenue at Highway 213** is controlled by a traffic signal. All approaches have separate right and left turn lanes. Highway 213 contains two through lanes on the northbound and southbound approaches.

The intersection of **Meyers Road at Highway 213** is configured as a tee shaped intersection with traffic signal control. There is a separate northbound left turn lane and southbound right turn lane on Highway 213. **Highway 213 at Caufield Road and Glen Oak Road** is controlled by stop signing on side street approaches to the highway. There is a southbound left turn lane on Highway 213. **Highway 213 at Henrici Road** is configured as a tee shaped intersection with stop control on the westbound approach. There is a southbound left turn lane on Highway 213. **Glen Oak Road at Beavercreek Road** (classified as major arterial) is a tee shaped intersection controlled by stop signing on the eastbound approach. A northbound left turn lane exists on Beavercreek Road.

TRAFFIC FLOW ANALYSIS

The study intersections and site access on Highway 213 and Glen Oak Road were analyzed for level of service (LOS) conditions as stipulated in the project scoping established with the City. LOS analyses were completed for the AM and PM peak hourly periods under several scenarios:

- Existing traffic
- Background traffic year 2003
- Total traffic year 2003
- Year 2020

In order to perform a LOS analysis at the critical intersections manual traffic counts were performed during the AM peak (7:00-9:00 AM) and PM peak (4:00 -6:00 PM) traffic hours. In some cases recent historical count data from year 2000 was also used. The existing traffic volumes are shown on Figures No. 2 & 3 in the report's appendix.

In-process traffic was included in the analysis to account for traffic from the City's new high school site. Traffic data from the school's traffic study report was obtained from Lancaster Engineering. The in-process traffic is shown on Figures No. 4 & 5.

Background traffic is comprised of the existing traffic, in-process traffic, and the application of traffic growth rates established from the City's TSP. For this project annual growth rates were applied to Highway 213 (1.0%), Molalla Avenue (1.3%), Glen Oak Road (1.0%), and Beavercreek Road (2.0%). Background traffic volumes are shown on Figures No. 6 & 7 in the report's appendix.

The total traffic scenario was derived from the summation of the background and site generated traffic. The total traffic scenarios are depicted on Figures No. 10-11 (proposed medical office), Figure No. 15 (current zoning campus industrial), and Figure No. 16 (proposed zoning DMV) in the report's appendix.

VEHICLE TRIP GENERATION

Vehicle trip generation rates were calculated based on historical data contained in the **ITE Trip Generation** manual (6th Edition, 1997) for the proposed land use (medical/dental code 720) and the alternative scenarios (State DMV code 731 & Junior/Community College code 540).

Under the medical-dental proposed use and over a 24-hour weekday period a total of 145 trip ends are projected to be generated when the project is completed. During the AM peak hour a total of 10 trip ends will be generated. During the PM peak hour there will be 15 trips generated. **Table No. 1** shown below exhibits the trip generation rates and projections for the medical-dental office project. Site generated traffic flows are illustrated on Figures No. 8, 9, 13, & 14 in the appendix.

Table 1. Projected trip generation for 4,000 sq.ft. medical office building.

ITE Land Use	Units (sq. ft.)	Weekday						
		ADT	AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
			Total	Enter	Exit	Total	Enter	Exit
Medical-Dental Office Building (#720)	4,000							
Generation Rate [1]		36.13	2.43	80%	20%	3.66	27%	73%
Site Trips		145	10	8	2	15	4	11

[1] Source: *Trip Generation*, 6th Edition, ITE, 1997. Average rates used.

For comparison purposes the trip generation totals for the alternative campus industrial and limited office uses were also calculated. **Tables No. 2 & 3** below illustrate the trip generation for each use. For the campus industrial use (junior/community college) the ADT will be 826 trips per day with 75 trip ends during the PM peak hour. For the alternative limited office use (state DMV) the ADT will be 3,339 trips per day with 564 trips in the PM peak hour.

Table 2. Trip generation for maximized use of current zoning.

ITE Land Use	Square Feet	Weekday						
		ADT	AM Peak Hour of Generator			PM Peak Hour of Generator		
			Total	Enter	Exit	Total	Enter	Exit
Junior/Community College (540)	45,000							
Generation Rate [1]		18.36	1.78	80%	20%	1.66	46%	54%
Site Trips		826	80	64	16	75	35	40

[1] Source: *Trip Generation*, 6th Edition, ITE, 1997. No fitted curve equation given.

Table 3. Trip generation for maximized use of proposed zoning.

ITE Land Use	Units (sq. ft.)	Weekday						
		ADT	AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
			Total	Enter	Exit	Total	Enter	Exit
State DMV (#731)	33,000							
Generation Rate [1]		101.19	7.48	50%	50%	17.09	50%	50%
Site Trips		3339	247	123	124	564	282	282

[1] Source: *Trip Generation*, 6th Edition, ITE, 1997. Fitted curve equations used. Average rate back-calculated.

ADT equation: $Ln(T) = 0.569\ Ln(X) + 6.124$

AM equation: $Ln(T) = 0.767\ Ln(X) + 2.827$

PM equation: Not given. Average rate used.

In order to determine the traffic impacts at the study intersections, site traffic for all scenarios were distributed over the street system and calculations performed to measure the traffic impacts and service levels for the peak hours.

TRIP DISTRIBUTION

Trip distribution for the development was based on several important considerations.

- Site location, orientation, and location of existing streets, and highways
- Street classification, and type of intersection traffic control
- Review of current turning movement traffic counts
- Access considerations
- Engineering judgement

The trip distribution is shown on the site generated mapping (Figures No. 8, 9, 13, & 14) in the report's appendix.

CAPACITY ANALYSIS

Capacity analyses for the surrounding intersections were performed to determine the levels of service during the peak hours. The study intersections on Highway 213 and Glen Oak Road were analyzed for the existing, background, year 2003 total, and year 2020 total traffic conditions. The 1994 highway capacity software (HCS) for signalized and unsignalized intersections were applied. For comparison purposes the SIGCAP software program was also used for analysis of the signalized intersections on Highway 213 since this highway is under the jurisdiction of ODOT. All LOS printouts are attached in the appendix.

The following section presents summaries of the level of service (L.O.S.) analyses. Figure No. 1A (Existing and Future Lane Configurations & Intersection Control) depicts the intersection improvements described in the City's Draft TSP. Figure No. 1B (Year 2020 Required Lane Configurations & Intersection Control) presents the year 2020 intersection improvements that are necessary beyond those identified in the TSP.

Highway 213 at Molalla Avenue will operate at acceptable service levels through the year 2020 total traffic scenario under both the proposed and current zoning alternatives and implementation of the street improvements listed in the City's Draft TSP. Reference **Table 4** below.

Table 4. LOS results for the signalized intersection of Highway 213 & Molalla Avenue.

Traffic Scenario	1994 HCM Methodology						ODOT SIGCAP Methodology			
	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Delay	V/C	LOS	Delay	V/C	LOS	V/C	LOS	V/C
Existing (2001) [1]	C	18.8	0.621	C	23.0	0.795	C	0.606	D	0.778
Background at Build-out (2003) [1]	C	18.7	0.635	C	24.2	0.827	C	0.620	D	0.810
Total at Build-out (2003) [1]	C	18.7	0.635	C	24.3	0.828	C	0.620	D	0.811
Base (2020) [2]				D	32.3	0.970			E *	0.948
Total (2020) - Current Zoning (C.I.) Maximized [2]				D	33.7	0.982			E *	0.960
Total (2020) - Proposed Zoning (L.O.) Maximized [2]				D	37.0	1.003			E - F *	0.980

Notes: [1] Analysis based on existing control and lane configurations, [2] Analysis based on future control and lane configurations outlined in 11/2000 Draft TSP, * Mitigation will require eastbound right-turn merge lane, HCM - Highway Capacity Manual, LOS - Level of Service, Delay - Average Delay (sec/veh), V/C - Critical Volume-to-Capacity Ratio, C.I. - Campus Industrial, L.O. - Limited Office.

Highway 213 at Meyers Road will operate at acceptable service levels through the year 2020 total traffic scenario under both the current and proposed zoning and implementation of the improvements listed in the TSP. Future improvements identified in the TSP include the addition of a second northbound through travel lane. Reference **Table 5** below.

Table 5. LOS results for the signalized intersection of Highway 213 & Meyers Road.

Traffic Scenario	1994 HCM Methodology						ODOT SIGCAP Methodology			
	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekday AM Peak Hour		Weekday PM Peak Hour	
	LOS	Delay	V/C	LOS	Delay	V/C	LOS	V/C	LOS	V/C
Existing (2001) [1]	D	25.9	0.989	B	11.3	0.713	E-F	0.989	C	0.689
Background at Build-out (2003) [1]	D	34.9	1.039	B	12.8	0.767	F	1.039	D	0.742
Total at Build-out (2003) [1]	D	35.0	1.040	B	12.9	0.770	F	1.040	D	0.745
Mitigated w/ add. NB thru-lane							C	0.601		
Base (2020) [2]				C	20.7	0.959			E *	0.928
Total (2020) - Current Zoning (C.I.) Maximized [2]				C	22.0	0.972			E *	0.940
Total (2020) - Proposed Zoning (L.O.) Maximized [2]				D	35.6	1.053			F *	1.019

Notes: [1] Analysis based on existing control and lane configurations, [2] Analysis based on future control and lane configurations outlined in 11/2000 Draft TSP, * Mitigation will require additional southbound thru-lane (3 total), HCM - Highway Capacity Manual, LOS - Level of Service, Delay - Average Delay (sec/veh), V/C - Critical Volume-to-Capacity Ratio, C.I. - Campus Industrial, L.O. - Limited Office.

Highway 213 at Glen Oak & Caufield Roads currently experiences failing LOS conditions. This intersection will operate at acceptable LOS conditions under both the current and proposed zoning when the intersection is upgraded according to the City's Draft TSP. Future improvements identified in the TSP include realignment of the intersection offset, signalization, and providing separate left turn lanes on all approaches. Reference **Table 6** below.

Table 6. LOS results for the unsignalized intersection of Highway 213 & Glen Oak/Caufield Rd.

Traffic Scenario	1994 HCM Methodology								ODOT SIGCAP Methodology			
	Weekday AM Peak Hour				Weekday PM Peak Hour				Weekday AM Peak Hour		Weekday PM Peak Hour	
	Critical Movement	LOS	Delay	V/C	Critical Movement	LOS	Delay	V/C	LOS	V/C	LOS	V/C
Existing (2001) [1]	EB	F	> 45		EB	F	> 45					
Background at Build-out (2003) [1]	EB	F	> 45		EB	F	> 45					
Total at Build-out (2003) [1]	EB	F	> 45		EB	F	> 45					
Mitigated - signal [2]		B	13.3	0.695		B	8.1	0.583	C	0.675	B	0.560
Base (2020) [2]						B	8.5	0.719			C	0.689
Total (2020) - Current Zoning (C.I.) Maximized [2]						B	9.7	0.738			C - D	0.704
Total (2020) - Proposed Zoning (L.O.) Maximized [2]						C	18.1	0.856			D	0.827

Notes: [1] Analysis based on existing control and lane configurations, [2] Analysis based on future control and lane configurations outlined in 11/2000 Draft TSP, HCM - Highway Capacity Manual, LOS - Level of Service, Delay - Average Delay (sec/veh), V/C - Critical Volume-to-Capacity Ratio, EB - Eastbound, C.I. - Campus Industrial, L.O. - Limited Office

Highway 213 at Henrici Road currently fails according to the analysis. However, the intersection will operate at acceptable LOS under both the current and proposed zoning when a signal is added as described in the TSP. It is noted that for the year 2020 proposed zoning and maximum density scenario (DMV office) a second southbound through lane will also be necessary in addition to the signal identified in the TSP. Reference **Table 7** below.

Table 7. LOS results for the unsignalized intersection of Highway 213 & Henrici Rd.

Traffic Scenario	1994 HCM Methodology								ODOT SIGCAP Methodology			
	Weekday AM Peak Hour				Weekday PM Peak Hour				Weekday AM Peak Hour		Weekday PM Peak Hour	
	Critical Movement	LOS	Delay	V/C	Critical Movement	LOS	Delay	V/C	LOS	V/C	LOS	V/C
Existing (2001) [1]	WB LT	D	29		WB LT	F	> 45					
Background at Build-out (2003) [1]	WB LT	E	31.4		WB LT	F	> 45					
Total at Build-out (2003) [1]	WB LT	E	31.5		WB LT	F	> 45					
Mitigated - signal [2]		B	10.2	0.825		B	9.8	0.846	D	0.825	D - E	0.846
Base (2020) [2]						D	35.1	1.065			F *	1.065
Total (2020) - Current Zoning (C.I.) Maximized [2]						D	36.8	1.071			F *	1.071
Total (2020) - Proposed Zoning (L.O.) Maximized [2]						E *	48.6	1.113			F *	1.113

Notes: [1] Analysis based on existing control and lane configurations, [2] Analysis based on future control and lane configurations outlined in 11/2000 Draft TSP, * Mitigation will require additional southbound thru-lane (2 total), HCM - Highway Capacity Manual, LOS - Level of Service, Delay - Average Delay (sec/veh), V/C - Critical Volume-to-Capacity Ratio, WB LT - Westbound Left-turn, C.I. - Campus Industrial, L.O. - Limited Office.

Beavercreek Road at Glen Oak Road will operate at acceptable LOS conditions through the year 2020 total traffic scenario under both the proposed and current zoning alternatives and implementation of the street improvements listed in the City's Draft TSP. The proposed TSP improvement includes signalization at this intersection. Reference **Table 8** below.

Table 8. LOS results for the unsignalized intersection of Beavercreek Rd & Glen Oak Rd.

Traffic Scenario	1994 HCM Methodology						
	Weekday AM Peak Hour			Weekday PM Peak Hour			
	Critical Movement	LOS	Delay	Critical Movement	LOS	Delay	V/C
Existing (2001) [1]	EB Left	C	16.9	EB Left	D	22.8	
Background at Build-out (2003) [1]	EB Left	D	24.0	EB Left	D	27.1	
Total at Build-out (2003) [1]	EB Left	D	24.1	EB Left	D	27.1	
Base (2020) [2]					B	5.4	0.833
Total (2020) - Current Zoning (C.I.) Maximized [2]					B	5.7	0.836
Total (2020) - Proposed Zoning (L.O.) Maximized [2]					B	9.0	0.858

Notes: [1] Analysis based on existing control and lane configurations, [2] Analysis based on future signalized control and lane configurations outlined in 11/2000 Draft TSP, HCM - Highway Capacity Manual, LOS - Level of Service, Delay - Average Delay (sec/veh), V/C - Critical Volume-to-Capacity Ratio, EB Left- Eastbound Left-Turn, C.I. - Campus Industrial, L.O. - Limited Office

Glen Oak Road at the site access will function at acceptable LOS conditions under stop sign control on the site access approach under both the current and proposed zoning scenarios. For the year 2020 conditions and the maximum densities an eastbound left turn lane on Glen Oak Road at the site access is warranted. Reference **Table 9** below.

Table 9. LOS results for the unsignalized intersection of the site access on Glen Oak Rd.

Traffic Scenario	1994 HCM Methodology					
	Weekday AM Peak Hour			Weekday PM Peak Hour		
	Critical Movement	LOS	Delay	Critical Movement	LOS	Delay
Total at Build-out (2003)	SB	A	3.2	SB	A	3.3
Total (2020) - Current Zoning (C.I.) Maximized				SB	A	3.5
Total (2020) - Proposed Zoning (L.O.) Maximized				SB	B	5.1

Notes: HCM - Highway Capacity Manual, LOS - Level of Service, Delay - Average Delay (sec/veh), V/C - Critical Volume-to-Capacity Ratio, SB - Southbound, C.I. - Campus Industrial, L.O. - Limited Office

Generally, LOS 'A', 'B', 'C', and 'D' are desirable service levels ranging from no vehicle delays to average or longer than average delays in the peak hours. Level 'E' represents long delays indicating signalization warrants need to be reviewed and signals considered only if warrants are met. Level 'F' indicates that intersection improvements, such as widening and signalization, may be required. By definition, and according to the Highway Capacity Manual (HCM), the following delay times are associated with the LOS at stop controlled (unsignalized) and signalized intersections.

Level of Service Criteria according to the 1994 *Highway Capacity Manual*

Level of Service (LOS)	Unsignalized Control Stopped Delay (sec/veh)	Signalized Control Stopped Delay (sec/veh)
A	≤ 5	≤ 5
B	> 5 and ≤ 10	> 5 and ≤ 15
C	> 10 and ≤ 20	> 15 and ≤ 25
D	> 20 and ≤ 30	> 25 and ≤ 40
E	> 30 and ≤ 45	> 40 and ≤ 60
F	> 45	> 60

TRAFFIC SIGNAL WARRANTS

The peak hour signal warrant (**Manual On Uniform Traffic Control Devices**) was reviewed for the following intersections for all scenarios during the AM and PM peak hours. The plots for each scenario is included in the appendix. The results are summarized below.

Highway 213 at Glen Oak Road

Traffic signal warrant met for background & total traffic year 2003. Also met for year 2020 scenarios under the maximum density for both the current and proposed zoning.

Highway 213 at Henrici Road
Traffic signal warrant not met under any scenario.

Beavercreek Road at Glen Oak Road
Traffic signal warrant not met under any scenario.

Glen Oak Road at site access
Traffic signal warrant not met under any scenario.

TRAFFIC ACCIDENT EXPERIENCE

Traffic accident data was researched from data furnished by the City. The City furnished accident reports covering the 1997-99 three-year period for the study intersections on Highway 213 and Glen Oak Road.

Listed below (**Table No. 10**) are the accident totals and rates. It is noted that all of the intersections have accident rates below the threshold level of 1.0 accident per million entering vehicles per year. Therefore, the accident analysis indicates no safety mitigation is necessary.

Table 10. Accident rate calculations.

Intersection	Accident History (# yrs.)	# Accidents	Annual # of Accidents	Annual Traffic Entering (veh/yr)	Accident Rate per M.E.V.*
Highway 213 & Molalla Ave/Douglas Lp	3	26	8.667	10891457	0.796
Highway 213 & Meyers Rd	3	8	2.667	9766518	0.273
Highway 213 & Glen Oak/Caulfield Rd	3	5	1.667	8203290	0.203
Highway 213 & Henrici Rd	3	1	0.333	6753288	0.049
Beavercreek Rd & Glen Oak Rd	3	2	0.667	4401142	0.151

* M.E.V. - million entering vehicles

STREET IMPROVEMENTS ON GLEN OAK ROAD

The proposed site access on Glen Oak Road will require one inbound lane and two outbound lanes. A separate eastbound left turn lane on Glen Oak Road at the site access is not required under the proposed medical-dental office use. Under the year 2020 maximum density scenarios for the current and proposed zoning an eastbound left turn lane is warranted. The left turn lane warrant curve for this determination is contained in the report's appendix.

According to the City's Draft TSP, future improvements identified on Glen Oak Road between Highway 213 and Beavercreek include curb and sidewalk on both sides. Therefore, it is anticipated that the frontage improvements adjacent to the project site associated with the site's development will need to conform to City standards and the future conditions listed in the TSP.

PEDESTRIAN & TRANSIT CONSIDERATIONS

Presently there are no sidewalks in the immediate area along Highway 213 and Glen Oak Road. There are bike lanes along both sides of Highway 213. There are no shoulders on Glen Oak Road except for limited segments near recent developments east of the project site. It is anticipated that the proposed project will develop sidewalk along the immediate property frontage on the north side of Glen Oak Road. It is noted that the City's Draft TSP proposes sidewalk be installed along Glen Oak Road on both sides from Highway 213 to Beavercreek Road.

Tri-Met provides bus service to the Clackamas Community College area from downtown Oregon City. Route No. 32 (Oatfield) provides service along Beavercreek Road. Route No. 33 (McLoughlin) provides service along Highway 213. No transit service is provided on Glen Oak Road.

SUMMARY AND RECOMMENDATIONS

The project proposes to develop a 4,000 square foot medical-dental office in the northeast corner of the intersection of Highway 213 and Glen Oak Road. One driveway access to Glen Oak Road is planned.

Since this project involves a rezone from campus industrial zoning to limited office zoning the City required a comparison of the traffic impacts based on the proposed use and the most intense uses permitted under both types of zoning. Therefore, the analysis considered the trip generation for the following scenarios.

Current Zoning:	Campus Industrial 45,000 square foot Junior/Community College
Proposed Zoning:	Limited Office 33,000 square foot State DMV Facility
	Limited Office 4,000 square foot Medical-Dental Office

The proposed medical-dental office will generate 145 trips per day and 15 trips during the PM peak hour. The most intense limited office use (state DMV type office) would generate 3,339 trips per day and 564 trips during the PM peak hour. For the campus industrial use (junior/community college) a total of 826 trips per day will occur and 75 trips will occur in the PM peak hour.

None of the alternative uses studied will result in unexpected impacts to the transportation system. As identified in the capacity analysis section of the report, mitigation will be required with each of the uses. These improvements are consistent with the recommendations identified in the City's Draft Transportation System Plan (November 2000). The only improvement identified beyond those contained in the City's TSP is the need to add a second southbound through lane on Highway 213 at the intersection with Henrici Road under the proposed zoning, maximum density (DMV), year 2020 alternative. Figures No. 1A & 1B illustrate the required improvements for all scenarios studied.

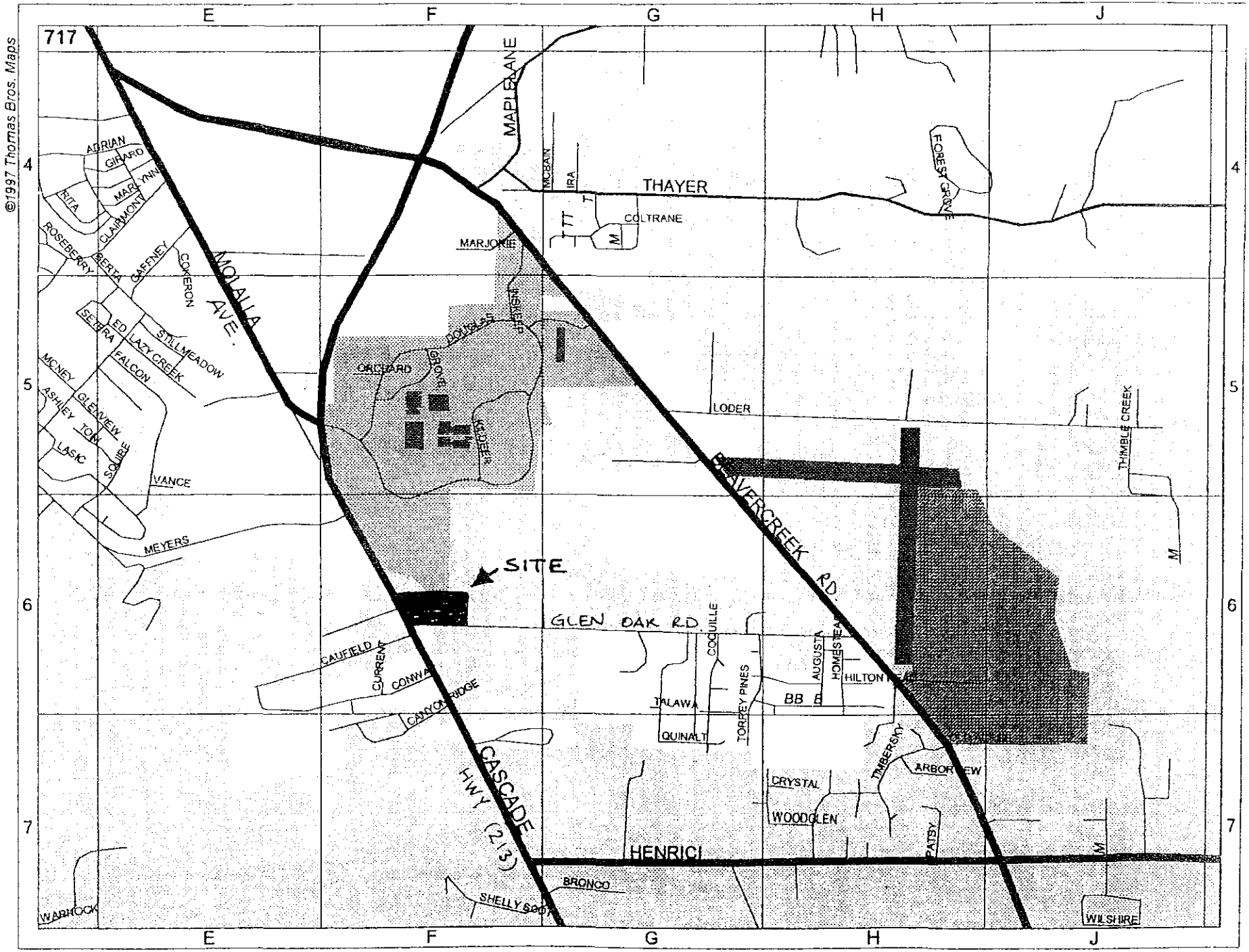
In conjunction with the proposed project it will be necessary to accomplish the following.

- Maintenance of the existing and adequate sight distance along Glen Oak Road at the proposed driveway is essential. Obstruction by landscaping, signing, parking, buildings, or other objects would be unsafe.

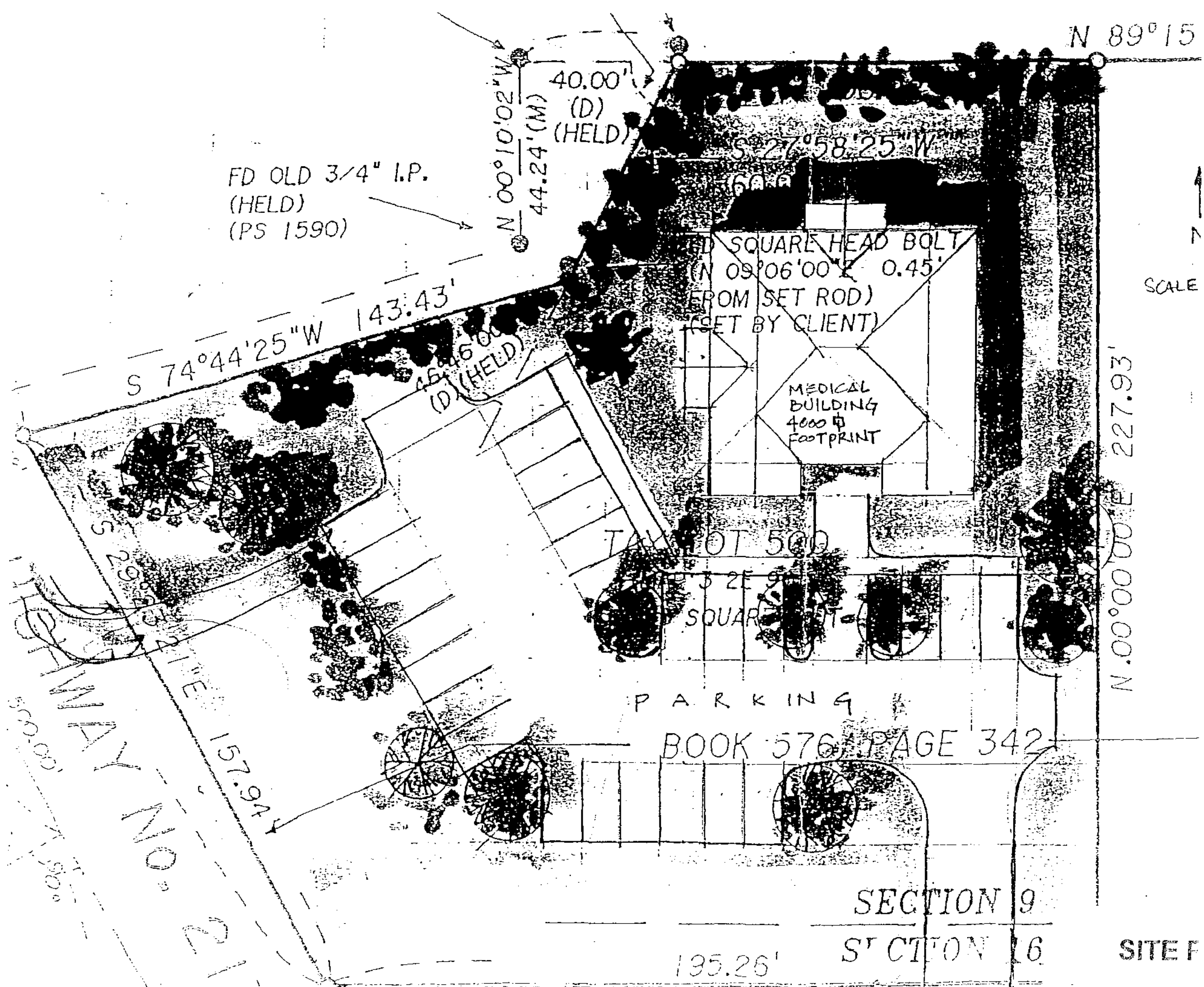
- Implement standard traffic control devices, including pavement markings and signing as per City standards and the Manual On Uniform Traffic Control Devices at the site access.

APPENDIX

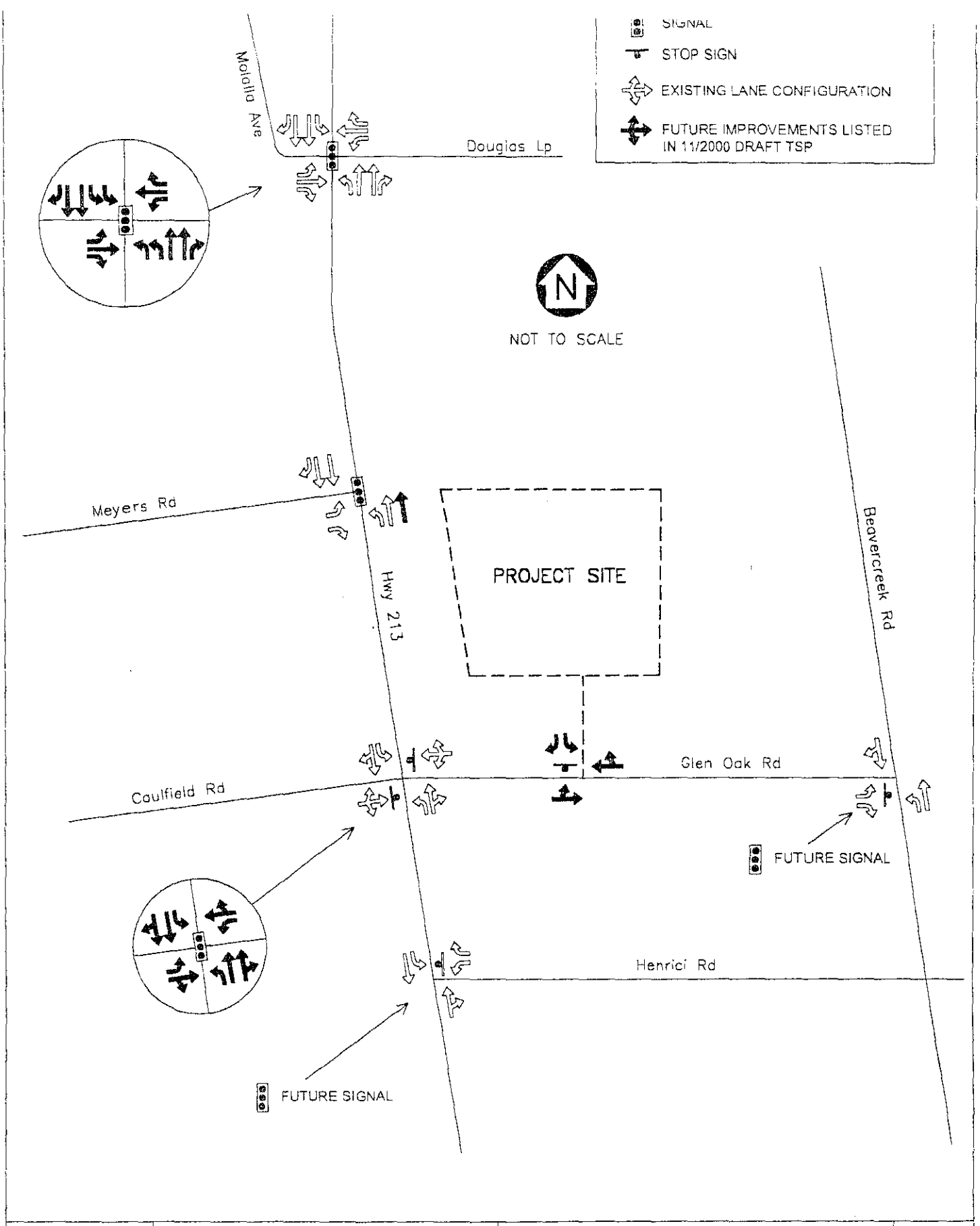
- Vicinity Map
- Site Plan
- Figure 1A Existing & Future Lane Configurations/Traffic Control
- Figure 1B Year 2020 Required Lane Configurations & Intersection Control
- Traffic Flow Diagrams (Figures No. 2 through 16)
- Peak Hour Signal Warrant Curves
- Left Turn Warrant Curve
- Trip Generation Summary of Alternative Uses (letter to City dated 2/14/01)
- Capacity Analysis Worksheets



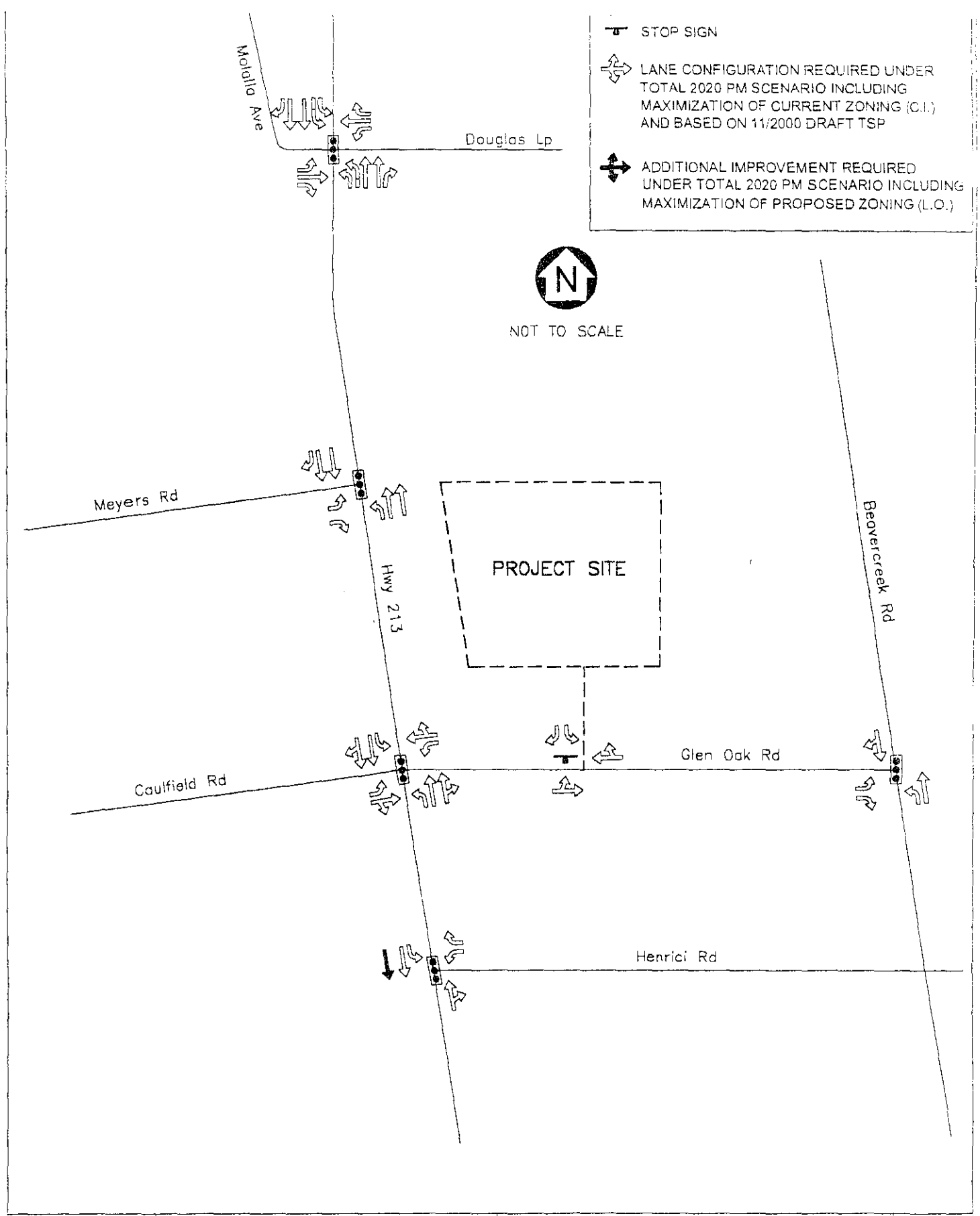
VICINITY MAP


N 89°15
40.00'
(D)
(HELD)
N 00°10'02"W
44.24'(M)
FD OLD 3/4" I.P.
(HELD)
(PS 1590)
S 27°58'25"W
FD SQUARE HEAD BOLT
(N 09°06'00"E 0.45'
FROM SET ROD)
(SET BY CLIENT)
S 74°44'25"W 143.43'
(D) (HELD)
MEDICAL
BUILDING
4000 ☐
FOOTPRINT
TAX LOT 500
SQUARE FEET
227.93'
N 00°00'00"E
PARKING
BOOK 576 PAGE 342
157.94'
SECTION 9
SECTION 16
135.26'
SCALE

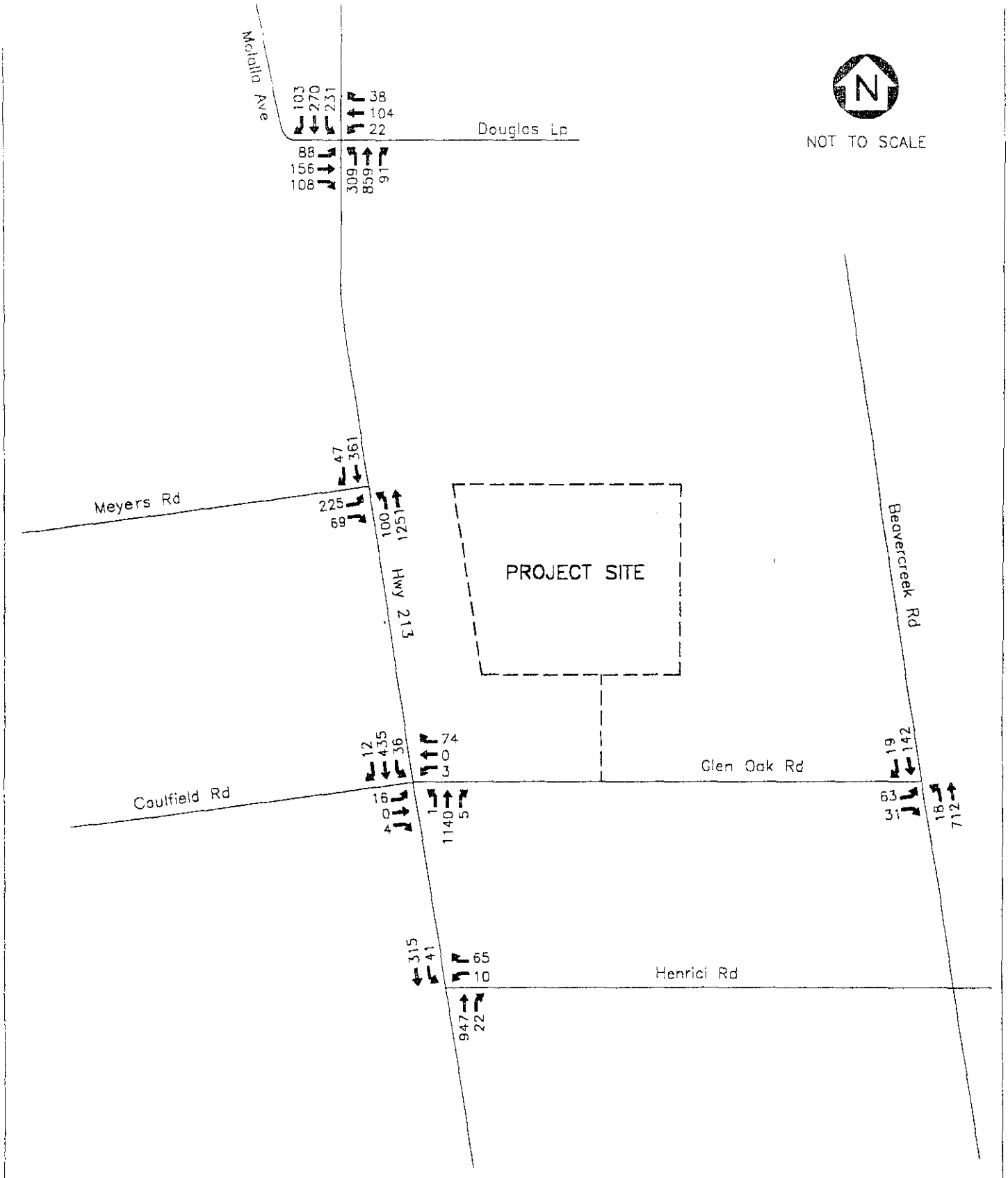
SITE F



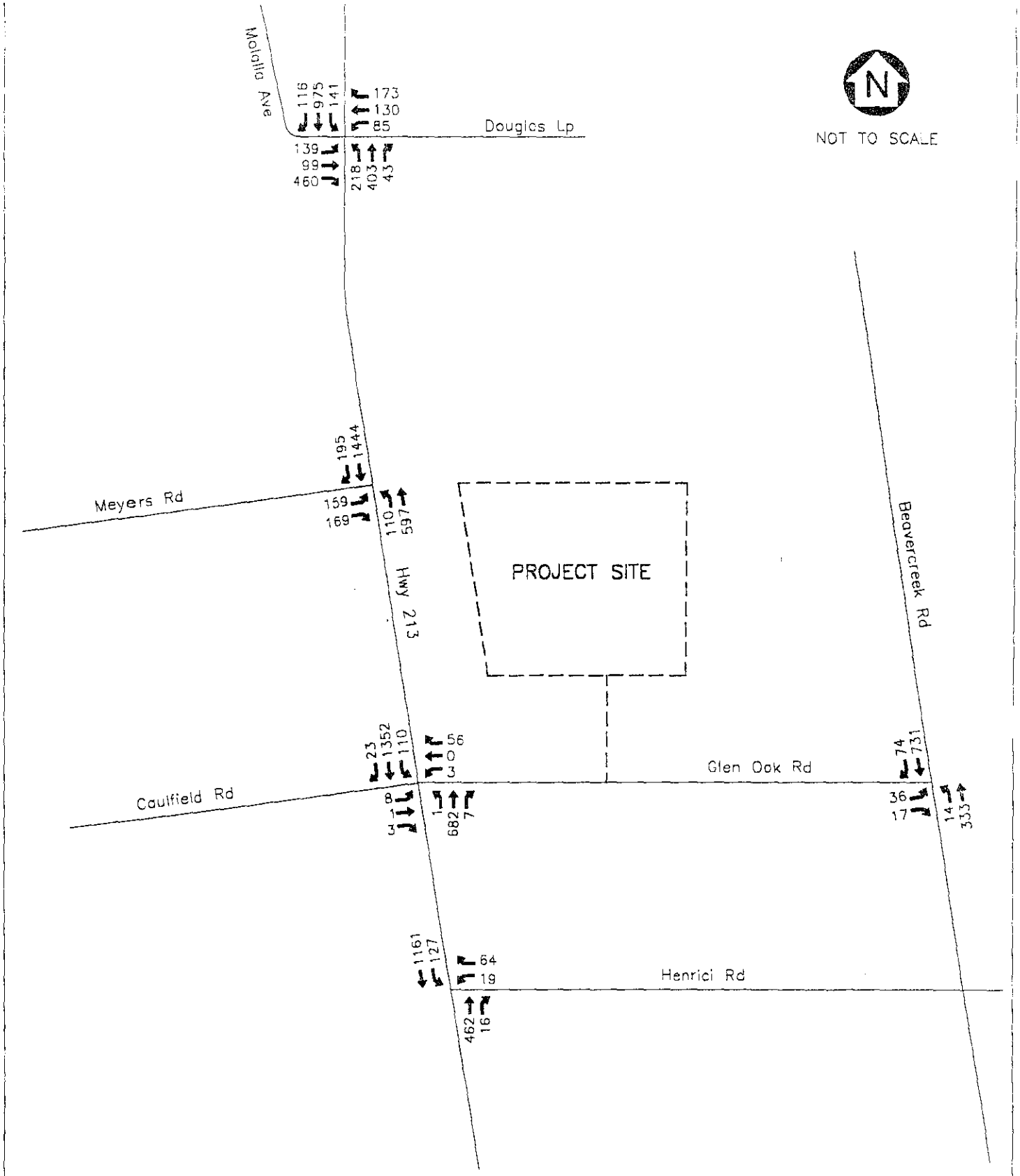
Date: 3/2/01 Project: 01-02 File: 0102flow.dwg	Notes: * Future improvements are based on the 11/2000 Draft TSP.	Existing & Future * Lane Configurations & Intersection Control	Figure 1 A



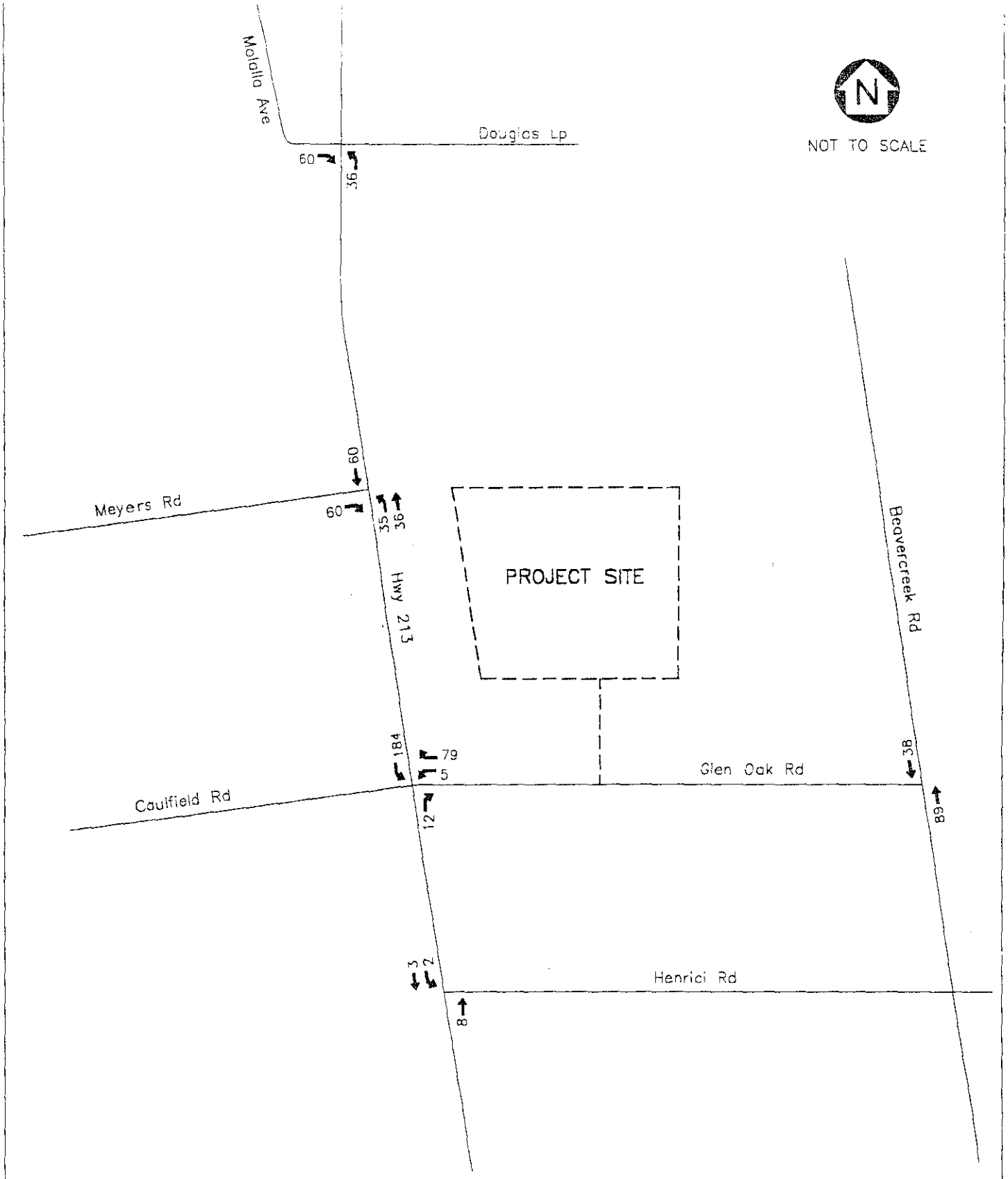
Date: 3/2/01	Notes:	Year 2020 - Required Lane Configurations & Intersection Control	Figure 1 E
Project: 01-02			
File: 0102flow.dwg			



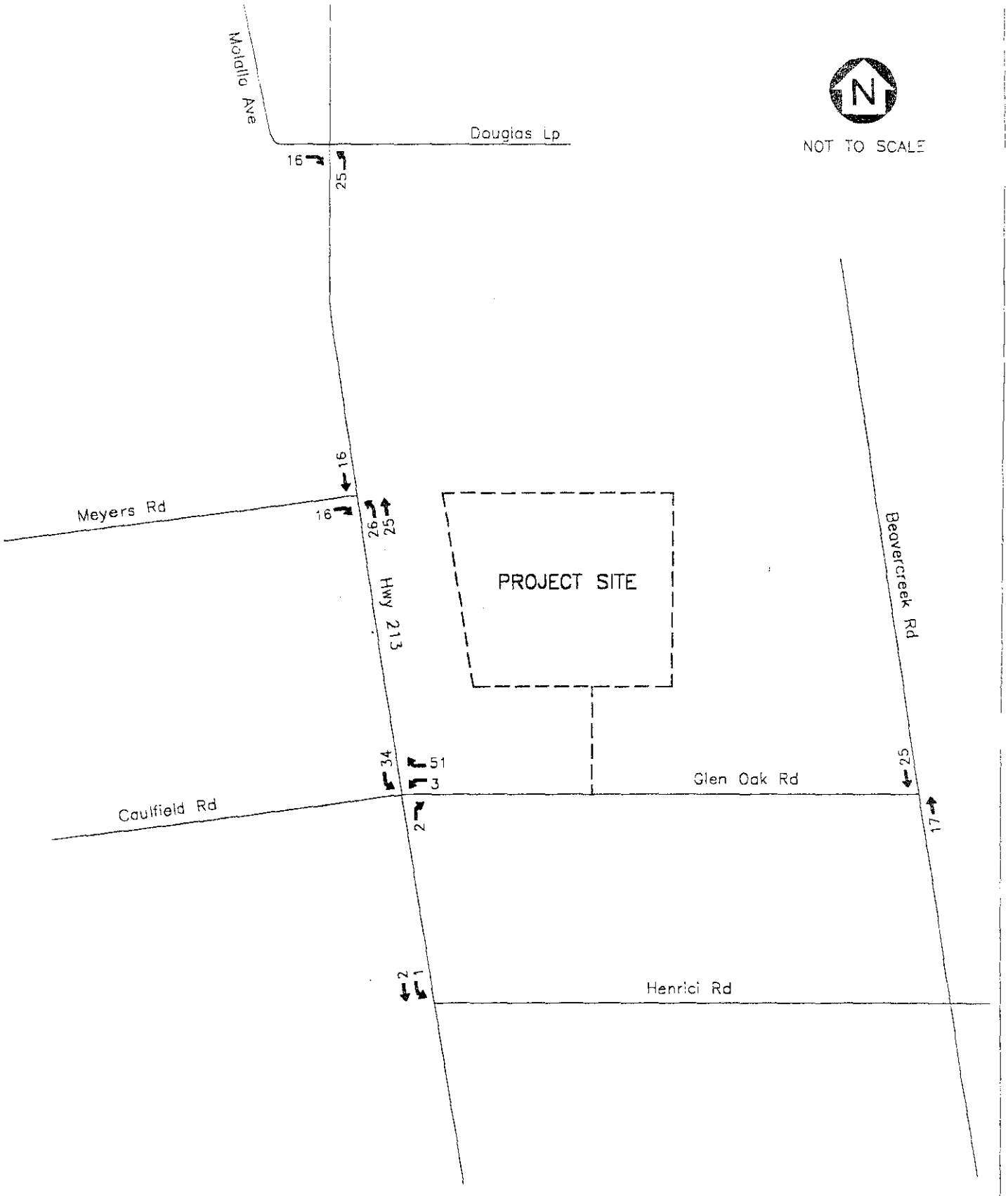
Date: 2/9/01	Notes:	2001 Existing Traffic Weekday AM Peak Hour	Figure
Project: 01-02			2
File: 0102flow.dwg			



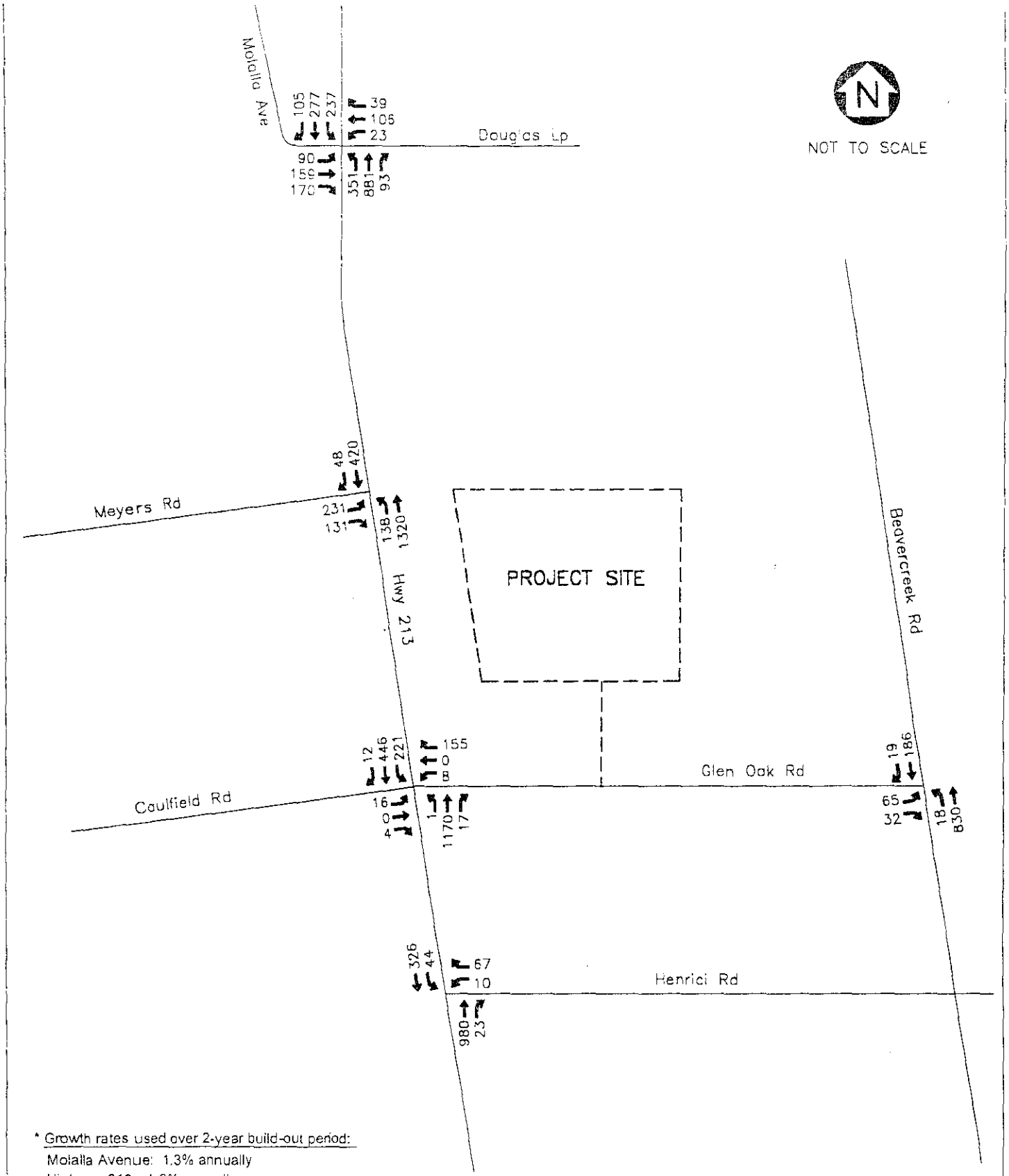
Date: 2/9/01	Notes:	2001 Existing Traffic Weekday PM Peak Hour	Figure
Project: 01-02			3
File: 0102flow.dwg			



Date: 2/9/01 Project: 01-02 File: 0102flow.dwg	Notes: In-Process Traffic accounts for the new Oregon City High School trip generation and trip redistribution.	In-Process Traffic Weekday AM Peak Hour	Figure 4



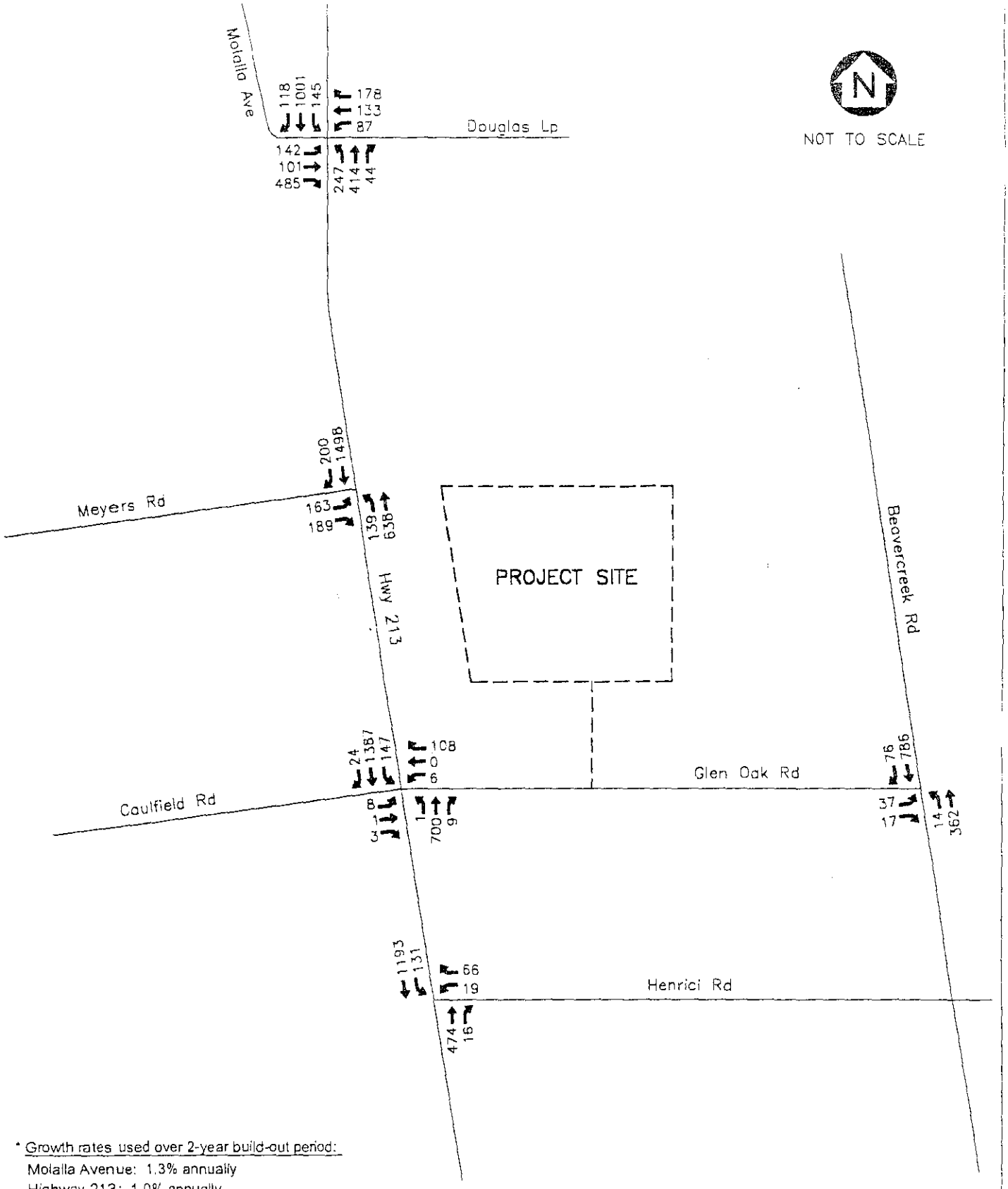
Date: 2/9/01	Notes:	In-Process Traffic	Figure
Project: 01-02	In-Process Traffic accounts for the new Oregon City High School trip generation and trip redistribution.	Weekday PM Peak Hour	5
File: 0102flow.dwg			



* Growth rates used over 2-year build-out period:

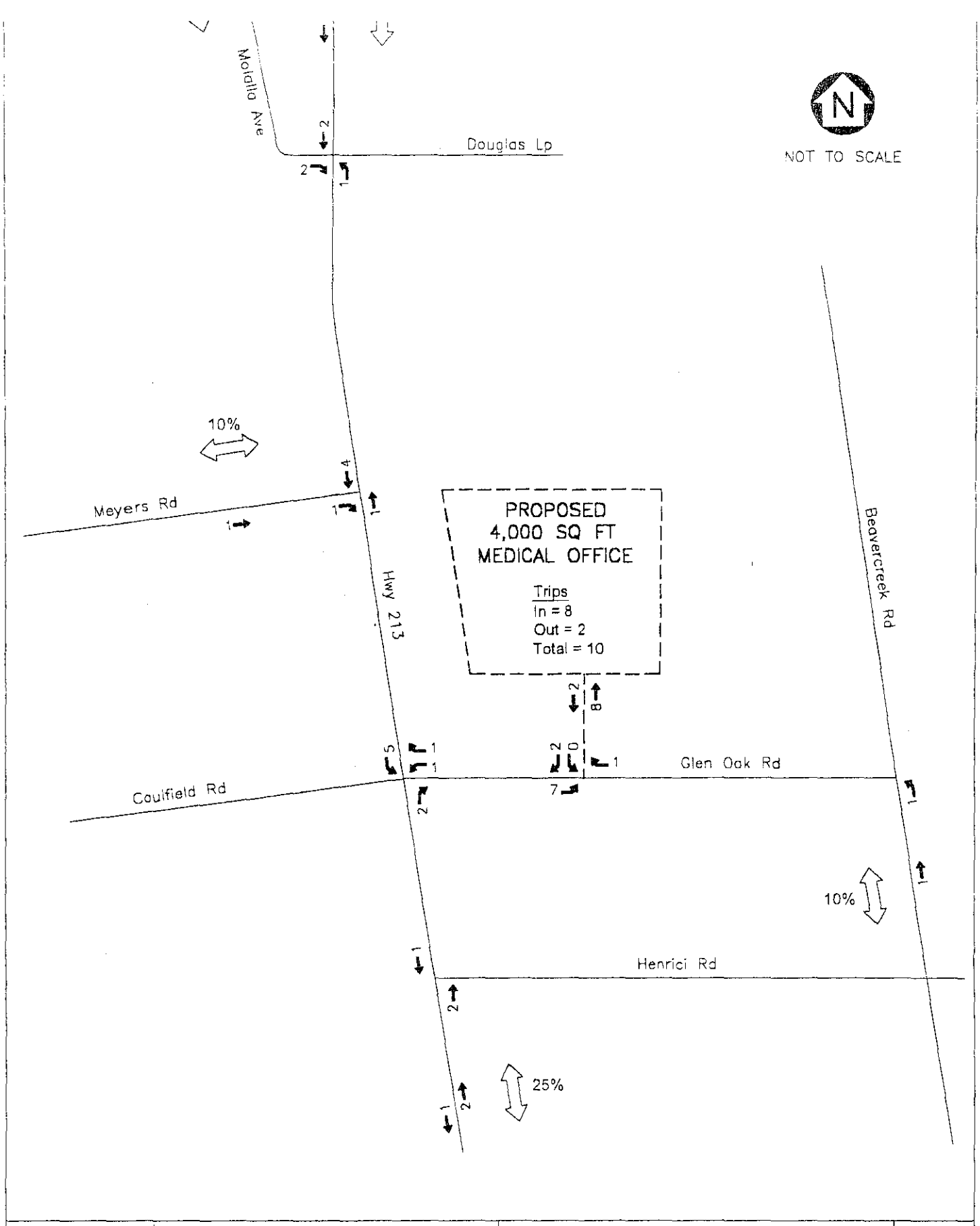
Molalla Avenue: 1.3% annually
Highway 213: 1.0% annually
Beavercreek Road: 2.0% annually
(rates based on Nov. 2000 Draft TSP)

Date: 2/9/01 Project: 01-02 File: 0102flow.dwg	Notes: Background Traffic = Existing Traffic + growth * + In-Process Traffic	Background Traffic at Build-out (2003) Weekday AM Peak Hour	Figure 6

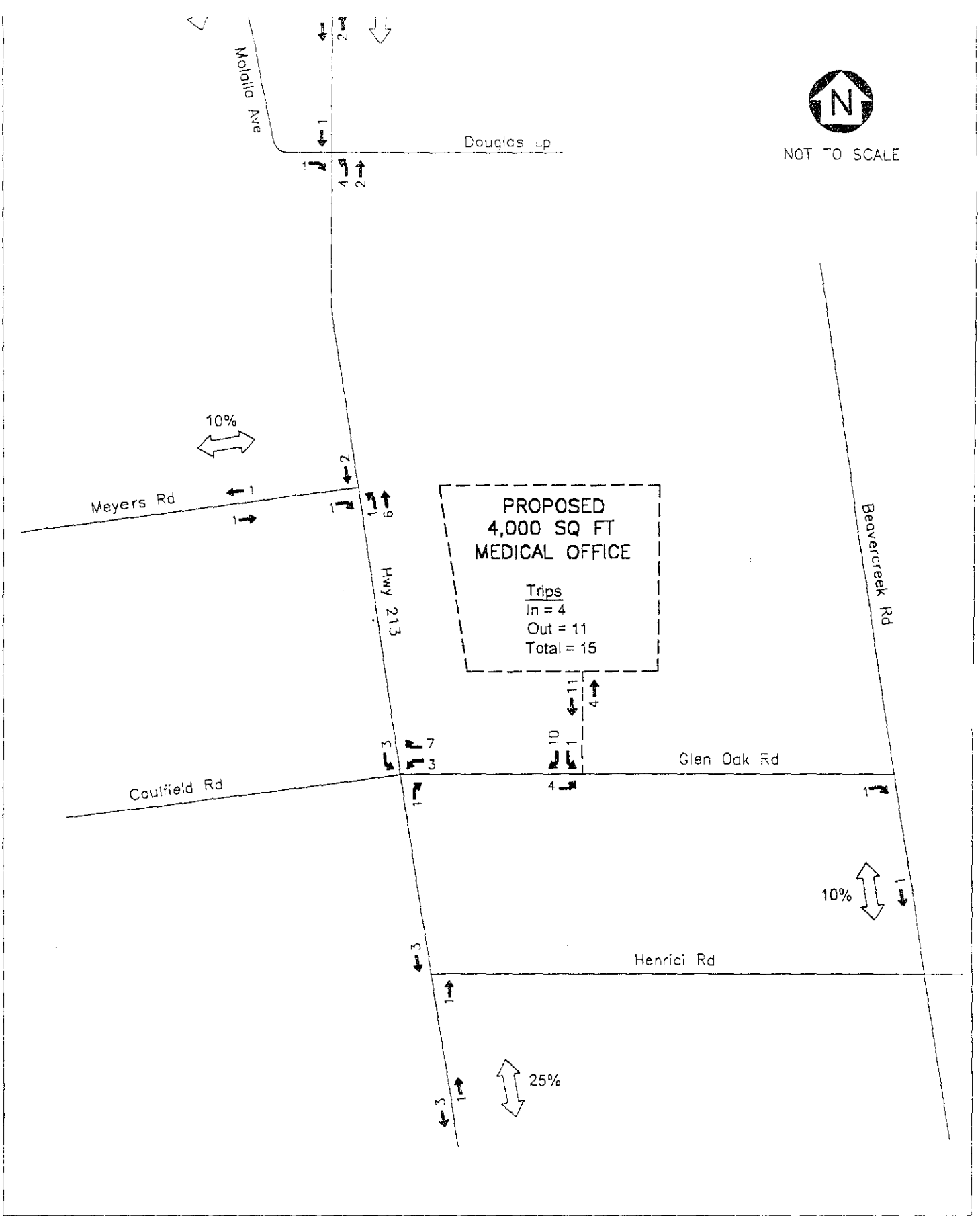


* Growth rates used over 2-year build-out period:
Molalla Avenue: 1.3% annually
Highway 213: 1.0% annually
Beavercreek Road: 2.0% annually
(rates based on Nov. 2000 Draft TSP)

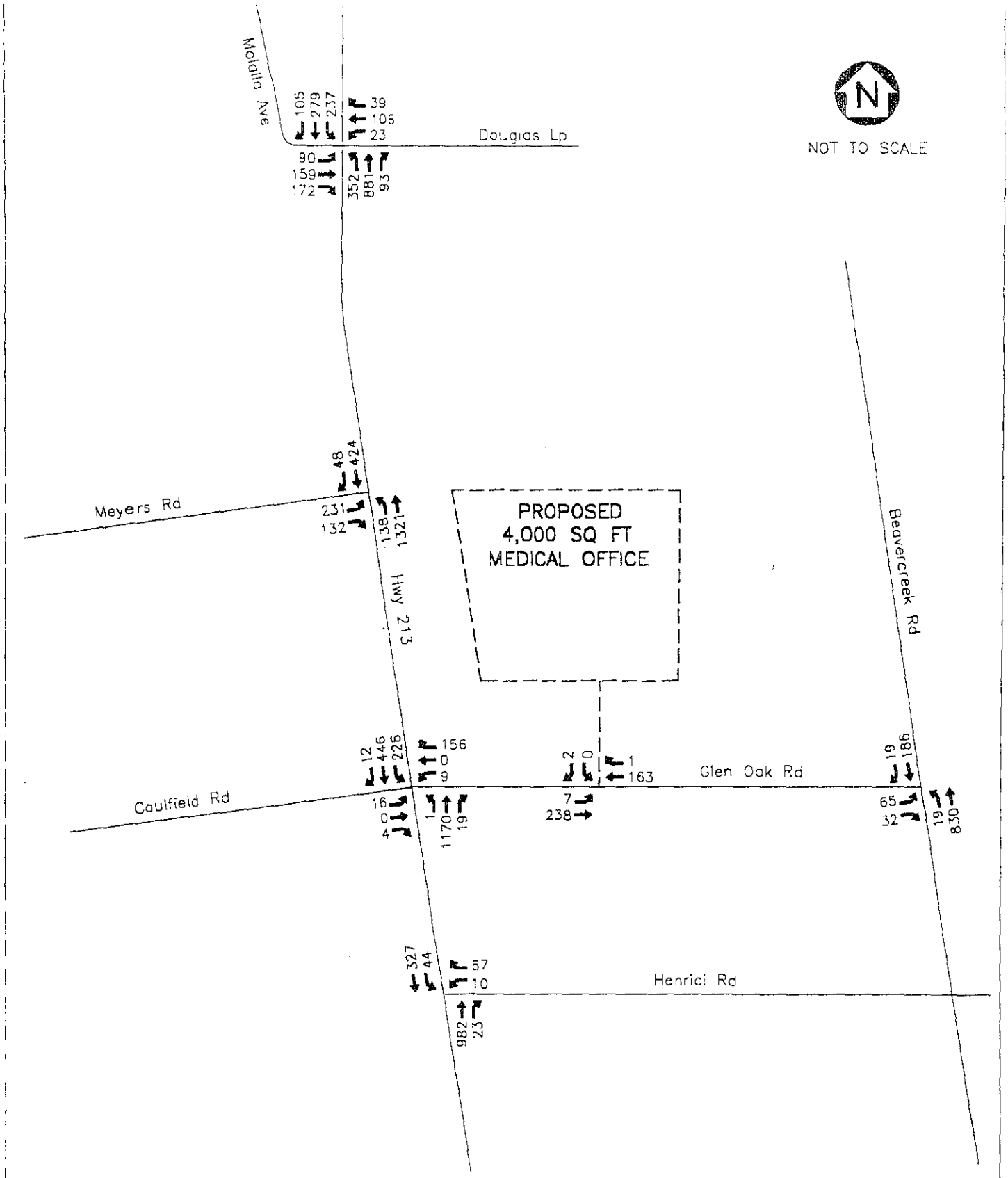
Date: 2/9/01 Project: 01-02 File: 0102flow.dwg	Notes: Background Traffic = Existing Traffic + growth * + In-Process Traffic	Background Traffic at Build-out (2003) Weekday PM Peak Hour	Figure 7



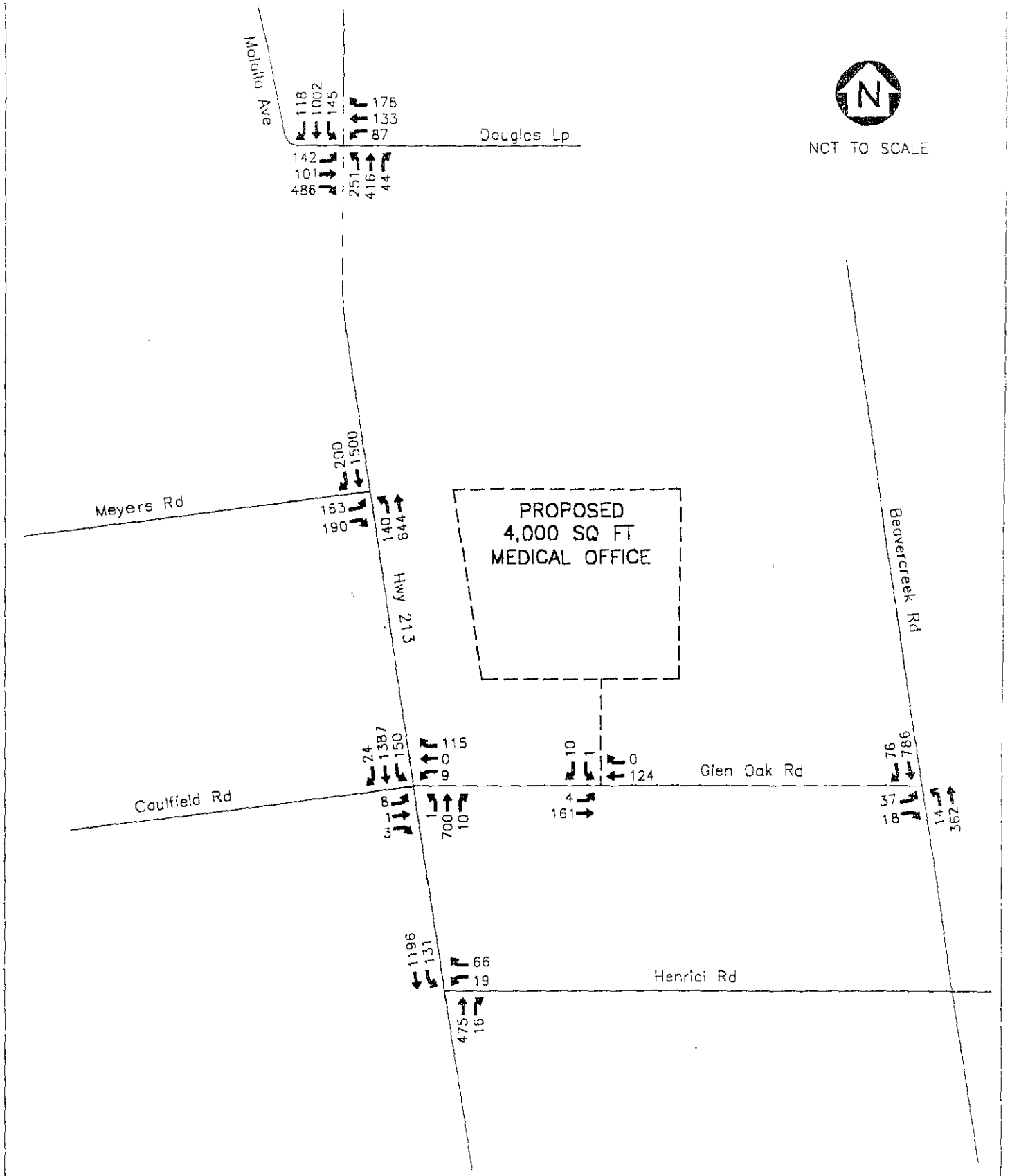
Date: 2/9/01	Notes:	Site Generated Traffic	Figure
Project: 01-02	Reference Table 1 for details on the trip generation.	Weekday AM Peak Hour	8
File: 0102flow.dwg			



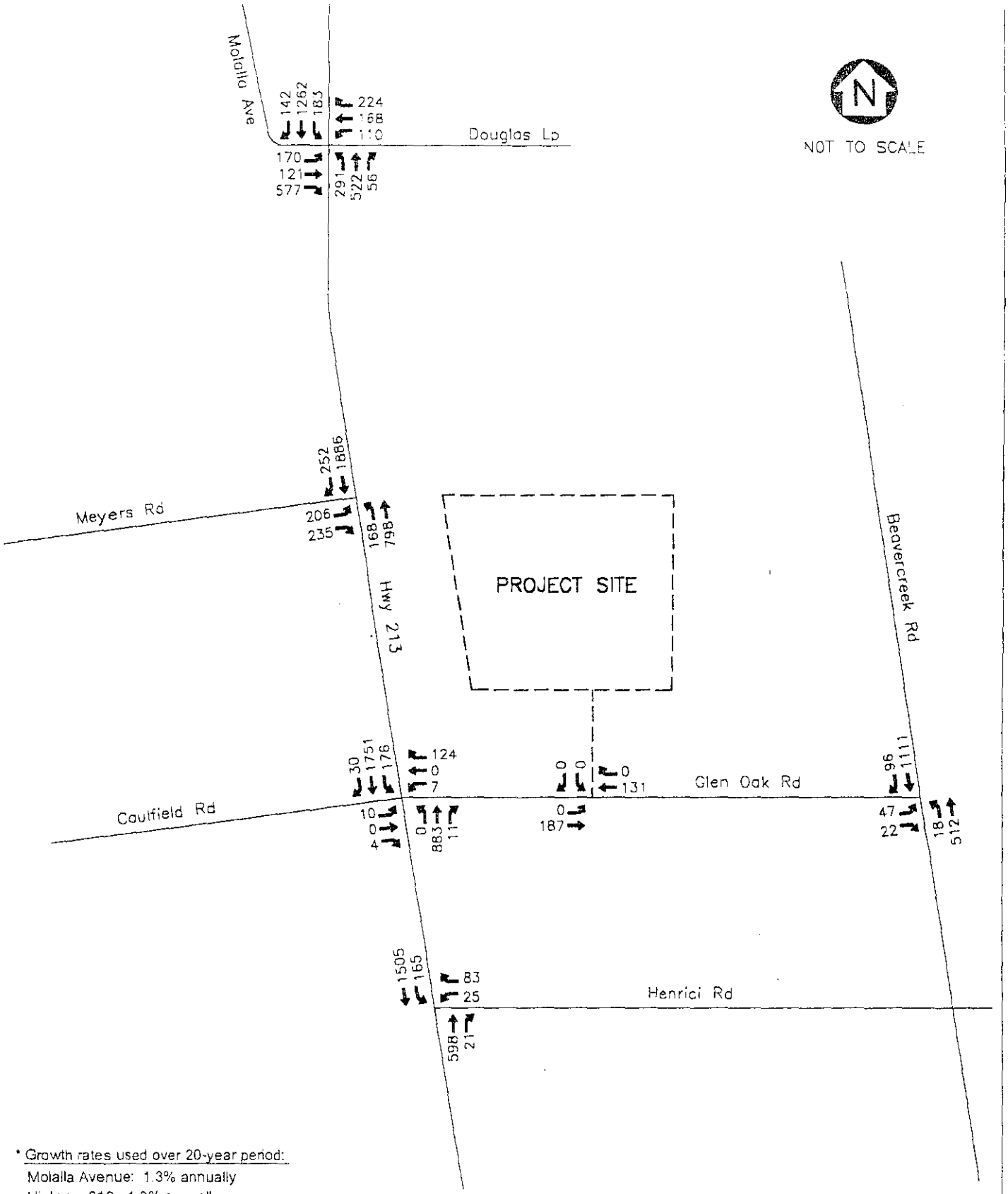
Date: 2/9/01	Notes:	Site Generated Traffic	Figure
Project: 01-02	Reference Table 1 for details on the trip generation.	Weekday PM Peak Hour	9
File: 0102flow.dwg			



Date: 2/9/01 Project: 01-02 File: 0102flow.dwg	Notes: Total Traffic = Background Traffic + Site Generated Traffic from 4,000 sf medical office	Total Traffic at Build-out (2003) Weekday AM Peak Hour	Figure 10

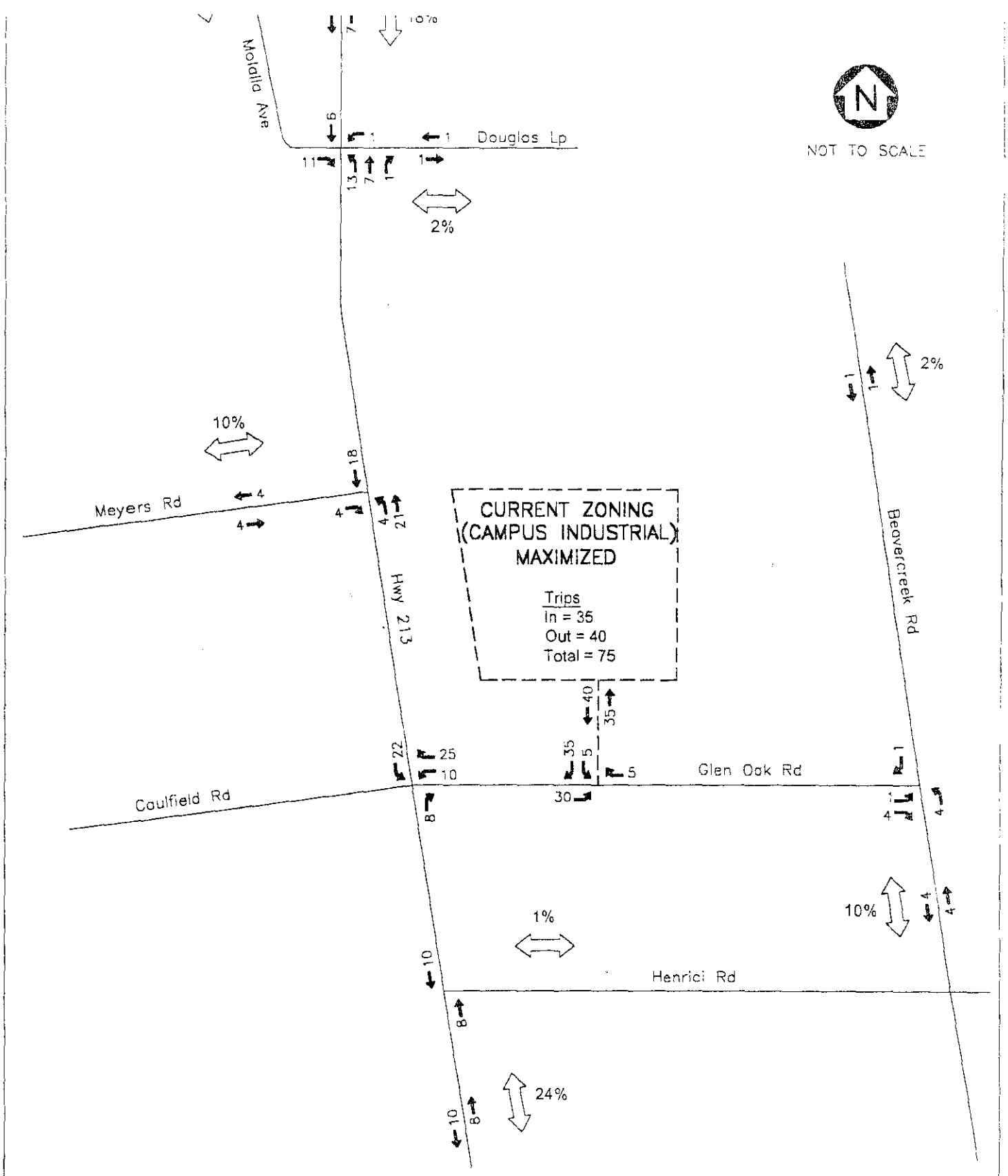


Date: 2/9/01	Notes:	Total Traffic at Build-out (2003)	Figure
Project: 01-02	Total Traffic = Background Traffic + Site Generated Traffic from 4,000 sf medical office	Weekday PM Peak Hour	11
File: 0102flow.dwg			



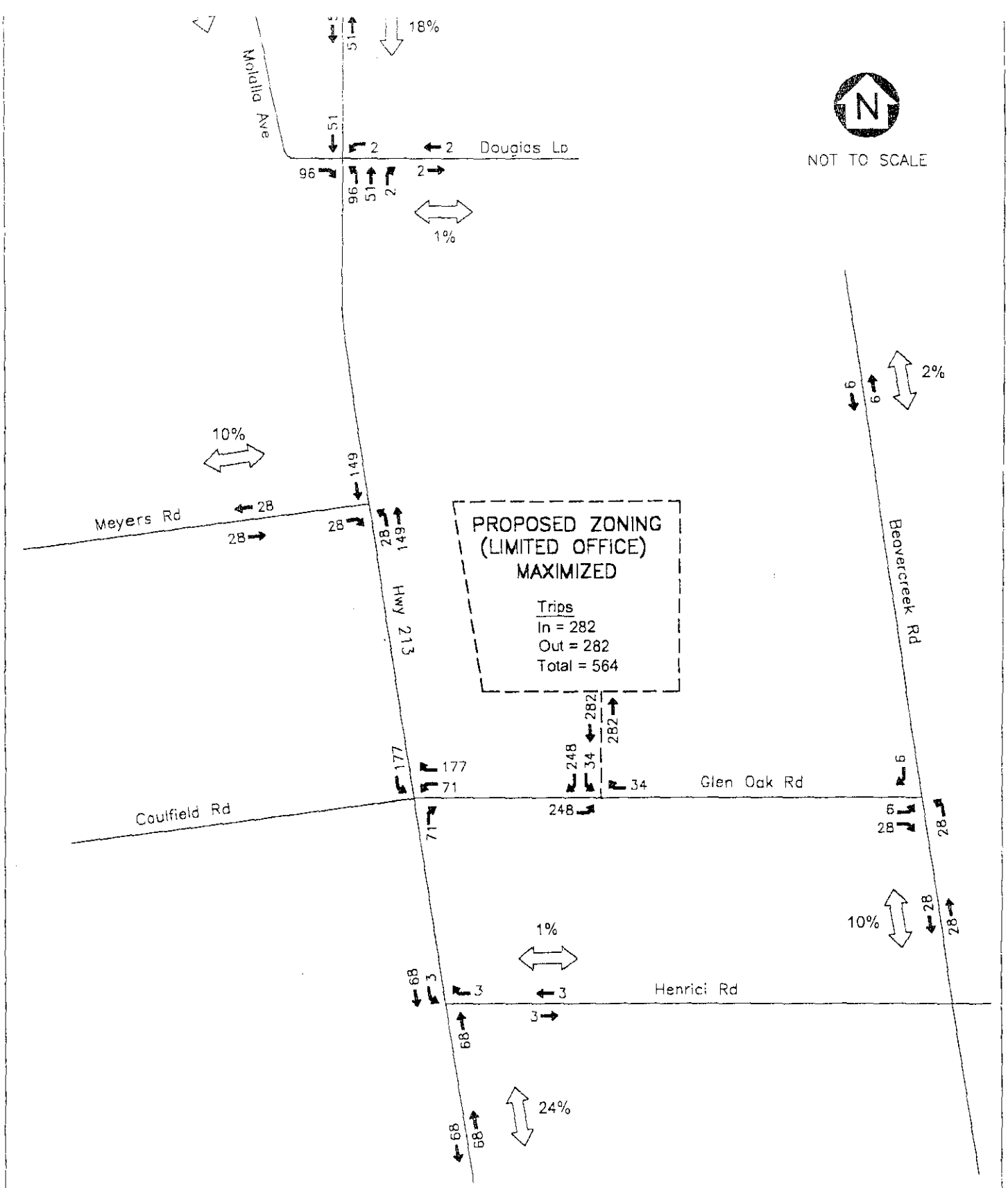
* Growth rates used over 20-year period:
Molalla Avenue: 1.3% annually
Highway 213: 1.0% annually
Beavercreek Road: 2.0% annually
(rates based on Nov. 2000 Draft TSP)

Date: 2/9/01 Project: 01-02 File: 0102flow.dwg	Notes: Base Traffic Year 2020 = Existing Traffic + growth * + In-Process Traffic	Base Traffic Year 2020 Weekday PM Peak Hour	Figure 12



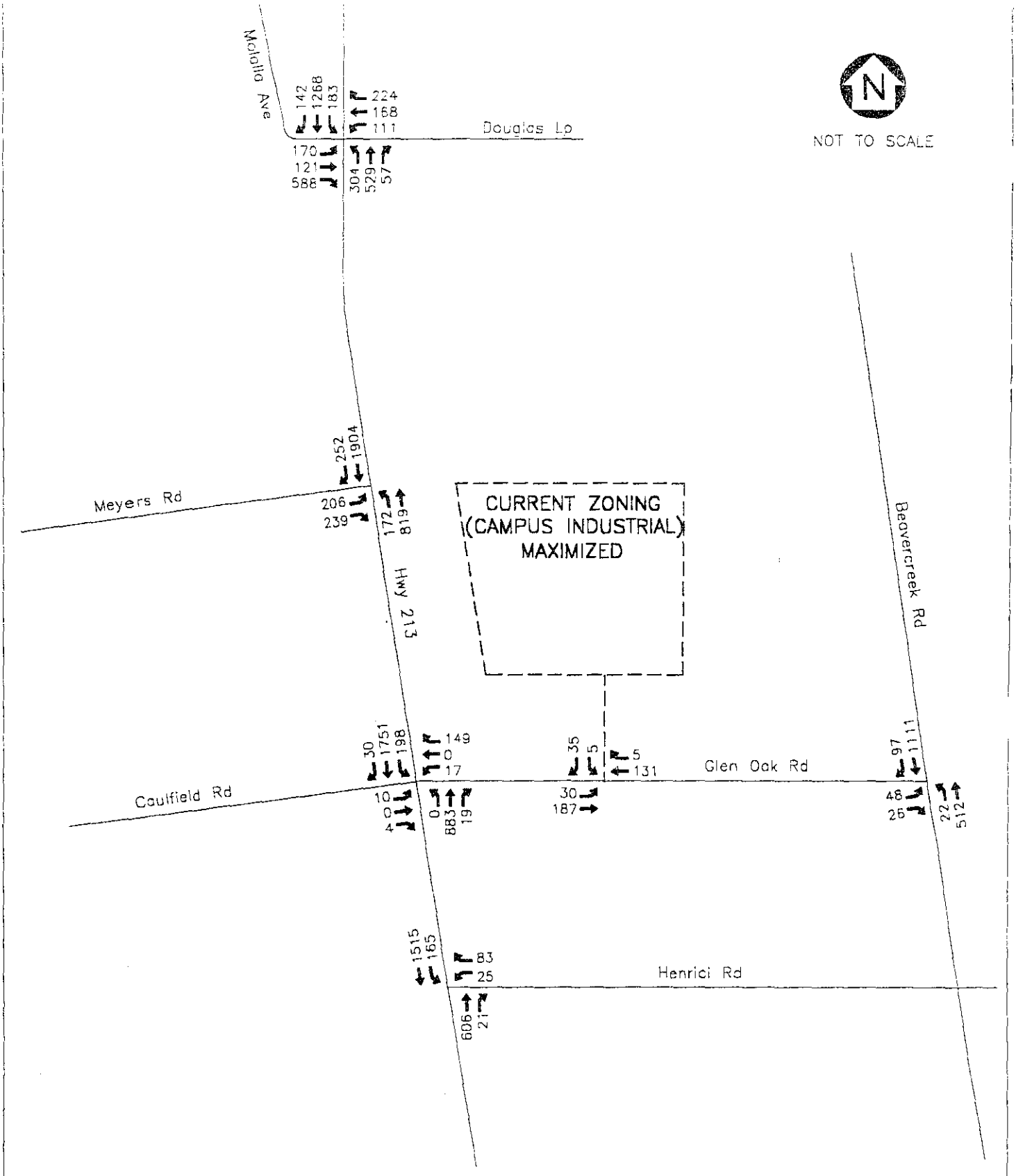
Maximized Use of Current Zoning (Campus Industrial)

Date: 3/1/01	Notes:	Site Generated Traffic	Figure
Project: 01-02	Reference Table 2 for details on the trip generation.	Weekday PM Peak Hour	13
File: 0102flow.dwg			



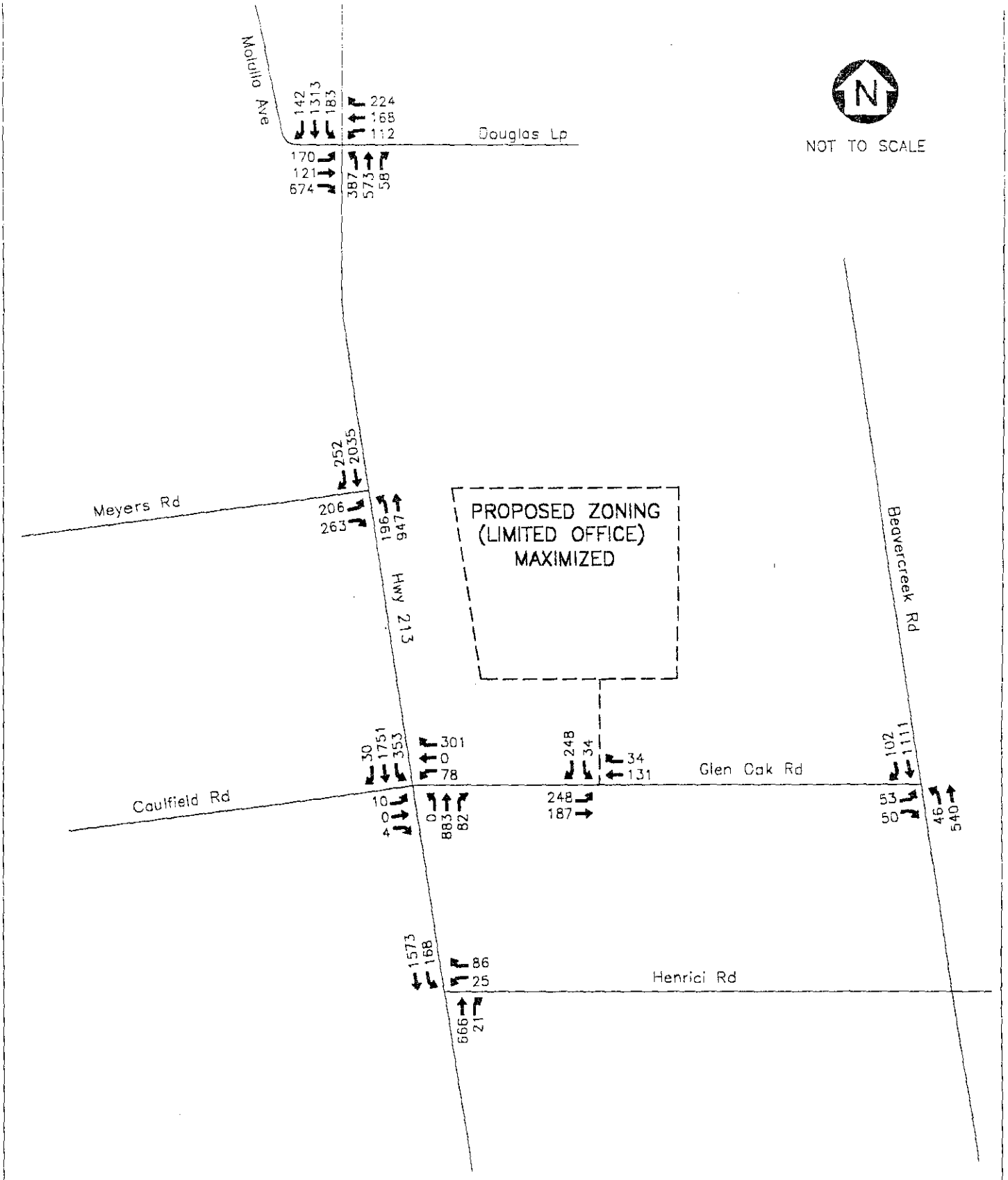
Maximized Use of Proposed Zoning (Limited Office)

Date: 3/1/01	Notes:	Site Generated Traffic	Figure
Project: 01-02	Reference Table 3 for details on the trip generation.	Weekday PM Peak Hour	14
File: 0102flow.dwg			



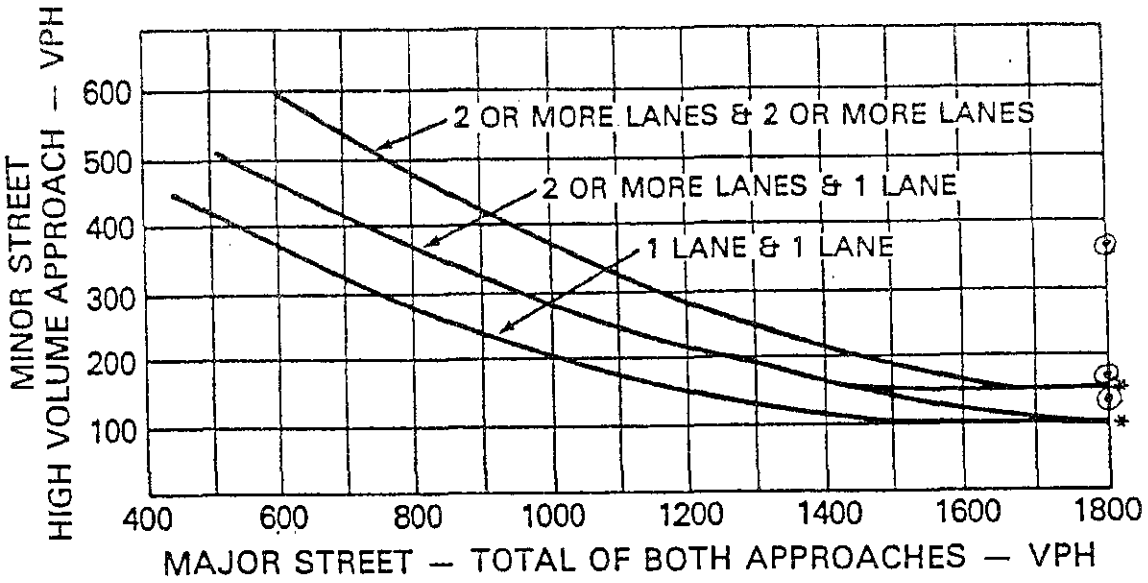
Maximized Use of Current Zoning (Campus Industrial)

Date: 3/1/01 Project: 01-02 File: 0102flow.dwg	Notes: Total Traffic Year 2020 = Base Traffic Year 2020 + Site Generated Traffic from maximized use of current zoning	Total Traffic Year 2020 Weekday PM Peak Hour	Figure 15



Maximized Use of Proposed Zoning (Limited Office)

Date: 3/1/01 Project: 01-02 File: 0102flow.dwg	Notes: Total Traffic Year 2020 = Base Traffic Year 2020 + Site Generated Traffic from maximized use of proposed zoning	Total Traffic Year 2020 Weekday PM Peak Hour	Figure 16



*NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

4C-9

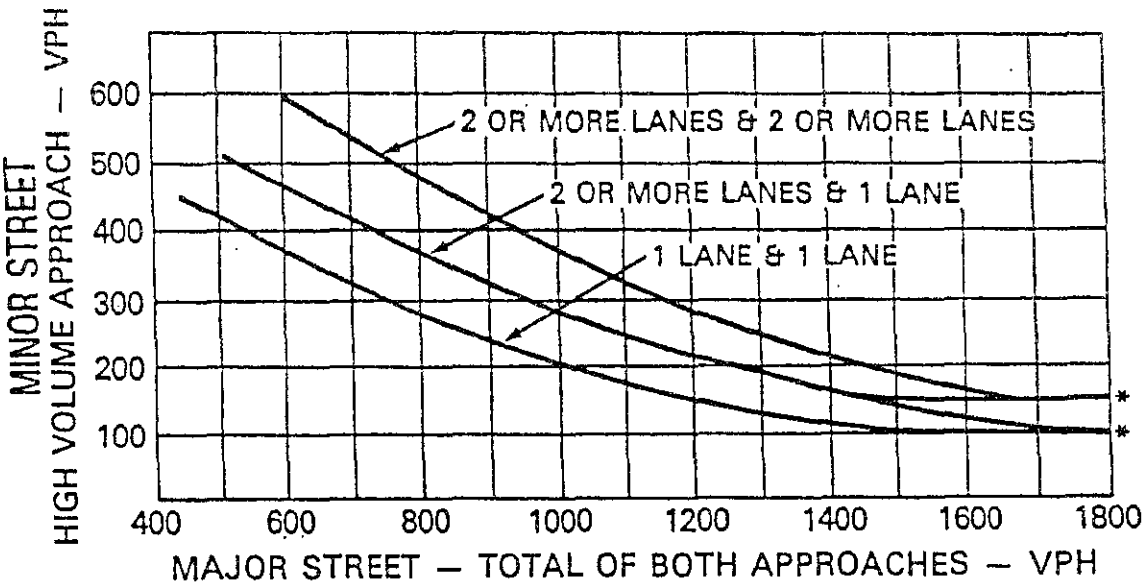
Rev. 3/89

PEAK HOUR VOLUME WARRANT DATA

Intersection	Analysis Period	Major Street		Minor Street High Volume Approach		Signal Warranted?	
		Volume (vph)	Lanes (#)	Volume (vph)	Lanes (#)		
Hwy. 213 at Glen Oak Road	Exist. AM '01	1617	2	77	1	NO	
"	Exist. PM '01	2195	2	59	1	NO	
	Yr. 2003						
"	Background AM	1867	2	163	1	Yes	
"	Background PM	2268	2	~~165~~ 114	1	Yes	(NO 2 Lan
	Yr. 2003						
"	Total AM	1874	2	165	1	Yes	
"	Total PM	2292		124	1	Yes	(NO 2 Lan
	Year 2020						
"	Base PM	2851	2	131	2	NO	
"	TOTAL PM - Max. Current Zoning	2881	2	166	2	YES	
"	Total PM - Max. Proposed Zoning	3099	2	379	2	YES	

4C-9 Medical Office

Rev. 3/89



*NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

4C-9

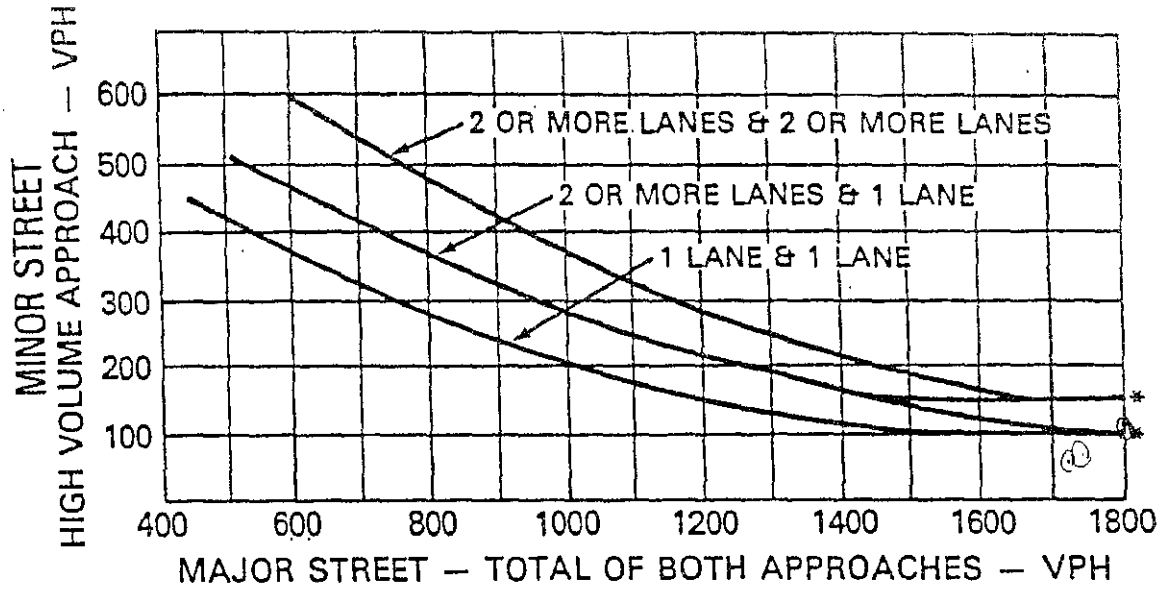
Rev. 3/89

PEAK HOUR VOLUME WARRANT DATA

Intersection	Analysis Period	Major Street		Minor Street High Volume Approach		Signal Warranted?
		Volume (vph)	Lanes (#)	Volume (vph)	Lanes (#)	
Hwy. 213 at Henrici Road	Exist. AM '01	1325	2	75	1	NO
"	Exist. PM '01	1766	2	83	1	NO
" '03	Background AM	1373	2	77	1	NO
" '03	Background PM	1814	2	85	1	NO
" '03	Total AM	1376	2	77	1	NO
" '03	Total PM	1818	2	85	1	NO
" 2020	Base PM	2289	2	108	2	NO
" 2020	Total PM - max. current zoning	2307	2	108	2	NO
" 2020	Total PM - max. proposed zoning	2328	2	111	2	NO

4C-9 Medical Office

Rev. 3/89



*NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

4C-9

Rev. 3/89

PEAK HOUR VOLUME WARRANT DATA

Intersection	Analysis Period	Major Street		Minor Street High Volume Approach		Signal Warranted?
		Volume (vph)	Lanes (#)	Volume (vph)	Lanes (#)	
Beavercreek Road at Glen Oak Road	Exist. AM '01	891	2	94	2	NO
"	Exist. PM '01	1152	2	53	2	NO
" '03	Background AM	1053	2	97	2	NO
" '03	Background PM	1238	2	54	2	NO
" '03	Total AM	1054	2	97	2	NO
" '03	Total PM	1238	2	55	2	NO
" 2020	Base PM	1737	2	69	2	NO
" 2020	Total PM - Max. Current Zoning	1742	2	74	2	NO
" 2020	Total PM - Max. Proposed Zoning	1799	2	103	2	NO

4C-9 Medical — Office —

Rev. 3/89

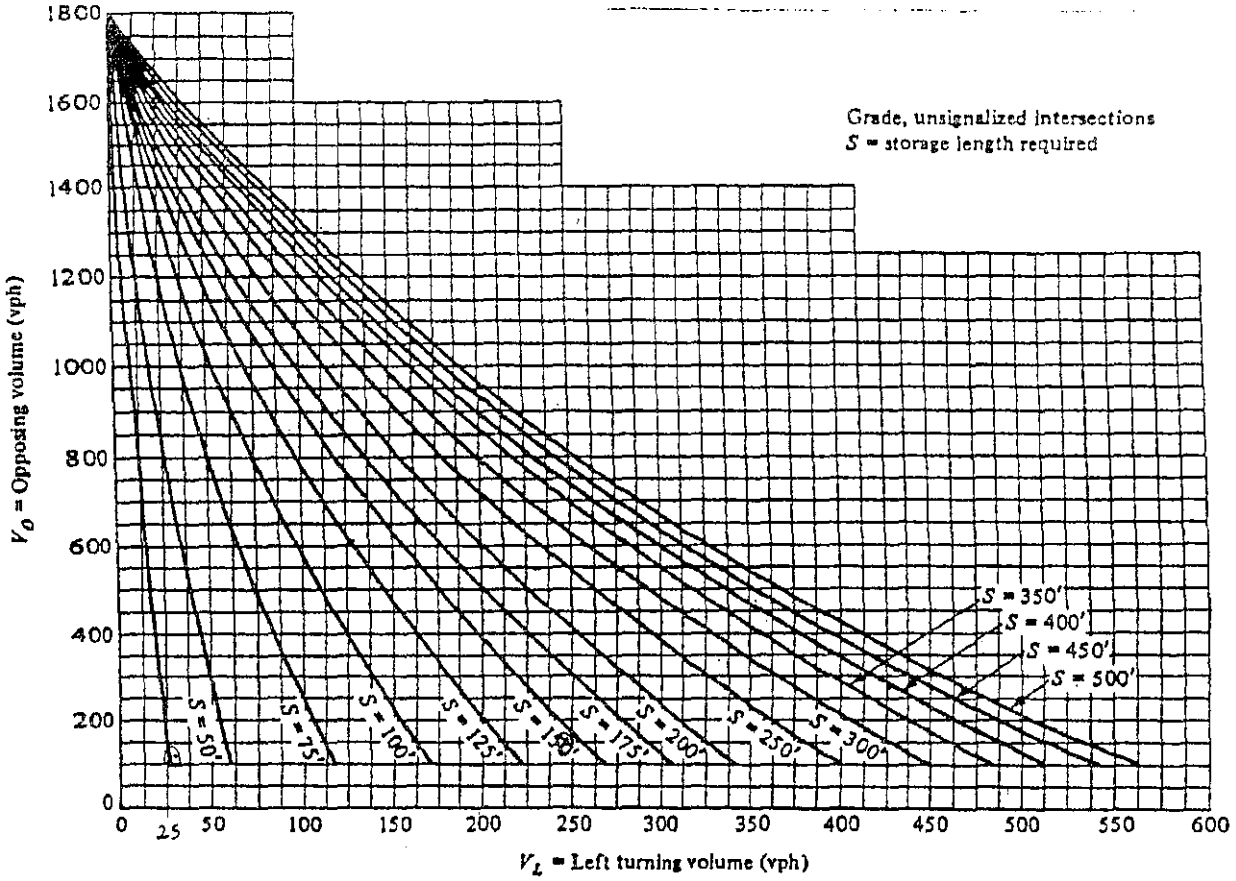


Figure 5-15 Nomograph for left-turn storage at nonsignalized intersections. The nomograph is used by reading horizontally from the opposing traffic volume, V_O, on the vertical axis and reading vertically from the left-turn volume, V_L, on the horizontal axis and locating the minimum storage length, S, at the point where the horizontal and vertical lines cross. For example, 100 left-turning vehicles per hour, V_L, with an opposing through volume, V_O, of 950 vph, will require a minimum storage length of about 150 feet. SOURCE: M. D. Hamelink [12]. **Source:** ***Transportation and Land Development,*** **ITE, Prentice Hall, 1988, p. 138.**

LEFT-TURN STORAGE REQUIREMENTS AT UNSIGNALIZED INTERSECTIONS

Intersection	Movement	Analysis Period	Opposing Vol. V_O (vph)	Left-Turning Vol. V_L (vph)	Storage Req'd (ft)
Medical Office — Site Access/Glen Oak	EB Left	Total AM (2003)	164	7	0
Site Access/Glen Oak	EB Left	Total PM	124	4	0
"	EB Left	Total (2020) PM - Max. Current Zoning	136	30	25-50'
"	EB Left	Total (2020) PM - Max. Proposed Zoning	165	248	125-150'

FAX MEMORANDUM

DATE ~~January~~ February 14, 2001

0102fax.doc

TO
Colin Cooper
City of Oregon City
320 Warner Milne Rd
Oregon City, OR 97045-3040

FAX # (503) 657-7892

FROM
Ty Reynolds
Traffic Analyst

OF PAGES 2

SUBJECT **Morris Womack Property** - Highway 213 & Glen Oak Rd

Trip Generation Assumptions for Zone Change/Traffic Impact Study

As per your request, the following memo describes what we propose to use for trip generation assumptions in the Traffic Impact/Zone Change Study for Mr. Womack's property.

The maximum building sizes under each zoning type were calculated by Dane Segrin at Hoffman Realtors, and have been based on the City building codes. We have reviewed the assumptions and calculations, and they seem reasonable to us. If you would like the details regarding the assumptions and calculations made in determining these maximum building sizes, I can provide this information to you.

Current zoning: Campus Industrial
Max. building size that would fit on the property: 45,000 sq.ft. (2 floors at 22,500 sq.ft. each)

The I.T.E. Trip Generation manual (6th Edition) codes that closely correspond to the permitted uses listed under the City Code 17.37.020 were reviewed. Based on the rates provided in the Trip Generation manual, we believe that the most intense use is "Trade School", which we have approximated with ITE Code #540 (Junior/Community College). The following table summarizes the resulting trip generation.

Table 1. Trip generation for 45,000 sq.ft. Junior/Community College

ITE Land Use	Square Feet	Weekday						
		ADT	AM Peak Hour of Generator			PM Peak Hour of Generator		
			Total	Enter	Exit	Total	Enter	Exit
Junior/Community College (540)	45,000							
Generation Rate [1]		18.36	1.78	80%	20%	1.66	46%	54%
Site Trips		826	80	64	16	75	35	40

[1] Source: *Trip Generation*, 6th Edition, ITE, 1997. No fitted curve equation given.

Proposed zoning: Limited Office
Max. building size that would fit on the property: 33,000 sq.ft. (3 floors at 11,000 sq.ft. each)

The I.T.E. Trip Generation manual (6th Edition) codes that closely correspond to the permitted uses listed under the City Code 17.22.020 were reviewed. Based on the rates provided in the Trip Generation manual, we believe that the most intense use is "Governmental Services and Agencies", which we have approximated with ITE Code #731 (State Motor Vehicle Department). The following table summarizes the resulting trip generation.

Table 2. Projected trip generation for State Motor Vehicles Department.

ITE Land Use	Units (sq. ft.)	Weekday						
		ADT	AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
			Total	Enter	Exit	Total	Enter	Exit
State DMV (#731)	33,000							
Generation Rate [1]		101.19	7.48	NA	NA	17.09	NA	NA
Site Trips		3339	247			564		

[1] Source: *Trip Generation*, 6th Edition, ITE, 1997. Fitted curve equations used. Average rate back-calculated.
ADT equation: Ln(T) = 0.569 Ln(X) + 6.124
AM equation: Ln(T) = 0.767 Ln(X) + 2.827
PM equation: Not given. Average rate used.
NA - Entering/exiting split not provided in ITE manual.

The actual size of the proposed dental office building is 4,000 sq.ft. The following table summarizes the projected trip generation for the proposed building.

Table 3. Projected trip generation for 4,000 sq.ft. dental office building.

ITE Land Use	Units (sq. ft.)	Weekday						
		ADT	AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
			Total	Enter	Exit	Total	Enter	Exit
Medical-Dental Office Building (#720)	4,000							
Generation Rate [1]		36.13	2.43	80%	20%	3.66	27%	73%
Site Trips		145	10	8	2	15	4	11

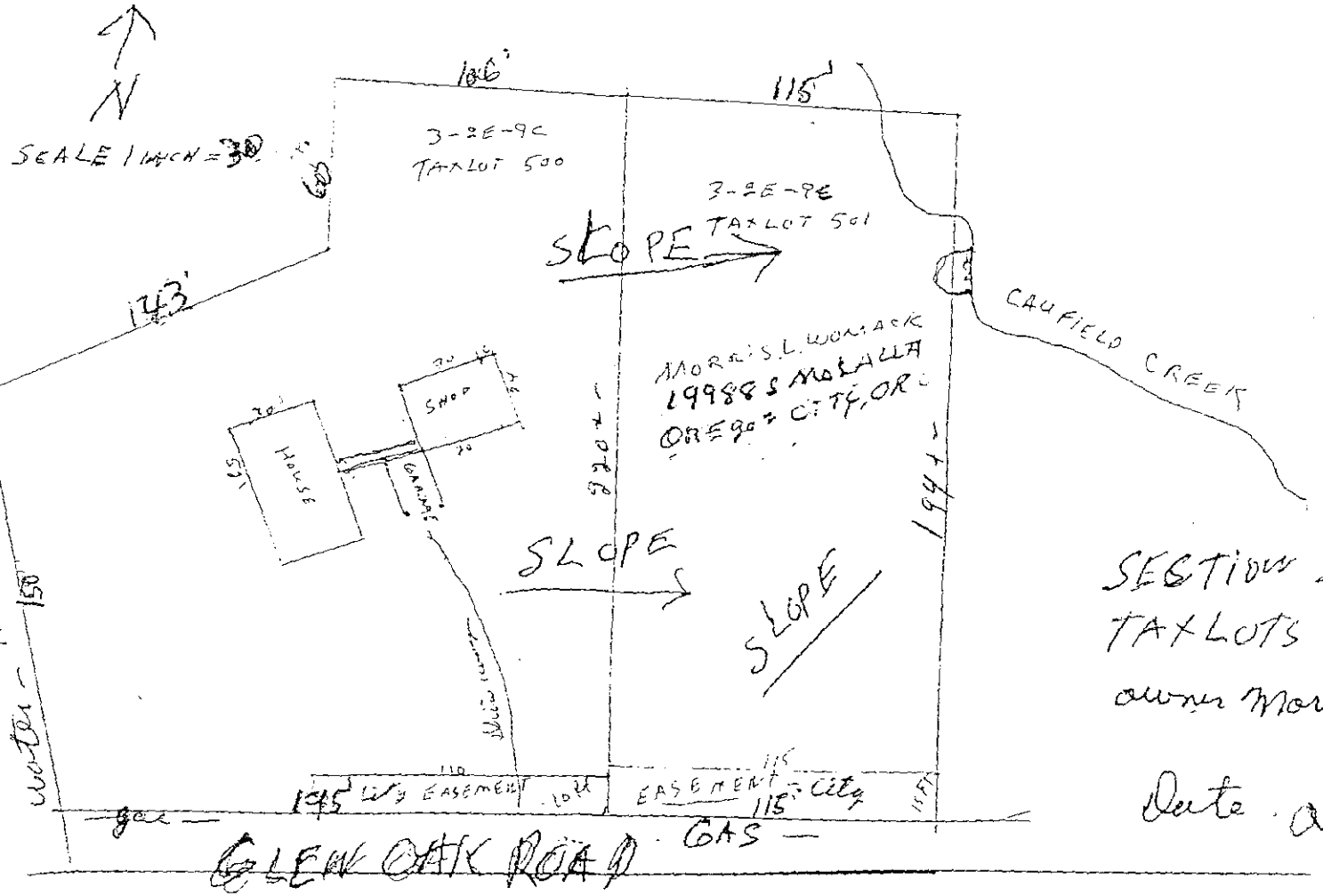
[1] Source: *Trip Generation*, 6th Edition, ITE, 1997. Average rates used.

Thanks in advance for reviewing this information, and letting us know if this looks reasonable and/or acceptable. Please call if you have any questions (503) 293-1118.

CC: Dane Segrin, Hoffman Realtors
Morris Womack, subject property owner

9370 SW Greenburg Rd., Suite 411, Portland, OR 97223 • Phone (503) 293-1118 • FAX (503) 293-1119

EXHIBIT 4



SECTION 3S 2E 09 C
TAXLOTS 500 & 501
owner Morris & Patricia Womack
Date oct 23, 2000

ANALYSIS AND FINDINGS

The applicant has proposed a zone change for the property located at the northeast corner of the intersection of Hwy. 213/Glen Oak Road from Campus Industrial to Limited Office. Applicant is proposing to construct a medical clinic on the property to provide service to Willamette Falls Hospital.

Staff recommends approval of the proposed zone change as long as the following recommendations and conditions of approval are followed:

PROVISION OF PUBLIC SERVICES:

WATER.

There is an existing 8-inch Clackamas River Water (CRW) water main in Glen Oak Road, and an existing 16-inch City water main in Hwy 213.

Future development of this property will require a new 16-inch water main in Glen Oak Road to replace the existing 8-inch (CRW) water main along the site frontage.

SANITARY SEWER.

There is an existing 15-inch sanitary sewer main in Hwy. 213. There is no sanitary sewer main in Glen Oak Road at this location.

Future development of this property may require new sanitary sewer lines along the north and east property lines according to the Sanitary Master Plan.

STORM SEWER/DETENTION AND OTHER DRAINAGE FACILITIES.

This site is in the Caufield Drainage Basin as designated in the City's Drainage Master Plan. Drainage impacts to this site are significant. This site drains to Caufield Creek to the north and east of the site. Caufield Creek drains across Hwy. 213 to a pond. The entire project site is located within the Water Quality Resource Area Overlay District. Erosion and water quality controls are critical for the development of this site.

EXHIBIT 5a

Future development of this property will require detention and water quality treatment as well as meeting requirements to the Caufield Basin Master Plan.

DEDICATIONS AND EASEMENTS.

Glen Oak Road is classified as a Collector in the Oregon City Transportation System Plan, which requires a right-of-way (ROW) width of 35 to 85 feet. Currently, Glen Oak Road appears to have a 50-foot wide ROW along most of the site frontage and a 60-foot wide ROW to the west, with 25-feet on the project site side of the centerline.

Highway 213 is classified as a Major Arterial in the Oregon City Transportation System Plan, which requires a ROW width of 39 to 123 feet. Currently, Hwy. 213 appears to have a 75-foot wide ROW along the site frontage, with 30 feet on the project site side of the centerline. Hwy. 213 is under Oregon Department of Transportation (ODOT) jurisdiction.

Future development of this property will require dedication of ROW along Glen Oak Road to meet City requirements, and dedication of ROW along Hwy. 213 to meet ODOT requirements. A right turn lane may be required for west bound traffic on Glen Oak Road requiring extra ROW width.

STREETS.

Glen Oak Road is classified as a Collector in the Oregon City Transportation System Plan, which requires a pavement width of 22 to 62 feet. Currently, Glen Oak Road appears to have a pavement width of approximately 16 feet.

Highway 213 is classified as a Major Arterial in the Oregon City Transportation System Plan, which requires a pavement width of 24 to 98 feet. Currently, Hwy. 213 appears to have a pavement width of approximately 46 feet. Hwy. 213 is under Oregon Department of Transportation (ODOT) jurisdiction.

Future development of this property will require half street improvements along the site frontage with Glen Oak Road to meet City requirements, and highway improvements along the site frontage with Hwy. 213 to meet ODOT requirements. A right turn lane may be required for west bound traffic on Glen Oak Road requiring extra pavement width.

TRAFFIC AND TRANSPORTATION.

A traffic analysis for this site, prepared by Charbonneau Engineering LLC and dated February 2001, was submitted to the City for review. The City's traffic engineer concluded that the applicant's traffic study meets the City's requirements. The proposed development will have little impact on the transportation system, but in combination with other developments, the traffic overwhelms the transportation system. Immediate needs are for improvements to the Hwy. 213/Glen Oak Road/Caufield Road intersection. Longer-term needs are from capacity improvements to the Hwy. 213 corridor.

Future development of this property will require applicant to contribute to the improvements in the corridor in proportion to the traffic generated.

DAVID EVANS AND ASSOCIATES, INC.

2828 SW Corbett Avenue
Portland, Oregon 97201
Tel: 503.223.6663
Fax: 503.223.2701

April 2, 2001

Mr. Colin Cooper
City of Oregon City
PO Box 3040
Oregon City, OR 97045

SUBJECT: REVIEW OF TRAFFIC IMPACT STUDY
GLEN OAK ROAD MEDICAL OFFICE BUILDING – ZC 00-04
WOMACK PROPERTY

Dear Mr. Cooper:

In response to your request, David Evans and Associates, Inc. has reviewed the Traffic Analysis Report (TAR) prepared by Frank Charbonneau, PE (Charbonneau Engineering) for the Glen Oak Road Medical Office Building located adjacent to Glen Oak Road and Highway 213. The site is in the northeast quadrant of the intersection on a site of approximately 1½ acres. The TAR is dated February 2001.

The TAR compared the impact of development under three conditions: the current zoning, maximum intensity of the proposed zoning and the medical office building proposal. I concur with the report's conclusion that a 4000 square foot medical office building would have a lesser impact than the most intense use possible on the site. I question whether the most intense use evaluated for the site could reasonably occur. For the most intense use, both options require multi-story buildings and, probably, multi-level parking. This does not seem likely for any site this far from the city's principal activity centers. In actuality, the medical office building seems a reasonable high traffic generator under the limited office zoning category.

The applicant analyzed the existing conditions and accounted for in-process traffic including the proposed expansion of the Oregon City High School on Glen Oak Road. I find the report uses reasonable assumptions for distribution of traffic and for trip generation.

The analysis does address other modes of transportation and mentions the need to accommodate pedestrians on Glen Oak Road.

The analysis includes an assessment of five key intersections – four on Highway 213 and one on Beavercreek Road. They consist of Highway 213 with Molalla/Douglas, with Meyers Road, with Glen Oak/Caufield, and with Henrici; and Beavercreek with Glen Oak.

According to the report, both short-term and long-term projects are need to mitigate for traffic from this and other developments. I concur with the conclusions stated by the applicant in the TAR as summarized below.

- The report concludes that the intersection of Highway 213 and Molalla Avenue/Douglas Loop will continue to operate at an acceptable level of service in 2003. By year 2020, the intersection will be at or approaching capacity under either zoning category.

EXHIBIT 56

- The report concludes that the intersection of Highway 213 and Meyers Road will continue to operate at an acceptable level of service in 2003. By year 2020, the intersection will require mitigation. The intersection will require the addition of through lanes on Highway 213 in both directions (as indicated in the City's draft TSP) and may require an additional southbound through lane to achieve adequate operations.

- The report concludes that the intersection of Highway 213 and Glen Oak Road/Caufield Road is failing currently, assuming the addition of traffic from the high school. It concludes that adequate operations will be achieved with the installation of a traffic signal and with reconfiguration of the intersection (a standard 4-leg intersection without an offset as it is currently configured.) With the improvements specified in the TSP (a five-lane cross-section on Highway 213), long-term operations are also expected to be at an adequate level of service.

- The report concludes that the intersection of Highway 213 and Henrici Road will continue to operate with a poor level of service for the westbound left turn movement until a traffic signal is installed. By year 2020, the signalized intersection is expected to operate at or near capacity.

- The report concludes that the intersection of Beavercreek Road and Glen Oak Road will operate at an acceptable level of service through year 2020 with the installation of a traffic signal.

- The report concludes that warrants for the installation of a traffic signal will be met for background traffic and total year 2003 traffic for the intersection of Highway 213 with Glen Oak Road. It also states that the warrants are not met for either of the other two unsignalized intersections.

The report also addresses the proposed site access onto Glen Oak Road. The proposed access is located approximately 170 feet from Highway 213. The TAR also addresses the demand for left turns into the site from eastbound Glen Oak Road. The remedy proposed is for a left turn lane from eastbound Glen Oak Road. This site access could be problematic because of the proximity to the intersection with Highway 213. This situation is probably directly attributable to the zone change request. Although it is not a certainty, it seems likely that development of this parcel under the campus industrial zoning would include integrated development of several parcels. In the event that several parcels were developed as one, the site access could have been situated much further from the intersection. The reason that this proximity is a problem is that the queue storage for westbound traffic will regularly back up to the site driveway during peak hours. To provide a space for eastbound traffic entering the site to queue for an opening in westbound traffic, a second eastbound lane would be required. Thus, the street cross-section for Glen Oak Road should probably be designed for four lanes plus bike lanes with a total curb-to-curb width of approximately 60 feet. Right-of-way would need to be adjusted accordingly. Alternatively, the site access could be restricted to right-in, right-out operation. In this case, a barrier median would separate eastbound from westbound traffic on Glen Oak Road. Without a second eastbound lane, a full-movement access might be permitted initially, but the city should retain the right to require the developer to pay for the construction of a barrier median if such proved to be necessary. In the event that a full-movement site access is desired, the developer may need to pay for the addition of a second eastbound lane on Glen Oak Road.

There are two issues that need to be addressed to allow the development to proceed. First, this TAR emphasizes the immediate need to address traffic growth on Glen Oak Road. The existing transportation system cannot support this project and others that induce traffic on Glen Oak Road unless mitigation is undertaken. To provide an adequate level of service, mitigation must be undertaken that provides for the signalization and reconfiguration of the intersection of Highway 213 and Glen Oak Road. A secondary issue relating to this intersection and the site driveway involves the configuration of Glen Oak Road itself. To accommodate full movements at the site driveway, a second eastbound lane would be needed between the intersection of Highway 213 and the site driveway with appropriate tapers to the east. Alternatively, a right-in, right-out only access could be permitted.

The applicant needs to commit to improvements to this intersection and to upgrading the roads on which the parcel fronts in conformance with the city's adopted plans.

In conclusion, I find that the applicant's traffic analysis meets the City's requirements. The proposed development will cause relatively little impact on the transportation system, but in combination with other developments currently under consideration, the traffic overwhelms the current transportation system. The immediate need is for improvements to address the Highway 213/Glen Oak Road/Caufield intersection. A longer-term problem is to improve capacity in the Highway 213 corridor. This development should contribute to the improvements in the corridor in proportion to the traffic generated.

If you have any questions or need any further information concerning this review, please call me at 223-6663.

Sincerely,

DAVID EVANS AND ASSOCIATES, INC.

John Replinger, PE
Senior Transportation Engineer

JGRE:
o:\project\o\orct0009\correspo\TP00-04.doc

CITY OF OREGON CITY

PLANNING COMMISSION

320 WARNER MILNE ROAD OREGON CITY, OREGON 97045
TEL 657-0891 FAX 657-7892

STAFF REPORT
Date: April 16, 2001

Complete: March 7, 2001
120-Day: July 5, 2001

FILE NO.: Conditional Use CU 01-03

HEARING DATE: April 23, 2001
7:00 p.m., City Hall
320 Warner Milne Road
Oregon City, OR 97045

APPLICANT/ OWNER: Oregon City School District
1417 12th Street
Oregon City, OR 97045

REQUEST: Conditional use to expand the existing Park Place Elementary School, including an approximately 3,248-square feet classroom addition

LOCATION: 16075 Front Avenue (Exhibit 2)
Clackamas County Map 2S-2E-20DD, Tax Lot 2800

REVIEWER: Barbara Shields, Senior Planner
Jay Toll, Senior Engineer

RECOMMENDATION: **Staff recommends approval of CU 01 –03, subject to conditions (Exhibit 1)**

CRITERIA:

Municipal Code:
Section 17.08 R-8 Single-Family Dwelling
Section 17.50 Administration and Procedures
Section 17.56 Conditional Uses

SUMMARY OF ISSUES:

Scope of the Request:
The Oregon City School District is requesting a conditional use to expand the existing Park Place Elementary School complex. The proposed expansion would consist of an approximately 3,248-square feet addition.

The subject property is located west of Front Avenue (Exhibit 2). The site is occupied by an approximately 38,000-square feet school building. The proposed expansion would enlarge the building floor area of the school building by approximately 9%.

The proposal incorporates improvements to the Front Avenue frontage, including a sidewalk along the Front Avenue frontage, relocation of the existing bus loading and parking spaces out of the Front Avenue right-of-way area and construction of two crosswalks across LaRae Street (Exhibit 4).

Summary of Analysis:

In general, a scope of a conditional use review is to assure that the proposed use may be allowed in a specific location upon showing that (1) such use will not adversely impact the site conditions or the areas surrounding the subject property, i.e. is compatible with the surrounding areas; or (2) appropriate conditions of approval may be considered to mitigate the identified negative impacts of the proposed use to achieve its compatibility with the surrounding areas.

Based on the analysis contained below, in this report, (1) no significant impacts to the abutting properties will occur as a result of the proposed expansion; (2) several improvements to the Front Avenue frontage are needed to rectify the existing unsafe conditions in front of the school building.

The proposal will satisfy the criteria for a conditional use permit, as provided in Oregon City Municipal Code (OCMC 17.56) when the recommended conditions of approval (Exhibit 1) are met.

Conditional Use versus Site Plan and Design Review

While a focus of a conditional use permit review is primarily on the use and its compatibility with the surrounding properties, the objective of the City's site plan and design review process is to assure that the actual development complies with the applicable development

standards and implements the identified mitigation measures (conditions) of the proposed use.

Following the conditional use permit analysis and approval, the applicant needs to file and obtain a site plan and design review permit approval. The site plan and design review process does not require a public hearing and is processed separately, as an administrative type of review (Type II permit), with a decision issued by the Planning Manger.

BASIC FACTS:

1. Park Place Elementary School is located on an approximately 7.89-acre site, west of Front Avenue(Exhibit 2). The existing school complex contains approximately 39,624 square feet and occupies approximately 11% of the subject property (Exhibits 2 and 4).

2. The proposed expansion of the existing school complex consists of a 3,248-square feet addition, which would accommodate four classrooms. The proposal incorporates improvements to the Front Avenue frontage, including a sidewalk along the Front Avenue frontage, relocation of the existing bus loading and parking spaces out of the Front Avenue right-of-way area and construction of two crosswalks across LaRae Street (Exhibit 4).

3. The subject site is flat, with an average slope less than 1%. The southwesterly portion of the site is within a Water Resource Overlay District. The school district filed Water Resource application to determine the impact of the proposed addition on the identified Water Resource Overlay District (WR01-05).

4. The site is zoned R-8 Single Family Residential Dwelling. Schools are allowed as conditional uses in the R-8 Single Family Residential District (OCMC 17.10.030) and subject to Chapter OCMC 17.56 requirements.

5. The majority of the surrounding areas to the north and northwest, west, and south of the subject property are residential subdivisions, zoned either R-8 or R-10.

6. Transmittals on the proposal were sent to various City departments, affected agencies, property owners within 300 feet, and the Park Place Neighborhood Association.

   Staff received comments from City Engineering (Exhibit 5a) and City Public Works Department (Exhibit 5b).

ANALYSIS AND FINDINGS:

I. 17.56 Conditional Uses

1. **Criterion (1): The use is listed as a conditional use in the underlying district.**

   The site is zoned R-8, Single-Family Residential. Schools are allowed as conditional uses in the R-8 District (OCMC 17.10.030) and subject to OCMC 17.56 requirements.

   Therefore, staff finds that this criterion is satisfied.

2. **Criterion (2): The characteristics of the site are suitable for the proposed use considering size, shape, location, topography, existence of improvements and natural features.**

   As discussed earlier in this report, the proposed expansion affects the already developed site.

   The subject property is flat and rectangular in size. The southwesterly portion of the subject property is within the Water Resource Overlay Area. The school district filed a Water Resource request to determine the presence and boundaries of the Water Resource Vegetative Corridor on the subject property.

   In general, with regards to the existing size, shape, natural features, and topography, the characteristics of the site are suitable to accommodate the proposed expansion (Exhibits 5a and 5b).

   The proposal incorporates improvements to the Front Avenue frontage, including a sidewalk along the Front Avenue frontage, relocation of the existing bus loading and parking spaces out of the Front Avenue right-of-way area and construction of two crosswalks across LaRae Street (Exhibit 4).

   An analysis of the existing and needed transportation facilities is contained in the Engineering Division comments (Exhibit 5a) and below, in response to Criterion 3.

   Based on the above analysis, staff concludes that this criterion will be satisfied by complying with Conditions # 1 and 2 (Exhibit 1).

3. **Criterion (3): The site and proposed development are timely, considering the adequacy of transportation systems, public facilities and services existing or planned for the area affected by the use.**

   The proposal was evaluated by utility providers (Exhibits 5a and 5b).

The Engineering Division and the Public Works Department indicate that the existing water and sewer facilities are adequate to accommodate the proposed use.

However, an analysis of the existing transportation system indicates that the level of improvements along the Front Avenue frontage is not adequate to assure pedestrian safety in vicinity of the school site. Both the existing bus loading/unloading area and a number of parking spaces are located within the right-of-way area along Front Avenue, which impacts traffic safety on Front Avenue in the vicinity of the school. To mitigate this situation, the school district is proposing several improvements to the Front Avenue frontage, including a sidewalk along the Front Avenue frontage, relocation of the existing bus loading and parking spaces out of the Front Avenue right-of-way area and construction of two crosswalks across LaRae Street (Exhibit 4)

The improvements proposed by the school district will help the unsafe traffic circulation conditions, but are not sufficient to address safety conditions at the intersection of La Rae Street and Front Avenue. No parking shall be allowed along the west side of Front Street between the bus loading area and La Rae Street.

Specific design elements related to the required transportation improvements will be assessed by the City at the time of the site plan and design review. All improvements must meet the requirements established in Engineering Policy 00-01 (Exhibit 6).

Based on above analysis, staff concludes that in order to comply with this criterion, the applicant needs to comply with Conditions # 1 and 2 (Exhibit 1).

4. **Criterion (4): The proposed use will not alter the character of the surrounding area in a manner which substantially limits, impairs or precludes the use of surrounding properties for the primary uses listed in the underlying district.**

As previously discussed in this report, the proposed expansion would enlarge the building floor area of the school building by approximately 9%.

Based on the information provided by the applicant, it appears that the proposed extension would not significantly impair or preclude the use of the surrounding residential properties.

Therefore, staff finds that this criterion is satisfied.

5. **Criterion (5): The proposal satisfies the goals and policies of the city comprehensive plan, which apply to the proposed use.**

The Oregon City Comprehensive Plan contains the following applicable goals and policies:

"Encourage citizen participation in all functions of government and land-use planning." (Citizen Involvement Goals and Policies, Policy 4).

The public hearing was advertised and noticed as prescribed by law to be heard by the Planning Commission on April 23, 2001. The public hearing will provide an opportunity for comment and testimony from interested parties.

"Oregon City will coordinate with the Oregon City School District to encourage that school sites are located within the Urban Boundary and subdivision proposals are reviewed for impact on the school system..." (Community Facilities Goals and Policies, Health and Education, Policy 2).

The proposed extension involves an existing school that is already located within the Urban Growth Boundary.

Therefore, staff finds that this criterion is satisfied in that this proposal satisfies the applicable goals and policies of the Oregon City Comprehensive Plan.

In addition to the standards listed in Section 17.56.010, which are to be considered in the approval of all conditional uses and the standards of the zone in which the conditional use is located, the following additional standards for schools shall be applicable (17.56.040.F.):

The site must be located to best serve the intended area, must be in conformance with the city plan, must have adequate access, must be in accordance with appropriate State standards, and must meet the following dimensional standards:

1. Minimum lot area, twenty thousand square feet;
2. Front yard setback, twenty-five feet;
3. Rear yard setback, twenty feet;
4. Side yard setback, twenty feet.

File CU01-03 pertains to the already developed school site within the Urban Growth Boundary. The Front Avenue frontage, including access to the school site, along the easterly boundary of the site, would be improved. The submitted site plan indicated indicates (Exhibit 4) that the required setbacks are met.

Based on the above analysis, staff finds that the applicant can satisfy this standard (OCMC 17.56.040.F) by meeting Conditions # 1 and 2 (Exhibit 1).

CONCLUSION AND RECOMMENDATION:

Based on the analysis and findings presented in the report, staff concludes that the proposed Conditional Use CU 01-03 can satisfy the requirements as described in the Oregon City Municipal Code for Conditional Use Permits, Chapter 17.56, if the recommended conditions of approval are met (Exhibit 1).

Based on the findings of fact, staff recommends the Planning Commission approve Conditional Use Permit, CU 01-03, with conditions (Exhibit 1) affecting the property identified as Clackamas County Map 2S-2E-20DD, Tax Lot 2800.

EXHIBITS:

1. Recommended Conditions of Approval
2. Vicinity Map
3. Applicant's Narrative
4. Applicant's Site Plan
5. Agency Comments
   a. City Engineering
   b. Public Works
6. Engineering Policy 00-01

CU01-03, Park Place Elementary School 2-2E-20DD, TL 2800

CONDITONS OF APPROVAL

1. The applicant is responsible for this project's compliance to Engineering Policy 00-01 (Exhibit 6).

2. No parking shall be allowed along the west side of Front Street between the bus loading area and La Rae Street.

EXHIBIT 1

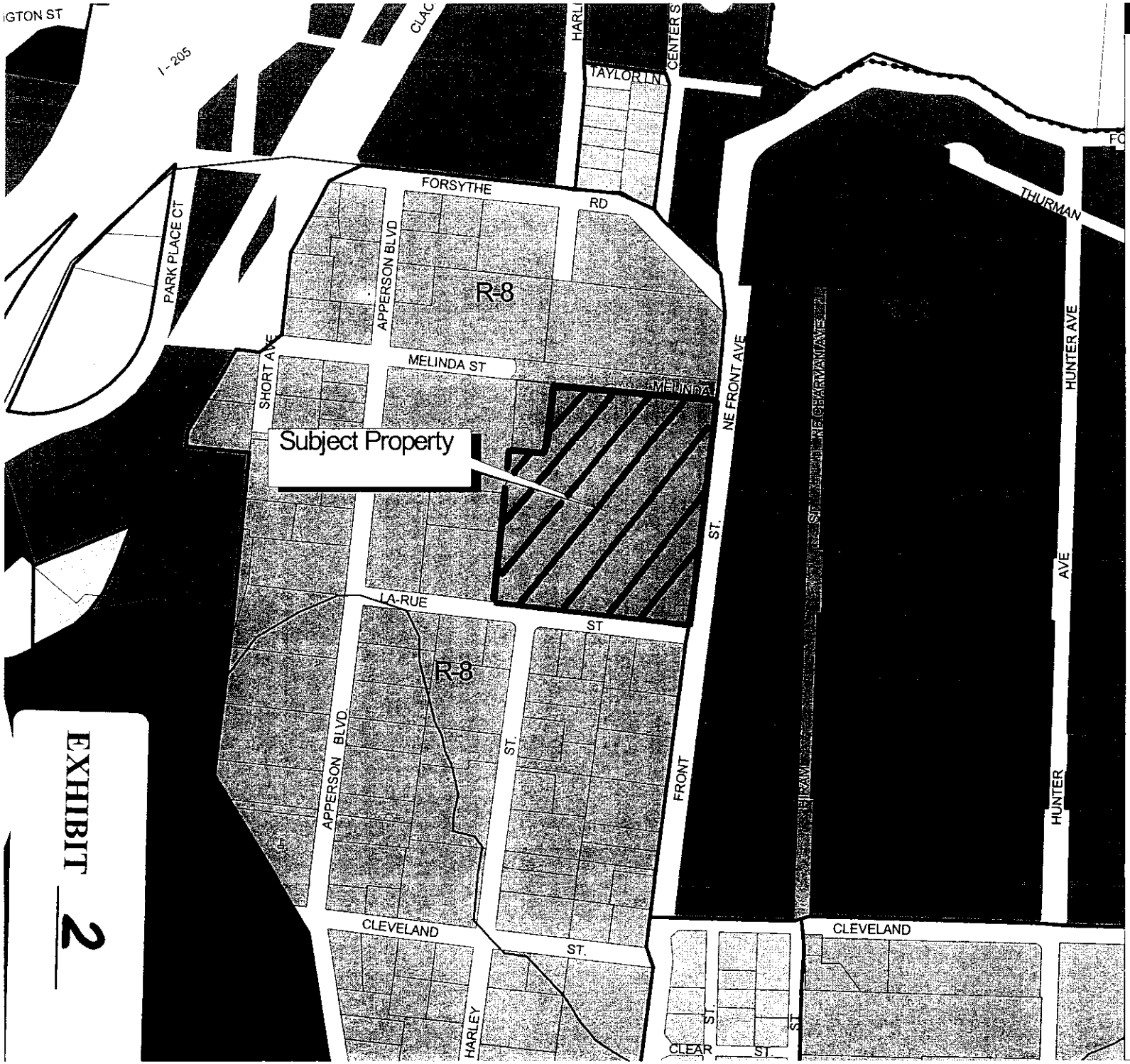


EXHIBIT 2

City of Oregon City

GEOGRAPHIC INFORMATION SYSTEM

Vicinity Map
Park Place Elementary School

0 50 100 150 200 250 Feet

MAP FOR REFERENCE PURPOSES ONLY.
The information on this map is derived from Oregon City's digital database. However, there may be map errors or omissions. Please contact Oregon City directly to verify map information. Notification of any errors will be appreciated.

City of Oregon City
320 Warner Milne Road | Oregon City, Oregon 97045
503 657-0891

Plot date: Apr 3, 2001; g:\gis\users\sean\czone.apr

Park Place Elementary School
Conditional Use Application
for Addition and retrofit
Zone R 8

Narrative:

The Oregon City School District asked the district voters to approve a bond measure for adding classrooms, repairing wear and tear damage, and to improve accessibility, energy use and seismic resistant construction. The voters agreed the work was needed. Part of the process is to secure conditional use approval on the various projects.
In this narrative City Ordinance quotes are in vertical type face and proposer discussions are in italics. Some section requirements may overlap, but each will be discussed individually.

Summary

*The **Park Place Elementary School** addition proposal is for two(2) new class rooms, four new restrooms and an elevator, as well as the required retrofits mentioned above. The addition will be two story and includes the elevator for ADA accessibility to the existing school. The building foot print will increase by 1624 square feet and total floor space by 3248. The building is presently 38,000 square feet and will become 41,000 + square feet. The added classroom space is to provide standard classroom space for programs which are currently housed in non-standard (i.e. on the stage) spaces. The additional classrooms are not for increasing the capacity of the school.*

I

Title 17 Zoning
under **Chapter 17.50 Administration and Procedures** *and under*
Section 17.50.080 Complete application
Subsection D says:
D. A complete and detailed narrative description of the proposed development that describes **existing site conditions**, **existing buildings**, **public facilities** and **services**, presence of **wetlands**, **steep slopes** and other **natural features**, a discussion of the **approval criteria** for all permits required for approval of the development proposal that explains how the criteria are or can be met, and any other information indicated by staff at the pre application conference as being required;

*The **existing site** conditions are: mostly grass playgrounds, buildings and parking areas on a relatively flat building pad.*
*The **existing building** is a school which was approved for a conditional use in Clackamas County on an unknown date.*
*The public facilities: **sewer, water, storm sewer** and **power** are all of adequate for the existing school and The Site Design process will investigate the addition requirements.*

EXHIBIT 3

Park Place Elementary School

The site has been used as a school playground for years with no ***wetland*** *problems.*
The building pad is flat, there are no ***steep slopes*** *and there are no significant* ***natural features*** *on the site.*
Specific ***approval criteria*** *are addressed in the following sections.*

II
Approval Criteria.
Chapter 17.56 CONDITIONAL USES
17.56.010 Permit--Authorization--Standards--Conditions.
. A conditional use permit listed in this section may be permitted, enlarged or altered upon authorization of the planning commission in accordance with the standards and procedures of this section. Any expansion to, alteration of, or accessory use to a conditional use shall require planning commission approval of a modification to the original conditional use permit.
A. The following conditional uses, because of their public convenience and necessity and their effect upon the neighborhood shall be permitted only upon the approval of the planning commission after due notice and public hearing, according to procedure as provided in Chapter 17.50.
The planning commission may allow a conditional use, provided that the applicant provides evidence substantiating that all the requirements of this title relative to the proposed use are satisfied, and demonstrates that the proposed use also **satisfies the following criteria**:
1. The **use is listed as a conditional use in the underlying district**;

Park Place Elementary School is located in an R8 Single Family Zone.

Chapter **17.10.00** R-8 Single Family Residential Zone
Section**17.10.030 Conditional uses.**
The following conditional uses are permitted in this district when authorized by and in accordance with the standards contained in Chapter 17.56:
B. Uses listed in Section **17.56.030**. (Prior code §11-3-3(B))
Section **17.56.030** Uses requiring conditional use permit.
R. Private and public schools;

2. The **characteristics of the site** are suitable for the **proposed use** considering **size, shape, location**, **topography**, existence of **improvements and natural features**;

The ***size*** *of the property is 347,920 square feet or 7.89 acres. The building coverage will be 39,624 square feet or 11% of the site.*
The ***shape*** *is almost square with the southeast corner cut out.*

Park Place Elementary School

*The **location** functions well as a neighborhood elementary school and there is no known reason for it not to continue for the foreseeable future.*

*The **topography** has been accommodated by the existing and proposed building plans.*

*The **improvements** are more than adequate for the proposed expansion.*

*There are no **natural features** that affect the use or development of this proposal.*

3. The **site and proposed development are timely**, considering the adequacy of transportation systems, public facilities and services existing or planned for the area affected by the use;

The proposal is timely for the school district in that the space could be used at present. The proposal is timely considering the adequacy of the transportation systems, public facilities and services now in place and being used by the school. The district's engineering consultants indicate this expansion is compatible with the existing systems. This concern will be treated more thoroughly in the design review process.

4. The proposed use **will not alter the character of the surrounding area** in a manner which substantially limits, impairs or precludes the use of surrounding properties for the primary uses listed in the underlying district;

The use is already established and adequate buffer areas exist, so the proposed expansion will not compromise the surrounding uses.

5. The proposal **satisfies the goals and policies of the city comprehensive plan**, which apply to the proposed use.

The Comprehensive Plan in the Education section of the Community Facilities Goals and Policies says:

"Oregon City will coordinate with the Oregon City School District to encourage that school sites are located within the Urban Growth Boundary and subdivision proposals are reviewed for impact on the school system."

The school is within the UGB. It is recognized that the City and District have worked in concert to locate of the present school campuses and this cooperation has ensured that the placement and size of existing school sites provide adequate urban services and space for future growth.

III

17.56.040 Criteria and standards for conditional uses.

In addition to the standards listed herein in Section 17.56.010, which are to be considered in the approval of all conditional uses and the standards of the zone in which the conditional use is located, the following additional standards shall be applicable:

Park Place Elementary School

E. Schools.
The site must be **located to best serve the intended area**,
The site location is established and serves the neighborhood well.

must be in **conformance with the city plan,**
The Oregon City Comprehensive Plan says:
"Oregon City will coordinate with the Oregon City School District to encourage that school sites are located within the Urban Growth Boundary and subdivision proposals are reviewed for impact on the school system."
The School and proposed addition are within the Urban Growth Boundary.

must have **adequate access**,
The Park Place School fronts on S. Front Street, Melinda Street and LaRea Street

must be in accordance with appropriate **State standards,**
Of course.

and must meet the following **dimensional standards**
In any zone,
1. Minimum lot area, twenty thousand square feet;
   The Park Place School lot area is 347,920 square feet.
2. Front yard setback, twenty-five feet;
   The minimum front yard setback will not change in this proposal.
3. Rear yard setback, twenty feet;
   The minimum rear yard setback will not change in this proposal.
4. Side yard setback, twenty feet.
   The minimum side yard setback will not change in this proposal.

Water Quality Resource Area Variance 17.49.080

This school was established and in use for 20 years or more before the WQRA was identified. The development in this CU application does not disturb the areas shown on the Resources Overlay Map. There is a portion of the school playfields within the WQRAOD map. There are no areas shown for this site within the vegetated corridor portion of the Water Quality Resource Overlay District Map. This proposal does not affect the land identified in the WQRA.

Neighborhood Association

The Oregon City School District has held meetings with the Neighborhood Association and with the Parent/Teacher groups for this attendance area of the past few years in anticipation of the Bond Issue.
During the period prior to the Bond Election last May meetings were held with the Neighborhood Association and other local interest groups to communicate how the money would be used. No attendance lists were kept for those meetings.
The elector of the School District voiced their approval of the additions and improvements by passing the Bond Issue.
Follow-up meetings with the Neighborhood Association will be held in the next four weeks.

Traffic

The Proposed addition is for a minimal addition to the existing school on this site. The site has adequate access and there ore no traffic problems in the neighborhood which relate to the school. This building addition will not generate any appreciable traffic increases at the site. No Traffic Impact Study was requested for this project.

INTRODUCTION

This report presents the results of GeoDesign's geotechnical engineering evaluation for six Oregon City School District elementary schools. The elementary school grounds explored are listed below. The general locations of the sites relative to surrounding physical features are shown in Figures 1 through 3.

We understand that primary geotechnical related elements specific to each school are as follows:

Jennings Lodge	covered play structure, 15 parking stalls, and related dry wells.
Park Place	1,800-square-foot addition and hillside drainage improvements.
Holcomb	7,400-square-foot addition and hillside drainage improvements.
John McLoughlin	4 classrooms and 30 parking stalls.
Gaffney Lane	4,400-square-foot addition and 12 parking spaces.
Redland	6,000-square-foot play structure.

PURPOSE AND SCOPE

The purpose of our services was to provide geotechnical engineering recommendations for design and construction of the proposed additions, including a seismic hazard investigation of each facility. The specific scope of our services was as follows:

- Coordinate and manage the field investigations, including utility locates, access preparation and coordination, and scheduling of contractors and GeoDesign staff.
- Explore subsurface conditions in the areas of proposed new structures with the use of one augered boring at each school, with the exception of Redland, to depths of up to 21.5 feet.
- Complete an infiltration test at Jennings Lodge Elementary School.
- Perform a site reconnaissance of the proposed covered play structure site at Redland.
- Complete Standard Penetration Test sampling at 2.5- to 5.0-foot intervals in the borings.
- Classify the materials encountered in the explorations. Maintain a detailed log of each exploration and obtain soil samples at select depths.
- Complete 34 moisture content and 2 Atterberg limits tests on selected soils.
- Provide recommendations for site preparation, grading, fill type for imported materials, compaction criteria, trench excavation and backfill, use of on-site soils, drainage, and dry and wet weather earthwork procedures.
- Provide recommendations for design and construction of shallow spread foundations, including allowable design bearing pressures, minimum footing depth and width, and estimates for total and differential settlement.
- Provide geotechnical engineering recommendations for the design and construction of concrete floor slabs, including an anticipated value for subgrade modulus.
- Provide recommendations for asphalt concrete and base rock thickness for auto parking areas.

- Provide a seismic hazard investigation covering each of the sites (attached as one document in Appendix B) including discussion of the geologic and tectonic setting, historic seismicity, design earthquakes, amplification, fault surface rupture, liquefaction, and a seismic coefficient as required by the State of Oregon Structural Specialty Code (SOSSC), and as appropriate to the degree of complexity of the projects.
- Provide three copies of the written report summarizing the results of our geotechnical evaluation.

SITE CONDITIONS

GENERAL

A surface reconnaissance was performed at each school site in the areas of proposed improvements. We explored subsurface conditions for each proposed building addition by advancing one boring (B-1) to a depth of 21.5 feet below the existing ground surface. One boring was also advanced in the vicinity of the proposed covered play structure at Jennings Lodge Elementary School. The approximate locations of the borings at each school are shown in Figures 4 thru 8. No subsurface exploration was performed at Redland Elementary School.

We tested selected soil samples from the explorations to determine the natural moisture content of the soils. Atterberg limits tests were performed on soil samples from Park Place and Holcomb Elementary School. Descriptions of the field explorations, exploration logs, and laboratory procedures are included in Appendix A.

JENNINGS LODGE

Surface Conditions

The proposed site for the covered play structure and parking lot addition is relatively flat. The ground surface slopes gently to the south in the vicinity of the additional parking spaces. The majority of the ground surface is covered with short grasses. Wood chips are present around existing play structures, which are located near our boring location. Other than the wood chips, no evidence of existing fill was noted during our reconnaissance.

Subsurface Conditions

In general, subsurface soil conditions at the site consist of medium stiff silt underlain by layers of silt and silty sand. We observed a heavily rooted zone approximately 3 inches thick at the ground surface. The boring encountered medium stiff to stiff, moist silt to a depth of approximately 4 feet. Below 4 feet, we encountered layers of medium stiff to stiff silt with trace to some sand and loose to medium dense silty sand to the maximum depth of our exploration. We observed layers of silt and silty sand up to 12 inches thick.

Groundwater was not observed during our exploration. Based on the fine-grained soils at the site, shallow seasonal perched groundwater may occur at the site.

Infiltration Testing

We conducted an infiltration test at a depth of 20.0 feet through gasketed hollow stem augers with an inside diameter of 4.5 inches. We established a minimum permeability from

this information, which was used in our analyses and recommendations for dry well sizing presented in the "Infiltration Recommendations" section of this report.

PARK PLACE

Surface Conditions

The proposed building addition site slopes gently to the west. The surface is covered with asphalt, which appears to be in fair condition. An approximate 2.5H:1V (horizontal to vertical) west-facing slope is located at the edge of the asphalt. The slope is approximately 8 feet high and covered with grass.

Subsurface Conditions

In general, subsurface soil conditions at the site consist of medium stiff silt fill underlain by layers of stiff native silt deposits. We observed a pavement section of approximately 2 inches of asphalt underlain by 8 inches of sandy gravel. The silt fill extends to a depth of approximately 6 feet.

Groundwater was observed at approximately 13 feet during our exploration. Due to the surrounding impervious surfaces and slopes directed away from the footprint, we do not anticipate shallow seasonal perched groundwater at the proposed building addition site.

HOLCOMB

Surface Conditions

The proposed site for the building addition is relatively flat and sits near the foot of a west-facing slope east of the addition. Concrete sidewalks and landscape planters exist adjacent to the building. Asphalt pavement covers part of the west half of the building addition footprint, while the east half is covered with short grass. A shallow swale runs through the east side of the proposed footprint.

Subsurface Conditions

In general, subsurface soil conditions at the site consist of silt that grades from medium stiff to hard at depth. We observed a heavily rooted zone approximately 4 inches thick at the ground surface.

Groundwater was not observed during our exploration. Seasonal perched groundwater is expected near the surface based on mottling in the native silts.

JOHN MCLOUGHLIN

Surface Conditions

The proposed site for the building addition is relatively flat, with an approximate 4H:1V to 5H:1V south-facing slope off the southern building edge. The footprint is covered with short grass. Based on observation of surface conditions, shallow fill soils may be present in the southeast corner of the addition.

The proposed play structure site is situated on an approximate 4H:1V to 5H:1V south-facing slope. The slope appears to be a cut slope constructed during grading of the existing school grounds. A small swale which drains an existing play area on the east side of the building runs through the play structure site.

Subsurface Conditions

In general, subsurface soil conditions at the site consist of stiff silt fill underlain by residual soils at shallow depth. We observed a heavily rooted zone approximately 6 inches thick at the ground surface. The boring encountered stiff, moist silt fill with trace sand to a depth of approximately 4 feet. Below the silt, residual soils consisted of very stiff, clayey silt.

Groundwater was not observed during our exploration. Seasonal perched groundwater may be anticipated near the surface based on the relatively impervious nature of the site soils.

GAFFNEY LANE

Surface Conditions

The proposed site for the building addition is relatively flat. A gravel walkway is present running in the east/west direction adjacent to the building. Concrete sidewalks exist adjacent to the building as well as within the building alcove. The remainder of the proposed footprint is covered with short grass.

The proposed new parking area is situated at the toe of a cut slope. The footprint is relatively flat and covered with short grass. No evidence of existing fill was noted.

Subsurface Conditions

In general, subsurface soil conditions at the site consist of medium stiff to very stiff silt with increasing clay with depth. We observed a heavily rooted zone approximately 8 inches thick at the ground surface.

Silt became wet at approximately 8.5 feet during our exploration. Seasonal perched groundwater is expected near the surface based on mottling in the native silts, and observed ponding in the wet season..

REDLAND

Site Reconnaissance

The proposed covered play structure site is situated on a flat to gentle east-facing slope. An existing timber gym structure is located within the footprint. The ground surface is covered with wood chips. Based on observation of surface conditions, we anticipate less than 3 feet of fill is present at the ground surface.

CONCLUSIONS AND RECOMMENDATIONS

GENERAL

Based on the results of our site reconnaissance, soil explorations, laboratory testing and analyses, it is our opinion that the proposed structures at each school can be supported on shallow foundations bearing on undisturbed native soils, stiff silt fill, or on new structural fill.

Uncontrolled or non-engineered fill, such as the wood chip fills observed at Jennings Lodge and Redland, and fill that may be encountered at John McLoughlin, should be removed from foundation areas to expose firm, undisturbed native soils. The resulting excavations should be brought to grad with structural fill. We recommend foundations for the Park Place school addition be placed on granular pads to reduce settlement. Foundation subgrade preparation and design recommendations are presented in the "Shallow Foundations" section of this report.

In our opinion, the seismic hazards at the sites are low and do not preclude proceeding with design and construction of the proposed structures supported on shallow spread footings. A site specific seismic hazard assessment of each building site is presented in Appendix B of this report.

Trafficability on fine grained subgrades will be difficult during or after extended wet periods or when the moisture content of the surface soil is more than a few percentage points above optimum moisture content. Grading of pavement and slab-on-grade subgrades during the wet season will incur additional project cost due in part to imported crushed rock and soil export expenditures. We recommend site grading be performed during the dry summer months.

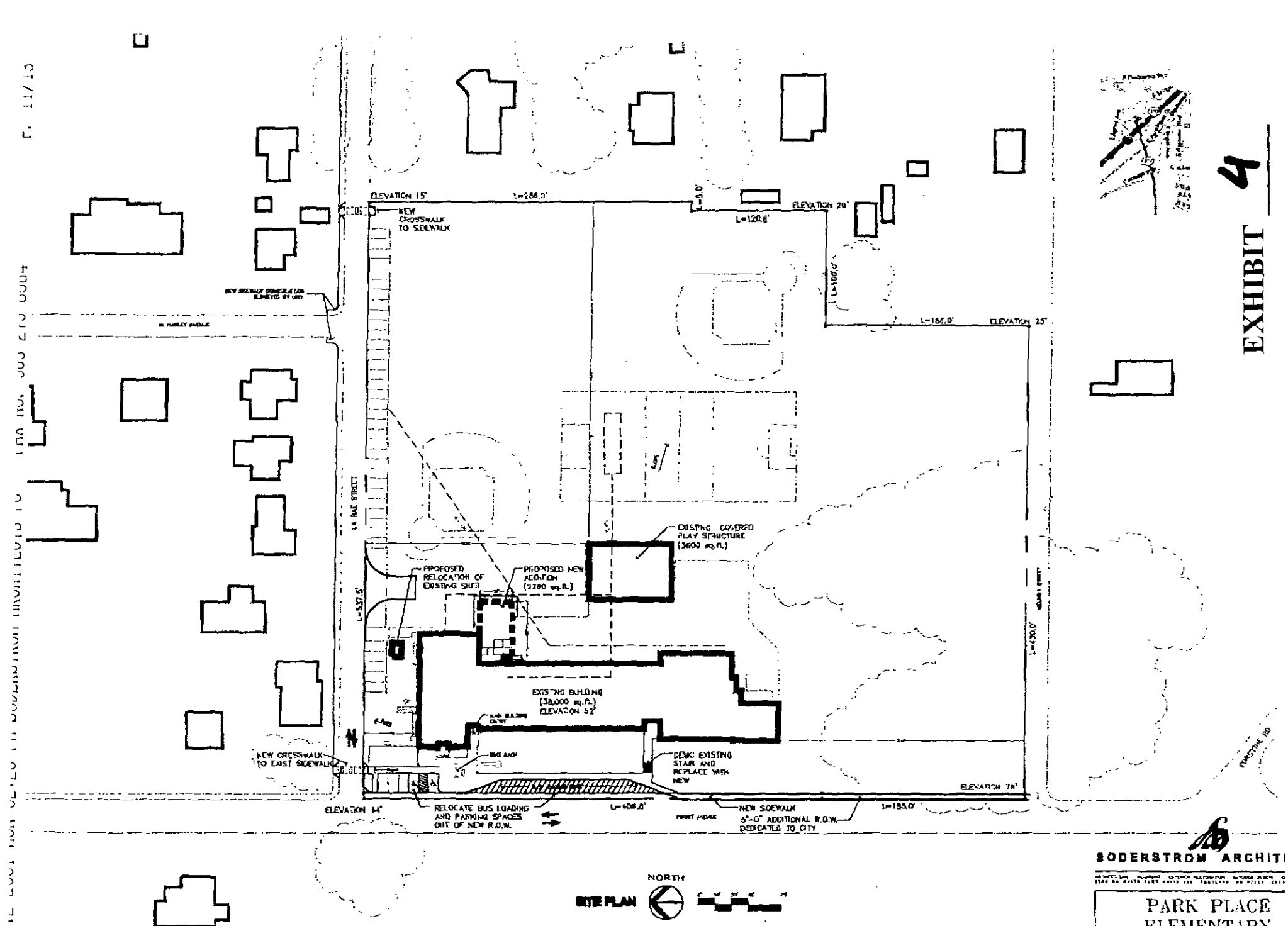
The following paragraphs present specific geotechnical recommendations for design and construction of the proposed fire station.

SITE PREPARATION AND EROSION CONTROL

Trees, sod, and other grubbing items should be removed from all building, structural fill, and pavement areas and for a 5-foot margin around such areas. Wood chip fills and other soft or unsuitable fill soil should be stripped and removed from the sites in all proposed structural areas as well. Based on our site reconnaissance, non-engineered fill may be encountered over a portion of the John McLoughlin building addition. The condition of the fill and actual fill removal depth, if required, should be based on field observations at the time of construction. We recommend that soil disturbed during grubbing operations be removed to expose firm undisturbed subgrade. The resulting excavations should be backfilled with structural fill. If grubbing activities disturb less than a 12-inch depth of soil and provided the earthwork is being completed in the drier summer period, it may be possible to scarify, moisture condition, and compact the disturbed material in place. Removed fill material should be transported off site for disposal or used in landscaped areas.

After stripping and required site cutting have been completed, we recommend proofrolling the subgrade with a fully loaded dump truck or similar-size, rubber-tire construction equipment to identify areas of excessive yielding. A member of our geotechnical staff, who will evaluate the subgrade, should observe the proofrolling. If areas of excessive yielding are identified, the material should be excavated and replaced with structural fill. Areas that appear to be too wet and soft to support proofrolling equipment should be prepared in accordance with the recommendations for wet weather construction.

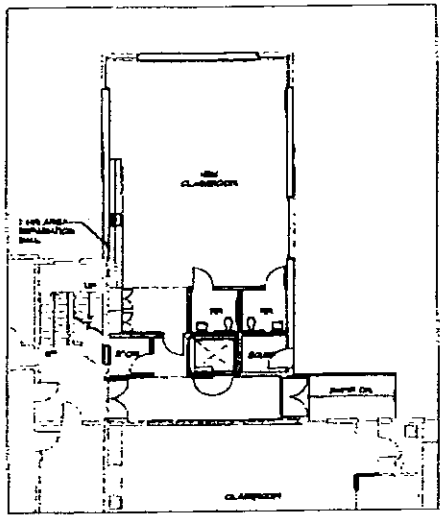
EXHIBIT 4



SITE PLAN NORTH

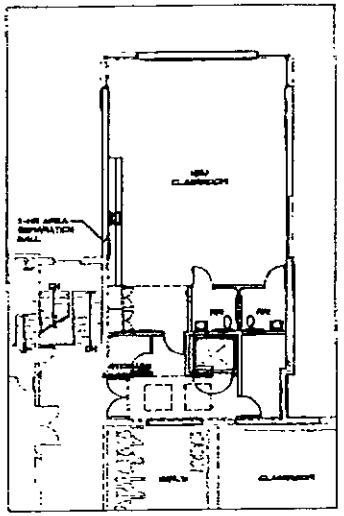
SODERSTROM ARCHITE

PARK PLACE ELEMENTARY
OREGON CITY SCHOOL DIST
FEBRUARY 12th, 2001



FLOOR PLAN LOWER LEVEL

NORTH

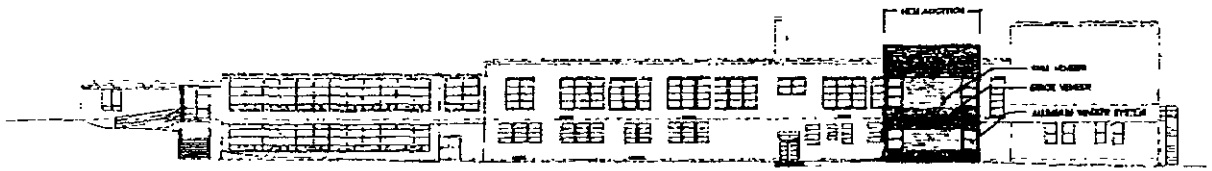


FLOOR PLAN UPPER LEVEL

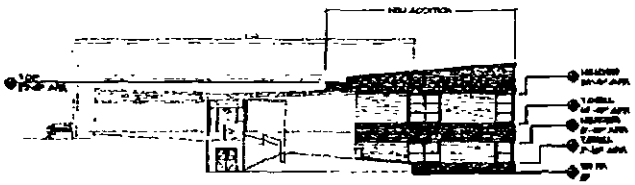
NORTH

SODERSTROM ARCHIT

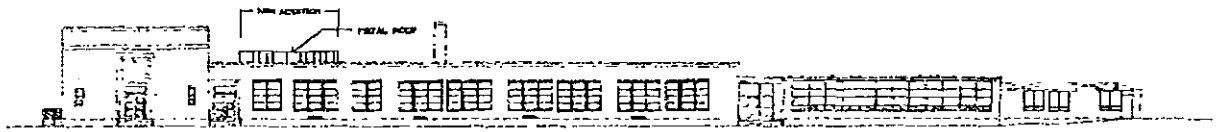
PARK PLACE
ELEMENTARY
OREGON CITY SCHOOL DIST
FEBRUARY 12th, 2001



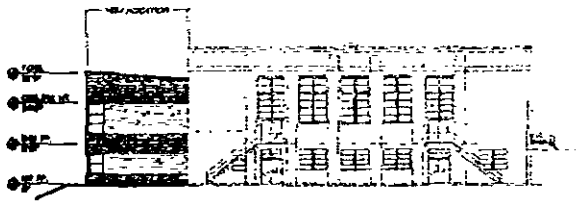
WEST ELEVATION



NORTH ELEVATION



EAST ELEVATION



SOUTH ELEVATION

SODERSTROM ARCHITE

PARK PLACE
ELEMENTARY
OREGON CITY SCHOOL DISTRI
FEBRUARY 12th, 2001

ANALYSIS AND FINDINGS

The Park Place Elementary School proposes to expand their existing facility located at 16075 Front Avenue. The applicant proposes approximately 3,248 square foot of classroom additions on two floors. The property is currently zoned R-8 and is surrounded by R-10 and R-8 zoning.

Front Avenue is classified as a Collector Street in the Oregon City Transportation Master Plan, which requires a minimum right-of-way (ROW) width of 60 to 70 feet. Currently Front Avenue appears to have a 50-foot wide ROW. Applicant has proposed dedicating additional ROW along the site frontage with Front Avenue. Front Avenue will require at least a 5 foot ROW dedication which will be determined as part of the site plan and design review process.

A Collector Street in the Oregon City requires a minimum pavement width of 34 to 50 feet. Currently Front Avenue appears to have a 36-foot pavement width south of La Rae Street with curbs on both sides and a sidewalk on the west side. North of La Rae Street adjacent to Park Place Elementary School the pavement appears to be approximately 16-wide, with parking and a bus loading area within the ROW on the west side. There are no curbs or sidewalks along the school frontage. The existing improvements at this location do not meet the minimum collector street standards as required by the Code.

The paved shoulder at the northwest corner of the intersection of La Rae Street and Front Avenue is currently being used for parking. This creates an unsafe condition for traffic and pedestrian circulation in the vicinity.

La Rae Street and Melinda Street are classified as Local Streets in the Oregon City Transportation Master Plan.

The proposed site layout will relocate existing bus loading and parking spaces along Front Avenue to the west out of the new right-of-way (ROW) dedication. The proposal is to construct sidewalk along the school's site frontage with Front Avenue, and construct two crosswalks across La Rae Street at the eastern and western ends of the site. No additional parking spaces were proposed.

The proposed site layout would improve the frontage but is not sufficient to address safety issues at the intersection of La Rae Street and Front Street. No parking shall be allowed along the west side of Front Street between the bus loading area and La Rae Street.

The proposed site is large enough to adequately accommodate the proposed infrastructure.

The shape is conducive to the placement and functioning of the proposed use.

The existing use of this site for this type of use blends with other residential uses in the area.

EXHIBIT 5a

There is an existing 12-inch City water line in Front Avenue, and an existing 6-inch City water line in La Rae Street.

There are 8-inch City sanitary sewer lines existing in Front Avenue, La Rae Street, and at the northwestern corner of the site in Melinda Street.

The site is relatively flat and will require minimal grading. The existing improvements will not restrict the proposed use.

A traffic study has not been provided to the City for review.

Conditions:

1. The Applicant is responsible for this project's compliance to Engineering Policy 00-01 (attached). The policies pertain to any land use decision requiring the applicant to provide any public improvements.
2. No parking shall be allowed along the west side of Front Street between the bus loading area and La Rae Street.

H:\WRDFILES\JAY\STAFFRPT\CU\CU01-03.DOC

CITY OF OREGON CITY - PLANNING DIVISION
PO Box 3040 - 320 Warner Milne Road - Oregon City, OR 97045-0304
Phone: (503) 657-0891 Fax: (503) 657-7892

TRANSMITTAL

IN-HOUSE DISTRIBUTION
- ☑ BUILDING OFFICIAL
- ☐ ENGINEERING MANAGER
- ☐ FIRE CHIEF
- ☐ PUBLIC WORKS- OPERATIONS
- ☐ CITY ENGINEER/PUBLIC WORKS DIRECTOR
- ☐ TECHNICAL SERVICES (GIS)
- ☐ PARKS MANAGER

TRAFFIC ENGINEER
- ☐ JOHN REPLINGER @ DEA

MAIL-OUT DISTRIBUTION
- ☐ CICC
- ☐ NEIGHBORHOOD ASSOCIATION (N.A.) CHAIR
- ☐ N.A. LAND USE CHAIR
- ☐ CLACKAMAS COUNTY - Joe Merek
- ☐ CLACKAMAS COUNTY - Bill Spears
- ☐ ODOT - Sonya Kazen
- ☐ ODOT - Gary Hunt
- ☐ SCHOOL DIST 62
- ☐ TRI-MET
- ☐ METRO - Brenda Bernards
- ☐ OREGON CITY POSTMASTER
- ☐ DLCD

RETURN COMMENTS TO:

PLANNING PERMIT TECHNICIAN
Planning Department

COMMENTS DUE BY: March 30, 2001

HEARING DATE: April 23, 2001
HEARING BODY: Staff Review: ___ PC: X CC:___

IN REFERENCE TO

FILE # & TYPE:	CU 01-03
PLANNER:	Barbara Shields
APPLICANT:	Milstead and Associates, Pete Daniels
REQUEST:	The addition of two new classrooms, four new restrooms and an elevator to the Park Place Elementary School.
LOCATION:	16075 Front Avenue, Clackamas County Map 2-2E-20DD, Tax Lot 2800

The enclosed material has been referred to you for your information, study and official comments. Your recommendations and suggestions will be used to guide the Planning staff when reviewing this proposal. If you wish to have your comments considered and incorporated into the staff report, please return the attached copy of this form to facilitate the processing of this application and will insure prompt consideration of your recommendations. Please check the appropriate spaces below.

____ The proposal does not conflict with our interests.

____ The proposal would not conflict our interests if the changes noted below are included.

_____ The proposal conflicts with our interests for the reasons stated below.

_____ ***The following items are missing and are needed for completeness and review:***

SEE ATTACHED

Signed _____
Title PW OPS MGR

PLEASE RETURN YOUR COPY OF THE APPLICATION AND MATE **EXHIBIT 56**

MEMORANDUM

City of Oregon City

DATE: 3-15-01

TO: Joe McKinney, Public Works Operations Manager
SUBJECT: Comment Form for Planning Information Requests

File Number CU01-03

Name: 16075 Front ave

Water: Park Place Elementary School Addition of Two new classrooms, 4 restrooms & an elevator

Existing Water Main Size = _____

Existing Location= **No impact to existing H2O system**

Upsizing required? Yes____ No____ Size Required_____inch

Extension required? Yes____ No____

Looping required? Yes____ No____ Per Fire Marshall_____

From:_____

To:_____

New line size=_____

Backflow Preventor required? Yes X No____

Clackamas River Water lines in area? Yes____ No____

Easements Required? Yes____ No____

Recommended easement width_____ft.

Water Departments additional comments No____ Yes X Initial eli
03/21/2001

Consult Water Master Plan. The new additions should not have a dramatic impact to the existing water system. Fire flow testing was performed for the fire department recently. Their information may suggest otherwise. Of course, backflow devices should already be in place at the school.

Sanitary Sewer:

Existing Sewer Main Size = 8" PVC.

Existing location = LA RAC

Existing Lateral being reused? Yes ✓ No ____

Additional Laterals needed? Yes ____ No ✓

Upsizing required? See Sanitary Sewer Master Plan

Extension required? No ✓ Yes ____

Pump Station Required? See Sanitary Sewer Master Plan

Industrial Pre-treatment required? If non-residential Contact Tri-City Service District

Easements Required Yes ____ No ✓

Recommended Easement Width N/A feet

Sanitary Sewer additional comments No ____ Yes ✓ Initial CC

A NEW LATERAL FOR THE ADDITIONAL RESTROOMS MAY BE NEEDED DEPENDING ON LOCATION

Storm Sewer:

Existing Line Size = 15 inch None existing ____

Upsizing required? See Storm Drainage Master Plans

Extension required? Yes ____ No ✓

From: ____

To: ____

Detention and treatment required? Yes___ No ✓

On site water resources: None known ✓ Yes___

Storm Department additional comments No___ Yes ✓ Initial CC

DETENTION OR TREATMENT CANNOT BE DETERMINED AT THIS TIME. THE CONDITIONS ARE ADDRESSED IN THE NARRATIVE TITLE 17 ZONING SUBSECTION D.

Streets:

Classification: FRONT ST. , LA RAE

Major Arterial_____ Minor Arterial_____

Collector X FRONT ST. Local X LA RAE

Additional Right Of Way required? Yes_____ No_____

Jurisdiction:

City X County_____ State_____

Existing width = N/A feet

Required width =_____feet

Roadway improvements? See Transportation System Plan

Bicycle Lanes required? Yes_____ No_____

Transit Street? Yes_____ No_____ Line No=_____

Street Department additional comments No___ Yes X Initial PF

1. SCHOOL CROSSINGS AS SHOWN ON LA RAE ST. MAY BE IN CONFLICT WITH BEST PRACTICE, THESE SHOULD BE REVIEWED BY CITY TRAFFIC ENGINEER BEFORE INSTALLATION.

CITY OF OREGON CITY

ENGINEERING POLICY 00-01
Guidelines for Development

EFFECTIVE: April 10, 2000

PREPARED BY

COMMUNITY DEVELOPMENT DEPARTMENT

320 Warner-Milne Road

Post Office Box 3040

Oregon City, Oregon 97045-0304

Telephone: (503) 657-0891

Engineering Division

EXHIBIT 6

Applicability. This policy applies to applicants for land use decisions and site plan reviews with regard to providing public improvements, submittal of documentation, and . The following sections outline some of the important requirements and helpful hints for those unfamiliar with providing public improvements as required by the Oregon City Municipal Code and Oregon City Public Works Standards. This is not an all-inclusive list of City requirements and does not relieve the applicant from meeting all applicable City Code and Public Works Standards.

Availability of Codes and Standards. Copies of these City Codes and Standards are available at City Hall for a nominal price. Some engineering firms in the local metropolitan area already own these Codes and Standards to enable them to properly plan, design, and construct City projects.

General

- Applicants shall design and construct all required public works improvements to City Standards. These Standards include the latest version in effect at the time of application of the following list of documents: Oregon City Municipal Code, Water Master Plan, Transportation Master (System) Plan, Sanitary Sewer Master Plan, and the Drainage Master Plan. It includes the Public Works Design Standards, which is comprised of Sanitary Sewer, Water Distribution System, Stormwater and Grading, and Erosion Control. This list also includes the Street Work Drawings, Appendix Chapter 33 of the Uniform Building Code (by reference), and the Site Traffic Impact Study Procedures. It may also include the City of Oregon City Review Checklist of Subdivision and Partition Plats when the development is a Subdivision, Partition, or Planned Unit Development.

Water (Water Distribution System Design Standards)

- The applicant shall provide water facilities for their development. This includes water mains, valves, fire hydrants, blow-offs, service laterals, and meters.
- All required public water system improvements shall be designed and constructed to City standards.
- The Fire Marshall shall determine the number of fire hydrants and their locations. Fire hydrants shall be fitted with a Storz metal face adapter style S-37MFL and cap style SC50MF to steamer port. This adapter is for a 5-inch hose. All hydrants to be completed, installed, and operational before beginning structural framing. Hydrants shall be painted with Rodda All-Purpose Equipment Enamel (1625 Safety Orange Paint) and all chains shall be removed from the fire hydrants.
- Backflow prevention assemblies are required on all domestic lines for commercial buildings, all fire service lines, and all irrigation lines. Backflow prevention assemblies are also required on residential domestic lines greater than or equal to 2-inch diameter. These assemblies are also required where internal plumbing is greater than 32 feet above the water main. The type of backflow prevention device required is dependent on the degree of hazard. City Water Department personnel, certified as cross connection inspectors, shall determine the type of device to be installed in any specific instance. All

backflow prevention devices shall be located on the applicant's property and are the property owner's responsibility to test and maintain in accordance with manufacturer's recommendations and Oregon statutes.

- The applicant shall verify that there are no wells on site, or if any wells are on the site prior to connecting to the public water system, the applicant shall:
  - Abandon the well per Oregon State requirements and provide copies of the final approval of well abandonment to the City; or
  - Disconnect the well from the home and only use the well for irrigation. In this case, the applicant shall install a back flow preventor on the public service line. The applicant shall also coordinate with the City water department to provide a cross connection inspection before connecting to the public water system.

Sanitary Sewer (Sanitary Sewer Design Standards)

- The applicant shall provide sanitary sewer facilities to their development. This includes gravity mains, manholes, stub outs, and service laterals.
- All required public sanitary sewer system improvements shall be designed and constructed to City standards.
- Applicant must process and obtain sanitary sewer system design approval from DEQ.
- Any existing septic system on site shall be abandoned and certification documentation provided from Clackamas County before recording the plat or obtaining a certificate of occupancy.

Stormwater (Stormwater and Grading Design Standards)

- The applicant shall provide stormwater and detention facilities for their development. This includes the stormwater mains, inlets, manholes, service laterals for roof and foundation drains, detention system if necessary, control structure if necessary, inflow and outflow devices if necessary, and energy dissipaters if necessary.
- The applicant shall design and construct required public stormwater system improvements to City standards. Each project is to coordinate with the City Drainage Master Plan, the Public Works Stormwater and Grading Standards, and the appropriate individual Basin Master Plan (if adopted) and incorporate recommendations from them as directed.
- The applicant shall design the stormwater system to detain any increased runoff created through the development of the site, as well as convey any existing off-site surface water entering the site from other properties.
- The applicant shall submit hydrology/detention calculations to the City Engineering Division for review and approval before approval of construction plans. The applicant shall provide documentation to verify the hydrology and detention calculations. The applicant shall show the 100-year overflow path and shall not design the flow to cross any developed properties.

Dedications and Easements

- The applicant shall obtain and record all off-site easements required for the project before City approval of construction plans.

Streets

- The applicant shall provide street facilities to their site including within the site and on the perimeter of the site where it borders on existing public streets. This includes half- and full-street width pavement as directed, curbs, gutters, planter strips or tree wells as directed, street trees, sidewalks, and bicycle lanes (when required by the type of street classification). This also includes city utilities (water, sanitary and storm drainage facilities), traffic control devices, centerline monumentation in monument boxes, and street lights in compliance with the City Code for Oregon City and its various Master Plans. Half-street improvements include an additional 10-foot wide pavement past the centerline subject to City review of existing conditions.
- After installation of the first lift of asphalt, applicant shall provide asphalt berms or another adequate solution, as approved by the City Engineering Division, at storm catch basins or curb inlets on all streets. This ensures positive drainage until the applicant installs the second lift of asphalt.
- All street names shall be reviewed and approved by the City (GIS Division 657-0891, ext.168) prior to approval of the final plat to ensure no duplicate names are proposed in Oregon City or the 9-1-1 Service Area.
- All street improvements shall be completed and temporary street name signs shall be installed before issuance of building permits.
- The applicant is responsible for all sidewalks in their development. The applicant may transfer the responsibility for the sidewalks adjacent to the right-of-way as part of the requirement for an individual building permit on local streets. However, failure to do so does not waive the applicant's requirement to construct the sidewalks. Applicant shall complete sidewalks on each residential lot within one year of City acceptance of public improvements for the project (e.g.; subdivision, partition, or Planned Unit Development) unless a building permit has been issued for the lot.
- Applicant shall install sidewalks along any tracts within their development, any pedestrian/bicycle accessways within their development, along existing homes within the development's property boundaries, and all handicap access ramps required in their development at the time of street construction.
- Street lights shall typically be owned by the City of Oregon City under PGE plan "B" and installed at the expense of the applicant. The applicant shall submit a street light plan, subject to City and PGE approval, prepared by a qualified electrical contractor. Streetlights shall be placed at street intersections and along streets at property lines. The required lights shall be installed by a qualified electrical contractor. Streetlights are to be spaced and installed per recommendations of the Illuminating Engineering Society of North America as published in their current issue of IES, RP-8 to provide adequate lighting for safety of drivers, pedestrians, and other modes of transportation. Streetlights shall be 100-watt high-pressure sodium fixtures mounted on fiberglass poles with a

25-foot mounting height unless otherwise specified. The applicant shall dedicate any necessary electrical easements on the final plat. All streetlights and poles shall be constructed of material approved by PGE for maintenance by PGE.

Grading And Erosion Control

- The applicant's engineer shall submit rough grading plan with construction plans. The engineer shall certify completed rough grading elevations to +/- 0.1 feet. For single family residential developments, a final residential lot-grading plan shall be based on these certified grading elevations and approved by the City Engineer before issuance of a building permit. If significant grading is required for the residential lots due to its location or the nature of the site, rough grading shall be required of the developer before the acceptance of the public improvements. (See Geotechnical section for cut and fill certification issues on building lots or parcels) There shall not be more than a maximum grade differential of two (2) feet at all site boundaries. Final grading shall in no way create any water traps, or create other ponding situations. Submit one copy (pertinent sheet) of any residential lot grading for each lot (e.g., 37 lots equals 37 copies).
- Applicants shall obtain a DEQ 1200c permit when their site clearing effort is over five (5) acres, as modified by DEQ. Applicant shall provide a copy of this permit to the City before any clearing efforts are started.
- An Erosion Prevention and Sedimentation Control Plan shall be submitted for City approval. Applicant shall obtain an Erosion Control permit before any work on site.
  - Dewatering excavations shall not be allowed unless the discharge water meets turbidity standards (see next bullet) or is adequately clarified before it enters on-site wetlands, drainage courses, and before it leaves the site. Discharge from man-made, natural, temporary, or permanent ponds shall meet the same standard.
  - Construction activities shall not result in greater than 10 percent turbidity increase between points located upstream and downstream of construction activities.
  - Effective erosion control shall be maintained after subdivision site work is complete and throughout building permit issuance.
  - Plans shall document erosion prevention and control measures that will remain effective and be maintained until all construction is complete and permanent vegetation has been established on the site.
  - Responsible party (site steward) for erosion control maintenance throughout construction process shall be shown on the Erosion Control Plan.
  - Staff encourages applicant to select high performance erosion control alternatives to minimize the potential for water quality and fish habitat degradation in receiving waters.

Geotechnical

- Any structural fill to accommodate public improvements shall be overseen and directed by a geotechnical engineer. The geotechnical engineer shall provide test reports and certification that all structural fill has been placed as specified and provide a final

summary report to the City certifying all structural fill on the site before City approval and acceptance of public improvements.

- Any cut or fill in building lots or parcels beyond the rough grading shall be subject to the Building Division's requirements for certification under the building permit.

Engineering Requirements

- Design engineer shall schedule a pre-design meeting with the City of Oregon City Engineering Division before submitting engineering plans for review.
- Street Name/Traffic Control Signs. Approved street name signs are required at all street intersections with any traffic control signs/signals/striping.
- Applicant shall pay City invoice for the manufacture and installation of permanent signs for street names and any traffic control signs/signals/striping.
- Bench Marks. At least one benchmark based on the City's datum shall be located within the subdivision.
- Other Public Utilities. The applicant shall make necessary arrangements with utility companies for the installation of underground lines and facilities. The City Engineer may require the applicant to pay these utility companies to use trenchless methods to install their utilities in order to save designated and marked trees when the utility crosses within a dripline of a tree marked, or identified, to be saved. Applicant to bear any additional costs that this may incur.
- Technical Plan Check and Inspection Fees. The current Technical Plan Check and Inspection Fee shall be paid before approval of the final engineering plans for the required site improvements. The fee is the established percentage of a City-approved engineer's cost estimate or actual construction bids as submitted by the applicant. Half of the fee is due upon submitting plans for final approval; the other half is due upon approval of the final plans.
- It is the City's policy that the City will only provide spot check inspection for non public-funded improvements, and the applicant's engineer shall provide inspection and surveying services necessary to stake and construct the project and prepare the record (as-built) drawings when the project is complete.
- Applicant shall submit two (2) sets of final engineering plans for initial review by the City Engineering Division to include the drainage report (wet signed by the responsible engineer), and the cost estimate with half of the Technical Plan Check fee. The engineering plans shall be blackline copies, 24" x 36". Blueline copies are not acceptable.
- For projects such as subdivisions, partitions, and Planned Unit Developments, the applicant shall submit a completed copy of the City's latest final subdivision and partition plat checklist, and a paper copy of the preliminary plat.
- Two (2) copies of any revised documents (in response to redlined comments) will be required for subsequent reviews, if necessary.
- The applicant shall submit, for the final City approval, six (6) copies of the plans with one full set wet signed over the engineer's Professional Engineer Oregon stamp.

- Minimum Improvement Requirements. Applicant shall provide a surety on land division developments for uncompleted work before a plat is recorded as required by a Land Division Compliance Agreement (available in hard copy or electronic version from City Engineer office). This occurs if the applicant wishes to record the final plat before completion of all required improvements. Surety shall be an escrow account or in a form that is acceptable to the City Attorney.
- Upon conditional acceptance of the public improvements by the City, the applicant shall provide a two-year maintenance guarantee as described in the Land Division Compliance Agreement. This Maintenance Guarantee shall be for fifteen (15) percent of the engineer's cost estimate or actual bids for the complete public improvements.
- The applicant shall submit a paper copy of the record (as-built) drawings, of field measured facilities, to the City Engineer for review before building permits are issued beyond the legal limit. Upon approval of the paper copy by the City Engineer, applicant shall submit a bond copy set and two 4-mil mylar record drawings sets.
- The applicant shall submit one full set of the record (as-built) drawings, of field measured facilities, on AutoCAD files on CD-ROM or 3.5-inch diskette, in a format acceptable to the City Engineer, and include all field changes.
- One AutoCAD file of the preliminary plat, if applicable, shall be furnished by the applicant to the City for addressing purposes. A sample of this format may be obtained from the City Geographical Information System Division. This information, and documents, shall be prepared at the applicant's cost.
- The applicant's surveyor shall also submit, at the time of recordation, a copy of the plat on a CD-ROM or 3.5-inch diskette to the City in a format that is acceptable to the City's Geographic Information System Division.
- The City reserves the right to accept, or reject, record drawings that the City Engineer deems incomplete or unreadable that are submitted to meet this requirement. The applicant shall be responsible for all costs associated with meeting this condition. The applicant shall ensure their engineer submits the record drawings before the City will release final surety funds or residential building permits beyond the legal limit.
- Final Plat Requirements, if applicable. The final plat shall comply with ORS 92.010 through 92.190, and City Code. In addition the following requirements shall be required:
  - The applicant, and their surveyor, shall conform to the City's submittal and review procedures for the review and approval of plats, easements, agreements, and other legal documents associated with the division of this parcel.
  - Show the City Planning File Number on the final plat, preferably just below the title block.
  - A blackline copy of the final plat illustrating maximum building envelopes shall be submitted to the Planning Division concurrently with submittal of the plat to ensure setbacks and easements do not conflict.
  - Use recorded City control surveys for street centerline control, if applicable.
  - Tie to City GPS Geodetic Control Network, County Survey reference PS 24286, and use as basis of bearings. Include ties to at least two monuments, show measured versus record, and the scale factor. Monuments may be either GPS stations or other monuments from prior City control surveys shown on PS 24286. If ties are to prior

City control surveys, monument ties shall be from the same original control survey. The tie to the GPS control can be part of a reference boundary control survey filed for the land division.

  - Show state plane coordinates on the Point of Beginning.

- The civil construction drawings, once approved by the City Engineering Division, shall have an approval period of one year in which to commence with construction. The plans and drawings shall be valid, once the City Engineer holds the preconstruction conference and construction activity proceeds, for as long as the construction takes. If the construction drawings expire before construction commences, the applicant shall ensure the civil construction documents and plans conform to the latest Standards, Specifications, and City Codes that are in place at the time of the update. The applicant shall bear the cost associated with bringing them into conformance, including additional technical plan check and review costs.
- The applicant shall include a statement in proposed Conditions, Covenants, and Restrictions (CC & R's), plat restrictions, or some other means acceptable to the City Attorney for:
  - Maintaining surface runoff patterns established for each lot,
  - Maintaining any proposed private storm lines or detention, and
  - Conformance by individual lot owner to the City's erosion control standards when establishing or renovating landscaping.
  - The applicant shall submit the proposed method and statement to the Planning staff for review and approval, before final plat approval.
- Construction vehicles and other vehicles associated with the development shall only use the entrance as approved by the City Engineering Division to enter their site and these vehicles shall park or wait on the construction site. The applicant should provide a specified area of off street parking for the site's construction workers which meets the erosion/sedimentation control measures. Supplier vehicles and trailers (hauling vehicles) and actual construction vehicles shall not park, or wait, in such a manner that would block or hinder access for emergency vehicles. This includes private vehicles belonging to construction workers, supplier vehicles and trailers, and actual construction vehicles.
- Site construction activity is to only occur between 7:00 AM and 6:00 PM on Monday through Friday; between 9:00 AM and 6:00 PM on Saturday. No site improvement construction activity is allowed on Sunday. Construction activity includes all field maintenance of equipment, refueling, and pick up and delivery of equipment as well as actual construction activity.
- The applicant shall ensure that all applicable outside agencies are contacted and any appropriate approvals obtained for the construction of the project. The applicant shall supply copies of approvals to the City. Failure to do so shall be a justification for the City to prevent the issuance of a construction or building permit or to revoke an issued permit for this project.
- The applicant shall be responsible for paying all fees associated with the recording of documents such as non-remonstrance agreements, easements, and dedications.
- Should the applicant, or any assigns or heirs, fail to comply with any of the conditions set forth here, the City may take the appropriate legal action to ensure compliance. The

applicant shall be responsible for any City legal fees and staff time associated with enforcing these conditions of approval.

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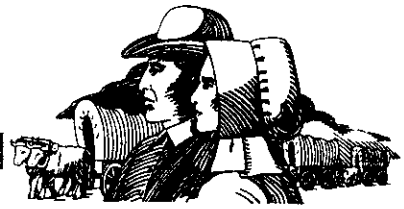
CITY OF OREGON CITY

PLANNING COMMISSION

320 WARNER MILNE ROAD OREGON CITY, OREGON 97045
TEL. 657-0891 FAX 657-7892



STAFF REPORT
Date: April 16, 2001

Complete: March 7, 2001
120-Day: July 5, 2001

FILE NO.: Conditional Use CU 01-04

HEARING DATE: April 23, 2001
7:00 p.m., City Hall
320 Warner Milne Road
Oregon City, OR 97045

APPLICANT/ OWNER: Oregon City School District
1417 12th Street
Oregon City, OR 97045

REQUEST: Conditional use to expand the existing Holcomb Elementary School, including an approximately 7,800-square feet classroom addition

LOCATION: 14625 Holcomb Boulevard (Exhibit 2)
Clackamas County Map 2S-2E-20DD, Tax Lot 2800

REVIEWER: Barbara Shields, Senior Planner
Jay Toll, Senior Engineer

RECOMMENDATION: **Staff recommends approval of CU 01-04, subject to conditions (Exhibit 1)**

CRITERIA:

Municipal Code:
Section 17.08 R-10 Single-Family Dwelling
Section 17.50 Administration and Procedures
Section 17.56 Conditional Uses

SUMMARY OF ISSUES:

Scope of the Request:
The Oregon City School District is requesting a conditional use to expand the existing Holcomb Elementary School complex. The proposed expansion would consist of an approximately 7,800-square feet addition.

The subject property is located north of Holcomb Boulevard (Exhibit 2). The site is occupied by an approximately 44,100-square feet school building. The proposed expansion would enlarge the building floor area of the school building by approximately 15%. An approximately 440-foot roadway connects the school site to Holcomb Boulevard.

Summary of Analysis:

In general, a scope of a conditional use review is to assure that the proposed use may be allowed in a specific location upon showing that (1) such use will not adversely impact the site conditions or the areas surrounding the subject property, i.e. is compatible with the surrounding areas ; or (2) appropriate conditions of approval may be considered to mitigate the identified negative impacts of the proposed use to achieve its compatibility with the surrounding areas.

Based on the analysis contained below, in this report, no significant impacts to the abutting properties will occur as a result of the proposed expansion.

The proposal will satisfy the criteria for a conditional use permit, as provided in Oregon City Municipal Code (OCMC 17.56) when the recommended conditions of approval (Exhibit 1) are met at the time of the actual construction of the proposed school addition.

Conditional Use versus Site Plan and Design Review

While a focus of a conditional use permit review is primarily on the use and its compatibility with the vicinity of the site, the objective of the City's site plan and design review process is to assure that the actual development complies with the applicable development standards and implements the identified mitigation measures (conditions) of the proposed use.

Following the conditional use permit analysis and approval, the applicant needs to file and obtain a site plan and design review permit approval. The site plan and design review process does not require a public hearing and is done separately, as an administrative type of review (Type II permit), with a decision issued by the Planning Manger.

BASIC FACTS:

1. Holcomb Elementary School is located on an approximately 13.2-acre site, north of Holcomb Boulevard (Exhibit 2). The existing school complex contains approximately 44,100 square feet. The proposed expansion would enlarge the building floor area of the school building by approximately 15% (Exhibits 3 and 4).

2. The proposed expansion of the existing school complex consists of a 7,800-square feet addition, which would accommodate six classrooms (Exhibit 4).

3. The subject site is relatively flat. The site does not contain any significant natural resources or constraints.

4. The site is zoned R-10 Single- Family Residential Dwelling. Schools are allowed as conditional uses in the R-10 Single Family Residential District (OCMC 17.08.030) and subject to Chapter OCMC 17.56 requirements.

5. The subject property is surrounded by residential areas, zoned either R-10 Single-Family Residential, or RD-4 Duplex Residential District.

6. Transmittals on the proposal were sent to various City departments, affected agencies, property owners within 300 feet, and the Park Place Neighborhood Association.

   Staff received comments from City Engineering (Exhibit 5a) and City Public Works Department (Exhibit 5b).

ANALYSIS AND FINDINGS:

I. 17.56 Conditional Uses

1. **Criterion (1): The use is listed as a conditional use in the underlying district.**

   The site is zoned R-10, Single-Family Residential. Schools are allowed as conditional uses in the R-10 District (OCMC 17.10.030) and subject to OCMC 17.56 requirements.

   Therefore, staff finds that this criterion is satisfied.

2. **Criterion (2): The characteristics of the site are suitable for the proposed use considering size, shape, location, topography, existence of improvements and natural features.**

   As discussed earlier in this report, the proposed expansion affects the already developed site.

The subject property is relatively flat and rectangular in size.

In general, with regards to the existing size, shape, natural features, and topography, the characteristics of the site are suitable to accommodate the proposed expansion (Exhibits 5a and 5b).

The specific site plan design review details will be analyzed at the time of the site plan and design review stage to assure that the actual development complies with the applicable development standards.

Based on the above analysis, staff concludes that this criterion will be satisfied by complying with Condition # 1 (Exhibit 1).

3. **Criterion (3): The site and proposed development are timely, considering the adequacy of transportation systems, public facilities and services existing or planned for the area affected by the use.**

The proposal was evaluated by utility providers (Exhibits 5a and 5b).

The Engineering Division and the Public Works Department indicate that the existing water, sewer facilities, and transportation facilities are adequate to accommodate the proposed use.

Specific design elements related to the required transportation improvements will be assessed by the City at the time of the site plan and design review. All improvements must meet the requirements established in Engineering Policy 00-01 (Exhibit 6).

Based on above analysis, staff concludes that in order to comply with this criterion, the applicant needs to comply with Condition # 1 (Exhibit 1).

4. **Criterion (4): The proposed use will not alter the character of the surrounding area in a manner which substantially limits, impairs or precludes the use of surrounding properties for the primary uses listed in the underlying district.**

As previously discussed in this report, the proposed expansion would enlarge the building floor area of the school building by approximately 15%.

Based on the information provided by the applicant, it appears that the proposed extension would not significantly impair or preclude the primary uses of the surrounding residential properties.

Therefore, staff finds that this criterion is satisfied.

5. **Criterion (5): The proposal satisfies the goals and policies of the city comprehensive plan, which apply to the proposed use.**

The Oregon City Comprehensive Plan contains the following applicable goals and policies:

"Encourage citizen participation in all functions of government and land-use planning." (Citizen Involvement Goals and Policies, Policy 4).

The public hearing was advertised and noticed as prescribed by law to be heard by the Planning Commission on April 23, 2001. The public hearing will provide an opportunity for comment and testimony from interested parties.

"Oregon City will coordinate with the Oregon City School District to encourage that school sites are located within the Urban Boundary and subdivision proposals are reviewed for impact on the school system..." (Community Facilities Goals and Policies, Health and Education, Policy 2).

The proposed extension involves an existing school that is already located within the Urban Growth Boundary.

Therefore, staff finds that this criterion is satisfied in that this proposal satisfies the applicable goals and policies of the Oregon City Comprehensive Plan.

In addition to the standards listed in Section 17.56.010, which are to be considered in the approval of all conditional uses and the standards of the zone in which the conditional use is located, the following additional standards for schools shall be applicable (17.56.040.F.):

The site must be located to best serve the intended area, must be in conformance with the city plan, must have adequate access, must be in accordance with appropriate State standards, and must meet the following dimensional standards:

1. Minimum lot area, twenty thousand square feet;
2. Front yard setback, twenty-five feet;
3. Rear yard setback, twenty feet;
4. Side yard setback, twenty feet.

The proposed expansion pertains to the already developed school site within the Urban Growth Boundary. The submitted site plan indicated indicates (Exhibit 4) that the required setbacks are met.

Based on the above analysis, staff finds that the applicant can satisfy this standard (OCMC 17.56.040.F) by meeting Condition # 1.

CONCLUSION AND RECOMMENDATION:

Based on the analysis and findings presented in the report, staff concludes that the proposed Conditional Use CU 01-04 can satisfy the requirements as described in the Oregon City Municipal Code for Conditional Use Permits, Chapter 17.56, if the recommended conditions of approval are met (Exhibit 1).

Based on the findings of fact, staff recommends the Planning Commission approve Conditional Use Permit, CU 01-04, with conditions (Exhibit 1) affecting the property identified as Clackamas County Map 2S-2E-28A, Tax Lot 1100.

EXHIBITS:

1. Recommended Conditions of Approval
2. Vicinity Map
3. Applicant's Narrative
4. Applicant's Site Plan
5. Agency Comments
   a. City Engineering
   b. Public Works
6. Public Works Engineering Policy 00-01

CONDITONS OF APPROVAL

1. The applicant is responsible for this project's compliance to Engineering Policy 00-01 (Exhibit 6).

EXHIBIT 1

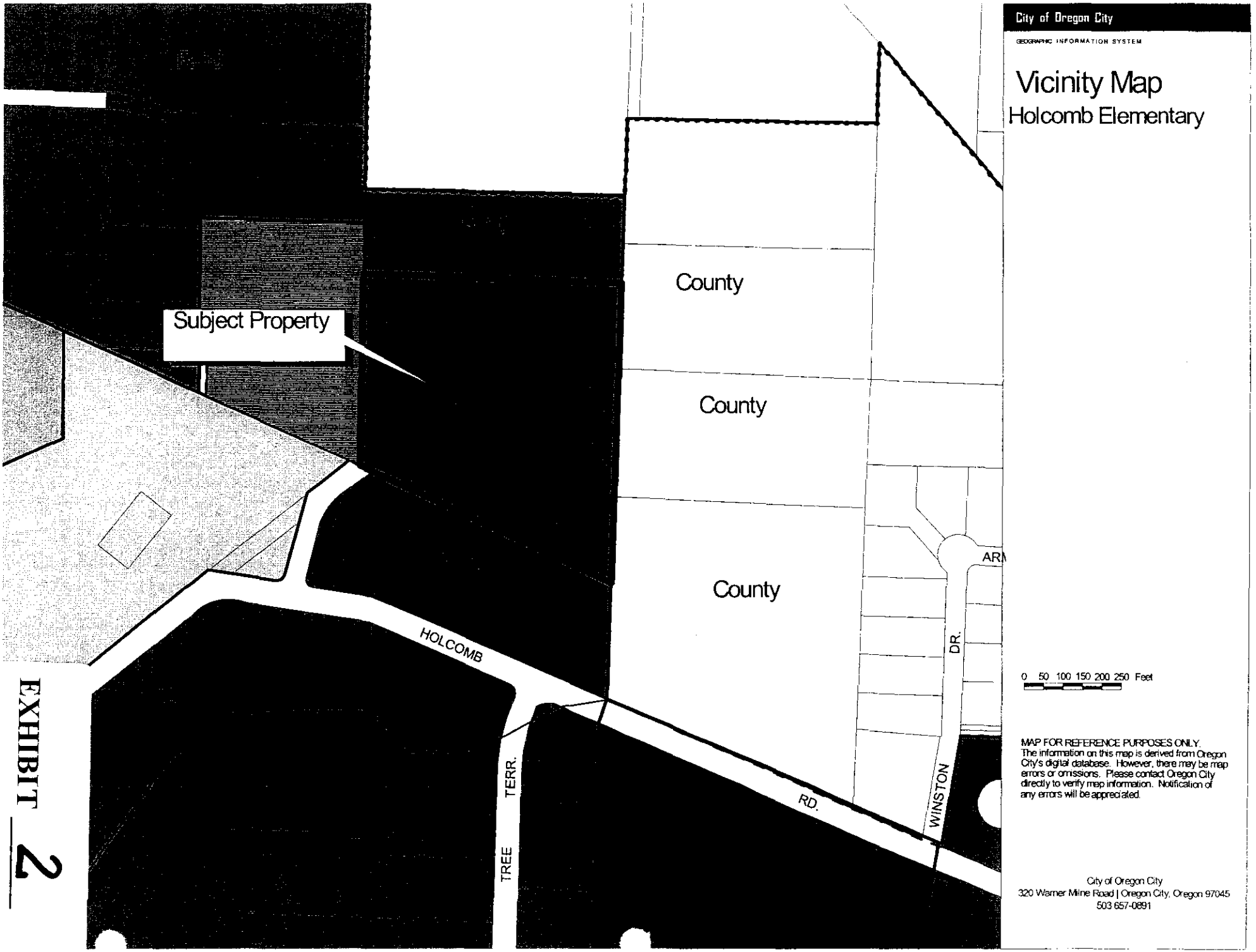


EXHIBIT 2

with colored office grade paper.

Plot date: Apr 3, 2001; g:\users\seanl\czone.apr

Holcomb Elementary School
Conditional Use Application
for Addition and retrofit
Zone R10

Narrative:

The Oregon City School District asked the district voters to approve a bond measure for adding classrooms, repairing wear and tear damage, and to improve accessibility, energy use and seismic resistant construction. The voters agreed the work was needed. Part of the process is to secure conditional use approval on the various projects.
In this narrative City Ordinance quotes are in vertical type face and proposer discussions are in italics. Some section requirements may overlap a little, but each will be discussed individually.

Summary

*The **Holcomb Elementary School** addition proposal is for six (6) new class rooms and two restrooms as well as the required retrofits mentioned above. The addition building area will be 7800 square feet. The existing building is 44,100 square feet, so the resulting building will be 51900 square feet. The addition will represent about a 15% of the total building. Almost half of the class-rooms proposed are to eliminate substandard areas that have been used for classes and the remaining area is to satisfy growth school's attendance area.*

I
Title 17 Zoning
under **Chapter 17.50 Administration and Procedures** *and under*
Section 17.50.080 Complete application
Subsection D says:
D. A complete and detailed narrative description of the proposed development that describes **existing site conditions**, **existing buildings**, **public facilities** and **services**, presence of **wetlands**, **steep slopes** and other **natural features**, a discussion of the **approval criteria** for all permits required for approval of the development proposal that explains how the criteria are or can be met, and any other information indicated by staff at the pre application conference as being required;

*The **existing site** conditions are: mostly grass playgrounds, buildings and parking areas on a relatively flat site.*
*The **existing building** is a school which was approved for a conditional use in Clackamas County October 1985.*
*The public facilities: **sewer, water, storm sewer** and **power** are all of adequate for the existing school and site design will investigate the addition requirements.*

EXHIBIT 3

Holcomb Elementary School

The site has been used as a school playground for the last 35 years with no ***wetland*** *problems.*
The site is slopes from the southeast corner (elevation 388) down to the northwest corner (elev. 324) in 1180 feet about 5%, therefore there are no ***steep slopes*** *or and there are no significant* ***natural features*** *on the site.*

Specific ***approval criteria*** *are addressed in the following sections.*

II

Approval Criteria.

Chapter 17.56 CONDITIONAL USES

17.56.010 Permit--Authorization--Standards--Conditions.

. A conditional use permit listed in this section may be permitted, enlarged or altered upon authorization of the planning commission in accordance with the standards and procedures of this section. Any expansion to, alteration of, or accessory use to a conditional use shall require planning commission approval of a modification to the original conditional use permit.

A. The following conditional uses, because of their public convenience and necessity and their effect upon the neighborhood shall be permitted only upon the approval of the planning commission after due notice and public hearing, according to procedure as provided in Chapter 17.50.

The planning commission may allow a conditional use, provided that the applicant provides evidence substantiating that all the requirements of this title relative to the proposed use are satisfied, and demonstrates that the proposed use also **satisfies the following criteria**:

1. The **use is listed as a conditional use in the underlying district**;

Holcomb Elementary School is located in an R8 Single Family Zone.

Chapter **17.08.00** R-10 Single Family Residential Zone
Section**17.08.030 Conditional uses.**
The following conditional uses are permitted in this district when authorized by and in accordance with the standards contained in Chapter **17.56:**
B. Uses listed in Section **17.56.030**. (Prior code §11-3-3(B))
Section **17.56.030** Uses requiring conditional use permit.
R. Private and public schools;

2. The **characteristics of the site** are suitable for the **proposed use** considering **size, shape, location**, **topography**, existence of **improvements and natural features**;

The ***size*** *of the property is 675' by 850' , 573,400 square feet or 13+ acres. The building coverage will be 51,900 square feet or 9% of the site.*

Holcomb Elementary School

*The **shape** is rectangular with the east property line being 990' long and the west being 709' and the uniform width being about 675'.*
*The **location** functions well for an elementary school in this neighborhood and is expected to be a good location for the foreseeable future.*
*The **topography** is quite flat which provides good playgrounds.*
*The **improvements** are more than adequate for the proposed expansion.*
*There are no **natural features** that affect the use or development of this proposal.*

3. The **site and proposed development are timely**, considering the adequacy of transportation systems, public facilities and services existing or planned for the area affected by the use;

The proposal is timely for the school district in that the space could be used at present. The proposal is timely considering the adequacy of the transportation systems, public facilities and services now in place and being used by the school. The engineering consultants indicate this expansion is compatible with the existing systems. This concern will be treated more thoroughly in the design review process.

4. The proposed use **will not alter the character of the surrounding area** in a manner which substantially limits, impairs or precludes the use of surrounding properties for the primary uses listed in the underlying district;

The use is already established and adequate buffer areas exist, so the proposed expansion will not compromise the surrounding uses.

5. The proposal **satisfies the goals and policies of the city comprehensive plan**, which apply to the proposed use.

The Comprehensive Plan in the Education section of the Community Facilities Goals and Policies says:

"Oregon City will coordinate with the Oregon City School District to encourage that school sites are located within the Urban Growth Boundary and subdivision proposals are reviewed for impact on the school system."

The school is within the UGB. It is recognized that the City and District have worked in concert to locate of the present school campuses and this cooperation has ensured that the placement and size of existing school sites provide adequate urban services and space for future growth.

Holcomb Elementary School

III

17.56.040 Criteria and standards for conditional uses.

In addition to the standards listed herein in Section 17.56.010, which are to be considered in the approval of all conditional uses and the standards of the zone in which the conditional use is located, the following additional standards shall be applicable:

E. Schools.

The site must be **located to best serve the intended area**,

The site location is established

must be in **conformance with the city plan,**

The Oregon City Comprehensive Plan says:

"Oregon City will coordinate with the Oregon City School District to encourage that school sites are located within the Urban Growth Boundary and subdivision proposals are reviewed for impact on the school system."

must have **adequate access**,

There is a 440' access road out onto Holcomb Road.

must be in accordance with appropriate **State standards,**

Of course.

and must meet the following **dimensional standards**

In any zone,

1. Minimum lot area, twenty thousand square feet;
   The Holcomb School lot area is 573,412 square feet.
2. Front yard setback, twenty-five feet;
   The minimum front yard setback will not change in this proposal.
3. Rear yard setback, twenty feet;
   The minimum rear yard setback will not change in this proposal.
4. Side yard setback, twenty feet.
   The minimum side yard setback set by this expansion will be about 207 feet.

Water Quality Resource Area Variance 17.49.080

This school was established and in use for 20 years or more before the WQRA was identified. The development in this CU application does not disturb the areas shown on the Resources Overlay Map. There is a portion of the school playfields within the WQRAOD map. There are no areas shown for this site within the vegetated corridor portion of the Water Quality Resource Overlay District Map. This proposal does not affect the land identified in the WQRA.

Neighborhood Association

The Oregon City School District has held meetings with the Neighborhood Association and with the Parent/Teacher groups for this attendance area of the past few years in anticipation of the Bond Issue. During the period prior to the Bond Election last May meetings were held with the Neighborhood Association and other local interest groups to communicate how the money would be used. No attendance lists were kept for those meetings.

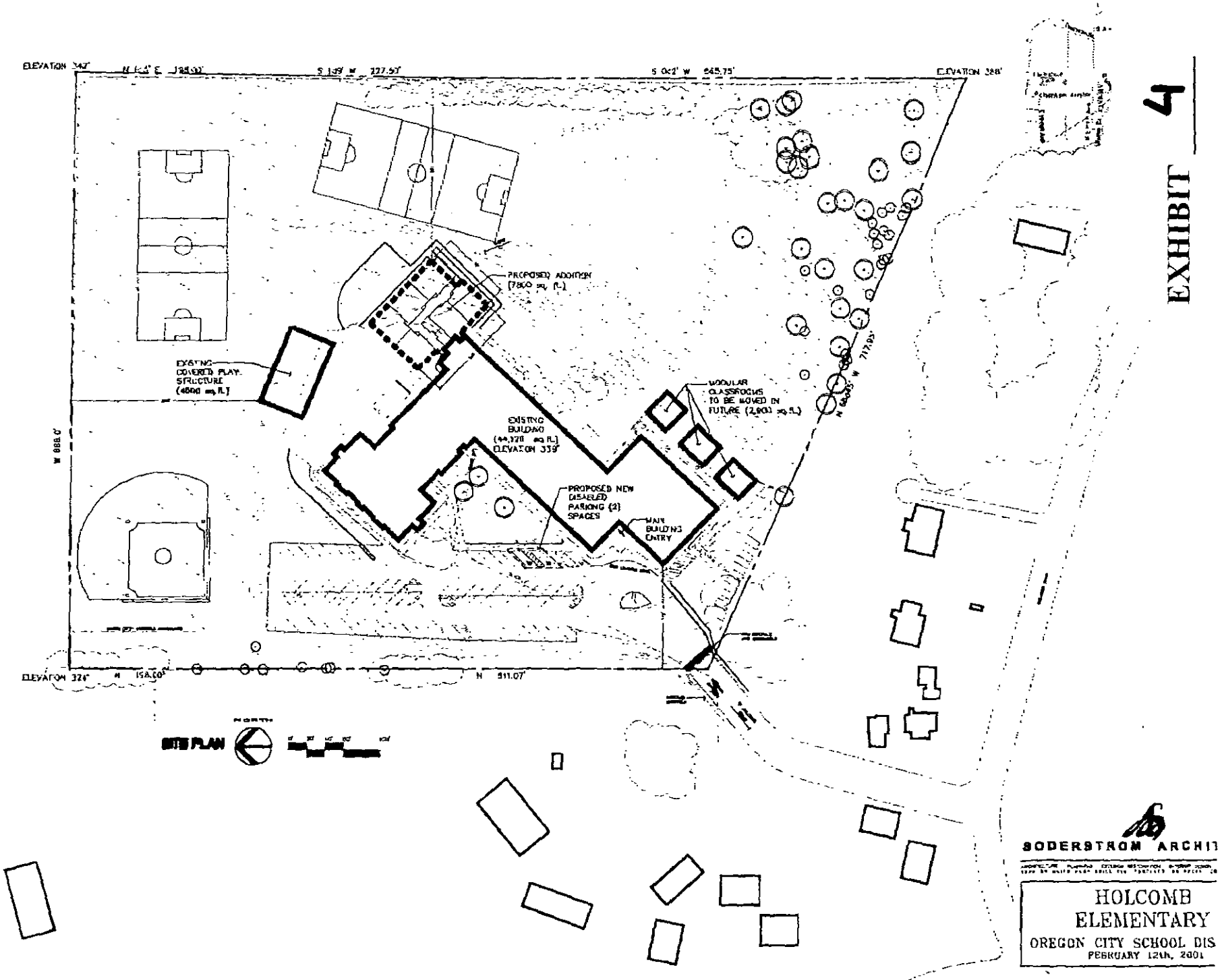
The elector of the School District voiced their approval of the additions and improvements by passing the Bond Issue.

Follow-up meetings with the Neighborhood Association will be held in the next four weeks.

Traffic

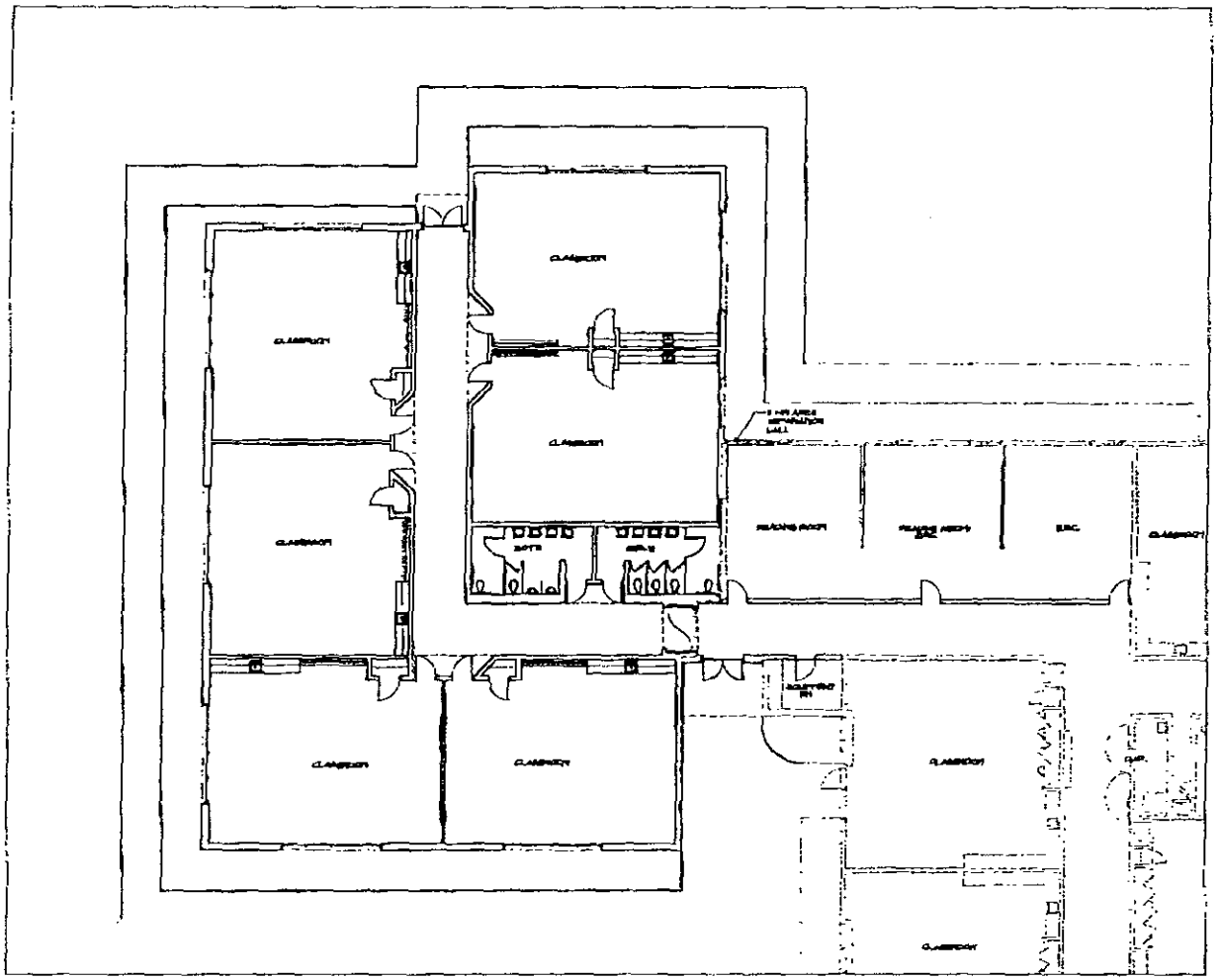
The Proposed addition is for a minimal addition to the existing school on this site. The site has adequate access and there ore no traffic problems in the neighborhood which relate to the school. This building addition will not generate any appreciable traffic increases at the site. No Traffic Impact Study was requested for this project.

EXHIBIT 4



SODERSTROM ARCHI

HOLCOMB ELEMENTARY
OREGON CITY SCHOOL DIS
FEBRUARY 12th, 2001



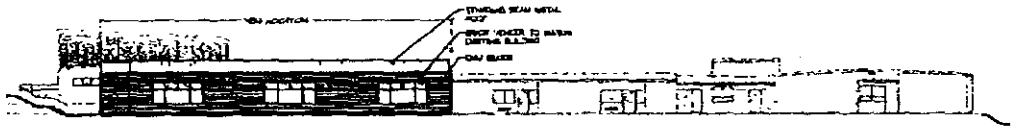
NORTH

FLOOR PLAN

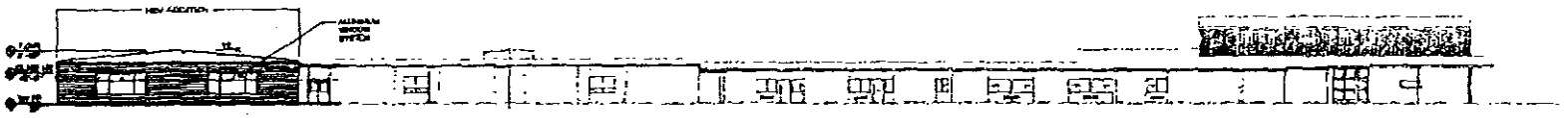
SODERSTROM ARCHITE

HOLCOMB
ELEMENTARY
OREGON CITY SCHOOL DIST
FEBRUARY 12th, 2001

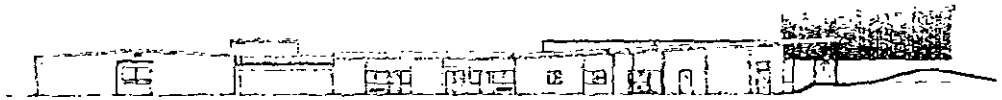
EAST ELEVATION



NORTH ELEVATION



WEST ELEVATION



SOUTH ELEVATION

SODERSTROM ARCHITI

HOLCOMB
ELEMENTARY
OREGON CITY SCHOOL DIST
FEBRUARY 12th, 2001

ANALYSIS AND FINDINGS

The Holcomb Elementary School proposes to expand their existing facility located at 14625 S. Holcomb Boulevard. The applicant proposes approximately 7,800 square foot of classroom and bathroom additions. The property is currently zoned R-10 and is surrounded by R-10, R-8, R-6MH, RD-4, and Clackamas County FU-10 zoning.

The proposed site is large enough to adequately accommodate the proposed infrastructure.

The shape is conducive to the placement and functioning of the proposed use.

The existing use of this site for this type of use blends with other residential uses in the area.

There is an existing 16-inch City water line in Holcomb Blvd.

There is an existing 8-inch City sanitary sewer line in Holcomb Blvd., and an existing 8-inch City sanitary sewer line stubbed to the southwestern corner of the school site.

Holcomb Blvd. is classified as a Minor Arterial in the Oregon City Transportation Master Plan. Holcomb Blvd. is under Clackamas County jurisdiction.

The existing improvements will not restrict the proposed use.

A traffic study has not been provided to the City for review.

Conditions:

1. The Applicant is responsible for this project's compliance to Engineering Policy 00-01 (attached). The policies pertain to any land use decision requiring the applicant to provide any public improvements.

EXHIBIT 5a

CITY OF OREGON CITY - PLANNING DIVISION
PO Box 3040 - 320 Warner Milne Road - Oregon City, OR 97045-0304
Phone: (503) 657-0891 Fax: (503) 657-7892

TRANSMITTAL

IN-HOUSE DISTRIBUTION
- ☐ BUILDING OFFICIAL
- ☑ ENGINEERING MANAGER
- ☐ FIRE CHIEF
- ☐ PUBLIC WORKS- OPERATIONS
- ☑ CITY ENGINEER/PUBLIC WORKS DIRECTOR
- ☐ TECHNICAL SERVICES (GIS)
- ☐ PARKS MANAGER

TRAFFIC ENGINEER
- ☐ JOHN REPLINGER @ DEA

MAIL-OUT DISTRIBUTION
- ☐ CICC
- ☐ NEIGHBORHOOD ASSOCIATION (N.A.) CHAIR
- ☐ N.A. LAND USE CHAIR
- ☐ CLACKAMAS COUNTY - Joe Merek
- ☐ CLACKAMAS COUNTY - Bill Spears
- ☐ ODOT - Sonya Kazen
- ☐ ODOT - Gary Hunt
- ☐ SCHOOL DIST 62
- ☐ TRI-MET
- ☐ METRO - Brenda Bernards
- ☐ OREGON CITY POSTMASTER
- ☐ DLCD

RETURN COMMENTS TO:

PLANNING PERMIT TECHNICIAN
Planning Department

COMMENTS DUE BY: March 30, 2001

HEARING DATE: April 23, 2001
HEARING BODY: Staff Review: ___ PC: X CC: ___

IN REFERENCE TO

FILE # & TYPE:	CU 01-04
PLANNER:	Barbara Shields
APPLICANT:	Milstead and Associates, Pete Daniels
REQUEST:	An approximately 7,800 square foot addition, including six new classrooms, to the Holcomb Elementary School.
LOCATION:	14625 S. Holcomb Blvd, Clackamas County Map 2-2E-28A, Tax Lot 1100

The enclosed material has been referred to you for your information, study and official comments. Your recommendations and suggestions will be used to guide the Planning staff when reviewing this proposal. If you wish to have your comments considered and incorporated into the staff report, please return the attached copy of this form to facilitate the processing of this application and will insure prompt consideration of your recommendations. Please check the appropriate spaces below.

_____ The proposal does not conflict with our interests.

_____ The proposal would not conflict our interests if the changes noted below are included.

_____ The proposal conflicts with our interests for the reasons stated below.

_____ ***The following items are missing and are needed for completeness and review:***

SEE ATTACHED

Signed _____
Title PW OPS MGR

PLEASE RETURN YOUR COPY OF THE APPLICATION AND MATEI

EXHIBIT 5b

MEMORANDUM

City of Oregon City

DATE: 3-14-01

TO: Joe McKinney, Public Works Operations Manager
SUBJECT: Comment Form for Planning Information Requests

File Number CU01-04

Name: 14625 S. Holcomb Blvd

Water: Holcomb Elementary School Addition of six new classrooms and two restrooms

Existing Water Main Size =_____

Existing Location= **No impact to existing H2O system**

Upsizing required? Yes____ No____ Size Required_____inch

Extension required? Yes____ No____

Looping required? Yes____ No____ Per Fire Marshall_____

From:_____

To:_____

New line size=_____

Backflow Preventor required? Yes X No____

Clackamas River Water lines in area? Yes____ No____

Easements Required? Yes____ No____

Recommended easement width_____ft.

Water Departments additional comments No____ Yes X Initial eli
03/21/2001

Consult Water Master Plan. The new additions should not have a dramatic impact to the existing water system. Fire flow testing was performed for the fire department recently. Their information may suggest otherwise. Of course, backflow devices should already be in place at the school.

Sanitary Sewer:

Existing Sewer Main Size = 8"

Existing location = THRU SCHOOL PROPERTY TO ENTRANCE OF SCHOOL ON PAVED RD. (ENTRY RD. TO SCHOOL)

Existing Lateral being reused? Yes ✓ No ____

Additional Laterals needed? Yes ____ No ✓

Upsizing required? See Sanitary Sewer Master Plan

Extension required? No ✓ Yes ____

Pump Station Required? See Sanitary Sewer Master Plan

Industrial Pre-treatment required? If non-residential Contact Tri-City Service District

Easements Required Yes ____ No ✓

Recommended Easement Width N/A feet

Sanitary Sewer additional comments No ____ Yes ✓ Initial C.C.
ADDITIONAL LATERAL MAY BE NEEDED DEPENDING ON LOCATION OF NEW RESTROOMS.

Storm Sewer:

Existing Line Size = 10 inch None existing ____

Upsizing required? See Storm Drainage Master Plans

Extension required? Yes ____ No ✓

From: ____

To: ____

Detention and treatment required? Yes____ No✓

On site water resources: None known✓ Yes____

Storm Department additional comments No✓ Yes____ Initial CC.

Streets:

Classification: ~~FROST ST.~~ COUNTY HOLCOMB BLVD. / CITY HOLCOMB SCHOOL RD.

Major Arterial_____ Minor Arterial_____

Collector X Local SCHOOL RD.

Additional Right Of Way required? Yes_____ No_____

Jurisdiction:

City X County X State_____

Existing width = _____feet

Required width =_____feet

Roadway improvements? See Transportation System Plan

Bicycle Lanes required? Yes_____ No_____

Transit Street? Yes_____ No_____ Line No=_____

Street Department additional comments No____ Yes X Initial PA.

1. PROPOSED ACTION WILL NOT EFFECT ROADWAY.

CITY OF OREGON CITY

ENGINEERING POLICY 00-01
Guidelines for Development

EFFECTIVE: April 10, 2000

PREPARED BY

COMMUNITY DEVELOPMENT DEPARTMENT

320 Warner-Milne Road

Post Office Box 3040

Oregon City, Oregon 97045-0304

Telephone: (503) 657-0891

Engineering Division

EXHIBIT 6

Applicability. This policy applies to applicants for land use decisions and site plan reviews with regard to providing public improvements, submittal of documentation, and . The following sections outline some of the important requirements and helpful hints for those unfamiliar with providing public improvements as required by the Oregon City Municipal Code and Oregon City Public Works Standards. This is not an all-inclusive list of City requirements and does not relieve the applicant from meeting all applicable City Code and Public Works Standards.

Availability of Codes and Standards. Copies of these City Codes and Standards are available at City Hall for a nominal price. Some engineering firms in the local metropolitan area already own these Codes and Standards to enable them to properly plan, design, and construct City projects.

General

- Applicants shall design and construct all required public works improvements to City Standards. These Standards include the latest version in effect at the time of application of the following list of documents: Oregon City Municipal Code, Water Master Plan, Transportation Master (System) Plan, Sanitary Sewer Master Plan, and the Drainage Master Plan. It includes the Public Works Design Standards, which is comprised of Sanitary Sewer, Water Distribution System, Stormwater and Grading, and Erosion Control. This list also includes the Street Work Drawings, Appendix Chapter 33 of the Uniform Building Code (by reference), and the Site Traffic Impact Study Procedures. It may also include the City of Oregon City Review Checklist of Subdivision and Partition Plats when the development is a Subdivision, Partition, or Planned Unit Development.

Water (Water Distribution System Design Standards)

- The applicant shall provide water facilities for their development. This includes water mains, valves, fire hydrants, blow-offs, service laterals, and meters.
- All required public water system improvements shall be designed and constructed to City standards.
- The Fire Marshall shall determine the number of fire hydrants and their locations. Fire hydrants shall be fitted with a Storz metal face adapter style S-37MFL and cap style SC50MF to steamer port. This adapter is for a 5-inch hose. All hydrants to be completed, installed, and operational before beginning structural framing. Hydrants shall be painted with Rodda All-Purpose Equipment Enamel (1625 Safety Orange Paint) and all chains shall be removed from the fire hydrants.
- Backflow prevention assemblies are required on all domestic lines for commercial buildings, all fire service lines, and all irrigation lines. Backflow prevention assemblies are also required on residential domestic lines greater than or equal to 2-inch diameter. These assemblies are also required where internal plumbing is greater than 32 feet above the water main. The type of backflow prevention device required is dependent on the degree of hazard. City Water Department personnel, certified as cross connection inspectors, shall determine the type of device to be installed in any specific instance. All

backflow prevention devices shall be located on the applicant's property and are the property owner's responsibility to test and maintain in accordance with manufacturer's recommendations and Oregon statutes.

- The applicant shall verify that there are no wells on site, or if any wells are on the site prior to connecting to the public water system, the applicant shall:
  - Abandon the well per Oregon State requirements and provide copies of the final approval of well abandonment to the City; or
  - Disconnect the well from the home and only use the well for irrigation. In this case, the applicant shall install a back flow preventor on the public service line. The applicant shall also coordinate with the City water department to provide a cross connection inspection before connecting to the public water system.

Sanitary Sewer (Sanitary Sewer Design Standards)

- The applicant shall provide sanitary sewer facilities to their development. This includes gravity mains, manholes, stub outs, and service laterals.
- All required public sanitary sewer system improvements shall be designed and constructed to City standards.
- Applicant must process and obtain sanitary sewer system design approval from DEQ.
- Any existing septic system on site shall be abandoned and certification documentation provided from Clackamas County before recording the plat or obtaining a certificate of occupancy.

Stormwater (Stormwater and Grading Design Standards)

- The applicant shall provide stormwater and detention facilities for their development. This includes the stormwater mains, inlets, manholes, service laterals for roof and foundation drains, detention system if necessary, control structure if necessary, inflow and outflow devices if necessary, and energy dissipaters if necessary.
- The applicant shall design and construct required public stormwater system improvements to City standards. Each project is to coordinate with the City Drainage Master Plan, the Public Works Stormwater and Grading Standards, and the appropriate individual Basin Master Plan (if adopted) and incorporate recommendations from them as directed.
- The applicant shall design the stormwater system to detain any increased runoff created through the development of the site, as well as convey any existing off-site surface water entering the site from other properties.
- The applicant shall submit hydrology/detention calculations to the City Engineering Division for review and approval before approval of construction plans. The applicant shall provide documentation to verify the hydrology and detention calculations. The applicant shall show the 100-year overflow path and shall not design the flow to cross any developed properties.

Dedications and Easements

- The applicant shall obtain and record all off-site easements required for the project before City approval of construction plans.

Streets

- The applicant shall provide street facilities to their site including within the site and on the perimeter of the site where it borders on existing public streets. This includes half- and full-street width pavement as directed, curbs, gutters, planter strips or tree wells as directed, street trees, sidewalks, and bicycle lanes (when required by the type of street classification). This also includes city utilities (water, sanitary and storm drainage facilities), traffic control devices, centerline monumentation in monument boxes, and street lights in compliance with the City Code for Oregon City and its various Master Plans. Half-street improvements include an additional 10-foot wide pavement past the centerline subject to City review of existing conditions.
- After installation of the first lift of asphalt, applicant shall provide asphalt berms or another adequate solution, as approved by the City Engineering Division, at storm catch basins or curb inlets on all streets. This ensures positive drainage until the applicant installs the second lift of asphalt.
- All street names shall be reviewed and approved by the City (GIS Division 657-0891, ext.168) prior to approval of the final plat to ensure no duplicate names are proposed in Oregon City or the 9-1-1 Service Area.
- All street improvements shall be completed and temporary street name signs shall be installed before issuance of building permits.
- The applicant is responsible for all sidewalks in their development. The applicant may transfer the responsibility for the sidewalks adjacent to the right-of-way as part of the requirement for an individual building permit on local streets. However, failure to do so does not waive the applicant's requirement to construct the sidewalks. Applicant shall complete sidewalks on each residential lot within one year of City acceptance of public improvements for the project (e.g.; subdivision, partition, or Planned Unit Development) unless a building permit has been issued for the lot.
- Applicant shall install sidewalks along any tracts within their development, any pedestrian/bicycle accessways within their development, along existing homes within the development's property boundaries, and all handicap access ramps required in their development at the time of street construction.
- Street lights shall typically be owned by the City of Oregon City under PGE plan "B" and installed at the expense of the applicant. The applicant shall submit a street light plan, subject to City and PGE approval, prepared by a qualified electrical contractor. Streetlights shall be placed at street intersections and along streets at property lines. The required lights shall be installed by a qualified electrical contractor. Streetlights are to be spaced and installed per recommendations of the Illuminating Engineering Society of North America as published in their current issue of IES, RP-8 to provide adequate lighting for safety of drivers, pedestrians, and other modes of transportation. Streetlights shall be 100-watt high-pressure sodium fixtures mounted on fiberglass poles with a

25-foot mounting height unless otherwise specified. The applicant shall dedicate any necessary electrical easements on the final plat. All streetlights and poles shall be constructed of material approved by PGE for maintenance by PGE.

Grading And Erosion Control

- The applicant's engineer shall submit rough grading plan with construction plans. The engineer shall certify completed rough grading elevations to +/- 0.1 feet. For single family residential developments, a final residential lot-grading plan shall be based on these certified grading elevations and approved by the City Engineer before issuance of a building permit. If significant grading is required for the residential lots due to its location or the nature of the site, rough grading shall be required of the developer before the acceptance of the public improvements. (See Geotechnical section for cut and fill certification issues on building lots or parcels) There shall not be more than a maximum grade differential of two (2) feet at all site boundaries. Final grading shall in no way create any water traps, or create other ponding situations. Submit one copy (pertinent sheet) of any residential lot grading for each lot (e.g., 37 lots equals 37 copies).
- Applicants shall obtain a DEQ 1200c permit when their site clearing effort is over five (5) acres, as modified by DEQ. Applicant shall provide a copy of this permit to the City before any clearing efforts are started.
- An Erosion Prevention and Sedimentation Control Plan shall be submitted for City approval. Applicant shall obtain an Erosion Control permit before any work on site.
  - Dewatering excavations shall not be allowed unless the discharge water meets turbidity standards (see next bullet) or is adequately clarified before it enters on-site wetlands, drainage courses, and before it leaves the site. Discharge from man-made, natural, temporary, or permanent ponds shall meet the same standard.
  - Construction activities shall not result in greater than 10 percent turbidity increase between points located upstream and downstream of construction activities.
  - Effective erosion control shall be maintained after subdivision site work is complete and throughout building permit issuance.
  - Plans shall document erosion prevention and control measures that will remain effective and be maintained until all construction is complete and permanent vegetation has been established on the site.
  - Responsible party (site steward) for erosion control maintenance throughout construction process shall be shown on the Erosion Control Plan.
  - Staff encourages applicant to select high performance erosion control alternatives to minimize the potential for water quality and fish habitat degradation in receiving waters.

Geotechnical

- Any structural fill to accommodate public improvements shall be overseen and directed by a geotechnical engineer. The geotechnical engineer shall provide test reports and certification that all structural fill has been placed as specified and provide a final

summary report to the City certifying all structural fill on the site before City approval and acceptance of public improvements.

- Any cut or fill in building lots or parcels beyond the rough grading shall be subject to the Building Division's requirements for certification under the building permit.

Engineering Requirements

- Design engineer shall schedule a pre-design meeting with the City of Oregon City Engineering Division before submitting engineering plans for review.
- Street Name/Traffic Control Signs. Approved street name signs are required at all street intersections with any traffic control signs/signals/striping.
- Applicant shall pay City invoice for the manufacture and installation of permanent signs for street names and any traffic control signs/signals/striping.
- Bench Marks. At least one benchmark based on the City's datum shall be located within the subdivision.
- Other Public Utilities. The applicant shall make necessary arrangements with utility companies for the installation of underground lines and facilities. The City Engineer may require the applicant to pay these utility companies to use trenchless methods to install their utilities in order to save designated and marked trees when the utility crosses within a dripline of a tree marked, or identified, to be saved. Applicant to bear any additional costs that this may incur.
- Technical Plan Check and Inspection Fees. The current Technical Plan Check and Inspection Fee shall be paid before approval of the final engineering plans for the required site improvements. The fee is the established percentage of a City-approved engineer's cost estimate or actual construction bids as submitted by the applicant. Half of the fee is due upon submitting plans for final approval; the other half is due upon approval of the final plans.
- It is the City's policy that the City will only provide spot check inspection for non public-funded improvements, and the applicant's engineer shall provide inspection and surveying services necessary to stake and construct the project and prepare the record (as-built) drawings when the project is complete.
- Applicant shall submit two (2) sets of final engineering plans for initial review by the City Engineering Division to include the drainage report (wet signed by the responsible engineer), and the cost estimate with half of the Technical Plan Check fee. The engineering plans shall be blackline copies, 24" x 36". Blueline copies are not acceptable.
- For projects such as subdivisions, partitions, and Planned Unit Developments, the applicant shall submit a completed copy of the City's latest final subdivision and partition plat checklist, and a paper copy of the preliminary plat.
- Two (2) copies of any revised documents (in response to redlined comments) will be required for subsequent reviews, if necessary.
- The applicant shall submit, for the final City approval, six (6) copies of the plans with one full set wet signed over the engineer's Professional Engineer Oregon stamp.

- Minimum Improvement Requirements. Applicant shall provide a surety on land division developments for uncompleted work before a plat is recorded as required by a Land Division Compliance Agreement (available in hard copy or electronic version from City Engineer office). This occurs if the applicant wishes to record the final plat before completion of all required improvements. Surety shall be an escrow account or in a form that is acceptable to the City Attorney.
- Upon conditional acceptance of the public improvements by the City, the applicant shall provide a two-year maintenance guarantee as described in the Land Division Compliance Agreement. This Maintenance Guarantee shall be for fifteen (15) percent of the engineer's cost estimate or actual bids for the complete public improvements.
- The applicant shall submit a paper copy of the record (as-built) drawings, of field measured facilities, to the City Engineer for review before building permits are issued beyond the legal limit. Upon approval of the paper copy by the City Engineer, applicant shall submit a bond copy set and two 4-mil mylar record drawings sets.
- The applicant shall submit one full set of the record (as-built) drawings, of field measured facilities, on AutoCAD files on CD-ROM or 3.5-inch diskette, in a format acceptable to the City Engineer, and include all field changes.
- One AutoCAD file of the preliminary plat, if applicable, shall be furnished by the applicant to the City for addressing purposes. A sample of this format may be obtained from the City Geographical Information System Division. This information, and documents, shall be prepared at the applicant's cost.
- The applicant's surveyor shall also submit, at the time of recordation, a copy of the plat on a CD-ROM or 3.5-inch diskette to the City in a format that is acceptable to the City's Geographic Information System Division.
- The City reserves the right to accept, or reject, record drawings that the City Engineer deems incomplete or unreadable that are submitted to meet this requirement. The applicant shall be responsible for all costs associated with meeting this condition. The applicant shall ensure their engineer submits the record drawings before the City will release final surety funds or residential building permits beyond the legal limit.
- Final Plat Requirements, if applicable. The final plat shall comply with ORS 92.010 through 92.190, and City Code. In addition the following requirements shall be required:
  - The applicant, and their surveyor, shall conform to the City's submittal and review procedures for the review and approval of plats, easements, agreements, and other legal documents associated with the division of this parcel.
  - Show the City Planning File Number on the final plat, preferably just below the title block.
  - A blackline copy of the final plat illustrating maximum building envelopes shall be submitted to the Planning Division concurrently with submittal of the plat to ensure setbacks and easements do not conflict.
  - Use recorded City control surveys for street centerline control, if applicable.
  - Tie to City GPS Geodetic Control Network, County Survey reference PS 24286, and use as basis of bearings. Include ties to at least two monuments, show measured versus record, and the scale factor. Monuments may be either GPS stations or other monuments from prior City control surveys shown on PS 24286. If ties are to prior

City control surveys, monument ties shall be from the same original control survey. The tie to the GPS control can be part of a reference boundary control survey filed for the land division.

- Show state plane coordinates on the Point of Beginning.

- The civil construction drawings, once approved by the City Engineering Division, shall have an approval period of one year in which to commence with construction. The plans and drawings shall be valid, once the City Engineer holds the preconstruction conference and construction activity proceeds, for as long as the construction takes. If the construction drawings expire before construction commences, the applicant shall ensure the civil construction documents and plans conform to the latest Standards, Specifications, and City Codes that are in place at the time of the update. The applicant shall bear the cost associated with bringing them into conformance, including additional technical plan check and review costs.
- The applicant shall include a statement in proposed Conditions, Covenants, and Restrictions (CC & R's), plat restrictions, or some other means acceptable to the City Attorney for:
  - Maintaining surface runoff patterns established for each lot,
  - Maintaining any proposed private storm lines or detention, and
  - Conformance by individual lot owner to the City's erosion control standards when establishing or renovating landscaping.
  - The applicant shall submit the proposed method and statement to the Planning staff for review and approval, before final plat approval.
- Construction vehicles and other vehicles associated with the development shall only use the entrance as approved by the City Engineering Division to enter their site and these vehicles shall park or wait on the construction site. The applicant should provide a specified area of off street parking for the site's construction workers which meets the erosion/sedimentation control measures. Supplier vehicles and trailers (hauling vehicles) and actual construction vehicles shall not park, or wait, in such a manner that would block or hinder access for emergency vehicles. This includes private vehicles belonging to construction workers, supplier vehicles and trailers, and actual construction vehicles.
- Site construction activity is to only occur between 7:00 AM and 6:00 PM on Monday through Friday; between 9:00 AM and 6:00 PM on Saturday. No site improvement construction activity is allowed on Sunday. Construction activity includes all field maintenance of equipment, refueling, and pick up and delivery of equipment as well as actual construction activity.
- The applicant shall ensure that all applicable outside agencies are contacted and any appropriate approvals obtained for the construction of the project. The applicant shall supply copies of approvals to the City. Failure to do so shall be a justification for the City to prevent the issuance of a construction or building permit or to revoke an issued permit for this project.
- The applicant shall be responsible for paying all fees associated with the recording of documents such as non-remonstrance agreements, easements, and dedications.
- Should the applicant, or any assigns or heirs, fail to comply with any of the conditions set forth here, the City may take the appropriate legal action to ensure compliance. The

applicant shall be responsible for any City legal fees and staff time associated with enforcing these conditions of approval.

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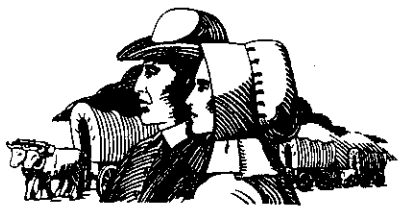
CITY OF OREGON CITY

PLANNING COMMISSION

320 WARNER MILNE ROAD OREGON CITY, OREGON 97045
TEL 657-0891 FAX 657-7892



STAFF REPORT
Date: April 16, 2001

Complete: March 7, 2001
120-Day: July 5, 2001

FILE NO.: Conditional Use CU 01-05

HEARING DATE: April 23, 2001
7:00 p.m., City Hall
320 Warner Milne Road
Oregon City, OR 97045

APPLICANT/ OWNER: Oregon City School District
1417 12th Street
Oregon City, OR 97045

REQUEST: Conditional use to expand the existing Gaffney Lane Elementary School, including an approximately 5,052-square feet classroom addition

LOCATION: 13521 Gaffney Lane (Exhibit 2)
Clackamas County Map 3S-2E-8BD, Tax Lot 4200

REVIEWER: Barbara Shields, Senior Planner
Jay Toll, Senior Engineer

RECOMMENDATION: **Staff recommends approval of CU 0 –05, subject to conditions (Exhibit 1)**

CRITERIA:

Municipal Code:
Section 17.08 R-10 Single-Family Dwelling
Section 17.50 Administration and Procedures
Section 17.56 Conditional Uses

SUMMARY OF ISSUES:

Scope of the Request:
The Oregon City School District is requesting a conditional use to expand the existing Gaffney Lane Elementary School complex. The proposed expansion would consist of an approximately 5,052-square feet addition.

The subject property is located northwest of Gaffney Lane (Exhibit 2). The site is occupied by an approximately 51,000-square feet school building. The proposed expansion would enlarge the building floor area of the school building by approximately 10%.

Summary of Analysis:

In general, a scope of a conditional use review is to assure that the proposed use may be allowed in a specific location upon showing that (1) such use will not adversely impact the site conditions or the areas surrounding the subject property, i.e. is compatible with the surrounding areas ; or (2) appropriate conditions of approval may be considered to mitigate the identified negative impacts of the proposed use to achieve its compatibility with the surrounding areas.

Based on the analysis contained below, in this report, no significant impacts to the abutting properties will occur as a result of the proposed expansion.

The proposal will satisfy the criteria for a conditional use permit, as provided in Oregon City Municipal Code (OCMC 17.56) when the recommended conditions of approval (Exhibit 1) are met at the time of the actual construction of the proposed school addition.

Conditional Use versus Site Plan and Design Review

While a focus of a conditional use permit review is primarily on the use and its compatibility with the vicinity of the site, the objective of the City's site plan and design review process is to assure that the actual development complies with the applicable development standards and implements the identified mitigation measures (conditions) of the proposed use.

Following the conditional use permit analysis and approval, the applicant needs to file and obtain a site plan and design review permit approval. The site plan and design review process does not require a public hearing and is reviewed separately, as an administrative type of review (Type II permit), with a decision issued by the Planning Manger.

BASIC FACTS:

1. Gaffney Lane Elementary School is located on an approximately 8-acre site, northwest of Gaffney Lane (Exhibit 2). The existing school complex contains approximately 51,000 square feet. The proposed expansion would enlarge the building floor area of the school building by approximately 15% (Exhibits 3 and 4).

2. The proposed expansion of the existing school complex consists of a 5,052-square feet addition, which would accommodate four classrooms (Exhibit 4).

3. The subject site is relatively flat. The site does not contain any significant natural resources or constraints.

4. The site is zoned R-10 Single- Family Residential Dwelling. Schools are allowed as conditional uses in the R-10 Single Family Residential District (OCMC 17.08.030) and subject to Chapter OCMC 17.56 requirements.

5. The subject property is surrounded by residential areas, zoned either R-10 Single-Family Residential, or R-8 Single-Family Residential District.

6. Transmittals on the proposal were sent to various City departments, affected agencies, property owners within 300 feet, and the Gaffney Lane Neighborhood Association (Exhibit 5c).

   Staff received comments from City Engineering (Exhibit 5a), City Public Works Department (Exhibit 5b), and Gaffney Lane Neighborhood Association.

ANALYSIS AND FINDINGS:

I. 17.56 Conditional Uses

1. Criterion (1): The use is listed as a conditional use in the underlying district.

The site is zoned R-10, Single-Family Residential. Schools are allowed as conditional uses in the R-10 District (OCMC 17.10.030) and subject to OCMC 17.56 requirements.

Therefore, staff finds that this criterion is satisfied.

2. Criterion (2): The characteristics of the site are suitable for the proposed use considering size, shape, location, topography, existence of improvements and natural features.

As discussed earlier in this report, the proposed expansion affects the already developed site.

The subject property is relatively flat and rectangular in size.

In general, with regards to the existing size, shape, natural features, and topography, the characteristics of the site are suitable to accommodate the proposed expansion (Exhibits 5a and 5b).

The specific site plan design review details will be analyzed at the time of the site plan and design review stage to assure that the actual development complies with the applicable development standards.

Based on the above analysis, staff concludes that this criterion will be satisfied by complying with Condition # 1 (Exhibit 1).

3. **Criterion (3): The site and proposed development are timely, considering the adequacy of transportation systems, public facilities and services existing or planned for the area affected by the use.**

The proposal was evaluated by utility providers (Exhibit 5a and 5b).

The Engineering Division and the Public Works Department indicate that the existing water, sewer facilities, and transportation facilities are adequate to accommodate the proposed use.

Specific design elements related to the required transportation improvements will be assessed by the City at the time of the site plan and design review. All improvements need to meet the requirements established in Engineering Policy 00-01 (Exhibit 6).

Based on above analysis, staff concludes that in order to comply with this criterion, the applicant needs to comply with Condition # 1 (Exhibit 1).

4. **Criterion (4): The proposed use will not alter the character of the surrounding area in a manner which substantially limits, impairs or precludes the use of surrounding properties for the primary uses listed in the underlying district.**

As previously discussed in this report, the proposed expansion would enlarge the building floor area of the school building by approximately 10%.

Based on the information provided by the applicant, it appears that the proposed extension would not significantly impair or preclude the use of the surrounding residential properties.

Therefore, staff finds that this criterion is satisfied.

5. **Criterion (5): The proposal satisfies the goals and policies of the city comprehensive plan, which apply to the proposed use.**

The Oregon City Comprehensive Plan contains the following applicable goals and policies:

"Encourage citizen participation in all functions of government and land-use planning." (Citizen Involvement Goals and Policies, Policy 4).

The public hearing was advertised and noticed as prescribed by law to be heard by the Planning Commission on April 23, 2001. The public hearing will provide an opportunity for comment and testimony from interested parties.

"Oregon City will coordinate with the Oregon City School District to encourage that school sites are located within the Urban Boundary and subdivision proposals are reviewed for impact on the school system..." (Community Facilities Goals and Policies, Health and Education, Policy 2).

The proposed extension involves an existing school that is already located within the Urban Growth Boundary.

Therefore, staff finds that this criterion is satisfied in that this proposal satisfies the applicable goals and policies of the Oregon City Comprehensive Plan.

In addition to the standards listed in Section 17.56.010, which are to be considered in the approval of all conditional uses and the standards of the zone in which the conditional use is located, the following additional standards for schools shall be applicable (17.56.040.F.):

The site must be located to best serve the intended area, must be in conformance with the city plan, must have adequate access, must be in accordance with appropriate State standards, and must meet the following dimensional standards:

1. Minimum lot area, twenty thousand square feet;
2. Front yard setback, twenty-five feet;
3. Rear yard setback, twenty feet;
4. Side yard setback, twenty feet.

File CU01-05 pertains to the already developed school site within the Urban Growth Boundary. The submitted site plan indicates (Exhibit 4) that the required setbacks are met.

Based on the above analysis, staff finds that the applicant can satisfy this standard (OCMC 17.56.040.F) by meeting Condition # 1.

CONCLUSION AND RECOMMENDATION:

Based on the analysis and findings presented in the report, staff concludes that the proposed Conditional Use CU 01-05 can satisfy the requirements as described in the Oregon City Municipal Code for Conditional Use Permits, Chapter 17.56, if the recommended conditions of approval are met (Exhibit 1).

Based on the findings of fact, staff recommends the Planning Commission approve Conditional Use Permit, CU 01-05, with conditions (Exhibit 1) affecting the property identified as Clackamas County Map 3S-2E-8BD, Tax Lot 4200.

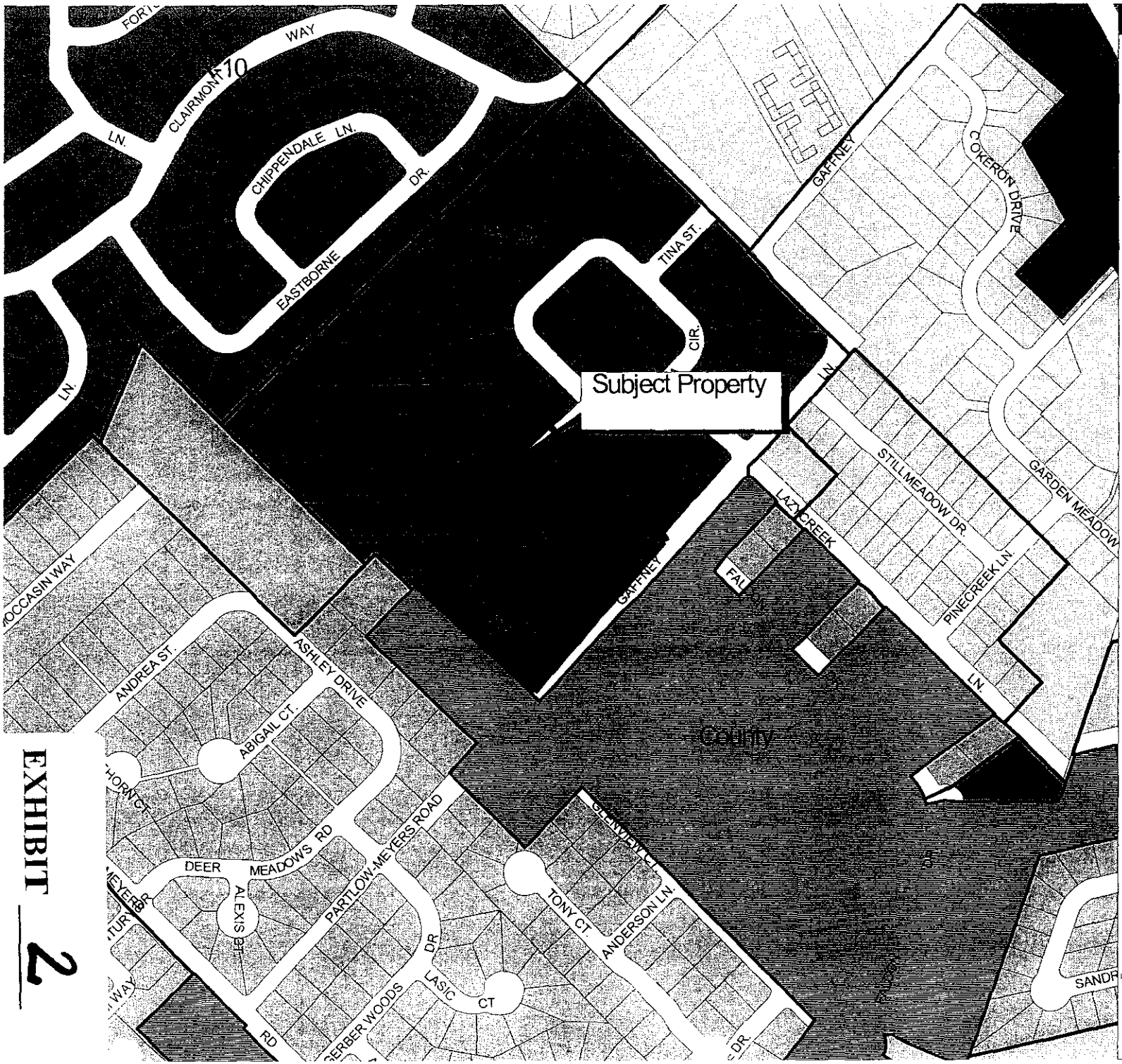
EXHIBITS:

1. Recommended Conditions of Approval
2. Vicinity Map
3. Applicant's Narrative
4. Applicant's Site Plan
5. Agency Comments
   a. City Engineering
   b. Public Works
   c. Gaffney Lane Neighborhood Comments
6. Engineering Policy 00-01

CONDITONS OF APPROVAL

1. The applicant is responsible for this project's compliance to Engineering Policy 00-01 (Exhibit 6).

EXHIBIT 1



City of Oregon City

GEOGRAPHIC INFORMATION SYSTEM

Vicinity Map

Gaffney Lane Elementary

0 50 100 150 200 250 Feet

MAP FOR REFERENCE PURPOSES ONLY.
The information on this map is derived from Oregon City's digital database. However, there may be map errors or omissions. Please contact Oregon City directly to verify map information. Notification of any errors will be appreciated.

City of Oregon City
320 Warner Milne Road | Oregon City, Oregon 97045
503 657-0891

EXHIBIT 2

th colored office grade paper.

Plot date: Apr 3, 2001; g:\gis\users\sean\zzzzz.apr

Gaffney Lane Elementary School
Conditional Use Application
for Addition and retrofit
Zone R10

Narrative:

The Oregon City School District asked the district voters to approve a bond measure for adding classrooms, repairing wear and tear damage, and to improve accessibility, energy use and seismic resistant construction. The voters agreed the work was needed. Part of the process is to secure conditional use approval on the various projects.
In this narrative City Ordinance quotes are in vertical type face and proposer discussions are in italics. Some section requirements may overlap but each will be discussed individually.

Summary

*The **Gaffney Lane Elementary School** addition proposal is for four (4) new classrooms and two restrooms as well as the required retrofits mentioned above. The building area will be increased by 5052 square feet. The building is presently 51,000 square feet, so the addition represents about a 10% increase in floor area.*

I

Title 17 Zoning
under **Chapter 17.50 Administration and Procedures** *and under*
Section 17.50.080 Complete Application
Subsection D says:
D. A complete and detailed narrative description of the proposed development that describes **existing site conditions**, **existing buildings**, **public facilities** and **services**, presence of **wetlands**, **steep slopes** and other **natural features**, a discussion of the **approval criteria** for all permits required for approval of the development proposal that explains how the criteria are or can be met, and any other information indicated by staff at the pre application conference as being required;

*The **existing site** conditions are: mostly grass playgrounds, buildings and parking areas on a relatively flat site.*
*The **existing building** is a school which was approved for a conditional use in Clackamas County March of 1965.*
*The public facilities: **sewer, water, storm sewer** and **power** are all of adequate for the existing school and site design will investigate the addition requirements.*
*The site has been used as a school playground for the last 35 years with no **wetland** problems.*
*The site is flat east/west (793') and elevation 450 to 460 north/south (440') therefore there are no **steep slopes** or and there are no significant **natural features** on the site.*

EXHIBIT 3

Gaffney Lane Elementary School

*Specific **approval criteria** are addressed in the following sections.*

II

Approval Criteria.

Chapter 17.56 CONDITIONAL USES

17.56.010 Permit--Authorization--Standards--Conditions.

. A conditional use permit listed in this section may be permitted, enlarged or altered upon authorization of the planning commission in accordance with the standards and procedures of this section. Any expansion to, alteration of, or accessory use to a conditional use shall require planning commission approval of a modification to the original conditional use permit.

A. The following conditional uses, because of their public convenience and necessity and their effect upon the neighborhood shall be permitted only upon the approval of the planning commission after due notice and public hearing, according to procedure as provided in Chapter 17.50.

The planning commission may allow a conditional use, provided that the applicant provides evidence substantiating that all the requirements of this title relative to the proposed use are satisfied, and demonstrates that the proposed use also **satisfies the following criteria**:

1. The **use is listed as a conditional use in the underlying district**;

Gaffney Lane Elementary School is located in an R8 Single Family Zone.

Chapter **17.10.00** R-10 Single Family Residential Zone

Section**17.10.030 Conditional uses.**

The following conditional uses are permitted in this district when authorized by and in accordance with the standards contained in Chapter 17.56:

B. Uses listed in Section **17.56.030**. (Prior code §11-3-3(B))

Section **17.56.030** Uses requiring conditional use permit.

R. Private and public schools;

2. The **characteristics of the site** are suitable for the **proposed use** considering **size, shape, location**, **topography**, existence of **improvements and natural features**;

*The **size** of the property is 793' by 440'= 349,000 square feet or eight (8) acres. The building coverage will be 56052 square feet or 16% of the site.*

*The **shape** is rectangular (1 to 2) and works quite well for a school.*

*The **location** functions well for an elementary school in this neighborhood and is expected to continue for the foreseeable future.*

*The **topography** is quite flat which provides good playgrounds.*

*The **improvements** are more than adequate for the proposed expansion.*

Gaffney Lane Elementary School

*There are no **natural features** that affect the use or development of this proposal.*

3. The **site and proposed development are timely**, considering the adequacy of transportation systems, public facilities and services existing or planned for the area affected by the use;

The proposal is timely for the school district in that the space could be used at present. The proposal is timely considering the adequacy of the transportation systems, public facilities and services now in place and being used by the school. The engineering consultants indicate this expansion is compatible with the existing systems. This concern will be treated more thoroughly in the design review process.

4. The proposed use **will not alter the character of the surrounding area** in a manner which substantially limits, impairs or precludes the use of surrounding properties for the primary uses listed in the underlying district;

The use is already established and adequate buffer areas exist, so the proposed expansion will not compromise the surrounding uses.

5. The proposal **satisfies the goals and policies of the city comprehensive plan**, which apply to the proposed use.

The Comprehensive Plan in the Education section of the Community Facilities Goals and Policies says:

"Oregon City will coordinate with the Oregon City School District to encourage that school sites are located within the Urban Growth Boundary and subdivision proposals are reviewed for impact on the school system."

The school is within the UGB. It is recognized that the City and District have worked in concert to locate of the present school campuses and this cooperation has ensured that the placement and size of existing school sites provide adequate urban services and space for future growth.

III

17.56.040 Criteria and standards for conditional uses.

In addition to the standards listed herein in Section 17.56.010, which are to be considered in the approval of all conditional uses and the standards of the zone in which the conditional use is located, the following additional standards shall be applicable:

E. Schools.

The site must be **located to best serve the intended area**,

The site location is established

must be in **conformance with the city plan,**

Gaffney Lane Elementary School

The Oregon City Comprehensive Plan says:
"Oregon City will coordinate with the Oregon City School District to encourage that school sites are located within the Urban Growth Boundary and subdivision proposals are reviewed for impact on the school system."

The School and proposed addition are within the Urban Growth Boundary.

must have **adequate access**,

There are two access points on Gaffney Lane which fronts the School for 440 feet.

must be in accordance with appropriate **State standards,**

Of course.

and must meet the following **dimensional standards**

In any zone,

1. Minimum lot area, twenty thousand square feet;
   The Gaffney Lane School lot area is 349,000 square feet.
2. Front yard setback, twenty-five feet;
   The minimum front yard setback will not change in this proposal.
3. Rear yard setback, twenty feet;
   The minimum rear yard setback will be *over 520 feet*
4. Side yard setback, twenty feet.
   The minimum side yard setback set by this expansion will be about 170 feet.

Neighborhood Association

The Oregon City School District has held meetings with the Neighborhood Association and with the Parent/Teacher groups for this attendance area of the past few years in anticipation of the Bond Issue.
During the period prior to the Bond Election last May meetings were held with the Neighborhood Association and other local interest groups to communicate how the money would be used. No attendance lists were kept for those meetings.
The elector of the School District voiced their approval of the additions and improvements by passing the Bond Issue.
Follow-up meetings with the Neighborhood Association will be held in the next four weeks.

Traffic

The Proposed addition is for a minimal addition to the existing school on this site. The site has adequate access and there ore no traffic problems in the neighborhood which relate to the school. This building addition will not generate any appreciable traffic increases at the site. No Traffic Impact Study was requested for this project.

ANALYSIS AND FINDINGS

The Gaffney Lane Elementary School proposes to expand their existing facility located at 13521 Gaffney Lane by approximately 5,052 square feet. The property is currently zoned R-10 and is surrounded mostly by R-10 zoning and some R-8.

The proposed site layout will use the existing ingress/egress on Gaffney Lane and add an additional 30 parking spaces.

The proposed site is large enough to adequately accommodate the proposed infrastructure.

The shape is conducive to the placement and functioning of the proposed use.

The existing use of this site for this type of use blends with other residential uses in the area.

There is a 14-inch City water line in Gaffney Lane.

An 8-inch City sanitary sewer line serves the site from Setera Circle.

Gaffney Lane is classified as a Collector street in the Oregon City Transportation Master Plan, which requires a right-of-way (ROW) width of 60 to 70 feet and a pavement width of 34 to 50 feet. Gaffney Lane appears to have a 60-foot wide ROW.

The site is relatively flat and will require minimal grading. The existing improvements will not restrict the proposed use.

A traffic study has not been provided to the City for review.

The City water quality and quantity requirements at this site have been postponed on the last school projects.

Conditions:

1. The applicant shall provide a 10-foot wide dedication along the property fronting Gaffney Lane.
2. The Applicant is responsible for this project's compliance to Engineering Policy 00-01 (attached). The policies pertain to any land use decision requiring the applicant to provide any public improvements.

EXHIBIT 5a

CITY OF OREGON CITY - PLANNING DIVISION
PO Box 3040 - 320 Warner Milne Road - Oregon City, OR 97045-0304
Phone: (503) 657-0891 Fax: (503) 657-7892

TRANSMITTAL

IN-HOUSE DISTRIBUTION
- ☐ BUILDING OFFICIAL
- ☑ ENGINEERING MANAGER
- ☐ FIRE CHIEF
- ☑ PUBLIC WORKS- OPERATIONS
- ☑ CITY ENGINEER/PUBLIC WORKS DIRECTOR
- ☑ TECHNICAL SERVICES (GIS)
- ☑ PARKS MANAGER

TRAFFIC ENGINEER
- ☐ JOHN REPLINGER @ DEA

MAIL-OUT DISTRIBUTION
- ☐ CICC
- ☐ NEIGHBORHOOD ASSOCIATION (N.A.) CHAIR
- ☐ N.A. LAND USE CHAIR
- ☑ CLACKAMAS COUNTY - Joe Merek
- ☐ CLACKAMAS COUNTY - Bill Spears
- ☐ ODOT - Sonya Kazen
- ☐ ODOT - Gary Hunt
- ☐ SCHOOL DIST 62
- ☑ TRI-MET
- ☐ METRO - Brenda Bernards
- ☐ OREGON CITY POSTMASTER
- ☐ DLCD

RETURN COMMENTS TO:

PLANNING PERMIT TECHNICIAN
Planning Department

COMMENTS DUE BY: March 30, 2001

HEARING DATE: April 23, 2001
HEARING BODY: Staff Review: ___ PC: X CC: ___

IN REFERENCE TO		
	FILE # & TYPE:	CU 01-05
	PLANNER:	Barbara Shields
	APPLICANT:	Milstead and Associates, Pete Daniels
	REQUEST:	An approximately 5,052 square foot addition, including four new classrooms and two restrooms to the Gaffney Lane Elementary School.
	LOCATION:	13521 Gaffney Lane, Clackamas County Map 3-2E-8BD, Tax Lot 4200

The enclosed material has been referred to you for your information, study and official comments. Your recommendations and suggestions will be used to guide the Planning staff when reviewing this proposal. If you wish to have your comments considered and incorporated into the staff report, please return the attached copy of this form to facilitate the processing of this application and will insure prompt consideration of your recommendations. Please check the appropriate spaces below.

____ The proposal does not conflict with our interests.

____ The proposal would not conflict our interests if the changes noted below are included.

____ The proposal conflicts with our interests for the reasons stated below.

____ *The following items are missing and are needed for completeness and review:*

SEE ATTACHED

Signed _____
Title PW OPS MGR

EXHIBIT 5b

MEMORANDUM

City of Oregon City

DATE: 3-14-01

TO: Joe McKinney, Public Works Operations Manager
SUBJECT: Comment Form for Planning Information Requests

File Number CU01-05

Name: 13521 Gaffney Lane

Water: Gaffney Lane Elementary School Addition of four new classrooms and two restrooms

Existing Water Main Size = _____

Existing Location= **No impact to existing H2O system**

Upsizing required? Yes____ No____ Size Required_____inch

Extension required? Yes____ No____

Looping required? Yes____ No____ Per Fire Marshall_____

From:_____

To:_____

New line size=_____

Backflow Preventor required? Yes X No____

Clackamas River Water lines in area? Yes____ No____

Easements Required? Yes____ No____

Recommended easement width_____ft.

Water Departments additional comments No____ Yes X Initial eli
03/21/2001

Consult Water Master Plan. The new additions should not have a dramatic impact to the existing water system. Fire flow testing was performed for the fire department recently. Their information may suggest otherwise. Of course, backflow devices should already be in place at the school.

Detention and treatment required? Yes____ No ✓

On site water resources: None known ✓ Yes____

Storm Department additional comments No ✓ Yes____ Initial CC.

Streets: GAFFNEY LANE

Classification:

Major Arterial_____ Minor Arterial_____

Collector X Local_____

Additional Right Of Way required? Yes_____ No_____

Jurisdiction:

City X County_____ State_____

Existing width = _____feet

Required width =_____feet

Roadway improvements? See Transportation System Plan

Bicycle Lanes required? Yes_____ No_____

Transit Street? Yes_____ No_____ Line No=_____

Street Department additional comments No____ Yes X Initial AS.

1. NO IMPACT TO ROADWAY WITH PROPOSED ACTION.

CITY OF OREGON CITY - PLANNING DIVISION
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TRANSMITTAL

IN-HOUSE DISTRIBUTION
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- ☐ METRO - Brenda Bernards
- ☐ OREGON CITY POSTMASTER
- ☐ DLCD

RECEIVED
CITY OF OREGON CITY
01 MAR 21 AM 8:01

RETURN COMMENTS TO:

PLANNING PERMIT TECHNICIAN
Planning Department

COMMENTS DUE BY: March 30, 2001

HEARING DATE: April 23, 2001
HEARING BODY: Staff Review: ___ PC: _X_ CC:__

IN REFERENCE TO	FILE # & TYPE:	CU 01-05
	PLANNER:	Barbara Shields
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___ The proposal does not conflict with our interests.

X The proposal would not conflict our interests if the changes noted below are included.

___ The proposal conflicts with our interests for the reasons stated below.

___ *The following items are missing and are needed for completeness and review:*

See Attached.

Signed Shelley Oleary, GLNA Land Use Chairperson
Title

EXHIBIT 5c

There are three areas of concern regarding the Gaffney Lane School addition.

1. We would like to see the traffic flow at the school entrance on Gaffney Lane improved.

2. Make sure that half-street improvements are made on the school side of Gaffney Lane. These would include curbs, sidewalks, street trees, and streetlights.

3. We would also like to see improvements made on the school side of McVey for parking at school and sports functions.

CITY OF OREGON CITY

ENGINEERING POLICY 00-01
Guidelines for Development

EFFECTIVE: April 10, 2000

PREPARED BY

COMMUNITY DEVELOPMENT DEPARTMENT

320 Warner-Milne Road

Post Office Box 3040

Oregon City, Oregon 97045-0304

Telephone: (503) 657-0891

Engineering Division

EXHIBIT 6

Applicability. This policy applies to applicants for land use decisions and site plan reviews with regard to providing public improvements, submittal of documentation, and . The following sections outline some of the important requirements and helpful hints for those unfamiliar with providing public improvements as required by the Oregon City Municipal Code and Oregon City Public Works Standards. This is not an all-inclusive list of City requirements and does not relieve the applicant from meeting all applicable City Code and Public Works Standards.

Availability of Codes and Standards. Copies of these City Codes and Standards are available at City Hall for a nominal price. Some engineering firms in the local metropolitan area already own these Codes and Standards to enable them to properly plan, design, and construct City projects.

General

- Applicants shall design and construct all required public works improvements to City Standards. These Standards include the latest version in effect at the time of application of the following list of documents: Oregon City Municipal Code, Water Master Plan, Transportation Master (System) Plan, Sanitary Sewer Master Plan, and the Drainage Master Plan. It includes the Public Works Design Standards, which is comprised of Sanitary Sewer, Water Distribution System, Stormwater and Grading, and Erosion Control. This list also includes the Street Work Drawings, Appendix Chapter 33 of the Uniform Building Code (by reference), and the Site Traffic Impact Study Procedures. It may also include the City of Oregon City Review Checklist of Subdivision and Partition Plats when the development is a Subdivision, Partition, or Planned Unit Development.

Water (Water Distribution System Design Standards)

- The applicant shall provide water facilities for their development. This includes water mains, valves, fire hydrants, blow-offs, service laterals, and meters.
- All required public water system improvements shall be designed and constructed to City standards.
- The Fire Marshall shall determine the number of fire hydrants and their locations. Fire hydrants shall be fitted with a Storz metal face adapter style S-37MFL and cap style SC50MF to steamer port. This adapter is for a 5-inch hose. All hydrants to be completed, installed, and operational before beginning structural framing. Hydrants shall be painted with Rodda All-Purpose Equipment Enamel (1625 Safety Orange Paint) and all chains shall be removed from the fire hydrants.
- Backflow prevention assemblies are required on all domestic lines for commercial buildings, all fire service lines, and all irrigation lines. Backflow prevention assemblies are also required on residential domestic lines greater than or equal to 2-inch diameter. These assemblies are also required where internal plumbing is greater than 32 feet above the water main. The type of backflow prevention device required is dependent on the degree of hazard. City Water Department personnel, certified as cross connection inspectors, shall determine the type of device to be installed in any specific instance. All

backflow prevention devices shall be located on the applicant's property and are the property owner's responsibility to test and maintain in accordance with manufacturer's recommendations and Oregon statutes.

- The applicant shall verify that there are no wells on site, or if any wells are on the site prior to connecting to the public water system, the applicant shall:
  - Abandon the well per Oregon State requirements and provide copies of the final approval of well abandonment to the City; or
  - Disconnect the well from the home and only use the well for irrigation. In this case, the applicant shall install a back flow preventor on the public service line. The applicant shall also coordinate with the City water department to provide a cross connection inspection before connecting to the public water system.

Sanitary Sewer (Sanitary Sewer Design Standards)

- The applicant shall provide sanitary sewer facilities to their development. This includes gravity mains, manholes, stub outs, and service laterals.
- All required public sanitary sewer system improvements shall be designed and constructed to City standards.
- Applicant must process and obtain sanitary sewer system design approval from DEQ.
- Any existing septic system on site shall be abandoned and certification documentation provided from Clackamas County before recording the plat or obtaining a certificate of occupancy.

Stormwater (Stormwater and Grading Design Standards)

- The applicant shall provide stormwater and detention facilities for their development. This includes the stormwater mains, inlets, manholes, service laterals for roof and foundation drains, detention system if necessary, control structure if necessary, inflow and outflow devices if necessary, and energy dissipaters if necessary.
- The applicant shall design and construct required public stormwater system improvements to City standards. Each project is to coordinate with the City Drainage Master Plan, the Public Works Stormwater and Grading Standards, and the appropriate individual Basin Master Plan (if adopted) and incorporate recommendations from them as directed.
- The applicant shall design the stormwater system to detain any increased runoff created through the development of the site, as well as convey any existing off-site surface water entering the site from other properties.
- The applicant shall submit hydrology/detention calculations to the City Engineering Division for review and approval before approval of construction plans. The applicant shall provide documentation to verify the hydrology and detention calculations. The applicant shall show the 100-year overflow path and shall not design the flow to cross any developed properties.

Dedications and Easements

- The applicant shall obtain and record all off-site easements required for the project before City approval of construction plans.

Streets

- The applicant shall provide street facilities to their site including within the site and on the perimeter of the site where it borders on existing public streets. This includes half- and full-street width pavement as directed, curbs, gutters, planter strips or tree wells as directed, street trees, sidewalks, and bicycle lanes (when required by the type of street classification). This also includes city utilities (water, sanitary and storm drainage facilities), traffic control devices, centerline monumentation in monument boxes, and street lights in compliance with the City Code for Oregon City and its various Master Plans. Half-street improvements include an additional 10-foot wide pavement past the centerline subject to City review of existing conditions.
- After installation of the first lift of asphalt, applicant shall provide asphalt berms or another adequate solution, as approved by the City Engineering Division, at storm catch basins or curb inlets on all streets. This ensures positive drainage until the applicant installs the second lift of asphalt.
- All street names shall be reviewed and approved by the City (GIS Division 657-0891, ext.168) prior to approval of the final plat to ensure no duplicate names are proposed in Oregon City or the 9-1-1 Service Area.
- All street improvements shall be completed and temporary street name signs shall be installed before issuance of building permits.
- The applicant is responsible for all sidewalks in their development. The applicant may transfer the responsibility for the sidewalks adjacent to the right-of-way as part of the requirement for an individual building permit on local streets. However, failure to do so does not waive the applicant's requirement to construct the sidewalks. Applicant shall complete sidewalks on each residential lot within one year of City acceptance of public improvements for the project (e.g.; subdivision, partition, or Planned Unit Development) unless a building permit has been issued for the lot.
- Applicant shall install sidewalks along any tracts within their development, any pedestrian/bicycle accessways within their development, along existing homes within the development's property boundaries, and all handicap access ramps required in their development at the time of street construction.
- Street lights shall typically be owned by the City of Oregon City under PGE plan "B" and installed at the expense of the applicant. The applicant shall submit a street light plan, subject to City and PGE approval, prepared by a qualified electrical contractor. Streetlights shall be placed at street intersections and along streets at property lines. The required lights shall be installed by a qualified electrical contractor. Streetlights are to be spaced and installed per recommendations of the Illuminating Engineering Society of North America as published in their current issue of IES, RP-8 to provide adequate lighting for safety of drivers, pedestrians, and other modes of transportation. Streetlights shall be 100-watt high-pressure sodium fixtures mounted on fiberglass poles with a

25-foot mounting height unless otherwise specified. The applicant shall dedicate any necessary electrical easements on the final plat. All streetlights and poles shall be constructed of material approved by PGE for maintenance by PGE.

Grading And Erosion Control

- The applicant's engineer shall submit rough grading plan with construction plans. The engineer shall certify completed rough grading elevations to +/- 0.1 feet. For single family residential developments, a final residential lot-grading plan shall be based on these certified grading elevations and approved by the City Engineer before issuance of a building permit. If significant grading is required for the residential lots due to its location or the nature of the site, rough grading shall be required of the developer before the acceptance of the public improvements. (See Geotechnical section for cut and fill certification issues on building lots or parcels) There shall not be more than a maximum grade differential of two (2) feet at all site boundaries. Final grading shall in no way create any water traps, or create other ponding situations. Submit one copy (pertinent sheet) of any residential lot grading for each lot (e.g., 37 lots equals 37 copies).
- Applicants shall obtain a DEQ 1200c permit when their site clearing effort is over five (5) acres, as modified by DEQ. Applicant shall provide a copy of this permit to the City before any clearing efforts are started.
- An Erosion Prevention and Sedimentation Control Plan shall be submitted for City approval. Applicant shall obtain an Erosion Control permit before any work on site.
  - Dewatering excavations shall not be allowed unless the discharge water meets turbidity standards (see next bullet) or is adequately clarified before it enters on-site wetlands, drainage courses, and before it leaves the site. Discharge from man-made, natural, temporary, or permanent ponds shall meet the same standard.
  - Construction activities shall not result in greater than 10 percent turbidity increase between points located upstream and downstream of construction activities.
  - Effective erosion control shall be maintained after subdivision site work is complete and throughout building permit issuance.
  - Plans shall document erosion prevention and control measures that will remain effective and be maintained until all construction is complete and permanent vegetation has been established on the site.
  - Responsible party (site steward) for erosion control maintenance throughout construction process shall be shown on the Erosion Control Plan.
  - Staff encourages applicant to select high performance erosion control alternatives to minimize the potential for water quality and fish habitat degradation in receiving waters.

Geotechnical

- Any structural fill to accommodate public improvements shall be overseen and directed by a geotechnical engineer. The geotechnical engineer shall provide test reports and certification that all structural fill has been placed as specified and provide a final

summary report to the City certifying all structural fill on the site before City approval and acceptance of public improvements.

- Any cut or fill in building lots or parcels beyond the rough grading shall be subject to the Building Division's requirements for certification under the building permit.

Engineering Requirements

- Design engineer shall schedule a pre-design meeting with the City of Oregon City Engineering Division before submitting engineering plans for review.
- Street Name/Traffic Control Signs. Approved street name signs are required at all street intersections with any traffic control signs/signals/striping.
- Applicant shall pay City invoice for the manufacture and installation of permanent signs for street names and any traffic control signs/signals/striping.
- Bench Marks. At least one benchmark based on the City's datum shall be located within the subdivision.
- Other Public Utilities. The applicant shall make necessary arrangements with utility companies for the installation of underground lines and facilities. The City Engineer may require the applicant to pay these utility companies to use trenchless methods to install their utilities in order to save designated and marked trees when the utility crosses within a dripline of a tree marked, or identified, to be saved. Applicant to bear any additional costs that this may incur.
- Technical Plan Check and Inspection Fees. The current Technical Plan Check and Inspection Fee shall be paid before approval of the final engineering plans for the required site improvements. The fee is the established percentage of a City-approved engineer's cost estimate or actual construction bids as submitted by the applicant. Half of the fee is due upon submitting plans for final approval; the other half is due upon approval of the final plans.
- It is the City's policy that the City will only provide spot check inspection for non public-funded improvements, and the applicant's engineer shall provide inspection and surveying services necessary to stake and construct the project and prepare the record (as-built) drawings when the project is complete.
- Applicant shall submit two (2) sets of final engineering plans for initial review by the City Engineering Division to include the drainage report (wet signed by the responsible engineer), and the cost estimate with half of the Technical Plan Check fee. The engineering plans shall be blackline copies, 24" x 36". Blueline copies are not acceptable.
- For projects such as subdivisions, partitions, and Planned Unit Developments, the applicant shall submit a completed copy of the City's latest final subdivision and partition plat checklist, and a paper copy of the preliminary plat.
- Two (2) copies of any revised documents (in response to redlined comments) will be required for subsequent reviews, if necessary.
- The applicant shall submit, for the final City approval, six (6) copies of the plans with one full set wet signed over the engineer's Professional Engineer Oregon stamp.

- Minimum Improvement Requirements. Applicant shall provide a surety on land division developments for uncompleted work before a plat is recorded as required by a Land Division Compliance Agreement (available in hard copy or electronic version from City Engineer office). This occurs if the applicant wishes to record the final plat before completion of all required improvements. Surety shall be an escrow account or in a form that is acceptable to the City Attorney.
- Upon conditional acceptance of the public improvements by the City, the applicant shall provide a two-year maintenance guarantee as described in the Land Division Compliance Agreement. This Maintenance Guarantee shall be for fifteen (15) percent of the engineer's cost estimate or actual bids for the complete public improvements.
- The applicant shall submit a paper copy of the record (as-built) drawings, of field measured facilities, to the City Engineer for review before building permits are issued beyond the legal limit. Upon approval of the paper copy by the City Engineer, applicant shall submit a bond copy set and two 4-mil mylar record drawings sets.
- The applicant shall submit one full set of the record (as-built) drawings, of field measured facilities, on AutoCAD files on CD-ROM or 3.5-inch diskette, in a format acceptable to the City Engineer, and include all field changes.
- One AutoCAD file of the preliminary plat, if applicable, shall be furnished by the applicant to the City for addressing purposes. A sample of this format may be obtained from the City Geographical Information System Division. This information, and documents, shall be prepared at the applicant's cost.
- The applicant's surveyor shall also submit, at the time of recordation, a copy of the plat on a CD-ROM or 3.5-inch diskette to the City in a format that is acceptable to the City's Geographic Information System Division.
- The City reserves the right to accept, or reject, record drawings that the City Engineer deems incomplete or unreadable that are submitted to meet this requirement. The applicant shall be responsible for all costs associated with meeting this condition. The applicant shall ensure their engineer submits the record drawings before the City will release final surety funds or residential building permits beyond the legal limit.
- Final Plat Requirements, if applicable. The final plat shall comply with ORS 92.010 through 92.190, and City Code. In addition the following requirements shall be required:
  - The applicant, and their surveyor, shall conform to the City's submittal and review procedures for the review and approval of plats, easements, agreements, and other legal documents associated with the division of this parcel.
  - Show the City Planning File Number on the final plat, preferably just below the title block.
  - A blackline copy of the final plat illustrating maximum building envelopes shall be submitted to the Planning Division concurrently with submittal of the plat to ensure setbacks and easements do not conflict.
  - Use recorded City control surveys for street centerline control, if applicable.
  - Tie to City GPS Geodetic Control Network, County Survey reference PS 24286, and use as basis of bearings. Include ties to at least two monuments, show measured versus record, and the scale factor. Monuments may be either GPS stations or other monuments from prior City control surveys shown on PS 24286. If ties are to prior

City control surveys, monument ties shall be from the same original control survey. The tie to the GPS control can be part of a reference boundary control survey filed for the land division.

- Show state plane coordinates on the Point of Beginning.

- The civil construction drawings, once approved by the City Engineering Division, shall have an approval period of one year in which to commence with construction. The plans and drawings shall be valid, once the City Engineer holds the preconstruction conference and construction activity proceeds, for as long as the construction takes. If the construction drawings expire before construction commences, the applicant shall ensure the civil construction documents and plans conform to the latest Standards, Specifications, and City Codes that are in place at the time of the update. The applicant shall bear the cost associated with bringing them into conformance, including additional technical plan check and review costs.
- The applicant shall include a statement in proposed Conditions, Covenants, and Restrictions (CC & R's), plat restrictions, or some other means acceptable to the City Attorney for:
  - Maintaining surface runoff patterns established for each lot,
  - Maintaining any proposed private storm lines or detention, and
  - Conformance by individual lot owner to the City's erosion control standards when establishing or renovating landscaping.
  - The applicant shall submit the proposed method and statement to the Planning staff for review and approval, before final plat approval.
- Construction vehicles and other vehicles associated with the development shall only use the entrance as approved by the City Engineering Division to enter their site and these vehicles shall park or wait on the construction site. The applicant should provide a specified area of off street parking for the site's construction workers which meets the erosion/sedimentation control measures. Supplier vehicles and trailers (hauling vehicles) and actual construction vehicles shall not park, or wait, in such a manner that would block or hinder access for emergency vehicles. This includes private vehicles belonging to construction workers, supplier vehicles and trailers, and actual construction vehicles.
- Site construction activity is to only occur between 7:00 AM and 6:00 PM on Monday through Friday; between 9:00 AM and 6:00 PM on Saturday. No site improvement construction activity is allowed on Sunday. Construction activity includes all field maintenance of equipment, refueling, and pick up and delivery of equipment as well as actual construction activity.
- The applicant shall ensure that all applicable outside agencies are contacted and any appropriate approvals obtained for the construction of the project. The applicant shall supply copies of approvals to the City. Failure to do so shall be a justification for the City to prevent the issuance of a construction or building permit or to revoke an issued permit for this project.
- The applicant shall be responsible for paying all fees associated with the recording of documents such as non-remonstrance agreements, easements, and dedications.
- Should the applicant, or any assigns or heirs, fail to comply with any of the conditions set forth here, the City may take the appropriate legal action to ensure compliance. The

applicant shall be responsible for any City legal fees and staff time associated with enforcing these conditions of approval.

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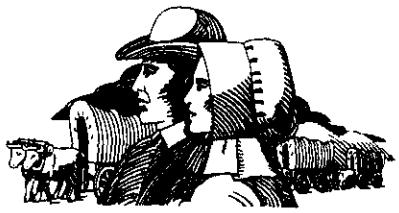
CITY OF OREGON CITY

PLANNING COMMISSION

320 WARNER MILNE ROAD OREGON CITY, OREGON 97045
TEL 657-0891 FAX 657-7892



STAFF REPORT
Date: April 16, 2001

Complete: March 7, 2001
120-Day: July 5, 2001

FILE NO.: Conditional Use CU 01-06

HEARING DATE: April 23, 2001
7:00 p.m., City Hall
320 Warner Milne Road
Oregon City, OR 97045

APPLICANT/ OWNER: Oregon City School District
1417 12th Street
Oregon City, OR 97045

REQUEST: Conditional use to expand the existing McLoughlin Elementary School, including a 5000-square feet classroom addition and 29 parking spaces

LOCATION: 19230 South End Road (Exhibit 2)
Clackamas County Map 3S-1E-12AC, Tax Lot 4400

REVIEWER: Barbara Shields, Senior Planner
Dean Norlin, Senior Engineer

RECOMMENDATION: **Staff recommends approval of CU 01-06, subject to conditions (Exhibit 1)**

CRITERIA:

Municipal Code:
Section 17.08 R-10 Single-Family Dwelling
Section 17.50 Administration and Procedures
Section 17.52 Off-Street Parking and Loading
Section 17.56 Conditional Uses

SUMMARY OF ISSUES:

Scope of the Request:
The Oregon City School District is requesting a conditional use to expand the existing McLoughlin Elementary School complex. The proposed expansion would consist of an approximately 5,000-square feet addition and 29 parking spaces.

The subject property is located east of South End Road. The westerly portion of the site is occupied by an 49,000-square foot school building and 71 parking spaces. The proposed expansion would enlarge the building floor area by approximately 11% and number of parking spaces by approximately 40%.

Summary of Analysis:

In general, a scope of a conditional use review is to assure that the proposed use may be allowed in a specific location upon showing that (1) such use will not adversely impact the site conditions or the areas surrounding the subject property; or (2) appropriate conditions of approval may be considered to mitigate the identified negative impacts of the proposed use.

Based on the analysis contained below, in this report, (1) no significant impacts to the abutting properties will occur as a result of the proposed expansion; (2) certain elements of internal pedestrian circulation and landscaping need to be improved on the school site to mitigate the impacts associated with the proposed expansion.

The proposal will satisfy the criteria for a conditional use permit, as provided in Oregon City Municipal Code (OCMC 17.56) when the recommended conditions of approval (Exhibit 1) are met.

Conditional Use versus Site Plan and Design Review

While a focus of a conditional use permit review is primarily on the use and its compatibility with the surrounding properties, the objective of the City's site plan and design review process is to assure that the actual development complies with the applicable development standards and implements the identified mitigation measures (conditions) of the proposed use.

Following the conditional use permit analysis and approval, the applicant needs to file and obtain a site plan and design review permit approval. The site plan and design review process

does not require a public hearing and is reviewed separately, as an administrative type of review (Type II permit), with a decision issued by the Planning Manger.

BASIC FACTS:

1. Mcloughlin Elementary School is located on an approximately 11.7-acre site, east of South End Road (Exhibit 2). The existing school complex contains approximately 49,000 square feet with 71 parking spaces located in the westerly portion of the site.

2. The proposed expansion of the existing school complex consists of a 5,000-square feet addition and 29 parking spaces (Exhibits 4 and 5). The proposed addition would accommodate three classrooms, one resource room, and two bathrooms.

3. The City and the school district are currently involved in reviewing a feasibility study of the joint use of the McLoughlin School site (L01-03). The goal of the study was to ascertain the physical requirements of both the district's and the City's use of the site and to determine if the site can accommodate both uses.

   A joint use agreement between the school district and the City will be needed that specifically defines the uses, the physical improvements and management of a portion of the McLoughlin Elementary School site as a public use recreation area managed by the Oregon City Parks and Recreation Department.

4. The subject site is flat, with an average slope less than 1%. The westerly and middle portions of the site are within a Water Resource Overlay District. The school district filed Water Resource application to determine the impact of the proposed addition on the identified Water Resource Overlay District (WR00-07).

6. The site is zoned R-10 Single Family Residential Dwelling. Schools are allowed as conditional uses in the R-10 Single Family Residential District (OCMC 17.08.030) and subject to Chapter OCMC 17.56 requirements.

5. The majority of the surrounding areas to the north and northwest and east of the subject property are residential subdivisions, zoned either R-8 or R-10. The majority of the surrounding areas to the southwest and south of the subject property are larger acreage rural subdivisions, which have been developed using Clackamas County standards.

6. Transmittals on the proposal were sent to various City departments, affected agencies, property owners within 300 feet, and the South End Neighborhood Association.

   Staff received comments from City Engineering (Exhibit 6a), City Public Works Department (Exhibit 6b), and the Southend Neighborhood Association (Exhibit 6c). Submitted comments are analyzed and incorporated into the analysis and findings section below.

ANALYSIS AND FINDINGS:

I. 17.56 Conditional Uses

1. **Criterion (1): The use is listed as a conditional use in the underlying district.**

The site is zoned R-10, Single-Family Residential. Schools are allowed as conditional uses in the R-10 District (OCMC 17.08.030) and subject to OCMC 17.56 requirements.

Therefore, staff finds that this criterion is satisfied.

2. **Criterion (2): The characteristics of the site are suitable for the proposed use considering size, shape, location, topography, existence of improvements and natural features.**

As discussed earlier in this report, the proposed expansion affects the already developed site. The existing school use was originally approved by Clackamas County in 1973.

The subject property is flat and rectangular in size. The school district filed a Water Resource request to determine the presence and boundaries of the Water Resource Vegetative corridor on the subject property.

In general, with regards to the existing size, shape, natural features, and topography, the characteristics of the site are suitable to accommodate the proposed expansion (Exhibits 6a and 6b).

The Engineering Division and the Public Works Division evaluated the proposal and concluded that the existing water and sewer facilities are adequate to accommodate the proposed expansion. An analysis of the existing and needed transportation facilities is contained in the Engineering Division comments (Exhibit 6a) and below, in response to Criterion 3.

Based on the above analysis, staff concludes that this criterion will be satisfied by complying with Conditions # 1, 2, and 3 (Exhibit 1).

3. **Criterion (3): The site and proposed development are timely, considering the adequacy of transportation systems, public facilities and services existing or planned for the area affected by the use.**

The proposal was evaluated by utility providers (Exhibit 6a and 6b).

The Engineering Division and the Public Works Department indicate that the existing water and sewer facilities are adequate to accommodate the proposed use.

However, an analysis of the existing transportation system, including vehicle and pedestrian circulation facilities, indicates that the adequacy of the pedestrian circulation system needs further examination to determine the impact of the proposed expansion on the subject property and the surrounding areas.

South End Road Frontage. The existing school site is located on South End Road. No changes to the existing ingress/egress are proposed as part of this extension. South End Road is classified as a minor arterial in the Oregon City Transportation Plan. The required right-of-way for a minor arterial is between 60 to 80 feet. The existing right-of-way of South End Road along the school site frontage is 60 feet. An additional 10 feet of right-of-way is required in order to comply with the Transportation Plan. As indicated in the Engineering Division comments (Exhibit 6a), there is no sidewalk along the property frontage on Central Point Road. A sidewalk along the property frontage on South End Road needs to be installed to assure safe access for students walking to school from the surrounding residential areas.

Site Internal Pedestrian Circulation System. The easterly and middle portions of the school site contain a fitness trail running along the north, west and south boundaries of the site (Exhibit 2). The existing fitness trail can be accessed from the surrounding residential subdivisions through three pedestrian walkways. As a result, given the location and access the McLoughlin School site, the existing fitness trail may be utilized as a recreational facility by the residents in the vicinity of the site and school students who choose to walk to school.

As indicated in the letter from the South End Neighborhood Association, the proposed parking extension along the southerly boundary of the school site (Exhibits 2, 5, and 6c) would affect the fitness trail and the pedestrian walkway off Salmonberry Drive, which is used by students entering the school site from the south. Consequently, any extension of the parking facilities into this area would create a conflict with the car circulation and pedestrian movement on the fitness trail and walkway off Salmonberry Drive.

Therefore, in order to mitigate the potential negative impacts created by the proposed parking extension, both pathway segments needs to be relocated to avoid crossing the parking area and to separate the pedestrian movement from the interior parking circulation (Exhibit 7).

Based on above analysis, staff concludes that in order to comply with this criterion, the applicant needs to comply with Conditions # 1, 2, and 3 (Exhibit 1).

4. **Criterion (4): The proposed use will not alter the character of the surrounding area in a manner which substantially limits, impairs or precludes the use of surrounding properties for the primary uses listed in the underlying district.**

As previously discussed in this report, the proposed expansion would increase the building floor area by approximately 11% and the parking area by approximately 40%.

Based on the information provided by the applicant, it appears that the proposed extension would not significantly impair or preclude the use of the surrounding residential properties for their primary residential purposes.

Therefore, staff finds that this criterion is satisfied.

5. **Criterion (5): The proposal satisfies the goals and policies of the city comprehensive plan, which apply to the proposed use.**

The Oregon City Comprehensive Plan contains the following applicable goals and policies:

"Encourage citizen participation in all functions of government and land-use planning." (Citizen Involvement Goals and Policies, Policy 4).

The public hearing was advertised and noticed as prescribed by law to be heard by the Planning Commission on April 23, 2001. The public hearing will provide an opportunity for comment and testimony from interested parties.

"Oregon City will coordinate with the Oregon City School District to encourage that school sites are located within the Urban Boundary and subdivision proposals are reviewed for impact on the school system..." (Community Facilities Goals and Policies, Health and Education, Policy 2).

The proposed extension involves an existing school that is already located within the Urban Growth Boundary.

Therefore, staff finds that this criterion is satisfied in that this proposal satisfies the applicable goals and policies of the Oregon City Comprehensive Plan.

In addition to the standards listed in Section 17.56.010, which are to be considered in the approval of all conditional uses and the standards of the zone in which the conditional use is located, the following additional standards for schools shall be applicable (17.56.040.F.):

The site must be located to best serve the intended area, must be in conformance with the city plan, must have adequate access, must be in accordance with appropriate State standards, and must meet the following dimensional standards:

1. Minimum lot area, twenty thousand square feet;
2. Front yard setback, twenty-five feet;
3. Rear yard setback, twenty feet;
4. Side yard setback, twenty feet.

The proposed expansion pertains to the already developed school site within the Urban Growth Boundary and established access from the South End Road frontage. The existing fitness trail, pedestrian walkway off Salmonberry Drive, and the proposed parking expansion need to be modified to assure safe pedestrian access to the school site. The submitted site plan indicates (Exhibit 5) that the required setbacks are met.

Based on the above analysis, staff finds that the applicant can satisfy this standard (OCMC 17.56.040.F) by meeting Conditions # 1, 2, and 3.

CONCLUSION AND RECOMMENDATION:

Based on the analysis and findings presented in the report, staff concludes that the proposed Conditional Use CU 01-06 can satisfy the requirements as described in the Oregon City Municipal Code for Conditional Use Permits, Chapter 17.56, if the recommended conditions of approval are met (Exhibit 1).

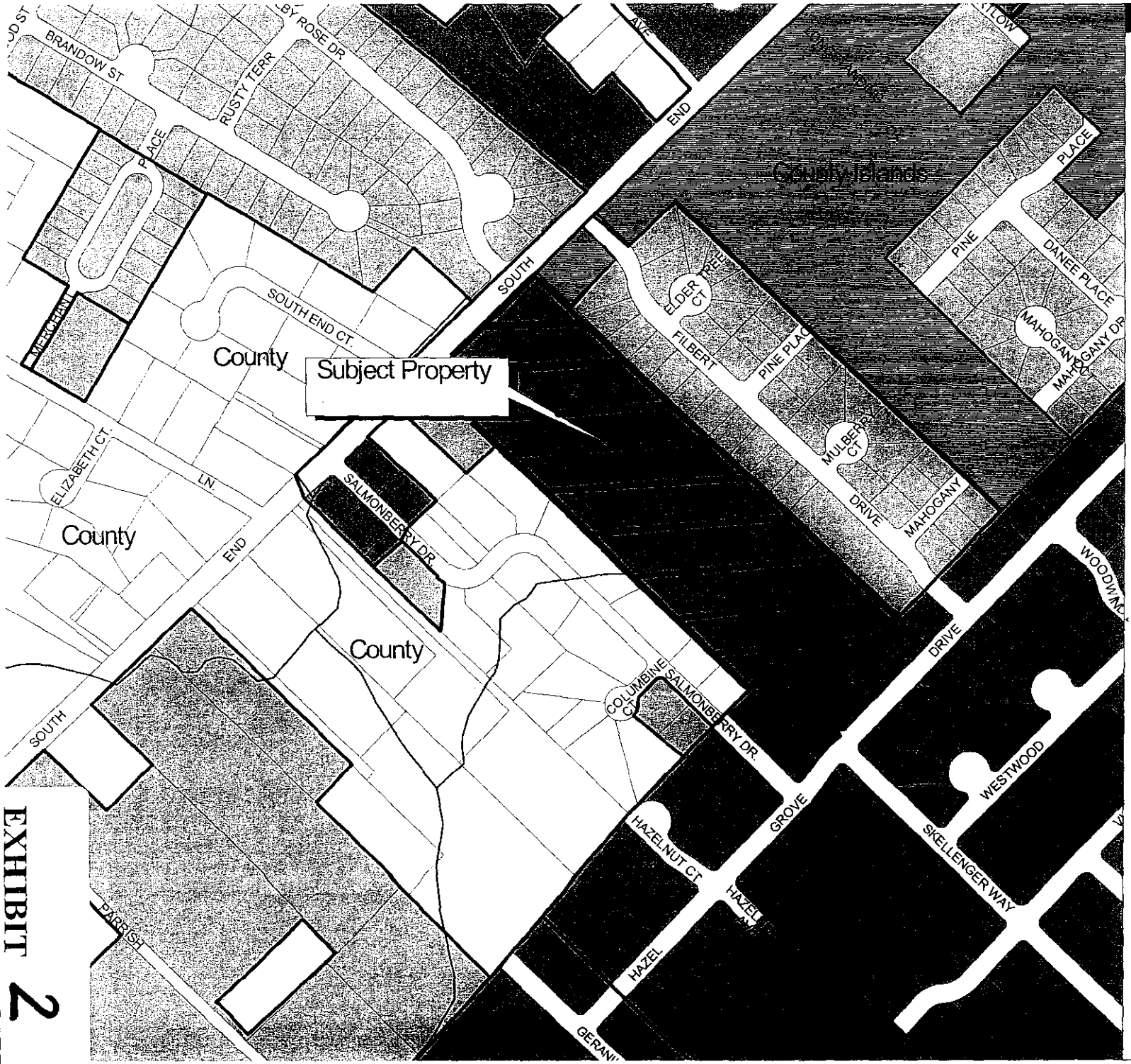
Based on the findings of fact, staff recommends the Planning Commission approve Conditional Use Permit, CU 01-06, with conditions (Exhibit 1) affecting the property identified as Clackamas County Map 3S-1E-12AC, Tax Lot 4400.

EXHIBITS:

1. Recommended Conditions of Approval
2. Vicinity Map
3. Site Plan, Existing School Facilities
4. Applicant's Narrative
5. Applicant's Site Plans
6. Agency Comments
   a. City Engineering
   b. Public Works
   c. Letter from Southend Neighborhood Association
7. Recommended Modifications to Pedestrian Circulation
8. Engineering Policy 00-01

CONDITONS OF APPROVAL

1. The applicant shall provide a 10-foot wide dedication along the property fronting South End Road.
2. The applicant is responsible for this project's compliance to Engineering Policy 00-01 (Exhibit 8).
3. The applicant shall modify the pedestrian circulation plan by incorporating the following elements:
   a) The existing fitness trail shall be relocated east of the proposed parking extension along the southerly boundary of the subject property (Exhibit 7). At a minimum, a 5 feet wide and 4 feet high landscaped buffer shall be established along the westerly boundary of the proposed parking extension and the relocated segment of the fitness trail.
   b) The existing pedestrian walkway connecting Salmonberry Drive and the boundary of the school property shall be extended to the school entrance. In any case, the pedestrian walkway extension shall not cross the proposed parking extension.
   c) At a minimum, a 5 feet wide and 4 feet high landscaped buffer shall be established along the westerly and southerly boundary of the proposed parking extension located south of the proposed school building extension (Exhibit 7).



City of Oregon City

GEOGRAPHIC INFORMATION SYSTEM

Vicinity Map

McLoughlin Elementary

0 50 100 150 200 250 Feet

MAP FOR REFERENCE PURPOSES ONLY.
The information on this map is derived from Oregon City's digital database. However, there may be map errors or omissions. Please contact Oregon City directly to verify map information. Notification of any errors will be appreciated.

City of Oregon City
320 Warner Milne Road | Oregon City, Oregon 97045
503 657-0891

EXHIBIT 2

Plot date: Apr 3, 2001; g:\gisusers\searlc\zone.apr

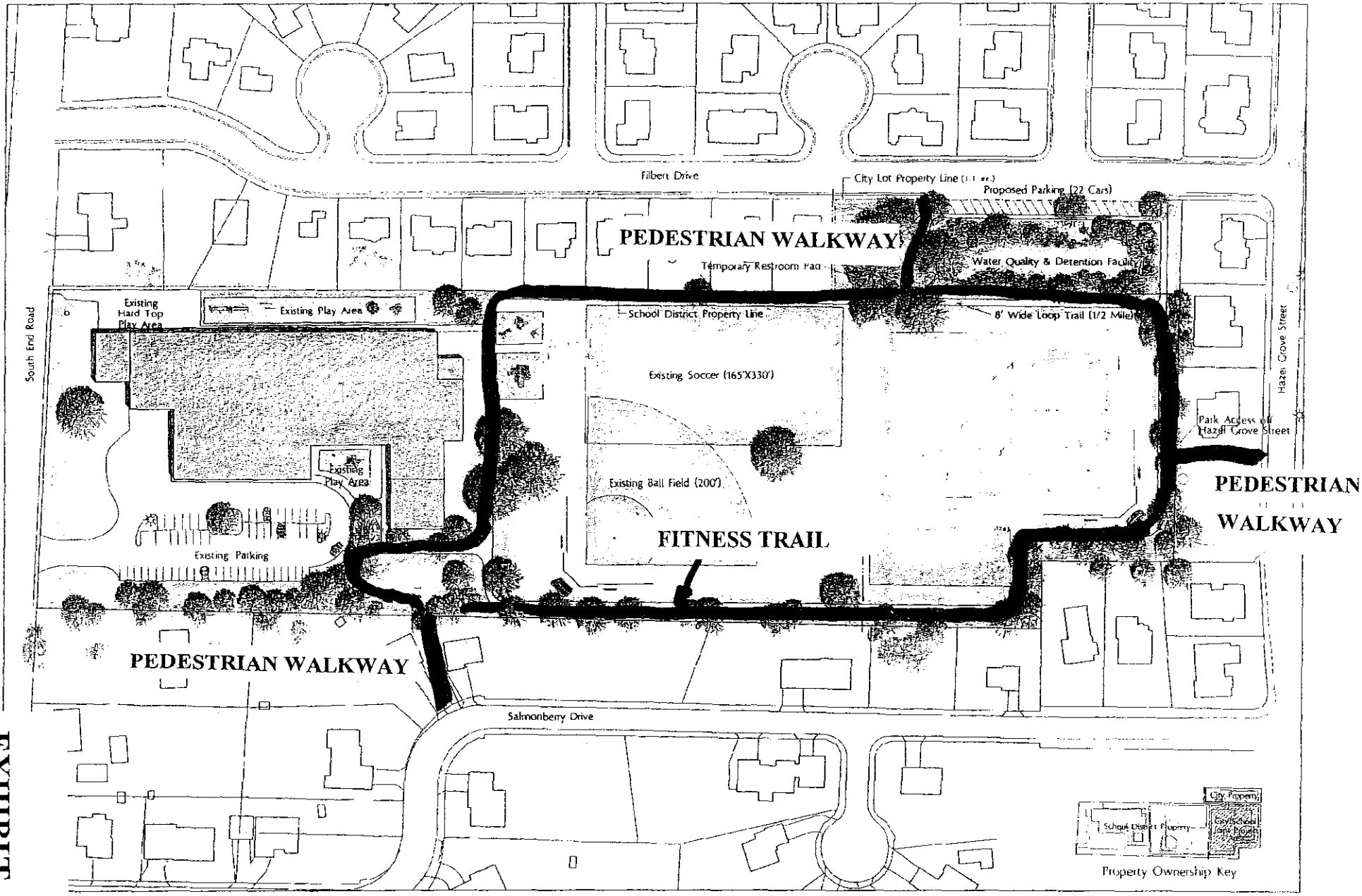

Filbert Drive
City Lot Property Line
Proposed Parking (22 Cars)
PEDESTRIAN WALKWAY
Temporary Restroom Pad
Water Quality & Detention Facility
Existing Hard Top Play Area
Existing Play Area
School District Property Line
8' Wide Loop Trail (1/2 Mile)
South End Road
Existing Soccer (165'X330')
Hazel Grove Street
Park Access on Hazel Grove Street
Existing Play Area
Existing Ball Field (200')
PEDESTRIAN WALKWAY
FITNESS TRAIL
Existing Parking
PEDESTRIAN WALKWAY
Salmonberry Drive
City Property
School District Property
City/School Joint Property
Property Ownership Key
SCALE 1" = 40'

EXHIBIT 3

McLoughlin Elementary School
Conditional Use Application
for Addition and retrofit
Zone R10

Narrative:

The Oregon City School District asked the district voters to approve a bond measure for adding classrooms, repairing wear and tear damage, and to improve accessibility, energy use and seismic resistant construction. The voters agreed the work was needed. Part of the process is to secure conditional use approval on the various projects.
In this narrative City Ordinance quotes are in vertical type face and the proposer discussions are in italics. Some section requirements may overlap, but each will be discussed individually.

Summary

*The **McLoughlin Elementary School** addition proposal is for three new class rooms, a resource room and two new restrooms, as well as the required retrofits mentioned above. The building area will be increased by 5000 square feet. The building is presently 49,000 square feet, so the addition represents about a 10.8% increase in floor area.*

I
Title 17 Zoning
under **Chapter 17.50 Administration and Procedures** *and under*
Section 17.50.080 Complete application
Subsection D says:
D. A complete and detailed narrative description of the proposed development that describes **existing site conditions**, **existing buildings**, **public facilities** and **services**, presence of **wetlands**, **steep slopes** and other **natural features**, a discussion of the **approval criteria** for all permits required for approval of the development proposal that explains how the criteria are or can be met, and any other information indicated by staff at the pre application conference as being required;

*The **existing site** conditions are: mostly grass playgrounds, buildings and parking areas on a relatively flat site.*
*The **existing building** is a school which was approved for a conditional use in Clackamas County July 1973*
*The public facilities: **sewer, water, storm sewer** and **power** are all of adequate for the existing school and site design will investigate the addition requirements.*
*The site has been used as a school playground for the last 29 years with no **wetland** problems.*

EXHIBIT 4

McLoughlin Elementary School

The site is flat with less than a 1% slope therefore there are no ***steep slopes*** *and there are no significant* ***natural features*** *on the site.*
Specific ***approval criteria*** *are addressed in the following sections.*

II

Approval Criteria.

Chapter 17.56 CONDITIONAL USES

17.56.010 Permit--Authorization--Standards--Conditions.

. A conditional use permit listed in this section may be permitted, enlarged or altered upon authorization of the planning commission in accordance with the standards and procedures of this section. Any expansion to, alteration of, or accessory use to a conditional use shall require planning commission approval of a modification to the original conditional use permit.

A. The following conditional uses, because of their public convenience and necessity and their effect upon the neighborhood shall be permitted only upon the approval of the planning commission after due notice and public hearing, according to procedure as provided in Chapter 17.50.

The planning commission may allow a conditional use, provided that the applicant provides evidence substantiating that all the requirements of this title relative to the proposed use are satisfied, and demonstrates that the proposed use also **satisfies the following criteria**:

1. The **use is listed as a conditional use in the underlying district**;

McLoughlin Elementary School is located in an R-10 Single Family Zone.

Chapter **17.08.00** R-10 Single Family Residential Zone
Section**17.08.030 Conditional uses.**
The following conditional uses are permitted in this district when authorized by and in accordance with the standards contained in Chapter **17.56:**
B. Uses listed in Section **17.56.030**. (Prior code §11-3-3(B))
R. Private and public schools;

2. The **characteristics of the site** are suitable for the **proposed use** considering **size, shape, location**, **topography**, existence of **improvements and natural features**;

The ***size*** *of the property is 1315 feet by approximately 390 feet or 512,850 square feet; 11.7 acres. The building coverage will be 54,000 square feet or 10.5% of the site.*
The ***shape*** *is rectangular and works quite well for a school.*
The ***location*** *functions well for an elementary school in this neighborhood and is expected to continue for the foreseeable future.*
The ***topography*** *is quite flat which provides good playgrounds.*

McLoughlin Elementary School

*The **improvements** are more than adequate for the proposed expansion.*
*There are no **natural features** that affect the use or development of this proposal.*

3. The **site and proposed development are timely**, considering the adequacy of transportation systems, public facilities and services existing or planned for the area affected by the use;

The proposal is timely for the school district in that the space could be used at present. The proposal is timely considering the adequacy of the transportation systems, public facilities and services now in place and being used by the school. The engineering consultants indicate this expansion is compatible with the existing systems. This concern will be treated more thoroughly in the design review process.

4. The proposed use **will not alter the character of the surrounding area** in a manner which substantially limits, impairs or precludes the use of surrounding properties for the primary uses listed in the underlying district;

The use is already established and adequate buffer areas exist, so the proposed expansion will not compromise the surrounding uses.

5. The proposal **satisfies the goals and policies of the city comprehensive plan**, which apply to the proposed use.

The Comprehensive Plan in the Education section of the Community Facilities Goals and Policies says:

"Oregon City will coordinate with the Oregon City School District to encourage that school sites are located within the Urban Growth Boundary and subdivision proposals are reviewed for impact on the school system."

The school is within the UGB. It is recognized that the City and District have worked in concert to locate of the present school campuses and this cooperation has ensured that the placement and size of existing school sites provide adequate urban services and space for future growth.

III

17.56.040 Criteria and standards for conditional uses.

In addition to the standards listed herein in Section 17.56.010, which are to be considered in the approval of all conditional uses and the standards of the zone in which the conditional use is located, the following additional standards shall be applicable:

E. Schools.

McLoughlin Elementary School

The site must be **located to best serve the intended area**,

The site location is established

must be in **conformance with the city plan,**

The Oregon City Comprehensive Plan says:

"Oregon City will coordinate with the Oregon City School District to encourage that school sites are located within the Urban Growth Boundary and subdivision proposals are reviewed for impact on the school system."

must have **adequate access**,

Access is from South End Road which fronts the School for 389 feet.

must be in accordance with appropriate **State standards,**

Of course.

and must meet the following **dimensional standards**

In any zone,

1. Minimum lot area, twenty thousand square feet;
   The McLoughlin School lot area is 512,850 square feet.
2. Front yard setback, twenty-five feet;
   The minimum front yard setback will not change in this proposal.
3. Rear yard setback, twenty feet;
   The minimum rear yard setback will be over 845 feet.
4. Side yard setback, twenty feet.
   The minimum side yard setback set by this expansion will be about 110 feet.

Water Quality Resource Area Variance 17.49.080

This school was established and in use for 20 years or more before the WQRA was identified. The development in this CU application does not disturb the areas shown on the Resources Overlay Map. There is a portion of the school playfields within the WQRAOD map. There are no areas shown for this site within the vegetated corridor portion of the Water Quality Resource Overlay District Map. This proposal does not affect the land identified in the WQRA.

Neighborhood Association

The Oregon City School District has held meetings with the Neighborhood Association and with the Parent/Teacher groups for this attendance area of the past few years in anticipation of the Bond Issue.
During the period prior to the Bond Election last May meetings were held with the Neighborhood Association and other local interest groups to communicate how the money would be used. No attendance lists were kept for those meetings.
The elector of the School District voiced their approval of the additions and improvements by passing the Bond Issue.
Follow-up meetings with the Neighborhood Association will be held in the next four weeks.

Traffic

The Proposed addition is for a minimal addition to the existing school on this site. The site has adequate access and there ore no traffic problems in the neighborhood which relate to the school. This building addition will not generate any appreciable traffic increases at the site. No Traffic Impact Study was requested for this project.

INTRODUCTION

This report presents the results of GeoDesign's geotechnical engineering evaluation for six Oregon City School District elementary schools. The elementary school grounds explored are listed below. The general locations of the sites relative to surrounding physical features are shown in Figures 1 through 3.

We understand that primary geotechnical related elements specific to each school are as follows:

Jennings Lodge	covered play structure, 15 parking stalls, and related dry wells.
Park Place	1,800-square-foot addition and hillside drainage improvements.
Holcomb	7,400-square-foot addition and hillside drainage improvements.
John McLoughlin	4 classrooms and 30 parking stalls.
Gaffney Lane	4,400-square-foot addition and 12 parking spaces.
Redland	6,000-square-foot play structure.

PURPOSE AND SCOPE

The purpose of our services was to provide geotechnical engineering recommendations for design and construction of the proposed additions, including a seismic hazard investigation of each facility. The specific scope of our services was as follows:

- Coordinate and manage the field investigations, including utility locates, access preparation and coordination, and scheduling of contractors and GeoDesign staff.
- Explore subsurface conditions in the areas of proposed new structures with the use of one augered boring at each school, with the exception of Redland, to depths of up to 21.5 feet.
- Complete an infiltration test at Jennings Lodge Elementary School.
- Perform a site reconnaissance of the proposed covered play structure site at Redland.
- Complete Standard Penetration Test sampling at 2.5- to 5.0-foot intervals in the borings.
- Classify the materials encountered in the explorations. Maintain a detailed log of each exploration and obtain soil samples at select depths.
- Complete 34 moisture content and 2 Atterberg limits tests on selected soils.
- Provide recommendations for site preparation, grading, fill type for imported materials, compaction criteria, trench excavation and backfill, use of on-site soils, drainage, and dry and wet weather earthwork procedures.
- Provide recommendations for design and construction of shallow spread foundations, including allowable design bearing pressures, minimum footing depth and width, and estimates for total and differential settlement.
- Provide geotechnical engineering recommendations for the design and construction of concrete floor slabs, including an anticipated value for subgrade modulus.
- Provide recommendations for asphalt concrete and base rock thickness for auto parking areas.

- Provide a seismic hazard investigation covering each of the sites (attached as one document in Appendix B) including discussion of the geologic and tectonic setting, historic seismicity, design earthquakes, amplification, fault surface rupture, liquefaction, and a seismic coefficient as required by the State of Oregon Structural Specialty Code (SOSSC), and as appropriate to the degree of complexity of the projects.
- Provide three copies of the written report summarizing the results of our geotechnical evaluation.

SITE CONDITIONS

GENERAL

A surface reconnaissance was performed at each school site in the areas of proposed improvements. We explored subsurface conditions for each proposed building addition by advancing one boring (B-1) to a depth of 21.5 feet below the existing ground surface. One boring was also advanced in the vicinity of the proposed covered play structure at Jennings Lodge Elementary School. The approximate locations of the borings at each school are shown in Figures 4 thru 8. No subsurface exploration was performed at Redland Elementary School.

We tested selected soil samples from the explorations to determine the natural moisture content of the soils. Atterberg limits tests were performed on soil samples from Park Place and Holcomb Elementary School. Descriptions of the field explorations, exploration logs, and laboratory procedures are included in Appendix A.

JENNINGS LODGE

Surface Conditions

The proposed site for the covered play structure and parking lot addition is relatively flat. The ground surface slopes gently to the south in the vicinity of the additional parking spaces. The majority of the ground surface is covered with short grasses. Wood chips are present around existing play structures, which are located near our boring location. Other than the wood chips, no evidence of existing fill was noted during our reconnaissance.

Subsurface Conditions

In general, subsurface soil conditions at the site consist of medium stiff silt underlain by layers of silt and silty sand. We observed a heavily rooted zone approximately 3 inches thick at the ground surface. The boring encountered medium stiff to stiff, moist silt to a depth of approximately 4 feet. Below 4 feet, we encountered layers of medium stiff to stiff silt with trace to some sand and loose to medium dense silty sand to the maximum depth of our exploration. We observed layers of silt and silty sand up to 12 inches thick.

Groundwater was not observed during our exploration. Based on the fine-grained soils at the site, shallow seasonal perched groundwater may occur at the site.

Infiltration Testing

We conducted an infiltration test at a depth of 20.0 feet through gasketed hollow stem augers with an inside diameter of 4.5 inches. We established a minimum permeability from

this information, which was used in our analyses and recommendations for dry well sizing presented in the "Infiltration Recommendations" section of this report.

PARK PLACE

Surface Conditions

The proposed building addition site slopes gently to the west. The surface is covered with asphalt, which appears to be in fair condition. An approximate 2.5H:1V (horizontal to vertical) west-facing slope is located at the edge of the asphalt. The slope is approximately 8 feet high and covered with grass.

Subsurface Conditions

In general, subsurface soil conditions at the site consist of medium stiff silt fill underlain by layers of stiff native silt deposits. We observed a pavement section of approximately 2 inches of asphalt underlain by 8 inches of sandy gravel. The silt fill extends to a depth of approximately 6 feet.

Groundwater was observed at approximately 13 feet during our exploration. Due to the surrounding impervious surfaces and slopes directed away from the footprint, we do not anticipate shallow seasonal perched groundwater at the proposed building addition site.

HOLCOMB

Surface Conditions

The proposed site for the building addition is relatively flat and sits near the foot of a west-facing slope east of the addition. Concrete sidewalks and landscape planters exist adjacent to the building. Asphalt pavement covers part of the west half of the building addition footprint, while the east half is covered with short grass. A shallow swale runs through the east side of the proposed footprint.

Subsurface Conditions

In general, subsurface soil conditions at the site consist of silt that grades from medium stiff to hard at depth. We observed a heavily rooted zone approximately 4 inches thick at the ground surface.

Groundwater was not observed during our exploration. Seasonal perched groundwater is expected near the surface based on mottling in the native silts.

JOHN MCLOUGHLIN

Surface Conditions

The proposed site for the building addition is relatively flat, with an approximate 4H:1V to 5H:1V south-facing slope off the southern building edge. The footprint is covered with short grass. Based on observation of surface conditions, shallow fill soils may be present in the southeast corner of the addition.

The proposed play structure site is situated on an approximate 4H:1V to 5H:1V south-facing slope. The slope appears to be a cut slope constructed during grading of the existing school grounds. A small swale which drains an existing play area on the east side of the building runs through the play structure site.

Subsurface Conditions

In general, subsurface soil conditions at the site consist of stiff silt fill underlain by residual soils at shallow depth. We observed a heavily rooted zone approximately 6 inches thick at the ground surface. The boring encountered stiff, moist silt fill with trace sand to a depth of approximately 4 feet. Below the silt, residual soils consisted of very stiff, clayey silt.

Groundwater was not observed during our exploration. Seasonal perched groundwater may be anticipated near the surface based on the relatively impervious nature of the site soils.

GAFFNEY LANE

Surface Conditions

The proposed site for the building addition is relatively flat. A gravel walkway is present running in the east/west direction adjacent to the building. Concrete sidewalks exist adjacent to the building as well as within the building alcove. The remainder of the proposed footprint is covered with short grass.

The proposed new parking area is situated at the toe of a cut slope. The footprint is relatively flat and covered with short grass. No evidence of existing fill was noted.

Subsurface Conditions

In general, subsurface soil conditions at the site consist of medium stiff to very stiff silt with increasing clay with depth. We observed a heavily rooted zone approximately 8 inches thick at the ground surface.

Silt became wet at approximately 8.5 feet during our exploration. Seasonal perched groundwater is expected near the surface based on mottling in the native silts, and observed ponding in the wet season..

REDLAND

Site Reconnaissance

The proposed covered play structure site is situated on a flat to gentle east-facing slope. An existing timber gym structure is located within the footprint. The ground surface is covered with wood chips. Based on observation of surface conditions, we anticipate less than 3 feet of fill is present at the ground surface.

CONCLUSIONS AND RECOMMENDATIONS

GENERAL

Based on the results of our site reconnaissance, soil explorations, laboratory testing and analyses, it is our opinion that the proposed structures at each school can be supported on shallow foundations bearing on undisturbed native soils, stiff silt fill, or on new structural fill.

Uncontrolled or non-engineered fill, such as the wood chip fills observed at Jennings Lodge and Redland, and fill that may be encountered at John McLoughlin, should be removed from foundation areas to expose firm, undisturbed native soils. The resulting excavations should be brought to grad with structural fill. We recommend foundations for the Park Place school addition be placed on granular pads to reduce settlement. Foundation subgrade preparation and design recommendations are presented in the "Shallow Foundations" section of this report.

In our opinion, the seismic hazards at the sites are low and do not preclude proceeding with design and construction of the proposed structures supported on shallow spread footings. A site specific seismic hazard assessment of each building site is presented in Appendix B of this report.

Trafficability on fine grained subgrades will be difficult during or after extended wet periods or when the moisture content of the surface soil is more than a few percentage points above optimum moisture content. Grading of pavement and slab-on-grade subgrades during the wet season will incur additional project cost due in part to imported crushed rock and soil export expenditures. We recommend site grading be performed during the dry summer months.

The following paragraphs present specific geotechnical recommendations for design and construction of the proposed fire station.

SITE PREPARATION AND EROSION CONTROL

Trees, sod, and other grubbing items should be removed from all building, structural fill, and pavement areas and for a 5-foot margin around such areas. Wood chip fills and other soft or unsuitable fill soil should be stripped and removed from the sites in all proposed structural areas as well. Based on our site reconnaissance, non-engineered fill may be encountered over a portion of the John McLoughlin building addition. The condition of the fill and actual fill removal depth, if required, should be based on field observations at the time of construction. We recommend that soil disturbed during grubbing operations be removed to expose firm undisturbed subgrade. The resulting excavations should be backfilled with structural fill. If grubbing activities disturb less than a 12-inch depth of soil and provided the earthwork is being completed in the drier summer period, it may be possible to scarify, moisture condition, and compact the disturbed material in place. Removed fill material should be transported off site for disposal or used in landscaped areas.

After stripping and required site cutting have been completed, we recommend proofrolling the subgrade with a fully loaded dump truck or similar-size, rubber-tire construction equipment to identify areas of excessive yielding. A member of our geotechnical staff, who will evaluate the subgrade, should observe the proofrolling. If areas of excessive yielding are identified, the material should be excavated and replaced with structural fill. Areas that appear to be too wet and soft to support proofrolling equipment should be prepared in accordance with the recommendations for wet weather construction.

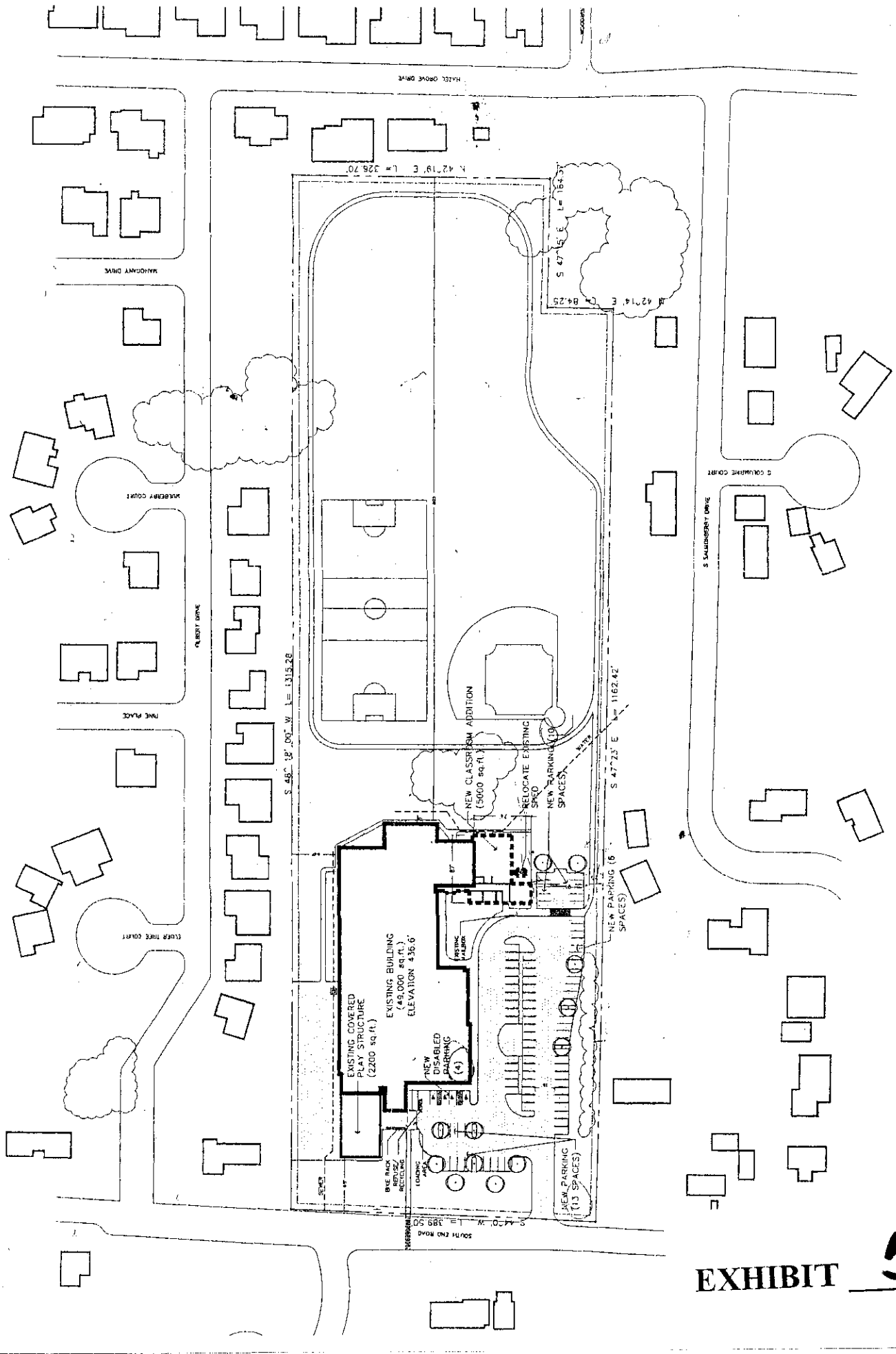
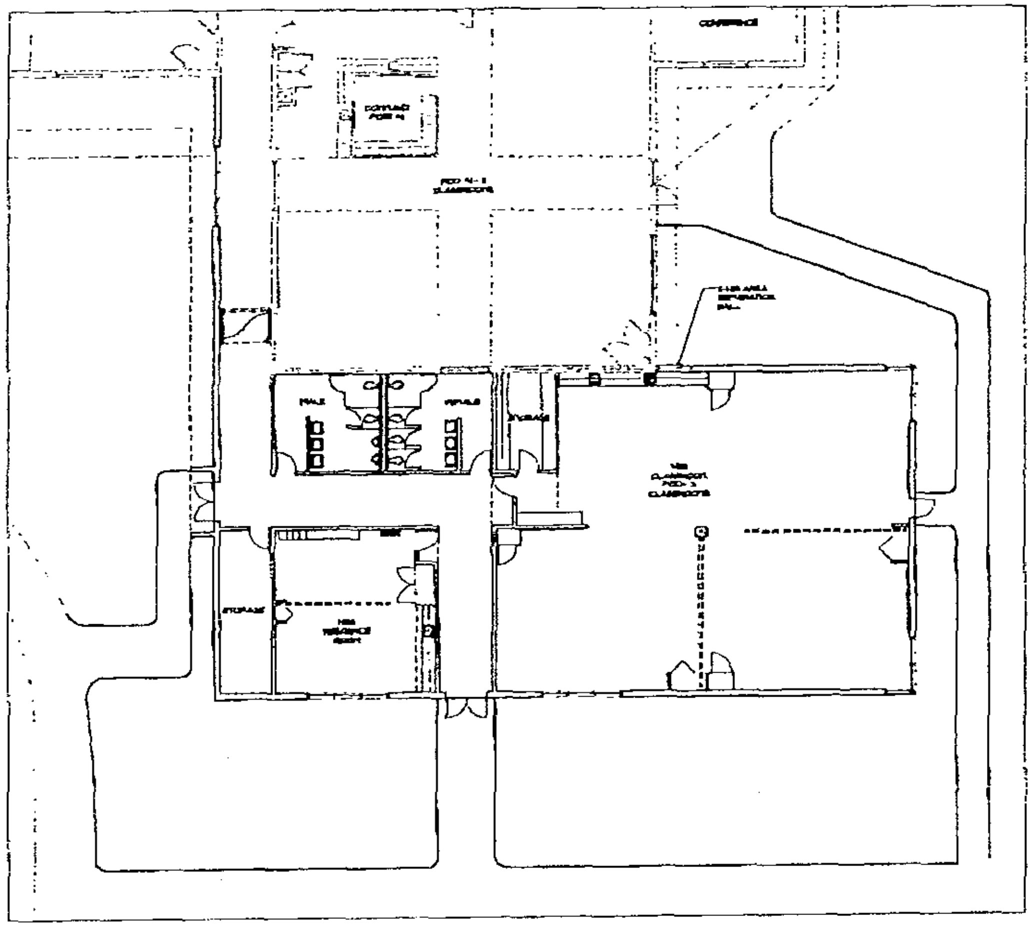

HAZEL GROVE DRIVE
MAHOGANY DRIVE
JUNEBERRY COURT
PINE PLACE
CLOVER TREE COURT
S COLUMBINE COURT
S SAGEBRUSH DRIVE
SOUTH END ROAD
N 42°19' E L= 326.70'
S 47°15' E L= 164.37'
N 42°14' E C= 84.25'
S 48° 18' 00" W L= 1315.28'
S 47°23' E L= 1162.42'
NEW CLASSROOM ADDITION (5000 sq.ft.)
RELOCATE EXISTING SHED
NEW PARKING (10 SPACES)
NEW PARKING (16 SPACES)
EXISTING BUILDING (49,000 sq.ft.) ELEVATION 436.6'
EXISTING COVERED PLAY STRUCTURE (2200 sq.ft.)
NEW DISABLED PARKING (4)
EXISTING FLAGPOLE
BIKE RACK
RECYCLING
LOADING AREA
NEW PARKING (13 SPACES)
S 44°10' W L= 389.50'

EXHIBIT 5

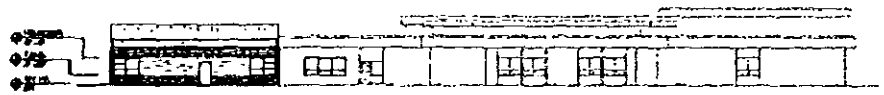


FLOOR PLAN NORTH

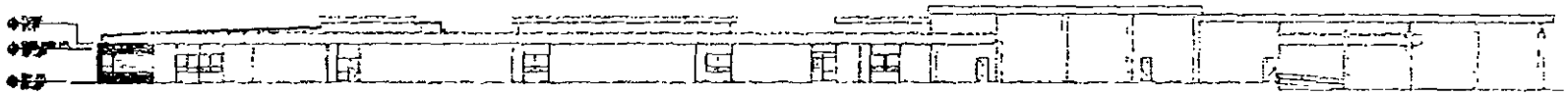
SODERSTROM ARCHITEC

McLOUGHLIN
ELEMENTARY
OREGON CITY SCHOOL DISTRIC
FEBRUARY 12th, 2001

SOUTH ELEVATION



EAST ELEVATION



NORTH ELEVATION

WEST ELEVATION

SODERSTROM ARCHITECTS

McLOUGHLIN ELEMENTARY

OREGON CITY SCHOOL DIST

FEBRUARY 12th, 2001

ANALYSIS AND FINDINGS

The Mcloughlin Elementary School proposes to expand their existing facility located at 19230 South End Road. The applicant proposes approximately 5,000 square foot of classroom additions, and a 2,200 square foot covered play structure. The property is currently zoned R-10 and is surrounded by R-10 and R-8 zoning.

The proposed site layout will use the existing ingress/egress on South End Road and add an additional 29 Forest Ridge Road appears to have a 45-foot wide ROW with 20-feet on the project site side of the centerline. parking spaces. The proposed parking spaces near the new classroom addition will be constructed over an existing pedestrian walkway. The applicant shall relocate the pedestrian walk around the new parking area and connect to the existing walkways without crossing the parking areas.

The proposed site is large enough to adequately accommodate the proposed infrastructure.

The shape is conducive to the placement and functioning of the proposed use.

The existing use of this site for this type of use blends with other residential uses in the area.

There is a 12-inch City water line in South End Road.

A 12-inch City sanitary sewer line serves the site from South End Road.

South End Road is classified as a Minor Arterial in the Oregon City Transportation Master Plan, which requires a minimum right-of-way (ROW) width of 60 to 80 feet. South End Road appears to have a 60-foot wide ROW. South End Road is a County Road and under the Clackamas County's jurisdiction.

The applicant shall be required at the Site Planning and Design Review stage to improve their sites frontage along South End Road to the City's Minor Arterial standards, which will include and not be limited to sidewalks and street trees.

The site is relatively flat and will require minimal grading. The existing improvements will not restrict the proposed use.

A traffic study has not been provided to the City for review.

Conditions:

1. The applicant shall provide a 10-foot wide dedication along the property fronting South End Road.
2. The Applicant is responsible for this project's compliance to Engineering Policy 00-01 (attached). The policies pertain to any land use decision requiring the applicant to provide any public improvements.

CITY OF OREGON CITY - PLANNING DIVISION
PO Box 3040 - 320 Warner Milne Road - Oregon City, OR 97045-0304
Phone: (503) 657-0891 Fax: (503) 657-7892

TRANSMITTAL

IN-HOUSE DISTRIBUTION
- ☐ BUILDING OFFICIAL
- ☑ ENGINEERING MANAGER
- ☐ FIRE CHIEF
- ☐ PUBLIC WORKS- OPERATIONS
- ☑ CITY ENGINEER/PUBLIC WORKS DIRECTOR
- ☑ TECHNICAL SERVICES (GIS)
- ☐ PARKS MANAGER

TRAFFIC ENGINEER
- ☐ JOHN REPLINGER @ DEA

MAIL-OUT DISTRIBUTION
- ☐ CICC
- ☑ NEIGHBORHOOD ASSOCIATION (N.A.) CHAIR
- ☐ N.A. LAND USE CHAIR
- ☑ CLACKAMAS COUNTY - Joe Merek
- ☐ CLACKAMAS COUNTY - Bill Spears
- ☐ ODOT - Sonya Kazen
- ☐ ODOT - Gary Hunt
- ☑ SCHOOL DIST 62
- ☐ TRI-MET
- ☐ METRO - Brenda Bernards
- ☐ OREGON CITY POSTMASTER
- ☐ DLCD

RETURN COMMENTS TO:

PLANNING PERMIT TECHNICIAN
nning Department

COMMENTS DUE BY: March 30, 2001

HEARING DATE: April 23, 2001
HEARING BODY: Staff Review: ___ PC: _X_ CC:___

IN REFERENCE TO		
	FILE # & TYPE:	CU 01-06
	PLANNER:	Barbara Shields
	APPLICANT:	Milstead and Associates, Pete Daniels
	REQUEST:	An addition of four new classrooms and two new restrooms to the Mcloughlin Elementary School
	LOCATION:	19230 South End Road, Clackamas County Map 3-1E-12AC, Tax Lot 4400

The enclosed material has been referred to you for your information, study and official comments. Your recommendations and suggestions will be used to guide the Planning staff when reviewing this proposal. If you wish to have your comments considered and incorporated into the staff report, please return the attached copy of this form to facilitate the processing of this application and will insure prompt consideration of your recommendations. Please check the appropriate spaces below.

____ The proposal does not conflict with our interests.

____ The proposal would not conflict our interests if the changes noted below are included.

____ The proposal conflicts with our interests for the reasons stated below.

____ *The following items are missing and are needed for completeness and review:*

SEE ATTACHED Signed _____
Title P.W. OPS Mgr.

PLEASE RETURN YOUR COPY OF THE APPLICATION AND MATE

EXHIBIT 6b

MEMORANDUM

City of Oregon City

DATE: 3-14-01

TO: Joe McKinney, Public Works Operations Manager
SUBJECT: Comment Form for Planning Information Requests

File Number CU01-06

Name: 19230 S. End Rd

Water: McLoughlin Elementary School Addition of four new classrooms and two restrooms

Existing Water Main Size =_____

Existing Location= **No impact to existing H2O system**

Upsizing required? Yes____ No____ Size Required____inch

Extension required? Yes____ No____

Looping required? Yes____ No____ Per Fire Marshall_____

From:_____

To:_____

New line size=_____

Backflow Preventor required? Yes X No____

Clackamas River Water lines in area? Yes____ No____

Easements Required? Yes____ No____

Recommended easement width_____ft.

Water Departments additional comments No____ Yes X Initial eli
03/21/2001

Consult Water Master Plan. The new additions should not have a dramatic impact to the existing water system. Fire flow testing was performed for the fire department recently. Their information may suggest otherwise. Of course, backflow devices should already be in place at the school.

Sanitary Sewer:

Existing Sewer Main Size = 12"

Existing location = S. END RD.

Existing Lateral being reused? Yes ✓ No ____

Additional Laterals needed? Yes ____ No ✓

Upsizing required? See Sanitary Sewer Master Plan

Extension required? No ✓ Yes ____

Pump Station Required? See Sanitary Sewer Master Plan

Industrial Pre-treatment required? If non-residential Contact Tri-City Service District

Easements Required Yes ____ No ✓

Recommended Easement Width N/A feet

Sanitary Sewer additional comments No ____ Yes ✓ Initial LC

AN ADDITIONAL LATERAL MAY BE NEED DEPENDING ON LOCATION OF NEW RESTROOMS

Storm Sewer:

Existing Line Size = 10 inch (CONCRETE, S. END RD.) None existing ____

Upsizing required? See Storm Drainage Master Plans

Extension required? Yes ____ No ✓

From: ____

To: ____

Detention and treatment required? Yes____ No ✓

On site water resources: None known____ Yes ✓

Storm Department additional comments No____ Yes ✓ Initial PC

A portion of this property lies within a water quality Resource Area overlay district.

Streets: South End Rd.

Classification:

~~Major~~ Arterial X Minor Arterial_____

Collector_____ Local_____

Additional Right Of Way required? Yes_____ No_____

Jurisdiction:

City_____ County X State_____

Existing width = N/A feet

Required width =_____feet

Roadway improvements? See Transportation System Plan

Bicycle Lanes required? Yes_____ No_____

Transit Street? Yes_____ No_____ Line No=_____

Street Department additional comments No____ Yes X Initial RCL

1. Proposed action will not impact Roadway.

To: City of Oregon City- Planning Division
RE: McLoughlin Elementary School (New Construction)
From: Southend Neighborhood Association
Date: March 15,2001

Dear Planning Department

Upon receiving and reviewing the material for the John McLoughlin Elementary School new construction proposal, we the Southend Neighborhood Association found some discrepancies within the material. One sheet calls for the addition of four new classrooms and two new restrooms, another sheet has a request for four classrooms and 30 parking stalls and yet another sheet has a proposal for three new class rooms, a resource room and two new restrooms, along with required retrofits. We are really not clear on what is actually going to be done at the site. We would appreiciate a revised version of the proposal mailed to us stating exactly what work and what changes will be done at the Elementary School. We are all in agreement that the Elementary School is in need of more class room space and all of us support that idea.

Some of the concerns that came out of our meeting are as follows:

1) If there are going to be parking spaces added as one of the proposals states, we noticed a sidewalk running from the gate in the fence that crosses the parking lot. We would suggest that the sidewalk go around the outside of the parking lot so that the children would not have to cross the parking lot. Perhaps adding bushes in that area would further discourage the children from crossing through the parking lot.

2) Again if new parking spaces are added, along with the addition of the three or four new classrooms; Is there or will there be adequate drainage to handle the additional water that would otherwise drain into the ground.

3.) It also appears that some trees will need to be removed to accommodate the construction of new classrooms and parking spaces. If so ,are there any plans to plant new trees to replace the lost ones?

Thank you very much,

Southend Neighborhood Association

EXHIBIT 6c

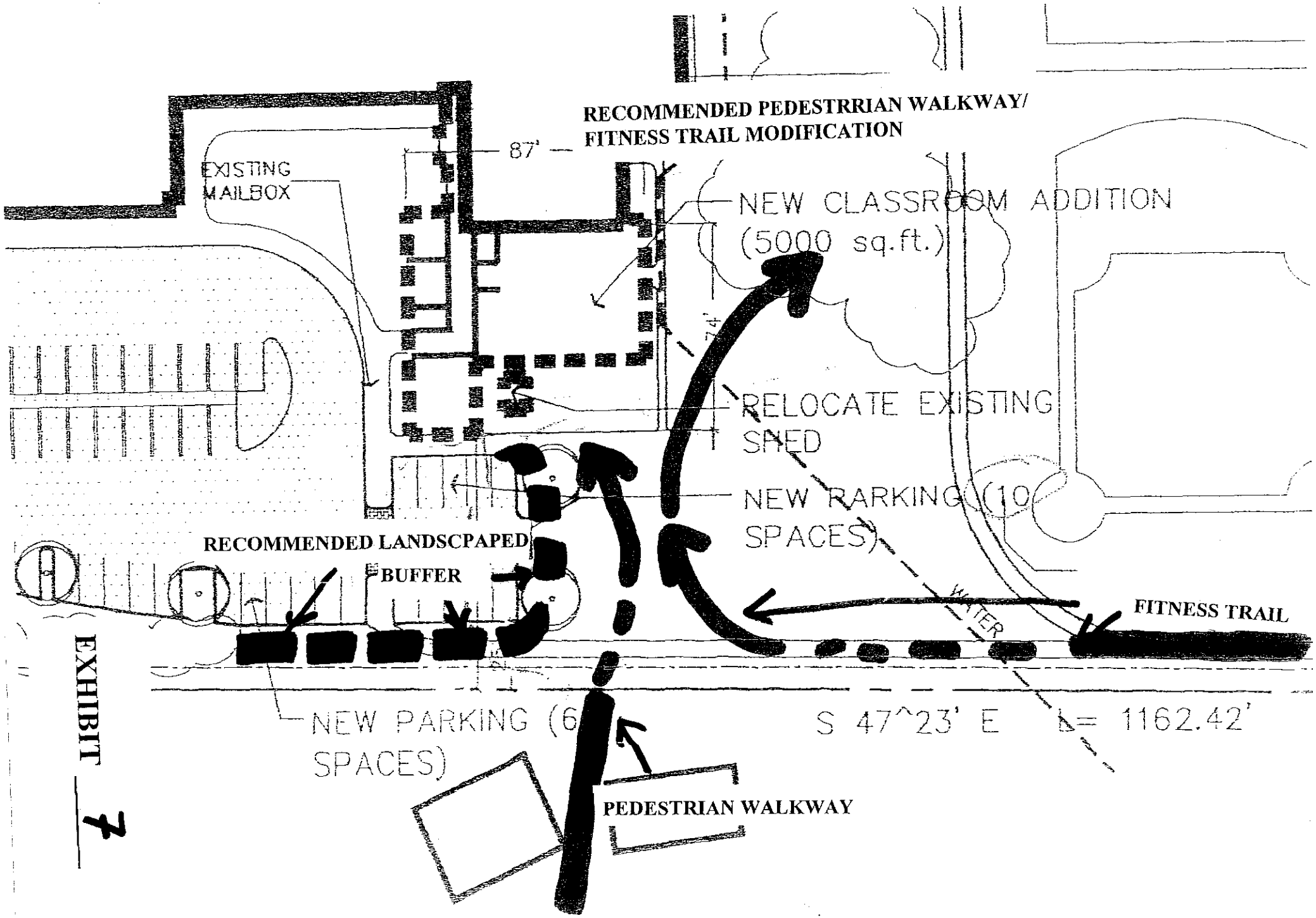

RECOMMENDED PEDESTRRIAN WALKWAY/
FITNESS TRAIL MODIFICATION
87'
EXISTING
MAILBOX
NEW CLASSROOM ADDITION
(5000 sq.ft.)
74'
RELOCATE EXISTING
SHED
NEW PARKING (10
SPACES)
RECOMMENDED LANDSCPAPED
BUFFER
FITNESS TRAIL
WATER
NEW PARKING (6
SPACES)
S 47^23' E
L= 1162.42'
PEDESTRIAN WALKWAY

EXHIBIT 7

CITY OF OREGON CITY

ENGINEERING POLICY 00-01
Guidelines for Development

EFFECTIVE: April 10, 2000

PREPARED BY

COMMUNITY DEVELOPMENT DEPARTMENT

320 Warner-Milne Road

Post Office Box 3040

Oregon City, Oregon 97045-0304

Telephone: (503) 657-0891

Engineering Division

EXHIBIT 8

Applicability. This policy applies to applicants for land use decisions and site plan reviews with regard to providing public improvements, submittal of documentation, and . The following sections outline some of the important requirements and helpful hints for those unfamiliar with providing public improvements as required by the Oregon City Municipal Code and Oregon City Public Works Standards. This is not an all-inclusive list of City requirements and does not relieve the applicant from meeting all applicable City Code and Public Works Standards.

Availability of Codes and Standards. Copies of these City Codes and Standards are available at City Hall for a nominal price. Some engineering firms in the local metropolitan area already own these Codes and Standards to enable them to properly plan, design, and construct City projects.

General

- Applicants shall design and construct all required public works improvements to City Standards. These Standards include the latest version in effect at the time of application of the following list of documents: Oregon City Municipal Code, Water Master Plan, Transportation Master (System) Plan, Sanitary Sewer Master Plan, and the Drainage Master Plan. It includes the Public Works Design Standards, which is comprised of Sanitary Sewer, Water Distribution System, Stormwater and Grading, and Erosion Control. This list also includes the Street Work Drawings, Appendix Chapter 33 of the Uniform Building Code (by reference), and the Site Traffic Impact Study Procedures. It may also include the City of Oregon City Review Checklist of Subdivision and Partition Plats when the development is a Subdivision, Partition, or Planned Unit Development.

Water (Water Distribution System Design Standards)

- The applicant shall provide water facilities for their development. This includes water mains, valves, fire hydrants, blow-offs, service laterals, and meters.
- All required public water system improvements shall be designed and constructed to City standards.
- The Fire Marshall shall determine the number of fire hydrants and their locations. Fire hydrants shall be fitted with a Storz metal face adapter style S-37MFL and cap style SC50MF to steamer port. This adapter is for a 5-inch hose. All hydrants to be completed, installed, and operational before beginning structural framing. Hydrants shall be painted with Rodda All-Purpose Equipment Enamel (1625 Safety Orange Paint) and all chains shall be removed from the fire hydrants.
- Backflow prevention assemblies are required on all domestic lines for commercial buildings, all fire service lines, and all irrigation lines. Backflow prevention assemblies are also required on residential domestic lines greater than or equal to 2-inch diameter. These assemblies are also required where internal plumbing is greater than 32 feet above the water main. The type of backflow prevention device required is dependent on the degree of hazard. City Water Department personnel, certified as cross connection inspectors, shall determine the type of device to be installed in any specific instance. All

backflow prevention devices shall be located on the applicant's property and are the property owner's responsibility to test and maintain in accordance with manufacturer's recommendations and Oregon statutes.

- The applicant shall verify that there are no wells on site, or if any wells are on the site prior to connecting to the public water system, the applicant shall:
  - Abandon the well per Oregon State requirements and provide copies of the final approval of well abandonment to the City; or
  - Disconnect the well from the home and only use the well for irrigation. In this case, the applicant shall install a back flow preventor on the public service line. The applicant shall also coordinate with the City water department to provide a cross connection inspection before connecting to the public water system.

Sanitary Sewer (Sanitary Sewer Design Standards)

- The applicant shall provide sanitary sewer facilities to their development. This includes gravity mains, manholes, stub outs, and service laterals.
- All required public sanitary sewer system improvements shall be designed and constructed to City standards.
- Applicant must process and obtain sanitary sewer system design approval from DEQ.
- Any existing septic system on site shall be abandoned and certification documentation provided from Clackamas County before recording the plat or obtaining a certificate of occupancy.

Stormwater (Stormwater and Grading Design Standards)

- The applicant shall provide stormwater and detention facilities for their development. This includes the stormwater mains, inlets, manholes, service laterals for roof and foundation drains, detention system if necessary, control structure if necessary, inflow and outflow devices if necessary, and energy dissipaters if necessary.
- The applicant shall design and construct required public stormwater system improvements to City standards. Each project is to coordinate with the City Drainage Master Plan, the Public Works Stormwater and Grading Standards, and the appropriate individual Basin Master Plan (if adopted) and incorporate recommendations from them as directed.
- The applicant shall design the stormwater system to detain any increased runoff created through the development of the site, as well as convey any existing off-site surface water entering the site from other properties.
- The applicant shall submit hydrology/detention calculations to the City Engineering Division for review and approval before approval of construction plans. The applicant shall provide documentation to verify the hydrology and detention calculations. The applicant shall show the 100-year overflow path and shall not design the flow to cross any developed properties.

Dedications and Easements

- The applicant shall obtain and record all off-site easements required for the project before City approval of construction plans.

Streets

- The applicant shall provide street facilities to their site including within the site and on the perimeter of the site where it borders on existing public streets. This includes half- and full-street width pavement as directed, curbs, gutters, planter strips or tree wells as directed, street trees, sidewalks, and bicycle lanes (when required by the type of street classification). This also includes city utilities (water, sanitary and storm drainage facilities), traffic control devices, centerline monumentation in monument boxes, and street lights in compliance with the City Code for Oregon City and its various Master Plans. Half-street improvements include an additional 10-foot wide pavement past the centerline subject to City review of existing conditions.
- After installation of the first lift of asphalt, applicant shall provide asphalt berms or another adequate solution, as approved by the City Engineering Division, at storm catch basins or curb inlets on all streets. This ensures positive drainage until the applicant installs the second lift of asphalt.
- All street names shall be reviewed and approved by the City (GIS Division 657-0891, ext.168) prior to approval of the final plat to ensure no duplicate names are proposed in Oregon City or the 9-1-1 Service Area.
- All street improvements shall be completed and temporary street name signs shall be installed before issuance of building permits.
- The applicant is responsible for all sidewalks in their development. The applicant may transfer the responsibility for the sidewalks adjacent to the right-of-way as part of the requirement for an individual building permit on local streets. However, failure to do so does not waive the applicant's requirement to construct the sidewalks. Applicant shall complete sidewalks on each residential lot within one year of City acceptance of public improvements for the project (e.g.; subdivision, partition, or Planned Unit Development) unless a building permit has been issued for the lot.
- Applicant shall install sidewalks along any tracts within their development, any pedestrian/bicycle accessways within their development, along existing homes within the development's property boundaries, and all handicap access ramps required in their development at the time of street construction.
- Street lights shall typically be owned by the City of Oregon City under PGE plan "B" and installed at the expense of the applicant. The applicant shall submit a street light plan, subject to City and PGE approval, prepared by a qualified electrical contractor. Streetlights shall be placed at street intersections and along streets at property lines. The required lights shall be installed by a qualified electrical contractor. Streetlights are to be spaced and installed per recommendations of the Illuminating Engineering Society of North America as published in their current issue of IES, RP-8 to provide adequate lighting for safety of drivers, pedestrians, and other modes of transportation. Streetlights shall be 100-watt high-pressure sodium fixtures mounted on fiberglass poles with a

25-foot mounting height unless otherwise specified. The applicant shall dedicate any necessary electrical easements on the final plat. All streetlights and poles shall be constructed of material approved by PGE for maintenance by PGE.

Grading And Erosion Control

- The applicant's engineer shall submit rough grading plan with construction plans. The engineer shall certify completed rough grading elevations to +/- 0.1 feet. For single family residential developments, a final residential lot-grading plan shall be based on these certified grading elevations and approved by the City Engineer before issuance of a building permit. If significant grading is required for the residential lots due to its location or the nature of the site, rough grading shall be required of the developer before the acceptance of the public improvements. (See Geotechnical section for cut and fill certification issues on building lots or parcels) There shall not be more than a maximum grade differential of two (2) feet at all site boundaries. Final grading shall in no way create any water traps, or create other ponding situations. Submit one copy (pertinent sheet) of any residential lot grading for each lot (e.g., 37 lots equals 37 copies).
- Applicants shall obtain a DEQ 1200c permit when their site clearing effort is over five (5) acres, as modified by DEQ. Applicant shall provide a copy of this permit to the City before any clearing efforts are started.
- An Erosion Prevention and Sedimentation Control Plan shall be submitted for City approval. Applicant shall obtain an Erosion Control permit before any work on site.
  - Dewatering excavations shall not be allowed unless the discharge water meets turbidity standards (see next bullet) or is adequately clarified before it enters on-site wetlands, drainage courses, and before it leaves the site. Discharge from man-made, natural, temporary, or permanent ponds shall meet the same standard.
  - Construction activities shall not result in greater than 10 percent turbidity increase between points located upstream and downstream of construction activities.
  - Effective erosion control shall be maintained after subdivision site work is complete and throughout building permit issuance.
  - Plans shall document erosion prevention and control measures that will remain effective and be maintained until all construction is complete and permanent vegetation has been established on the site.
  - Responsible party (site steward) for erosion control maintenance throughout construction process shall be shown on the Erosion Control Plan.
  - Staff encourages applicant to select high performance erosion control alternatives to minimize the potential for water quality and fish habitat degradation in receiving waters.

Geotechnical

- Any structural fill to accommodate public improvements shall be overseen and directed by a geotechnical engineer. The geotechnical engineer shall provide test reports and certification that all structural fill has been placed as specified and provide a final

summary report to the City certifying all structural fill on the site before City approval and acceptance of public improvements.

- Any cut or fill in building lots or parcels beyond the rough grading shall be subject to the Building Division's requirements for certification under the building permit.

Engineering Requirements

- Design engineer shall schedule a pre-design meeting with the City of Oregon City Engineering Division before submitting engineering plans for review.
- Street Name/Traffic Control Signs. Approved street name signs are required at all street intersections with any traffic control signs/signals/striping.
- Applicant shall pay City invoice for the manufacture and installation of permanent signs for street names and any traffic control signs/signals/striping.
- Bench Marks. At least one benchmark based on the City's datum shall be located within the subdivision.
- Other Public Utilities. The applicant shall make necessary arrangements with utility companies for the installation of underground lines and facilities. The City Engineer may require the applicant to pay these utility companies to use trenchless methods to install their utilities in order to save designated and marked trees when the utility crosses within a dripline of a tree marked, or identified, to be saved. Applicant to bear any additional costs that this may incur.
- Technical Plan Check and Inspection Fees. The current Technical Plan Check and Inspection Fee shall be paid before approval of the final engineering plans for the required site improvements. The fee is the established percentage of a City-approved engineer's cost estimate or actual construction bids as submitted by the applicant. Half of the fee is due upon submitting plans for final approval; the other half is due upon approval of the final plans.
- It is the City's policy that the City will only provide spot check inspection for non public-funded improvements, and the applicant's engineer shall provide inspection and surveying services necessary to stake and construct the project and prepare the record (as-built) drawings when the project is complete.
- Applicant shall submit two (2) sets of final engineering plans for initial review by the City Engineering Division to include the drainage report (wet signed by the responsible engineer), and the cost estimate with half of the Technical Plan Check fee. The engineering plans shall be blackline copies, 24" x 36". Blueline copies are not acceptable.
- For projects such as subdivisions, partitions, and Planned Unit Developments, the applicant shall submit a completed copy of the City's latest final subdivision and partition plat checklist, and a paper copy of the preliminary plat.
- Two (2) copies of any revised documents (in response to redlined comments) will be required for subsequent reviews, if necessary.
- The applicant shall submit, for the final City approval, six (6) copies of the plans with one full set wet signed over the engineer's Professional Engineer Oregon stamp.

- Minimum Improvement Requirements. Applicant shall provide a surety on land division developments for uncompleted work before a plat is recorded as required by a Land Division Compliance Agreement (available in hard copy or electronic version from City Engineer office). This occurs if the applicant wishes to record the final plat before completion of all required improvements. Surety shall be an escrow account or in a form that is acceptable to the City Attorney.
- Upon conditional acceptance of the public improvements by the City, the applicant shall provide a two-year maintenance guarantee as described in the Land Division Compliance Agreement. This Maintenance Guarantee shall be for fifteen (15) percent of the engineer's cost estimate or actual bids for the complete public improvements.
- The applicant shall submit a paper copy of the record (as-built) drawings, of field measured facilities, to the City Engineer for review before building permits are issued beyond the legal limit. Upon approval of the paper copy by the City Engineer, applicant shall submit a bond copy set and two 4-mil mylar record drawings sets.
- The applicant shall submit one full set of the record (as-built) drawings, of field measured facilities, on AutoCAD files on CD-ROM or 3.5-inch diskette, in a format acceptable to the City Engineer, and include all field changes.
- One AutoCAD file of the preliminary plat, if applicable, shall be furnished by the applicant to the City for addressing purposes. A sample of this format may be obtained from the City Geographical Information System Division. This information, and documents, shall be prepared at the applicant's cost.
- The applicant's surveyor shall also submit, at the time of recordation, a copy of the plat on a CD-ROM or 3.5-inch diskette to the City in a format that is acceptable to the City's Geographic Information System Division.
- The City reserves the right to accept, or reject, record drawings that the City Engineer deems incomplete or unreadable that are submitted to meet this requirement. The applicant shall be responsible for all costs associated with meeting this condition. The applicant shall ensure their engineer submits the record drawings before the City will release final surety funds or residential building permits beyond the legal limit.
- Final Plat Requirements, if applicable. The final plat shall comply with ORS 92.010 through 92.190, and City Code. In addition the following requirements shall be required:
  - The applicant, and their surveyor, shall conform to the City's submittal and review procedures for the review and approval of plats, easements, agreements, and other legal documents associated with the division of this parcel.
  - Show the City Planning File Number on the final plat, preferably just below the title block.
  - A blackline copy of the final plat illustrating maximum building envelopes shall be submitted to the Planning Division concurrently with submittal of the plat to ensure setbacks and easements do not conflict.
  - Use recorded City control surveys for street centerline control, if applicable.
  - Tie to City GPS Geodetic Control Network, County Survey reference PS 24286, and use as basis of bearings. Include ties to at least two monuments, show measured versus record, and the scale factor. Monuments may be either GPS stations or other monuments from prior City control surveys shown on PS 24286. If ties are to prior

City control surveys, monument ties shall be from the same original control survey. The tie to the GPS control can be part of a reference boundary control survey filed for the land division.

- Show state plane coordinates on the Point of Beginning.

- The civil construction drawings, once approved by the City Engineering Division, shall have an approval period of one year in which to commence with construction. The plans and drawings shall be valid, once the City Engineer holds the preconstruction conference and construction activity proceeds, for as long as the construction takes. If the construction drawings expire before construction commences, the applicant shall ensure the civil construction documents and plans conform to the latest Standards, Specifications, and City Codes that are in place at the time of the update. The applicant shall bear the cost associated with bringing them into conformance, including additional technical plan check and review costs.
- The applicant shall include a statement in proposed Conditions, Covenants, and Restrictions (CC & R's), plat restrictions, or some other means acceptable to the City Attorney for:
  - Maintaining surface runoff patterns established for each lot,
  - Maintaining any proposed private storm lines or detention, and
  - Conformance by individual lot owner to the City's erosion control standards when establishing or renovating landscaping.
  - The applicant shall submit the proposed method and statement to the Planning staff for review and approval, before final plat approval.
- Construction vehicles and other vehicles associated with the development shall only use the entrance as approved by the City Engineering Division to enter their site and these vehicles shall park or wait on the construction site. The applicant should provide a specified area of off street parking for the site's construction workers which meets the erosion/sedimentation control measures. Supplier vehicles and trailers (hauling vehicles) and actual construction vehicles shall not park, or wait, in such a manner that would block or hinder access for emergency vehicles. This includes private vehicles belonging to construction workers, supplier vehicles and trailers, and actual construction vehicles.
- Site construction activity is to only occur between 7:00 AM and 6:00 PM on Monday through Friday; between 9:00 AM and 6:00 PM on Saturday. No site improvement construction activity is allowed on Sunday. Construction activity includes all field maintenance of equipment, refueling, and pick up and delivery of equipment as well as actual construction activity.
- The applicant shall ensure that all applicable outside agencies are contacted and any appropriate approvals obtained for the construction of the project. The applicant shall supply copies of approvals to the City. Failure to do so shall be a justification for the City to prevent the issuance of a construction or building permit or to revoke an issued permit for this project.
- The applicant shall be responsible for paying all fees associated with the recording of documents such as non-remonstrance agreements, easements, and dedications.
- Should the applicant, or any assigns or heirs, fail to comply with any of the conditions set forth here, the City may take the appropriate legal action to ensure compliance. The

applicant shall be responsible for any City legal fees and staff time associated with enforcing these conditions of approval.

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CITY OF OREGON CITY

PLANNING COMMISSION

320 WARNER MILNE ROAD OREGON CITY, OREGON 97045
TEL 657-0891 FAX 657-7892

TO: Planning Commission

FROM: Colin Cooper, AICP
Senior Planner

DATE: April 16, 2001

SUBJECT: PD 00-01 and WR 00-13 Oak Tree Terrace

Staff requests that the Planning Commission continue the hearing for the above referenced file to May 14, 2001. The reason for this request is that a staff analysis for the project has not been completed.

Two continuances have previously been requested by the applicant and granted by the Planning Commission in order to allow additional time to address geotechnical, wetland, and water resource issues associated with the development of the site.

Staff received the supplemental application materials on March 19, 2001, however, because of the complexity of the proposed grading plan, wetland and stream impacts, staff has not finished the analysis for this project.

The applicant is aware of the proposed request for a continuance and has not objected. Staff recommend a continuance of the public hearing for the Wittke PUD (File PD 00-01 and WR 00-13) to a date certain May 14, 2001.

Memo from Oregon City Planning Manager
April 13, 2001

We received this request today, and are sending it as part of your 4/23/01 packet. We ask that you fill out the survey form and mail it to Metro, or bring it to our office here, and we will forward on. Thank you for your assistance.

MC

Subject: Survey of Local Elected Officials and Planning Commissioners
Date: Fri, 13 Apr 2001 10:13:38 -0700
From: "Gerry Uba" <ubag@metro.dst.or.us>
To: <durhamcity@aol.com>, <jgrillo@ci.beaverton.or.us>, <rmeyer@ci.cornelius.or.us>, <andersenj@ci.fairview.or.us>, <jholan@ci.forest-grove.or.us>, <talbot@ci.gresham.or.us>, <jimc@ci.happy-valley.or.us>, <winkb@ci.hillsboro.or.us>, <rouyera@ci.milwaukie.or.us>, <ocbryan@ci.oregon-city.or.us>, <ocmaggie@ci.oregon-city.or.us>, <djs@ci.oswego.or.us>, <gkelley@ci.portland.or.us>, <jimh@ci.tigard.or.us>, <rfaith@ci.troutdale.or.us>,
CC: "Andy Cotugno" <cotugnoa@metro.dst.or.us>, "Mike Hoglund" <hoglundm@metro.dst.or.us>, "Mark Turpel" <turpelm@metro.dst.or.us>

Dear Planning Directors:

Attached please find: 1) Metro Executive Officer (Mike Burton) letter to local elected officials and planning commissioners regarding survey related to 2040 Growth Concept implementation; and 2) Copy of the Survey.

The purpose of this email is twofold: a) to make sure that you are aware of the survey and especially the questions we are asking your city/county officials to answer: and b) solicit your support to help increase the return rate of the survey. Please help us to remind members of your city councils, county commissions and planning commissions to complete the survey and return to Metro by April 30, 2001.

Background:
As you know, Metro has concluded that it is important to evaluate the performance of its policies. In 1996, the Metro Council adopted Title 9 (of the Urban Growth Management Functional Plan) directing the preparation of performance measures once the policies had the opportunity to be put in place. Accordingly, Metro is putting together possible performance indicators to be measured and presented to the Metro Council for consideration.

In addition to these quantitative performance indicators, Metro would like to identify qualitative performance indicators through a survey of local elected officials and planning commissioners so as to provide as assessment of the qualities of the region as well as the actual measured changes.

Please call me at 503-797-1737, if you have questions about this survey. Thank you for your consideration of this request.

Gerry Uba, Program Supervisor
Metro, Planning Department
600 NE Grand Avenue
Portland, OR 97232
phone: (503) 797-1737, email: ubag@metro.dst.or.us
cc: Andy Cotugno, Director Planning Department
Mike Hoglund, Director, Regional Planning
Mark Turpel, Manager, Regional Planning

April 6, 2001

«Courtesy_Title» «First_Name» «Middle_Name» «Last_Name»
«Department»
«Organization»
«Address» «Suite_Type» «Suite»
«City», OR «Zipcode»

Dear «Courtesy_Title» «Last_Name»:

Metro believes it is time to evaluate how the region has been doing since the 2040 Growth Concept was adopted in 1995. To that end, we are compiling "performance measures" to track our progress. The measures will include key statistics related to each program area, a random sample survey of public attitudes and opinions and the enclosed survey of local city councils, county commissions and planning commissions. We hope you will complete the in-depth survey to assist us in this important project.

As you may know, during the early 1990s Metro began to research and develop a regional plan for growth. In 1995, the Metro Council, with Metro Policy Advisory Committee (MPAC) recommendations, adopted the 2040 Growth Concept. In 1996, MPAC reviewed and the Metro Council adopted the Urban Growth Management Functional Plan to implement the Growth Concept.

The Growth Concept and the Functional Plan were intended to address shared regionwide goals and were far ranging in scope. They dealt directly with accommodating forecasted growth through more compact and efficient use of land and enhancement of natural resources. They also sought to improve the regional transportation system by servicing the land-use patterns embodied in the Growth Concept, addressing freight needs and increasing accessibility, mobility and mode choice. These documents also provided a regionwide approach to surface parking, big box retail, water quality and flooding.

As you complete the enclosed survey, please know that we value your candor, your ideas and your recommendations. Please call Gerry Uba at 503-797-1737, if you have questions about this survey. Thank you for your consideration of this request.

Sincerely,

Mike Burton
Executive Officer

MB/srb
C:\PC Surv1 letter.doc

Enclosure

___ I am a planning official
___ I am an elected official

Local Elected Officials and Planning Commissioners

The purpose of this survey is to measure your level of satisfaction related to the 2040 Growth Concept implementation

MetroSurvey

Perception/performance based questions

1. In the next 20 years, do you see quality of life in the metropolitan area as getting better, staying about the same, or getting worse? Why?

2. What about quality of life in your neighborhood (getting better, staying the same, or getting worse)? Why?

3. What in your opinion is the most important issue you'd like to see addressed in your community?

4. Can Metro, through its regional planning function, address this issue? How?

METRO

600 NE Grand Ave.
Portland, OR
97232-2736
(503) 797-1700

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01093 tsm

5. Rate the following from 1 to 7, with 1 being "most important" and 7 being "least important."

		Most important						*Least important*
a.	population growth	1	2	3	4	5	6	7
b.	increased density	1	2	3	4	5	6	7
c.	urban sprawl	1	2	3	4	5	6	7
d.	traffic congestion	1	2	3	4	5	6	7
e.	affordable housing	1	2	3	4	5	6	7
f.	road conditions	1	2	3	4	5	6	7
g.	taxes too high	1	2	3	4	5	6	7
h.	clean air	1	2	3	4	5	6	7
i.	water quality	1	2	3	4	5	6	7
j.	jobs	1	2	3	4	5	6	7
k.	strong regional economy	1	2	3	4	5	6	7
l.	protecting open spaces	1	2	3	4	5	6	7
m.	maintaining parks	1	2	3	4	5	6	7

6. Some people have suggested that population growth can be slowed or stopped. What trade-offs do you see if this policy was pursued? What policy direction on this issue do you favor?

_____

_____

_____

_____

_____

7. Please describe the way you feel about the following statements using a scale of 1 to 7, where 1 is "strongly agree" and 7 is "strongly disagree."

   Growth should occur on the fringes of the existing developed area within the urban growth boundary.

   1 2 3 4 5 6 7

Growth should be developed in new communities outside the urban growth boundary.

1 2 3 4 5 6 7

Growth should be directed within existing neighborhoods and business districts within the urban growth boundary.

1 2 3 4 5 6 7

8. Before the urban growth boundary is moved, it must be determined whether more growth can be accommodated inside the current boundary. Can your community accommodate more growth? If so, which kind of growth (e.g., additional housing, additional jobs, mixed uses, redevelopment)? How?

_____

_____

_____

_____

_____

9. "Centers" are communities of varying sizes and intensities, ranging from the central city of downtown Portland to regional centers (e.g., Gresham) to town centers (e.g., Lake Oswego) to main streets (e.g., Cedar Mill area in Washington County). They meet, to varying degrees, the need for goods and services and serve as a "hub" for housing, jobs, transportation or entertainment. If you favor growth in centers, what are the features you would like to see? Circle all that apply.

a. public square or focal point
b. parking
c. mixed use centers with retail and housing together
d. bicycle improvements
e. pedestrian improvements
f. connections to the local park system
g. local retail establishments
h. national retail establishments
i. a variety of housing options
j. a variety of job and service opportunities
k. frequent public transit options
l. transit improvements

10. What advice can you give other jurisdictions in planning and developing centers?

_____

_____

11. What tools make centers work most effectively (e.g., public infrastructure, financing, land assembly)?

_____

_____

12. Do you have the tools to make centers work?

_____

_____

13. Will growth in centers have a positive or negative local fiscal impact? Please explain.

_____

_____

14. Are there incentives that would help make centers more productive?

_____

_____

15. Should market forces alone determine housing affordability or should public policy further support more affordable housing options?

_____

16. Think about changes happening in your community in the last five years. On a scale of 1 to 7 with 1 being "excellent," and 7 being "poor," please rate the following:

		Excellent						*Poor*
a.	the way land is being used	1	2	3	4	5	6	7
b.	patterns of development in your community's business area (such as Lake Oswego Town Center, Hollywood Town Center, Forest Grove Town Center)	1	2	3	4	5	6	7
c.	the type of growth along transportation corridors like Cornelius Main Street, Martin Luther King Jr. Blvd.	1	2	3	4	5	6	7
d.	Measures being taken to protect the natural environment	1	2	3	4	5	6	7
e.	Measures being taken to provide choices for the way we travel, such as bicycling, walking and using mass transit, as well as cars and freight movement	1	2	3	4	5	6	7
f.	How growth in our region occurs in relation to neighboring cities just outside our area (such as Sandy, Canby)	1	2	3	4	5	6	7

		Excellent						*Poor*
g.	Housing affordability	1	2	3	4	5	6	7
h.	Housing choices	1	2	3	4	5	6	7
i.	Coordination of development in residential and business areas with transportation and road systems	1	2	3	4	5	6	7
j.	Street design (access and pedestrian amenities)	1	2	3	4	5	6	7
k.	Transit service	1	2	3	4	5	6	7
l.	Parking conditions	1	2	3	4	5	6	7
m.	Adequate active parks (such as ball fields, tennis courts)	1	2	3	4	5	6	7
n.	Adequate natural areas (such as open spaces, trails)	1	2	3	4	5	6	7
o.	Access to active parks and natural areas (i.e., within walking distance)	1	2	3	4	5	6	7
p.	Building design	1	2	3	4	5	6	7
q.	Visual appearance of business areas	1	2	3	4	5	6	7
r.	Visual appearance of neighborhood and community	1	2	3	4	5	6	7
s.	Other (please specify)	1	2	3	4	5	6	7

17. Have regional policies affected any of the changes identified in your community (see previous question). If yes, please specify which have been impacted by regional policies (see list above, "a" through "s").

_____

_____

18. Are changes to regional policies needed to help you improve your community? If so, what changes?

_____

_____

Concurrency

19. What method do you most favor to pay for the costs associated with future growth and development in the region, such as roads, sewers and water? (circle one)

a. local taxes
b. state taxes
d. systems development charges (development fees)
e. business and industry taxes
f. user fees (e.g., toll roads, vehicle registration)
g. don't know
h. other _____

20. Public policies could create increases in investment and value of existing neighborhoods that is sometimes viewed as "gentrification" and/or "revitalization." Alternatively, policies could increase the value of lands outside the urban growth boundary to the point that could result in the abandonment of neighborhoods and public investments in existing neighborhoods.

a. What is your view on this in relation to your community?

_____

_____

b. Are current policies tilted in one direction?

_____

_____

21. How would you describe the setting in which you reside: rural, rural changing to suburban, suburban, urban?

_____

Please provide other comments, observations:

_____

_____

_____

_____

Name (optional) _____

Name of jurisdiction (optional) _____