MEMORANDUM

December 21, 2011

TO: Mayor and City Council

FROM: Ken Gibb, Community Development Director

RE: First Annual Public Hearing for the FY 12-13 Corvallis Community Development Block Grant and HOME Investment Partnerships Program Action Plan Development Process

I Issue

Federal Community Development Block Grant (CDBG) and HOME Investment Partnerships (HOME) program guidelines, as well as the City's CDBG/HOME program Citizen Participation Plan, call for the City to hold two public hearings annually to receive comments from citizens. These hearings offer opportunities for public comment regarding the housing and community development needs of low income Corvallis residents, and offer an opportunity for citizens to provide feedback about the City's performance in its recent use of CDBG and HOME funding.

II Background

In July of 2000 the City of Corvallis became an entitlement community for purposes of the CDBG program, a federal program administered by the U.S. Department of Housing and Urban Development (HUD) that allocates funds to states and cities in order to support them in their efforts to meet local affordable housing and community development needs. A year later, in July of 2001, the City became a participating jurisdiction for the HOME program, another HUD-administered program that focuses federal resources specifically on the creation or retention of housing opportunities that will be affordable to low, very low and extremely low income people.

As an entitlement community/participating jurisdiction, the City creates a Consolidated Plan every five years to guide its use of CDBG and HOME funds. The current Plan was completed in May 2008, and covers the period FY 08-09 through FY 12-13; the City is currently operating in its fourth year under this Consolidated Plan and beginning to plan for its fifth.

In preparation for carrying out HUD-funded activities in FY 12-13 a one-year Action Plan must be developed. The intent of the Action Plan will be to lay out the means by which CDBG and HOME funds will be allocated to community projects and activities in order to meet the needs and address the goals identified in the five-year Consolidated Plan.

At the time this report is being written, HUD has not yet finalized the CDBG and HOME allocation amounts for the coming year, but has given jurisdictions planning estimates for both programs. Based on HUD's estimates, the City would receive $460,744 in CDBG funding and $295,759 in HOME funding for FY 12-13. These figures represent decreases relative to FY 11-12 allocations for both programs: -6% for CDBG, and -25% for HOME.

III. Discussion

Plan Development

Under the process outlined in the City's CDBG/HOME Citizen Participation Plan, the Corvallis Housing and Community Development Commission (HCDC) plays an integral role in gathering public input and developing the City's Consolidated Plans and Action Plans. Consistent with the body's charge, the HCDC will take a leadership role in reviewing applications for FY 12-13 CDBG and HOME funding support. The Commission's recommendations will come forward for Council consideration in a second public hearing next April.

In their past work on assessing needs and establishing priorities for the City's CDBG and HOME programs, the HCDC has developed and followed these guidelines:

1) **All funds expended in support of housing and community development needs should primarily benefit low and very-low income residents, with an emphasis on assisting those with the very lowest incomes where possible.** In so doing, the City will be assured of meeting the federal expenditure requirements of the CDBG and HOME programs.

2) **To the greatest and most practical extent possible, funds should be allocated to uses from which they will return to the City to be recycled to meet future demands.** This philosophy has served the City well in the past and is responsible for sustaining a portion of the housing loan programs we continue to offer today. If the federal CDBG and/or HOME programs are cut drastically or cease to exist, maintaining a healthy, recycling loan fund balance will hedge against a future in which little or no outside funding assistance may be available to the City.

3) **Where the City contemplates using CDBG funds to support social services, funds should be used to underwrite new community projects and programs, to expand existing programs, or to continue programs currently receiving CDBG funding, rather than using CDBG funds to replace other current sources of City funding for ongoing activities.** HUD guidelines strictly prohibit the use of CDBG funds to replace, or "supplant" other City funding for the same activity.

4) **Methods should be developed to use funds to serve segments of the population that are typically or historically under-served.** The CDBG/HOME Consolidated Plan process requires that jurisdictions identify gaps in their community's ability to meet current low and moderate income needs, and then take steps to fill them. By funding new projects and programs, or continuing to support programs that have recently received CDBG funding, the City will be able to serve residents who fall within those gaps, and will also avoid supplanting restrictions.

5) **The City's CDBG and HOME programs should build upon organizational efficiencies and strengths, and consider these elements in determining overall program goals.** Program efficiency can be attained by focusing efforts on programs and projects that minimize the staff-related costs of oversight and monitoring (e.g., by funding a small number

of larger community-based capital projects in a year, rather than several smaller ones). In addition, it is typically more difficult to assure compliance with CDBG and HOME guidelines when funding external programs or services than it is when using funds for eligible uses that are delivered from within the City organization; the City is financially responsible to HUD for assuring that all program requirements are met whether it, or a grant sub-recipient, is delivering programs or services. Thus a mix of internally- and externally-managed programs and activities should be maintained. Finally, the organization currently operates a set of successful core housing assistance loan programs that should be maintained in order to insure future program availability.

6) **Every effort should be made to gather meaningful, and helpful, public input in determining how best to apply CDBG and HOME allocations to community needs.** In order to achieve this objective, the citizen participation process must avoid simply meeting HUD's "statutory requirements for citizen involvement" that are outlined in the Consolidated Plan guidelines. Instead, in addition to meeting the requirements, the City should take steps to seek out and listen to those who have benefitted or might benefit from CDBG- or HOME-funded programs and projects, and to encourage their participation in ways that make their contributions to the process both easy and meaningful.

7) **Program designs and project expenditures should consider both the long term and short term benefits of both the direct program/project beneficiaries, and of the community as a whole.** This principle is intended to assure that expenditures not only meet needs in the short term, but that they also attempt to provide long term solutions that prevent, or at least delay as long as possible, recurrence of the original need. For example, capital housing or facility projects should be expected to provide long term commitments to affordability or the provision of services; rehabilitation program loan limits should not be set so low that they preclude substantial building improvements and instead promote only cosmetic, or immediately-needed, cover-ups.

Activities Eligible for Funding Under the Current Consolidated Plan

The Corvallis Consolidated Plan for FY 08-09 through FY 12-13 identifies the following activity types as eligible for funding with CDBG and/or HOME resources:

1. Creation of new housing, or the long-term commitment of existing housing for occupancy by low income owners or renters;
2. Facilitation of home ownership opportunities for low income households;
3. Rehabilitation of housing occupied by low income owners and/or renters;
4. Development of public improvements or facilities to support affordable housing or the delivery of social services to target populations;
5. Support for the creation of supportive housing units for homeless and special needs populations;
6. Funding for social service activities through the Human Services Fund; and
7. Support for citizen access to economic opportunities through microenterprise development.

The Consolidated Plan has established numeric, housing-related goals toward the achievement of which the allocation of funds will be applied during the five year period it is in use. These goals fall into three primary areas: the creation of new affordable housing opportunities; the preservation of affordable housing through rehabilitation activities; and the creation of supportive housing opportunities for special needs populations. The following table depicts these larger goals, more refined sub-goals within each, and breakouts of what the programs have achieved/will likely achieve during the four year period beginning with FY 08-09 and ending with FY 11-12, as well as what will still need to be achieved for the one year that will remain under the current Consolidated Plan.

FY 08-09 through FY 12-13 Consolidated Plan Housing Activity Goals

Activity Type and Unit Goal	Activity Subtype	Primary Funding Source*	Five Year Unit Goals	Units Achieved FY 08-09 thru FY 10-11	Unit Goals for FY 11-12	Unit Goals for Remaining Plan Year
Facilitate the creation of 150 new affordable owner or renter housing opportunities	Provide direct City down payment assistance loans	CDBG	60	23	12	25
	Fund unit acquisition or construction by others	HOME	90	6	53	31
Facilitate the rehabilitation of 175 units of owner of renter housing occupied by people with low incomes	Fund housing rehab activity by others	HOME and/or CDBG	125	170	0	--
	Provide direct City housing rehab loans	CDBG or non-federal RLF	50	17	10	23
Create 30 permanent supportive housing opportunities for special needs populations	Fund the creation or rehab of permanent supportive housing units for homeless populations/ subpopulations	HOME and/or CDBG	20	0	18	2
	Fund the creation or rehab of permanent supportive housing units for non-homeless special needs populations	HOME and/or CDBG	10	5	4	1
All unit types			355	221	97	82

* *In a given Plan year the City may determine that a source not identified as "primary" in this column is better suited to a particular request, and utilize that source for project funding.*

Action Plan Development/Request for Proposals Process Outline

A Request for Proposals process seeking applications for projects that would be eligible during FY 12-13 for CDBG and/or HOME funding was initiated in October 2011. Proposals for capital project funding must be received by January 5, 2012; services funding proposals must be received by January 6. Detailed staff reviews of proposals will be carried out during January/February; based on the letters of intent to apply for CDBG and/or HOME funding received from agencies in November, the following summary of requests has been prepared:

Funding Source	*Anticipated Requests*	*Estimated Funds Available*
CDBG Capital/Microenterprise	$250,000	$75,000 to $125,000*
HOME	$670,000	$265,000
CDBG Human Services	$177,000	$69,000

**A range is shown here because these funds support not only capital projects external to the City organization, but also City-operated housing rehabilitation and down payment assistance loan programs. The HCDC's allocation discussions will balance requests for external funding with housing rehab and home ownership goals as they develop their recommendations for the Council.*

It is likely that at least some and perhaps many of the entities that will be submitting FY 12-13 funding proposals will attend the January 3 public hearing to present a description of their projects. Such attendance is not mandatory, however, and will not factor into the HCDC's development of allocation recommendations for future Council consideration. Rather, the HCDC recommendations will be based on the merits of each proposal as they are reviewed by and then presented to the Commission, and by the extent to which projects are feasible, ready to proceed, and address the priorities of the City's current Consolidated Plan.

It is also likely, and desirable, that during the Council's public hearing citizens and others with interest will present program feedback, discuss community needs, and suggest ideas for longer-term projects as well. It is hoped that this discussion will help guide the HCDC's future Consolidated Plan development and outreach efforts by suggesting at least a few areas for investigation.

V. Summary and Action Requested

As noted in Section I of this report, the first public hearing of each year is held simply to provide an opportunity for community input about past and future CDBG/HOME program efforts, and no decisions or actions on the part of the City Council are required.

Review and Concur:

James A. Patterson, City Manager

MEMORANDUM

TO: Mayor and City Council

FROM: Ken Gibb, Community Development Director

DATE: December 27, 2011

RE: McFadden Industrial Annexation (ANN11-00001)

I. ISSUE

The Land Development Code specifies that the City Council makes final decisions on placing Annexations on the ballot for voter approval.

The Planning Commission has made a recommendation to the City Council regarding the placement of the McFadden Industrial Annexation on the May 15, 2012, ballot (ANN11-00001). Additionally, the Planning Commission has approved the Zone Change request (ZDC11-00002), which is contingent upon the City Council placement of the Annexation on the May 15, 2012, ballot and voter approval of the measure. Upon annexation, a zone of PD(GI) (General Industrial with Planned Development), as well as a Willamette River Greenway Overlay, would be applied to the McFadden property **(Exhibit C)**. The Planning Commission also decided to approve Planned Development (Conceptual and Detailed Development Plan) and Willamette River Greenway - Conditional Development Permit applications associated with the Annexation request. The Conceptual and Detailed Development Plan includes conditions of approval, as well as development of a public sidewalk along the site's Highway 20 frontage and landscaped berm improvements near the southwest corner of the site (**Exhibit F**). The Willamette River Greenway - Conditional Development Permit approval is related to the proposed sidewalk improvements, for that portion of the public sidewalk that would be located within the WRG Overlay.

No appeal was filed regarding the Planning Commission's decision to approve the Zone Change, Planned Development, and Willamette River Greenway Conditional Development Permit. Therefore, the Planning Commission's decision on this matter is final (subject to City Council placement of the proposed Annexation on the ballot and voter approval of the ballot measure), and this staff report will not address the Zone Change, Planned Development, and Willamette River Greenway Conditional Development Permit.

II. BACKGROUND

The applicant proposes to annex a total of 88 acres into the City of Corvallis. This includes 85.43 acres of private property associated with Tax Lot 1308, and 2.57 acres of Highway 20 public right-of-way.

November 16, 2011: The Planning Commission held a public hearing on the above-referenced Annexation, Zone Change, Planned Development and Willamette River Greenway Conditional Development Permit. The Planning Commission deliberated on the Annexation, Zone Change, Planned Development and Willamette River Greenway Conditional Development Permit, and decided to 1) recommend that the City Council place the proposed Annexation before the voters on the May 15, 2012, ballot; and 2) approve the proposed Zone Change, Planned Development, and Willamette River Greenway Conditional Development Permit, contingent upon Annexation. The Planning Commission adopted the findings contained in the November 16, 2011, meeting minutes (**EXHIBIT E**) that demonstrate support for approval of the request, as well as findings from the November 9, 2011, Staff Report (**EXHIBIT F**).

III. DISCUSSION

Focus of this Discussion

Since the Planning Commission's decision regarding the Zone Change was not appealed, this discussion will focus solely on the Annexation request.

General:
Specific criteria and policies which apply to all aspects of the proposed Annexation were addressed in Part I of the November 9, 2011, Staff Report to the Planning Commission. The Planning Commission adopted the information and findings in the November 9, 2011, Staff Report and made findings of support at its November 16, 2011, meeting regarding the requests. Relevant topics addressed in the November 9, 2011, Staff Report to the Planning Commission include the following criteria and discussion **(EXHIBIT F)**:

Annexation

- Applicant's Proposal (page 3)
- Annexation Review Criteria and Findings (page 8)
  1. Demonstration of Public Need (pages 9-27)
  2. Advantages to the Community Outweigh Disadvantages (page 28)
  3. Site is Capable of Being Served by Urban Services & Facilities (pages 28-39)
  4. Compatibility (pages 40-44)
- Summary and Conclusions on Annexation (page 45)

Annexation:
Consistent with Land Development Code Section 2.6.30.08, the Planning Commission's recommendation regarding the placement of an annexation request on the ballot is forwarded to the City Council for a final decision. As outlined above, the November 9, 2011, Staff Report to the Planning Commission presents a complete analysis of the relevant criteria. The Planning Commission adopted this analysis and voted unanimously to recommend that the Council place the McFadden Industrial Annexation request (ANN11-00001) on the May 15, 2012, ballot. The Planning Commission found that there is a public need for the Annexation, that the annexation would provide more advantages than disadvantages to the community, that the site is capable of being served by urban services and facilities, and that annexation of the subject property would result in compatible development. Given the above discussion, it is concluded that the proposed Annexation is consistent with the applicable review criteria. A draft resolution, in support of the annexation request as well as a proposed ballot title is included in **EXHIBIT A**.

Clarification Regarding Buildable Land Inventory Data Presented to Planning Commission
Attachment B to the November 9, 2011, Staff Report to the Planning Commission contains excerpts of the 1998 Buildable Land Inventory (BLI), including Table 5-2 (**EXHIBIT F - Page 102**). This table shows, after factoring in both need and supply of industrial land within the City limits, that the surplus amount of industrial land projected in 2020 is 482 acres. Page 12 of the Planning Commission staff report references the 482 acre figure, and discussion on that page is based on this surplus amount of available industrial lands. It should be noted that this figure includes land within both the General Industrial (GI) and Intensive Industrial (II) designations.

Table 8 from Appendix G of the BLI was prepared in December of 1998, in anticipation of the City's adoption of new mixed-use Comprehensive Plan land use designations. The new mixed-use designations were later implemented in 2006, through adoption of Phase 1 of the Land Development Code update. By factoring in the amount of industrial lands available, after considering the new mixed use land use designations, the amount of surplus industrial land in the City's supply was projected to be less than the original amount presented in Table 5-2, by approximately 84 acres. Table 8 was not presented to the Planning Commission, nor discussed in the staff report. The difference in amount of the anticipated surplus industrial land does not change the underlying findings presented by staff in the Planning Commission staff report: that in 1998 it was projected that the City would have an oversupply of vacant, industrially designated lands in 2020. Because the underlying arguments in support of the annexation are unchanged by the differences in the BLI data presented here, it is unlikely the Planning Commission would have decided differently. However, in the interest of providing accurate information, staff have provided this clarification.

Table 5-2:	*482 acres*
Table 8:	*398 Acres*
Difference:	84 acres

Update on Progress of Public Improvement Plan Review for Highway 20 Sidewalk
Condition of Approval # 4 (**EXHIBIT D - Page 4**) requires that, prior to City Council's hearing on the annexation, all items required for issuance of permits for the public improvements associated with the proposed sidewalk along Highway 20, be completed and on file with the City. The reason that public improvement plan authorization and security is required at this time relates to the need to "lock in" the Conceptual and Detailed Development Plan (CDDP) and associated conditions of approval as soon as possible, if voters approve the annexation in May. LDC Section 2.5.50.09(a) states that one way a CDDP cannot expire is if public improvements associated with the DDP are installed and/or bonded within five years following the approval. If Condition # 4 is fully satisfied, the CDDP approval will not expire. Therefore, the conditions of approval associated with the Planned Development will apply to development of the property in perpetuity.

This approach is necessary in order to satisfy concerns about the Oregon State Transportation Planning Rule (TPR). As part of the Planning Commission support of this annexation application, the Commission approved the zone change to General Industrial with a Planned Development and Willamette River Greenway Overlays, contingent upon voter approval of the annexation. The TPR applies where a zone change occurs, and the potential land uses and associated vehicle traffic leads to a "significant effect" on any Oregon Department of Transportation (ODOT) facility in the vicinity of the subject property. Determination of significant effect may require that the associated ODOT facility be upgraded in some manner to address deficiencies in the transportation system.

Additional conditions of approval specific to the McFadden Annexation limit the overall floor area associated with industrial uses on the site (maximum of 855,906 square feet) and the amount of vehicle trips generated by those industrial uses (719 AM trip ends, and 736 PM trip ends), so that the intensity of development and related traffic is no greater than what can occur under the current Benton County Urban Industrial zone. These conditions have the net effect of ensuring that the change in zoning from Benton County's Urban Industrial zone to the City's General Industrial zone has no significant effect on ODOT facilities.

ODOT has reviewed this approach, along with the McFadden Annexation application, and finds it acceptable in terms of addressing TPR (**EXHIBIT F - Page 30, Page 60, Page 62, and Page 184**).

As of the date of this Staff Memorandum to City Council, the applicant has obtained public improvement plan authorization for the subject public sidewalk, but has not completed the bonding for the public improvements. Staff anticipates that an update will be provided on the status of the public improvement financial security at the January 3, 2012, City Council public hearing on this matter.

IV. REQUESTED ACTION

The City Council has the following options relative to the proposed McFadden Industrial Annexation:

Option #1: Approve placement of the McFadden Industrial Annexation (ANN11-00001) on the May 15, 2012, ballot; or

Option #2: Deny placement of the McFadden Industrial Annexation (ANN11-00001) on the May 15, 2012, ballot.

As evidenced by the findings contained in the November 9, 2011, Staff Report to the Planning Commission, the Planning Commission's verbal findings in support of placing the McFadden Industrial Annexation on the May 15, 2012, ballot, (as noted in the minutes of the November 16, 2011, Planning Commission meeting), and this December 27, 2011, staff memorandum to the City Council, staff and the Planning Commission recommend **Option #1.** If the City Council agrees with this recommendation, it is recommended that the Council entertain the following motion:

MOTION: **The City Council moves to tentatively approve the request and to place the annexation on the May 15, 2012, ballot, subject to adoption of formal findings to be prepared by staff, with consideration of the formal findings and the resolution to place the annexation on the ballot to occur at the next City Council meeting.**

V. EXHIBITS AND ATTACHMENTS

Exhibits:

Exhibit A. Draft Resolution to schedule an election on May 15, 2012, and forward the McFadden Industrial Annexation to the voters, and proposed Ballot Title

Exhibit B: Comprehensive Plan Map

Exhibit C: Existing and Proposed (if Annexation Measure Passes) District Designation Map

Exhibit D: Order 2011-055: Planning Commission Notice of Disposition, dated November 18, 2011

Exhibit E: November 16, 2011, Minutes of the Planning Commission, including Written Testimony Received at the November 16, 2011, Planning Commission public hearing

Exhibit F: November 9, 2011, Staff Report to the Planning Commission

Review and Concur:

Jim Patterson, City Manager

RESOLUTION 2012 - _____

A RESOLUTION FORWARDING THE MCFADDEN INDUSTRIAL ANNEXATION TO THE VOTERS AT THE MAY 15, 2012, ELECTION, AND DIRECTING THAT NOTICE OF THE ELECTION AND PUBLICATION FOR THE MEASURE TO BE VOTED UPON BE GIVEN.

Minutes of the meeting of January 3, 2012, continued.

A resolution submitted by Council person _____.

WHEREAS, the Corvallis Planning Commission held a duly-noticed public hearing on November 16, 2011, regarding the McFadden Industrial Annexation; and

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WHEREAS, the Corvallis Planning Commission voted unanimously to recommend that the City Council place the McFadden Industrial Annexation on the May 15, 2012, ballot; and

WHEREAS, the Corvallis City Council has held a duly-noticed public hearing on January 3, 2012, regarding the McFadden Industrial Annexation; and

WHEREAS, the City Council held deliberations regarding the McFadden Industrial Annexation on January 17, 2012; and

WHEREAS, the City Council found that the McFadden Industrial Annexation complies with all applicable decision criteria, as evidenced in the findings contained in Exhibit A (which consists of the complete Staff Report to the City Council, including attachments, and dated December 27, 2011) and by this reference incorporated herein, the Planning Commission's verbal findings in support of recommending placement of the McFadden Industrial Annexation on the May 15, 2012, ballot (as noted in the minutes of the November 16, 2011, Planning Commission meeting), and the City Council's verbal findings in support of recommending placement of the McFadden Industrial Annexation on the May 15, 2012, ballot, (as noted in the minutes of the January 3, 2012, City Council meeting)

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF CORVALLIS RESOLVES THAT:

A primary municipal election shall be held on May 15, 2012, beginning at 7 am and continuing to 8 pm on the same date. The election shall be conducted and votes thereafter counted, canvassed, and returned by the Benton County Elections Office.

THE CITY COUNCIL OF THE CITY OF CORVALLIS FURTHER RESOLVES that the findings contained in Exhibit A (which consists of the complete Staff Report to the City Council, including attachments, and dated December X, 2011) and by this reference

incorporated herein, the Planning Commission's verbal findings in support of recommending placement of the McFadden Industrial Annexation on the May 15, 2012, ballot (as noted in the minutes of the November 16, 2011, Planning Commission meeting), and the City Council's verbal findings in support of recommending placement of the McFadden Industrial Annexation on the May 15, 2012 ballot, (as noted in the minutes of the January 3, 2012, City Council meetings) are hereby adopted.

THE CITY COUNCIL OF THE CITY OF CORVALLIS FURTHER RESOLVES that the McFadden Industrial Annexation, which would annex approximately 88 acres of land generally located west of Highway 20 and the Willamette River, south of Circle Boulevard, and north of Waterworks Avenue, to be zoned GI (General Industrial) with Overlays for a Planned Development (PD) and Willamette River Greenway, is to be submitted to the legal voters of Corvallis, Oregon, for their approval or rejection pursuant to Corvallis City Charter Section 52 at an election to be held on May 15, 2012, between the hours of 7 am and 8 pm. This election will be conducted by mail-in ballots, with ballot information being sent to voters two to three weeks prior to the election. Citizens may vote by mailing in ballots or dropping off ballots in a drop zone anytime prior to 8 pm on May 15, 2012.

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LEGAL DESCRIPTION OF THE SITE

The following described real property, all located in Benton County, Oregon, shall be annexed to the City of Corvallis upon obtaining a favorable majority vote of the people:

Legal Description of Arthur L. McFadden Property and
Portion of U.S. Highway 20 Right of Way for Annexation

Commencing at a 1-3/8 inch brass cap at the southwest corner of the Archimedes Stewart Donation Land Claim No. 46 in the west one-half of Section 25 of Township 11 South, Range 5 West of the Willamette Meridian, Benton County, Oregon; thence South 22º52'00" West 890.11 feet to a 5/8 inch iron rod at the most northerly corner of that property conveyed to Hewlett-Packard Company in Benton County Deed Record M-201764-95; thence along the most northerly line of said Hewlett-Packard property South 36º17'44" West 1057.22 feet to a 5/8 inch iron rod at the most westerly corner of said Hewlett-Packard property, being the TRUE POINT OF BEGINNING; thence along the lines of said Hewlett-Packard property the following courses: South 62º28'02" East 222.76 feet to a 5/8 inch iron rod, North 34º20'51" East 330.37 feet to a 5/8 inch iron rod, North 45º56'16" East 332.51 feet to a 5/8 inch iron rod, South 71º39'08" East 247.23 feet to a 5/8 inch iron rod, North 73º31'35" East 187.04 feet to a 5/8 inch iron rod, South 00º21'47" East 368.37 feet to a 5/8 inch iron rod, South 53º36'14" West 399.48 feet to a 5/8 inch iron rod, South 00º21'25" East 287.03 feet to a 5/8 inch iron rod, North 89º38'43" East 323.10 feet to a 5/8 inch iron rod, South 00º21'47" East 721.70 feet to a point being witnessed by a 5/8 inch iron rod which bears South 25º54'59" East 1.00 feet of the true corner; thence continuing along said Hewlett-Packard west line South 25º54'59" East 1162.03 feet to a 5/8 inch iron rod at the northerly right of way line of U.S. Highway 20, said additional highway right of way acquired by the City of Corvallis in the State of Oregon Circuit Court Case No. 95-10096; thence along the northerly right of way line of said Highway 20 South 64º30'15" West 337.85 feet to a 5/8 inch iron at the point of curvature (Highway 20 centerline station 497+66.9); thence continuing along said northerly right of way line along a 3869.71 foot radius curve to the left 166.25 feet (the long chord of which bears South 63º16'24' West 166.24 feet) to a 5/8 inch iron rod at the end of said additional right of way acquired by the City of Corvallis (Highway 20 centerline station 499+31.0); thence along the end of said additional right of way South 27º57'26" East 20.00 feet to a 5/8 inch iron rod at the northerly right of way line of said Highway 20; thence along the northerly right of way line of Highway 20 along a 3849.71 foot radius curve to the left 177.28 feet (the long chord of which bears South 60º43'24" West 177.27 feet) to a 5/8 inch iron rod at the point of tangency (Highway 20 centerline station 501+06.9); thence continuing along said northerly right of way line of Highway 20 South 59º12'56" West 1019.40 feet to the southeast corner of that property conveyed to Linn and Sylvia Averill in Benton County Deed Record Book 167, Page 280, said point being witnessed by a 3/4 inch iron pipe which bears North 27º00'43" East 0.43 feet of the true corner; thence along the east line of said Averill property North 27º00'43" West 174.94 feet to a 3/4 inch iron pipe at the northeast corner of said Averill property; thence along the north line of said Averill property North 88º57'51" West 79.43 feet to a 3/4 inch iron pipe at the northwest corner of said Averill property, also being on the east line of that property conveyed to Kathleen and William Ten Pas in Benton County Deed Record 2004-365498; thence along the east line of said Ten Pas property North 26º26'41" West 16.65

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feet to a 3/4 inch iron pipe at the northeast corner of said Ten Pas property; thence along the north line of said Ten Pas property North 84º31'05" West 19.05 feet to a 5/8 inch iron rod at the most westerly southwest corner of that property conveyed to Arthur McFadden in Benton County Deed Record M-185094-94; thence along the west line of said McFadden property North 00º19'44" West 2789.00 feet to a 5/8 inch iron rod at the most westerly northwest corner of said McFadden property, also being on the easterly right of way line of the Southern Pacific Railroad; thence along said easterly right of way line North 36º17'44" East 203.91 feet to the true point of beginning. Containing 85.43 acres of land, more or less.

Together and with that portion of U.S. Highway right of way described as follows:
Beginning at the aforementioned Southeast corner of said Averill property; thence South 27º00'43" East 60.00 feet to the southerly right of way line of Highway 20; thence along said southerly right of way line North 59º12'56" East 1023.20 to the point of tangency (Highway centerline station 501+06.9); thence continuing along said southerly right of way line along a 3789.71 foot radius curve to the right 337.28 feet (the long chord of which bears North 61º57'16" East 337.17 feet) to a 5/8 inch iron rod at the point of curvature (Highway 20 centerline station 497+66.9); thence continuing along said southerly right of way line North 64º30'15" East 338.43 feet; thence North 25º54'59" West 80.00 feet to a 5/8 inch iron rod at the northerly right of way line of U.S. Highway 20, said additional highway right of way acquired by the City of Corvallis in the State of Oregon Circuit Court Case No. 95-10096; thence along the northerly right of way line of said Highway 20 South 64º30'15" West 337.85 feet to a 5/8 inch iron at the point of curvature (Highway 20 centerline station 497+66.9); thence continuing along said northerly right of way line along a 3869.71 foot radius curve to the left 166.25 feet (the long chord of which bears South 63º16'24' West 166.24 feet) to a 5/8 inch iron rod at the end of said additional right of way acquired by the City of Corvallis (Highway 20 centerline station 499+31.0); thence along the end of said additional right of way South 27º57'26" East 20.00 feet to a 5/8 inch iron rod at the northerly right of way line of said Highway 20; thence along the northerly right of way line of Highway 20 along a 3849.71 foot radius curve to the left 177.28 feet (the long chord of which bears South 60º43'24" West 177.27 feet) to a 5/8 inch iron rod at the point of tangency (Highway 20 centerline station 501+06.9); thence continuing along said northerly right of way line of Highway 20 South 59º12'56" West 1019.40 feet to the southeast corner of that property conveyed to Linn and Sylvia Averill in Benton County Deed Record Book 167, Page 280, said point being witnessed by a 3/4 inch iron pipe which bears North 27º00'43" East 0.43 feet of the true corner and being the point of beginning. Containing 2.57 acres of land, more or less.

The above described properties contain a total of 88.00 acres of land, more or less. The Basis of Bearings for the above described area is from Benton County Survey No. 9025.

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BALLOT TITLE

The following shall be the ballot title of the measure to be submitted to the city's voters:

CAPTION:

02-_____ : PROPOSED ANNEXATION OF THE MCFADDEN SITE

QUESTION:

Shall the 88-acre McFadden Industrial Annexation site be annexed?

SUMMARY:

DRAFT

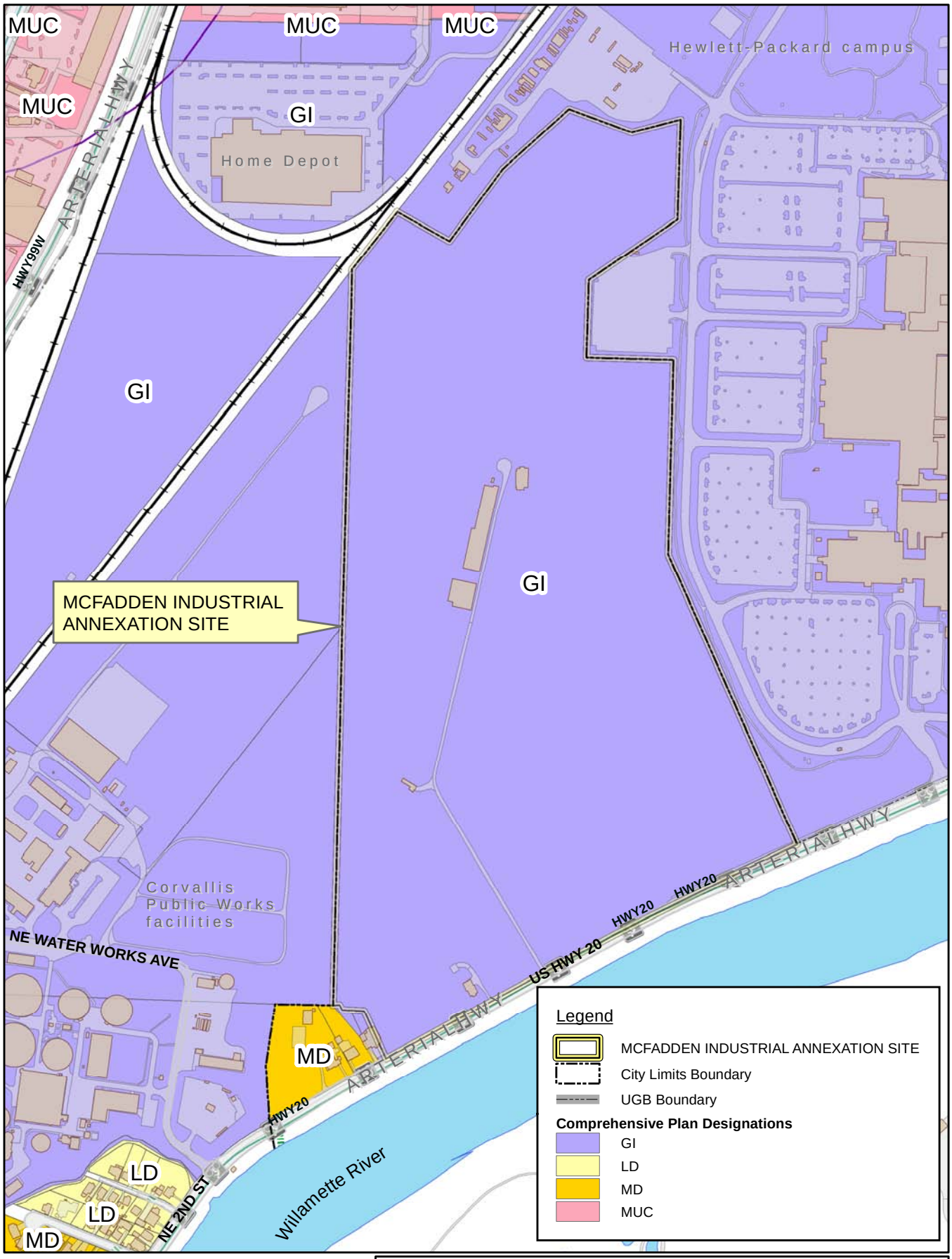
Approval of this measure would annex approximately 88 acres into the City of Corvallis, including 85.43-acres of private property and 2.57 acres of adjacent Highway 20 right-of-way. The site to be annexed is located west of Highway 20 and the Willamette River, south of Circle Boulevard, and north of Waterworks Avenue. The 85.43-acre McFadden site will be zoned PD(GI) (General Industrial with Planned Development and Willamette River Greenway Overlays), if the annexation is approved.

The City Recorder is authorized and directed to give notice of the submission of this question to the voters, including a true copy of the complete text and the ballot title for the measure in the form in which it shall be printed on the official ballot and any other information required by law to be published. That notice shall be published in not less than two successive and consecutive weekly issues of the Corvallis Gazette Times.

_____

Upon motion duly made and seconded, the foregoing resolution was adopted and the Mayor thereon declared said resolution to be adopted.

Comprehensive Plan Map



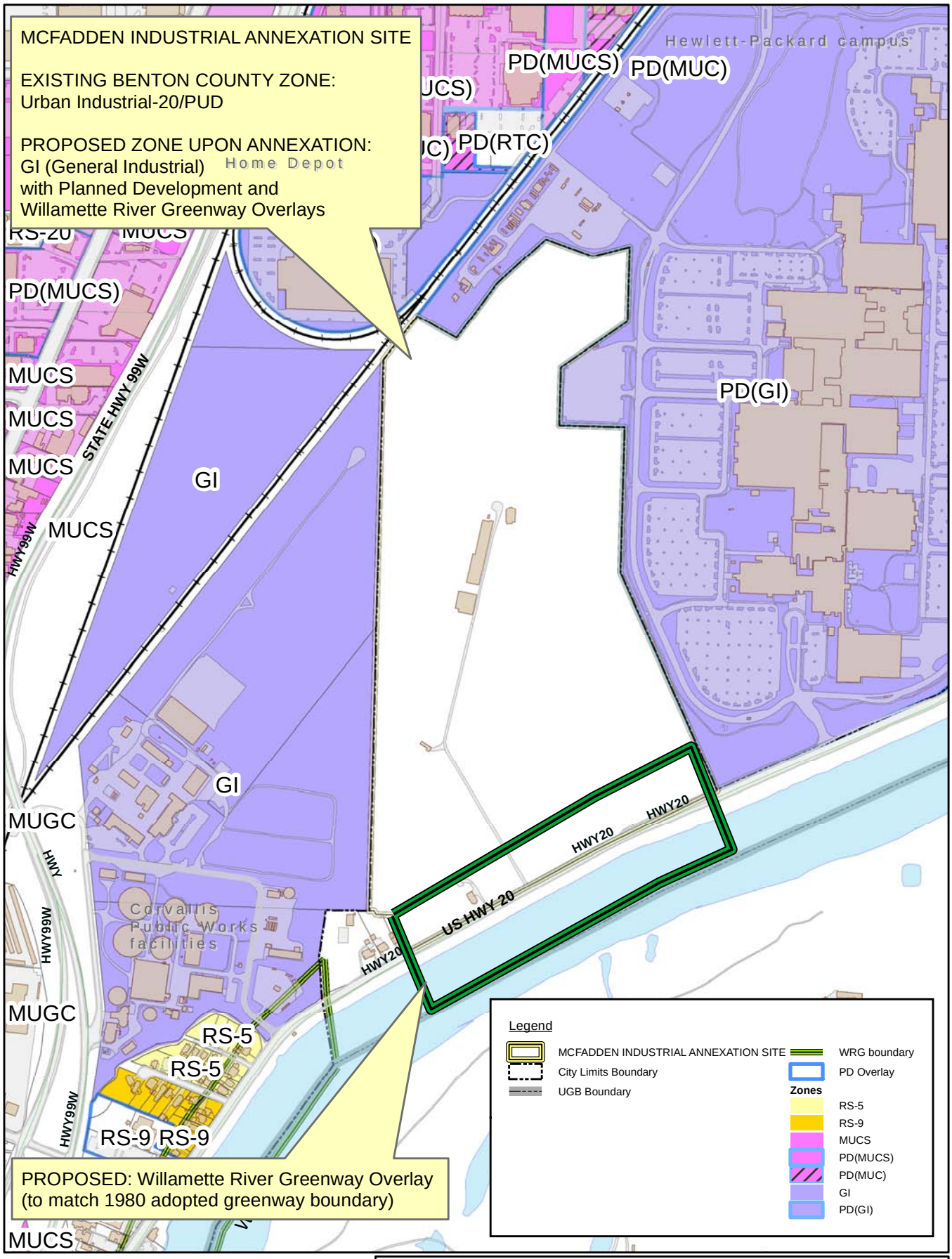
MCFADDEN INDUSTRIAL ANNEXATION
(ANN11-00001 / ZDC11-00002 / PLD11-00002 / WRG11-00001)
PLANNING COMMISSION STAFF REPORT
ATTACHMENT A-3

0 190 380 760 Feet

Corvallis Planning Division
501 SW Madison Ave
Corvallis, OR 97333
541.766.6908
Planning@ci.corvallis.or.us

MCFADDEN INDUSTRIAL ANNEXATION - (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT B

Zone Map (Existing and Proposed)



MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT C

MCFADDEN INDUSTRIAL ANNEXATION
(ANN11-00001 / ZDC11-00002 / PLD11-00002 / WRG11-00001)
PLANNING COMMISSION STAFF REPORT
ATTACHMENT A-4

0 255 510 1,020 Feet

Corvallis Planning Division
501 SW Madison Ave
Corvallis, OR 97333
541.766.6908
Planning@ci.corvallis.or.us

Community Development
Planning Division
501 SW Madison Avenue
Corvallis, OR 97333

CORVALLIS PLANNING COMMISSION
NOTICE OF DISPOSITION

ORDER 2011-055

CASE: **McFadden Industrial Annexation**
(ANN11-00001 / ZDC11-00002 / PLD11-00002 / WRG11-00001)

REQUEST: The applicant requests that the Planning Commission recommend that the City Council place a measure on the May 15, 2012, ballot to annex 88 acres of privately-owned land and Highway 20 right-of-way into the City Limits. The applicant also requests that the Planning Commission approve a Zone Change to zone the site General Industrial with Planned Development and Willamette River Greenway Overlays. The applicant is also requesting a Conceptual Development Plan approval that proposes specific conditions of approval for the subject annexation site, and Detailed Development Plan and Willamette River Greenway Conditional Development approval to construct a public sidewalk along the subject site's Highway 20 frontage, with additional landscaping improvements. The current Benton County zoning of the property is Urban Industrial-20/PUD with various County Overlays. The Zone Change, Conceptual and Detailed Development Plan, and Willamette River Greenway Conditional Development decisions would be contingent upon passage of the annexation measure on the May 2012 ballot.

APPLICANT: Gazeley & Associates
7275 NE Haugen Road
Corvallis, OR 97330

OWNER: Arthur McFadden
401 SW Alder Street
Portland, OR 97204

LOCATION: The site is located at 1350-1520 NE Highway 20. It is shown on Benton County Assessor's Map 11-5-25, as Tax Lot 1308.

DECISION: The Corvallis Planning Commission conducted a public hearing on November 16, 2011, closed the public hearing, deliberated, and decided to forward the requested Annexation to City Council with a recommendation to place the request on the May 2012 election ballot. The Planning Commission also decided to approve the requested Zone Change, Conceptual and Detailed Development Plan, and Willamette River Greenway Conditional Development Permit applications, subject to voter approval of the Annexation measure, and

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT D-1

subject to the attached conditions of approval, including a revision to Condition # 8 as presented in the November 16, 2011, Staff Memorandum to the Planning Commission. The Planning Commission adopts the findings contained in the November 9, 2011, Planning Commission Staff Report, and the portions of the November 16, 2011, Planning Commission minutes that demonstrate support for the Planning Commission's actions.

If you are an affected party and wish to appeal the Planning Commission's decision, appeals must be filed, in writing, with the City Recorder within 12 days from the date that the order is signed. The following information must be included:

1. Name and address of the appellant(s).
2. Reference the subject development and case number, if any.
3. A statement of the specific grounds for appeal.
4. A statement as to how you are an affected party.
5. Filing fee of $840.10 ($420.05 If appealed by a recognized Neighborhood Association).

Appeals must be filed by 5:00 p.m. on the final day of the appeal period. When the final day of an appeal period falls on a weekend or holiday, the appeal period shall be extended to 5:00 p.m. on the subsequent work day. The City Recorder is located in the City Manager's Office, City Hall, 501 SW Madison Avenue, Corvallis, Oregon.

11/18/11

Jennifer Gervais, Chair
Corvallis Planning Commission

Signed this 18th day of November, 2011.

Appeal Deadline / Effective Date: Tuesday, November 30, 2011, at 5 p.m.

Effective Period of the Conceptual and Detailed Development Plan:
Unless appealed, and contingent upon passage of the Annexation measure, the Conceptual and Detailed Development Plan will expire on November 30, 2016.

Effective Period of the Willamette River Greenway Conditional Development Permit:
Unless appealed, and contingent upon passage of the Annexation measure, the Willamette River Greenway Conditional Development Permit will expire on November 30, 2013.

Conditions of Approval for PLD11-00002 / WRG11-00001 (applicable if City Council places ANN11-00001 Annexation measure on May 2012, ballot, and contingent upon voter approval of the Annexation)	
#	Condition Language
1	Consistency with Plans - Development shall comply with the narrative and plans identified in Attachment D, except as modified by the conditions below, or unless a requested modification otherwise meets the criteria for a Minor Planned Development Modification. Such changes may be processed in accordance with Chapter 2.5 of the LDC.
2	Modifications to Conditions / Future Planned Development Modifications and Transportation Planning Rule - Any modification to condition # 7 below which proposes an increase in the prescribed maximum vehicle trips requires submittal of a Planned Development Modification application to the City, to allow for review and comment on the application by ODOT. Materials included as part of the Planned Development Modification application shall include a discussion on the reconsideration of the applicability of OAR 660-012-0060 and the Oregon Transportation Planning Rule, as it is defined by OAR at the time of application.
3	Deed Restriction for Subject Property- Upon voter approval of the requested Annexation, and as part of the processing of permits as required in the conditions below, the applicant shall submit a deed restriction document to the City for review, approval, and recording with the Benton County Records and Licenses Office. The deed restriction shall include the complete language of the conditions outlined below that limit floor area and vehicle trips. The applicant shall pay the costs of filing the deed restriction with the Benton County Records office. Any future Planned Development Modification approval that involves changes to the proposed limits on floor area and vehicle trips shall include a condition of approval that requires amendments to the deed restriction outlined in this condition, in order to inform current and future owners of the subject property of any changes to the applicable development restrictions.

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT D-3

Conditions of Approval for PLD11-00002 / WRG11-00001 (applicable if City Council places ANN11-00001 Annexation measure on May 2012, ballot, and contingent upon voter approval of the Annexation)	
4	Public Improvements - Prior to City Council's hearing of ANN11-00001, the public improvements shown in the Detailed Development Plan and submitted with case PIP11-1530 shall be secured in accordance with LDC 4.0.20. Improvements consist of the installation of the public setback sidewalk along the sites U.S. Highway 20 frontage along with a dedication of ROW or the granting of an easement to accommodate the improvements. In order to secure the public improvements, the applicant shall prepare Public Improvement by Private Contract (PIPC) permits. The plans shall be authorized and all permit items required for issuance of the permit shall be completed and on file with Development Review Engineering. The permit shall be ready to issue and the ROW dedication or easement shall be ready to be filed upon successful annexation to the City. An environmental assessment shall be provided by the developer (grantor) for all lands to be dedicated to the public or City per LDC 4.0.100.g. All improvements must be installed, inspected and approved within 12 months of Annexation approval (based on the results of the May 15, 2012, ballot measure).
5	Public Access Easement - Prior to approval of the PIPC application (PIP11-1530), the applicant shall provide documents for dedication of a public access easement over the west 15 feet of the subject property, where it abuts the Southern Pacific Railroad Line, to the City. Prior to City Council review of the Annexation request, the applicant shall finalize and prepare the easement documents for recording. If the voters approve the Annexation request, the applicant shall provide fees to the City of Corvallis so that the easement may be recorded with the Benton County Records and Licenses Office, upon certification of the Annexation results.

Conditions of Approval for PLD11-00002 / WRG11-00001 (applicable if City Council places ANN11-00001 Annexation measure on May 2012, ballot, and contingent upon voter approval of the Annexation)	
6	Maximum Floor Area Ratio - Future development proposals on the subject property shall be limited to a maximum Floor Area Ratio (FAR) of 0.23. The maximum FAR for the site is 0.23 (85.43 acres x 43,560 square feet/acre = 855,906 square feet of floor area). The maximum floor area for an incremental application approach shall be proportioned in relation to the developable area included in each application . The cumulative total floor area of all increments shall not exceed 855,906 square feet. Applications, as outlined above, are defined as Detailed Development Plan / Planned Development Modifications, building shell permit, and tenant improvement permit applications. All required applications shall include a table of existing and proposed uses within each building, as well as gross floor area and trip end calculations associated with each use.
7	Maximum Trip Ends - Future development proposals on the subject site shall calculate trip ends for traffic analysis purposes based upon the current applicable International Traffic Engineers (ITE) land use code. However the total trip ends at full build out shall not exceed the following categories of total trips which are based upon the current ITE land use code for industrial parks. AM peak hour 0.84/1,000 sq. ft. x 855,906 sq. ft. = 719 trip ends PM peak hour 0.86/1,000 sq. ft. x 855,906 sq. ft. = 736 trip ends Weekday 6.96/1,000 sq. ft. x 855,906 sq. ft. = 5,957 trip ends Trip ends for incremental applications shall not exceed a proportional calculation using the above rates. For either an individual application or for the cumulative total of all applications at full build out, the floor area shall be the lesser of the FAR calculation (as calculated per Condition #6) or the floor area used in the trip end calculation methodology. Applications, as outlined above, are defined as Detailed Development Plan / Planned Development Modifications, building shell permit, and tenant improvement permit applications. All required applications shall include a table of existing and proposed uses within each building, as well as gross floor area and trip end calculations associated with each use.

Conditions of Approval for PLD11-00002 / WRG11-00001 (applicable if City Council places ANN11-00001 Annexation measure on May 2012, ballot, and contingent upon voter approval of the Annexation)	
8	Planned Development Approval for Future Phases : Future phases of development beyond the scope of work identified in the Detailed Development Plan (Sheet C2.2 - sidewalk and landscaped berm) are required to be processed using the City's Planned Development provisions in LDC Chapter 2.5, which requires a Major Modification to the Conceptual Development Plan shown on Sheet C2.1, and Detailed Development Plan approval for each phase. *** THIS CONDITION MODIFIED BY THE PLANNING COMMISSION**
9	Use Restrictions - The following uses are normally permitted in the City's General Industrial (GI) Zone, but are prohibited in the McFadden Industrial Planned Development: • 3.24.20.01.a.2.c(2) - Kennels • 3.24.20.01.a.2.i - Scrap Operations; and • 3.24.20.03.a - Explosive Storage.
10	Preservation of Existing Trees or Mitigation for Removal: Four existing significant trees are identified on Sheet C2.2. These trees should be preserved to the maximum extent practicable and shall be illustrated on the plans submitted for public improvements (PIPC). Prior to issuance of construction permits for the public sidewalk, the applicant shall install tree protection fencing consistent with LDC Section 4.12.60.f. However, if the final location of the required public sidewalk and/or its expansion in width to accommodate the required public multi-use path impacts the trees such that they cannot be preserved in a healthy condition, then the affected trees may be removed. Prior to removal and issuance of the construction permits for the sidewalk, the applicant shall provide a valuation estimate to the City's Urban Forester. Upon approval of the valuation, the applicant shall re-plant an equivalent number of equal value trees along the site's frontage, in a location consistent with LDC Section 4.2.30.b.

Conditions of Approval for PLD11-00002 / WRG11-00001 (applicable if City Council places ANN11-00001 Annexation measure on May 2012, ballot, and contingent upon voter approval of the Annexation)	
11	Street Trees / Landscaped Berm Construction Permits Required: Upon voter approval of the Annexation request, the applicant shall submit, by June 15, 2012, applications and construction drawings for Excavation and Grading (EXC) and Landscape and Irrigation (LND) permits, associated with the improvements proposed as part of the Detailed Development Plan, except as modified below. Landscape Construction Documents (LND) - Plans submitted for the required landscape and irrigation permit shall contain a specific planting plan (including correct Latin and common plant names), a Significant Vegetation preservation plan addressing existing significant trees identified on Sheet C2.2, in the vicinity of construction, irrigation plans, details, and specifications for all required landscaped areas identified on the DDP, with the exception of street trees along the Highway 20 frontage. The irrigation plans shall indicate source of water, pipe location and size, and specifications for backflow prevention. The irrigation system shall utilize 100 percent sprinkler head-to-head coverage or sufficient coverage to ensure 90 percent coverage of plant materials in three years. Plantings shall be provided as shown on Sheet C2.2 - Detailed Development Plan, with the exception of street trees along the Highway 20 frontage and except as modified below and shall comply with LDC Chapter 4.2. As proposed, medium and large canopy trees and groundcover shall be provided on the landscaped berm. Additional ground cover, shrubs, and trees shall be provided in the area of the landscaped berm to ensure that the landscaping meets the height, opacity, and maturity time prescribed in LDC 3.24.30.03.a, 4.2.30.a.4, 4.2.40, and 4.2.50. Tree plantings shall match planting standards adopted by the Urban Forester. The landscape construction documents shall include an overlay drawing which illustrates proposed plantings and existing and proposed underground utilities, in order to ensure that plantings and utilities meet the separation requirements outlined in LDC § 4.2.30.b. Exceptions to the plantings shown on Sheet C2.2 may be administratively approved by the Development Services Division where, due to plant availability or performance issues, minor changes are warranted. Plant substitutions shall meet the LDC performance criteria and maintain at least the minimum plant density and plant size as specified in this Condition.

Conditions of Approval for PLD11-00002 / WRG11-00001 (applicable if City Council places ANN11-00001 Annexation measure on May 2012, ballot, and contingent upon voter approval of the Annexation)	
12	Timing of Installation of Landscape Improvements - If the voters approve the Annexation request, and once the applicant has received permit approval consistent with Condition # 10 above, the applicant shall install the berm, landscaping, and irrigation approved as part of the EXC and LND permit applications, by June 15, 2013.
13	Inspections and Three Year Maintenance Guarantee - Prior to final acceptance of the installation of required landscaping by the City, the applicant shall provide a three year maintenance bond or other financial assurance to the Development Services Division for review and approval. This financial assurance is to cover the required three year landscape maintenance period which begins at the time the landscape installation is approved by the City. This includes achieving the minimum 90 percent coverage specified by Code.
14	Three -Year Maintenance Guarantee Release - The developer shall provide a report to the Development Services Division just prior to the end of the three year maintenance period for the 3-Year Maintenance Bond initiated by this Detailed Development Plan, as prescribed in LDC § 4.2.20.a.3 of the LDC. The report shall be prepared by a licensed arborist or licensed landscape contractor and shall verify that 90 percent ground coverage has been achieved, either by successful plantings or by the installation of replacement plantings. The Director shall approve the report prior to release of the guarantee.

Development Related Concerns:

A. Future Detailed Development Plans shall address the extent of improvements along the site's frontage. Street trees, roadway, bicycle, and pedestrian improvements shall be consistent with the City's Land Development Code, the Transportation Plan, and the Parks & Recreation Facilities Plan.

B. Future Detailed Development Plans shall complete a TIA in accordance with LDC 2.5.40.01.g.5 and 4.0.60.a. The City Engineer shall define the scope of the traffic impact study based on established procedures. The TIA shall be submitted for review to the City Engineer. The proposed TIA shall reflect the magnitude of the project in accordance with accepted traffic engineering practices. The applicant shall complete the evaluation and present the results with future overall site development proposals.

C. As part of the first phase of any future Detailed Development Plan application, the applicant shall include plans to widen the public sidewalk along the site's Highway 20 frontage to 12 feet, and the entire facility shall be constructed to the City's off-street multi-use path standards. Additionally, the applicant shall dedicate a public access easement over any portion of the widened multi-use path facility that is located on private property. Please note that the location of this path could change to accommodate required travel lanes on U.S. Highway 20.

D. The existing 16 inch waterline along U.S. Highway 20 is located approximately 15 feet north of the existing ROW in a 20 foot wide easement. Depending on future lane configurations, the existing waterline may end up within, or close to, the future landscape strip. Per LDC 4.2.30.b.2.d, trees may not be planted within 10 feet of public utility lines. This may preclude trees from being planted within the landscape strip. Street trees that cannot be accommodated within the park strip may be located on the west side of the sidewalk / multi-use path as necessary, to avoid utility conflicts.

E. With future development, the application proposes to serve the site by constructing a 16 inch waterline through the site, connecting the existing 16 inch and 30 inch waterlines. This improvement is consistent with the City's Water Master Plan.

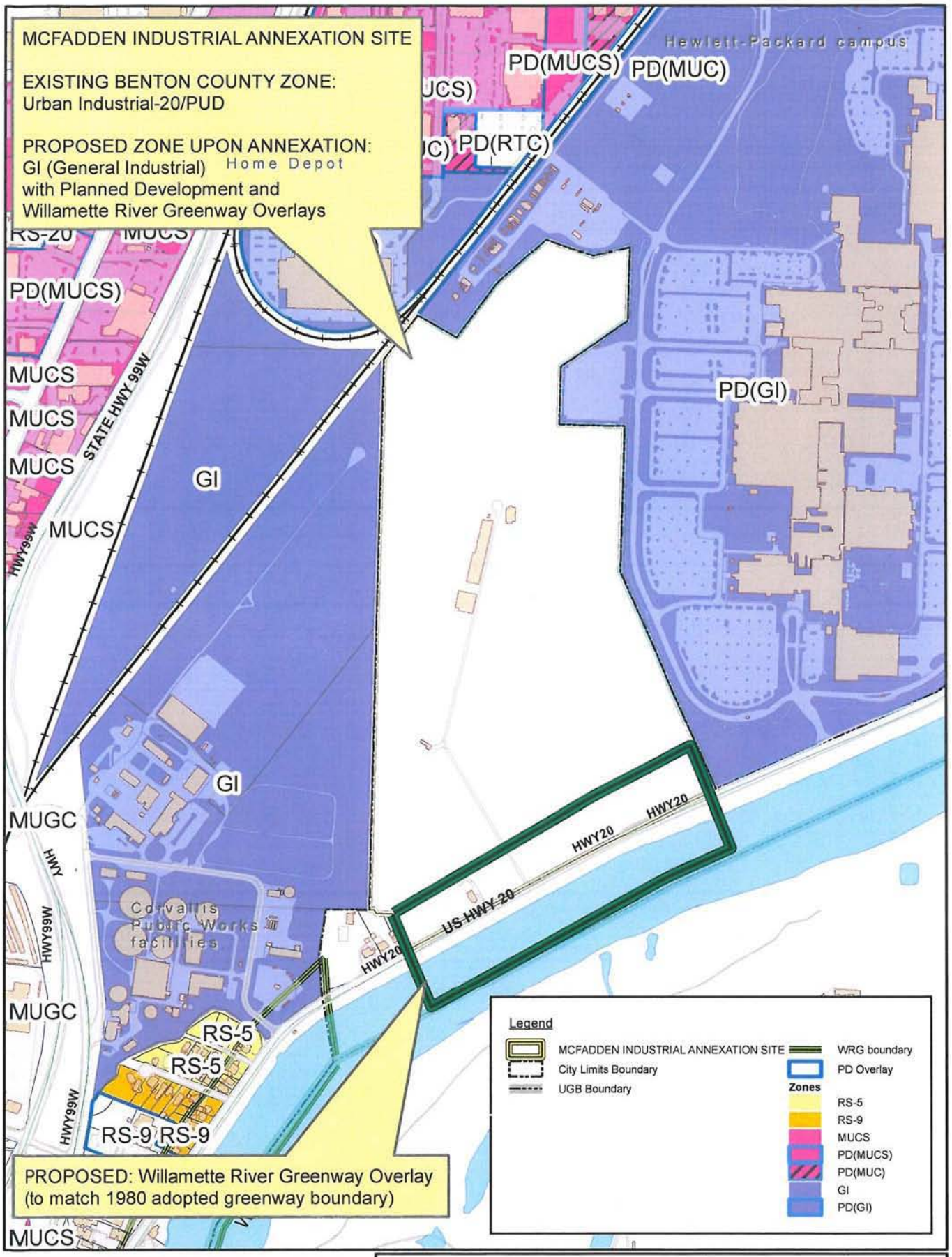
F. Future Detailed Development Plan phases on the site that create more than 5,000 ft^2 of pollution generating impervious surfaces will be required to construct stormwater quality facilities. Stormwater quality facilities shall be designed in accordance with criteria established in Appendix F of the Stormwater Master Plan and the most recent version of the *King County, Washington, Surface Water design Manual*. The water quality facilities shall be designed to remove 70 percent of the total suspended solids (TSS) entering the facility during the water quality design storm, 0.9-inch 24-hr rainfall event with NRCS Type 1A distribution.

G. Future detailed development phases on the site that create more than 25,000 ft^2 of impervious surfaces will be required to construct stormwater detention facilities in accordance with the LDC section 4.0.130.b. Detention facilities shall be designed to maximize storm water infiltration. Maintenance of these facilities is most efficiently provided with open systems because they facilitate visible evaluation of system conditions and accommodate routine, low-technology maintenance practices. Open systems also allow stormwater contact with vegetation and soil to enhance water quality, infiltration, and maintaining the properly functioning hydrological and biological condition of open drainageways. The storm water detention facilities shall be designed consistent with both criteria outlined in Appendix F of the Storm Water Master Plan, and criteria outlined in the most recent King County, Washington, Surface Water Design Manual, and shall be designed to

capture run-off so that the run-off rates from the site after development do not exceed the pre-developed conditions, based on the 2-year, 5-year, and 10-year, 24-hour design storms.

H. Future development of the site shall require the installation of a City standard street light system in accordance with LDC 4.0.70.a and 4.2.80.f.

Zone Map (Existing and Proposed)



MCFADDEN INDUSTRIAL ANNEXATION
(ANN11-00001 / ZDC11-00002 / PLD11-00002 / WRG11-00001)
PLANNING COMMISSION STAFF REPORT
ATTACHMENT A-4

0 255 510 1,020 Feet

Corvallis Planning Division
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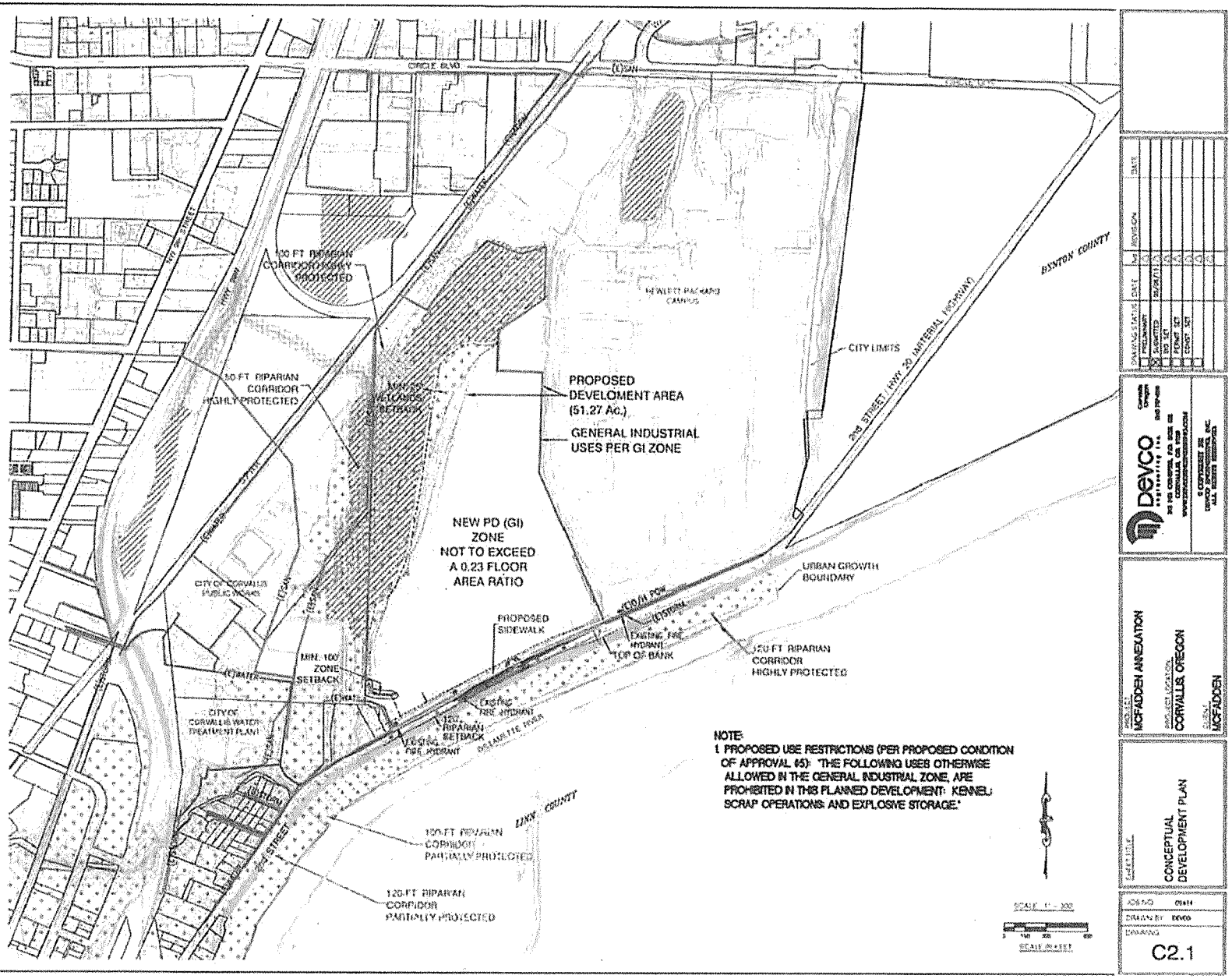
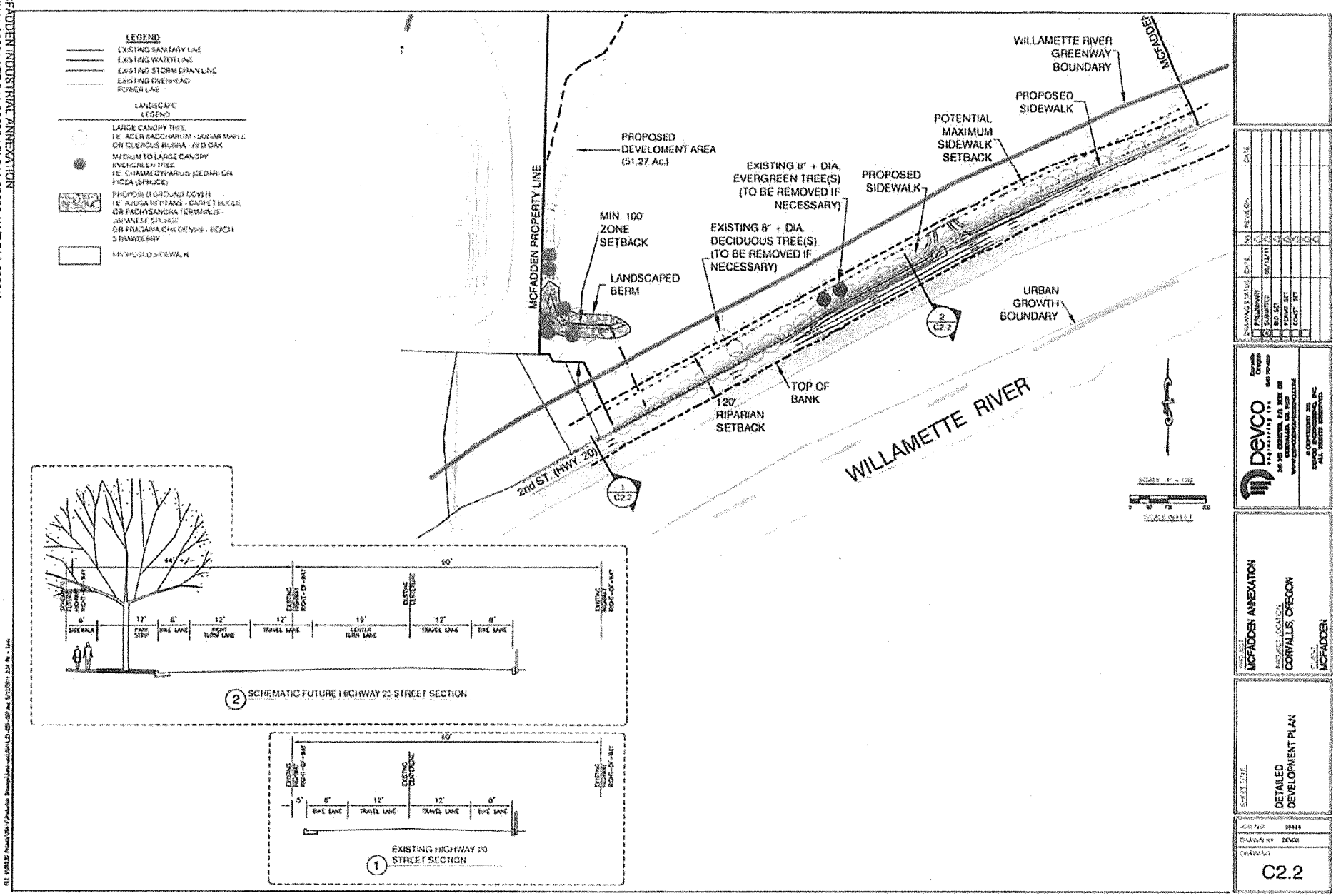
MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT D-11



MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT D-12



MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT D-13

Community Development
Planning Division
501 SW Madison Avenue
Corvallis, OR 9733

Approved as corrected, December 14, 2011

CITY OF CORVALLIS
PLANNING COMMISSION MINUTES
November 16, 2011

Present
James Feldmann
Jennifer Gervais, *Chair*
Frank Hann, *Vice Chair*
Tony Howell
Roger Lizut
Ronald Sessions
Jasmin Woodside
Biff Traber, *Council Liaison*

Staff
David Coulombe, Deputy City Attorney
Kevin Young, Planning Division Manager
Jeff McConnell, Development Engineering Supervisor
Ted Reese, Development Review Engineer
Jason Yaich, Associate Planner
Claire Pate, Recorder

Excused Absence
Tad Abernathy
Jim Ridlington

SUMMARY OF DISCUSSION

	Agenda Item	Information Only	Held for Further Review	Recommendations
I.	Visitors' Propositions			
II.	Public Hearing – **McFadden Industrial Annexation (ANN11-00001, ZDC11-00002, PLD11-00002, WRG11-00001)**			Recommend placement on the ballot; Recommend approval, with revision to Condition #8.
III.	Planning Commission Minutes A. October 19, 2011			Approved, with 1 revision.
IV.	Old Business			
V.	New Business A. Planning Division Update			For information only
VI.	Adjournment – 9:30 p.m.			

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT E-1

Attachments to the November 16, 2011 minutes:

A. Revisions to Condition of Approval #8, submitted by Planner Jason Yaich.

B. Written testimony, submitted by Marcy Eastham, Executive Director of the Corvallis Chamber of Commerce.

C. Written testimony, submitted by Dona Gaver.

D. Written testimony, submitted by Curtis Wright.

CONTENT OF DISCUSSION

The Corvallis Planning Commission was called to order by Chair Jennifer Gervais at 7:00 p.m. in the Downtown Fire Station Meeting Room, 400 NW Harrison Boulevard.

I. VISITOR'S PROPOSITIONS: There were no propositions brought forward.

II. PUBLIC HEARING – McFadden Industrial Annexation (ANN11-00001, ZDC11-00002, PLD11-00002, WRG11-00001)

A. Opening and Procedures:

The Chair welcomed citizens and reviewed the public hearing procedures. Staff will present an overview followed by the applicant's presentation. There will be a staff report and public testimony, followed by rebuttal by the applicant, limited in scope to issues raised in opposition and sur-rebuttal by opponents, limited in scope to issues raised on rebuttal. The Commission may ask questions of staff, engage in deliberations, and make a final decision. Any person interested in the agenda may offer relevant oral or written testimony. Please try not to repeat testimony offered by earlier speakers. It is sufficient to say you concur with earlier speakers without repeating their testimony. For those testifying this evening, please keep your comments brief and directed to the criteria upon which the decision is based.

Land use decisions are evaluated against applicable criteria from the Land Development Code and Comprehensive Plan. A list of the applicable criteria for this case is available as a handout at the back of the room.

Persons testifying either orally or in writing may request a continuance to address additional documents or evidence submitted in favor of the application. If this request is made, please identify the new document or evidence during your testimony. Persons testifying may also request that the record remain open seven additional days to submit additional written evidence. Requests for allowing the record to remain open should be included within a person's testimony.

The Chair opened the public hearing.

B. Declarations by the Commission: Conflicts of Interest, Ex Parte Contacts, Site visits, or Objections on Jurisdictional Grounds

1. Conflicts of Interest - none

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT E-2

2. Ex Parte Contacts – Commissioner Woodside knows Creed Eckert personally but it will not affect her ability to make a fair and impartial decision.
3. Site Visits – by Commissioners Feldmann, Gervais, Howell, Sessions, and Woodside
4. Objections on Jurisdictional Grounds - none

C. Staff Overview:

Associate Planner Yaich said the request is for placing on the ballot a measure to annex the McFadden property, which is located in northeast Corvallis, on the west side of Highway 20 and the Willamette River and approximately ¾ of a mile north of downtown. The property abuts the railroad tracks on the west side. It is 88 acres in size, with approximately 85.5 of that private property and the remainder ODOT right of way for Highway 20. Planner Yaich showed aerial photographs of the existing conditions. The site is currently farmed and is a relatively flat site. It contains two single-family homes: one is along Highway 20 frontage near the southwest corner of the site, and the other is accessed off a central driveway in the center of the property along with a horse barn and other farm structures. The west side of the property contains mitigation wetland and heavy brush. The Corvallis Comprehensive Plan designation for the property is General Industrial (GI) and it is surrounded by lands with the same designation on the east, west and north sides. There is a small area offsite to the southwest with a Medium Density-Residential designation. The existing County zoning designation is Urban Industrial and has several County overlays on it for floodplain management, Greenway management, and natural features. For the most part, it is surrounded by property in the city limits, with the exception being three properties in the southwest corner which are outside the city limits. The Natural Hazards Map shows that the west one-third of the property has a High Protection 100-year floodplain. Related to that floodplain, there is a locally protected-wetland of special significance and a High Protection Riparian Corridor on the site. On the southeast portion of the property along the Highway 20 frontage there is a 120-foot High Protection Riparian Corridor associated with the Willamette River.

There are four requests under consideration, and the first one is a recommendation to City Council for placing the annexation of the 88 acres on the May 2012 election ballot. Contingent upon approval of the annexation, the additional requests are for a Zone Change to GI zone with overlays for Planned Development and the Willamette River Greenway; a Planned Development Conceptual and Detailed Development Plan request; and finally the Willamette River Greenway permit. Planner Yaich finished the overview by showing an overhead of the applicable Corvallis Land Development Code criteria, as outlined in the staff report. He also directed attention to a staff-proposed revision to Condition of Approval # 8, in a memo dated November 16, 2011 (Attachment A).

D. Legal Declaration:

Deputy City Attorney Coulombe said the Commission will consider the applicable criteria as outlined in the staff report, and he asked that citizens direct their testimony to the criteria in the staff report or other criteria that they believe are applicable. It is necessary at this time to raise all issues that are germane to this request. Failure to raise an issue, or failure to provide sufficient specificity to afford the decision-makers an opportunity to respond, precludes an appeal to the State Land Use Board of Appeals on that issue.

The failure of the applicant to raise constitutional or other issues relating to proposed conditions of approval with sufficient specificity to allow the local government to respond to the issue precludes an action for damages in Circuit Court.

E. Applicant's Presentation:
Tim McFadden spoke on behalf of his father, Arthur McFadden, applicant. He introduced the development project team which included Sandra Gazeley and Creed Eckert, Gazeley & Associates; Lyle Hutchens, Devco Engineering; and Todd Mobley, Lancaster Engineering. He commended and thanked the City staff for working with them over the past two years to ensure that all aspects of the application were discussed and resolved prior to the public hearing process.

Project Manager Sandra Gazeley said that they had worked closely with the adjacent neighbors to maintain good communications, and had received valuable feedback from them. She then highlighted some of the decision criteria points relating primarily to the public need for the annexation.

Article 8 of the City's Comprehensive Plan states: "The challenge Corvallis faces is to continue diversifying its economic base while retaining the stability and quality of life that has marked its past." Ms. Gazeley said, that statement was adopted by the City in 1998 and certainly still rings true today. However, she noted, it is extremely difficult to diversify when there is not a sufficient inventory of General Industrial (GI) land to provide choices in the market. The application includes analyses by economic development specialists establishing that many traded sector industries that have been identified as compatible with this community require relatively large sites. Mike Williams, Industrial Lands Specialist with Business Oregon, said that Corvallis has been repeatedly and routinely bypassed for scale projects over 20 acres due to a lack of ready-to-go, larger-scale land inventory. In its findings regarding industrial land, Article 8 of the Comprehensive Plan also acknowledges that: "...Many firms require areas of at least 30-50 acres." Their application includes information from economic development professionals that provide findings that Corvallis does not have an adequate supply of larger, vacant GI land sufficient to provide choices in the market. Ms. Gazeley said she had recently spoken with Bob Warren, State of Oregon Business Development Officer for Linn, Benton and Lane Counties. He gave her permission to quote him. He further reinforced their applications' findings that large industrial sites were very important in a community's inventory, and quality large sites are incredibly hard to find.

Ms. Gazeley said Corvallis has extremely limited choices in this land use designation. Every vacant GI site over 20 acres is located in the southwest quadrant of the City, and all of them have been within the City limits for at least twenty-five years. With 100% of the inventory in one location, there is clearly and absolutely no geographic balance. The City's Land Development Information Report (LDIR) does not currently factor in wetlands as a development constraint. In defining "development constraint," Oregon Department of Land Conservation and Development's Administrative Rules prominently cite wetlands: "Development constraints means factors that temporarily or permanently limit or prevent the use of land for economic development. Development constraints include but are not limited to wetlands...." South Corvallis sites are dominated by locally significant wetlands. In an executive summary of an industrial land report for a current project, Council of Government's staff states that the extent of wetlands in the mid-Willamette valley has been identified, both locally and at the state level, as an industrial development barrier. When wetlands are present on an industrial site, it is usually necessary for the developer to obtain removal-and-fill permits

from both Department of State Lands and the Corps of Engineers. This permitting process adds time, effort, expense, and uncertainty to the development process. Employers who might otherwise be interested in a parcel of land will likely be dissuaded when considering the delay, the expense and the uncertainty inherent with extensive wetlands.

Ms. Gazeley said there are also significant issues and constraints relative to provision of public services to the vacant GI sites south of town. This is discussed both in the application and in the staff report. When those issues are coupled with predominant wetlands, it becomes questionable whether these properties are reasonably available as part of a Five-Year Inventory of GI land.

Another constraint for certain types of employers is the presence of the Airport Approach Safety Zone, within which some of the southern GI sites are located. Federal regulations prohibit places of public assembly, uses that may cause electrical interference with navigational or radio signals, or any use that can impair visibility for pilots including glare, smoke and steam. They also prohibit uses which create bird strike hazards such as water impoundments. This could be problematic for storm water detention resulting in another potential development constraint. About 100 acres of the south GI land are constrained by the Airport Approach Safety Zone. Additionally, the quantity and quality of power in south Corvallis might suffice for some businesses, but will not suffice for those requiring greater quantities of redundant electrical power which is available at the subject site.

Having one's total inventory in one geographic location that is not easily or cost-effectively serviced and has numerous physical and use constraints does not equate to reasonably developable land such as one might expect in a Five-Year Inventory, nor does it equate to a sufficient inventory to provide choices in the market place. Ms. Gazeley said that, in addition to offering geographic balance, the McFadden property provides substantially different characteristics than the southerly GI land. In a letter included with the application, Mike Williams, State of Oregon, wrote: "Several things recommend and differentiate the McFadden site including large parcel size, availability of quality electrical service, proximity to Hewlett-Packard (H-P) campus and transportation connectivity." Yesterday, Bob Warren, Business Oregon, told her that the site has regional significance; that it offers unique advantages in its size, proximity to H-P, OSU and emerging businesses, its transportation connectivity, and quality power.

John Secrest, former Corvallis Economic Development Director, stated in the application that the McFadden property provides a significant opportunity for Corvallis to diversify its inventory of industrial property. The current properties available have significant barriers to development and do not represent an adequate supply of property to ensure choices in the market place. He went on to say that the annexation of this property would help to ensure that Corvallis actually has buildable property which addresses the Five-Year supply of GI land. The fact is that there is vigorous competition for the most desirable traded sector employers. With all of its amenities and quality of life, Corvallis should be highly competitive for the types of employers it seeks to attract and retain, but it is repeatedly and routinely bypassed due to a lack of industrial land inventory. The City's Comprehensive Plan, which was adopted in 1998, references "stable economic conditions." While the City has not been hit as hard as some, even in Corvallis the days when the citizens can take for granted economic stability are past. Many people choose to live in Corvallis because the outstanding quality of life is a hallmark of this community. There are aspects of the City's overall livability that are inherent in its location in the Willamette Valley; but other livability factors depend on family-wage jobs and a sufficient tax base to fund education, public amenities and services. Maintaining the quality of life cited

in the Corvallis Comprehensive Plan is possible when there is a healthy, stable economy. The applicant realizes that the decision criteria, the livability indicators and benchmarks are not weighted. When viewed on balance, however, they believe that there are substantial findings that the advantages of this proposal markedly outweigh any potential disadvantages.

Creed Eckert, Gazeley & Associates, stated that as discussed in the staff report this application satisfies the applicable decision criteria, including key benchmarks and livability indicators. The applicant's Conceptual Development Plan (CDP) preserves just over 34 acres of protected natural features, or 40% of the total area. Mr. Eckert said that some natural features on this site are intended for a high level of protection, including Highly Protected Riparian Corridors, Flood Plain and wetlands of special significance. Adoption of the applicant's CPD and Detailed Development Plan (DDP) will protect in perpetuity the most valuable resources on the site from future impacts of development. The plan incorporates a minimum 25-foot safe harbor setback from the wetlands, which contain virtually all of the natural features located in the northerly and westerly sectors of the property.

Annexation will permit the City to oversee its own environmental protections for the site's inventoried natural features, some of which are targeted for high level protection. This seems preferable to relying on the County to enforce these important environmental regulations which actually originate with the City. Two riparian corridors on site are associated with Garfield Creek, and one corresponds with the Willamette River Greenway. The applicant's DDP includes a request for Conditional Development to construct a public sidewalk and landscaping improvements within the Willamette River riparian corridor. Consistent with applicable benchmarks, this sidewalk would connect to and extend the existing sidewalk fronting H-P for a distance greater than 350 feet. The Willamette River is located across Highway 20 from the subject property, greatly diminishing, and possibly eliminating, any functional value which might otherwise be served by this mapped riparian area. Consistent with the Conditional Development criteria, the City Engineer has deemed the proposed pedestrian and landscaping improvements as necessary in the riparian zone to maintain the functional transportation system. The DDP incorporates an urban berm and landscaping in excess of standards adjacent to the site's only neighboring residential uses on the southwest corner. These are designed to increase compatibility and respond to specific comments received in a voluntary neighborhood meeting. Future development would also observe Corvallis' GI zone requirement for a minimum100-foot setback from the residential zone, as compared with a 25-foot minimum setback standard under current County regulations.

In terms of compatibility, annexation with a Planned Development (PD) Overlay will result in much higher levels of compatibility with the immediate neighborhood and the community in general than the levels that could occur if it were to remain under County jurisdiction. Some of the specific uses permitted in the current County zone have more nuisance characteristics than those that could occur in the proposed City GI zone with a PD Overlay district. Outright permitted uses in the current zone include manufactured homes sales and repair, aggregate processing, concrete and asphalt batch plants, transportation terminals and commercial kennels as a home occupation. Conditional uses, subject only to administrative review in the current zone, include junkyards and correctional/law enforcement facilities. Only two decision criteria, relating to public health and safety, are considered for these staff decisions, while City requirements for similar decisions include addressing thirteen compatibility factors in a public forum. With adoption now, the applicant's proposed zoning establishing even an outright permitted use in the future would require consideration of fourteen compatibility factors through the City's DDP procedures, along with the other DDP decision criteria. While the title

of the County's Planned Unit Development might appear similar in terminology to the City's Planned Development, the processes and requirements are not comparable. The County's PUD process comes into play only with the land division and typically does not involve a public hearing. Adoption of the applicant's CDP would go further towards reducing impacts from this site by prohibiting certain uses normally permitted in the GI zone, including dog kennels, scrap operations, and explosives storage.

In summary, the applicant has strived to create the framework for a future development profile which responds to the natural conditions on the site and is more desirable to the neighbors as well as to the community in the types and characteristics of activities that could otherwise presently occur.

Lyle Hutchens, Devco Engineering, spoke to Conditions of Approval 6 and 7, which are specifically engineering and quantitative-oriented. They are measures proposed by the applicant to help hold the impacts of this development to be similar to what could be developed under the County zoning. Condition of Approval #6 limits Floor Area Ratio (FAR) on the property and #7 limits the total trips from the future development of the property. Both are quantitative-type measures that can be controlled through future development proposals, with the intent that those types of related impacts would not exceed what would occur should current, existing property be developed under the County zoning. The proposed FAR is similar to the FAR under the Planned Development Overlay approval for the adjacent H-P property.

Commissioner Howell referred to the revision of Condition of Approval # 8, as proposed by staff. His understanding is that what is awkward about this proposal is application of the Transportation Planning Rule (TPR) requirements. The Commission reviewed a similar case with the 49th Street annexation proposal which was not recommended for approval. In that case, the applicant did not have much detail in the general land use plan nor in the Conceptual Development Plan (CDP). With this application, there is detail in the general land use plan to show - without any obligation to do it this way - that an industrial development at this site is feasible and can be made to be compatible with the surrounding uses. The difficulty in this application is without a fully-detailed CDP there is no way to find that a future Detailed Development Plan (DDP) is consistent in that the proposed CDP only shows a sidewalk. His understanding is that staff has proposed the revision to Condition #8 as a way of solving that, in that it indicates that the next step would be to do more of a site-wide CDP with the occupant. If there are any variation requests at that time, the Commission will then be able to see how they impact the whole site, rather than considering small pieces of DDPs where the Commission has never seen the whole picture. Ms. Gazeley said her understanding of what Commissioner Howell was saying was that there would be a need for a somewhat-detailed CDP for the whole site prior to or at the time that the first DDP is submitted with the first industrial user, even if that user is not using the whole site. Commissioner Howell agreed that this was his reading. Mr. Hutchens said that they were comfortable with the wording. Specifically, they are in agreement that whenever the first DDP comes in there would be a CDP in accord with the requirements in the Land Development Code that would then update the current CDP.

Commissioner Howell asked for more discussion about the sidewalk and location of the water line and where they might end up if an acceleration lane and a turn lane get put in along Highway 20. He referred to the graphic in attachment C2.2. Development Review Engineer Ted Reese said that the existing water line is located approximately fifteen feet north of the existing right-of-way line, with a twenty-foot easement on the north side of ODOT's right of way. Depending on final configurations, which will not be determined until a DDP comes into effect,

if it goes to a four-lane section the water line will be underneath the highway itself. If it goes to a three-lane section it will probably be located somewhere in the landscape strip. Commissioner Howell said that his understanding then is that the plan is to go ahead with the sidewalk but that the applicant is asking for leeway in waiting to plant trees in the planter strip. Mr. Hutchens said that was correct, in that ODOT will not respond to how the intersection and turn lane section will look like until they have an application, and that the applicant does not have a development yet to make that application. It is a bit of the chicken and the egg situation. The graphic is the applicant's interpretation, based on the Transportation Master Plan, of what is likely to happen. They have tried to locate the sidewalk far enough back so that hopefully it will not be impacted by the final design. It will definitely be impacted in the area of the driveway approach off of the highway, and the applicant is accepting of the fact that they might not have guessed right with the location as shown in drawing C2.2, and that the whole sidewalk might have to be relocated when an actual development proposal comes forward and they get the input from ODOT through an approach application. At that time, they would know where to plant the trees.

Commissioner Howell asked if the existing trees would be impacted by the interim sidewalk. Mr. Hutchens said they were trying to locate it so that existing trees would not be impacted. If they are impacted, they understand that there is a requirement for value-equivalent replacement.

Commissioner Howell referred to the livability indicators and benchmarks, and specifically to distance to transit. He asked if they have anticipated any chance of pedestrian connectivity for people to get from this site to Circle Boulevard, and if they have had any talks with H-P to this effect. Ms. Gazeley said that they had not had that conversation with H-P, but that H-P has been very open to everything else they have had discussions on. The more southerly part of their campus is becoming a bit more open and the applicant would be happy to have those conversations.

Commissioner Feldmann asked if the sidewalk would eventually be widened, what the width would be and of what material it would be constructed. Mr. Hutchens said that the initial width is for five feet, and would go to twelve feet as a multi-use path. Both the initial path and the expansion would be of concrete.

Commissioner Howell asked about the potential other multi-use path along the railroad, and asked them to describe what the land is like between the railroad and wetlands. Mr. Hutchens said that it consists mostly of blackberries and brush. The applicant is providing a fifteen-foot easement along the railroad right-of-way and there is lots of talk about connectivity with the rails with trails project and how it will all come together. With future planning, there will definitely be bicycle and pedestrian connections through the property. Ms. Gazeley added that they have an agreement with H-P for an emergency access through their property to access the applicant's property in an emergency situation. This access is shown on the General Land Use Plan sheet C2.0B.

Commissioner Woodside asked why the landscape berm was not a part of the PIPC plans that had already been submitted. Mr. Hutchens said that they will be part of a separate application through Development Services in that they are private and not part of the public infrastructure.

F. Staff Report:

Planner Yaich reviewed the four requests, stating that they are interdependent in that the Zone Map change does not happen unless the annexation gets approved, and the Conceptual and Detailed Development Plan and the Willamette River Greenway Conditional Development decisions would also be contingent upon passage of the annexation measure.

The Zone Map Change would apply the General Industrial (GI) zone to the entire site as the base zone, with the Planned Development (PD) and the Willamette River Greenway (WRG) overlays applied to the site as well. The PD includes a Conceptual and Detailed Development Plan (CDP) with proposed Conditions of Approval, and a Detailed Development Plan specific to the sidewalk and landscape berm improvements. The WRG permit is tied in with the sidewalk improvements because of their location relative to the Greenway.

The annexation review criteria come from Land Development Code section 2.6.30.06. There are four primary criteria: that there is a demonstrated public need for the annexation; that there are more advantages to the community than disadvantages; that the site itself is capable of being served by urban services and facilities; and that it has addressed the compatibility criteria.

Relative to public need, the Land Development Code states three main factors to be considered, the first of which is the Five-Year Supply of Serviceable Land. Absent a City Council policy relating to this, the applicant chose to look at City data which includes the 1998 Buildable Land Inventory (BLI) which projected land use needs through the year 2020. They also looked at the 2010 Land Development Information Report, which evaluates lands within the City limits. In looking at the applicant's analysis, it is important to remember that there are often times Comprehensive Plan policies that may support or not support the applicant's arguments. Looking at straight numbers, the 1998 BLI indicates that there is sufficient supply of lands in the grouped category of General Industrial and Intensive Industrial lands within the City limits. In fact, there is a 482-acre surplus in the 1998 BLI. That number has not changed much since 1998. It is important to note that the 1998 BLI also evaluated land use needs within the Urban Growth Boundary and this property was designated at the time as General Industrial and so was considered to be part of that supply.

As addressed earlier by the applicant, there are other factors to consider rather than sheer numbers: ownership, location, size and serviceability of those lands. In looking at the existing supply, 96% is located in south Corvallis. City-wide, 74% of the General Industrial lands are less than 20 acres in size for the individual parcels. As noted previously, there are several constraints to those south Corvallis GI lands. Primarily, they are lands that are west of the railroad tracks, which would require constructing commercial-grade crossings. They also require intersection improvements with the highway, extension of City services for some distance as described in the staff report, and have wetlands that would require mitigation and permitting through the Oregon Department of State Lands. The applicant did a comparison of the south Corvallis lands with the McFadden site. The McFadden site, excluding the wetlands, has over 50 acres that could be developed with general industrial uses. As noted in the staff report, the site is well-served with existing public infrastructure and has good access to Highway 20. The applicant argues that it will add to the diversity in terms of location, size, ownership and serviceability. It is important to note that the Land Development Code does allow the Planning Commission to consider these factors in the arguments presented by the

applicants. The City staff is not independently reviewing these claims with third parties and verifying documentation, and it is up to the Planning Commission to make the determination of whether the advantages outweigh the disadvantages.

Planner Yaich said the applicant already spoke about some of the statements in the correspondence provided by Business Oregon, as well as correspondence from John Sechrest. Looking at Comprehensive Plan policies that might support the applicant's arguments, Policy 8.2.1 states that: "The City and County shall support diversity in type, scale, and location of professional, industrial and commercial activities..." Policy 8.9.1 states that: "The City shall designate appropriate and sufficient land in a variety of different parcel sizes and locations to fulfill the community's industrial needs."

Land Development Code section 2.6.30.07.c gives the adopted livability indicators and benchmarks, fourteen of the applicable nineteen of which are met by the applicant. The applicant partially complies with three of them but will fully comply once certain public infrastructure is provided, consistent with the City's Master Plans. The applicant is non-compliant with two, one of which deals with number of police officers/1000 persons and the second related to the level of service of nearby intersections which include intersections downtown, the Van Buren and Harrison bridges, and Highway 20 at Circle Boulevard. Table 3 on page 18 of the staff report has a complete discussion of how the application complies with the various indicators and benchmarks.

The second criteria for annexation is that when evaluating all the factors and data, in balance there are more advantages than disadvantages. The applicant's arguments for this criterion go back to the discussion of Five Year Supply of Lands, choices in the marketplace, and the compliance with the livability indicators and benchmarks already noted.

The third criterion is asking whether or not the site is capable of being served by urban services and facilities. This gets at public transportation, public utilities and franchise utilities. The applicant has provided correspondence from all of the applicable franchise utilities which indicate that the site is capable of being served. In terms of transportation facilities, it is important to talk about the Transportation Planning Rule (TPR). Because the site has frontage on Highway 20, ODOT has jurisdiction. The TPR is triggered because an annexation requires a zone change request, and the TPR states that when evaluating the impacts of that change it is necessary to determine whether that change in zoning will have a significant impact on the transportation facilities. If yes, improvements to the public transportation system might be required. Therefore, the applicant submitted a Transportation Impact Analysis. The scope considered impacts based on full build-out of the site, and the conceptual worst-case scenario is tempered by the proposed limiting of the Floor Area Ratio (FAR) and trip generation, as noted earlier and in the staff report. There is also a component of the application that evaluates development that would be possible under the present County zone. With the limits placed on the FAR and trip generation, development would be no more intense under the zone change than could presently occur under the County's zoning and rules. Correspondence from ODOT concurring with the approach is included in the application. In terms of other public utilities, the site is served by water and sewer systems, and the applicant must meet the City's water quality and water quantity standards for managing stormwater runoff.

The fourth criterion relates to demonstration of compatibility. The General Land Use Plan is a very general concept which will also have Conditions of Approval applied to the site. The general concept includes the limit on floor area and trip generation, and that wetlands will be

protected per Land Development Code standards. There is a more detailed land use plan submitted which conceptually lays out the buildings and parking to start to address some of the issues relating to pedestrian-oriented design, getting parking behind the buildings, etc.

In regard to the Zone Change, the applicant is proposing a GI base zone with the Planned Development (PD) and Willamette River Greenway (WRG) overlays. This is contingent on voter-approval of the annexation. Interestingly, the WRG overlay does not appear on either the City's Comprehensive Plan Map nor on the Zone Map currently; however it is part of the original 1980 Greenway Overlay report that was prepared with the adoption of the 1980 Comprehensive Plan. It does show up on Benton County's maps. The GI zone is one of four possible choices per Table 2.2-1 in the Land Development Code. Review criteria for the zone change relate back to the base zone standards for the industrial district. The assumption is that if the site is developed according to those standards then there will be compatibility. There are standards in the GI zone that address compatibility adjacent to residential development which is where the 100-foot setback comes from. As noted in the Planned Development part of the application, the applicant is going above and beyond what the base requirements are for that setback and buffer by planting a landscape berm.

The purpose of applying the WRG overlay is to address state-wide Planning Goal 15 and to ensure that any development within the Greenway overlay meets the Land Development Code criteria that address development within that space. There are excerpts in the staff report showing that original 1980 report and the location of the WRG boundary, in Attachment B-6.

Accompanying the Planned Development, there is a Conceptual and Detailed Development Plan. There are no plans shown on the Conceptual Development Plan for industrial uses specifically; it is limited to the proposed Conditions of Approval and the Public Improvement Plans for the Highway 20 setback. These have already been submitted and are included as Attachment E to the staff report. The proposed Conditions of Approval deal with trip generation limits and a Floor Area Limit of .23. As the applicant stated, they are proposing to voluntarily limit some of the additional uses that might otherwise be allowed in the GI zone. The conditions also cover the multi-use path requirements, because the site is identified on the City's Master Plans for potentially two multi-use paths to traverse the site. There has already been a discussion about the staff-proposed modification to Condition of Approval #8 which deals with the requirement for future development phases to come back through the Major Modification process and get a more refined Conceptual Development Plan and Detailed Development Plan for each phase.

As noted in the staff report, staff had some modifications to the conditions as proposed by the applicant. Two of the conditions that are being brought forward by staff are responding to concerns by ODOT – one of them is to ensure that any future development will continue to reevaluate the Transportation Planning Rule. Tied in with that would be additional Transportation Impact Analyses for each phase of development to understand what types of transportation improvements, if any, would be required. There is also a catch-all condition to make sure that if there is ever a proposal to modify the Floor Area Limit or the Trip Generation Limit, ODOT will always be involved in the review. Another modification to the conditions came from ODOT, which is to apply a Deed Restriction to the property to inform potential future owners of development restrictions. There are a few other, more minor staff proposed modifications as noted in the staff report.

The Detailed Development Plan is limited to the sidewalk improvements along the highway and the landscaped berm at the southwest corner of the site. The applicant has shown a potential maximum sidewalk setback that falls within the WRG boundary.

The multi-use path proposals were brought up at the Bicycle and Pedestrian Advisory Commission and the Parks and Recreation Board meetings and correspondence from those meetings is included in the staff report.

The Willamette River Greenway (WRG) permit review criteria are included in Land Development Code section 3.30.40. A lot of these criteria are to encourage access to the river to the maximum extent possible. Obviously, with the highway dividing access to the site, it is problematic to do this. However, the proposal meets criteria for preserving viewpoints along the river, and the natural vegetative fringe is fairly minimal, though there are approximately four significant trees along the frontage.

Planner Yaich stated that two additional pieces of testimony were distributed which were received just prior to the hearing (Attachments B & C). In summary, staff find that the applicable criteria for the Zone Change, the Conditional and Detailed Development Plan and the WRG permit are satisfied. Staff has identified the arguments made by the applicant relative to the annexation request as well. The recommended motions are that the annexation request be forwarded to City Council for voter consideration on the May, 2012, ballot, and that the Zone Change be approved contingent upon voter approval of the annexation and the Planned Development and WRG be approved subject to voter approval of the annexation and to the Conditions of Approval.

The Chair asked if any commissioners had additional preliminary questions of staff, and asked that any questions of staff that could be held until after public testimony be held until that time.

Commissioner Feldmann asked if it might be possible to provide bicycle and pedestrian access by using Waterworks Avenue and Cornell Avenues, or other access ways across the City Public Works property which might tie in to the right-of-way along the railroad on the McFadden property. Staff explained that there were unknown variables related to connectivity through the City-owned property. Some of that has to do with natural features such as the Garfield Creek drainage way and the riparian corridor that would have to be crossed to make a physical connection from the McFadden site through City property to the existing bikepath at Cornell. Waterworks provides access to the Public Works yard, and Cornell Avenue provides for a limited private access across the railroad tracks as an additional exit point because of the presence of chlorine gas on the City site. The railroad gave permission to use the crossing in a limited way only, and not for public access. For this reason, there is a gate across Cornell that remains closed. Additionally, there are hazards on the property associated with the spreading of waste material and the wastewater lagoons. The future Fire Department training tower will also likely be moved to a portion of that area. Commissioner Feldmann opined that if there were an opportunity at some point, it would be appropriate to consider that linkage.

Commissioner Howell asked about the sidewalk termination on the south end, and asked whether the dead end transitioned back to the bike lane or whether there was some other arrangement. Development Review Engineer Reese said that the plans were currently under review and a letter has been sent back to the applicants. Staff has proposed that the southwest end of the sidewalk, where it abuts the residential properties, be terminated with a Type 3, visible barricade with a concrete connection out to the curb where there would be a ramp for a

connection for bicycles and pedestrians. There is not enough room within the right of way to extend it further without getting rid of buffering for the residential properties. Commissioner Howell asked if the PIPC permit process would give staff the ability to assert the need for that connection back to the bike lane, or would it need to be added to a Condition of Approval. Staff said that would not be necessary, that the PIPC review process in place was enough.

Commissioner Howell said that since the Conceptual Development Plan was for the entire site, even though not detailed, he asked whether some of staff's proposed Development-Related Concerns which use "shall" and "will require" might be more appropriate as Conditions of Approval. He asked that staff and the applicant consider this question as they finish out the public hearing portion of the application review.

Commissioner Hann asked if the inventory of available GI land included only vacant land, or also included land that was occupied. Additionally, he asked if there was a potential for loss of GI land, such as with Evanite, and whether this was factored in. Staff said that the Land Development Information Report of 2010 only looked at vacant lands; though changes could be made, it would be hard to anticipate what those changes might be.

Commissioner Hann spoke to the fact that this property would be part of the gateway into the City and asked if there was some mechanism for ensuring that the look would overall improve the look of the City. Staff said that the Land Development Code would require the setback from the riparian corridor which improves the look, and the PD overlay allows for visual compatibility criteria to be considered which might provide some opportunity to get at that issue; but this is not identified in the Land Development Code as a gateway area.

In response to a question from Commissioner Sessions, staff said that the Airport Commission, along with other Boards and Commissions, would have been notified that the annexation request was under consideration, but they have not commented on the application. Councilor Traber said he was not aware of any real discussion of this annexation at any of the Airport Commission meetings he has attended.

Commissioner Woodside asked what would happen if the developer does not meet Condition #12 which specifies a date by which landscape improvements should be installed. Staff stated that it would not mean that the Planned Development would go away, but would likely be pursued as a Land Development Code violation. However, plans have already been submitted for PIPC, and as proposed those plans should be ready to be issued and secured.

G. Public Testimony in favor of the application: -

Marcy Eastham, Executive Director of the Corvallis Chamber of Commerce, said she was representing the Chamber's Government Affairs Committee which is a group of members and community individuals interested in the economic vitality and health of this region. She highlighted some of the information contained in her written testimony (Attachment B). She said that in previous years, under the guidance of John Sechrest, the Chamber was active in trying to develop and grow the properties in south Corvallis at the Corvallis Municipal Airport Industrial Park. This has been an extreme challenge for them, and has been tasked back to the Economic Development Commission as they explore what their options are. Just in the past year, there have been numerous inquiries for buildable land in the 20-40 acre range and it is not available in a location that businesses are looking to locate. Co-location, particularly for traded sector businesses, is incredibly important and the location of the McFadden property adjacent to

H-P and with easy access to Highway 20 is very desirable. Secondly, construction of the sidewalk along Highway 20 will provide safety for pedestrians and joggers. There are a lot of people from H-P who jog in that area. The McFadden property is the largest, single rural industrial property in the Urban Growth Boundary and this location will be attractive to both new and expanding businesses. There are businesses in this community that are growing, and as they grow they are looking for places to reestablish themselves. Finally, one of the important considerations is availability of stable power. Having the H-P substation located directly next to the McFadden property adds to this stability. The Chamber supports growth that is planned, thoughtful and desirable, and this annexation proposal falls into that category.
Commissioner Gervais asked Ms. Eastham for some examples of the types of businesses who have looked at Corvallis and could not find an appropriate piece of property. Ms. Eastham said that they had mostly clean-tech companies who did not believe that the available H-P parcels were large enough.

Curtis Wright, 3325 NW Poppy Drive, submitted written testimony (Attachment D) and spoke in favor of recommending to City Council an annexation vote for the McFadden property. He served on the Prosperity that Fits development plan steering committee and also on the City's Budget Commission. It did not take long to realize the profound challenges Corvallis faces in achieving economic well-being and assuring adequate funding for City services. It needs more better-paying jobs and more tax revenue especially if it comes from properties that do not draw as heavily on city or school district services. Annexing the Mcfadden property into the City would be a sound and sensible step in the right direction toward helping to solve both of those problems. The McFadden property has the location and available services that are more like what businesses are looking for than most of the industrial land elsewhere in Corvallis. It is more likely that development will happen here faster, creating more jobs sooner. Because this property is not in any of the joint City or County Enterprise zones, new development on this property will generate new property taxes immediately. Annexing the McFadden property can create those positive opportunities. That is good for Corvallis.

Annexing the McFadden property can also prevent negative possibilities and that is even better for the citizens of Corvallis. There are some significant natural resources on a portion of the property. While the County standards for protection and preservation are stringent, our City's are far stronger. With this property in our City, mother nature fares far better than if we leave her out in the County. It is his understanding that the County zoning would allow for a vehicular parts procurement operation, which he believes is "government-speak" for auto junk yard. This is not likely what the citizens would want next to the beautiful H-P campus, across from the Willamette River and along a major highway into our beautiful downtown. City zoning would not permit this to happen. He asked that the Commission please give the voters that chance to vote on annexation of the property.

H. Public Testimony in opposition to the applicant's request: - none

I. Neutral testimony: - none

The Chair reminded people that speaking neutrally removes rebuttal rights. No one came forward.

Additional questions of staff:

Commissioner Howell asked staff if they had given thought to any of the Development-Related Concerns being recast as Conditions of Approval. Planning Manager Young said that his preliminary thought was that the Concerns are forecasting the need for potential improvements in conjunction with future development and staff do not believe that we are in a position to require certain improvements at this time, given concerns about disproportionate exactions. Typically, the next time staff review a new development on the property they will go back to this land use decision and look at both the Conditions and the Concerns and base the requirements for a future Detailed Development Plan in part upon what are in the Concerns. Engineer Reese said that the Development-Related Concerns that address needs under the purview of Public Works are typically already legislated in the Code or are contained in the City's Master Plans. It would be better not to encumber the applicant with those as conditions at this time.

J. Rebuttal by Applicant:

Mr. Eckert asked to respond to a concern shared by one of the commissioners about whether the Airport Commission had been notified of the proposal. Both the Airport Commission Chair and the Airport Manager coordinated with Mr. Eckert personally in preparation of the application, and they were certainly aware of the proposal, and even supportive. He could not say that the Commission as a whole had considered it, however.

K. Sur-rebuttal:

L. Additional time for applicant to submit final argument:

The applicant waived the additional time to submit written argument.

M. Close the public hearing:

MOTION: Commissioner Howell moved to close the public hearing. Commissioner Hann seconded the motion and it **passed** unanimously.

N. Discussion and Action by the Commission:

Commissioner Hann said his biggest concern coming into the meeting was the current availability of GI land. He thinks the applicant did a great job of distinguishing the different types and variety of industrial land that is available and made a good case for why this annexation is important.

MOTION: Commissioner Hann **moved** to recommend that the City Council place the proposed Annexation request (ANN11-00001) on the May 2012, ballot. This motion is based on findings presented in the November 9, 2011, Staff Report to the Planning Commission, and findings made by the Planning Commission during deliberations on the request. Commissioner Howell **seconded** the motion.

Commissioner Howell agreed with what Commissioner Hann said about a good case made for the need for this type of industrial land even though there is an excess of available industrial land. He found the applicant's arguments persuasive in that there appear to be barriers to

developing those south Corvallis properties, though at some point the time might be right for marketability of those parcels. He also appreciates the case they made about other protections that annexation provides, apart from just the availability of land. Commissioner Gervais said she agreed with those arguments as well.

Commissioner Sessions said that from the City's point of view there should be very little resistance to annexing this piece of property, versus the potential of having the County monitor the process of development. It seems that the City would have much more control over the process and provide a better product in the long run.

Commissioner Hann said he believes that people might feel there is a lack of information about how this will look once developed, and would encourage the applicant to share as much information as possible along this line.

Commissioner Feldmann said he agrees with many of the strengths of this proposal but believes that the connections to the west and north for bicycle and pedestrians fall short of the mark and do not score very high on livability. However, he does not see an easy way to address this given the constraints that have been discussed.

Vote on the Motion: The motion **passed** unanimously.

MOTION: Commissioner Hann **moved** to approve the Zone Change request (ZDC11-00002), contingent upon the City Council's placement of the associated Annexation request on the May 2012 ballot and upon voter approval of the ballot measure. This motion is based on Findings presented in the November 9, 2011, Staff Report to the Planning Commission, and findings made by the Planning Commission during deliberations on the request. Commissioner Lizut **seconded** the motion.

Commissioner Howell said that though there might be other options for zoning designations that could have been selected, this is still the most flexible zoning in terms of the types of uses and it is similar to HP's zoning designation. It makes sense to apply it in this case.

Vote on the Motion: The motion **passed** unanimously.

MOTION: Commissioner Woodside **moved** to approve the Planned Development request (PLD11-00002), contingent upon the City Council's placement of the associated Annexation request on the May 2012 ballot and upon voter approval of the ballot measure. This motion is based on Findings presented in the November 9, 2011, Staff Report to the Planning Commission, and findings made by the Planning Commission during deliberations on the request. Included in the motion is adoption of staff-proposed revisions to Condition #8, in memorandum dated November 16, 2011. Commissioner Howell **seconded** the motion. The motion **passed** unanimously.

MOTION: Commissioner Lizut **moved** to approve the Willamette River Greenway Permit request (WRG11-00001), contingent upon the City Council's placement of the associated Annexation request on the May 2012 ballot and upon voter approval of the ballot measure. This motion is based on Findings presented in the November 9, 2011, Staff Report to the Planning

Commission, and findings made by the Planning Commission during deliberations on the request. Included in the motion is adoption of staff-proposed revisions to Condition #8, in memorandum dated November 16, 2011. Commissioner Hann **seconded** the motion. The motion **passed** unanimously.

Deputy City Attorney asked the commissioners to confirm that the last two motions included adoption of all proposed Conditions of Approval recommended as part of the staff report, as well as the staff-revision to Condition #8; and they so affirmed.

O. Appeal Period:

The Chair explained that the decision will be effective 12 days from when the Notice of Disposition is signed, unless an appeal is filed with the City Recorder.

III. PLANNING COMMISSION MINUTES:

A. October 19, 2011:
Revision: On page 7, last sentence, change "east" to "west" side of Conser.
MOTION: Commissioner Hann **moved** to approve the minutes as revised. Commissioner Feldmann **seconded** the motion and it **passed** unanimously.

IV. OLD BUSINESS:

Commissioner Gervais asked staff for a brief discussion about what are considered preliminary questions of staff and what are not. Her concern is ensuring that questions and discussion are limited prior to the public getting their opportunity to testify. The general consensus was that preliminary questions should generally be limited to those which bring up issues that a commissioner would like the applicant to address for the benefit of all. Additionally, preliminary questions can be asked which alert staff to the need for follow up in addressing some detail of the proposal or interpretation of the Code.

V. NEW BUSINESS:

A. Planning Division Update:

Planning Division Manager Young shared to following information:

1. City Council approved the extension of land use approvals, as recommended by the Planning Commission.

2. There has been a Council request to look into considering appeals "on record" as opposed to "de novo." A de novo appeal is generally a "do over" process, in that City Council looks at the whole thing, including all of the decision criteria. An "on record" appeal, as he understands it, the discussion would be confined to the issues that are raised on appeal versus everything. This then might limit the submittal of new information into the record. There are pros and cons to this. One of the concerns staff has heard over the years is that an applicant will change their proposal in between Planning Commission and City Council so that the two bodies are not really looking at the same project. Council Liaison Biff Traber added that he has heard the same concerns, and it has the effect of making the process more expensive as well as making the Planning Commission's process of less use. Commissioner Howell said that another route to achieving the same goal would be to not allow applicants to change their

proposal, though they can still appeal a decision. They could then be offered a less-costly "re-application" fee. There was additional discussion about the pros and cons of the various options, and commissioners were encouraged to share their thoughts with Councilor Traber and others on City Council.

3. There will be a special hearing on December 14, 2011, in lieu of December 21, 2011, to hear the Heart of the Valley redevelopment project. The December 7th, 2011, meeting is also cancelled. Commissioner Gervais said she will likely not be attending the December 14, 2011, meeting.

4. In response to comments and a request from some commissioners, Mr. Young said they would alert the commissioners as to when staff reports are ready so that they might be picked up earlier than they would receive them through the mail.

VI. ADJOURNMENT: The meeting was adjourned at 9:30p.m.

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT E-18

MEMORANDUM

Date: November 16, 2011

To: Planning Commission

From: Jason Yaich, Associate Planner - Community Development Department

Re: McFadden Industrial Annexation
(ANN11-00001 / ZDC11-00002 / PLD11-00002 / WRG11-00001)
Revisions to Condition of Approval # 8

After release of the November 9, 2011, Staff Report to the Planning Commission, a revision has been proposed by staff to further clarify Condition of Approval #8 (page 77 of the staff report).

The clarification is intended to better outline the necessary land use approval process that is required for future phases of development on the Annexation site, should the Annexation be forwarded to City Council and be approved by the voters.

The revision to Condition of Approval # 8 is as follows:

> **Planned Development Approval for Future Phases :**
> Future phases of development beyond the scope of work identified in the Detailed Development Plan (Sheet C2.2 - sidewalk and landscaped berm) are required to be processed using the City's Planned Development provisions in LDC Chapter 2.5, which requires a Major Modification to the Conceptual Development Plan shown on Sheet C2.1, and Detailed Development Plan approval for each phase.

Corvallis Chamber of Commerce

We're all for business.

Thank you to our Leading Investors for your support.

Platinum Leading Investors:

The Ball Studio/Photography
Horsepower Productions
Pacific Power
Starker Forests, Inc.
Stover, Neyhart & Co., PC

Gold Leading Investors:

Blackledge Furniture
CH2M HILL
Jeanne Smith & Associates, P.C.
Mobile Computing Solutions
T. Gerding Construction Co.

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NOV 16 2011

Community Development
Planning Division

Date: November 16, 2011

To: City of Corvallis Planning Commission

From: Corvallis Chamber of Commerce Government Affairs Committee

My name is Marcy Eastham, and I am the Executive Director of the Corvallis Chamber of Commerce. I am here tonight representing the Chamber's Government Affairs Committee. The Committee is comprised of Chamber members who are interested in the economic vitality and economic health of our region. We are very interested in having sufficient buildable land in Corvallis to help grow employers and jobs for the future. We are here to support the proposal for the McFadden property annexation now before the Planning Commission.

Land supply is an issue in many Oregon communities. Those cities that are willing to increase the supply and diversity of available land stand to be ahead of the game as the economy recovers. Those communities that sit idle now and fail to plan will be at a distinct disadvantage in attracting new business.

We believe this annexation proposal should move forward for the following reasons:

- The location of the McFadden property – adjacent to the Hewlett-Packard campus and abutting Hwy 20 - makes it a desirable property for industrial development. The property is designated as General Industrial in the Corvallis Comprehensive plan, so annexation into the City is a natural next step to development of the property.

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT E-20

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NOV 16 2011
Community Development
Planning Division

- The construction of a sidewalk along Hwy. 20 will provide safety for pedestrians and joggers who are frequently seen using the bike lane and shoulder of Hwy. 20 in front of the McFadden property.
- The McFadden property is the largest single rural Industrial property in the urban growth boundary in Northwest Corvallis. In the past, the Chamber has received many inquiries from potential employers who were seeking larger properties for their businesses. This property would have met the needs of several of those companies had it been within the City with available City services. Annexation of this property makes it an attractive location for both new and expanding businesses. In my experience, there currently are not sufficient industrial property choices in Corvallis.

- Availability of stable power is also a plus. The HP substation provides adequate electricity to meet the needs of most businesses. Power access has long been a perceived challenge at the Corvallis Municipal Air Park in South Corvallis.

A growing thriving community is as much about leadership as it is about the overall economy. This is an opportunity for the leaders in Corvallis to take a step forward for the benefit of the general public.

We support growth that is planned, thoughtful, and desirable. We believe this annexation proposal falls into that category.

Thank you for the opportunity to share the Corvallis Chamber's Government Affairs Committee's support of the proposal before you tonight.

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NOV 16 2011
Attach C
Community Development
Planning Division

November 16, 2011

To the City of Corvallis:

As the next-door neighbor to the Arthur McFadden property, we wish to express our approval as to the annexation to the city of that piece of real estate.

We have also been much impressed with Sandra Gazley and her group, who have kept us informed with plans for the annexation.

We are hopeful that the annexation will proceed in an orderly fashion.

Sincerely

Kenton Dona Haver

Attachment C

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT E-22

McFadden Annexation — Planning Commission Testimony —11/16/11

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NOV 16 2011
Community Development
Planning Division

My name is Curtis Wright. I reside at 3325 NW Poppy Drive, here in Corvallis.

I'm here to speak in favor of your recommending to the City Council an annexation vote for the McFadden property.

As some of you may know, I served on the Prosperity That Fits Economic Development Plan Steering committee, and now serve on the City's Budget Commission. It didn't take being on either body very long to realize what profound challenges our city faces in achieving economic well-being and assuring adequate funding for city services.

We need more jobs, more better paying jobs in Corvallis. We need more tax revenue, especially if it comes from properties that don't draw as heavily on city or school district services.

Annexing the McFadden property into our City is a sound and sensible step in the right direction toward helping to solve both of those problems.

The McFadden property has a location and available services that are more like what businesses are looking for than most of the industrial land elsewhere in Corvallis. It's more likely development will happen here faster, creating more jobs, sooner. And because this property isn't in any of the joint City/County Enterprise Zones, new development here will generate new property taxes here, immediately.

Annexing the McFadden property can create these positive opportunities. That's good for Corvallis.

Annexing the McFadden property can also prevent negative possibilities. And that's even better for the citizens of Corvallis.

As I understand it, there are some significant natural resources on a portion of the property. While the County standards for protection and preservation are stringent, our City's are even stronger. With this property in the City, Mother Nature fares better than if we leave her out in the County.

As I understand it, the County's zoning would permit a "vehicular parts procurement operation" here. I think that's government-speak for what most of would call an auto junkyard. Is that really the kind of development the citizens of Corvallis want next to the beautiful HP campus, across from the beautiful Willamette River, on a major highway into our beautiful downtown? Our City's zoning wouldn't permit it. With this property actually in the city, Beautiful Corvallis doesn't risk an eyesore on land most people already think is within city limits.

Creating positive opportunities. Preventing negative possibilities. It's what the citizens of Corvallis can do, if you give them a chance to vote on annexing the McFadden property. Please give the voters that chance. Thank you.

Corvallis Planning Division
Report to the Planning Commission
Planning Commission Hearing: November 16, 2011
Staff Report Prepared: November 9, 2011
Staff: Jason Yaich, (541) 766-6908

TOPIC: **Annexation, Zone Change, Conceptual and Detailed Development Plan, and Willamette River Greenway Conditional Development**

CASE: **McFadden Industrial Annexation (ANN11-00001 / ZDC11-00002 / PLD11-00002 / WRG11-00001)**

REQUEST: The applicant requests that the Planning Commission recommend that the City Council place a measure on the May 15, 2012, ballot to annex 88 acres of privately-owned land and Highway 20 right-of-way into the City Limits. The applicant also requests that the Planning Commission approve a Zone Change to zone the site General Industrial with Planned Development and Willamette River Greenway Overlays. The applicant is also requesting a Conceptual Development Plan approval that proposes specific conditions of approval for the subject annexation site, and Detailed Development Plan and Willamette River Greenway Conditional Development approval to construct a public sidewalk along the subject site's Highway 20 frontage, with additional landscaping improvements. The current Benton County zoning of the property is Urban Industrial-20/PUD with various County Overlays. The Zone Change, Conceptual and Detailed Development Plan, and Willamette River Greenway Conditional Development decisions would be contingent upon passage of the annexation measure on the May 2012 ballot.

APPLICANT: Gazeley & Associates
7275 NE Haugen Road
Corvallis, OR 97330

OWNERS: Arthur McFadden
401 SW Alder Street
Portland, OR 97204

LOCATION: The site is located at 1350-1520 NE Highway 20. It is shown on Benton County Assessor's Map 11-5-25, as Tax Lot 1308.

SITE AREA: 88 acres (Tax Lot 1308: 85.43 acres; Hwy 20 Right-of-Way: 2.57 acres)

COMPREHENSIVE PLAN DESIGNATION: GI - General Industrial

EXISTING COUNTY ZONE: Urban Industrial-20/PUD (includes Floodplain Management Overlay, Greenway Management Overlay, and Natural Features Overlay in the Corvallis Urban Fringe designations)

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-1

PROPOSED CITY ZONE: GI (General Industrial) with Planned Development and Willamette River Greenway Overlays (the Willamette River Greenway Overlay would only cover a portion of the site that is adjacent to the river)

PUBLIC COMMENT: On October 26, 2011, 50 public notices were mailed or emailed, and the site was posted. No comments have been received as of the date of publication of this staff report. A prenotification of this hearing was sent to all neighborhood associations, concerned citizens, and groups on record on May 9, 2011, and again on October 11, 2011.

ATTACHMENTS:

A - City of Corvallis GIS Maps

A- 1 Vicinity Map
A- 2 Existing Conditions / 2010 Aerial Photograph
A- 3 Comprehensive Plan Map
A- 4 Zone Map (Existing and Proposed)
A- 5 Natural Hazards Map
A- 6 Natural Resources Map

B - City of Corvallis - Supplemental Information

B- 1 2010 Land Development Information Report *(Excerpts of Tables and Charts Identifying Vacant Industrial Lands in City limits)*
B- 2 1998 Buildable Lands Inventory *(Excerpts of Industrial Land Use Needs inside City limits and within Urban Growth Boundary)*
B- 3 Park and Recreation Facilities Plan *(Excerpts of adopted Trails Plan)*
B- 4 Transportation Plan *(Excerpts of adopted Trails Master Plan and Bikeway System Routes)*
B- 5 Staff Identified Review Criteria - Comprehensive Plan Policies and Land Development Code
B- 6 Willamette River Greenway Boundary Information *(Excerpts from Comprehensive Plan and 1980 Willamette River Greenway Report)*
B- 7 Parks, Natural Areas, and Recreation Board Minutes (May 19, 2011)
B- 8 Bicycle & Pedestrian Advisory Commission Minutes (June 3, 2011)

C - Correspondence from Other Agencies

C- 1 Oregon Department of Transportation
C- 2 Oregon Department of State Lands - Wetlands Program
C- 3 Oregon Department of Land Conservation and Development
C- 4 Oregon Department of Parks and Recreation
C- 5 Benton County - Email and Response from Greg Verret, Planning Director for Benton County

D - Application Narratives & Graphics

Annexation Narrative (D-6 through D-64)
Zone Change Narrative (D-65 through D-75)
Planned Development Narrative (D-76 through D-92)

WRG Permit Narrative (D-93 through D-106)
Graphics (Attachments, Figures, Drawings: D-107 through D-130)
Appendix (Transportation Impact Analysis, Proposed Conditions of Approval, TPR Memorandums, County Zoning Analysis, Utility Demand Calculations: D-131 through D-406)

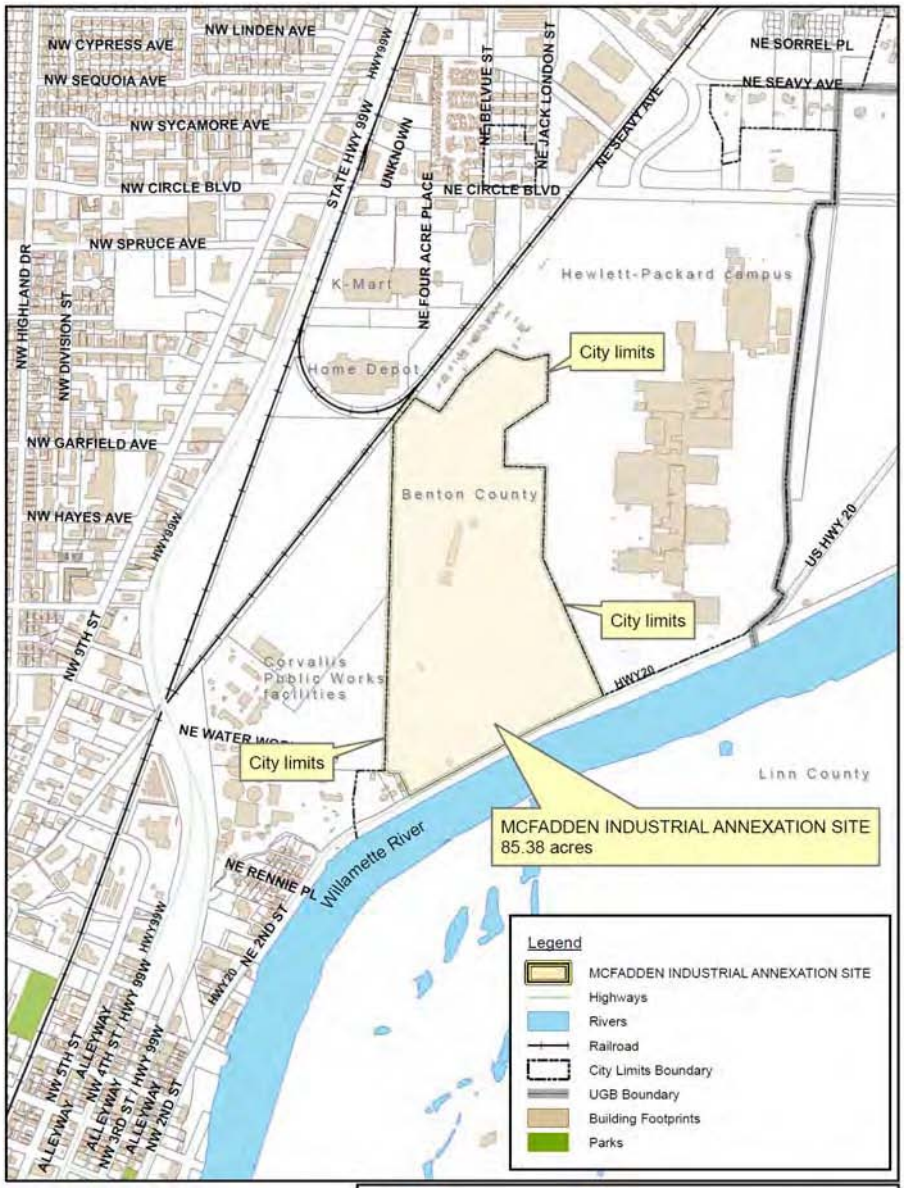
E - October 31, 2011, PIPC Submittal

APPLICANT'S PROPOSAL

The applicant proposes to annex a total of 88 acres into the City of Corvallis. This includes 85.43 acres of private property associated with Tax Lot 1308, and 2.57 acres of Highway 20 public right-of-way.

A General Land Use Plan (GLUP) is included in the application that shows one way in which the site may be developed **(Attachment D - Page 127)**. The GLUP is for illustrative purposes only, and does not constitute a site plan that defines future development. The proposed GLUP shows the general location of development that could occur on the site (approximately 51.27 acres), as well as areas of the site set aside for Natural Features protections (remaining 34.16 acres). The GLUP also illustrates a potential building layout consistent with the proposed General Industrial zone (**Attachment D - Page 128**).

Vicinity Map



Upon annexation, the applicant requests a Zone Change to replace the Benton County Zone (Urban Industrial-20/PUD) with the City's GI (General Industrial) Zone and to place both a Planned Development (PD) and Willamette River Greenway (WRG) Overlay on the site **(Attachment A-4)**.

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-3

According to the Oregon Department of Transportation (ODOT), a Zone Change (or designation of a City Zone upon annexation in this case) is considered to be an amendment to a land use regulation, as described in Oregon Administrative Rule 660-012-0060 **(Attachment C-1)**. Such an amendment is one of the actions that trigger consideration of the State's Transportation Planning Rule (TPR).

Per the TPR and where it is demonstrated that the proposed Zone Change leads to an intensity of development that causes a "significant" affect on transportation facilities managed by ODOT, ODOT may require mitigation or a mechanism to ensure mitigation to the affected State transportation facilities. "Significant effect", in this context, explores whether the Zone Change could allow development that would generate traffic impacts that would degrade the performance of a state transportation facility below acceptable levels. The proposed Zone Change and its associated General Industrial land uses have the potential to significantly affect levels of service at the intersections of Circle Boulevard and Highway 20 (NE 2nd Street), as well as at the Harrison Boulevard and Van Buren Avenue bridges that intersect Highway 20 in the downtown area. Therefore, the TPR should be considered in reviewing the Zone Change portion of this application.

Typically, traffic mitigation associated with a land use application is satisfied through a condition of approval of the application; however, Annexation and Zone Change applications cannot be subject to conditions of approval. Because Annexation and Zone Change applications cannot be conditioned, the typical mechanism for satisfying the need for traffic mitigation is not feasible. Consequently, the applicant requests approval of a Planned Development - Conceptual and Detailed Development Plan (CDDP). The proposed Conceptual Development Plan covers the entire 85.43 acre site, and includes proposed conditions of approval limiting the overall development potential on the site based on a proposed maximum floor area ratio and maximum vehicle trips generated(**Attachment D - pages 81 and 82**). By voluntarily limiting the development potential on the subject property, the application begins to address the question of whether or not there is a significant effect on the associated ODOT transportation facilities, by comparing development scenarios possible under the Benton County zone with the Conceptual Development Plan envisioned with this application. This is discussed in further detail, in Part II and Part III of this staff report.

Detailed Development Plan (DDP) approval is requested to allow construction of a public sidewalk along the site's Highway 20 frontage, and a landscaped berm along the site's southwest corner (**Attachment D - page 130**). Other than the sidewalk and landscaping improvements, the applicant is not proposing additional development at this time. A condition of approval is proposed which requires future development not covered within the scope of the proposed DDP to be reviewed according to the City's Planned Development process. Prior to future development, the applicant will be required to submit a Major Modification to the existing DDP or to submit a new DDP for review and approval.

The CDDP is capable of receiving conditions of approval and the applicant is proposing conditions of approval which will limit floor area and trip generation associated with future site development such that application of the TPR thresholds results in no need for mitigation at this time. The proposed limit on floor area is 855,906 square feet (or a 0.23 F.A.R.). The proposed limit on generated vehicle trips is 719 AM peak hour trips, and 736 PM peak hour trips. As proposed, the total floor area at build out would be the lesser of 855,906 square feet or the floor area associated

with the trip cap. ODOT has reviewed this methodology for addressing the TPR, and has concurred with the approach and conditions of approval.

Because CDDPs can expire and PD Overlays can be administratively removed, the applicant proposes to "lock in" the CDDP approval in perpetuity by providing construction drawings and financial security for all public improvements related to the proposed sidewalk. The applicant proposes to complete design and financially secure the proposed sidewalk improvements before the City Council public hearing for the annexation application. This approach to preserve the CDDP approval in perpetuity is consistent with the requirements of **LDC § 2.5.50.09**.

Upon development of the site, and with future DDPs, the applicant will be required to provide public utilities, address compatibility with neighboring properties, and mitigate for impacts to traffic. The applicant has indicated that there is no intent to impact the site's natural features located on the western portion of the site. The application includes a detailed discussion of how public streets, water, sanitary sewer, stormwater, and other infrastructure needs could be accommodated on the site to serve the most intensive possible development scenario under the proposed PD(GI) zoning designation. A traffic impact analysis has also been provided that identifies the impacts to nearby intersections and required mitigation (**Attachment D - Page 133**).

SITE AND VICINITY

The site proposed to be annexed consists of one tax lot. The right-of-way abutting the site's frontage along Highway 20 is also proposed to be annexed to allow for future annexation of adjacent properties. The Willamette River is located on the east side of the site's Highway 20 frontage. A portion of the site's northwest corner abuts the Southern Pacific Railroad line.

The site is actively farmed. Two single family residences and various farm-related outbuildings are located on the site (**Attachment A-2**). Physically, the site is relatively flat, with a gentle slope toward the western property line. The site and all of the abutting properties have a Comprehensive Plan Designation of General Industrial. Three properties, located outside of City limits, near the site's southwest corner have a designation of Residential - Medium Density (**Attachment A-3**).

The site has a County zone of Urban Industrial-20/PUD, and includes County Floodplain Management, Greenway Management, and Natural Features in the Corvallis Urban Fringe Overlay designations. To the north are the Hewlett Packard campus and Corvallis Business Park / Corvallis Station, which have a City zone of PD (GI). To the west is the City of Corvallis waste water treatment plant and Public Works yard, which has a City zone of GI (**Attachment A-4**). The neighboring residences to the southwest are outside City limits and have a Benton County zone of UR-5 (Urban Residential with 5 acre minimum parcel size).

The site contains the High Protection 100-Year Floodplain (**Attachment A-5**), two High Protection Riparian Corridors, and an associated Proximate, Locally Protected Wetland of Special Significance (**Attachment A-6**). There are no other Natural Features regulated by the Land Development Code on the site.

CRITERIA, STAFF REPORT FORMAT, AND ACTION REQUIRED

This report responds to Annexation, Zone Change, Planned Development (Conceptual & Detailed Development Plan), and Willamette River Greenway Conditional Development (WRG) criteria and applicable Land Development Code (LDC) development standards. The adoption of the 2006 LDC fully implements the Comprehensive Plan, as acknowledged by the Department of Land Conservation and Development (DLCD). Therefore, Comprehensive Plan Policies will be addressed in this report only to the extent that they clarify any ambiguities regarding LDC standards, and where they aid in analysis of the Annexation review criteria.

This report is organized into four parts. Part I discusses the Annexation request, Part II discusses the Zoning District Change, Part III discusses the Planned Development request, and Part IV discusses the WRG Conditional Development request. All four parts are organized by the review criteria of their respective LDC Chapters outlined below:

Table 1: Staff Report Contents and Review Criteria

Planning Commission Staff Report Part	Base LDC Review Criteria[1]
Part I: Annexation	Chapter 2.6 - Annexations • Demonstrated Public Need - Sections 2.6.30.06.a and 2.6.30.07 • Advantages and Disadvantages to the community - Sections 2.6.30.06.b and 2.6.30.07 • Site's capability of being served by urban services - Section 2.6.30.06.c • Compatibility - Section 2.6.30.06.e
Part II: Zone Change	Chapter 2.2 - Zone Changes • Compatibility - Section 2.2.40.05.a
Part III: Conceptual & Detailed Development Plan[1]	Chapter 2.5 - Planned Development • Compatibility - Sections 2.5.40.04.a and 2.5.50.04 • Natural Resources and Natural Hazards Factors - Sections 2.5.40.04.b and 2.5.50.04 • GI zone standards - Chapter 3.24
Part IV: Willamette River Greenway Conditional Development[1]	Chapter 2.3 - Conditional Development • Compatibility - Section 2.3.30.04 Chapter 3.30 - WRG Overlay Criteria • Review Criteria - Section 3.30.40
[1] additional LDC review criteria apply to Part III and Part IV, based on scope of proposed sidewalk development - see applicable parts of this staff report for more detail	

Based on the conclusions reached in the staff report, the Planning Commission is asked to recommend that the City Council either place or not place the Annexation on the May 2012, ballot. The Planning Commission is also asked to either approve or deny the Zone Change, Conceptual and Detailed Development Plan, and WRG Conditional Development, all of which would be contingent upon the City Council placement of the Annexation request on the May 2012, ballot, and upon voter approval of the measure.

PART I: ANNEXATION

A. Purposes and Procedures of Chapter 2.6 - Annexation

Land Development Code Section 2.6.30.06 states that requests for Annexations shall be reviewed to ensure consistency with the purposes of Chapter 2.6, applicable policies of the Comprehensive Plan, particularly Article 14 of the Comprehensive Plan, and other policies and standards adopted by the City Council and State of Oregon. The purposes of Chapter 2.6 are provided below:

Applicable LDC Criteria

Section 2.6.20 - PURPOSES

The procedures and review criteria for proposed Annexations are established for the following purposes:

a. Maximize citizen involvement in the Annexation review process;

b. Establish methodology to evaluate need, serviceability, and the economic, environmental, and related social effects of proposed Annexations;

c. Provide adequate public information and sufficient time for public review before an Annexation election;

d. Ensure adequate time for City staff review; and

e. Allow for simultaneous review of multiple Annexation proposals.

The applicant submitted applications for an Annexation, Zone Change, and Planned Development, by the deadline of March 31, 2011, as specified in LDC § 2.6.30.02. The applicant also submitted a companion Willamette River Greenway Conditional Development application on May 6, 2011, consistent with direction from City staff and in order to achieve compliance with Statewide Planning Goal 15.

During review of the application and based on the complexity of some of the issues, it was determined by staff and the applicant that additional time should be spent refining the application. This led to the realization that the original target of a November 2011 ballot measure was not feasible in terms of meeting all of the scheduling requirements associated with Annexation requests. Therefore, the applicant voluntarily requested that the Annexation measure be considered for the May 2012 ballot instead.

A prenotification for the application was mailed on October 11, 2011, and a public hearing notice was mailed and the site was posted on October 26, 2011, which provided the public with information regarding the proposal. A schedule has been prepared for the application to ensure that public hearings before the Planning Commission and City Council can be accommodated, as well as preparation and public review of the ballot title, publication of a display advertisement as required by the LDC, and publication of the annexation explanatory

statement in "The City" newsletter prior to the May election on the matter. Staff find the purposes of Chapter 2.6 have been met by the proposed Annexation request.

Applicable LDC Criteria

LDC Section 2.6.30 - PROCEDURES

An application filed for Annexation shall be reviewed in accordance with the following procedures:

2.6.30.01 - Determination of Annexation Type

The Director shall determine whether an application is for a Minor or Major Annexation as follows:

a. **Minor Annexation - Intended to address situations where properties are proposed for Annexation and, by virtue of their size and development potential, have negligible impacts on surrounding properties and neighborhoods, and on the community as a whole. These Annexations are typically proposed to gain access to public services, such as sanitary sewer and water facilities, before actual Health Hazards are declared; to incorporate infill sites into the City; and/or to allow a limited level of urban development to occur on existing parcels. Minor Annexation provisions are not intended to provide piecemeal Annexations whereby a property owner within the county partitions a small piece of land specifically to be classified as a Minor Annexation, and then continues to partition small sites and propose multiple Minor Annexations.**

   An Annexation shall be considered Minor if all of the following conditions exist:

   1. No more than one parcel is involved;

   2. For residential Annexations, the parcel is capable of providing not more than 10 dwelling units (at maximum allowed density per gross acre). For commercial and industrial Annexations, the parcel is no greater than one acre; and

   3. City services are contiguous to the parcel.

   When addressing the review criteria in Section 2.6.30.06.a and Section 2.6.30.06.b, a Minor Annexation proposal need not provide the same level of detail as a Major Annexation proposal. See Section 2.6.30.06 and Section 2.6.30.07 for specifics. All other submittal requirements and review criteria, however, are applicable.

b. **Major Annexation - An Annexation shall be considered Major if it does not meet all three conditions for a Minor Annexation as outlined in "a," above.**

The annexation application involves one 85.43 acre parcel (Tax Lot 1308) that has a General Industrial Comprehensive Plan designation, and 2.57 acres of abutting ODOT right-of-way. Based on the size of the subject parcel, the subject Annexation cannot be considered a Minor Annexation as outlined in LDC § 2.6.30.01(a), and therefore, shall be considered a Major Annexation.

Review criteria for consideration of an Annexation are listed in LDC § 2.6.30.06, as follows:

Applicable LDC Criteria

2.6.30.06 - Review Criteria
Requests for Annexations shall be reviewed to ensure consistency with the purposes of this Chapter, applicable policies of the Comprehensive Plan, particularly Article 14, and other

applicable policies and standards adopted by the City Council and State of Oregon.

Annexations can only be referred to the voters when the proposed Annexation site is within the City's Urban Growth Boundary (UGB), and where the findings below are made. The criteria are highlighted in bold type.

The subject property is located within the Corvallis Urban Growth Boundary. Findings associated with the four additional applicable criteria outlined under LDC § 2.6.30.06(a), LDC § 2.6.30.06(b), LDC § 2.6.30.06(c), and LDC § 2.6.30.06(e) are outlined below. Criterion under LDC § 2.6.30.06(d), which requires Comprehensive Plan Map amendments for Open Space-Conservation or Public Institutional designations, is not applicable to this specific request, because the subject site is not identified as open space or general community use on adopted City master plans.

B. Demonstration of a Public Need for the Annexation

The first criterion to consider in reviewing an Annexation request is whether or not there is a public need for the additional land and associated potential uses of that land. There are many ways that need can be demonstrated, and LDC § 2.6.30.06(a) provides guidance on what factors to consider when evaluating public need, as follows:

Applicable LDC Criteria

LDC Section 2.6.30.06(a)

The applicant has demonstrated a public need for the Annexation -

2. **<u>Major Annexations</u> - Factors to be considered in evaluating public need for Major Annexations shall include, but are not limited to:**

   a) **The five-year supply of serviceable land of the Annexation's land use category (single-family, multi-family, Commercial, or Industrial). Annexations of land designated as Public Institutional, Open Space-Conservation, or Open Space-Agriculture on the Comprehensive Plan Map are exempt from this criteria;**

   b) **Availability of sufficient land of this type (single-family, multi-family, Commercial, or Industrial) to ensure choices in the market place. Annexations of land designated as Public Institutional, Open Space-Conservation, or Open Space-Agriculture on the Comprehensive Plan Map are exempt from this criteria; and**

   c) **Compliance with adopted community-wide livability indicators and benchmarks relative to Major Annexations, as identified in Section 2.6.30.07.c.**

The City shall provide annually updated Citywide data for the applicant to use in calculating supply and demand for the major land use categories (single-family residential, multi-family residential, Commercial, and Industrial). Residential land supply and demand data shall be calculated using housing units. Commercial and Industrial land supply and demand data shall be calculated using acres.

The required data sources and methodologies for use in determining land supply and demand for Major Annexations, and the requirements for addressing community-wide benchmarks, are outlined below in Section 2.6.30.07.

LDC Section 2.6.30.07

All of the provisions within this Section are required for Major Annexation proposals except for proposals or portions of proposals that include land with Comprehensive Plan designations of Public Institutional, Open Space-Conservation, or Open Space-Agriculture. Lands with these map designations are exempt from the provisions within "a," and "b," below. Minor Annexation proposals are subject only to the provisions in "c," below.

a. Determining Five-Year Supply of Serviceable Land - Serviceable land is land within the City limits capable of being served by public facilities.

When calculating a five-year supply of serviceable land, applicants shall refer to and follow the Council Policy addressing the five-year supply, as amended from time to time. This Policy outlines the accepted methodology and will result in more uniform application submittals.

b. Providing information on land availability to ensure choices in the market place - Comprehensive Plan Policy 14.3.6 states that "factors to be considered in evaluating public need for Annexation may include... the availability of sufficient land of this type to ensure choices in the market place." Minor Annexation applications are not required to include information on market choice. However, Major Annexation applications shall provide this information. Appropriate and encouraged market choice topics include, but are not limited to:

1. Information regarding a housing/jobs balance;

2. Housing rental rates and prices;

3. Vacancy rates; and

4. A comparison of housing costs related to incomes, land prices, and land availability.

The City does not independently review and verify documentation of this nature. Therefore, an applicant's market choice arguments shall be developed by a recognized professional in the field. Additionally, the applicant shall identify the methodologies used and the sources of information.

The Director will summarize the applicant's arguments and methodologies in the staff report provided to the hearing authority, and identify them as the applicant's arguments. The hearing authority shall determine the validity of the arguments based on the information provided by the applicant and on public comments during the public hearing process. The hearing authority shall also determine to what extent these arguments affect the criteria in Section 2.6.30.06.b.

c. Providing information on community-wide livability indicators and determining compliance with adopted community-wide benchmarks -

1. The City has just begun the process of identifying livability indicators to ultimately assist in the development of community-wide benchmarks. Additionally, many of the community-wide livability indicators are not applicable to Annexation proposals.

2. Table 2.6-1 - Livability Indicators and Benchmark Criteria provides interim direction to applicants in addressing livability indicator and benchmark criteria. As the community further develops these livability indicators and benchmarks, this

Section of this Code shall be updated accordingly.

a) **The livability indicators and benchmarks in the following table are intended to be balanced and identified as advantages and disadvantages relative to an Annexation proposal. Compliance with all benchmarks is not required. However, when balanced and viewed in aggregate, the decision-makers need to find that the advantages to the community outweigh the disadvantages.**

b) **The number of applicable livability indicators and benchmarks varies, depending on the Comprehensive Plan Map designation(s) of the property involved in the Annexation request, as well as whether the Annexation is categorized as a Minor Annexation or a Major Annexation.**

c) **For those livability indicators and benchmarks that require distance measurements from an amenity to a proposed Annexation site, measurements shall be taken from the average point within the Annexation site.**

Land Development Code § 2.6.30.06(a) above provides three factors that are to be used in determining whether an applicant has demonstrated a public need for the annexation. The factors to be weighed in this application include, but are not limited to, the five-year supply of serviceable Industrial land, the availability of sufficient Industrial land to ensure choices in the market place, and compliance with the community-wide livability indicators and benchmarks. LDC § 2.6.30.07 provides methodologies for determining land supply and demand, and consistency with community-wide benchmarks, which are factors used to demonstrate a public need for the annexation. An evaluation of the three factors affecting public need, relative to the Annexation request, is as follows:

1. Five-year Supply of Serviceable Land

To calculate the five-year supply of serviceable land, LDC § 2.6.30.07(a) refers to a City Council Policy, which is yet to be developed. Since the Council Policy referenced in the LDC does not exist, the applicant has provided alternative sources of information which are intended to address the five year supply of serviceable Industrial lands within City limits. Data sources used in the analysis provided by the applicant include the City's current 2010 Land Development Information Report (LDIR), the 1998 Corvallis Buildable Lands Inventory, and Corvallis Comprehensive Plan, as well as the DLCD Industrial and Other Employment Lands Analysis Guidebook (October 2005) and the Prosperity That Fits Economic Development Plan, prepared by the community in 2006. The applicant has also provided references, either in writing or via verbal communication, from Business Oregon and the past Economic Development Director of the Corvallis-Benton Chamber Coalition. The applicant's findings are outlined below. Where applicable to data or publications produced by the City of Corvallis, staff have verified that the information is accurate.

Demand for Industrial Lands Using 1998 Analysis (Buildable Lands Inventory)

In calculating five-year supply of serviceable land, it is important to know what the present and future demand is. The Corvallis Buildable Land Inventory (BLI) was completed in 1998 and projects trends regarding land need and supply based on 1996 data. The BLI anticipates a sufficient supply of what is designated as Industrial land (GI and Intensive Industrial zones) to meet the projected demand over the 1996-2020 planning period. This is based on a calculated demand for Industrial lands of 44 gross

acres within the City limits. At the time of the 1998 analysis, there was a surplus of more than 482 acres of this type within the City limits (**Attachment B-2 - Page 12**). However, the BLI indicates that slight variations in employment growth by as little as one percent (1%) could lead to a significant increase in demand for GI-designated lands (up to an additional 240 acres), as shown in Table 5-3 of the 1998 BLI (**Attachment B-2 - Page 13**). Therefore, the 1998 demand of 44 acres could be underestimated if factors change. It should be noted that a significant amount of time has lapsed since the 1998 BLI, and the City has yet to publish an update to demand calculations for various land uses. However, the 1998 BLI planning period calculated demand through the year 2020, and there has been no City effort since that time to change the methodology or assumptions used in the 1998 BLI for calculating demand.

Other Factors That Affect Demand for Industrial Lands

In calculating demand relative to a five-year supply of serviceable Industrial land, the applicant points out that it is important to consider additional factors beyond the net area of available industrial lands within City limits. To better determine the five-year supply based on what the market needs are, industrial land with particular characteristics such as individual parcel size, diversity of ownership, geographic distribution, and serviceability should be examined. The applicant cites recent trends in industrial land development and employment opportunities related to those industrial uses that suggests that factors such as individual parcel size and serviceability play a big role in whether an industrial-based employer is likely to locate a facility at any given location. This is supported by the statements provided in the applicant's references.

Some of the findings associated with market demand, provided by the applicant, and documented in the attached references include:

- Demand is partly driven by availability of a particular class of industrial land (**Business Oregon, Attachment D - page 55)**
- Recent trends show that particular segments of the industrial employment market demand large (20+ acre) parcel sizes
- Corvallis has lost recent opportunities to attract new employers "due to a lack of ready to go larger parcel land inventory" (**Business Oregon, Attachment D - page 55**)
- The McFadden property provides a significant opportunity for Corvallis to diversify industrial property inventory (**John Sechrest memo, Attachment D - page 57)**
- The McFadden property would provide a serviceable alternative to existing industrial land supply elsewhere in City limits (**John Sechrest memo, Attachment D - page 58**)

The Business Oregon memorandum cites qualities of the McFadden property such as parcel size, large capacity of quality electrical service, proximity to the Hewlett-Packard campus, and transportation connectivity as characteristics which many existing General Industrial properties within the City limits do not have. Therefore, the applicant argues, the McFadden property meets certain criteria relative to market demand and five-year supply based on that demand, that the City's existing supply of vacant, General

Industrial land does not. A discussion of available, vacant GI lands within City limits is included below.

In evaluating other factors presented by the applicant, it is important to consider Corvallis Comprehensive Plan (CCP) policies which may or may not support those arguments. Consideration of the applicable CCP policies is supported in the Annexation review criteria (LDC § 2.6.30.06). Applicable CCP policies that address issues of industrial employment and land use include:

Applicable Comprehensive Plan Policies	
8.2.1	**The City and County shall support diversity in type, scale, and location of professional, industrial, and commercial activities to maintain a low unemployment rate and to promote diversification of the local economy.**
8.9.1	**The City shall designate appropriate and sufficient land in a variety of different parcel sizes and locations to fulfill the community's industrial needs.**

In addition to these CCP policies, which support the applicant's arguments for increasing the diversity of available vacant industrial lands in terms of size and location, it is important to acknowledge that the City's adopted Comprehensive Plan map has already designated the subject property as suitable for General Industrial uses, and the applicant's proposed Zone Change is consistent with that designation.

Vacant Industrial Lands within City

The applicant cites data from the 2010 Corvallis LDIR (**Attachment B-1**), which indicates that there are approximately 406 acres of vacant GI lands in Corvallis. This is about 81 acres less than the amount identified as vacant and unconstrained in the 1998 BLI. Despite the difference (which might be attributed to development that has occurred since 1998) and based on the demand for General Industrial lands in the 1998 BLI, a simple comparison of the acreage associated with the 1998 demand and the 2010 supply of GI lands indicates there is sufficient GI land within the City limits of Corvallis in terms of overall supply.

However, as the applicant states, this is an over-simplified analysis of supply and demand, and further factors, as warranted by the LDC criteria relative to choices in the marketplace (LDC § 2.6.30.07.b) should be considered. As discussed above, these additional factors include a discussion about serviceability, distribution, parcel size, ownership, and other development constraints such as Natural Features protections. Analysis of these factors is supported by the serviceability criteria in LDC § 2.6.30.06.c and LDC § 2.6.30.07.a, and choices in the marketplace criterion in LDC § 2.6.30.07.b.

Serviceability

The LDC does not define "serviceable." Nearly all land within the Urban Growth Boundary is proposed to be served by City services at some point in the future. Adoption of the City's master plans such as the Transportation Master Plan and Storm Water Master Plan are testimony to the City's long term vision of providing urban level

services to land identified within the City limits of Corvallis, and to lands within the Urban Fringe, as those lands are annexed. However, currently there are lands even within the City Limits that cannot be immediately served by City services, because of the condition and extent of the existing systems, physical distance between the subject properties and facilities intended to service those lands, and other constraints that hinder provision of services. Therefore, it is clear that while there may be a surplus of General Industrial lands relative to the calculated demand of the 1998 BLI, it is not true that all of the surplus lands are serviceable. The applicant provides information on the serviceability of the vacant GI lands identified in the more recent 2010 LDIR.

The majority of the lands designated as GI within City limits are concentrated either in south Corvallis, or in northeast Corvallis in the vicinity of the subject Annexation site. Because of this geographic concentration, there are several common factors that affect serviceability of these lands. The applicant provides an in-depth analysis of the characteristics and serviceability of these lands, as compared to the McFadden Industrial Annexation property in the narrative (**Attachment D - Pages 17 through 30**). A simplified summary of the applicant's findings are included in the table below.

Table 2: Utilities Comparison

City and franchise utility service	South Corvallis GI properties	McFadden property
water	current: constrained due to need to extend water	current: located in first level water service area, 16" and 30" mains along site boundary
	master plan: constrained due to need to extend 24" water lines along Herbert Avenue	master plan: on site extension of 16" line connecting two existing lines paid for by developer
sanitary sewer	current: 33" adjacent to some lots, other lots do not have adjacent sewer access	36" main exists along west and north sides of site
	future: requires extension of services between 400-2,000 feet to serve some of the large parcels	master plan: existing line may need to be upgraded to 48"
power	current: 4 megawatts, no redundancy	20 megawatts, redundant sources
transportation	existing: several large parcels have unimproved, gravel access, rural-level railroad crossings	existing: improved arterial highway along site frontage,

	future: require extension of fully improved public street network with access and signal improvements at highway and railroad, improvement of substandard railroad crossings	future: potential deceleration / acceleration lanes along site frontage, existing bike lanes, proposed sidewalk

CCP policies address serviceability of lands relative to urbanization, and the following CCP policy supports the applicant's discussion on the serviceability comparison of the south Corvallis industrial lands and the proposed Annexation site:

Applicable Comprehensive Plan Policies	
10.2.6	**The type, location, and phasing of public facilities and utilities shall be based on actual needs, desired levels of service, cost-effectiveness, and/or property owner willingness to pay for infrastructure.**

The applicant's arguments relative to serviceability are supported by CCP 10.2.6, since the applicant has indicated a willingness to pay for the necessary infrastructure, and because the extent of necessary public infrastructure improvements associated with the McFadden site is less than that required to achieve serviceability of industrial lands in south Corvallis, thus leading to a cost-effective method of providing public services to land already designated for industrial uses. The applicant has also provided correspondence from applicable utility companies that indicate that the McFadden property can be readily serviced (**Attachment D - pages 59 through 63**), consistent with the criterion for serviceability. As noted in the discussion below on vacancy rates, 96% of vacant GI lands within City limits are located in south Corvallis, and are affected from a serviceability standpoint as noted in the table above.

Conclusion on Five-Year Supply

As noted above, supply and demand are inter-related. In order to calculate a five-year supply, it is important to understand what the demand is for any given land use category. The 1998 BLI is one source of information that can be used to determine demand or need for land with a specific use classification. The City provides data related to availability or supply of vacant lands of given land use designations, through publication of the Land Development Information Report. A simple comparison of demand and supply of General Industrial lands within City limits indicates that the City has a surplus in terms of overall acreage.

However, the applicant has provided data and arguments that suggest that simple comparison of acreage of supply versus demand is overly simplistic, and does not position the City well for attracting a variety of industrial employers who are looking for properties with specific characteristics that may not be represented in the current supply of vacant General Industrial lands in City limits. The applicant's conclusions on demand

for vacant General Industrial lands with specified characteristics are supported by the references provided in the Annexation application. The specified characteristics include serviceability, individual parcel size (> 20 acres), diversity of ownership, Natural Features-related development constraints, and geographic distribution of industrial lands. Consideration of these other factors are supported by Comprehensive Plan policies (CCP policies 8.2.1, 8.9.1, and 10.2.6), components of the community's "Prosperity that Fits" report, BLI discussion on provision of balanced and unconstrained land supply, and by the market choice topics outlined in LDC § 2.6.30.07.b, as more thoroughly discussed below.

2. Sufficient Land to Ensure Market Choice

A summary of the applicant's arguments related to market choice, sources of data, and methodologies is provided below. Per LDC § 2.6.30.07(b), the Planning Commission shall determine the validity of the applicant's arguments based on the information provided by the applicant and on public comments during the public hearing process. The Planning Commission shall also determine to what extent the applicant's arguments affect the criteria in LDC § 2.6.30.06(b) (i.e. the Annexation provides more advantages to the community than disadvantages).

LDC § 2.6.30.07(b) provides examples of four market choice topics that the applicant can use to provide arguments for land availability to ensure choices in the market place. The four topics are: information regarding a housing/jobs balance; housing rental rates and prices; vacancy rates; and a comparison of housing costs related to incomes, land prices, and land availability. Not all four topics are applicable to a discussion concerning choices in the market place for industrially-designated lands, and the City has yet to develop the referenced policy on housing/jobs balance, so the applicant has chosen to focus on the LDC-provided topic of vacancy of industrial designated lands, as well as alternate methods for assessing availability of sufficient industrial land to ensure choices in the marketplace. The discussion and data provided by the applicant comes from sources who are recognized professionals in the field of industrial real estate development and job / business creation. These sources include an Industrial Lands Specialist and Clean Technology Recruiter from Business Oregon and a past Corvallis Economic Development Director, associated with the Corvallis-Benton Chamber Coalition.

a. Information regarding a housing/jobs balance;

Provision of General Industrial lands encourages growth of employment as land is developed with industrial uses. However, the City has not yet developed a study that evaluates what the proper balance is between jobs and housing. This factor cannot be fairly evaluated.

b. Housing rental rates and prices;

Not applicable to proposed land use of General Industrial.

c. Vacancy Rates; and

The applicant cites the City's 2010 LDIR as a source of inventoried vacant industrial properties within City limits. The applicant notes that a large number

of the vacant industrial properties located inside City limits are ten acres or less in size, and are concentrated in two geographic regions of the City - south Corvallis near the Airport, and northeast Corvallis, near the Corvallis Business Park / Corvallis Station / HP campus. The applicant notes that there is a geographic concentration in south Corvallis of the majority of vacant GI lands, which lack basic infrastructure for development purposes, and that these variables greatly reduce choices in the market for "shovel ready" GI lands.

According to the 2010 LDIR data, there are twenty-three (23) vacant parcels which are either exclusively zoned GI or have a mix of zones with some portion being GI. The total area of vacant GI lands, according to the 2010 LDIR data is approximately 406 acres (**Attachment B-1**). Of the 23 vacant parcels, 17 are twenty acres or less in size (74%). 16 of the 17 are less than four acres in area. A large percentage of vacant GI lands in City limits (389 acres, or 96%) is located in south Corvallis near the Corvallis Industrial Park. Of the 389 acres located in south Corvallis, 348 acres (90%) are located west of the Southern Pacific / Venell Farms rail line. As noted in the discussion above on serviceability, the GI parcels in south Corvallis generally require a greater degree of infrastructure investment than the subject annexation site. The applicant's arguments related to the market choice criterion are supported by the LDIR data and maps.

d. A comparison of housing costs related to incomes, land prices, and land availability.
Not applicable to proposed land use of General Industrial.

Other Market Factors Raised in the Application
The applicant has provided information from recognized professionals in the field of industrial and economic development (**Attachment D - Pages 55-58**) that indicates certain sectors of the industrial employment market involve businesses that are seeking industrial lands equal or greater than 20 acres in size, that have basic infrastructure such as sewer, water, and electricity in place. These arguments appear to be supported by statements made in economic development correspondence provided by the applicant (**Attachment D - page 55.**):

"Corvallis has been repeatedly and routinely bypassed for scale projects over 20 acres due to a lack of ready to go larger parcel inventory. In your case, the absence of visible demand is evidence of the absence of inventory."

3. Compliance with Community-Wide Livability Indicators and Benchmarks
LDC Table 2.6-1 provides the livability indicators and benchmarks that are intended to be balanced and identified as advantages or disadvantages relative to an Annexation proposal. The LDC does not require compliance with all the benchmarks; however, when balanced and viewed in aggregate, the decision-makers need to find that the advantages outweigh the disadvantages.

The applicant has provided a table analyzing the applicable livability indicators in relation to the proposed Annexation. The following table is excerpted from the applicant's narrative (**Attachment D - pages 46 through 53**), includes the applicable livability indicators with the applicant's analysis, and includes an added column for Staff's analysis.

Table 3: Analysis of Compliance with Livability Indicators and Benchmarks

Livability Indicators	Description of Livability Indicators	Benchmarks	Applicant's Analysis of Compliance	Staff's Analysis of Compliance
Livability indicators and benchmarks relating to the Corvallis Vision 2020 Statement category of "Where People Live"				
Rural Development Potential	Type of county development that could occur if property not Annexed (depends on county land use policies in effect at time of proposed Annexation).	Development on land within the Urban Growth Boundary is done in a fashion that does not preclude urban-level development on the subject site and/or on adjacent properties within the UGB.	✔ **Complies** The Benton County Development Code (BCDC) permits the wide range of activities below: 1. Research facility, testing laboratory and facility for the manufacturing, processing and/or assembling of products, provided a permit is not required from the Oregon Department of Environmental Quality 2. Vehicle and manufactured dwelling sales and/or repair. 3. Transportation terminals and warehouses. 4. Vocational school. 5. Aggregate processing, and concrete and asphalt batch plants. 6. Outside storage of materials, except junkyards as defined in BCDC 51.020. 7. One dwelling required for the employer or employee for management or safeguarding of the industrial use. 8. Farm use and forest use.	✔ **Complies** The uses permitted under the County UI zone are similar to the industrial uses permitted by the City's GI Zone. The applicant has provided supplemental materials that indicates that the site can be developed with some level of industrial park uses, even without City facilities such as public water and public sewer.

Livability Indicators	Description of Livability Indicators	Benchmarks	Applicant's Analysis of Compliance	Staff's Analysis of Compliance
			9. Accessory use or structure.	
Adjacency to City	Percentage of the perimeter of the Annexation site that is enclosed within the City Limits.	It is considered an advantage if ≥ 50 percent of the perimeter of an Annexation site is enclosed within the City limits.	✔ **Complies** 79% of the site perimeter enclosed by City limits.	✔ **Complies** Other than the property line shared by the Highway 20 right-of-way (1,023 feet) and two residential properties at the southwest corner of the site (289 feet), the remaining 7,567-foot (or 85%) perimeter of the site borders the City Limits.
Development Plans	Concurrent processing of Detailed Development Plan and/or Tentative Subdivision Plat with Annexation Request.	It is not considered a disadvantage and may be considered an advantage if an Annexation request is processed concurrently with a Detailed Development Plan and/or Tentative Subdivision Plat, even though such land use decisions may be changed after Annexation.	✔ **Complies** Conceptual and Detailed Development Plans accompany the Annexation request.	✔ **Complies** The applicant submitted a Conceptual and Detailed Development Plan concurrent with the Annexation and Zone Change Applications. However, the current application is limited in scope to construction of a public sidewalk, and the majority of future development on the property would require subsequent Detailed Development Plan approvals.
Distance to Bicycle and Pedestrian Access	Distance to bike lanes. Distance to sidewalk. Distance to multi-use path.	0.5-mile to bike lane. 0.25-mile to sidewalk. 0.5-mile to multi-use path.	✔ **Complies** Site fronts Hwy. 20 which has bike lanes both sides. Existing sidewalk terminates at SE corner of site. Two multi-use paths located approximately .48	✔ **Complies** There are existing bike lanes along the site's Hwy. 20 frontage, and a public sidewalk which covers a portion of the site's frontage near the HP campus. The nearest multi-use paths are as

Livability Indicators	Description of Livability Indicators	Benchmarks	Applicant's Analysis of Compliance	Staff's Analysis of Compliance
			miles from the site: 1. Adjacent to HP's Circle Blvd. entrance and 2. Across RR tracks.	stated, although direct access from the average point within the Annexation site to these existing facilities is hindered by railroad tracks and Natural Resources, so practical access would need to occur along Highway 20 and Circle Blvd., which is more than 0.5 mile of travel distance.
Connectivity & Extension of Bicycle and Pedestrian Facilities	It is considered an advantage if improvements proposed as part of the Annexation request would connect to and extend existing bicycle and pedestrian facilities.	Connection to existing pedestrian facilities and extension of them by at least 350'; or connection to existing pedestrian facilities and filling a gap between existing pedestrian facilities of at least 100'. Connection to existing bicycle facilities and extension of them by at least 350'; or connection to existing bicycle facilities and filling a gap between existing pedestrian facilities of at least 100'.	✔ **Complies** The DDP extends a new public sidewalk along the entire highway frontage, connecting with an existing sidewalk fronting on the subject site for 275 lineal feet and extending from HP to the east. The extension of app. 1375' far exceeds the 350' sought in the benchmark. In this area, a sidewalk could feasibly serve both pedestrians and bicyclists, and increases safety for cyclists by removing them from the roadway. Additional bicycle facilities may be included as part of a future DDP.	↔ **Partially Complies** The applicant's statements concerning extension of the public sidewalk and connection to existing sidewalk at HP complies with the pedestrian facility benchmark. As previously mentioned, Highway 20 along the site frontage contains bike lanes in both directions. The site is also affected by potential future multi-use path alignments. Based on anticipated near term pedestrian volumes on the proposed sidewalk, it would be reasonable to assume some use by bicyclists of the sidewalk, for safety reasons. However, as the area continues to develop, provision of a multi-use path is warranted consistent with City master plans is warranted. **SEE DEVELOPMENT RELATED**

Livability Indicators	Description of Livability Indicators	Benchmarks	Applicant's Analysis of Compliance	Staff's Analysis of Compliance
				CONCERNS A and C
Planned Public Transportation Improvements	Type and extent of public transportation improvements (street, bicycle, pedestrian) that are listed in City master plans and would occur with urban-level development of Annexation site.	It is considered an advantage if public transportation improvements (street, bicycle, pedestrian) would be installed with the Annexation, are listed in City master plans, and would enable other sites within the Urban Growth Boundary to ultimately develop.	✔ **Complies** Pedestrian improvements associated with Annexation and Zone Change to City of Corvallis General Industrial would be consistent with Corvallis transportation planning documents and executed at time of Annexation via concurrent CDP and DDP applications. Site and highway improvements associated with ultimate industrial development under a future DDP will facilitate urban level development of adjacent UGB lands at such time as owners' desire.	✔ **Complies** The proposed sidewalk improvement is consistent with the City's transportation master plan and LDC, as it relates to Arterial Highway improvements. Annexation would facilitate ability to construct additional public transportation improvements such as highway lanes and multi-use paths consistent with the City's master plans. These additional improvements could be achieved though future DDP approvals.
Distance to Shopping	Distance from neighborhood shopping opportunities (both existing and planned).	Annexation site is within 0.5-mile of neighborhood shopping opportunities (existing and planned). More advantage associated with shorter distances from existing (as opposed to planned) shopping opportunities and/or location within 0.5-mile from existing shopping opportunities.	✔ **Complies** Annexation site is 0.39 miles from a nearby shopping center. Site is .5 miles from fronts of both Big K and Carmike Theaters.	✔ **Complies** However, there are limitations on direct access to the Corvallis Station / Corvallis Business Park site due to the railroad and lack of public street routes other than NE 2nd Street and NE Circle Blvd.

Livability Indicators	Description of Livability Indicators	Benchmarks	Applicant's Analysis of Compliance	Staff's Analysis of Compliance
Livability indicators and benchmarks relating to the Corvallis Vision 2020 Statement category of "Economic Vitality"				
Employment / Housing	Balance of jobs and housing	To be developed as part of a future update of this Code, and following completion of regional studies.	No standard or desired benchmark identified to date by City, and the regional studies referenced in the benchmark have not been executed. Annexation would facilitate additional job creation in the City of Corvallis, in a nation-wide stressed economic environment.	✔ **Complies** Although there is not a community benchmark for a jobs / housing balance, it could be anticipated that Annexation of Industrially-designated land will diversify the supply of vacant and serviceable Industrial lands by addressing the characteristics of size, ownership, and location. By improving the choices in the marketplace for certain types of Industrial lands, there is greater potential for the vacant and underutilized lands to be developed. When developed, the Annexed land would improve employment opportunities.
Livability indicators and benchmarks relating to the Corvallis Vision 2020 Statement category of "Protecting our Environment"				
Natural Features	Acres and percentage of Annexation site with Significant Natural Features	Consistency with Significant Natural Feature protections specified by Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting, Chapter 4.5 - Natural Hazards and Hillside Development	✔ **Complies** Annexation site contains 40% Significant Natural Features including 100 year floodplain, highly protected riparian corridors, and locally protected wetlands. Natural Resource protection is proposed consistent with the pertinent sections of the	✔ **Complies** If annexed, the Natural Hazards and Natural Resources on-site would be protected according to LDC standards.

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Livability Indicators	Description of Livability Indicators	Benchmarks	Applicant's Analysis of Compliance	Staff's Analysis of Compliance
		Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions; and Chapter 4.13 - Riparian Corridor and Wetland Provisions. It is considered an advantage of Significant Natural Features are protected through Annexation, since they may be better protected within the City.	LDC. Limited vegetation removal associated with the new public sidewalk is permitted under applicable code provisions. Annexation provides greater environmental protections under City of Corvallis regulations as compared with current County and State protections, regulations.	
Distance to Transit	Distance from an existing transit line and/or bus stop.	Annexation site is within 0.5-mile of an existing transit line and/or bus stop.	✔ **Complies** Three CTS Routes (Routes 1, 7, C2) all provide service within .5 miles or less of Annexation site. 2 bus stop locations on HP campus are located approximately .25 and .45 miles from site, respectively. One bus stop location outside HP campus (between NE Byron Place and NE Rennie Place) is about .5 mile from center of Annexation site.	✔ **Complies** Route 1 and 7 (HP campus stop): 0.42 mile Route C2 transit line abuts site on Hwy 20. Linn-Benton Loop (HP campus stop): 0.42 mile
Distance to Major	Distance to	Distance to	✔ **Complies**	↔ **Partially**

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Livability Indicators	Description of Livability Indicators	Benchmarks	Applicant's Analysis of Compliance	Staff's Analysis of Compliance
Street	nearest Collector and/or Arterial Street(s) that would serve the proposed annexation site and is fully improved to City standards or is improved to City standards with regard to bicycle and pedestrian facilities.	nearest Collector and/or Arterial Street(s) that would serve the proposed annexation site ≤ 0.25-mile and is fully improved to City standards or is improved to City standards with regard to bicycle and pedestrian facilities.	*Southeast boundary of Annexation site directly abuts a section of US Hwy 20 for 275 lineal feet which is improved to city standards with regard to bicycle and pedestrian facilities; with bicycle lanes extending across the subject property and a right of way sidewalk terminating 275' west of the Annexation site's southeasterly corner. These conditions exceed the benchmark of less than .25 miles to an improved collector / arterial street relative to bike and pedestrian facilities.*	**Complies** The southeast boundary of the site abuts Hwy 20 / NE 2nd Street, which is classified as an Arterial Highway. The existing road section does not contain standard Arterial Hwy center turn lane, planters strips and sidewalks. **SEE DEVELOPMENT RELATED CONCERN A**
Intersection	Levels of service for intersections of Arterial and/or Collector Streets, as determined by the City's Traffic Engineer, within a one-mile radius of the site.	Levels of service for intersections of Arterial and/or Collector Streets affected by the proposal, as determined by the City's Traffic Engineer, and generally within one-mile radius of the site, will be a level of service "D" or better following urban level development of the Annexation Site.	**✘ Does not comply** *Existing Levels of Service for streets and intersections near the Annexation site are not conducive to meeting this benchmark.*	**✘ Does not comply** This is based on existing levels of service, as well as those anticipated if the Annexation site were to develop to urban standards. Refer to the submitted Traffic Impact Analysis, and conditions of approval.
Truck Traffic routes	Determination of truck traffic route(s).	Truck traffic associated with urban level development of the proposed Annexation will not result in primary travel routes on Local	**✔ Complies** Truck traffic, if any, associated with future urban level development will be routed onto US Highway 20 and will not impact local or local connector streets through residential	**✔ Complies** Logical routing of truck traffic associated with urban level development on the site will not impact local or local connector streets through residential

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Livability Indicators	Description of Livability Indicators	Benchmarks	Applicant's Analysis of Compliance	Staff's Analysis of Compliance
		or Local Connector Streets through residential neighborhoods.	neighborhoods.	neighborhoods.
Livability indicators and benchmarks relating to the Corvallis Vision 2020 Statement category of Education and Human Services				
Police Response Time	Number of police officers per 1,000 persons residing within City limits	At least 1.2 officers per 1,000 persons residing within City limits.	**✘ Does not comply** City Manager's office indicates a City population of 54,890 on March 25,2011. 66 officers are necessary to meet the benchmark. Corvallis Police Department employs 58 sworn officers, with 48 patrolling the streets. City has between an 8-18 officer deficit per the benchmark. Annexation would not affect this condition	**✘ Does not comply** Applicant's analysis is correct. City is currently out of compliiance with this standard. Annexation of industrially-zoned property does not have a direct bearing on City population, and ability for City to meet this standard is outside of the control of the applicant.
Distance from Fire Station	Distance from an existing fire station.	All buildable portions of the Annexation site are within 1.5 miles of a fire station with an engine company.	**✔ Complies** *Downtown fire station is approximately 1.07 miles from center of* Annexation site.	**✔ Complies** *Downtown fire station is approximately 1.07 miles from center of* Annexation site.
Public Improvements	Type and extent of public improvements developed to City standards; and urban-level development, such as clustered housing, etc., existing on the proposed Annexation site.	Annexation of partially developed land within the Urban Growth Boundary (UGB) that already contains some public improvements developed to City standards, and urban-level development on part of the site, is considered more	**✔ Complies** *Annexation site is partially developed. City water mains, fire hydrants, a sanitary sewer main and associated easements are already located on site.*	**✔ Complies** Existing public water lines along site's southern highway frontage and along north side of site meet City standards. Existing public sewer lines along north and northwest part of site meet City standards.

Livability Indicators	Description of Livability Indicators	Benchmarks	Applicant's Analysis of Compliance	Staff's Analysis of Compliance
		advantageous to the City than Annexation of undeveloped land.		
Distance to Sewer and Water	Distance to adequately sized public sanitary sewer and water lines needed to serve the site.	Sanitary sewer and water facilities are proximate to the Annexation site. After some monitoring, distances for this benchmark may be specified in a future update of this code.	✔ ***Complies*** *An existing 36" sanitary sewer line lies within the northerly perimeter of the Annexation site.* *A 30" public water main is also located in this area.* *The site also contains a 16" water main near its southerly boundary within an easement that could contain sanitary sewer in the future, and is currently served by City water.*	✔ **Complies** See above.
Planned Public Utilities	Types and extent of public utility improvements of sanitary sewer, water, and storm drainage, that are listed in City master plans, and would occur with urban-level development of the Annexation site.	It is considered an advantage if the installation of public utilities of sanitary sewer, water, and storm drainage, listed in City master plans, would enable other sites within the UGB to ultimately develop.	✔ ***Complies*** *The City's Water Master Plan depicts future 16" water line connecting existing mains described above.* *This could help facilitate future urban-level service to UGB sites sw of annexation site.*	↔ **Partially Complies** The Detailed Development Plan does not include utility installations with Phase 1, although the applicant proposes to comply as future Detailed Development Plans are approved. **SEE DEVELOPMENT RELATED CONCERNS**
Livability indicators and benchmarks relating to the Corvallis Vision 2020 Statement category of "Central City"				
Distance to Downtown	Distance of the Annexation from the Central	It is considered an advantage if an Annexation	✔ ***Complies*** *Annexation site*	✔ **Complies** Annexation site

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Livability Indicators	Description of Livability Indicators	Benchmarks	Applicant's Analysis of Compliance	Staff's Analysis of Compliance
	Business Zone intersection of SW Third Street and SW Monroe Avenue.	site is within 3.8 miles from the intersection of SW Third Street and SW Monroe Avenue, within the boundaries of the Central Business Zone.	*approximately 1.25 miles from this intersection.*	approximately 1.25 miles from this intersection.

Compliance with Livability Indicators and Benchmarks

Of the 19 applicable livability indicators, the proposed annexation would fully comply with 14, partially comply with 3, and not comply with 2 of the indicators. The LDC does not provide guidance on whether each livability indicator is granted equal value in balancing the advantages and disadvantages contemplated by Section 2.6.30.07.c.2(a), and compliance with all benchmarks is not required. The LDC Section states that "*when balanced and viewed in aggregate, the decision-makers need to find that the advantages to the community outweigh the disadvantages.*"

Conclusion on Public Need for the Annexation

The applicant provided information and arguments regarding the five-year supply of serviceable land of the annexation's land use category, the availability of sufficient land of this type to ensure choices in the market place, and compliance with the community-wide livability indicators and benchmarks.

In regards to the analysis of the five-year supply of serviceable land, and choices in the market place for GI lands, staff find that there is approximately 406 acres of developable General Industrial land within the City limits. However, 96% of the available lands are geographically concentrated in south Corvallis, and 90% of the south Corvallis GI lands are not immediately serviceable due to physical constraints or the need to extend City services.

The applicant has also provided additional information and arguments regarding the availability of serviceable General Industrial land within the City to ensure choices in the market place, and has provided market data that supports those arguments. As specified by LDC § 2.6.30.07(b), the City does not independently verify market choice arguments presented by the applicant. This staff report simply summarizes the applicant's data and arguments for decision-makers' consideration.

Lastly, the applicant has provided information regarding the consistency of the proposed Annexation with community-wide livability indicators and benchmarks relative to Major Annexations, as identified in Section 2.6.30.07(c) and LDC Table 2.6-1. Although it is not clear to Staff if all livability indicators are to be granted equal value in the evaluation of the advantages and disadvantages of the annexation, Staff find that the proposed annexation would fully comply with 14, partially comply with 3, and not comply with 2 of the 19 applicable indicators.

C. The Advantages to the Community Outweigh the Disadvantages

Applicable LDC Criteria

LDC Section 2.6.30.06

b. The Annexation provides more advantages to the community than disadvantages - To provide guidance to applicants, examples of topics to address for the advantages versus disadvantages discussion are highlighted in Section 2.6.30.07.

2. Major Annexations - Major Annexation proposals shall include a discussion of advantages and disadvantages in terms of the methodologies outlined in Section 2.6.30.07. Applicants are required to document the methodologies and criteria used. The Director will review the applicant's arguments, but will not conduct independent research to verify or justify them.

The applicant's discussion regarding five-year supply of serviceable land, availability of those lands to ensure choices in the market place, and full compliance with 17 of 19 livability indicators and benchmarks provides the bulk of the applicant's argument that the proposed annexation provides more advantages to the community than disadvantages. The additional market study information and correspondence from Business Oregon and the former director of the Benton Corvallis Chamber Coalition provide evidence that supports the arguments relative to choices in the market place. Per Section 2.6.30.06(b).2 noted above, City Staff are to review the applicant's arguments regarding the advantages and disadvantages to the community, but will not conduct independent research to verify or justify them. It is consistent with the LDC criteria in 2.6.30.06(b-2) to have decision makers consider the arguments presented by the applicant above, and find whether or not, when viewed in aggregate, the arguments for five-year supply of serviceable land, choices in the marketplace, and livability indicator conformance, in addition to any other arguments made by the applicant, equate to the annexation being advantageous for the community.

D. The Site is Capable of being Served by Urban Services and Facilities Required with Development

Applicable LDC Criteria

LDC 2.6.30.06.c

c. The site is capable of being served by urban services and facilities required with development - The developer is required to provide urban services and facilities to and through the site. At minimum, both Minor and Major Annexations shall include consideration of the following:

1. Sanitary sewer facilities consistent with the City's Sanitary Sewer Master Plan and Chapter 4.0 - Improvements Required with Development;

2. Water facilities consistent with the City's Water Master Plan, Chapter 4.0 - Improvements Required with Development, and fire flow and hydrant placement;

3. Storm drainage facilities and drainageway corridors consistent with the City's Stormwater Master Plan, Chapter 4.0 - Improvements Required with Development, Chapter 4.5 - Natural Hazard and Hillside Development

Provisions, and Chapter 4.13 - Riparian Corridor and Wetland Provisions;

4. **Transportation facilities consistent with the City's Transportation Plan and Chapter 4.0 - Improvements Required with Development; and**
5. **Park facilities consistent with the City's Parks Master Plan.**

The following section evaluates the proposal's compliance with Section 2.6.30.06(c) and Chapter 4.0 - Improvements Required with Development of the LDC **(Attachment B-5)**. Evaluation occurs under three broad categories: Circulation, Public Facilities and Services, and Franchise Utilities.

Circulation

The following discussion addresses criteria related to vehicles, bicycles, pedestrians and transit.

Vehicular Circulation:

Applicable LDC Criteria

4.0.60 - PUBLIC AND PRIVATE STREET REQUIREMENTS

a. **Traffic evaluations shall be required of all development proposals in accordance with the following:**
   1. **Any proposal generating 30 or more trips per hour shall include Level of Service (LOS) analyses for the affected intersections. A Traffic Impact Analysis (TIA) is required, if required by the City Engineer. The TIA shall be prepared by a registered professional engineer. The City Engineer shall define the scope of the traffic impact study based on established procedures. The TIA shall be submitted for review to the City Engineer. The proposed TIA shall reflect the magnitude of the project in accordance with accepted traffic engineering practices. The applicant shall complete the evaluation and present the results with an overall site development proposal.**

e. **Development sites shall be provided with access from a public street or a private street that meets the criteria in "d," improved to City standards in accordance with the following:**
   1. **Where a development site abuts an existing public street not improved to City standards, the abutting street shall be improved to City standards along the full frontage of the property concurrently with development. Where a development site abuts an existing private street not improved to City standards, and the private street is allowed per the criteria in "d", above, the abutting street shall meet all the criteria in "d", above and be improved to City standards along the full frontage of the property concurrently with development.**

k. **Location, grades, alignments, and widths for all public and private streets shall be considered in relation to existing and planned streets, topographical conditions, public convenience and safety, and proposed land use. Where topographical conditions present special circumstances, exceptions to these standards may be granted by the City Engineer provided that the safety and capacity of the street network is not adversely effected. The following standards shall apply:**
   8. **Right-of-way and improvement widths shall be as specified in the Transportation Plan and Table 4.0-1 - Street Functional Classification System.**

The applicant's site is accessed from U.S. Highway 20, between NE Water Works Avenue and HP's southern access.

U.S. Highway 20

U.S. Highway 20 is designated as an arterial highway and is under Oregon Department of Transportation (ODOT) jurisdiction. The section of U.S. Highway 20 adjacent to the applicant's site is partially improved to City standards with two travel lanes, bike lanes and concrete curbs and gutters. Future City standard improvements will include a center turn lane, setback sidewalks, and landscape strips. The detailed development plan proposes to construct the setback sidewalk along the site's frontage (**see Part III of this staff report**). Future detailed development plans will need to address the extent of additional improvements along this frontage **(Development Related Concern A)**.

Transportation Planning Rule

The Zone District Change required with the annexation triggers the State's Transportation Planning Rule (TPR), OAR 660-012-0060. If, as a result of potential development allowed by the Zone District Change, the performance standard of an existing or planned transportation facility is worsened below the accepted level, the TPR requires the impact to be mitigated. In this case, the applicants have demonstrated that the zone change from the County's Urban Industrial zone to the City's General Industrial zone, would not result in an increased demand on the transportation system, and therefore would not worsen the performance of the existing or planned transportation facilities.

The applicants have demonstrated this by showing a reasonable level of development that could be expected under the County's zoning rules. Both the Benton County Planning department and ODOT have reviewed and concurred with the applicant's feasibility study given the County zoning designation and ability for the site to be served with water and sewer without the need to connect to City services.

The applicants have proposed Conditions of Approval to be placed on their site that would limit the Floor Area Ratio (F.A.R.) of future development, and that would place a cap on trips that could be generated from future development on the site, if it is annexed into the City. The trip cap will ensure that, as a result of the zone district change, the performance of existing and planned transportation facilities will not be worsened.

Trip Generation

A trip generation study was conducted for the site. The applicants have proposed Conditions of Approval to limit both the FAR on the site as well as a cap on the maximum allowable number of trips from the site. Using the FAR proposed in the applicant's proposed condition of approval, trip generations were calculated based on the proposed General Industrial zoning of the applicant's site. The trip generation rates for development are based on standards established by the Institute of Transportation Engineers and are

published in the ITE Trip Generation Manual, 8th Edition. One "trip" is defined as a vehicle leaving from or arriving at the site.

ITE land use code 130, Industrial Park was used in the study. The worst case development scenario, limited by the proposed FAR condition, would generate 719 AM peak hour trips and 736 PM peak hour trips. The City of Corvallis typically defines an impact as 30 or more peak hour trips to a single intersection. Because the calculated peak hour trip total is higher than the City's threshold, a trip distribution and Traffic Impact Analysis (TIA) was conducted.

Traffic Impact Analysis

As previously discussed, the applicant's have proposed Conditions of Approval to be placed on their site that would limit both the Floor Area Ratio and to place a cap on trips that could be generated from future development on the site, if it is annexed into the City. The proposed trip cap would result in less AM and PM peak hour trips than what is possible under the current County zoning. Even though the traffic impact from future development under the proposed annexation would be no more intense than the current County zoning, per LDC § 2.6.30.03.i.4 the City asked for a Traffic Impact Analysis (TIA) (**Attachment D - page 133**) to be completed for the worst case scenario under the proposed annexation. Having a TIA included with the application will give the decision makers and City residents an understanding of the potential impacts from development on the site, if under City jurisdiction.

The proposed Detailed Development Plan does not include interior site development of industrial uses, and is limited in scope to a public sidewalk and landscape berm improvements. Without a specific plan for industrial development, a conceptual worst case scenario was used for the TIA. The City allowed the Traffic Engineer to use data from the Corvallis Area Metropolitan Transportation Plan, Destination 2030 (CAMPO) report and the Corvallis Willamette River Crossing (CWRC). Traffic counts for a few intersections are also included in the TIA that were not included in the two reports.

ODOT staff have expressed some concerns regarding the applicant's TIA, but are in agreement that the trip cap and F.A.R. limitation will ensure that there is no "significant effect", per the TPR. City staff have determined that data and analysis presented within the TIA are sufficient to show the impact to the current transportation system if development were to occur on the site.

Future Detailed Development Plan applications will need to complete a TIA in accordance with LDC § 2.5.40.01.g.5 and 4.0.60.a. The City Engineer shall define the scope of the traffic impact study based on established procedures. The TIA shall be submitted for review to the City Engineer. The proposed TIA shall reflect the magnitude of the project in accordance with accepted traffic engineering practices. The applicant shall complete the evaluation and present the results with an overall site development proposal **(Development Related Concern B)**. In this manner, potential mitigation for transportation system impacts can be considered in relation to a specific development proposal for the site.

Conclusion on Vehicular Circulation

Given the discussion above, the McFadden Annexation has demonstrated that, with improvements, the existing street network can accommodate development of the subject property consistent with the City's Land Development Code and the Transportation Plan.

Bicycle/Pedestrian Circulation:

Applicable LDC Criteria

4.0.30 - PEDESTRIAN REQUIREMENTS

a. Sidewalks shall be required along both sides of all streets, as follows:

2. Sidewalks on Arterial, Collector, and Neighborhood Collector Streets - Sidewalks along Arterial, Collector, and Neighborhood Collector Streets shall be separated from curbs by a planted area. The planted area shall be a minimum of 12 ft. wide and landscaped with trees and plant materials approved by the City. The sidewalks shall be a minimum of five ft. wide. An exception to these provisions is that this separated tree planting area shall not be provided adjacent to sidewalks where they are allowed to be located within Natural Resource areas governed by Chapter 4.12 - Significant Vegetation Protection Provisions and Chapter 4.13 - Riparian Corridor and Wetland Provisions. This separated tree planting area shall also not be provided adjacent to sidewalks where they are allowed to be located within drainageway areas governed by regulations in Chapter 4.5 - Natural Hazard and Hillside Development Provisions.

3. Sidewalk Installation Timing - The timing of the installation of sidewalks shall be as follows:

a) Sidewalks and planted areas along Arterial, Collector, and Neighborhood Collector Streets shall be installed with street improvements.

d. To provide for orderly development of an effective pedestrian network, pedestrian facilities installed concurrently with development of a site shall be extended through the site to the edge of adjacent property(ies).

f. Prior to development, applicants shall perform a site inspection and identify any Contractor Sidewalk/street Stamps in existing sidewalks that will be impacted by the development. If such a Contractor Sidewalk/street Stamp exists, it shall either be left in its current state as part of the existing sidewalk, or incorporated into the new sidewalk for the development site, as close as possible to the original location and orientation.

4.0.40 - BICYCLE REQUIREMENTS

a. On-street Bike Lanes - On-street bike lanes shall be required on all Arterial, Collector, and Neighborhood Collector Streets and constructed at the time of street improvements.

Public set back sidewalks do not exist along the site's U.S. Highway 20 frontage. Setback sidewalks and planter strips are City standards and components of safe public sidewalks

that are taken into consideration when determining serviceability. The applicant benefits from these neighborhood street improvements in the form of:

- An enhanced aesthetic experience for pedestrians as the separation from motor vehicle traffic decreases road noise, prevents water from the roadway being splashed on pedestrians and provides an enhanced sense of security.
- An enhanced environment for wheelchair users as the sidewalk can be kept at a constant slope with the steeper slopes for driveway approaches built into the planting strip.
- An area for street trees, sign posts, utility and signal poles, mailboxes, fire hydrants, etc.
- Mature street trees may reduce vehicle speed.
- When wide enough, a place for a motor vehicle to wait out of the stream of traffic while yielding to a pedestrian crossing a driveway.
- A break in hard surfacing with added pervious area.

Public Sidewalk along Arterial Highway

The applicants have proposed a Detailed Development Plan to install the setback sidewalk along the site's U.S. Highway 20 frontage. The applicant is proposing that, prior to the City Council's hearing of ANN11-00001, the public improvements shown in the detailed development plan shall be designed and secured in accordance with LDC Section 4.0.20 (**see Condition # 4**). The proposed improvements consist of the installation of the public setback sidewalk along the site's U.S. Highway 20 frontage, along with a dedication of ROW or the granting of an easement to accommodate the improvements. In order to secure the public improvements, the applicant shall prepare Public Improvement by Private Contract (PIPC) permits. The plans shall be authorized and all permit items required for issuance of the permit shall be completed and on file with Development Review Engineering. The permit shall be ready to issue and the ROW dedication or easement shall be ready to be filed upon successful annexation to the City. An environmental assessment shall be provided by the developer (grantor) for all lands to be dedicated to the public or City per LDC § 4.0.100.g **(see Condition # 4)**.

The location of the proposed sidewalk is within a Highly Protected Riparian Corridor associated with the Willamette River. The City Engineer has deemed the sidewalk necessary in order to maintain a functional system per LDC § 4.13.50.b.2 as it will likely be the only sidewalk along this stretch of U.S. Highway 20. The opposite side does not have room to accommodate a sidewalk with the edge of the highway located on top of the river bank. Typically when sidewalks extend through protected corridors they are placed curbside per Table 4.0-1-Street Functional Classification System, footnote 8, of LDC 4.0. In this case, the City Engineer has determined that setback sidewalks will be more beneficial in order to locate the facility further from the river and to reduce the uninterrupted pavement width associated with U.S. Highway 20.

Multi-Use Paths and City Master Plans

The Trails Master Plans for the City (Transportation Plan - Figures A-3 and A-4, and 2000 Park and Recreation Facilities Plan - Map # 7 and # 8) identify conceptual trail/ multi-use path / bike path alignments along the site's Highway 20 frontage and along the site's

western boundary at the Southern Pacific Railroad line. However, these alignments are conceptual in nature and are not considered precise alignments for these paths.

Multi-Use Path (Highway 20)
The City's Parks & Recreation Facilities Plan and the Transportation plan show a proposed trail/multi-use path along the site's U.S. Highway 20 frontage. The Plan does not detail on what side of U.S. Highway 20 the trail would be located. Staff have reviewed the site and have determined that the trail should be located on the north side of the highway, adjacent to the applicant's site. It has been determined the path and sidewalk should be a combined facility. The Bicycle and Pedestrian Advisory Commission and the Parks, Natural Areas, and Recreation Board have agreed with this determination. The south side of the highway is located directly on top of the bank of the Willamette River, without room to accommodate a multi-use trail. The applicant has proposed, with future development of the site, the setback sidewalk along the Highway could be widened for use as the multi-use path, consistent with the Parks & Recreation Facilities Plan and the Transportation Plan. As part of the first phase of any future Detailed Development Plan application, the applicant shall include plans to widen the public sidewalk along the site's Highway 20 frontage to 12 feet, and the entire facility shall be constructed to the City's off-street multi-use path standards. Additionally, the applicant shall dedicate a public access easement over any portion of the widened multi-use path facility that is located on private property. Please note that the location of this path could change to accommodate required travel lanes on U.S. Highway 20 **(Development Related Concern C)**.

Multi-Use Path Easement (Railroad Alignment)
The applicant has proposed to provide a public multi-use path easement along the northwest property line, parallel to the railroad tracks. A multi-use path constructed at this location is referenced as a "needed bike path" on the adopted Transportation Plan - Trails master plan. At this time, it is uncertain how feasible it will be to construct off-site connections north and south of the subject property. A completed multi-use path connecting NW Circle Blvd. through the HP campus, through the subject site, and through the City waste water treatment plant to the existing path at the Hwy 99W overpass would require extensive study and additional right-of-way acquisition. At this time, provision of a public access easement is sufficient to create the possibility that the trail might someday be constructed.

With submittal of the PIPC application, required per **Condition # 4**, the applicant shall provide draft documents for dedication of a public access easement over the west 15 feet of the subject property, where it abuts the Southern Pacific Railroad Line (**see Condition # 5**). Prior to City Council review of the Annexation request, the applicant shall finalize and prepare the easement documents for recording. If the voters approve the Annexation request, the applicant shall provide fees to the City of Corvallis so that the easement may be recorded with the Benton County Records and Licenses Office, upon certification of the Annexation results.

Public on-street bike lanes exist along the U.S. Highway 20 site frontage. As detailed above in the Vehicular Circulation section, future Detailed Development Plan phases will need to address the extent of improvements along the site's frontage. Improvements shall

be constructed concurrent with development of the site **(Development Related Concern A)**.

Conclusion on Bicycle/Pedestrian Circulation

Given the discussion above, the McFadden Annexation has demonstrated that, with improvements, the existing bicycle and pedestrian circulation network can accommodate development of the subject property consistent with the City's Land Development Code, the Transportation Plan, and the Parks & Recreation Facilities Plan.

Transit

Applicable LDC Criteria

4.0.50 - TRANSIT REQUIREMENTS

a. Development sites located along existing or planned transit routes shall, where appropriate, incorporate transit stops and shelters into the site design. These improvements shall be installed in accordance with the guidelines and standards of the Corvallis Transit System.

b. Development sites at or near existing or planned transit stops shall provide safe, convenient access to the transit system, as follows:

1. All Commercial and Civic Use developments shall provide a prominent entrance oriented toward Arterial, Collector, and Neighborhood Collector Streets, with front setbacks reduced as much as possible to provide access for pedestrians, bicycles, and transit.

2. All developments shall provide safe, convenient pedestrian walkways between the buildings and the transit stop, in accordance with the provisions of Section 4.0.30.b.

Corvallis Transit System (CTS) Limited Service Route C2 currently provides service to U.S. Highway 20 along the site's frontage.

Conclusion on Transit

Given the discussion above, the McFadden Annexation has demonstrated that the existing transit network can accommodate development of the subject property consistent with the City's Land Development Code and Transportation Plan.

Overall Conclusion on Circulation

Given the information contained in the application and the discussion above, the existing circulation network, with improvements, can accommodate development of the subject property consistent with the City's Land Development Code, the Transportation Plan, and the Parks & Recreation Facilities Plan.

2. PUBLIC FACILITIES AND SERVICES

The following discussion addresses criteria related to public water, sanitary sewer, storm drainage, street lights and franchise utilities.

Applicable LDC Criteria

2.6.30.06 - Review Criteria

c. The site is capable of being served by urban services and facilities required with development - The developer is required to provide urban services and facilities to and through the site. At minimum, both Minor and Major Annexations shall include consideration of the following:

1. **Sanitary sewer facilities consistent with the City's Sanitary Sewer Master Plan and Chapter 4.0 - Improvements Required with Development;**
2. **Water facilities consistent with the City's Water Master Plan, Chapter 4.0 - Improvements Required with Development, and fire flow and hydrant placement;**
3. **Storm drainage facilities and drainageway corridors consistent with the City's Stormwater Master Plan, Chapter 4.0 - Improvements Required with Development, Chapter 4.5 - Natural Hazard and Hillside Development Provisions, and Chapter 4.13 - Riparian Corridor and Wetland Provisions;**

4.0.60 - PUBLIC AND PRIVATE STREET REQUIREMENTS

q. Development shall include underground electric services, light standards, wiring and lamps for streetlights according to the specifications and standards of the City Engineer. The developer shall be responsible for installation of underground conduit for street lighting along all public streets improved in conjunction with such development in accordance with the following:

1. **The developer shall coordinate with the City Engineer to determine the location of future street light poles.**
2. **The streetlight plan shall be designed to provide illumination meeting standards set by the City Engineer.**
3. **The standard street light installation is a wood pole.**

The developer shall install such facilities and make the necessary arrangements with the serving electric utility for the City-owned and operated street lighting system to be served at the lowest applicable rate available to the City. Upon City's acceptance of such development improvements, the street lighting system, exclusive of utility-owned service lines, shall be and become the property of the City.

4.0.70 - PUBLIC UTILITY REQUIREMENTS (OR INSTALLATIONS)

a. All development sites shall be provided with public water, sanitary sewer, storm drainage, and street lights.

b. Where necessary to serve property as specified in "a" above, required public utility installations shall be constructed concurrently with development.

c. Off-site public utility extensions necessary to fully serve a development site and adjacent properties shall be constructed concurrently with development.

d. To provide for orderly development of adjacent properties, public utilities installed concurrently with development of a site shall be extended through the site to the

edge of adjacent property(ies).

e. All required public utility installations shall conform to the City's adopted facilities master plans.

f. Private on-site sanitary sewer and storm drainage facilities may be allowed, provided all the following conditions exist:
   1. Extension of a public facility through the site is not necessary for the future orderly development of adjacent properties;
   2. The development site remains in one ownership and Land Division does not occur, with the exception of Land Divisions that may occur under the provisions of Section 4.0.60.d, above; and
   3. The facilities are designed and constructed in accordance with the Uniform Plumbing Code and other applicable codes, and permits are obtained from the Development Assistance Center prior to commencement of work.

4.0.100 - LAND FOR PUBLIC PURPOSES

a. Easements for public sanitary sewer, water, storm drain, streetlight, transit, pedestrian and bicycle facilities shall be provided whenever these facilities are located outside a public right-of-way. The minimum easement width for a single utility is 15 ft. The minimum easement width for two adjacent utilities is 20 ft. The easement width shall be centered on the utility to the greatest extent practicable. Wider easements may be required for unusually deep facilities.

b. Utility easements with a minimum width of seven ft. shall be granted to the public adjacent to all street rights-of-way for franchise utility installations.

4.2.30 - REQUIRED TREE PLANTINGS AND MAINTENANCE

b. Areas Where Trees May Not be Planted -
   1. Trees may not be planted within five ft. of permanent hard surface paving or walkways, unless special planting techniques and specifications are used and particular species of trees are planted, as outlined in Section 4.2.40.c or approved by the Director. These limitations apply most frequently in areas such as landscape parkways, pedestrian walkways, and plaza areas, where there may be tree grates.
   2. Unless approved otherwise by the City Engineer, trees may not be planted:
      a) Within 10 ft. of fire hydrants and utility poles;
      b) Within 20 ft. of street light standards;
      c) Within five ft. from an existing curb face, except where required for street trees;
      d) Within 10 ft. of a public sanitary sewer, storm drainage, or water line; or
      e) Where the Director determines the trees may be a hazard to the public interest or general welfare.

Water

The proposed annexation site is located in the City's first level (elevation 210-290') water service area. There is an existing 16 inch waterline located along the U.S. Highway 20 site frontage, and a 30 inch waterline along the site's northern boundary, adjacent to the railroad ROW.

The existing 16 inch waterline along U.S. Highway 20 is located approximately 15 feet north of the existing ROW in a 20 foot wide easement. Depending on future lane configurations, the existing waterline may end up within, or close to, the future landscape strip. Per LDC

§ Section 4.2.30.b.2.d, trees may not be planted within 10 feet of public utility lines. This may preclude trees from being planted within the landscape strip **(Development Related Concern D)**.

With future development, the application proposes to serve the site by constructing a 16 inch waterline through the site, connecting the existing 16 inch and 30 inch waterlines. This improvement is consistent with the City's Water Master Plan **(Development Related Concern E)**.

The applicant has provided water system calculations showing that the proposed annexation can be served by the existing water system with the proposed improvements.

Sanitary Sewer

The proposed annexation site is located within the City's Northeast drainage basin. There is an existing 36" sewer pipe located along the north and northwest portions of the site. The City's Wastewater Utility Master Plan indicates that the existing pipe will have capacity until the City reaches a population of 80,000. At that time, a 48" pipe is proposed in the Master Plan to serve the drainage basin.

The applicant has provided sanitary sewer calculations showing that the proposed annexation can be served by the existing sanitary sewer system.

Storm Drainage

The proposed annexation site is located within the Garfield basin. The existing U.S. Highway 20 frontage has concrete curbs and gutters, catch basins, and a piped drainage system, owned and maintained by ODOT. Future development will be required to comply with the City's water quality and quantity standards in accordance with the LDC § 4.0.130 and appendix F of the City's Storm Water Master Plan. The applicant's General Land Use Plan (**Attachment D - page 128**) shows open area that could be used for the purpose of stormwater quality and detention.

The applicant proposes to serve future development by either discharging stormwater into the Garfield Drainage Basin along the west side of the property, or to gain access from ODOT and discharge across the Highway, directly into the Willamette River.

The applicant has provided storm water calculations for the site (**Attachment D - pages 397 through 406**). The calculations have demonstrated that development on the site will be capable of meeting the City's stormwater quality and detention requirements and Appendix F of the City's Storm Water Master Plan.

Future Detailed Development Plan phases on the site that create more than 5,000 ft^2 of pollution generating impervious surfaces will be required to construct stormwater quality facilities. Stormwater quality facilities shall be designed in accordance with criteria established in Appendix F of the Stormwater Master Plan and the most recent version of the *King County, Washington, Surface Water design Manual*. The water quality facilities

shall be designed to remove 70 percent of the total suspended solids (TSS) entering the facility during the water quality design storm, 0.9-inch 24-hr rainfall event with NRCS Type 1A distribution **(Development Related Concern F)**.

Future Detailed Development Plan phases on the site that create more than 25,000 ft^2 of impervious surfaces will be required to construct stormwater detention facilities in accordance with the LDC § 4.0.130.b. Detention facilities shall be designed to maximize storm water infiltration. Maintenance of these facilities is most efficiently provided with open systems because they facilitate visible evaluation of system conditions and accommodate routine, low-technology maintenance practices. Open systems also allow stormwater contact with vegetation and soil to enhance water quality, infiltration, and maintaining the properly functioning hydrological and biological condition of open drainageways. The storm water detention facilities shall be designed consistent with both criteria outlined in Appendix F of the Storm Water Master Plan, and criteria outlined in the most recent King County, Washington, Surface Water Design Manual, and shall be designed to capture run-off so that the run-off rates from the site after development do not exceed the pre-developed conditions, based on the 2-year, 5-year, and 10-year, 24-hour design storms **(Development Related Concern G)**.

Street Lights

Currently there are no street lights in the vicinity of this project. Future development of the site would require the installation of a City standard street light system **(Development Related Concern H)**.

Overall Conclusion on Public Utilities

Given the discussion above, the McFadden Annexation has demonstrated that the existing water, sewer, stormwater, and streetlight networks, with improvements, can accommodate development of the subject property consistent with the City's Land Development Code and applicable Master Plans.

Franchise Utilities

Applicable LDC Criteria

4.0.100 - LAND FOR PUBLIC PURPOSES

b. Utility easements with a minimum width of seven ft. shall be granted to the public adjacent to all street rights-of-way for franchise utility installations.

Existing franchise utilities are located in the vicinity of the subject site. In accordance with **LDC 2.6.60.03.i.1,** the applicant has provided letters confirming the ability to serve the site (**Attachment D - pages 59 through 63**). This criterion is met.

E. Compatibility

The final criterion used in evaluating Annexation requests involves the following compatibility criteria:

Applicable LDC Criteria

LDC Section 2.6.30.06(e)

e. Compatibility - The application shall demonstrate compatibility in the following areas, as applicable:

1. **Basic site design - the organization of Uses on a site and its relationship to neighboring properties;**
2. **Visual Elements (scale, structural design and form, materials, etc.);**
3. **Noise attenuation;**
4. **Odors and emissions;**
5. **Lighting;**
6. **Signage;**
7. **Landscaping for buffering and screening;**
8. **Transportation facilities;**
9. **Traffic and off-site parking impacts;**
10. **Utility infrastructure;**
11. **Effects on air and water quality (note: a DEQ permit is not sufficient to meet this criterion);**
12. **Consistency with the applicable development standards, including the applicable Pedestrian Oriented Design Standards;**
13. **Preservation and/or protection of Significant Natural Features, consistent with Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting, Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, and Chapter 4.13 - Riparian Corridor and Wetland Provisions. Streets shall also be designed along contours, and structures shall be designed to fit the topography of the site to ensure compliance with these Code standards.**

Consistent with Section 2.6.30.06(e) above, Staff will analyze the Annexation request for compatibility in the following areas, as applicable:

• Basic Site Design • Visual Elements • Noise Attenuation • Odors and Emissions • Lighting • Signage • Landscaping for Buffering and Screening	• Transportation Facilities • Traffic and off-site parking impacts • Utility Infrastructure • Effects on air and water quality • Consistency with the applicable development standards, including the applicable PODS • Natural Features

Basic Site Design - The organization of Uses on a site and its relationship to neighboring properties

As stated previously, the GLUP is not a binding DDP and represents one way the site could be developed in the future, if annexed. Because the GLUP is not a binding development plan, staff would err to analyze it as a development plan for compatibility with surrounding uses. The applicant made application for a CDDP concurrent with the Annexation application. The CDP for the site is identical to the GLUP, and includes the proposed conditions of approval, which limit floor area and trip generation to below the development intensity feasible under Benton County zoning standards (**Attachment D - page 129**). However, DDP approval has only been requested for the public sidewalk improvement along the site's Highway 20 frontage and for the landscaped berm located at the southeast corner of the site. Future DDP approval would be required prior to any additional development on the site. A compatibility analysis of the development proposed for the site will occur at that time.

The GLUP does demonstrate how the site might be developed with buildings, vehicle parking, pedestrian access, and utilities consistent with the GI Zone. In general, the buildings and associated uses are concentrated on the eastern half of the site, to avoid any development impacts on the site's Natural Features. Approximately 51.27 acres of the 85.43 acre site would be developable after excluding the Natural Features. The GLUP shows buildings located such that they meet the GI Zone 100-ft. setback required adjacent to residential uses, near the southwest corner of the site. The neighboring uses to the southwest are currently outside the City limits and have a Comprehensive Plan designation of Residential - Medium Density. It is anticipated that these neighboring properties would be compatible when the site is developed at an urban level, because of the 100-ft. setback required by the GI zone, and because future development on the McFadden property will require Detailed Development Plan approval.

Based on the above analysis, staff find the annexation, if approved by the voters, will provide additional General Industrial zoned property within City limits that is subject to the LDC development and design standards. This will result in site designs for development that would be compatible with adjacent industrial and low density residential development in the City, based on the GI zone development and buffering standards.

Visual Elements (scale, structural design and form, materials, etc.)
No building designs were submitted with the annexation request. Development that occurs, as future Detailed Development Plans are approved, will need to be consistent with the GI zone development standards and the compatibility criteria in LDC 2.5.40.04. Staff find that urban level development within the site and vicinity will be visually compatible, and that building scale, design, and form will comply with City Standards.

Noise Attenuation, and Odors and Emissions
If annexed, it is anticipated that the land would be developed to GI zoning standards. As such, it would be anticipated that the noise, odors and emissions would be typical of industrial development, and compatible with the neighboring properties to the north and west, with the same designation. Additionally, it should be noted that the GI Zone includes a special building setback of 100-feet when abutting residential uses, which would minimize any impacts to the existing residences to the southwest of the subject site. Potential impacts associated with a specific development will be addressed with future Detailed Development Plan submittals. This criterion is satisfied.

Lighting and Signage
If annexed, exterior lighting and signage on the site would be subject to the requirements for lighting and signage in Section 4.2.80 and Chapter 4.7 of the LDC. These requirements would ensure that resultant lighting and signage on the development site would be compatible with neighboring properties. Potential impacts associated with a specific development will be addressed with future Detailed Development Plan submittals.

Landscaping for Buffering and Screening
Refer to the discussion in Part III of this staff report for landscaping associated with the frontage improvements. Additional landscaping requirements will be determined with submittal of future Detailed Development Plans, and will be required to be consistent with standards in place at the time of submittal. As discussed in Part III below, and when future phases are developed, staff find the proposal will be compatible with neighboring properties.

Transportation Facilities, Traffic and Off-site Parking Impacts, and Utility Infrastructure
Refer to the discussion above, under the criterion for urban services and facilities required with development. As discussed above, the site is currently served by water and sewer services along the site's borders. Transportation facilities are available to the site via Highway 20. The applicant's TIA analyzed impacts to the transportation system resulting from development at the anticipated highest intensity expected based on the proposed limits on floor area and trip generation. This level of development is at, or below, the intensity permissible under current Benton County zoning rules (**Attachment D - page 264**) The provision of adequate street, bicycle, pedestrian, and transit improvements at the time of future phases of development will mitigate impacts associated with the development. A detailed discussion of the traffic impact study is included above in Part I, Section D of this report and findings related to the transportation facilities in that section of this report are hereby incorporated by reference as findings under this criterion.

A portion of the transportation system requirements are addressed with development of the proposed sidewalk, discussed in more detail in Part III of this staff report.

In conjunction with future phases of development, a new TIA will be required to assess the specific traffic impacts that would be created by the development plan for the site (**see Condition # 2 and Development Related Concern B**). The TIA will need to assess whether the traffic impacts from the proposed development will need to be mitigated by the off-site improvements or other measures. Staff will collaborate with ODOT and evaluate any necessary mitigation, conduct a rough proportionality analysis of the traffic impacts, and either require the necessary mitigation to be completed by the applicant, or recommend denial of Phase II development until such time as the necessary mitigation is in place. All on-site parking requirements will be addressed in conjunction with Phase II development and building permit processes.

The applicant has demonstrated that the necessary utility infrastructure to serve development on the site can be provided in compliance with City requirements. In conjunction with Phase II development, staff will ensure that all necessary public improvements are in place or financially secured to the satisfaction of the City Engineer prior to occupancy of buildings on the development site.

Effects on Air and Water Quality

Development on the subject site is anticipated to involve industrial and manufacturing uses consistent with the GI zone. LDC § 3.24.30.05 requires that each use, activity, or operation in the GI zone comply with applicable local, state and federal standards and that the uses not create odor, vibration, noise, dust, smoke, or gas-related nuisances.

Because the applicant proposes to apply the Planned Development Overlay to the site, future phases of development require discretionary review through the Detailed Development Plan approval process. This provides an additional level of review relative to specific uses and their impacts on air and water quality.

As such, air and water quality impacts are anticipated to be negligible, in part because water quality measures will be required for stormwater leaving the site, consistent with City standards, at the time of development, and because of the additional DDP compatibility review requirements. Air emissions are monitored by the Oregon Department of Environmental Quality (DEQ). The DEQ indicates that the City of Corvallis is in compliance with all Federal and State air quality regulations.

Consistency with Development Standards, including PODS

The proposed Planned Development Overlay and **Condition #8** requires Detailed Development Plan approval for future development of buildings, uses, and site improvements. The GI zone development standards do not require compliance with the pedestrian oriented design standards in Chapter 4.10 of the LDC. However, because of the PD Overlay, compatibility criteria relative to basic site design and visual elements will be analyzed with future DDP applications, to ensure consistency with the GI zone and to address basic site planning principles relative to pedestrian orientation and architectural compatibility. Because the site will be subject to a Planned Development, future DDPs may

include requests to vary from development standards. Any such requests would be reviewed for compatibility with the future DDP application.

Preservation and/or Protection of Significant Natural Features and Natural Hazards
The site contains the following Natural Features:

Natural Hazards (**Attachment A-5**)
- High Protection 100-Year Floodplain

Natural Resources (**Attachment A-6**)
- High Protection Riparian Corridor (Willamette River)
- High Protection Riparian Corridor and Proximate Wetland of Special Significance (Garfield drainage basin)

All applicable Natural Features have been identified in the application materials. The Hazards and Resources all have a High Protection status. Development proposed as part of the Detailed Development Plan component of this application affects the 120-ft. High Protection Riparian Corridor. Discussion in Part III of the staff report evaluates the impacts of the proposed sidewalk and landscape improvements on the Riparian Corridor, as well as applicable exemptions outlined in LDC Chapter 4.13 that permit the sidewalk and landscape improvements.

Other than the proposed sidewalk identified in the DDP, the applicant is not proposing any encroachment into the remaining Natural Resources and Hazards on site. As discussed in further detail in Part III, staff find the proposal is consistent with the Natural Features protection criterion in LDC § 2.6.30.06.e.13.

Conclusion of Compatibility Analysis
The GLUP is not a binding development plan and should not be analyzed for compatibility with neighboring uses. Development currently proposed is limited to the public sidewalk and landscaped berm, and discussed in greater detail in Part III of this staff report. Additional development beyond that identified in the DDP will be subject to a future DDP approval, where a complete compatibility analysis will occur. The annexation application was reviewed for compatibility and staff found the annexation is compatible with neighboring uses for each of the criteria noted above.

Part I: Summary and Conclusions

Staff have reviewed the annexation request and found that it complies with the application requirements, and the purposes of Chapter 2.6 - Annexation. In terms of the review criteria, staff reviewed and provided analysis on each of the criteria except for LDC Sections 2.6.30.06.a.2(b) and 2.6.30.06.b.2, which clearly state that City staff are not to review or provide evaluation and recommendation. The applicant's arguments have been provided for those criteria. Per LDC Sections 2.6.30.06.a.2(b) and 2.6.30.06.b.2, the Planning Commission shall determine the validity of the arguments based on the information provided by the applicant and on public comments during the public hearing process.

The applicant has provided information and arguments stating that there is a public need for the additional General Industrial land. Staff reviewed the five-year supply of serviceable land and found that the City has not determined an accepted methodology for determining what would be the five-year supply of Industrial land. The 1998 BLI indicated that in the year 2020, the city would have a 482-acre surplus of industrial land. The applicant cited figures from the 2010 LDIR that indicates there is a minimum of 406 acres of General Industrial land within the City limits. Staff note that not all of this land is readily serviceable, but are not able to calculate a precise quantity of serviceable land without clear guidelines. Staff found that the annexation would increase the supply of industrial land in the City.

Staff also reviewed the annexation's compliance with adopted community-wide livability indicators and benchmarks. Staff found that of the 19 applicable livability indicators, the proposed annexation would fully comply with 14, partially comply with 3, and not comply with 2.

Staff found the annexation site is capable of being served by urban services and facilities, which are already present at the site boundary or that would be required with future development. With improvements, the transportation networks and public facilities could be accommodated by the proposal.

Lastly, Staff found the proposed annexation request would be compatible with each of the 13 compatibility criteria, as noted above.

Based on the criteria, findings, and conclusions stated above, it is recommended that the Planning Commission recommend to the City Council, to **FORWARD** the 88-acre annexation request for consideration of annexation (ANN11-00001) by the voters of the City of Corvallis, at the May 2012, election. A motion to forward the annexation application would be based upon the criteria, discussions, and conclusions contained within the November 9, 2011, Staff Report to the Planning Commission, and upon the reasons given by the Planning Commission members during deliberations on this application. A recommended motion is provided at the end of this staff report.

PART II: ZONE CHANGE
(District Designation Upon Annexation)

A. Summary of Proposal

The applicant proposes to amend the Official Zoning Map by applying a base zone of GI (General Industrial) for the entire subject site, which is contingent upon voter approval of the annexation. Additionally, the applicant proposes to apply a Planned Development Overlay (as part of the Conceptual & Detailed Development Plan request) and a Willamette River Greenway Overlay, to the subject site, should the annexation be approved by voters.

B. Land Use

Base Zone - General Industrial Designation
LDC Table 2.2-1 identifies zoning map designations that are consistent with the underlying Comprehensive Plan land use designation of General Industrial. LDC Section 3.24.10 discusses the purpose of the GI Zone.

TABLE 2.2-1 COMPREHENSIVE PLAN AND CORRESPONDING ZONING MAP DESIGNATIONS (not including zone overlays)	
INDUSTRIAL	**INDUSTRIAL**
General	**RTC Research Technology Center** **MUE Mixed Use Employment** **GI General Industrial** **C-OS Conservation - Open Space**

Section 3.24.10 - Purpose
This is the primary zone that implements the General Industrial Comprehensive Plan designation. It is intended to provide appropriate locations for a variety of General Industrial Uses including Manufacturing and related activities with few, if any, nuisance characteristics. This zone prohibits Residential Uses except as authorized in Chapter 4.3 - Accessory Development Regulations.

LDC Table 2.2-1 indicates that the GI Zone is one of four potential Zones that can be applied to properties with a Comprehensive Plan designation of General Industrial. The subject property currently has a Comprehensive Plan designation of General Industrial (**Attachment A-3**) and a County Zoning Designation of Urban Industrial-20/PUD (20 acre minimum site area) **(Attachment A-4)**. Staff find the proposed General Industrial base zone is consistent with the Comprehensive Plan designation of GI (General Industrial), and LDC Table 2.2-1.

Planned Development Overlay

In addition to the new zone designation of GI, the applicant requests that the site receive a PD Overlay, consistent with LDC Section 2.5.10(d). Land Development Code Sections 3.32.30 and 3.32.40 describe the implementation and initiation processes associated with assigning a non-residential PD Overlay to a site. Those LDC sections are provided below.

Section 3.32.30 - IMPLEMENTATION

Property may be designated with a Nonresidential PD Overlay in any of the following ways:

a. Upon Annexation in accordance with Chapter 2.6 - Annexation;

c. In conjunction with a Zone Change in accordance with Chapter 2.2 - Zone Changes.

A Nonresidential PD Overlay can also be applied through the use of the provisions in Chapter 2.5 - Planned Development, which allow such an Overlay in conjunction with approval of a Conceptual and/or Detailed Development Plan. However, Nonresidential PD Overlay established in accordance with Chapter 2.5 only remain as long as there is an active Conceptual Development Plan on the site (active defined in Section 2.5.40.09) or an active Detailed Development Plan on the site (active defined in Section 2.5.50.09).

Section 3.32.40 - INITIATION

A Nonresidential PD Overlay may be initiated in any of the following ways:

a. An application filed by a property owner on property(ies) with a nonresidential land use designation, in conjunction with an Annexation, Comprehensive Plan Map Amendment, or Zone Map Change; and under circumstances when the property owner states and the hearing authority finds the applicable underlying zone standards are not adequate to do address the following concerns:

1. Circulation or other common facilities issues;

2. Resolution of issues related to an unusual site configuration, steep topography, or Significant Natural Feature;

3. Assurance of comprehensive planning and coordinated development where the property is large and/or has mixed uses; or

4. Compatibility issues where it is desirable to locate more intensive land uses next to less intensive residential land uses.

Consistent with LDC Sections 2.5.10(d) and 3.32.30, the applicant requests to apply a Non-Residential PD Overlay in conjunction with the Annexation, Zone Change, and Planned Development (CDDP) applications. The applicant requests the PD Overlay and subsequent CDDP as a mechanism to attach conditions of approval for development on the site that will ensure that, with development, the provisions of the Oregon Transportation Planning Rule (TPR) will be addressed to the satisfaction of ODOT. The TPR is a comprehensive planning requirement that cannot be addressed in any other fashion, consistent with legal principles and the City's rules and regulations. Approval of Annexation and Zone Change requests cannot, by the nature of the request, be conditional. However, the CDDP associated with the PD Overlay is capable of receiving conditions of approval. The proposed conditions of approval, associated with the CDDP, are discussed in further detail in Part III of this staff report.

The request to apply the PD Overlay is consistent with LDC Section 3.32.40, because the

PD Overlay would enable the applicant to satisfy the requirements of the TPR at the time of development, which could not occur otherwise.

Willamette River Greenway Overlay

The applicant requests that the site receive a Willamette River Greenway (WRG) Overlay. The Purposes of the WRG Overlay are described in LDC Section 3.30.10, as follows:

> **Section 3.30.10 - PURPOSE**
> **The Willamette River Greenway is an Overlay that coincides with the adopted Greenway boundary and applies to all development permitted by the underlying zones. The objectives of this Overly and this Chapter are as follows:**
>
> **a. Protect, conserve, enhance, and maintain the natural, scenic, historical, economic, and recreational qualities of lands along the Willamette River;**
> **b. Maintain or improve air and water quality within the Greenway;**
> **c. Implement goals and policies of the State's Willamette River Greenway Program as required by the Oregon Revised Statutes, as amended;**
> **d. Implement policies of the City's Comprehensive Plan;**
> **e. Establish standards and requirements for the use of lands within the Willamette River Greenway in the City of Corvallis;**
> **f. Provide for review of any intensification of Use, change of Use, or development within the Greenway;**
> **g. Increase and maintain public access to and along the Willamette River to create urban recreational opportunities, provide linkages to other transportation corridors, and provide for multiple use of urban land; and**
> **h. Ensure development is consistent with floodwater flow mitigation and management of a Natural Resource or Natural Hazard.**

The boundary of the WRG Overlay was previously delineated through adoption of the City's 1982 Comprehensive Plan, and associated 1980 Willamette River Greenway - Comprehensive Plan Report, which includes Greenway boundary maps adopted by the City and State of Oregon (**Attachment B-6 - Page 8**). The applicant proposes to apply the WRG Overlay, consistent with the adopted Greenway boundary maps. Application of the WRG Overlay to the subject site provides consistency between the City's Official Zoning Map and Statewide Planning Goal 15, and requires approval of a WRG Conditional Development Permit for any development proposed within the WRG Overlay (**see Part IV of this staff report**).

Conclusion on Land Use Designation and Zone Overlays

The proposed zone of GI (General Industrial) with PD and WRG Overlays is found to be consistent with the underlying Comprehensive Plan designation of General Industrial, the purposes of the GI Zone as defined in LDC Section 3.24.10, LDC Chapters 2.5 (Planned Development) and 3.32 (Non-Residential Planned Development Overlay), as well as LDC Chapter 3.30 (WRG Overlay).

C. Compatibility

LDC Section 2.2.40.05

a. Review Criteria for Zone Changes, Except Those Requesting to Apply or Remove a Historic Preservation Overlay

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-48

Quasi-judicial Zone Changes shall be reviewed to determine how they affect City facilities and services, and to ensure consistency with the purposes of this Chapter, policies of the Comprehensive Plan, and any other applicable policies and standards adopted by the City Council. The application shall demonstrate compatibility in the following areas, as applicable:

1. **Basic site design (e.g., the organization of uses on a site and the uses' relationships to neighboring properties);**
2. **Visual elements (scale, structural design and form, materials, etc.);**
3. **Noise attenuation;**
4. **Odors and emissions;**
5. **Lighting;**
6. **Signage;**
7. **Landscaping for buffering and screening;**
8. **Transportation facilities;**
9. **Traffic and off-site parking impacts;**
10. **Utility infrastructure;**
11. **Effects on air and water quality (note: a DEQ permit is not sufficient to meet this criterion);**
12. **Consistency with the applicable development standards, including the applicable Pedestrian Oriented Design Standards;**
13. **Preservation and/or protection of Significant Natural Features, consistent with Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting, Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, and Chapter 4.13 - Riparian Corridor and Wetland Provisions. Streets shall also be designed along contours, and structures shall be designed to fit the topography of the site to ensure compliance with these Code standards.**

The proposed Zone Change is consistent with the compatibility criteria outlined in LDC Section 2.2.40.05(a) above, as follows:

- <u>Basic Site Design, Visual Elements, Landscaping for Buffering and Screening, Consistency with Development Standards, and Natural Features</u>

  If the subject site is annexed into the City limits, the Zone Change application is necessary so that a City zone may be applied to the site. As noted previously, the applicant requests a GI (General Industrial) Zone, with Planned Development and Willamette River Greenway Overlays. The GI zone is characterized primarily with

outright permitted uses that are industrial in nature (**see Attachment B-5 - pages 31 through 34 for permitted uses and development standards**), consistent with the underlying Comprehensive Plan Designation of General Industrial. All properties to the east, north and west of the subject site have a GI zone and an underlying Comprehensive Plan Designation of General Industrial. The subject site and neighboring properties to the north and west that are undeveloped or underdeveloped will be subject to the development standards of the GI zone, such as setbacks, building heights, landscaping, parking, and public improvements. Development that occurs consistent with the GI zone standards is considered to be compatible with surrounding development. The applicant has taken the further step of proposing to not allow kennels, scrap operations, and explosive storage uses, which are otherwise allowed in the GI zone (**Condition # 9**).

Three properties at the southwest corner of the site are located outside of City limits, and have a mix of General Industrial and Residential-Medium Density designations, as illustrated on the Comprehensive Plan map (**Attachment A-3**). Each of the three properties contains a single-family home. As part of the CDDP application, the applicant is proposing to construct a raised, landscaped berm, which is intended to buffer the more intensive industrial uses that might occur on the McFadden property from the adjacent residences. Additionally, the GI Zone contains a special development setback of 100-feet along GI property lines where the abutting properties are residential, which applies in the case of the three properties to the southwest. The application materials indicate the location of the 100-ft. setback (**Attachment D - page 130**). Development of uses consistent with the standards of the GI zone is considered to be compatible with surrounding residential uses based on adherence to this special setback, and the proposed landscaped berm provides an additional buffer beyond the base GI zone requirements.

Additionally, application of the PD Overlay on the site ensures that compatibility between any future industrial development and the abutting residences will be addressed, as the site builds out and future development is reviewed through the Planned Development / Detailed Development Plan process. Given the above discussion, staff find the proposed GI Zone is compatible with neighboring properties and zones, and meets the compatibility criteria listed in LDC 2.2.40.05(a.1),(a.2),(a.7), and (a.12).

Establishment of the Willamette River Greenway Overlay on the site ensures that any development proposed within the WRG Overlay area, except that exempted by LDC Section 3.30.30, will be required to go through the Conditional Development review process. This provides an additional level of compatibility review for uses abutting Highway 20 and the Willamette River. Additionally, a High Protection Riparian Corridor is located along the site's Highway 20 frontage (**Attachment A-6**). The High Protection Riparian Corridor standards in LDC Chapter 4.13 ensure that the only development present within the Riparian Corridor along the site's Highway 20 frontage will be the Arterial Highway frontage improvements and driveway access for future development interior to the site. This provides an additional level of compatibility related to overall site design, visual elements, and open space,

consistent with LDC 2.2.40.05(a.1), (a.2), (a.7), and (a.13).

- Noise Attenuation, Odors and Emissions, and Effects on Air and Water Quality
  The applicant requests a PD Overlay to be placed over the entire site in conjunction with the Zone Change and CDDP applications. Future development plans will be required to be reviewed for compatibility, based on the criteria noted above, through the Planned Development - Detailed Development Plan review process. As such, staff find the request for the GI Zone is compatible with surrounding uses in terms of noise, odor, and emissions impacts. As noted in the purpose statement of the GI Zone outlined in LDC 3.24.10, development is characterized, in general, by industrial uses that have few, if any, nuisance characteristics. Staff find that the criteria outlined in LDC Section 2.2.40.05(a.3), (a.4), and (a.11) are satisfied.

- Lighting and Signage
  The Zone Change portion of this application does not include lighting or signage. Lighting and signs on the site are anticipated to be developed consistent with LDC standards, and are therefore considered to meet the compatibility criteria for lighting and signage in LDC Section 2.2.50.05(a.5) and (a.6).

- Traffic and Off-Site Parking Impacts / Transportation Facilities
  Refer to the discussion in Part III of this staff report, which addresses transportation system impacts, parking and traffic associated with potential future development of the site. The CDDP discussed in Part III allows conditions of approval to be applied to the development site that address transportation system impacts and the State Transportation Planning Rule. As discussed in Part III, the criteria for traffic and transportation system impacts are satisfied. The existing circulation network, with improvements, can accommodate development of the subject property consistent with the City's Land Development Code, the Transportation Plan, and the Parks & Recreation Facilities Plan.

- Utility Infrastructure
  Part I of this staff report contains a detailed discussion concerning the utility demand calculations associated with the proposed Annexation and Zone Change. As noted in that discussion, the site is currently served by public sewer and water lines which run along the property boundaries. Additionally, as noted in that discussion, the potential maximum demand associated with development of anticipated industrial uses can be satisfied based on a combination of existing utility services, and known planned infrastructure improvements identified on City master utility plans. The applicant has noted what the planned infrastructure improvements are, has provided utility demand calculations that support the known demand and has acknowledged that future phases of development require infrastructure improvements, and that the costs of the improvements are to be born by the property owner. The criterion for utility infrastructure compatibility outline in LDC § 2.2.40.05.a.10 is satisfied.

Summary and Conclusion of Compatibility Analysis

Given the above discussion, staff find the proposed Zone Change application is consistent with the applicable criteria and compatible with neighboring uses.

D. Consistency with Statewide Planning Goal 15 (Willamette River Greenway)

The applicant proposes to apply the Willamette River Greenway Overlay to a portion of the subject site. The delineation of the WRG Overlay is proposed to match that shown on the original greenway boundary maps included as part of the City of Corvallis' 1980 Comprehensive Plan adoption (**Attachment B-6**). The original greenway boundary maps are included within the 1980 Comprehensive Plan report entitled "Comprehensive Plan Report - Willamette River Greenway", and are referenced as a Supporting Document to Article 6 of the current Corvallis Comprehensive Plan. Application of the WRG Overlay to the City's Official Zoning Map, in a location consistent with the original adopted greenway boundary, ensures compliance with Statewide Planning Goal 15, by requiring that future development on the site, if annexed, be reviewed in accordance with the City's Willamette River Greenway Permit / Conditional Development Permit process, outlined in LDC Chapter 3.30.

Part II: Summary and Conclusions

The GI Zone is consistent with the underlying General Industrial Comprehensive Plan Designation. The request to place a PD Overlay on the entire development site is consistent with the applicable review criteria in LDC Sections 2.5.10(d) and 3.32.30. Development that occurs consistent with the standards in the GI zone is considered compatible with adjacent properties developed to the same standards. The GI zone includes a special setback where GI-zone properties abut residential uses, and the application materials indicate compliance with the setback standard. Additionally, the applicant is proposing a raised, landscaped berm adjacent to the nearby residences, as part of the CDDP application. The berm and CDDP, ensures an additional level of compatibility review for the subject site.

Based on the criteria, findings and conclusions above, it is recommended that the Planning Commission **APPROVE** the proposed Zone Change application (ZDC11-00002) for the subject site. The Zone Change approval would be contingent upon a successful annexation vote in the May 2012, election. A motion to approve would be based upon the criteria, discussions, and conclusions contained within the November 9, 2011, Staff Report to the Planning Commission, and upon the reasons given by the Planning Commission members during deliberations on this application. A recommended motion is provided at the end of this staff report.

PART III: PLANNED DEVELOPMENT
(Conceptual and Detailed Development Plan)

A. Summary of Proposal

The applicant is requesting approval of a Conceptual and Detailed Development Plan (CDDP).

Conceptual Development Plan
The Conceptual Development Plan is limited in scope to seven proposed Conditions of Approval (**Attachment D - page 81 and 82, and table below**). The "proposed development area" identified on Sheet C2.1 (**Attachment D - page 129**) is intended to illustrate the limits of development due to protection of the Natural Features located on the western portion of the site, and based on the proposed limit on floor area. The proposed Conditions of Approval, intended to apply to the entire subject property in perpetuity, are as follows:

Condition	Applicant's Proposed Language	Staff Recommended Modifications
1	Prior to City Council's hearing of the McFadden Annexation application, specific public improvements shall be constructed or financially secured in accordance with LDC 2.4.40.08. The public improvements include the construction of a public sidewalk located parallel to Highway 20 along the southerly boundary of the subject (sic), and providing a public access easement over the sidewalk's route. In order to financially secure the public improvements, the applicant shall prepare Public Improvement by Private Contract (PIPC) permit documents. The PIPC design and plans shall be authorized for construction by the City engineer and all required permit documents shall be completed and on file with Development Review Engineering. Prior to the City Council hearing, the permit shall be complete and ready to issue and the Public Access Easement shall be in the possession of Development Review Engineering and ready for filing should the annexation request be successful.	Yes - see discussion below
2	Future development proposals on the subject property shall be limited to a maximum Floor Area Ratio (FAR) of 0.23. The maximum FAR for the site being calculated as 0.23 (85.43 acres x 43,560 square feet/acre) = 855,906 square feet of floor area. The maximum floor area for an incremental application approach shall be proportioned in relation to the developable area included in each application . The cumulative total floor area of all increments shall not exceed 855,906 square feet.	Yes - see discussion below

Condition	Applicant's Proposed Language	Staff Recommended Modifications
3	Future development proposals on the subject property shall calculate trip ends for traffic analysis purposes based upon the current applicable International Traffic Engineers (ITE) land use code. However the total trip ends at full build out shall not exceed the following categories of total trips which are based upon the current ITE land use code for industrial parks: AM peak hour 0.84/1,000 sf x 855,906 sf = 719 trip ends PM peak hour 0.86/1,000 sf x 855,906 sf = 736 trip ends Weekday 6.96/1,000 sf x 855,906 sf = 5,957 trip ends Trip ends for incremental applications shall not exceed a proportional calculation using the above rates. For either an individual application or for the cumulative total of all applications at full build out, the floor area shall be the lesser of the FAR calculation or the floor area used in the trip end calculation methodology.	Yes - see discussion below
4	The applicant shall grant a fifteen-foot easement parallel and proximate to the railroad right-of-way, along the subject parcel's northerly boundary, for the purpose of a potential future public-use trail or path. Said easement shall be in the possession of Development Review Engineering and ready for filing, should the annexation be successful.	Yes - see discussion below
5	Future Detailed Development Plans shall incorporate consideration of the City's adopted plans for multi-use path(s) or trail(s) within the subject property. If determined appropriate by the City, this will include, but not be limited to, widening the currently proposed sidewalk to a full-width multi-use path.	Yes - see discussion below
6	The following uses which are otherwise permitted in the City's General Industrial (GI) Zone, are prohibited in the subject Industrial Planned Development: • 3.24.20.01.a.2.c(2) - Kennels • 3.24.20.01.a.2.i - Scrap Operations; and • 3.24.20.03.a - Explosive Storage.	No
7	Future development applications for the subject property shall be processed through the City's planned development process in place at the time the application is made.	No

As noted in the table above, staff is suggesting revisions to some of the proposed conditions (see Conditions of Approval at the end of this staff report and discussion below), as well as new conditions of approval.

Detailed Development Plan

The Detailed Development Plan, as proposed, is limited in scope to construction of a public sidewalk along the site's Highway 20 frontage, and a landscaped berm located near the southwest corner of the site. The sidewalk construction also involves approximately two feet of fill, and removal of three existing significant trees along the frontage.

Condition of Approval # 4, as proposed, is intended to serve as a mechanism to ensure that, if approved, the Detailed Development Plan does not expire. The condition requires City review and authorization of a Public Improvement by Private Contract (PIPC) permit for the proposed sidewalk, but does not address the proposed landscaped berm, identified on the DDP. The applicant submitted the PIPC construction drawings on October 31, 2011 (**Attachment E - case PIP11-1530**), which are currently being reviewed by staff. Condition # 4 also addresses City approval of the security for the public improvements, prior to City Council review of the Annexation request. By securing (bonding) the public improvements associated with the sidewalk, the Detailed Development Plan will not expire, per LDC Section 2.5.50.09.b(1). This will have the effect of locking in place, the proposed Conditions of Approval on the subject property. Enforcement of the conditions of approval related to limits on floor area and trip generation is a critical piece for ensuring that the project complies with the Transportation Planning Rule, as discussed in more detail in Part I of this staff report.

B. Applicability and Purposes of Chapter 2.5 - Planned Development

LDC Section 2.5.10

a. The Procedures of this Chapter are Applicable When -

1. A property owner requests a Conceptual and/or Detailed Development Plan concurrent with a specific project review

d. On Nonresidentially Designated Properties - Upon approval of a Conceptual Development Plan on nonresidentially designated land, a Nonresidential Planned Development Overlay is placed on the site and shown on the Official Zoning Map for as long as the Conceptual Development Plan remains active (unexpired). Upon approval of a Detailed Development Plan on nonresidentially designated land, a Nonresidential Planned Development Overlay is placed on the site and shown on the Official Zoning Map for as long as the Detailed Development Plan remains active, as defined in Section 2.5.50.09.c. In cases where an approved Conceptual and/or Detailed Development Plan is no longer active, the associated Nonresidential Planned Development Overlay is automatically removed from the Official Zoning Map.

LDC Section 2.5.20 - PURPOSES

Planned Development review procedures are established in this Chapter for the following purposes:

a. Promote flexibility in design and permit diversification in location of structures;

b. Promote efficient use of land and energy, and facilitate a more economical arrangement of buildings, circulation systems, land uses, and utilities;

c. Preserve, to the greatest extent possible, existing Significant Natural Features and landscape features and amenities, and use such features in a harmonious fashion;

d. Provide for more usable and suitably located pedestrian and/or recreational facilities and other public and/or common facilities than would otherwise be provided under conventional land development procedures;

e. **Combine and coordinate architectural styles, building forms, and building relationships within the Planned Development;**

f. **Provide the applicant with reasonable assurance of ultimate approval before expenditure of complete design monies, while providing the City with assurances that the project will retain the character envisioned at the time of approval;**

g. **Provide greater compatibility with surrounding land uses than would otherwise be provided under conventional land development procedures; and**

h. **Provide benefits within the development site that compensate for the variations from development standards such that the intent of the development standards is still met.**

As noted under Part II of this report, the applicant requests a PD Overlay zone to be placed on the subject site, in conjunction with the proposed Conceptual and Detailed Development Plan (CDDP). In that analysis, staff found that the request for a Non-Residential PD Overlay was consistent with the processes of LDC Sections 3.32.30 and 3.32.40. The findings from Part II that demonstrate compliance with LDC Sections 3.32.30 and 3.32.40 are incorporated as findings here by reference. If the requested CDDP is approved, the site would contain a PD Overlay and the procedures in LDC Chapter 2.5 would be invoked with development.

The intent and purposes of the Planned Development is to permit flexibility in the land development process, allow preservation of Significant Natural Features, and allow for innovation in site planning and architectural design. The applicant does not request any flexibility from development standards with the CDDP application.

Conclusion on Applicability and Purposes of Chapter 2.5 - Planned Development
Given the above, staff find that the procedures of Chapter 2.5 - Planned Development are applicable to the subject site and that the CDDP is consistent with the purposes of Chapter 2.5.

C. Review Criteria

LDC Section 2.5.40.04 - Review Criteria

Requests for the approval of a Conceptual Development Plan shall be reviewed to ensure consistency with the purposes of this Chapter, policies and density requirements of the Comprehensive Plan, and any other applicable policies and standards adopted by the City Council. The application shall demonstrate compatibility in the areas in "a," below, as applicable, and shall meet the Natural Resource and Natural Hazard criteria in "b," below:

a. **Compatibility Factors -**

1. **Compensating benefits for the variations being requested;**

2. **Basic site design (the organization of Uses on a site and the Uses' relationships to neighboring properties);**

3. **Visual elements (scale, structural design and form, materials, etc.);**

4. **Noise attenuation;**

5. **Odors and emissions;**

6. **Lighting;**

7. **Signage;**

8. **Landscaping for buffering and screening;**

9. **Transportation facilities;**

10. **Traffic and off-site parking impacts;**

11. **Utility infrastructure;**

12. **Effects on air and water quality (note: a DEQ permit is not sufficient to meet this criterion);**

13. **Design equal to or in excess of the types of improvements required by the standards in Chapter 4.10 - Pedestrian Oriented Design Standards; and**

14. **Preservation and/or protection of Significant Natural Features, consistent with Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting, Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, and Chapter 4.13 - Riparian Corridor and Wetland Provisions. Streets shall also be designed along contours, and structures shall be designed to fit the topography of the site to ensure compliance with these Code standards.**

2.5.50.04 - Review Criteria for Determining Compliance with Conceptual Development Plan Request for approval of a Detailed Development Plan shall be reviewed to determine whether it is in compliance with the Conceptual Development Plan. The Detailed Development Plan shall be deemed to be in conformance with the Conceptual Development Plan and may be approved provided it is consistent with the review criteria in Section 2.5.40.04 above, provides a clear and objective set of development standards for residential Detailed Development Plans (considering the Detailed Development Plan proposal, required adherence to this Code, and Conditions of Approval), and does not involve any of the factors that constitute a major change in the Planned Development. See Section 2.5.60.02 - Thresholds that Separate a Minor Planned Development Modification from a Major Planned Development Modification.

Consistent with LDC Section 2.5.40.04(a) and 2.5.50.04 above, staff will analyze the CDDP request for compatibility in the following areas:

• Compensating Benefits for Requested Variations to LDC Standards • Basic Site Design • Visual Elements • Noise Attenuation • Odors and Emissions • Lighting • Signage • Landscaping for Buffering and Screening	• Transportation Facilities • Traffic and Off-site Parking Impacts • Utility Infrastructure • Effects on Air and Water Quality • Design equal to or in excess of the types of improvements required by the standards in Chapter 4.10 - PODS • Preservation and/or protection of Significant Natural Features

Compensating benefits for the variations being requested:
The proposed CDDP does not require any variations from LDC standards. Staff find the criterion in LDC Section 2.5.40.04.a.1 is not applicable.

Basic Site Design (Organization of Uses on a site and the Uses' relationship to neighboring properties):
The CDDP includes construction of a 6-ft. wide public sidewalk and 12-ft wide landscape park strip along the site's Highway 20 frontage, consistent with the City's Arterial Highway development standards, as outlined in LDC Table 4.0-1. The ultimate location of the sidewalk and associated park strip are dependent upon final approval of the western curb of Highway 20, based on ODOT review of driveway access permits and future development scenarios. The plans submitted as part of the PIPC review (**Attachment E**) illustrate the sidewalk as being between 12 and 40 feet from the existing curb.

As part of the CDDP, the applicant is proposing conditions of approval which provide a financial and design surety for the subject sidewalk. The CDDP also includes development of a raised, landscaped berm along the site's southwest corner, and has not been illustrated on the PIPC submittal. The intent of the berm is to address comments received from a public meeting that the applicant conducted with the neighborhood, and to ensure an additional level of compatibility between future industrial development and the existing residences, that would not occur if the site were developed according to base GI Zone development standards. The applicant is required to submit construction permit applications for the landscaped berm in order to fulfill the scope of the proposed Detailed Development Plan (**see Conditions # 11, 12, 13, and 14**).

Since the applicant is not requesting any variations to LDC standards as part of the CDDP request, and the proposed sidewalk, parks strip, and landscaped berm are consistent with LDC standards, the proposed CDDP is considered to be consistent with the criterion for basic site design.

Because it is conceivable that the curb and sidewalk could be removed and relocated in the future, if future development on the site triggers installation of acceleration and deceleration lanes by the City and/or ODOT, there is the potential that any street trees installed at this time might also be removed (see discussion in Part I).

The applicant is proposing that future development for the remainder of the subject site be required to go through the Planned Development Modification review process. This means that any future development on the subject site will require additional Detailed Development Plan(s) approval (**Condition # 8**). Consequently, the compatibility of future phases of development will be evaluated at the time of future DDP review. When development occurs with future DDP approval(s), the proposed development would be subject to GI Zone development standards such as building height limitations, setbacks, landscaping, parking and public facilities. These development standards would help to ensure compatibility with neighboring properties.

Based on the above analysis, staff find the requested CDDP, which includes the proposed Conditions of Approval, and Detailed Development Plan approval for the public sidewalk, planter strip, and landscaped berm, will result in development that is compatible with neighboring properties relative to the criterion for basic site design.

Visual Elements (scale, structural design and form, materials, etc.):
Other than the proposed 6-ft. wide public sidewalk and landscaped berm, the applicant is not proposing additional development within the scope of the Detailed Development Plan, which would be subject to the visual elements criterion. As conditioned, the sidewalk and landscaped berm improvements will be constructed to city standards, and therefore are considered to be compatible with surrounding development.

Noise Attenuation, and Odors and Emissions;
Development of the proposed sidewalk and landscaped berm is not anticipated to create noises or produce any noxious odors and emissions. As such, it is anticipated that the proposed development associated with the Detailed Development Plan will be compatible with the neighboring properties, and is consistent with the applicable criterion in LDC Section 2.5.40.04.a(4) and (5).

Lighting and Signage;
No lighting or signage is proposed with the CDDP. With development of future phases, exterior lighting and signage on the site would be subject to the same compatibility review and the LDC requirements for lighting and signage in Sections 4.2.80 and Chapter 4.7. These standards would ensure that all future lighting and signage on the development site would be compatible with neighboring properties.

Landscaping for Buffering and Screening;
The proposed Detailed Development Plan includes a landscaped berm (**Attachment D - Page 130**). The landscaped berm is intended to provide a visual and sound buffer between the existing residences located along Highway 20 and future industrial development on the McFadden site. The proposed landscaped berm is a solution that has been provided by the applicant to address some of the concerns raised by residents in the neighborhood, at a pre-development meeting arranged by the applicant. The applicant is proposing a mix of deciduous and evergreen trees and ground cover. The applicant will need to apply for the necessary permits and construct the berm consistent with LDC Chapter 4.2 - Landscaping, Buffering, Screening and Lighting, and is proposing to construct the berm with this Detailed

Development Plan, in order to get the plant materials established so that they will have time to mature prior to future development on the subject site (**see Condition # 11**).

In order to ensure that an effective visual and sound buffer has been provided, consistent with LDC 3.24.30.03.a, the plans submitted for permits shall meet the 80 percent opacity, minimum six-ft. height, and 18 month plant maturity standards identified in LDC 3.24.30.03.a. Additionally, the berm should be extended toward Highway 20, such that its southerly extent is matching the boundary of the Willamette River Greenway, as illustrated on Sheet C2.2 (**Attachment D - page 130**). A specific height, and extension of the berm will ensure that a suitable buffer has been provided for the adjacent residences. Therefore, a condition of approval has been provided which addresses the permit requirements and construction standards for the berm (**see Condition # 11**). Staff find that the proposed landscaped berm, if constructed according to the screening standards in 3.24.30.03.a, will provide an effective buffer between the existing residences and future industrial development.

The Detailed Development Plan (**Attachment D - page 130**) illustrates required street trees along the site's Arterial Highway frontage. The PIPC submittal (**Attachment E**) illustrates 34 large canopy Sugar Maple trees along the proposed public sidewalk. However, the applicant is proposing to defer installation of the street trees until future phases of development (**Attachment D - page 86**), citing the concern that the trees if installed at this time, might need to be removed once the extent of future lane improvements to Hwy 20 is known. Staff concur with the proposal to defer installation of the street trees, based on the applicant's rationale, and based on LDC § 4.2.20.a.2, which states that all required landscaping shall be completed prior to the issuance of a Certificate of Occupancy. Since Certificates of Occupancy will not be issued until future Detailed Development Plans and associated buildings are permitted and inspected, deferring the landscape installation is consistent with LDC provisions (**see Development Related Concern A**).

As conditioned, the proposal is consistent with the criterion in LDC 2.5.40.04.a.8.

<u>Transportation Facilities, Traffic and Off-site Parking Impacts, and Utility Infrastructure:</u>

Oregon Department of Transportation staff have indicated that the proposed zone change, from Benton County Urban Industrial-20/PUD to Corvallis PD(GI) requires analysis of whether development allowed by the zone change could result in a "significant effect" to any affected ODOT facility, per OAR 660-012-0060(1)(c)(C) **(Attachment C-1)**. The applicant addresses this Oregon Administrative Rule in the following ways:

1. Provision of a Traffic Impact Analysis that analyzed multiple intersections affected by vehicle trips generated as a result of conceivable industrial development on the site. The TIA includes an analysis of pre-development level-of-service (LOS), post-development LOS, and post-development with mitigation LOS, for the affected intersections.

2. Analysis of potential development scenarios under Benton County zoning rules, and comparison with City zoning rules. In the comparison, and as part

of the CDDP application, the applicant is proposing a voluntary limitation on overall intensity of development through proposed conditions of approval. The proposed limitations on development include a maximum limit on both floor area (0.23 floor area ratio, or 855,906 square feet for the net 85.43 acre site area) and trip generation (maximum 719 AM peak hour, 736 PM peak hour, and 5,957 weekday trip ends). The applicant proposes to limit overall development on the site to the lesser of the proposed floor area ratio or trip end calculations (**Conditions # 6 and 7**).

ODOT has commented on this approach as follows:

"In ODOT's opinion, the TPR would not apply to the development that is proposed, if the City of Corvallis includes the measures stated in my previous email as conditions of site development:

a) the trip cap limitation on the scale of possible development should be described in the chain of title so that purchasers are informed about the extent of development that is possible, and

b) an additional condition of approval should call for reconsideration of OAR 660-012-0060 before the vehicle trip cap is changed to allow more trips."

(Attachment C-1 - Page 9)

The applicant does not propose conditions of approval requiring a re-consideration of TPR if future development proposals include an increase in either the F.A.R. or trip ends, and deed restrictions that inform potential future property owners of the development restrictions that apply to the property, as recommended by ODOT (**Attachment C-1 - page 9**). The net effect of the proposed conditions, according to the applicant's proposal, is a development intensity at final buildout, that falls below what could be developed according to the existing County rules.

The conditions recommended by ODOT would ensure compliance with the State's Transportation Planning Rule and provide a public service to potential future property owner's by fully disclosing development restrictions that would apply to the subject property, if the annexation is approved by the voters. Staff recommends that the Planning Commission adopt the recommended conditions of approval (**see Conditions 2 and 3**).

3. Proposal to ensure that the Detailed Development Plan and related conditions of approval never expire by applying for and obtaining authorization of PIPC construction permits for a public sidewalk along Highway 20 frontage (**Conditions # 6 and # 7**). Once the applicant has obtained PIPC authorization and has bonded for the proposed public improvements, the Detailed Development Plan will be considered "locked-in", consistent with LDC 2.5.50.09.

The provision of adequate street, bicycle, pedestrian, and transit improvements at the time of future development will mitigate impacts associated with the development. A

detailed discussion of the traffic impact study is included above in Part I, Section D of this report and findings related to the transportation facilities in that section of this report are hereby incorporated by reference as findings under this criterion.

Beyond the sidewalk improvements proposed as part of the DDP, most transportation system requirements would be addressed in conjunction with future DDP applications for the site. It is anticipated that lane improvements may need to occur to Highway 20 along the site's frontage. As shown on the GLUP/CDP, these requirements can be accommodated on the subject site. No additional public street improvements are required of this site, based on LDC criteria.

In conjunction with future development, it is anticipated that a new TIA will be required to assess the specific traffic impacts that would be created by the development plan for the site. The TIA will need to assess whether the traffic impacts from the proposed development will need to be mitigated by the off-site improvements or other measures. Staff will evaluate any necessary mitigation, conduct a rough proportionality analysis of the traffic impacts, and either require the necessary mitigation to be completed by the applicant, or recommend denial of future development until such time as the necessary mitigation is in place. All on-site parking requirements will be addressed in conjunction with future Detailed Development Plan submittals.

As discussed in Part I of this staff report, the applicant has demonstrated that the necessary utility infrastructure to serve development on the site can be provided in compliance with City requirements. In conjunction with future development, staff will ensure that all necessary public improvements are in place or financially secured to the satisfaction of the City Engineer prior to issuance of Certificates of Occupancy.

As noted in Part I of this report and above, the Transportation Planning Rule (TPR) is a statewide administrative rule that is applicable to this land use application. The applicant intends to address the requirements of the TPR through a condition of approval that will ensure that, in conjunction with future development on the site, the requirements of the TPR are addressed. Staff have worked with the applicant and ODOT to develop this strategy to address the TPR consistent with state and local regulations, and support the proposed condition **(see Conditions # 2, #6, and #7)**.

Because expiration of the PD or removal of the PD Overlay through an administrative process would nullify Conditions 6 and 7, thereby nullifying the assurance that the TPR would be addressed with future development on the site, it is necessary for the applicant to ensure that the CDDP cannot expire. One way to do this, per LDC Section 2.5.50.09, is to install or bond for all public improvements related to the first phase of the project. Accordingly, staff recommend **Condition # 4** which requires the applicant to install or secure phase I public improvements, per LDC Section 2.4.40.08.

Staff have also provided **Conditions # 2 and 3**, in order to satisfy ODOT's concerns about ensuring compliance with the TPR and to provide notice to potential future property owners of the development restrictions that would be applied to the subject property, should the annexation be successful at the ballot.

Effects on Air and Water Quality (Note: a DEQ permit is not sufficient to meet this criterion):
Development proposed as part of this DDP will not require stormwater quality measures because the proposed development does not exceed the threshold of new pollution generating impervious surfaces (**see Development Related Concern F**).

Future phases of development on the subject site are anticipated to be similar to other industrial development within Corvallis. As such, air and water quality impacts are anticipated to be negligible, as long as the uses are consistent with those permitted outright in the GI zone, and in part because water quality measures will be required for stormwater leaving the site, consistent with City standards, at the time of Phase II development (**see Development Related Concern F**). Air emissions are monitored by the Oregon Department of Environmental Quality (DEQ). The DEQ indicates that the City of Corvallis is in compliance with all Federal and State air quality regulations.

Design equal to or in excess of the types of improvements required by the standards in Chapter 4.10 - Pedestrian Oriented Design Standards; and
The design requirements and standards of Chapter 4.10 - Pedestrian Oriented Design Standards do not apply to development in the GI Zone.

Preservation and/or Protection of Significant Natural Features
As noted in Part I of this staff report, the site contains portions of the High Protection 100-Year Floodplain, High Protection Riparian Corridor for both the Willamette River (along the site's Highway 20 frontage) and a local stream (on the western quarter of the site), and a Locally Protected Wetland of Special Significance. The provisions of LDC Chapter 4.11 - Minimum Assured Development Area (MADA) do not apply to the development site because the extent of the Natural Features on the site does not exceed the threshold that establishes applicability of MADA. Therefore, the identified Natural Features are subject to full protection, except for development that is exempt per the provisions of Chapter 4.5 - Natural Hazards and Hillside Development, and Chapter 4.13 - Riparian Corridor and Wetland Provisions. The applicant is proposing that future development subject to the Conceptual Development Plan will be consistent with the Natural Features protections of the LDC. Additionally, as discussed in Part I, the applicant cites the following LDC provision, which provides an exemption for the public sidewalk that is proposed within the High Protection Riparian Corridor of the Willamette River:

Applicable LDC Criteria

Section 4.13.50 - USE LIMITATIONS AND EXCEPTIONS WITHIN HIGHLY PROTECTED RIPARIAN CORRIDORS AND RIPARIAN-RELATED AREAS

b. Building, Paving, and Grading Activities - The placement of structures or impervious surfaces, as well as grading, excavation, and the placement of fill, are prohibited. Exceptions to the drainageway restrictions may be made for the purposes identified in items 1-7 of this Section, provided they are designed and constructed to minimize adverse impacts to Riparian Corridors and Riparian-related Areas.

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
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2. **The location and construction of streets, utilities, bridges, bicycle, and pedestrian facilities within Highly Protected Riparian Corridors and Riparian related Areas must be deemed necessary to maintain a functional system by the City Engineer. This Code, City Transportation and Utility Master Plans, and other adopted City plans shall guide this determination. The design standards of Chapter 4.0 - Improvements Required with Development shall be applied to minimize the impact to the subject area;**

Staff find that the proposed sidewalk is consistent with the City's Transportation Master Plan, because it fulfills a requirement for completion of Arterial Highway frontage improvements, which includes the park strip and setback sidewalk. The sidewalk and park strip are components of the street and pedestrian facilities identified in the exemption in LDC 4.13.50.b.2, "necessary to maintain a functional system". The applicant has indicated that existing significant vegetation may need to be removed in order to accommodate the public sidewalk. Tree removal is subject to the similar exemption. However, care should be taken to minimize unnecessary removal (**see Condition # 10**). Staff find the proposal is consistent with the criterion relative to Natural Features protections. The proposed landscaped berm is located in a portion of the site, outside of the delineated Natural Features. Therefore, the proposed landscaped berm is not subject to the Natural Features protection standards identified above.

Summary and Conclusions of Compatibility Analysis

The proposed development associated with the DDP is limited to placement of fill and constructing a public sidewalk improvement along the site's Highway 20 frontage, and construction of a landscaped berm located in the southwest corner of the site. Future phases of development will be subject to additional Planned Development review processes and compatibility of future development with adjacent properties will be determined with the future application processes. Given the above discussion, staff find that the proposed CDDP is compatible with neighboring properties and uses.

Parks, Natural Area, and Recreation Board Discussion (May 19, 2011) -

The proposed public sidewalk was presented to the Parks, Natural Areas, and Recreation Board (PNARB) on May 19, 2011 (**Attachment B-7**). PNARB made two recommendations on public multi-use paths associated with the subject property:

1. Highway 20 path - The ultimate configuration should be a combined public sidewalk / public multi-use path facility, of 12 feet in width to accommodate a mix of pedestrians and bicyclists. The ultimate location of the path and its alignment would be determined once ODOT has finalized plan approval for any acceleration / deceleration lanes fronting the subject property and lane re-configuration for Highway 20. The ultimate location would be known once the final location of the western curb has been determined, so that a minimum 12-ft. wide planter strip can be accommodated. Path completion should be linked to development of industrial uses on the property.

2. Railroad path - An easement of 15 feet should be acquired at this time to allow

for a potential future path along the site's western railroad track frontage. Because of several unknown factors related to potential alignments for the railroad path and connectivity through adjacent parcels, actual construction should not be required at this time.

Bicycle & Pedestrian Advisory Commission Discussion (June 3, 2011) -

The proposed public sidewalk was presented to the Bicycle & Pedestrian Advisory Commission (BPAC) on June 3, 2011 (**see Attachment B-8**). BPAC was informed of the recommendations of PNARB, and concurred with the recommendations for the two trail alignments.

Refer to the discussion below for an in-depth review of applicable criteria associated with the multi-use paths, and related conditions of approval and development related concerns.

D. Chapter 4.0 - Improvements Required with Development

The public infrastructure associated with the Detailed Development Plan is limited in scope to a public sidewalk along the site's Highway 20 frontage. As discussed in Parts I and II of this staff report, future development of the site consistent with the GI zone will likely trigger the need for additional public improvements, although the scale of required improvements may be tempered by the proposed conditions of approval, which are intended to limit the floor area of industrial uses and the number of vehicle trips generated. The following discussion evaluates the CDDP relative to compliance with applicable standards in LDC Chapter 4.0 - Improvements Required with Development. Evaluation occurs under three broad areas: Circulation, Public Facilities, and Franchise Utilities. The primary discussion on public improvement requirements is contained in Part I of this staff report, which are summarized below for reference purposes.

Conclusion on Vehicular Circulation

The scope of the Detailed Development Plan proposal is limited to a public sidewalk, which in terms of land use, does not generate vehicle trips. The applicant has provided a TIA, and discussion in Part I of this staff report evaluates the potential maximum level of industrial development on the site and its impacts on the public transportation system. As discussed in the findings in Part I, the site can be adequately served by the existing public transportation network that serves the site, or as conditioned, can support improvements to the vehicular circulation system that currently serves the site. The existing street network can accommodate development of the subject property consistent with the City's Land Development Code and the Transportation Plan.

Conclusions on Bicycle/Pedestrian Circulation:

Public on-street bike lanes exist along the applicant's frontage of Highway 20. As discussed in Part I, the City's Parks & Recreation Facilities Plan and Trails Master Plan

shows a proposed trail/multi-use path along the site's Highway 20 frontage. The applicant has proposed a condition of approval which requires that with future phases of development, the proposed sidewalk will be widened to twelve feet, to support a public multi-use path, consistent with the City's adopted facilities plans.

The applicant has also proposed a condition of approval, to provide a public access easement for a potential public multi-use path, to be located along the subject site's shared western border with the railroad. This alignment is consistent with the Park and Recreation Facilities Plan (Attachment B-3, page 4) and Trails Master Plan (Attachment B-4). As discussed in Part I of this staff report, the DDP and proposed conditions of approval are consistent with the criterion for public pedestrian and bicycle improvements, in LDC § 2.5.40.04.a.

Conclusions on Transit
The site is currently served by CTS Limited Service Route C2, along the Highway 20 frontage. As discussed in Part I, the criterion for public transit service is satisfied.

Overall Conclusion on Circulation
Given the discussion above, the proposed Conceptual & Detailed Development Plan for the McFadden Industrial Annexation has demonstrated that, with improvements, the existing circulation network can accommodate development of the subject property consistent with the City's LDC, Transportation Plan, and the Parks & Recreation Facilities Plan.

2. PUBLIC FACILITIES AND SERVICES

As discussed in Part I of this staff report, the applicant has provided utility demand calculations that examine the maximum potential development conceivable under GI zone standards. The sidewalk and landscaped berm will not create the need for additional improvements to public utility systems. The following discussion addresses criteria related to public water, sanitary sewer, storm drainage, and street lights, and incorporates the findings in Part I of this staff report, by reference.

Water
As noted in Part I, there is an existing 16 inch waterline located along the U.S. Highway 20 site frontage, and a 30 inch waterline along the site's northern boundary, adjacent to the railroad right-of-way. Based on the submitted utility demand calculations, the site is capable of being served by public water that is either existing, or that can be provided through enhancements to the system. Such enhancements would be required to be included with future Detailed Development Plan approvals. As discussed in Part I, the criterion for provision of public water service to and through the site is satisfied.

Sanitary Sewer
There is an existing 36" sewer pipe located along the north and northwest portions of the site. The City's Wastewater Utility Master Plan indicates that the existing pipe will have capacity until the City reaches a population of 80,000. At that time, a 48" pipe is

proposed in the Master Plan to serve the drainage basin. As noted in Part I of this staff report, the applicant has provided sanitary sewer calculations showing that the proposed annexation can be served by the existing sanitary sewer system.

Storm Drainage
The applicant proposes to serve future development by either discharging stormwater into the Garfield Drainage Basin along the west side of the property, or to gain access from ODOT and discharge across the Highway, directly into the Willamette River. As noted in Development Related Concerns F and G, future Detailed Development Plan submittals will be required to address the City's stormwater quality and quantity standards. The applicant has submitted stormwater demand calculations as part of the Annexation and Zone Change applications, and has demonstrated that the site is capable of being served with public stormwater facilities, consistent with LDC standards.

Street Lights
As noted in Part I of the staff report, there are no street lights in the vicinity of this project. Future development of the site would require the installation of a City standard street light system **(Development Related Concern H)**.

Overall Conclusion on Public Utilities
Given the discussion above, the development site is currently served by public water, sanitary sewer, and stormwater lines. Future Detailed Development Plan submittals will need to demonstrate that services can be provided, based on specific demands of the uses presented in future applications. However, the utility demand calculations provided as part of the Annexation (Part I) and Zone Change (Part II) requests, indicate that the site can be adequately served by public utilities.

3. Franchise Utilities

Existing franchise utilities are located in the vicinity of the subject site. As noted in Part I, and in accordance with LDC Section 2.6.60.03.i.1, the applicant has provided letters confirming the ability to serve the site with future phases of development.

Part III: Summary and Conclusions

The standards of LDC Chapter 2.5 - Planned Development are applicable when flexibility from development standards are requested or when the development site is subject to a PD Overlay. The requested Zone Change application includes a proposal to place a non-residential PD Overlay over the entire development site, based on the requested CDDP. The applicant is not requesting variations to LDC development standards at this time.

As conditioned, the CDDP is consistent with the applicable development standards of the LDC. Additionally, staff find the proposal is compatible with the neighboring properties and uses.

Based on the criteria, findings and conclusions above, it is recommended that the Planning Commission **APPROVE** the proposed Conceptual and Detailed Development Plan (PLD11-00002), subject to the recommended Conditions of Approval contained at the end of this staff report, and contingent upon passage of the annexation vote. A motion to approve would be based upon the criteria, discussions, and conclusions contained within the November 9, 2011, Staff Report to the Planning Commission, and upon the reasons given by the Planning Commission members during deliberations on this application. A recommended motion is provided at the end of this staff report.

PART IV: WILLAMETTE RIVER GREENWAY PERMIT

A. Summary of Proposal

The applicant proposes to construct a 6-ft. wide public sidewalk along the site's Highway 20 frontage, consistent with the City's standards for Arterial Highway frontage improvements (**see Sheet C2.2 - Attachment D - page 130**). The final alignment and location of the sidewalk is not known at this time, because it is unknown whether or not the existing western curb on Highway 20 will need to be relocated, as part of the City/ODOT review of the construction drawings. Additionally, future development on the site may trigger additional frontage improvements such as acceleration and deceleration lanes, which may necessitate future removal of the curb and sidewalk. Once the final curb location has been determined through the PIPC and ODOT permitting process, the proposed public sidewalk would meet the City's Arterial Highway construction standards, and be set back 12-ft. to the west of the curb. The applicant proposes a condition of approval (**see Attachment D - page 81**), which addresses the sidewalk permitting requirements and establishment of financial security for construction of the improvements.

The applicant has accounted for uncertainty in the final curb location by illustrating the proposed sidewalk as being located 12-feet from the existing curb, and noting that the ultimate location may be as far west as the line delineated as "potential maximum sidewalk setback" on Sheet C2.2. Regardless of the ultimate location of the sidewalk, based on known variables, the sidewalk will be located somewhere within the site's proposed Willamette River Greenway Overlay. Therefore, the proposed sidewalk development is subject to the Willamette River Greenway Conditional Development approval process. There is also the potential that existing significant trees along the site's frontage will be removed in order to accommodate the required sidewalk alignment. As depicted on Sheet C2.2, the applicant also proposes to install the required large canopy street trees within the newly created park strip, but intends to defer installation of the required street trees until development of the site occurs, consistent with future Detailed Development Plan approval.

B. Applicability and Purposes of Chapter 3.30 - Willamette River Greenway Overlay

Section 3.30.20 - CONDITIONAL DEVELOPMENT
Development within this Overly, regardless of the classification in the underlying zone, requires Conditional Development approval in accordance with the provisions of Chapter 2.3 - Conditional Development. In addition to notification requirements of Chapter 2.0 - Public Hearings, written public notice and a Notice of Disposition shall be mailed to the Oregon Department of Parks and Recreation. Development as used in this Section includes change of Use, intensification of land, or intensification of Water dependent
or Water-related Uses, except for those activities listed as exemptions in Section 3.30.30 below. Development also includes proposed increases in air discharges that require permit approval by the Oregon Department of Environmental Quality (DEQ).

The proposed public sidewalk is considered development, per the definition in LDC Chapter 1.6. Because of this, Conditional Development approval is required per LDC Section 3.30.20. The proposed landscaped berm is located outside of the delineated boundary of the WRG Overlay, and is not subject to the WRG Conditional Development review criteria.

C. Review Criteria

Section 3.30.40 - REVIEW CRITERIA
Conditional Development within the Willamette Greenway Overlay may be approved only when the Planning Commission, after considering cumulative effects within the City's Greenway, finds that the development standards in Section 3.30.50 and the following criteria are met:

- **a.** **Public access to and along the river shall be provided to the maximum extent practicable and to the extent that public access does not interfere with established Uses on the property.**
- **b.** **Significant Natural Hazards and Natural Resources shall be protected consistent with the requirements of Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, Chapter 4.13 - Riparian Corridor and Wetland Provisions, and the Natural Resource provisions of Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting.**
- **c.** **Significant natural and scenic areas, viewpoints, and vistas shall be preserved.**
- **d.** **The quality of air, water, and land resources in the Greenway shall be protected to the maximum extent practicable.**
- **e.** **The Minimum Assured Development Area (MADA) shall be consistent with Chapter 4.11 - Minimum Assured Development Area (MADA).**
- **f.** **The natural vegetative fringe along the river shall be protected and enhanced to the maximum extent practicable to ensure scenic quality, protection of wildlife, protection from erosion, and screening of Uses from the river.**
- **g.** **Any public Recreational Use or facility shall not substantially interfere with established Uses on adjoining property.**
- **h.** **Maintenance of public safety and protection of public and private property, especially from vandalism and trespass, shall be provided to the maximum extent practicable.**
- **i.** **Extraction of aggregate deposits shall be conducted in a manner designed to minimize adverse effects on water quality, fish and wildlife, vegetation, bank stabilization, stream flow, visual quality, noise, and safety, and to guarantee necessary reclamation.**
- **j.** **Development, change, or intensification of Use shall provide the maximum possible landscaped area, open space, or vegetation between the activity and the river.**
- **k.** **Development shall be sited to maximize distance from the river to the greatest extent practicable.**
- **l.** **In applying "a," through "k," above, to development proposals within the Willamette River Greenway, consideration should be given to the provisions of this Code, Corvallis 2020 Vision Statement, Comprehensive Plan,**

Downtown Streetscape Plan, Riverfront Commemorative Park Plan, and other applicable City documents. However, where conflicts arise, direction must be taken from the Corvallis Comprehensive Plan and this Code.

Highway 20 separates the subject site from access points to the Willamette River. Additionally, access to the Willamette River at this location is infeasible due to a steep bank, which lies on the east side of a guardrail along Highway 20. The sidewalk provides visual access to the river for its users. The criterion relative to river access is considered not applicable.

As discussed in Part III of this staff report, the subject site's frontage is located within a High Protection Riparian Corridor, which extends 120-feet westward from the top-of-bank (**Attachment A-6**). As noted in the discussion under applicable review criteria in Part I, the City Engineer finds that the proposed public sidewalk is a necessary portion of streets and pedestrian facilities identified on the City's Transportation Master Plan, and is therefore subject to the exemption under LDC § 4.13.50.b.2. Staff find that the criterion in LDC Section 3.30.40.b is satisfied. As noted in Part III of this staff report, the MADA provisions of LDC Chapter 4.11 are not applicable to the subject development site. Therefore, the criterion in LDC Section 3.30.40.e is not applicable.

The proposed public sidewalk will be constructed at grade along the site's frontage, 12 feet west of the ultimate curb location. Construction of the at-grade sidewalk is not anticipated to have a significant effect on vistas and viewpoints along the river, and in fact, will likely create new viewing opportunities of the river, for the public. The sidewalk is not anticipated to have negative effects on the quality of air, water, and land resources within the greenway. Staff find that the criteria in LDC 3.30.40(c) and (d) are satisfied.

The applicant has identified two (2) evergreen and two (2) deciduous trees, located along the site's Highway 20 frontage, that may be impacted by the construction of the sidewalk. Because the exact location of the sidewalk cannot be determined at this time, it is uncertain if the identified trees will need to be removed, or if they will be impacted in any way. Due to their distance from the river and their size, the existing trees do not provide any shade to the river nor do they contribute to erosion protection along the riverbank, so their riparian function is limited. Because the trees are located within the High Protection Riparian Corridor, and were within the bounds of the Riparian Assessment Study Area, they are required to be preserved per LDC Sections 4.2.20(c), 4.12.60(f), and 4.13.50(a). Since there may be a conflict in LDC requirements for both providing a public sidewalk along a certain alignment, and preserving existing riparian vegetation affected by the sidewalk alignment, the LDC conflict will need to be addressed through other criteria.

It is possible that the trees can be removed and replaced per a stream restoration or enhancement plan, consistent with LDC Section 4.13.50. However, due to the separation of the site's eastern border from the Willamette River caused by Highway 20, the intent behind the riparian enhancement provisions may not be satisfied. Provision of the required street trees in conjunction with future development is considered to be

complementary to the intent of providing an enhanced riparian corridor, and mitigates for any potential loss of existing significant vegetation. Staff find that the criterion in LDC 3.30.40(f) is satisfied.

The proposed sidewalk is designed to "dead-end" at the south property line of the site, and to transition to an existing sidewalk at the north property line (HP campus). It is not anticipated that the sidewalk will interfere with, nor encourage vandalism or trespass on abutting properties. The criteria in LDC Section 3.30.40(g) and (h) are satisfied. The criterion in LDC 3.30.40(i) is not-applicable, because no aggregate extraction is proposed.

The proposed sidewalk is located at the maximum distance permissible per the Arterial Highway standards (12-feet between the curb and sidewalk), and is thus located as far as possible relative to the Willamette River. This is consistent with LDC 3.30.40(j) and (k).

D. Consistency with Statewide Planning Goal 15 (Willamette River Greenway)

The Oregon Department of Parks and Recreation and the Department of Land Conservation and Development (DLCD) were notified of this land use application, and have provided written correspondence (**see Attachments C-3 and C-4**). These comments suggest that the City should make findings that the portions of the development proposal that are within the Willamette River Greenway boundary are supported by Goal 15 and the WRG review criteria, in order to comply with the purposes of DLCD and Oregon State Parks notification. Staff discussion above and the conclusions below fulfill that requirement.

Part IV: Summary and Conclusions

The requested WRG Conditional Development application includes a proposal to construct a 6-ft. wide public sidewalk within the WRG Overlay.

As noted in the discussion above, the sidewalk is not anticipated to have adverse impacts on the natural and scenic qualities of the Willamette River Greenway and associated Riparian Corridor. Additionally, staff find the proposal is compatible with the neighboring properties and uses.

Based on the criteria, findings and conclusions above, it is recommended that the Planning Commission **APPROVE** the proposed WRG Conditional Development (WRG11-00001), contingent upon passage of the annexation vote. A motion to approve would be based upon the criteria, discussions, and conclusions contained within the November 9, 2011, staff report to the Planning Commission, and upon the reasons given by the Planning Commission members during deliberations on this application. A recommended motion is provided below.

Recommended Motions for the McFadden Industrial Annexation application

Recommended Motion for ANN11-00001

MOTION: *I move to recommend that the City Council place the proposed Annexation request (ANN11-00001) on the May 2012 ballot. This motion is based on findings presented in the November 9, 2011, Staff Report to the Planning Commission, and findings made by the Planning Commission during deliberations on the request.*

Recommended Motion for ZDC11-00002

MOTION: *I move to approve the Zone Change request (ZDC11-00002), contingent upon the City Council's placement of the associated Annexation request on the May 2012 ballot and upon voter approval of the ballot measure. This motion is based on Findings presented in the November 9, 2011, Staff Report to the Planning Commission, and findings made by the Planning Commission during deliberations on the request.*

Recommended Motion for PLD11-00002

MOTION: *I move to approve the Planned Development request (PLD11-00002), contingent upon the City Council's placement of the associated Annexation request on the May 2012, ballot and upon voter approval of the ballot measure. This motion is based on Findings presented in the November 9, 2011, Staff Report to the Planning Commission, and findings made by the Planning Commission during deliberations on the request.*

Recommended Motion for WRG11-00001

MOTION: *I move to approve the Willamette River Greenway Permit request (WRG11-00001), contingent upon the City Council's placement of the associated Annexation request on the May 2012, ballot and upon voter approval of the ballot measure. This motion is based on Findings presented in the November 9, 2011, Staff Report to the Planning Commission, and findings made by the Planning Commission during deliberations on the request.*

Conditions of Approval for PLD11-00002 / WRG11-00001 (applicable if City Council places ANN11-00001 Annexation measure on May 2012, ballot, and contingent upon voter approval of the Annexation)		
Page(s)	#	Condition Language
All	1	Consistency with Plans - Development shall comply with the narrative and plans identified in Attachment D, except as modified by the conditions below, or unless a requested modification otherwise meets the criteria for a Minor Planned Development Modification. Such changes may be processed in accordance with Chapter 2.5 of the LDC.
43, 61,62	2	Modifications to Conditions / Future Planned Development Modifications and Transportation Planning Rule - Any modification to condition # 7 below which proposes an increase in the prescribed maximum vehicle trips requires submittal of a Planned Development Modification application to the City, to allow for review and comment on the application by ODOT. Materials included as part of the Planned Development Modification application shall include a discussion on the reconsideration of the applicability of OAR 660-012-0060 and the Oregon Transportation Planning Rule, as it is defined by OAR at the time of application.
61, 62	3	Deed Restriction for Subject Property- Upon voter approval of the requested Annexation, and as part of the processing of permits as required in the conditions below, the applicant shall submit a deed restriction document to the City for review, approval, and recording with the Benton County Records and Licenses Office. The deed restriction shall include the complete language of the conditions outlined below that limit floor area and vehicle trips. The applicant shall pay the costs of filing the deed restriction with the Benton County Records office. Any future Planned Development Modification approval that involves changes to the proposed limits on floor area and vehicle trips shall include a condition of approval that requires amendments to the deed restriction outlined in this condition, in order to inform current and future owners of the subject property of any changes to the applicable development restrictions.

Conditions of Approval for PLD11-00002 / WRG11-00001 (applicable if City Council places ANN11-00001 Annexation measure on May 2012, ballot, and contingent upon voter approval of the Annexation)		
33, 34, 55, 62	4	Public Improvements - Prior to City Council's hearing of ANN11-00001, the public improvements shown in the Detailed Development Plan and submitted with case PIP11-1530 shall be secured in accordance with LDC 4.0.20. Improvements consist of the installation of the public setback sidewalk along the sites U.S. Highway 20 frontage along with a dedication of ROW or the granting of an easement to accommodate the improvements. In order to secure the public improvements, the applicant shall prepare Public Improvement by Private Contract (PIPC) permits. The plans shall be authorized and all permit items required for issuance of the permit shall be completed and on file with Development Review Engineering. The permit shall be ready to issue and the ROW dedication or easement shall be ready to be filed upon successful annexation to the City. An environmental assessment shall be provided by the developer (grantor) for all lands to be dedicated to the public or City per LDC 4.0.100.g. All improvements must be installed, inspected and approved within 12 months of Annexation approval (based on the results of the May 15, 2012, ballot measure).
34	5	Public Access Easement - Prior to approval of the PIPC application (PIP11-1530), the applicant shall provide documents for dedication of a public access easement over the west 15 feet of the subject property, where it abuts the Southern Pacific Railroad Line, to the City. Prior to City Council review of the Annexation request, the applicant shall finalize and prepare the easement documents for recording. If the voters approve the Annexation request, the applicant shall provide fees to the City of Corvallis so that the easement may be recorded with the Benton County Records and Licenses Office, upon certification of the Annexation results.

Conditions of Approval for PLD11-00002 / WRG11-00001 (applicable if City Council places ANN11-00001 Annexation measure on May 2012, ballot, and contingent upon voter approval of the Annexation)		
61, 62	6	Maximum Floor Area Ratio - Future development proposals on the subject property shall be limited to a maximum Floor Area Ratio (FAR) of 0.23. The maximum FAR for the site is 0.23 (85.43 acres x 43,560 square feet/acre = 855,906 square feet of floor area). The maximum floor area for an incremental application approach shall be proportioned in relation to the developable area included in each application . The cumulative total floor area of all increments shall not exceed 855,906 square feet. Applications, as outlined above, are defined as Detailed Development Plan / Planned Development Modifications, building shell permit, and tenant improvement permit applications. All required applications shall include a table of existing and proposed uses within each building, as well as gross floor area and trip end calculations associated with each use.
61, 62	7	Maximum Trip Ends - Future development proposals on the subject site shall calculate trip ends for traffic analysis purposes based upon the current applicable International Traffic Engineers (ITE) land use code. However the total trip ends at full build out shall not exceed the following categories of total trips which are based upon the current ITE land use code for industrial parks. AM peak hour 0.84/1,000 sf x 855,906 sf = 719 trip ends PM peak hour 0.86/1,000 sf x 855,906 sf = 736 trip ends Weekday 6.96/1,000 sf x 855,906 sf = 5,957 trip ends Trip ends for incremental applications shall not exceed a proportional calculation using the above rates. For either an individual application or for the cumulative total of all applications at full build out, the floor area shall be the lesser of the FAR calculation (as calculated per Condition #6) or the floor area used in the trip end calculation methodology. Applications, as outlined above, are defined as Detailed Development Plan / Planned Development Modifications, building shell permit, and tenant improvement permit applications. All required applications shall include a table of existing and proposed uses within each building, as well as gross floor area and trip end calculations associated with each use.

Conditions of Approval for PLD11-00002 / WRG11-00001 (applicable if City Council places ANN11-00001 Annexation measure on May 2012, ballot, and contingent upon voter approval of the Annexation)		
44, 59	8	Detailed Development Plan Approval(s) Required - Future development applications for the applicant's property shall be processed through the City's planned development process in place at the time the application is made.
50	9	Use Restrictions - The following uses are normally permitted in the City's General Industrial (GI) Zone, but are prohibited in the McFadden Industrial Planned Development: • 3.24.20.01.a.2.c(2) - Kennels • 3.24.20.01.a.2.i - Scrap Operations; and • 3.24.20.03.a - Explosive Storage.
64	10	Preservation of Existing Trees or Mitigation for Removal: Four existing significant trees are identified on Sheet C2.2. These trees should be preserved to the maximum extent practicable and shall be illustrated on the plans submitted for public improvements (PIPC). Prior to issuance of construction permits for the public sidewalk, the applicant shall install tree protection fencing consistent with LDC Section 4.12.60.f. However, if the final location of the required public sidewalk and/or its expansion in width to accommodate the required public multi-use path impacts the trees such that they cannot be preserved in a healthy condition, then the affected trees may be removed. Prior to removal and issuance of the construction permits for the sidewalk, the applicant shall provide a valuation estimate to the City's Urban Forester. Upon approval of the valuation, the applicant shall re-plant an equivalent number of equal value trees along the site's frontage, in a location consistent with LDC Section 4.2.30.b.

Conditions of Approval for PLD11-00002 / WRG11-00001 (applicable if City Council places ANN11-00001 Annexation measure on May 2012, ballot, and contingent upon voter approval of the Annexation)		
58, 60	11	Street Trees / Landscaped Berm Construction Permits Required: Upon voter approval of the Annexation request, the applicant shall submit, by June 15, 2012, applications and construction drawings for Excavation and Grading (EXC) and Landscape and Irrigation (LND) permits, associated with the improvements proposed as part of the Detailed Development Plan, except as modified below. Landscape Construction Documents (LND) - Plans submitted for the required landscape and irrigation permit shall contain a specific planting plan (including correct Latin and common plant names), a Significant Vegetation preservation plan addressing existing significant trees identified on Sheet C2.2, in the vicinity of construction, irrigation plans, details, and specifications for all required landscaped areas identified on the DDP, with the exception of street trees along the Highway 20 frontage. The irrigation plans shall indicate source of water, pipe location and size, and specifications for backflow prevention. The irrigation system shall utilize 100 percent sprinkler head-to-head coverage or sufficient coverage to ensure 90 percent coverage of plant materials in three years. Plantings shall be provided as shown on Sheet C2.2 - Detailed Development Plan, with the exception of street trees along the Highway 20 frontage and except as modified below and shall comply with LDC Chapter 4.2. As proposed, medium and large canopy trees and groundcover shall be provided on the landscaped berm. Additional ground cover, shrubs, and trees shall be provided in the area of the landscaped berm to ensure that the landscaping meets the height, opacity, and maturity time prescribed in LDC 3.24.30.03.a, 4.2.30.a.4, 4.2.40, and 4.2.50. Tree plantings shall match planting standards adopted by the Urban Forester. The landscape construction documents shall include an overlay drawing which illustrates proposed plantings and existing and proposed underground utilities, in order to ensure that plantings and utilities meet the separation requirements outlined in LDC § 4.2.30.b. Exceptions to the plantings shown on Sheet C2.2 may be administratively approved by the Development Services Division where, due to plant availability or performance issues, minor changes are warranted. Plant substitutions shall meet the LDC performance criteria and maintain at least the minimum plant density and plant size as specified in this Condition.

Conditions of Approval for PLD11-00002 / WRG11-00001 (applicable if City Council places ANN11-00001 Annexation measure on May 2012, ballot, and contingent upon voter approval of the Annexation)		
58, 60	12	Timing of Installation of Landscape Improvements - If the voters approve the Annexation request, and once the applicant has received permit approval consistent with Condition # 10 above, the applicant shall install the berm, landscaping, and irrigation approved as part of the EXC and LND permit applications, by June 15, 2013.
58, 60	13	Inspections and Three Year Maintenance Guarantee - Prior to final acceptance of the installation of required landscaping by the City, the applicant shall provide a three year maintenance bond or other financial assurance to the Development Services Division for review and approval. This financial assurance is to cover the required three year landscape maintenance period which begins at the time the landscape installation is approved by the City. This includes achieving the minimum 90 percent coverage specified by Code.
58, 60	14	Three -Year Maintenance Guarantee Release - The developer shall provide a report to the Development Services Division just prior to the end of the three year maintenance period for the 3-Year Maintenance Bond initiated by this Detailed Development Plan, as prescribed in LDC § 4.2.20.a.3 of the LDC. The report shall be prepared by a licensed arborist or licensed landscape contractor and shall verify that 90 percent ground coverage has been achieved, either by successful plantings or by the installation of replacement plantings. The Director shall approve the report prior to release of the guarantee.

Development Related Concerns:

A. Future Detailed Development Plans shall address the extent of improvements along the site's frontage. Street trees, roadway, bicycle, and pedestrian improvements shall be consistent with the City's Land Development Code, the Transportation Plan, and the Parks & Recreation Facilities Plan.

B. Future Detailed Development Plans shall complete a TIA in accordance with LDC 2.5.40.01.g.5 and 4.0.60.a. The City Engineer shall define the scope of the traffic impact study based on established procedures. The TIA shall be submitted for review to the City Engineer. The proposed TIA shall reflect the magnitude of the project in accordance with accepted traffic engineering practices. The applicant shall complete the evaluation and present the results with future overall site development proposals.

C. As part of the first phase of any future Detailed Development Plan application, the applicant shall include plans to widen the public sidewalk along the site's Highway 20

frontage to 12 feet, and the entire facility shall be constructed to the City's off-street multi-use path standards. Additionally, the applicant shall dedicate a public access easement over any portion of the widened multi-use path facility that is located on private property. Please note that the location of this path could change to accommodate required travel lanes on U.S. Highway 20.

D. The existing 16 inch waterline along U.S. Highway 20 is located approximately 15 feet north of the existing ROW in a 20 foot wide easement. Depending on future lane configurations, the existing waterline may end up within, or close to, the future landscape strip. Per LDC 4.2.30.b.2.d, trees may not be planted within 10 feet of public utility lines. This may preclude trees from being planted within the landscape strip. Street trees that cannot be accommodated within the park strip may be located on the west side of the sidewalk / multi-use path as necessary, to avoid utility conflicts.

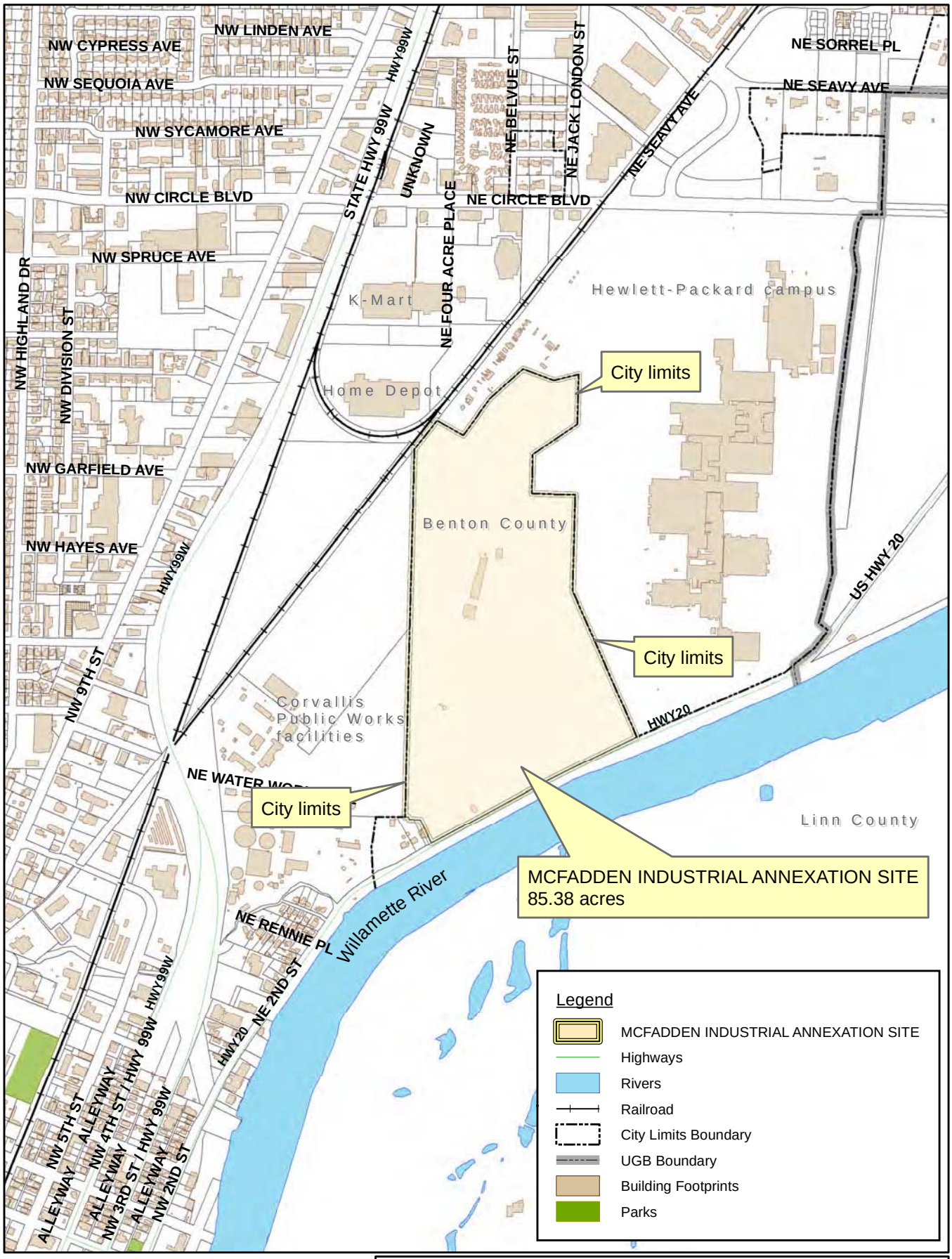
E. With future development, the application proposes to serve the site by constructing a 16 inch waterline through the site, connecting the existing 16 inch and 30 inch waterlines. This improvement is consistent with the City's Water Master Plan.

F. Future Detailed Development Plan phases on the site that create more than 5,000 ft^2 of pollution generating impervious surfaces will be required to construct stormwater quality facilities. Stormwater quality facilities shall be designed in accordance with criteria established in Appendix F of the Stormwater Master Plan and the most recent version of the *King County, Washington, Surface Water design Manual*. The water quality facilities shall be designed to remove 70 percent of the total suspended solids (TSS) entering the facility during the water quality design storm, 0.9-inch 24-hr rainfall event with NRCS Type 1A distribution.

G. Future detailed development phases on the site that create more than 25,000 ft^2 of impervious surfaces will be required to construct stormwater detention facilities in accordance with the LDC section 4.0.130.b. Detention facilities shall be designed to maximize storm water infiltration. Maintenance of these facilities is most efficiently provided with open systems because they facilitate visible evaluation of system conditions and accommodate routine, low-technology maintenance practices. Open systems also allow stormwater contact with vegetation and soil to enhance water quality, infiltration, and maintaining the properly functioning hydrological and biological condition of open drainageways. The storm water detention facilities shall be designed consistent with both criteria outlined in Appendix F of the Storm Water Master Plan, and criteria outlined in the most recent King County, Washington, Surface Water Design Manual, and shall be designed to capture run-off so that the run-off rates from the site after development do not exceed the pre-developed conditions, based on the 2-year, 5-year, and 10-year, 24-hour design storms.

H. Future development of the site shall require the installation of a City standard street light system in accordance with LDC 4.0.70.a and 4.2.80.f.

Vicinity Map

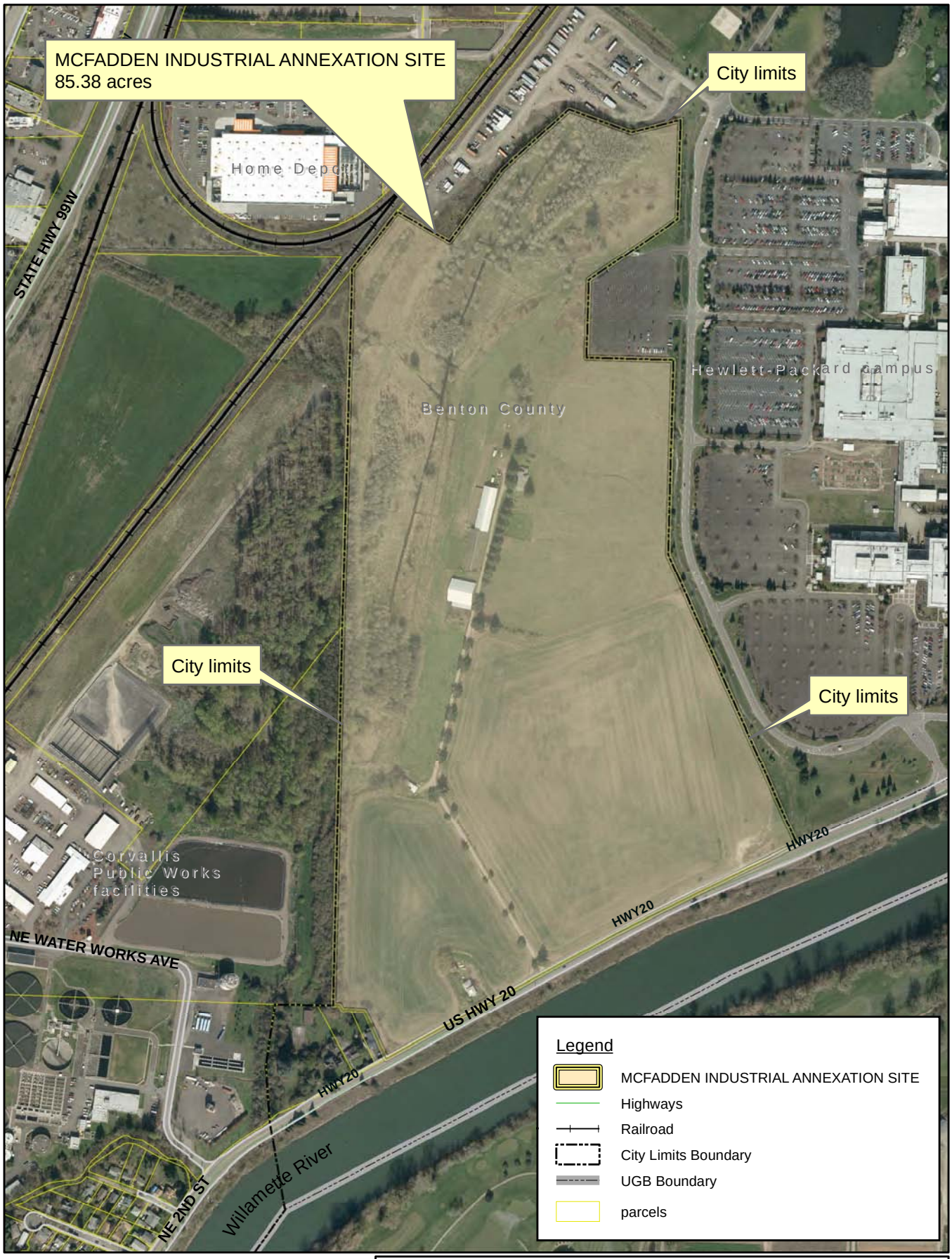


MCFADDEN INDUSTRIAL ANNEXATION
(ANN11-00001 / ZDC11-00002 / PLD11-00002 / WRG11-00001)
PLANNING COMMISSION STAFF REPORT
ATTACHMENT A-1

Corvallis Planning Division
501 SW Madison Ave
Corvallis, OR 97333
541.766.6908
Planning@ci.corvallis.or.us

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-81

Existing Conditions / 2010 Aerial Photograph



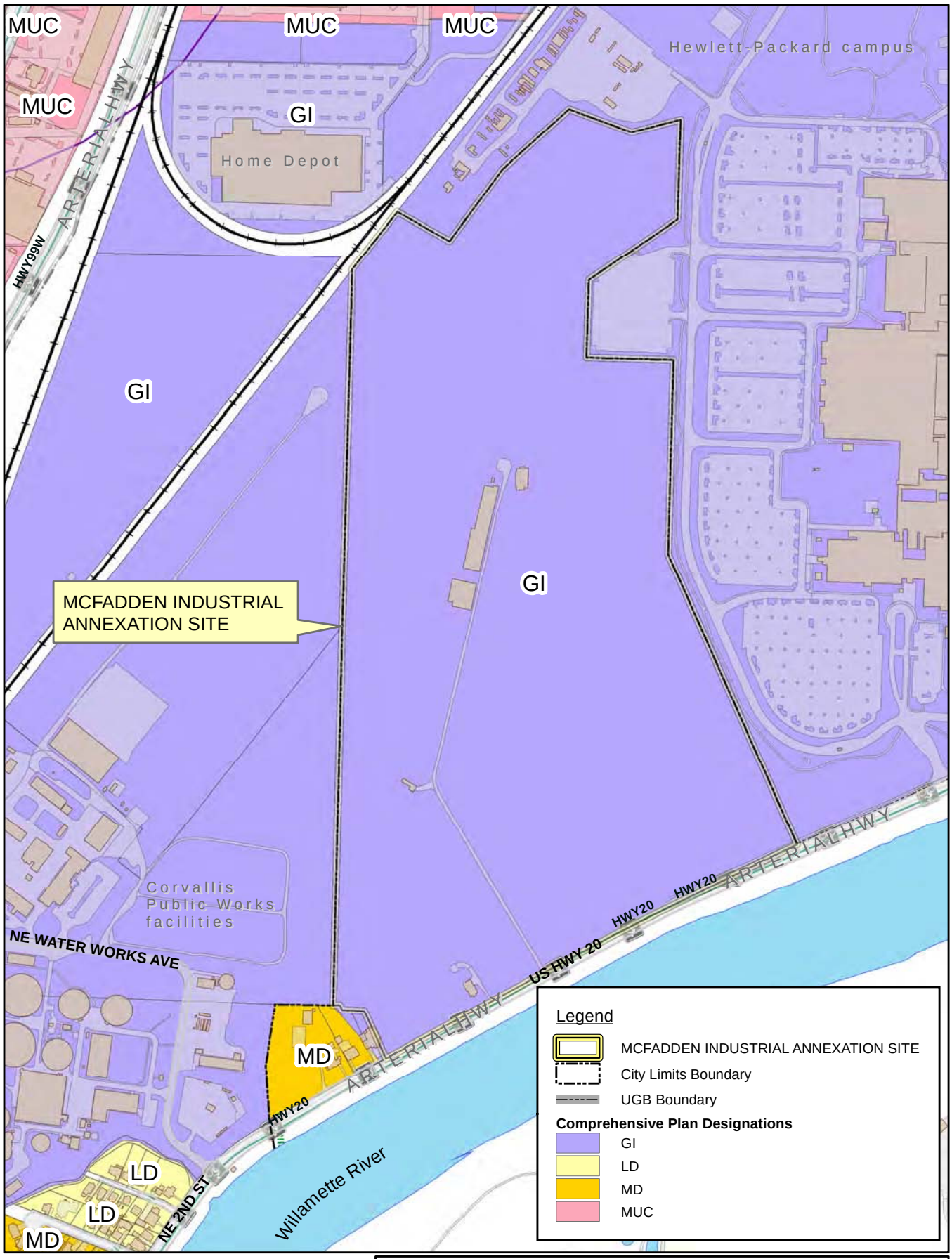
MCFADDEN INDUSTRIAL ANNEXATION
(ANN11-00001 / ZDC11-00002 / PLD11-00002 / WRG11-00001)
PLANNING COMMISSION STAFF REPORT
ATTACHMENT A-2

0 190 380 760 Feet

Corvallis Planning Division
501 SW Madison Ave
Corvallis, OR 97333
541.766.6908
Planning@ci.corvallis.or.us

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-82

Comprehensive Plan Map



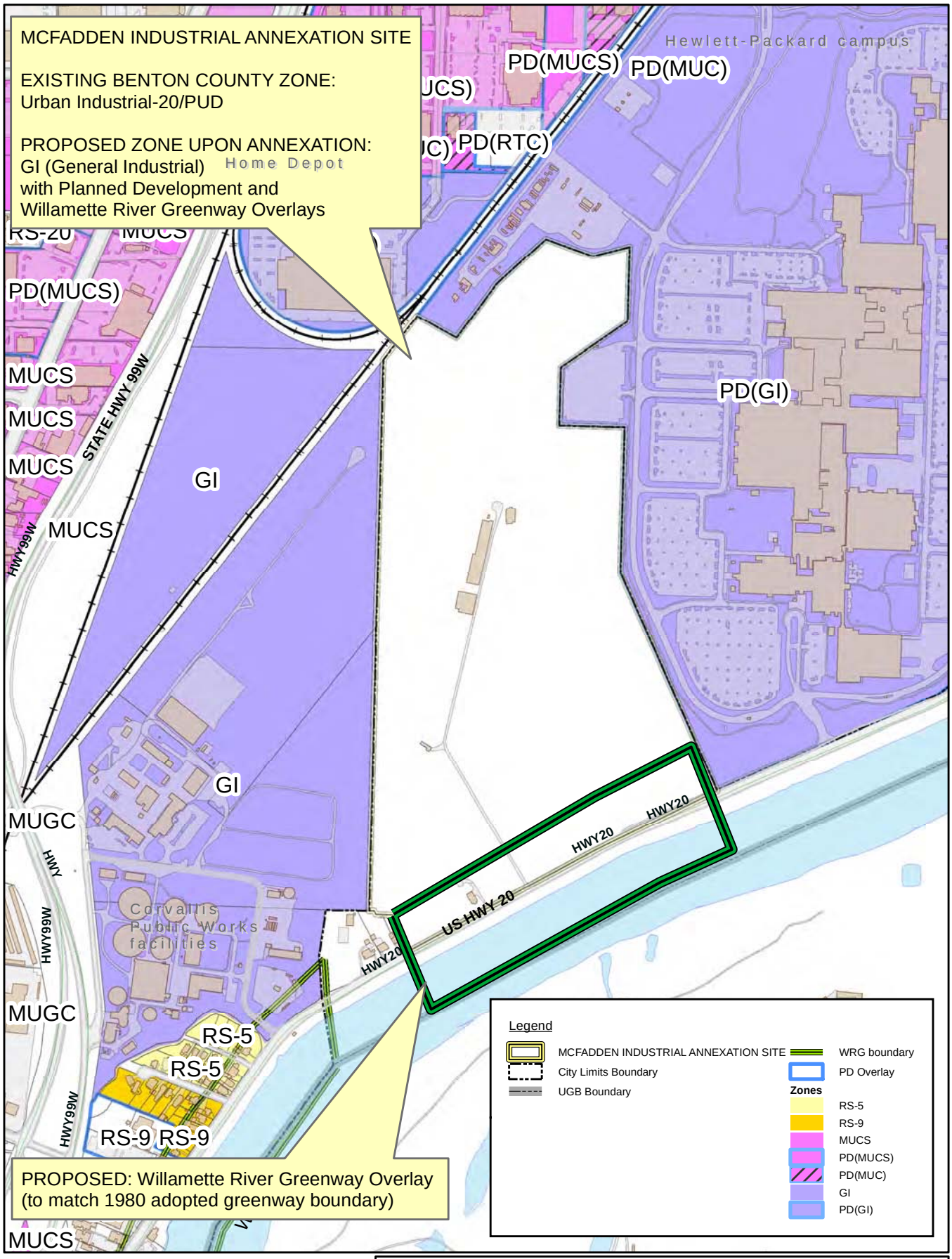
MCFADDEN INDUSTRIAL ANNEXATION
(ANN11-00001 / ZDC11-00002 / PLD11-00002 / WRG11-00001)
PLANNING COMMISSION STAFF REPORT
ATTACHMENT A-3

0 190 380 760 Feet

Corvallis Planning Division
501 SW Madison Ave
Corvallis, OR 97333
541.766.6908
Planning@ci.corvallis.or.us

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-83

Zone Map (Existing and Proposed)



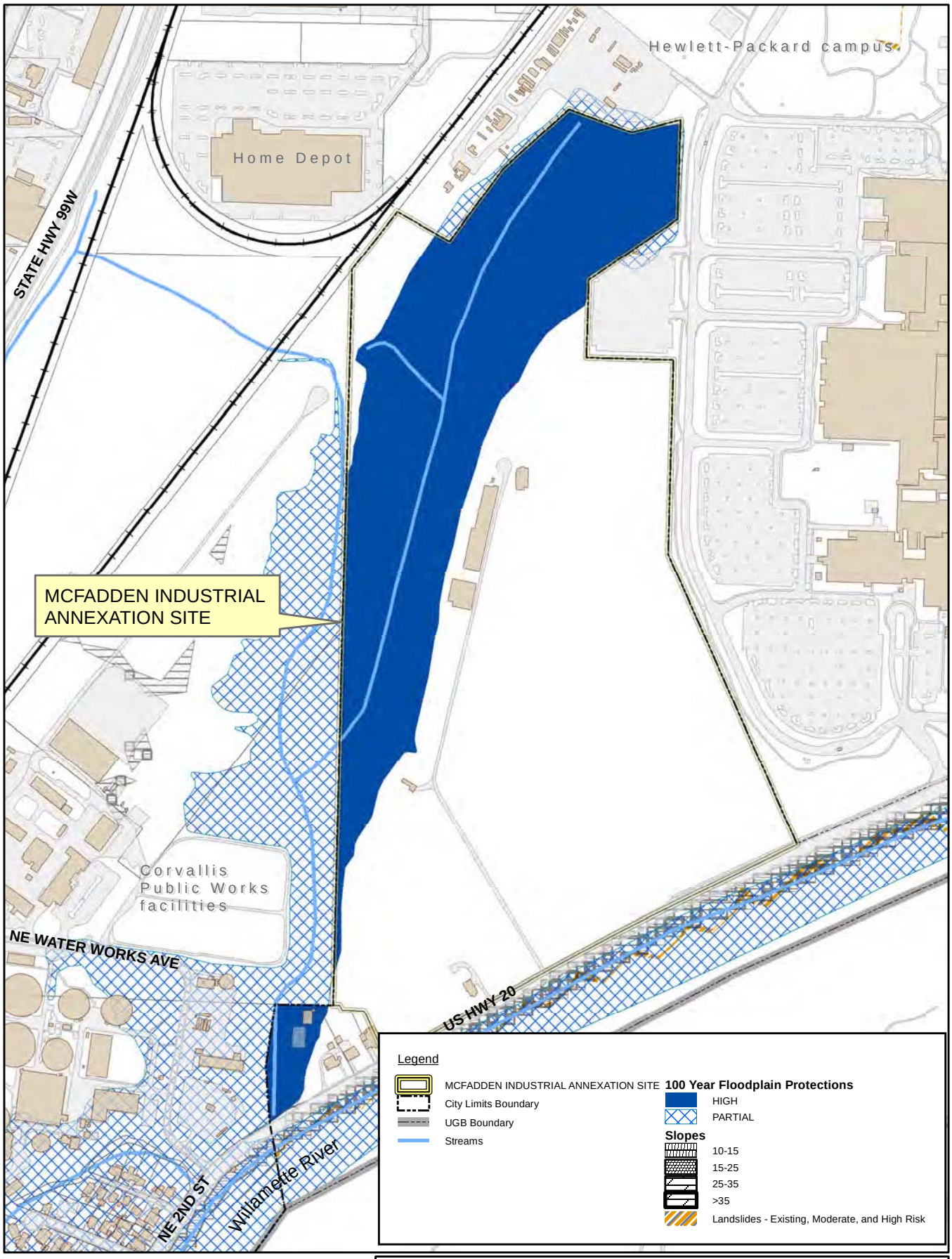
MCFADDEN INDUSTRIAL ANNEXATION
(ANN11-00001 / ZDC11-00002 / PLD11-00002 / WRG11-00001)
PLANNING COMMISSION STAFF REPORT
ATTACHMENT A-4

0 255 510 1,020 Feet

Corvallis Planning Division
501 SW Madison Ave
Corvallis, OR 97333
541.766.6908
Planning@ci.corvallis.or.us

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-84

Natural Hazards Map



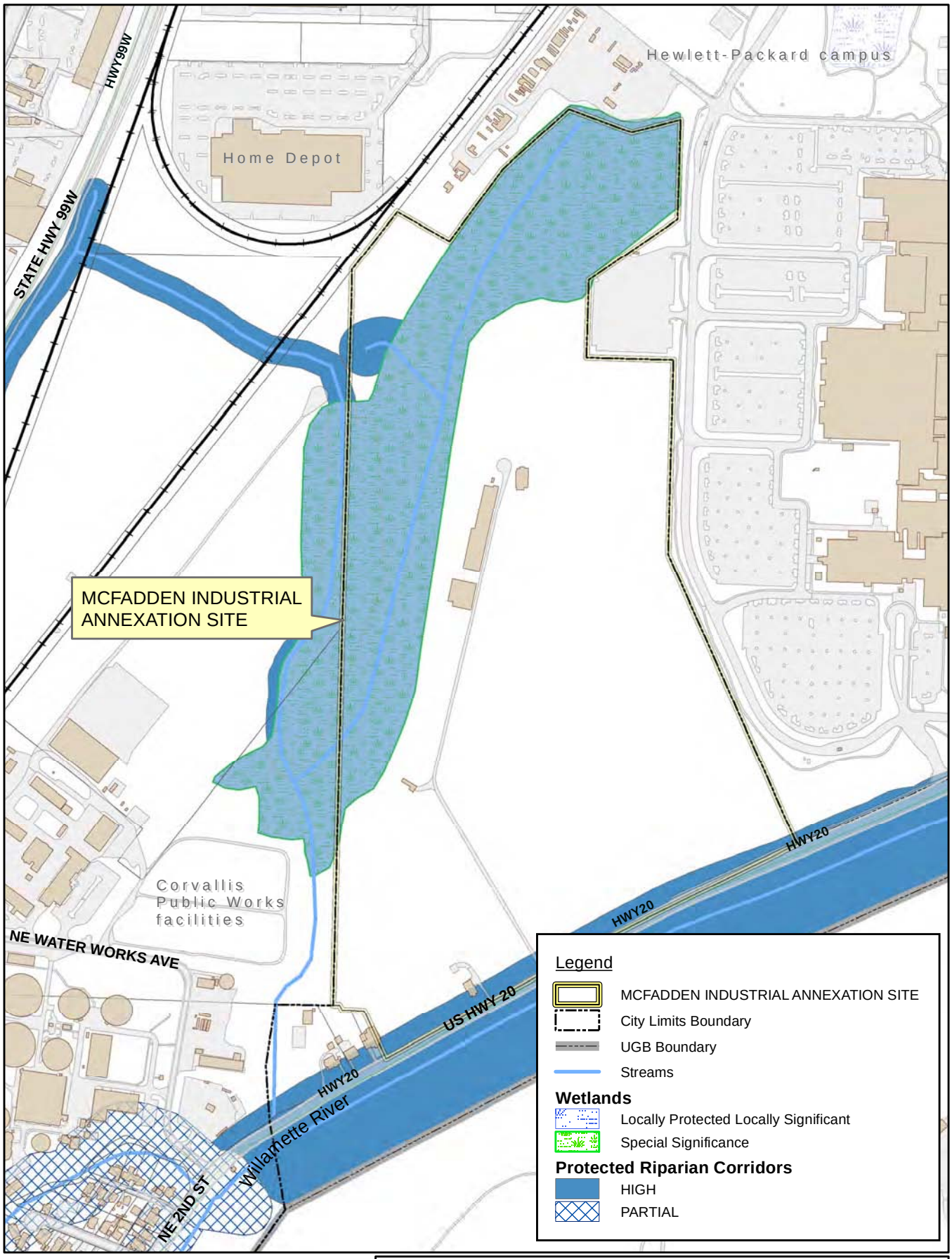
MCFADDEN INDUSTRIAL ANNEXATION
(ANN11-00001 / ZDC11-00002 / PLD11-00002 / WRG11-00001)
PLANNING COMMISSION STAFF REPORT
ATTACHMENT A-5

0 190 380 760 Feet

Corvallis Planning Division
501 SW Madison Ave
Corvallis, OR 97333
541.766.6908
Planning@ci.corvallis.or.us

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-85

Natural Resources Map



MCFADDEN INDUSTRIAL ANNEXATION
(ANN11-00001 / ZDC11-00002 / PLD11-00002 / WRG11-00001)
PLANNING COMMISSION STAFF REPORT
ATTACHMENT A-6

0 190 380 760 Feet

Corvallis Planning Division
501 SW Madison Ave
Corvallis, OR 97333
541.766.6908
Planning@ci.corvallis.or.us

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-86

Figure 3: 2010 Corvallis Vacant Lands, By Zone

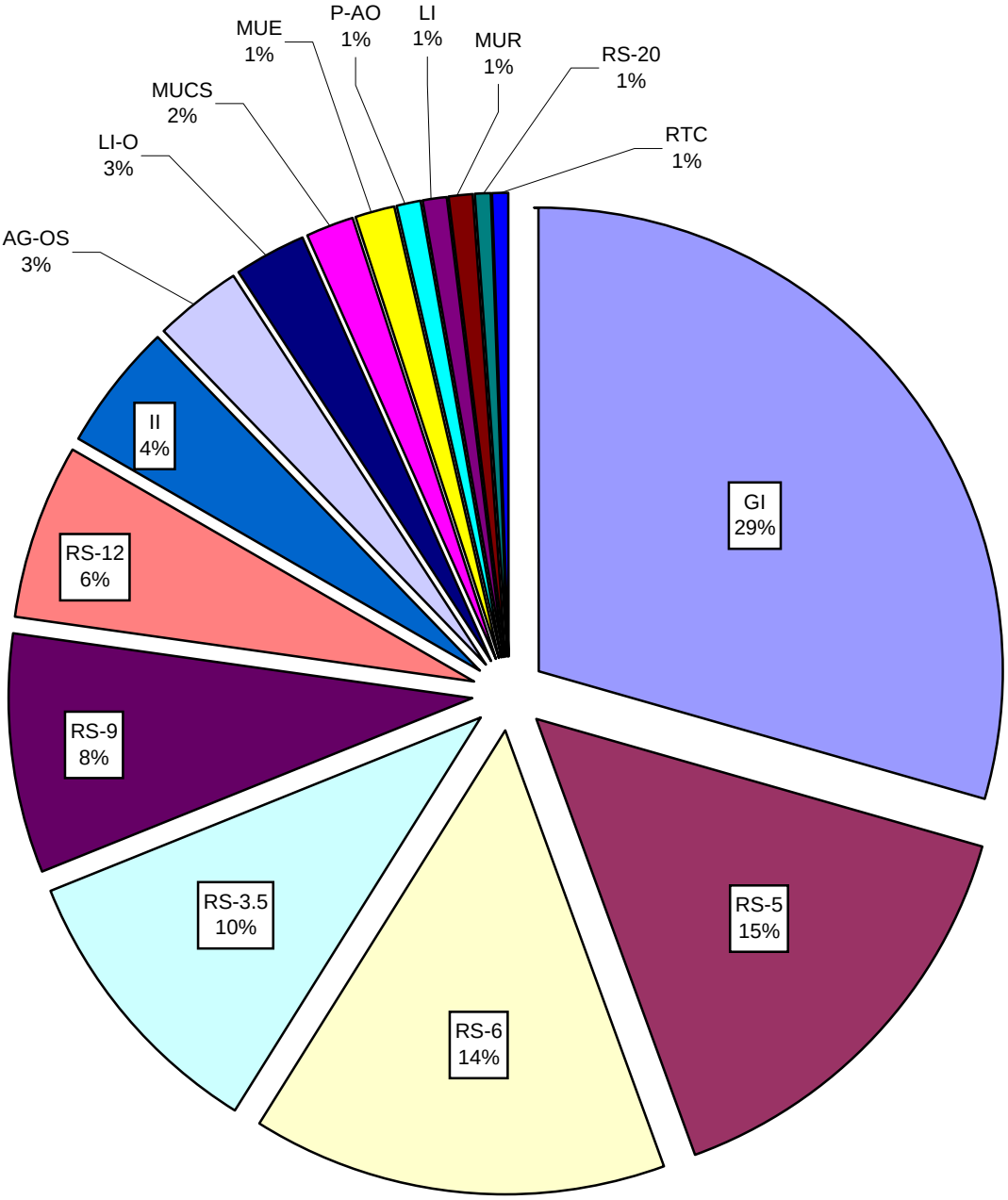


TABLE 11

2010 SUMMARY OF CORVALLIS VACANT LANDS (BY ZONE)

(BY BASE ZONE)

ZONE	[A] TOTAL ACRES	[B] % TOTAL AREA PER ZONE / TOTAL AREA IN CITY [1] (=A / 7,554 acres)	[C] VACANT AREA WITHIN ZONE (acres)	[D] % OF EACH ZONE THAT IS VACANT ([C]/[A])
RESIDENTIAL:				
Low Density				
RS-3.5	2267.79	30.02%	137.30	6.05%
RS-5	658.27	8.71%	206.39	31.35%
RS-6	432.51	5.73%	199.24	46.07%
Medium Density				
RS-9	699.56	9.26%	113.63	16.24%
RS-9 (U)	65.31	0.86%	0.05	0.08%
Medium-High Density				
RS-12	342.49	4.53%	86.38	25.22%
RS-12(U)	11.95	0.16%	0.00	0.00%
High Density				
RS-20	256.64	3.40%	8.44	3.29%
Other				
MUR	9.13	0.12%	9.13	100.00%
SUBTOTAL	4743.66		760.55	
COMMERCIAL:				
P-AO	71.93	0.95%	10.95	15.23%
NC-Major	93.73	1.24%	6.87	7.33%
NC-Minor	21.25	0.28%	6.50	30.59%
RF	8.77	0.12%	1.30	14.82%
CB	67.79	0.90%	0.84	1.24%
CBF	16.30	0.22%	0.59	3.62%
MUCS	186.58	2.47%	22.84	12.24%
MUC [1]	5.56	0.07%	2.32	41.73%
MUGC	45.12	0.60%	3.44	7.62%
SUBTOTAL	517.03		55.65	
INDUSTRIAL:				
MUT	42.00	0.56%	0.00	0.00%
LI-O	61.44	0.81%	36.49	59.40%
LI	11.27	0.15%	11.27	99.96%
GI	781.84	10.35%	406.39	51.98%
II	79.14	1.05%	61.98	78.31%
RTC	94.95	1.26%	8.51	8.96%
MUE	79.96	1.06%	19.50	24.39%
SUBTOTAL	1150.61		544.14	
OTHER:				
AG-OS	612.27	8.11%	39.60	6.47%
OSU	530.51	7.02%	0.00	0.00%
SUBTOTAL	1142.78		39.60	
TOTAL-ALL ZONES	**7554.08**		**1399.93**	

[1] MUC zone is attributed to property with a Planned Development (PD) Overlay that remained in effect after LDC map adoption.

TABLE 12 (continued)

2010 SUMMARY OF CORVALLIS VACANT LANDS (BY ZONE)

(BY ZONE, WITH PLANNED DEVELOPMENT ITEMIZATION)

ZONE	[A] TOTAL ACRES	[B] % TOTAL AREA PER ZONE / TOTAL AREA IN CITY [1] (=A / 7,554 acres)	[C] VACANT AREA WITHIN ZONE (acres)	[D] % OF EACH ZONE THAT IS VACANT ([C]/[A])
COMMERCIAL:				
P-AO	23.42	0.31%	0.00	0.00%
PD(P-AO)	48.52	0.64%	10.95	22.58%
NC-Major	28.56	0.38%	5.89	20.63%
PD(NC-Major)	65.18	0.86%	0.98	1.50%
NC-Minor	17.74	0.23%	3.59	20.23%
PD(NC-Minor)	3.50	0.05%	2.91	83.05%
RF	8.77	0.12%	1.30	14.82%
CB	67.79	0.90%	0.84	1.24%
CBF	16.30	0.22%	0.59	3.62%
MUCS	142.15	1.88%	20.04	14.10%
PD(MUCS)	44.43	0.59%	2.80	6.30%
PD(MUC) [2]	5.56	0.07%	2.32	41.71%
MUGC	44.90	0.59%	3.44	7.66%
PD(MUGC)	0.23	0.00%	0.00	0.00%
subtotal (commercial):	517.03	6.84%		
INDUSTRIAL:				
MUT	42.00	0.56%	0.00	0.00%
LI-O	21.47	0.28%	6.86	31.95%
PD(LI-O)	39.97	0.53%	29.64	74.14%
PD(LI)	11.27	0.15%	11.27	100.00%
GI	192.80	2.55%	10.64	5.52%
PD(GI)	589.04	7.80%	395.75	67.18%
II	0.34	0.00%	0.00	0.00%
PD(II)	78.80	1.04%	61.98	78.65%
RTC	92.95	1.23%	8.51	9.16%
PD(RTC)	2.00	0.03%	0.00	0.00%
MUE	63.69	0.84%	3.91	6.13%
PD(MUE)	16.28	0.22%	15.60	95.82%
subtotal (industrial):	1,150.61	15.23%		
OTHER:				
AG-OS	499.50	6.61%	1.59	0.32%
PD(AG-OS)	112.77	1.49%	38.01	33.71%
OSU	530.51	7.02%	0.00	0.00%
subtotal (other):	1,142.78	15.13%		
SUBTOTAL (NON-RESIDENTIAL)	2,810.42	37.20%	639.39	
TOTAL-ALL ZONES	**7,554.08**		**1399.93**	

[1] Total area excludes public rights-of-way.

[2] MUC (Mixed-Use Commercial) zone is subject to previously approved Planned Development and associated conditions of approval. MUC zone is not present in the 2006 Land Development Code.

TABLE 16 (NON-RESIDENTIAL ZONES)

2010 SUMMARY OF CORVALLIS VACANT LANDS CONSIDERING NATURAL FEATURES CONSTRAINTS (BY ZONE)

without consideration of MADA allowances [2]

BASE ZONE	[A] AREA OF ZONE WITHIN CITY LIMITS (acres)	[B] VACANT AREA WITHIN ZONE (acres)	[C] VACANT AREA WITHIN ZONE REMAINING AFTER NATURAL FEATURES CONSTRAINTS, BUT PRIOR TO APPLICATION OF MADA [2] (acres)	[D] % OF ZONE THAT IS VACANT (C/A) CONSIDERING NATURAL FEATURES CONSTRAINTS, BUT PRIOR TO APPLICATION OF MADA [2]
COMMERCIAL:				
P-AO	71.931327	10.95	10.94	15.21%
NC-Major	93.73	6.87	6.87	7.33%
NC-Minor	21.25	6.50	6.51	30.63%
RF	8.772318	1.30	0.51	5.77%
CB	67.788168	0.84	0.82	1.21%
CBF	16.297414	0.59	0.53	3.24%
MUCS	186.57709	22.84	19.22	10.30%
MUC [1]	5.56	2.32	2.12	38.15%
MUGC	45.12308	3.44	2.82	6.24%
INDUSTRIAL:				
MUT	42.004844	0.00	0.00	0.00%
LI-O	61.436835	36.49	35.96	58.53%
LI	11.27	11.27	0.06	0.53%
GI	781.837322	406.39	398.72	51.00%
II	79.144384	61.98	25.94	32.77%
RTC	94.953316	8.51	7.29	7.68%
MUE	79.963715	19.50	18.57	23.23%
OTHER:				
AG-OS	612.270149	39.60	2.23	0.36%
OSU	530.509297	0.00	0.00	0.00%
TOTAL NON-RESIDENTIAL	2810.42	639.39	539.11	
TOTAL RESIDENTIAL	4743.66	760.55	519.75	
TOTAL - ALL ZONES	**7554.08**	**1399.93**	**1058.87**	

[1] MUC zone is attributed to property with a Planned Development (PD) Overlay that remained in effect after LDC map adoption.

[2] Amount of vacant acreage does not factor in areas that may be developable per MADA provisions.

Table S-1. Comparison of land need and land supply, Corvallis UGB, 1996-2020

Plan Designation	Land Need		Land Supply			
	Net Acres	Gross Acres	Unconst. Vacant Acres	Redev Acres[a]	Total Buildable Acres	Surplus/ Deficit
Agriculture			174		174	174
Commercial/Office						
Commercial (CB/LC/SA)	60	76	109	27	136	60
Office (PAO)	176	220	32	1	33	-187
Comm/Office Total	**237**	**296**	**141**	**28**	**169**	**-127**
Industrial						
Heavy Industrial (GI/II)	35	44	1,101	49	1,150	1,106
Light Industrial (LI/RTC)	86	108	82	4	86	-22
Industrial Total	**121**	**152**	**1,182**	**53**	**1,236**	**1,084**
Intensive Development Sector[b]			**465**	**0**	**465**	**465**
Public-Institutional	**525**	**657**	**94**	**0**	**94**	**-563**
Residential						
Low Density Residential	337	438	3,876		3,876	3,438
Medium Density Residential	122	156	673		673	516
Medium-High Density Residential	101	126	99	7	107	-20
High Density Residential	16	21	7	8	15	-5
Residential Total	**576**	**741**	**4,655**	**15**	**4,670**	**3,930**
No Plan Designation				**16**	**16**	**16**
Total, All Designations	**1,460**	**1,845**	**6,711**	**113**	**6,824**	**4,979**

Source: ECONorthwest, 1998.

[a] Redevelopable land includes commercial, industrial and multi-family residential (medium-high and high) land.

[b] No land need was allocated to this sector. The Intensive Development Sector is a mixed use designation that can accommodate residential and commercial uses.

A land inventory and need analysis that complies with state requirements for long-run planning is not the same as a market analysis for a development proposal, which typically has a short-run view (1-3 years). In the short-run, land available for development may be constrained by lack of proper zoning, lack of services, neighborhood opposition to development, the situation and expectations of land owners and users, and so on. In the long-term, it is reasonable to assume that prices, preferences, and policies will adjust so that land that is vacant and buildable becomes available for development.

Thus, it is not uncommon for a long-run land need inventory to find ample land supply to meet state requirements at the same time land and housing prices are rising and developers and builders are having difficulty finding buildable land at prices they are willing to pay. Such appears to be the case in Corvallis, where the median sales price of homes increased almost

City of Corvallis

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-91

15% per year between 1990 and 1996. This report gives several reasons (e.g., lack of large-scale developers or builders, lack of parcels of sufficient size to allow large-scale development, annexation voting, speculation on vacant land, the cost of providing infrastructure) that explain why short-run problems with land availability and housing price can exist even when a long-run analysis shows ample land to accommodate expected growth.

The City generally has sufficient land designated residential and industrial to accommodate expected growth, but some minor adjustments should be considered

State statutes and good planning require a more detailed evaluation to determine whether the buildable land inside the UGB is planned in such a way that the amount of buildable land by plan designation (e.g., medium-density residential) is adequate to meet the needs for that use. It is obviously possible to have a surplus of land in the UGB in the aggregate, but not enough land designated for certain types of use.

Not only does Corvallis have more than sufficient buildable land within the existing urban growth boundary to meet long-term growth needs; it also has sufficient buildable land designated for residential and industrial uses to meet projected needs for these broad land use categories. Some issues that require attention, and possible policies, are:

- *Residential land*—a small deficit of land (estimated at 25 acres) exists in the Medium-High- and High-Density Residential designations. Some additions to the medium-high-density plan designation from either of the lower-density residential designations would be appropriate.

- *Industrial land*—a small deficit of land (estimated at 22 acres) exists in light industrial designations (LI/RTC). The City should either (a) continue to rely on its existing over-supply of Industrial land (GI/II) to meet Light Industrial needs, or (b) re-designate some Industrial land to Light Industrial to assure greater compatibility and choice among alternative Light Industrial sites.

- *Commercial/Office land*—a substantial deficit (estimated at 187 acres) exists in land designated for office uses. The City could (a) continue to rely on its existing over-supply of Commercial land to meet more specific Office Commercial needs, and (b) re-designate some Commercial land (LC or SA) to Office (PAO) to assure greater compatibility and choice among alternative office commercial sites.

- *Public/institutional land*—a substantial deficit (estimated at 563 acres) exists for public/institutional land. Well over half of the need derives from the City's policy stating that it should add 35 acres of parkland for every 1,000 people added to the City's population. For these uses the City is probably not required to re-designate land to address the potential deficit. The City can rely on its oversupply of low-density residential land, its subdivision and PUD process, and the land taken out of the buildable land inventory because of its natural features (e.g., steep slopes, wetlands) to meet much of this need.

City of Corvallis

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-92

Table 3-12. Refined estimate of housing and land need by type within the Corvallis UGB, 1996-2020

Housing Type/ Plan Designation	Units	Expected Density DU/Net Acre	Net Acres	Net to Gross Assumption	Expected Density DU/Gross Acre	Gross Acres
Single Family						
Low Density	1,400	4.2	337	77%	3.2	438
Medium Density	600	8.2	73	77%	6.3	95
Subtotal	2,000	4.9	410	77%	3.8	533
Multi-Family						
Medium Density	400	8.2	49	80%	6.3	61
Medium-High Density	1,200	11.9	101	80%	9.5	126
High Density	400	24.4	16	80%	19.5	21
Subtotal	2,000	12.0	166	80%	9.6	208
Total	4,000	7.0	576	77%	5.4	741

Source: ECONorthwest, 1998.

Chapter 5 discusses the implications of this forecast for City policy (especially for the issue of whether more land is needed in the UGB), and how reasonable variations in the assumptions affect final conclusions and policy recommendations.

3.2 DEMAND FOR NON-RESIDENTIAL LAND

The demand for non-residential land in the Corvallis UGB is a function of future employment, the density of employment, and the specific type of employment on a given parcel. This section evaluates these variables and presents an estimate of demand for industrial land between 1996 and 2020.

3.2.1 EMPLOYMENT

Employment growth is the usual variable used to drive estimates of the demand for commercial and industrial built space, and hence for the demand for commercial and industrial land. Appendix C describes in more detail various issues related to employment forecasts. It concludes that:

- The number of employees in Corvallis in 1996 is estimated to have been 30,558
- The number of employees in Corvallis in 2020 will be 38,853. Between 1996 and 2020 the City will have to accommodate over 8,000 new employees
- The great majority of that growth is in government, trade, and services (see Appendix C for details).

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3.2.2 COMMERCIAL AND INDUSTRIAL LAND NEED

We used employee-per-acre ratios to estimate demand for non-residential land. The general approach begins with sector-level employment estimates. Employment added during the analysis period is then divided by employee-per-acre ratios to yield net land need in acres by sector. The final step is to allocate office and non-office based employment by sector and to aggregate up to generalized land use types.

Because detailed employment data have not been previously compiled by government agencies for Corvallis, we used information from the Eugene-Springfield metro area (1993 and 1994) to estimate employee-per-acre (EPA) ratios. The first set of figures (ECONW estimate) are EPA ratios we developed using actual employment and land areas.[6] The second set of figures are the EPA ratios LCOG used in the 1993 *Buildable Lands Inventory* for Eugene-Springfield.

As Table 3-13 shows, the EPA ratios we calculated vary substantially by sector, while the LCOG estimates were relatively constant. Manufacturing sectors tend to have lower EPAs than office-based sectors. Because we did not remove the vacant portions of partially-developed parcels and land in other non-employment based uses from the database, our EPA estimates are lower than LCOG's, which tend to look at theoretical maximums under the assumption of efficient use of land and building space.

Moreover, our evaluation of 1994 employment and parcel data indicate significant variation occurs within individual sectors. This is due, in part, to inefficiencies of land uses, and the fact that some employment occurs on parcels that are only partially used for that employment. Our analysis of the Eugene-Springfield data led to several other conclusions:

- Employment is not always consistent with plan designation. For example, commercial uses occurring on land designated for industrial uses.
- Some employment sectors provide difficulties in developing EPA ratios. For example, many construction-related businesses are based out of residences.
- Most businesses have some level of office-based employment associated with them. LCOG accounted for this in the Eugene-Springfield *Industrial Lands Inventory* by allocating a percentage of employment for each sector to office, and using different EPAs for office use.

[6] Appendix C contains a more detailed description of the EPA ratios.

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Table 3-13. Floor area and employee per acre ratios in the Eugene/Springfield area, 1994

Division Title	ECONW Estimates	LCOG Estimates
Agriculture, Forestry, and Fishing	5.1	N/A
Mining	5.9	35
Construction	6.4	35
Manufacturing	12.6	25
Transportation, communications, and utilities	6.8	25
Wholesale trade	8.2	25
Retail trade	21.2	25
Finance, insurance, and real estate	22.4	44
Services	14.5	25
Public Administration	12.1	25

Source: LCOG, ECONorthwest.

Table 3-14 uses employment forecasts by sector (Appendix C) and the EPA ratios in Table 3-13 to estimate non-residential land need for the Corvallis UGB between 1996 and 2020. To account for variations in employment densities, we used the LCOG estimates as a upper bound for each sector and rounded our EPAs up to the next higher increment of 5 for each sector. The analysis shows a net non-residential land need of 429 acres and a gross land need (assuming net land is 75% of gross land) of 536 acres.

The output of the EPA ratio analysis is net and gross land need by sector. Generalized plan designations for non-residential use include heavy industrial (the City classifications of General and Intensive), light industrial, commercial, and office. To allocate that land need to specific plan designations, we made the following assumptions about which plan designations employment would be most likely to locate in:

- Heavy industry–includes lumber and wood products; food products; mining; agriculture, forestry, and fishing; other durable manufacturing; and other non-durable goods
- Light industrial—includes machine and electrical equipment; construction; transportation, communication and utilities; and wholesale trade
- Commercial—includes retail trade
- Office—includes finance, insurance, real estate; and services

Although government employment is included in the land need estimate shown in Table 3-14, we assume all governmental employment will be absorbed on public land as shown in Table 3-15.

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Table 3-14. Commercial and industrial land need by sector 1996-2020

Sector	EPA	Employment 1996.	Employment 2020	Employment 1996-2016 New	Land Needs (Acres) 1996-2020 Net	Land Needs (Acres) 1996-2020 Gross
Manufacturing		7,639	8,789	1,149	64	80
Lumber & Wood	10	611	641	30	3	4
Mach & Electric Equip	20	6,325	7,130	804	40	50
Other Durable	15	214	344	130	9	11
Food Products	30	92	106	14	0	1
Other Non-Durable	15	397	568	171	11	14
Non-Manufacturing		22,918	30,064	7,146	365	456
Ag, Forestry, Fishing	5	458	517	58	12	15
Mining	10	-	-	-	-	-
Construction	20	703	958	255	13	16
TC&U	10	642	815	173	17	22
Trade		4,584	6,221	1,637	76	95
Wholesale Trade	10	397	555	157	16	20
Retail Trade	25	4,156	5,666	1,510	60	76
Finance, Insurance, Real Estate	25	947	1,354	407	16	20
Services	20	6,417	9,617	3,200	160	200
Government	20	9,167	10,583	1,415	71	88
Total Wage and Salary Employment		**30,558**	**38,853**	**8,295**	**429**	**536**

Source: Data compiled from OEA employment forecasts (1997) and Oregon Employment Department employment by sector (1997). Analysis by ECONorthwest 1998.

Chapter 5 discusses the implications of this forecast for City policy (especially for the issue of whether more land is needed in the UGB), and how reasonable variations in the assumptions affect final conclusions and policy recommendations.

3.2.3 PUBLIC/INSTITUTIONAL LAND NEED

Public facilities such as schools, hospitals, governments, churches, parks, and other non-profit organizations will expand as population increases. Many communities have specific standards for parks. School districts typically develop population projections to forecast attendance and need for additional facilities.

New growth will cause demand for parks on lands not now owned by the City. The City estimates that it currently has about 20 acres of parkland per 1000 people. In the May 1991 Land Acquisition Strategy report, Corvallis specifies 35 acres of parkland for every 1,000 residents. Preliminary estimates are that there are 115 acres of vacant land designated as parkland. Given that the City does not currently meet the standards it is imposing on new development, we will assume that any vacant land the City owns for

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1,845 acres. This need is fairly evenly distributed between residential land, non-residential land, and public/institutional land.

Table 3-16. Summary of estimated land need, Corvallis UGB, 1996-2020

Use Type	Net Acres	Gross Acres
Residential		
Single Family		
Low Density	337	438
Medium Density	73	95
Subtotal	410	533
Multi-Family		
Medium Density	49	61
Medium-High Density	101	126
High Density	16	21
Subtotal	166	208
Residential Total	576	741
Non-residential		
Heavy Industrial	35	44
Light Industrial	86	108
Commercial	60	76
Office	176	220
Subtotal	358	447
Public and Institutional		
Public	438	548
Institutional	87	109
Subtotal	525	657
Total	1,460	1,845

Source: ECONorthwest, 1998.

[a]Includes "General" and "Intensive" industrial designations

Chapter 4 estimates the amount of land available to supply this estimated need; Chapter 5 compares the need to the supply and discusses implications for City policy.

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Table 4-4. Vacant parcels by size class inside the Corvallis UGB in 1996

Plan Designation	Acres			Number of Fully Vacant/Partially Vacant Parcels (FV/PV)						
	Total	Fully Vacant	Partially Vacant	Total Parcels (FV/PV)	<1 Acre (FV/PV)	1-4 Acres (FV/PV)	5-9 Acres (FV/PV)	10-19 Acres (FV/PV)	20-49 Acres (FV/PV)	50 or More Acres (FV/PV)
Agriculture	173.7	173.7	0.0	1/0	0/0	0/0	0/0	0/0	0/0	1/0
Conservation	242.0	124.5	117.5	34/26	11/3	14/15	5/4	3/3	1/1	0/0
Ag/OS Total	415.7	298.2	117.5	35/26	11/3	14/15	5/4	3/3	1/1	1/0
Central Business	3.3	2.0	1.3	11/4	11/3	0/1	0/0	0/0	0/0	0/0
Linear Commercial	41.2	14.2	27.0	22/60	17/32	4/28	1/0	0/0	0/0	0/0
Professional Administrative Office	32.2	15.8	16.4	24/11	18/7	6/2	0/2	0/0	0/0	0/0
Shopping Area	64.0	33.8	30.2	15/14	6/4	8/8	1/1	0/1	0/0	0/0
Comm/Office Total	140.8	65.8	75.0	72/89	52/46	18/39	2/3	0/1	0/0	0/0
General Industrial	969.2	410.0	559.2	32/58	10/13	11/29	2/6	3/2	2/4	4/4
Intensive Industrial	131.4	100.9	30.5	5/17	0/1	2/9	0/4	0/3	1/0	2/0
Limited Industrial	36.3	30.1	6.2	13/9	8/6	3/3	1/0	1/0	0/0	0/0
Research-Technology Center	45.4	28.7	16.7	17/8	10/1	5/4	2/2	0/1	0/0	0/0
Industrial Total	1,182.2	569.6	612.6	67/92	28/21	21/45	5/12	4/6	3/4	6/4
Intensive Development Sector	464.5	142.6	321.9	9/36	2/0	2/27	2/2	1/1	1/3	1/3
Mixed Use Total	464.5	142.6	321.9	9/36	2/0	2/27	2/2	1/1	1/3	1/3
Public-Institutional	94.3	55.0	39.3	10/7	3/3	3/2	1/1	2/0	1/1	0/0
Pub/Inst Total	94.3	55.0	39.3	10/7	3/3	3/2	1/1	2/0	1/1	0/0
Low Density Residential	3,875.7	1,947.4	1,928.3	614/921	440/492	98/349	34/46	11/11	21/17	10/6
Medium Density Residential	672.5	241.9	430.6	132/102	117/60	10/34	0/2	0/1	4/4	1/1
Med-High Density Residential	99.5	67.2	32.3	41/31	32/25	5/5	2/0	1/0	1/1	0/0
High Density Residential	7.3	2.9	4.4	9/7	8/5	1/2	0/0	0/0	0/0	0/0
Residential Total	4,655.0	2,259.4	2,395.6	796/1061	597/582	114/390	36/48	12/12	26/22	11/7
Total	6,952.4	3,390.5	3,561.9	989/1312	693/655	172/518	51/70	22/23	32/31	19/15

Source: LCOG/ECONorthwest, from City of Corvallis GIS & Benton County Assessor

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Table 4-3. Vacant land by plan designation within the Corvallis urban fringe in 1996

Plan Designation	Number of Parcels	Acres: Total	Unavail. for Dev.	Gross Avail. for Dev.	Con-strained	Net Avail. for Dev.
Agriculture	1	175.7	0.0	175.7[a]	2.0	173.7
Conservation	48	306.5	306.5	0.0	0.0	0.0
Ag/OS Total	**49**	**482.2**	**306.5**	**175.7**	**2.0**	**173.7**
General Industrial	29	574.7	10.0	564.7	75.7	489.0
Intensive Industrial	19	228.1	53.8	174.4	49.5	124.8
Industrial Total	**48**	**802.8**	**63.8**	**739.0**	**125.2**	**613.9**
Intensive Development Sector	45	613.1	18.0	595.1	130.5	464.5
Mixed Use Total	**45**	**613.1**	**18.0**	**595.1**	**130.5**	**464.5**
Public-Institutional	2	22.3	0.0	22.3	0.0	22.3
Pub/Inst Total	**2**	**22.3**	0.0	**22.3**	**0.0**	**22.3**
Low Density Residential	508	3,630.0	166.7	3,463.4	488.5	2,974.9
Medium Density Residential	12	124.8	4.0	120.8	26.9	93.9
Med-High Density Residential	6	66.1	1.5	64.6	8.5	56.2
Residential Total	**526**	**3,821.0**	**172.2**	**3,648.8**	**523.9**	**3,124.9**
No Data	1	66.0	66.0	0.0	0.0	0.0
No Data Total	**1**	**66.0**	**66.0**	0.0	0.0	0.0
Total	**671**	**5,807.4**	**626.5**	**5,180.9**	**781.6**	**4,399.3**

Source: LCOG/ECONorthwest, from City of Corvallis GIS & Benton County Assessor

[a]Six of the seven parcels designated for Agriculture inside the UGB are owned by OSU and assumed to be unavailable for development. The assessor's data had no information about ownership of the seventh parcel, which totals 175.7 acres. The agricultural designation only allows development of one unit per parcel. If this designation is retained through the planning period, this parcel would not have any significant development potential. For this analysis we treat it as buildable (assuming that it will convert to urban uses during the planning period).

4.2 VACANT LAND BY PARCEL SIZE

Parcel size and location are important factors in providing a balanced land supply. Table 4-4 shows net vacant land by plan designation and parcel size within the Corvallis UGB. The first column of the table shows plan designation. The following three columns show total net vacant acres, net vacant acres on fully vacant parcels and net vacant acres on partially developed. The final five columns show the number of parcels. The first numbers represents the number of fully vacant parcels; the second, the number of partially vacant parcels.

Consolidated ownership of land can affect the availability of land for development. To assess whether consolidated ownership could impact the

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long-term availability of land, we looked for owners that had three or more parcels more than 10 acres in size. About 160 parcels met these criteria.[3]

Analysis of individual ownership does not suggest that a handful of owners control the supply of vacant, buildable land. Note that for the purpose of this analysis, ownerships with similar assessor listings were considered, but some owners may have their property listed under multiple names. For vacant, unconstrained commercial land inside the city limits, two owners (out of 121) had 10 commercially-designated parcels (out of 161) totaling about 26 vacant, unconstrained acres (out of 141). For vacant, unconstrained industrial land inside the city limits, three owners (out of 77) had 15 industrially-designated parcels (out of 111) totaling about 102 vacant, unconstrained acres (out of 568). For vacant, unconstrained residential land inside the city limits, six owners (out of 1,027) had 63 residentially-designated parcels (out of 1,331) totaling about 490 vacant, unconstrained acres (out of 1,530). For vacant, unconstrained residential land inside the UGB, 19 owners (out of 1,416) had 119 residentially-designated parcels (out of 1,857) totaling about 1,378 vacant, unconstrained acres (out of 4,655).[4]

Our analysis is approximate. It does not get to the details of vacant, buildable parcels *with services immediately available,* which some brokers we interviewed believe is owned primarily by only a few landowners.

4.3 REDEVELOPMENT POTENTIAL

Redevelopment potential deals primarily with parcels with developed structures that are judged as likely to be demolished and new buildings constructed in their place. Parcels with redevelopable potential include commercial, multi-family residential (District Designation RS-12 or RS-20), or industrial parcels. Not all, or even a majority of parcels that meet these criteria for redevelopment *potential* will be assumed to redevelop during the planning period. The issue of *how much* land might redevelop over the planning period is discussed in the next chapter.

Table 4-5 shows a summary of developed parcels by improvement/land value ratio in 1996.[5] Parcels with improvement/land value ratios of less than 1:1 are considered to have more redevelopment potential, while parcels with improvement/land value ratios of more than 1:1 are considered to have less

[3] This does not include 64 parcels that met the criteria but did not have owner data in the GIS.

[4] These estimates probably understate the amount of consolidation. First, we had to estimate individual ownerships based on an exact match of owner names for each taxlot: errors in spelling or slight differences in data entry would cause us to identify two taxlots as having different ownerships, even though they really have common ownership. Second, though our report refers to *parcels,* we are actually dealing with *taxlots*. In most cases they are the same, but it is not uncommon for a parcel (a legally transferable lot of record) to consist of more than one taxlot, especially when the parcels are large.

[5] Developed parcels include parcels that are fully developed, and the developed portion of partially developed parcels.

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Table 5-1. Comparison of land need and land supply, Corvallis UGB, 1996-2020

Plan Designation	Land Need		Land Supply (Gross Acres)			
	Net Acres	Gross Acres	Unconst. Vacant Acres	Redev Acres[a]	Total Buildable Acres	Surplus/ Deficit
Agriculture			174		174	174
Commercial/Office						
Commercial (CB/LC/SA)	60	76	109	27	136	60
Office (PAO)	176	220	32	1	33	-187
Comm/Office Total	**237**	**296**	**141**	**28**	**169**	**-127**
Industrial						
Industrial (GI/II)	35	44	1,101	49	1,150	1,106
Light Industrial (LI/RTC)	86	108	82	4	86	-22
Industrial Total	**121**	**152**	**1,182**	**53**	**1,236**	**1,084**
Intensive Development Sector[b]			**465**	**0**	**465**	**465**
Public-Institutional	**525**	**657**	**94**	**0**	**94**	**-563**
Residential						
Low Density Residential	337	438	3,876		3,876	3,438
Medium Density Residential	122	156	673		673	516
Medium-High Density Residential	101	126	99	7	107	-20
High Density Residential	16	21	7	8	15	-5
Residential Total	**576**	**741**	**4,655**	**15**	**4,670**	**3,930**
No Plan Designation				**16**	**16**	**16**
Total	**1,460**	**1,845**	**6,711**	**113**	**6,824**	**4,979**

Source: ECONorthwest, 1998.

[a] Redevelopable land includes commercial, industrial and multi-family residential (medium-high and high) land.

[b] No land need was allocated to this sector. The Intensive Development Sector is a mixed use designation that can accommodate residential and commercial uses.

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Table 5-2. Comparison of land need and land supply, Corvallis city limit, 1996-2020

Plan Designation	Land Need		Land Supply (Gross Acres)			
	Net Acres	Gross Acres	Unconst. Vacant Acres	Redev. Acres[a]	Total Buildable Acres	Surplus/ Deficit
Commercial/Office						
Commercial (CB/LC/SA)	60	76	109	27	136	60
Office (PAO)	176	220	32	1	33	-187
Comm/Office Total	**237**	**296**	**141**	**28**	**169**	**-127**
Industrial						
Industrial (GI/II)	35	44	487	40	526	482
Light Industrial (LI/RTC)	86	108	82	4	86	-22
Industrial Total	**121**	**152**	**568**	**44**	**612**	**460**
Intensive Development Sector[b]						
Public-Institutional	**525**	**657**	**72**		**72**	**-585**
Residential						
Low Density Residential	337	438	901		901	463
Medium Density Residential	122	156	579		579	423
Medium-High Density Residential	101	126	43	7	50	-76
High Density Residential	16	21	7	8	15	-6
Residential Total	**576**	**741**	**1,530**	**15**	**1,545**	**804**
Total	**1,460**	**1,845**	**2,311**	**87**	**2,398**	**553**

Source: ECONorthwest, 1998.

[a] Redevelopable land includes commercial, industrial and multi-family residential (medium-high and high) land.

[b] No land need was allocated to this sector. The Intensive Development Sector is a mixed use designation that can accommodate residential and commercial uses.

5.2 SENSITIVITY ANALYSIS

Land needs analyses are premised on a number of assumptions that have a profound impact on the outcome of the analysis. Key assumptions that go into land need are population and employment forecasts, development density, and demographic shifts. The supply analysis tends to be more empirical in nature—the rate of redevelopment is the key assumption on the supply side.

Table 5-3 shows the sensitivity of land need and supply to selected variables. The intent of this analysis is to provide an estimate of land need under conditions to make the need greater: a scenario where population and employment grow faster than expected, densities are lower than expected,

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and redevelopment occurs at a lower rate than expected. If, under such conditions, sufficient land still exists to meet the forecasted need, then a strong case has been made that the UGB does not need to be expanded.

Table 5-3. Sensitivity of land need and supply

Change in Assumption	Affect
Forecasts	
Increase 2020 population forecast	The City has an acknowledged 2020 population forecast of 58,461. The 2020 Vision process developed a forecast of 63,500. All other things being equal, this increases the residential land need by about 375 gross acres. Sufficient residential land exists to accommodate the additional need.
Increase 2020 employment forecast	Increasing the employment growth rate from 1.0% to 2.0% annually increases commercial and industrial land need by about 690 gross acres (about 125%). About 450 acres of this additional land need would be for commercial land, while 240 would be for industrial land.
Land Use	
Decrease 1996-2020 average residential density from 7.5 du/net acre to 6.0 du/net acre to account for underbuild	Corvallis needs 4000 units between 1996 and 2020 to accommodate population growth. Decreasing the density from 7.5 du/net acre to 6.0 du/net acre increases residential land need by about 23% (175 gross acres).
Decrease overall EPA from 20 to 15	Decreasing the employee-per-acre ratio from 20 to 15 yields an increase non-residential land need of about 28% (about 150 acres).
Change the single-family/multi-family residential split for new development from 50%/50% to 70% single-family and 30% multi-family	The split of single-family and multi-family units impacts land needs. All things being equal, more single family units equates to a greater land need. For the base case analysis we used a 50%/50% sf/mf split, consistent with development trends in Corvallis over the past 5 years. The RELM model predicts a big shift: 70%/30% sf/mf. Changing the split while holding densities constant increases the overall residential land need by about 15% (about 125 acres)
Redevelopment potential	About 115 acres of land within the UGB were considered to have redevelopment potential. The base case assumption was that 25% of land with redevelopment potential would redevelopment between 1996 and 2020. Land with redevelopment potential account for less than 0.2% of vacant land. Reducing the assumption to 10% would reduce redevelopment potential to about 50 acres.

Source: ECONorthwest

For all of these scenarios, Corvallis still has a surplus of vacant buildable land. Even combining all of the factors described in Table 5-3 yields a total land need of about 3,360 acres, while reducing supply by only 50 acres: the

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Table E-8. Developed Land by Plan Designation (city limit & urban fringe)

All land inside the Corvallis UGB

Plan Designation	Number of Parcels	Acres: Total	Avg Parcel Size	Max Parcel Size	Min Parcel Size	Percent of Acres by Area	Percent of Total Acres
Inside the city limit							
Conservation	58	473.3	8.2	135.4	0.1	11.7%	6.4%
Ag/OS Total	58	473.3	8.2			11.7%	6.4%
Central Business District	459	95.9	0.2	4.7	0.0	2.4%	1.3%
Linear Commercial	169	96.0	0.6	5.3	0.0	2.4%	1.3%
Professional Office	91	11.9	0.1	1.1	0.0	0.3%	0.2%
Shopping Area	92	42.1	0.5	5.1	0.0	1.0%	0.6%
Comm/Office Total	811	245.9	0.3			6.1%	3.3%
General Industrial	46	140.9	3.1	29.0	0.1	3.5%	1.9%
Intensive Industrial	3	5.8	1.9	3.1	0.3	0.1%	0.1%
Limited Industrial	24	10.9	0.5	3.2	0.1	0.3%	0.1%
Research-Technology Center	11	12.9	1.2	6.6	0.2	0.3%	0.2%
Industrial Total	84	170.5	2.0			4.2%	2.3%
Public-Institutional	112	692.9	6.2	199.1	0.1	17.1%	9.4%
Pub/Inst Total	112	692.9	6.2			17.1%	9.4%
Low Density Residential	7,188	1,672.4	0.2	18.9	0.0	41.3%	22.8%
Medium Density Residential	1,998	346.2	0.2	5.8	0.0	8.6%	4.7%
Medium-High Density Residential	702	238.1	0.3	17.2	0.0	5.9%	3.2%
High Density Residential	560	207.0	0.4	10.0	0.0	5.1%	2.8%
Residential Total	10,448	2,463.6	0.2			60.9%	33.5%
Subtotal	11,513	4,046.2	0.4			100.0%	55.1%
Urban Fringe							
Agriculture	6	957.4	159.6	476.2	3.2	29.0%	13.0%
Conservation	20	306.0	15.3	108.7	0.1	9.3%	4.2%
Ag/OS Total	26	1,263.4	48.6			38.3%	17.2%
General Industrial	39	43.1	1.1	11.3	0.0	1.3%	0.6%
Intensive Industrial	11	7.7	0.7	3.0	0.1	0.2%	0.1%
Industrial Total	50	50.8	1.0			1.5%	0.7%
Intensive Development Sector	14	16.9	1.2	9.5	0.3	0.5%	0.2%
Mixed Use Total	14	16.9	1.2			0.5%	0.2%
Public-Institutional	6	1,486.8	247.8	580.9	29.7	45.1%	20.2%
Pub/Inst Total	6	1,486.8	247.8			45.1%	20.2%
Low Density Residential	262	477.0	1.8	168.1	0.0	14.5%	6.5%
Medium Density Residential	5	3.5	0.7	0.9	0.4	0.1%	0.0%
Residential Total	267	480.5	1.8			14.6%	6.5%
Subtotal	363	3,298.4	9.1			100.0%	44.9%
Grand Total	**11,876**	**7,344.6**	**0.6**				**100.0%**

Notes:
1/ Developed category includes lands unavailable for development (i.e., parks, conservation areas, etc.)

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
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City of Corvallis

Table E-9. Developed Land by Zoning (inside city limit)
All land inside the Corvallis City Limit

Zoning District	Number of Parcels	Acres: Total	Avg Parcel Size	Max Parcel Size	Min Parcel Size	Percent of Total Acres
Agriculture-Open Space	4	199.2	49.8	135.4	4.1	4.9%
Ag/OS Total	4	199.2				4.9%
Central Business	396	82.3	0.2	4.7	0.0	2.0%
Central Business Fringe	86	17.8	0.2	1.5	0.0	0.4%
Community Shopping	8	10.1	1.3	5.1	0.2	0.3%
Linear Commercial	165	93.8	0.6	5.3	0.0	2.3%
Professional and Administrative Office	95	17.4	0.2	4.1	0.0	0.4%
Shopping Area	77	28.4	0.4	4.4	0.0	0.7%
Shopping Area University	1	0.2	0.2	0.2	0.2	0.0%
Special Shopping	4	3.0	0.8	1.3	0.4	0.1%
Comm/Office Total	832	253.1				6.3%
General Industrial	45	139.8	3.1	29.0	0.1	3.5%
Intensive Industrial	3	5.8	1.9	3.1	0.3	0.1%
Limited Industrial	23	9.0	0.4	3.2	0.1	0.2%
Research Technology Center	5	25.0	5.0	13.8	0.3	0.6%
Industrial Total	76	179.6				4.4%
Oregon State University District	61	419.6	6.9	199.1	0.1	10.4%
Pub/Inst Total	61	419.6				10.4%
Low Density Residential-3.5	5,428	1,755.4	0.3	65.6	0.0	43.4%
Low Density Residential-5	1,645	320.2	0.2	6.5	0.0	7.9%
Low Density Residential-6	202	34.1	0.2	1.2	0.1	0.8%
Medium Density Residential-9	1,510	327.0	0.2	21.2	0.0	8.1%
Medium-High Density Residential	1,018	282.9	0.3	12.6	0.0	7.0%
High Density Residential	737	275.1	0.4	17.2	0.0	6.8%
Residential Total	10,540	2,994.7				74.0%
Grand Total	**11,513**	**4,046.2**				100.0%

Notes:
1/ Developed category includes lands unavailable for development (i.e., parks, conservation areas, etc.)

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Table E-15. Number of Fully Vacant Parcels by Plan Designation and Size Class
All land inside the Corvallis UGB

	Count of Parcels						
Plan Designation	**Total Parcels**	**<1 Acre**	**1-4 Acres**	**5-9 Acres**	**10-19 Acres**	**20-49 Acres**	**50 or More Acres**
Agriculture	1						1
Conservation	34	11	14	5	3	1	
Ag/OS Total	35	11	14	5	3	1	1
Central Business District	11	11					
Linear Commercial	22	17	4	1			
Professional Office	24	18	6				
Shopping Area	15	6	8	1			
Comm/Office Total	72	52	18	2			
General Industrial	32	10	11	2	3	2	4
Intensive Industrial	5		2			1	2
Limited Industrial	13	8	3	1	1		
Research-Technology Center	17	10	5	2			
Industrial Total	67	28	21	5	4	3	6
Intensive Development Sector	9	2	2	2	1	1	1
Mixed Use Total	9	2	2	2	1	1	1
Public-Institutional	10	3	3	1	2	1	
Pub/Inst Total	10	3	3	1	2	1	
Low Density Residential	614	440	98	34	11	21	10
Medium Density Residential	132	117	10			4	1
Medium-High Density Residential	41	32	5	2	1	1	
High Density Residential	9	8	1				
Residential Total	796	597	114	36	12	26	11
Grand Total	989	693	172	51	22	32	19

Notes:
1/Does not include partially vacant land

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City of Corvallis

Recommendations:

In this plan, *Recreational Trails and Pathways* are emphasized. The primary purpose of this trails system is to provide recreational walking, bicycling and hiking opportunities. That is not to say that these same trails may also meet some transportation needs as well.

The master plan identifies the primary trails within the community. In addition, local trails are needed to connect subdivisions with the city wide trail system.

Table 13
Summary of Trail Recommendations
Corvallis Planning Area

Trail Number	Site	Proposed Length (in Miles)	Type
T-1	Jackson Creek Trail	5.7	Paved/Unpaved
T-2	Frazier Creek Trail	2.3	Paved/Unpaved
T-3	CV Ridge Trail	3.6	Unpaved
T-4	Sequoia Creek Trail	2.2	Paved/Unpaved
T-5	Walnut Park Trail	2.2	Paved/Unpaved
T-6	Dixon Creek Trail	4.7	Paved/Unpaved
T-7	Highway 99 Trail	1.4	Paved
T-8	West Corvallis Trail	7.8	Unpaved
T-9	Walnut Boulevard Trail	3.5	Paved
T-10	Oak Creek Trail	2.8	Paved/Unpaved
T-11	OSU Trail/Midge Kramer Trail	1.8	Paved
T-12	Squaw Creek Trail (N)	2.1	Paved/Unpaved
T-13	Squaw Creek Trail (S)	2.0	Paved/Unpaved
T-14	Philomath-Corvallils Bike Path	4.3	Paved
T-15	Country Club Hill Trail	1.9	Paved/Unpaved
T-16	Millrace Trail	1.0	Paved/Unpaved
T-17	Ryan Creek Trail	1.1	Paved/Unpaved
T-18	Marys River Trail	6.8	Paved/Unpaved
T-19	Willamette Trail (W)	4.4	Paved/Unpaved
T-20	Willamette Trail (E)	5.6	Paved/Unpaved
T-21	Goodnight Creek Trail	2.3	Paved/Unpaved
T-22	South Corvallis Trail	2.5	Paved/Unpaved
T-23	Airport Trail	5.5	Paved/Unpaved
T-24	Buchanen – to- Circle	1.03	Paved/unpaved
T-25	Circle –to-Harrison	.73	Paved/Unpaved

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Table 17 (Continued)

	Facility	Planning	Acquisition	Development	Major Upgrade	Minor Improve.	No Action
OS-40	Goodnight Creek(P)	X	X				
OS-41	Willamette River Greenway (South) (P)	X	X				
OS-42	Mary's River(P)	X	X				
OS-43	Mary's River /Willamette River Connector(P)	X	X				
OS-44	Booneville Channel & Slough (P)	X	X				
OS-45	Dry Creek(P)	X	X				
	Pathways/Trails						
T-1	Jackson Creek Trail (P)	X	X	X			
T-2	Frazier Creek Trail (P)	X	X	X			
T-3	CV Ridge Trail (P)	X	X	X			
T-4	Sequoia Creek Trail (P)	X	X	X			
T-5	Walnut Park Trail (P)	X	X	X			
T-6	Dixon Creek Trail (P)	X	X	X			
T-7	Highway 99 Trail					X	
T-8	West Corvallis Trail (P)	X	X	X			
T-9	Walnut Boulevard Trail					X	
T-10	Oak Creek Trail (P)	X	X	X			
T-11	OSU Trail/Midge Kramer Trail					X	
T-12	Squaw Creek Trail (N) (P)	X	X	X			
T-13	Squaw Creek Trail (S) (P)	X	X	X			
T-14	Philomath-Corvallils Bike Path						
T-15	Country Club Hill Trail (P)	X	X	X			
T-16	Millrace Trail (P)	X	X	X			
T-17	Ryan Creek Trail (P)	X	X	X			
T-18	Marys River Trail (P)	X	X	X			
T-19	Willamette Trail (W) (P)	X	X	X			
T-20	Willamette Trail (E) (P)	X	X	X			
T-21	Goodnight Creek Trail (P)	X	X	X			
T-22	South Corvallis Trail (P)	X	X	X			
T-23	Airport Trail (P)	X	X	X			

(P) = Proposed

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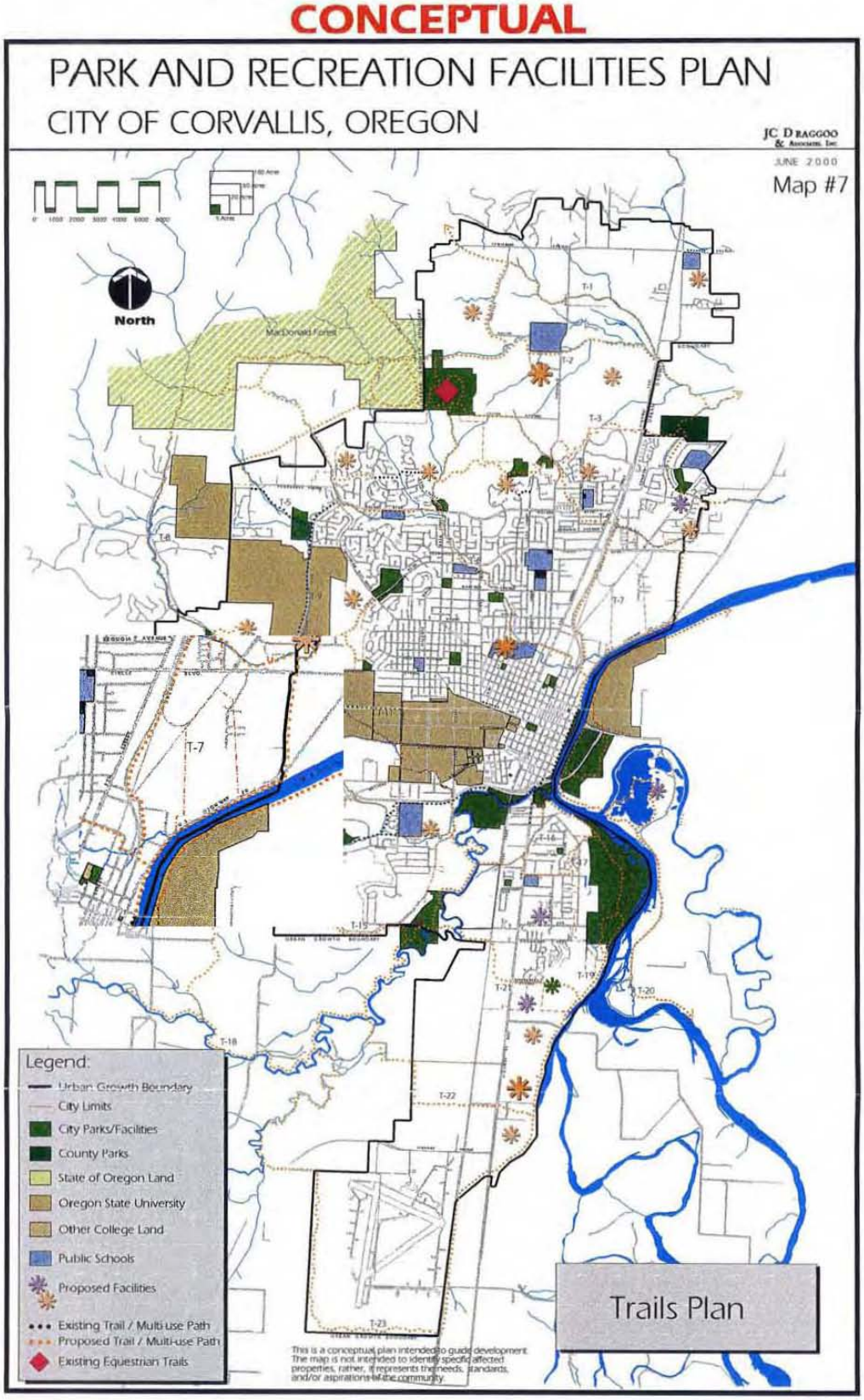

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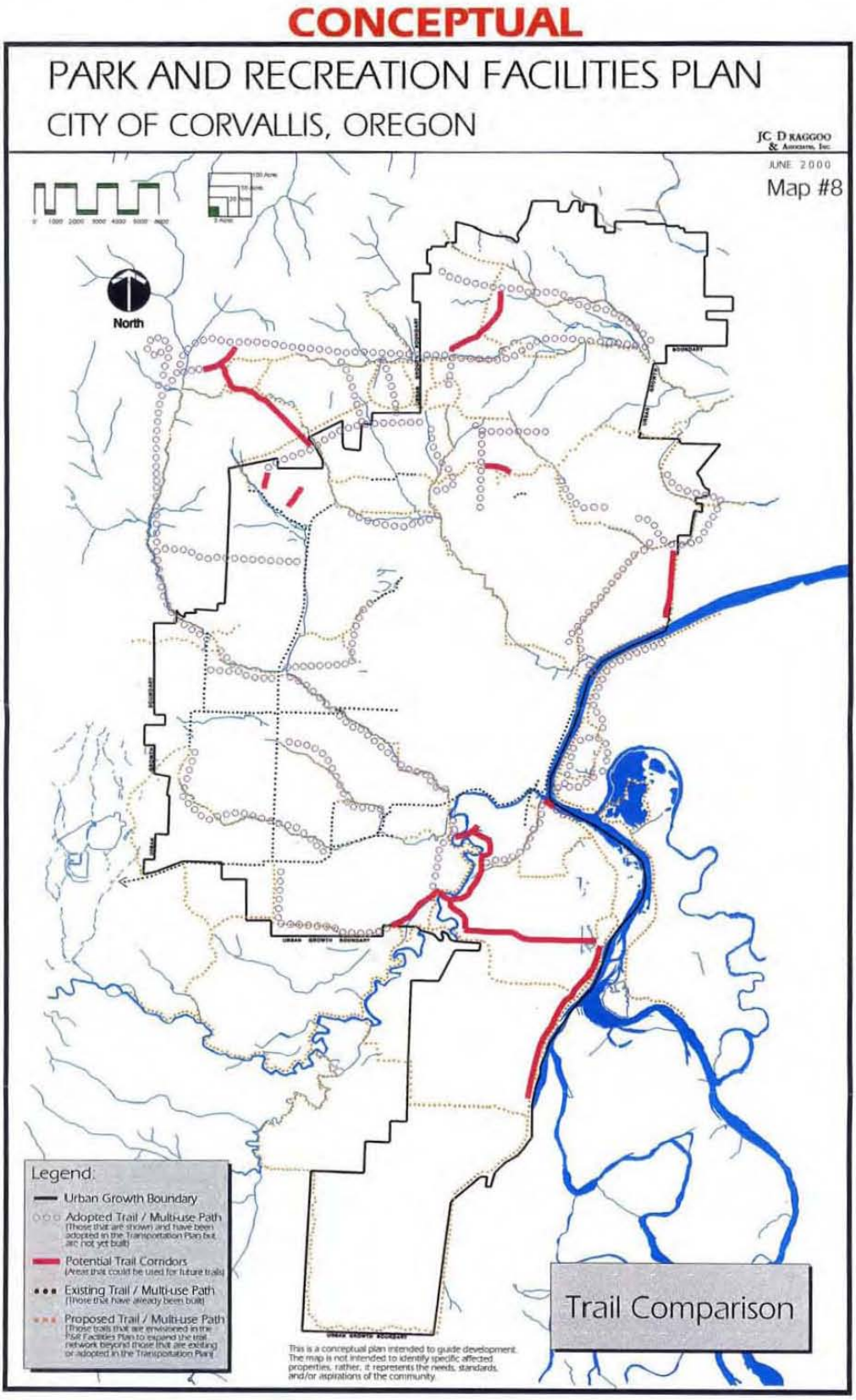

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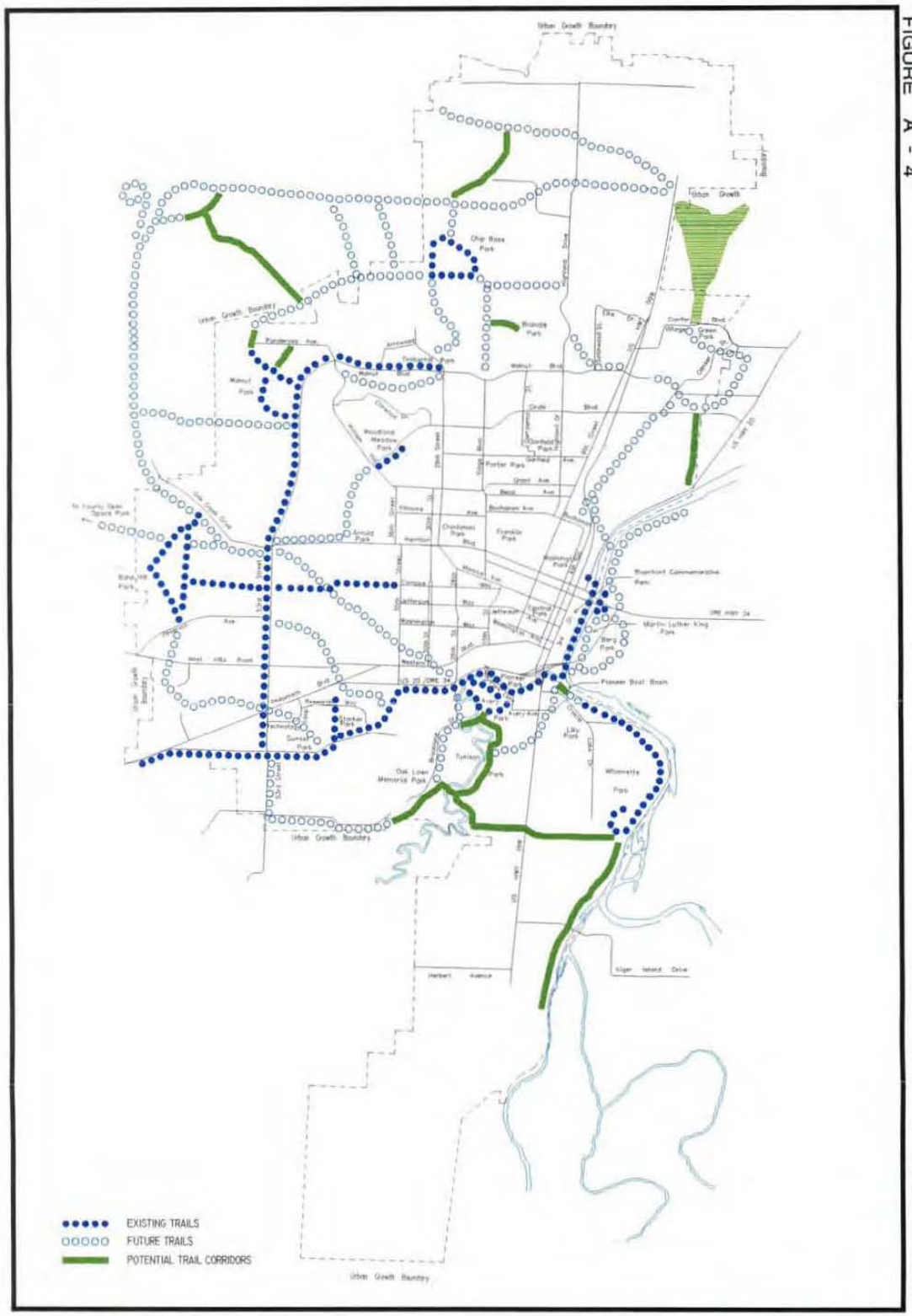
FIGURE A - 4



TRAILS MASTER PLAN

CORVALLIS GEOGRAPHIC INFORMATION SYSTEM

CITY OF CORVALLIS

COMMUNITY DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION - MAPPING/GIS SERVICES

DATE 9/1/96
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FIG. A-4

TRAILS MASTER PLAN

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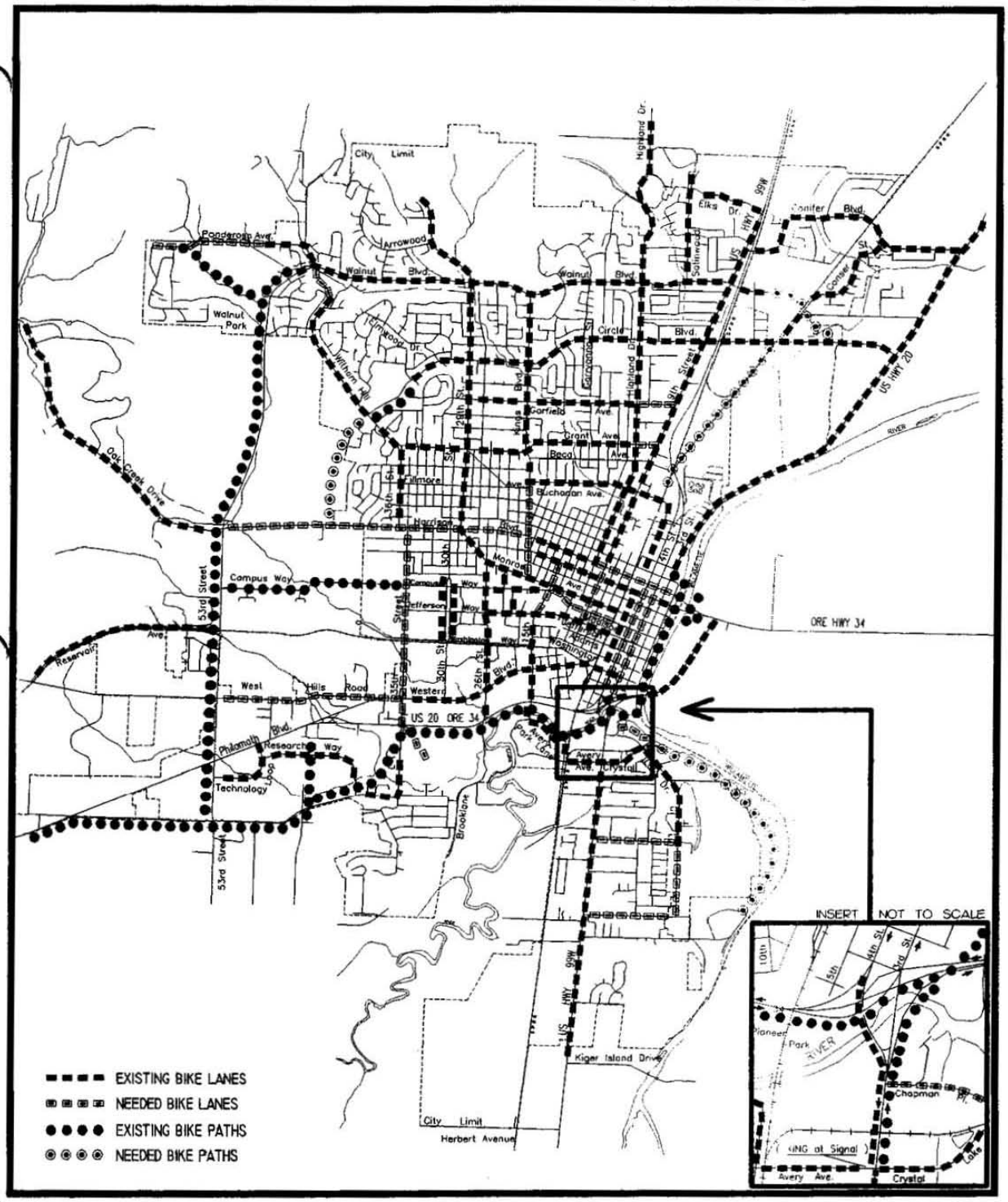
FIGURE A - 3 BIKEWAY SYSTEM ROUTES



CORVALLIS GEOGRAPHIC INFORMATION SYSTEM

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TITLE

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MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
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EXHIBIT F-112

Applicable Review Criteria for
McFadden Industrial Annexation
ANN11-00001 / ZDC11-00002 / PLD11-00002 / WRG11-00001

Comprehensive Plan

Article 1. Introduction and General Policies

1.1.8 City adopted indicators of livability shall be considered in making land use decisions.

1.1.9 The City shall work to develop community benchmarks that measure progress in achieving its vision.

1.2.9 The applicable criteria in all land use decisions shall be derived from the Comprehensive Plan and other regulatory tools that implement the Plan.

Article 2. Citizen Involvement

2.2.5 The City shall strive to ensure that all public information on land use planning issues is available in an understandable form, is accurate and complete, and is made available to all citizens as soon as possible after receipt of an application. The City shall continue to take advantage of the best available technology for dissemination of this information.

2.2.7 The City shall encourage dialogue between developers and citizens in the review of developments, and promote discussions to resolve development issues.

Article 3. Land Use Guidelines

3.2.1 The desired land use pattern within the Corvallis Urban Growth Boundary will emphasize:

A. Preservation of significant open space and natural features;
B. Efficient use of land;
C. Efficient use of energy and other resources;
D. Compact urban form;
E. Efficient provision of transportation and other public services; and
F. Neighborhoods with a mix of uses, diversity of housing types, pedestrian scale, a defined center, and shared public areas.

3.2.2 Within a land use district, primary uses and accessory uses permitted outright shall be considered compatible with each other when conforming to all standards of the district.

3.2.3 The City shall address compatibility conflicts through design and other transitional elements, as well as landscaping, building separation, and buffering.

3.2.4 In the case of compatibility conflicts, requirements will be imposed on both sides of a given property line, in the following manner:

A. Where both lots are undeveloped, each will be required to provide transitional elements when it develops.
B. The development in the more intensive development district shall provide the bulk of the transitional elements but shall not be required to provide the full amount unless the property in the less intensive district is already developed.

3.2.6 The plans and actions of special districts, County, State, and Federal agencies shall be consistent with the Comprehensive Plan.

3.2.7 All special developments, lot development options, intensifications, changes or modifications of nonconforming uses, Comprehensive Plan changes, and district changes shall be reviewed to assure compatibility with less intensive uses and potential uses on surrounding lands. Impacts of the following factors shall be considered:

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A. Basic site design (i.e., the organization of uses on a site and its relationship to neighboring properties);
B. Visual elements (i.e., scale, structural design and form, materials, etc.);
C. Noise attenuation
D. Odors and emissions
E. Lighting
F. Signage
G. Landscaping for buffering and screening
H. Transportation facilities; and
I. Traffic and off-site parking impacts

Article 4. Natural Features, Land, and Water Resources

4.2.2 Natural features and areas determined to be significant shall be preserved, or have their losses mitigated, and/or reclaimed. The City may use conditions placed upon development of such lands, private nonprofit efforts, and City, State, and Federal government programs to achieve this objective.

4.7.1 Developments shall not be planned or located in known areas of natural hazards without appropriate safeguards.

4.9.1 Significant watercourses, lakes, and wetlands shall be preserved, or have their losses mitigated, in order to: maintain clean water, support natural vegetation, protect the aquatic habitat, retain existing significant public vistas, and provide wildlife habitat and recreation sites. Site-specific buffering and setback requirements may be required, as necessary, to achieve protection.

4.10.1 Development within the Urban Growth Boundary shall conform to the Corvallis Drainage Master Plan which includes the site-specific provisions included in the 1996 South Corvallis Drainage Master Plan and subsequent updates of these Plans.

4.10.2 Significant riparian lands within the Urban Growth Boundary shall be identified and inventoried by the City or through the development process, and the City shall work to preserve and enhance native stream corridor vegetation on both public and private lands.(QL-6)}

4.10.4 Within the Urban Growth Boundary, appropriate drainageway dedications and easements adequate for flood protection, conveyance of stormwater, channel access and maintenance protection of riparian environment, and channel migration shall be secured along all open drainageways needed for public conveyance of stormwater, prior to or at the time of development.

4.10.7 To minimize the negative impacts of development, stormwater runoff after development should be managed to produce no significant reduction of water quality than prior to development unless more appropriate provisions are identified in adopted comprehensive storm water management plans.

4.11.14 To resolve wetland issues as early as possible in the development application process on land with hydric soils, land with wetland vegetation, and/or land identified on a State or national wetland inventory, the City shall require a developer to submit, at the time of application, a wetland determination or delineation from a qualified consultant. This professional analysis shall be submitted concurrently to the City and to the Division of State Lands. The City shall request comment from the Division of State Lands on land development applications requiring a public hearing.

Applicable Review Criteria for
McFadden Industrial Annexation
ANN11-00001 / ZDC11-00002 / PLD11-00002 / WRG11-00001

Article 5. Urban Amenities

5.2.1 Both public and private properties located along entrance corridors to the City of Corvallis shall be attractively landscaped, left as open space, or maintained as active agricultural or forest lands.

5.2.2 Entrance corridors shall be adequately signed to appropriately welcome visitors to the community and direct them to points of interest and special events.

5.2.6 The City shall ensure that trails are established, in addition to roads, which follow scenic routes to connect open space to residential areas, public sites, shopping areas, and downtown Corvallis. The trails network plan shall be used as the basis of trail development.

5.5.11 The significant entry corridors that should be preserved or enhanced are the following: Highway 99W, both north and south of the City Center; Highway 34, between Tangent and the City Center; Highway 20/34, between the City Center and Philomath; and Highway 20, between north Albany and the City Center.

5.6.8 When possible, trails should be constructed prior to or concurrent with development or with the improvement of public facilities.

Article 6. Willamette River Greenway

6.2.1 The City and County shall balance the diverse and potentially conflicting uses of the Greenway by protecting, enhancing, and maintaining the natural, hydrological, scenic, historical, archeological, agricultural, economic, and recreational qualities of lands along the river.

6.2.2 Any development or intensification of use in the Willamette River Greenway shall be subject to a Conditional Development review to assure compliance with adopted Greenway policies and development regulations and standards. The criteria shall:

A. Provide for public access;
B. Protect significant fish and wildlife habitats;
C. Preserve significant scenic qualities and viewpoints;
D. Protect air, water, and land resource quality;
E. Protect flood-prone areas and significant natural areas and wetlands.
F. Protect and enhance riparian vegetation and habitat to assure scenic quality, protection of fish and wildlife, and protection from erosion;
G. Protect public safety, and public and private property;
H. Protect adjacent private properties from the negative impact of public recreation uses and facilities;
I. Protect from the negative impacts of mineral extraction; and
J. Protect riverbank stability in a manner that protects fish and wildlife habitat and riparian vegetation.

6.2.9 The City shall manage the uses on lands within or near the Greenway at the time of district designation, in order to maintain the qualities of the Greenway.

Article 7. Environmental Quality

7.2.6 The City will encourage new development to be sensitive to the environment by having the development avoid significant negative impacts on:

A. Air and water quality;
B. Noise or light pollution; and
C. The hazards related to some types of waste materials.

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7.3.7 The City of Corvallis shall actively promote the use of modes of transportation that minimize impacts on air quality.

7.4.4 Noise abatement measures will be encouraged where higher intensive uses abut lesser intensive uses and where residential uses abut major roadways.

7.5.1 All development within the Corvallis Urban Growth Boundary shall comply with applicable State and Federal water quality standards.

Article 8. Economy

8.2.1 The City and County shall support diversity in type, scale, and location of professional, industrial, and commercial activities to maintain a low unemployment rate and to promote diversification of the local economy.

8.2.4 The City shall monitor the jobs / housing balance and develop strategies in response to that information to retain a balance over time.

8.3.4 The City shall seek opportunities to minimize unemployment among all segments of the community.

8.9.1 The City shall designate appropriate and sufficient land in a variety of different parcel sizes and locations to fulfill the community's industrial needs.

8.9.2 In designating new industrial properties, and in redesignating properties to industrial zoning from other designations, the City shall work to diversify the locations of industrial properties within the community.

8.9.3 Lands designated for industrial use shall be preserved for industrial and other compatible uses and protected from incompatible uses.

8.9.4 The Land Development Code shall maintain standards for the purpose of minimizing the negative impacts of industrial development on surrounding properties.

8.9.15 Industrial and commercial development adjacent to rail lines shall be designed and constructed in a way that does not preclude the future use of the rail facility.

Article 9. Housing

9.2.1 City land use decisions shall protect and maintain neighborhood characteristics (as defined in 9.2.5) in existing residential areas.

9.2.2 In new development, City land use actions shall promote neighborhood characteristics (as defined in 9.2.5) that are appropriate to the site and area.

9.2.4 Neighborhoods shall be pedestrian-oriented. Neighborhood development patterns shall give priority consideration to pedestrian-based uses, scales and experiences in determining the orientation, layout, and interaction of private and public areas.

9.2.5 Development shall reflect neighborhood characteristics appropriate to the site and area. New and existing residential, commercial, and employment areas may not have all of these neighborhood characteristics, but these characteristics shall be used to plan the development, redevelopment, or infill that may occur in these areas. These neighborhood characteristics are as follows:

A. Comprehensive neighborhoods have a neighborhood center to provide services within walking distance of homes. Locations of comprehensive neighborhood centers are determined by proximity to major streets, transit corridors, and higher density housing. Comprehensive neighborhoods use topography, open space, or major streets to form their edges.

B. Comprehensive neighborhoods support effective transit and neighborhood services and have a wide range of densities. Higher densities generally are located close to the focus of essential services and transit.

C. Comprehensive neighborhoods have a variety of types and sizes of public parks and open spaces to give structure and form to the neighborhood and compensate for smaller lot sizes and increased densities.

D. Neighborhood development provides for compatible building transitions in terms of scale, mass, and orientation.

E. Neighborhoods have a mix of densities, lot sizes, and housing types.

F. Neighborhoods have an interconnecting street network with small blocks to help disperse traffic and provide convenient and direct routes for pedestrians and cyclists. In neighborhoods where full street connections cannot be made, access and connectivity are provided with pedestrian and bicycle ways. These pedestrian and
bicycle ways have the same considerations as public streets, including building orientation, security-enhancing design, enclosure, and street trees.

G. Neighborhoods have a layout that makes it easy for people to understand where they are and how to get to where they want to go. Public, civic, and cultural buildings are prominently sited. The street pattern is roughly rectilinear. The use and enhancement of views and natural features reinforces the neighborhood connection to the immediate and larger landscape.

H. Neighborhoods have buildings (residential, commercial and institutional) that are close to the street, with their main entrances oriented to the public areas.

I. Neighborhoods have public areas that are designed to encourage the attention and presence of people at all hours of the day and night. Security is enhanced with a mix of uses and building openings and windows that overlook public areas.

J. Neighborhoods have automobile parking and storage that does not adversely affect the pedestrian environment. Domestic garages are behind houses or otherwise minimized (e.g., by setting them back from the front facade of the residential structure.) Parking lots and structures are located at the rear or side of buildings. On-street parking may be an appropriate location for a portion of commercial, institutional, and domestic capacity. Curb cuts for driveways are limited, and alleys are encouraged.

K. Neighborhoods incorporate a narrow street standard for internal streets which slows and diffuses traffic.

L. Neighborhood building and street proportions relate to one another in a way that provides a sense of enclosure.

M. Neighborhoods have street trees in planting strips in the public right-of-way.

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9.3.7 To the maximum extent possible in residential areas, glare from outdoor lighting shall be shielded and noise shall be limited.

Article 10. Public Utilities

10.2.2 The City shall provide urban public facilities and services to implement adopted community land use policies.

10.2.3 The location of facilities and utilities shall be planned and coordinated by the City and Benton County in advance of need, to the greatest extent possible.

10.2.4 Urban development within the Corvallis Urban Fringe shall be subsequent to, or concurrent with, the provision of an adequate level of facilities and services.

10.2.5 The City shall consider the level and type of public facilities that can be provided when planning for various densities and types of urban land uses.

10.2.6 The type, location, and phasing of public facilities and utilities shall be based on actual needs, desired levels of service, cost-effectiveness, and/or property owner willingness to pay for infrastructure.

10.2.8 The expansion of public facilities or services within City Limits or the extension of public facilities or services to newly-annexed areas shall be accomplished through the Capital
Improvement Plan, as funding allows, or as a condition of development, or a combination of both.

10.2.9 All developments shall comply with adopted utility and facility master plans and the Capital Improvement Plan.

10.2.11 Developers shall be required to participate financially in providing the facilities to serve their projects as a condition of approval.

10.2.12 Developers will be responsible for the construction of all facilities internal to and fronting their properties and for needed extensions of facilities to and through their site.

10.4.1 Community land use planning shall be coordinated with utility agencies to assure the availability of services when needed.

10.7.4 To promote a City standard of fire protection in areas annexed after adoption of this plan, new development in these areas shall be required to be served with municipal-level fire protection.

Article 11. Transportation

11.2.8 The following highway corridors shall be considered primary and important entryways or gateways into Corvallis:

Highway 99W from the north (north of the City Center)
Highway 99W from the south (south of the City Center)
Highway 20 from the northeast (between North Albany and the City Center)

Highway 34 from the east (between Tangent and the City Center)
Highway 20/34 from the west (between Philomath and the City Center)

11.2.9 Special attention shall be given to major entryways or gateways into Corvallis to ensure that they reflect and contribute to a positive and desirable image of the community.

11.2.10 Development proposals shall be reviewed to assure the continuity of sidewalks, trails, multi-use paths, and pedestrian ways.

11.2.11 The City shall coordinate with the Oregon Department of Transportation (ODOT) in implementing its highway improvement program.

11.2.12 The transportation system shall reflect consistency with the Corvallis Comprehensive Plan, land use designations, and regional and statewide transportation planning efforts.

11.2.14 Oregon Department of Transportation should fund, maintain, and improve all State highway facilities (highways 99W, 34 and 20) to meet level-of-service standards contained in the Oregon Highway Plan. When specific construction plans are proposed, ODOT should prepare comprehensive roadway designs that recognize urban usage for surface transportation modes, including facilities for pedestrians, bicycles, transit, drainage, curbs, and gutters.

11.3.9 Adequate capacity should be provided and maintained on arterial and collector streets to accommodate intersection level-of-service (LOS) standards and to avoid traffic diversion
to local streets. The level-of-service standards shall be: LOS "D" or better during morning and evening peak hours of operation for all streets intersecting with arterial or collector
streets, and LOS "C" for all other times of day. Where level-of-service standards are not being met, the City shall develop a plan for meeting the LOS standards that evaluates transportation demand management and system management opportunities for delaying or reducing the need for street widening. The plan should attempt to avoid the degradation
of travel modes other than the single-occupant vehicle.

11.3.10 In addition to level-of-service and capacity demands, factors such as livability, sustainability, and accessibility shall be considered in managing the City's transportation system.

11.5.4 Acquisition of land and/or easements for bikeways and trails shall be evaluated along with the need of land for parks and open space.

11.5.11 Where bicycle and pedestrian facilities are combined, adequate width for the combined uses shall be provided.

11.5.12 Safe and convenient bicycle facilities that minimize travel distance shall be provided within and between new subdivisions, planned developments, shopping centers, industrial parks, residential areas, transit stops, and neighborhood activity centers such as schools, parks, and shopping.

11.6.1 The City shall require safe, convenient, and direct pedestrian routes within all areas of the community.

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11.6.6 Safe and convenient pedestrian facilities that minimize travel distance shall be provided by new development within and between new subdivisions, planned developments, shopping centers, industrial parks, residential areas, transit stops, and neighborhood activity centers such as schools, parks, and shopping.

11.6.11 The City shall encourage timely installation of pedestrian facilities to ensure continuity and reduce hazards to pedestrians throughout the community.

11.7.7 The City should seek appropriate opportunities for increasing residential density and providing industrial and commercial development along existing and proposed transit routes.

Article 14. Urbanization

14.2.4 Upon annexation, all lands shall be districted in a manner consistent with Comprehensive Plan designations.

14.3.3 Urban level City utilities (i.e. water and sewer) shall be provided to private property only through annexation, except for areas not contiguous to the City that have been deemed health hazards by the Oregon State Health Department or its agents, and have signed a consent to annex.

14.3.4 Urbanization shall be contained within the Urban Growth Boundary, and shall occur incrementally through the annexation process. Limited interim development, consistent with Benton County clustering regulations, may be permissible.

14.3.5 Annexations can only be recommended to the voters where the following findings are made:

A. There is a demonstrated public need for the annexation.
B. The advantages to the community resulting from the annexation shall outweigh the disadvantages.
C. The City and other jurisdictions are capable of providing urban services and facilities required by the annexed area, when developed.

14.3.6 Factors to be considered in evaluating the public need for annexation may include, but are not limited to the following:

A. The 5-year supply of serviceable land of this type to meet projected demand;
B. The availability of sufficient land of this type to ensure choices in the market place; and
C. Other factors, including livability benchmarks, as delineated in the Land Development Code.

14.3.8 Information shall be provided to decision makers and the public related to consistency of the annexation proposal with established City policies and development regulations.

14.4.2 Design elements shall provide transitions between various land uses and intensities where necessary to improve compatibility.

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LAND DEVELOPMENT CODE

Section 2.6.20 - PURPOSES

The procedures and review criteria for proposed Annexations are established for the following purposes:

a. Maximize citizen involvement in the Annexation review process;

b. Establish a methodology to evaluate need, serviceability, and the economic, environmental, and related social effects of proposed Annexations;

c. Provide adequate public information and sufficient time for public review before an Annexation election;

d. Ensure adequate time for City staff review; and

e. Allow for simultaneous review of multiple Annexation proposals.

Section 2.6.30 - PROCEDURES

An application filed for Annexation shall be reviewed in accordance with the following procedures:

2.6.30.01 - Determination of Annexation Type

The Director shall determine whether an application is for a Minor or Major Annexation as follows:

a. **Minor Annexation** - Intended to address situations where properties are proposed for Annexation and, by virtue of their size and development potential, have negligible impacts on surrounding properties and neighborhoods, and on the community as a whole. These Annexations are typically proposed to gain access to public services, such as sanitary sewer and water facilities, before actual Health Hazards are declared; to incorporate infill sites into the City; and/or to allow a limited level of urban development to occur on existing parcels. Minor Annexation provisions are not intended to provide for piecemeal Annexations whereby a property owner within the county partitions a small piece of land specifically to be classified as a Minor Annexation, and then continues to partition small sites and propose multiple Minor Annexations.

An Annexation shall be considered Minor if all of the following conditions exist:

1. No more than one parcel is involved;

2. For residential Annexations, the parcel is capable of providing not more than 10 dwelling units (at maximum allowed density per gross acre). For commercial and industrial Annexations, the parcel is no greater than one acre; and

3. City services are contiguous to the parcel.

When addressing the review criteria in Section 2.6.30.06.a and Section 2.6.30.06.b, a Minor Annexation proposal need not provide the same level of detail as a Major Annexation proposal. See Section 2.6.30.06 and Section 2.6.30.07 for specifics. All other submittal requirements and review criteria, however, are applicable.

b. **Major Annexation** - An Annexation shall be considered Major if it does not meet all three conditions for a Minor Annexation as outlined in "a", above.

2.6.30.02 - Application Filing Deadlines

Annexation elections are scheduled for May and November of each year and application deadlines are established accordingly as follows: applications for Minor and Major Annexations must be filed with the Community Development Department before 5:00 p.m. on the last working day in September for a ballot election in May, and on the last working day in March for a ballot election in November.

2.6.30.05 - Staff Evaluation

The Director shall prepare a report that evaluates whether the Annexation proposal includes adequate information for the hearing authority to determine the proposal's compliance with the review criteria in Sections 2.6.30.06 and 2.6.30.07. The report shall include a recommendation to the Planning Commission and City Council stating whether the Annexation includes adequate information for the electorate to make an informed decision.

The Planning Commission and City Council shall determine whether the Annexation proposal complies with the review criteria and whether the Annexation request should be referred to the electorate.

2.6.30.06 - Review Criteria

Requests for Annexations shall be reviewed to ensure consistency with the purposes of this Chapter, applicable policies of the Comprehensive Plan, particularly Article 14, and other applicable policies and standards adopted by the City Council and State of Oregon.

Annexations can only be referred to the voters when the proposed Annexation site is within the City's Urban Growth Boundary (UGB), and where the findings below are made. The criteria are highlighted in bold type.

a. **The applicant has demonstrated a public need for the Annexation -**

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2. Major Annexations - Factors to be considered in evaluating public need for Major Annexations shall include, but are not limited to:

   a) The five-year supply of serviceable land of the Annexation's land use category (single-family, multi-family, Commercial, or Industrial). Annexations of land designated as Public Institutional, Open Space-Conservation, or Open Space-Agriculture on the Comprehensive Plan Map are exempt from this criteria;

   b) Availability of sufficient land of this type (single-family, multi-family, Commercial, or Industrial) to ensure choices in the market place. Annexations of land designated as Public Institutional, Open Space-Conservation, or Open Space-Agriculture on the Comprehensive Plan Map are exempt from this criteria; and

   c) Compliance with adopted community-wide livability indicators and benchmarks relative to Major Annexations, as identified in Section 2.6.30.07.c.

   The City shall provide annually updated Citywide data for the applicant to use in calculating supply and demand for the major land use categories (single-family residential, multi-family residential, Commercial and Industrial). Residential land supply and demand data shall be calculated using housing units. Commercial and Industrial land supply and demand data shall be calculated using acres.

   The required data sources and methodologies for use in determining land supply and demand for Major Annexations, and the requirements for addressing community-wide benchmarks, are outlined below in Section 2.6.30.07.

b. The Annexation provides more advantages to the community than disadvantages - To provide guidance to applicants, examples of topics to address for the advantages versus disadvantages discussion are highlighted in Section 2.6.30.07.

1. Minor Annexations - Minor Annexation proposals shall include a general discussion regarding:

   a) Advantages and disadvantages of the Annexation. Examples include the existence of a Health Hazard situation or the existence of Significant Natural Features addressed in Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting, Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.12 - Significant Vegetation Protection Provisions, and/or Chapter 4.13 - Riparian Corridor and Wetland Provisions. Also relevant is whether or not the Minimum

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Assured Development Area information from Chapter 4.11 - Minimum Assured Development Area (MADA) is applicable; and

b) Applicable livability indicators and benchmarks identified in Section 2.6.30.07.c.

2. Major Annexations - Major Annexation proposals shall include a discussion of advantages and disadvantages in terms of the methodologies outlined in Section 2.6.30.07. Applicants are required to document the methodologies and criteria used. The Director will review the applicant's arguments, but will not conduct independent research to verify or justify them.

c. **The site is capable of being served by urban services and facilities required with development** - The developer is required to provide urban services and facilities to and through the site. At minimum, both Minor and Major Annexations shall include consideration of the following:

1. Sanitary sewer facilities consistent with the City's Sanitary Sewer Master Plan and Chapter 4.0 - Improvements Required with Development;

2. Water facilities consistent with the City's Water Master Plan, Chapter 4.0 - Improvements Required with Development, and fire flow and hydrant placement;

3. Storm drainage facilities and drainageway corridors consistent with the City's Stormwater Master Plan, Chapter 4.0 - Improvements Required with Development, Chapter 4.5 - Natural Hazard and Hillside Development Provisions, and Chapter 4.13 - Riparian Corridor and Wetland Provisions;

4. Transportation facilities consistent with the City's Transportation Plan and Chapter 4.0 - Improvements Required with Development; and

5. Park facilities consistent with the City's Parks Master Plan.

e. **Compatibility** - The application shall demonstrate compatibility in the following areas, as applicable:

1. Basic site design - the organization of Uses on a site and its relationship to neighboring properties;
2. Visual elements (scale, structural design and form, materials, etc.);
3. Noise attenuation;
4. Odors and emissions;
5. Lighting;
6. Signage;
7. Landscaping for buffering and screening;
8. Transportation facilities;
9. Traffic and off-site parking impacts;
10. Utility infrastructure;
11. Effects on air and water quality (note: a DEQ permit is not sufficient to meet this criterion);
12. Consistency with the applicable development standards, including the applicable Pedestrian Oriented Design Standards;
13. Preservation and/or protection of Significant Natural Features, consistent with Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting, Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, and Chapter 4.13 - Riparian Corridor and Wetland Provisions. Streets shall also be designed along contours, and structures shall be designed to fit the topography of the site to ensure compliance with these Code standards.

2.6.30.07 - Methodologies for Some of the Review Criteria in Section 2.6.30.06

All of the provisions within this Section are required for Major Annexation proposals except for proposals or portions of proposals that include land with Comprehensive Plan designations of Public Institutional, Open Space-Conservation, or Open Space-Agriculture. Lands with these map designations are exempt from the provisions within "a," and "b," below. Minor Annexation proposals are subject only to the provisions within "c," below.

a. **Determining Five-Year Supply of Serviceable Land** - Serviceable land is land within the City limits capable of being served by public facilities.

When calculating a five-year supply of serviceable land, applicants shall refer to and follow the Council Policy addressing the five-year supply, as amended from time to time. This Policy outlines the accepted methodology and will result in more uniform application submittals.

b. **Providing information on land availability to ensure choices in the market place** - Comprehensive Plan Policy 14.3.6 states that "factors to be considered in evaluating public need for Annexation may include... the availability of sufficient land of this type to ensure choices in the market place." Minor Annexation applications are not required to include information on market choice. However, Major Annexation applications shall provide this information. Appropriate and encouraged market choice topics include, but are not limited to:

1. Information regarding a housing/jobs balance;
2. Housing rental rates and prices;
3. Vacancy rates; and
4. A comparison of housing costs related to incomes, land prices, and land availability.

The City does not independently review and verify documentation of this nature. Therefore, an applicant's market choice arguments shall be developed by a recognized professional in the field. Additionally, the applicant shall identify the methodologies used and the sources of information.

The Director will summarize the applicant's arguments and methodologies in the staff report provided to the hearing authority, and identify them as the applicant's arguments. The hearing authority shall determine the validity of the arguments based on the information provided by the applicant and on public comments during the public hearing process. The hearing authority shall also determine to what extent these arguments affect the criteria in Section 2.6.30.06.b.

c. **Providing information on community-wide livability indicators and determining compliance with adopted community-wide benchmarks -**

1. The City has just begun the process of identifying livability indicators to ultimately assist in the development of community-wide benchmarks. Additionally, many of the community-wide livability indicators are not applicable to Annexation proposals.

2. Table 2.6-1- Livability Indicators and Benchmark Criteria provides interim direction to applicants in addressing livability indicator and benchmark criteria. As the community further develops these livability indicators and benchmarks, this Section of this Code shall be updated accordingly.

   a) The livability indicators and benchmarks in the following table are intended to be balanced and identified as advantages and disadvantages relative to an Annexation proposal. Compliance with all benchmarks is not required. However, when balanced and viewed in aggregate, the decision-makers need to find that the advantages to the community outweigh the disadvantages.

   b) The number of applicable livability indicators and benchmarks varies, depending on the Comprehensive Plan Map designation(s) of the property involved in the Annexation request, as well as whether the Annexation is categorized as a Minor Annexation or a Major Annexation.

   c) For those livability indicators and benchmarks that require distance measurements from an amenity to a proposed Annexation site, measurements shall be taken from the average point within the Annexation site.

Table 2.6 - 1 - Community-wide Livability Indicators and Benchmarks for Annexation Proposals

Note: The following livability indicators and benchmarks have been placed into the categories of the City's 2020 Vision Statement. As this categorization is a first attempt based upon the actual wording in the Vision Statement, there may need to be some re-categorization and/or other revisions with future updates of this Code.

LIVABILITY INDICATORS	DESCRIPTION OF LIVABILITY INDICATORS	BENCHMARKS	LAND USE DESIGNATION	Minor Annex'n	Major Annex'n
Livability indicators and benchmarks relating to the Corvallis Vision 2020 Statement category of "Where People Live"					
Annexation Density	Average density of proposed Annexation relative to the average density of land within the City that is developed and of the same type (single-family or multi-family).	Meet or exceed the average density of land within the City, developed, and of the same type as the proposed Annexation (single-family or multi-family). Note: Information regarding existing density within the City may be obtained from the City's annual Land Development Information Report.	Residential[1]		Applies
			Commercial/ Industrial[2]		
			Open Space[3]		
			Public Inst.		
Rural Development Potential	Type of county development that could occur if property not Annexed (depends on county land use policies in effect at time of proposed Annexation).	Development on land within the Urban Growth Boundary is done in a fashion that does not preclude urban-level development on the subject site and/or on adjacent properties within the UGB.	Residential[1]	Applies	Applies
			Commercial/ Industrial[2]	Applies	Applies
			Open Space[3]	Applies	Applies
			Public Inst.	Applies	Applies
Adjacency to City	Percentage of the perimeter of the Annexation site that is enclosed within the City limits.	It is considered an advantage if ≥ 50 percent of the perimeter of an Annexation site is enclosed within the City limits.	Residential[1]	Applies	Applies
			Commercial/ Industrial[2]	Applies	Applies
			Open Space[3]	Applies	Applies
			Public Inst.	Applies	Applies

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LIVABILITY INDICATORS	DESCRIPTION OF LIVABILITY INDICATORS	BENCHMARKS	LAND USE DESIGNATION	Minor Annex'n	Major Annex'n
Development Plans	Concurrent processing of Detailed Development Plan and/or Tentative Subdivision Plat with Annexation request.	It is not considered a disadvantage and may be considered an advantage if an Annexation request is processed concurrently with a Detailed Development Plan and/or Tentative Subdivision Plat, even though such land use decisions may be changed after Annexation.	Residential[1]	Applies	Applies
			Commercial/ Industrial[2]	Applies	Applies
			Open Space[3]	Applies	Applies
			Public Inst.	Applies	Applies
Distance to Bicycle and Pedestrian Access	Distance to bike lanes. Distance to sidewalk. Distance to multi-use path.	0.5-mile to bike lane. 0.25-mile to sidewalk. 0.5-mile to multi-use path.	Residential[1]		Applies
			Commercial/ Industrial[2]		Applies
			Open Space[3]		
			Public Inst.		Applies
Connectivity & Extension of Bicycle and Pedestrian Facilities	It is considered an advantage if improvements proposed as part of the Annexation request would connect to and extend existing bicycle and pedestrian facilities.	Connection to existing pedestrian facilities and extension of them by at least 350 ft.; or connection to existing pedestrian facilities and filling a gap between existing pedestrian facilities of at least 100 ft. Connection to existing bicycle facilities and extension of them by at least 350 ft.; or connection to existing bicycle facilities and filling a gap between existing bicycle facilities of at least 100 ft.	Residential[1]		Applies
			Commercial/ Industrial[2]		Applies
			Open Space[3]		
			Public Inst.		Applies

LIVABILITY INDICATORS	DESCRIPTION OF LIVABILITY INDICATORS	BENCHMARKS	LAND USE DESIGNATION	Minor Annex'n	Major Annex'n
Planned Public Transportation Improvements	Type and extent of public transportation improvements (street, bicycle, pedestrian) that are listed in City master plans and would occur with urban-level development of Annexation site.	It is considered an advantage if public transportation improvements (street, bicycle, pedestrian) would be installed with the Annexation, are listed in City master plans, and would enable other sites within the Urban Growth Boundary to ultimately develop.	Residential[1]	Applies	Applies
			Commercial/ Industrial[2]	Applies	Applies
			Open Space[3]	Applies	Applies
			Public Inst.	Applies	Applies

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Distance to Shopping	Distance from neighborhood shopping opportunities (both existing and planned).	Annexation site is within 0.5-mile of neighborhood shopping opportunities (existing or planned). More advantage associated with shorter distances from existing (as opposed to planned) shopping opportunities and/or location within 0.5-mile from existing shopping opportunities.	Residential[1]		Applies
			Commercial/ Industrial[2]		Applies
			Open Space[3]		
			Public Inst.		Applies
Affordable Housing	Housing Affordability.	It is considered an advantage if more than 50 percent of the proposed residential housing units are classified as Affordable Housing using the definition in Chapter 1.6 - Definitions. This benchmark to be refined with future update of this Code.	Residential[1]		Applies
			Commercial/ Industrial[2]		
			Open Space[3]		
			Public Inst.		
Livability indicators and benchmarks relating to the Corvallis Vision 2020 Statement category of "Economic Vitality"					
Employment/ Housing	Balance of jobs and housing.	To be developed as part of a future update of this Code, and following completion of regional studies.	Residential[1]		Applies
			Commercial/ Industrial[2]		Applies
			Open Space[3]		
			Public Inst.		Applies

LIVABILITY INDICATORS	DESCRIPTION OF LIVABILITY INDICATORS	BENCHMARKS	LAND USE DESIGNATION	Minor Annex'n	Major Annex'n
Economic Diversification	Diversity in type, scale, and location of professional, industrial, and commercial activities to maintain a low unemployment rate and to promote diversification of the local economy.	It is considered an advantage if the Annexation request supports diversity in type, scale, and location of professional, industrial, and commercial activities to maintain a low unemployment rate and to promote diversification of the local economy. To be refined as part of a future update of this Code.	Residential[1]		
			Commercial/ Industrial[2]		Applies
			Open Space[3]		
			Public Inst.		

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Livability indicators and benchmarks relating to the Corvallis Vision 2020 Statement category of "Protecting our Environment"

Natural Features	Acres and percentage of Annexation site with Significant Natural Features.	Consistency with Significant Natural Feature protections specified by Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting, Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, and Chapter 4.13 - Riparian Corridor and Wetland Provisions. It is considered an advantage if Significant Natural Features are protected through Annexation, since they may be better protected within the City.	Residential[1]	Applies	Applies
			Commercial/ Industrial[2]	Applies	Applies
			Open Space[3]	Applies	Applies
			Public Inst.	Applies	Applies
Distance to Transit	Distance from an existing transit line and/or bus stop.	Annexation site is within 0.5-mile of an existing transit line and/or bus stop.	Residential[1]	Applies	Applies
			Commercial/ Industrial[2]	Applies	Applies
			Open Space[3]		
			Public Inst.	Applies	Applies

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LIVABILITY INDICATORS	DESCRIPTION OF LIVABILITY INDICATORS	BENCHMARKS	LAND USE DESIGNATION	Minor Annex'n	Major Annex'n
Distance to Major Street	Distance to nearest Collector and/or Arterial Street(s) that would serve the proposed Annexation site and is fully improved to City standards or is improved to City standards with regard to bicycle and pedestrian facilities.	Distance to nearest Collector and/or Arterial Street(s) that would serve the proposed Annexation site is ≤ 0.25-mile and is either fully improved to City standards or is improved to City standards with regard to bicycle and pedestrian facilities.	Residential[1]		Applies
			Commercial/ Industrial[2]		Applies
			Open Space[3]		Applies
			Public Inst.		Applies
Intersection	Levels of service for intersections of Arterial and/or Collector Streets, as determined by the City's Traffic Engineer, within a one-mile radius of the site.	Levels of service for intersections of Arterial and/or Collector Streets affected by the proposal, as determined by the City's Traffic Engineer, and generally within a one-mile radius of the site, will be a level of service "D" or better following urban level development of the Annexation site.	Residential[1]		Applies
			Commercial/ Industrial[2]		Applies
			Open Space[3]		
			Public Inst.		Applies
Truck Traffic Routes	Determination of truck traffic route(s).	Truck traffic associated with urban level development of the proposed Annexation will not result in primary travel routes on Local or Local Connector Streets through residential neighborhoods.	Residential[1]		
			Commercial/ Industrial[2]		Applies
			Open Space[3]		
			Public Inst.		Applies

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LIVABILITY INDICATORS	DESCRIPTION OF LIVABILITY INDICATORS	BENCHMARKS	LAND USE DESIGNATION	Minor Annex'n	Major Annex'n
Livability indicators and benchmarks relating to the Corvallis Vision 2020 Statement category of					
Local School Capacity/Travel Distance	Student enrollment, capacity, and average class size of public schools to serve the Annexation site. Distance to public elementary school	Public schools that would serve the Annexation site are not overcrowded. Corvallis School District goals for average class sizes may vary among grades. 0.5-mile to public elementary school. School District policies, re: boundaries of closest schools or additional schools, factor into potential redefinition of school boundaries.	Residential[1]	Applies	Applies
			Commercial/ Industrial[2]		
			Open Space[3]		
			Public Inst.		Applies
Police Response Time	Number of police officers per 1,000 persons residing within City limits.	At least 1.2 officers per 1,000 persons residing within City limits.	Residential[1]	Applies	Applies
			Commercial/ Industrial[2]	Applies	Applies
			Open Space[3]		
			Public Inst.	Applies	Applies
Distance from Fire Station	Distance from an existing fire station.	All buildable portions of the Annexation site are within 1.5 miles of a fire station with an engine company.	Residential[1]	Applies	Applies
			Commercial/ Industrial[2]	Applies	Applies
			Open Space[3]		
			Public Inst.	Applies	Applies
Public Improvements	Type and extent of public improvements developed to City standards; and urban-level development, such as clustered housing, etc., existing on the proposed Annexation site.	Annexation of partially developed land within the Urban Growth Boundary (UGB) that already contains some public improvements developed to City standards, and urban-level development on part of the site, is considered more advantageous to the City than Annexation of undeveloped land.	Residential[1]	Applies	Applies
			Commercial/ Industrial[2]	Applies	Applies
			Open Space[3]	Applies	Applies
			Public Inst.	Applies	Applies

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LIVABILITY INDICATORS	DESCRIPTION OF LIVABILITY INDICATORS	BENCHMARKS	LAND USE DESIGNATION	Minor Annex'n	Major Annex'n
Distance to Sewer and Water	Distance to adequately sized public sanitary sewer and water lines needed to serve the site.	Sanitary sewer and water facilities are proximate to the Annexation site. After some monitoring, distances for this benchmark may be specified in a future update of this Code.	Residential[1]	Applies	Applies
			Commercial/ Industrial[2]	Applies	Applies
			Open Space[3]		
			Public Inst.	Applies	Applies
Planned Public Utilities	Types and extent of public utility improvements of sanitary sewer, water, and storm drainage, that are listed in City master plans, and would occur with urban-level development of the Annexation site.	It is considered an advantage if the installation of public utilities of sanitary sewer, water, and storm drainage, listed in City master plans, would enable other sites within the UGB to ultimately develop.	Residential[1]	Applies	Applies
			Commercial/ Industrial[2]	Applies	Applies
			Open Space[3]	Applies	Applies
			Public Inst.	Applies	Applies
Livability indicators and benchmarks relating to the Corvallis Vision 2020 Statement category of					
Distance to Parks	Distance from an existing public park.	Annexation site is within 0.5-mile of an existing public park.	Residential[1]	Applies	Applies
			Commercial/ Industrial[2]		
			Open Space[3]		
			Public Inst.		Applies
LIVABILITY INDICATORS	**DESCRIPTION OF LIVABILITY INDICATORS**	**BENCHMARKS**	**LAND USE DESIGNATION**	**Minor Annex'n**	**Major Annex'n**
Livability indicators and benchmarks relating to the Corvallis Vision 2020 Statement category of "Central City"					
Distance to Downtown	Distance of the Annexation from the Central Business Zone intersection of SW Third Street and SW Monroe Avenue.	It is considered an advantage if an Annexation site is within 3.8 miles from the intersection of SW Third Street and SW Monroe Avenue, within the boundaries of the Central Business Zone.	Residential[1]	Applies	Applies
			Commercial/ Industrial[2]	Applies	Applies
			Open Space[3]		
			Public Inst.	Applies	Applies

1. Includes lands with a Comprehensive Plan Map designation of Low, Medium, Medium High, or High Density Residential; or Mixed Use Residential.

2. Includes lands with a Comprehensive Plan Map designation of Mixed Use Commercial, Professional Office, Central Business Zone, Limited Industrial, Limited Industrial-Office, Mixed Use Employment, General Industrial, Intensive Industrial, Mixed Use Transitional, or General Industrial - Office.

3. Includes lands with a Comprehensive Plan Map designation of Open Space-Conservation and Open Space-Agriculture.

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ZONE CHANGE

Section 2.2.20 - PURPOSES

This Chapter describes review criteria and procedural requirements for legislative and quasi-judicial Official Zoning Map changes to accomplish the following:

a. Maintain sound, stable, and desirable development within the City;

b. Permit changes in zone boundaries where appropriate;

c. Ensure Zone Changes are consistent with the community's land use policies and goals;

d. Lessen the influence of individual economic interests in the land use decision-making process;

e. Establish procedures and criteria for applying Historic Preservation Overlays to, or removing Historic Preservation Overlays from, Designated Historic Resources; and

f. Establish procedures and criteria for reclassifying a Designated Historic Resource in a National Register of Historic Places Historic District.

TABLE 2.2-1
COMPREHENSIVE PLAN AND CORRESPONDING ZONING MAP DESIGNATIONS (not including zone overlays)

IF THE COMPREHENSIVE PLAN DESIGNATION IS:	THE OFFICIAL ZONING MAP DESIGNATION SHALL BE:	
INDUSTRIAL	**INDUSTRIAL**	
Limited	RTC	Research Technology Center
	LI	Limited Industrial
	MUE	Mixed Use Employment
	C-OS	Conservation - Open Space
Limited Industrial - Office	RTC	Research Technology Center
	LI-O	Limited Industrial - Office
	C-OS	Conservation - Open Space
Mixed Use Employment	MUE	Mixed Use Employment
	C-OS	Conservation - Open Space
General	RTC	Research Technology Center
	MUE	Mixed Use Employment
	GI	General Industrial
	C-OS	Conservation - Open Space

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2.2.40.05 - Review Criteria

a. **Review Criteria for Zone Changes, Except Those Requesting to Apply or Remove a Historic Preservation Overlay**

Quasi-judicial Zone Changes shall be reviewed to determine how they affect City facilities and services, and to ensure consistency with the purposes of this Chapter, policies of the Comprehensive Plan, and any other applicable policies and standards adopted by the City Council. The application shall demonstrate compatibility in the following areas, as applicable:

1. Basic site design (e.g., the organization of uses on a site and the uses' relationships to neighboring properties);
2. Visual elements (scale, structural design and form, materials, etc.);
3. Noise attenuation;
4. Odors and emissions;
5. Lighting;
6. Signage;
7. Landscaping for buffering and screening;
8. Transportation facilities;
9. Traffic and off-site parking impacts;
10. Utility infrastructure;
11. Effects on air and water quality (note: a DEQ permit is not sufficient to meet this criterion);
12. Consistency with the applicable development standards, including the applicable Pedestrian Oriented Design Standards;
13. Preservation and/or protection of Significant Natural Features, consistent with Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting, Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, and Chapter 4.13 - Riparian Corridor and Wetland Provisions. Streets shall also be designed along contours, and structures shall be designed to fit the topography of the site to ensure compliance with these Code standards.

PLANNED DEVELOPMENT

Section 2.5.10 - BACKGROUND

It is the intent of this Chapter to establish procedures that permit flexibility in the land development process, allow for better preservation of Significant Natural Features, and allow for innovation in site planning and architectural design.

The Planned Development process is established to allow the review and approval of Conceptual and Detailed Development Plans, to provide the mechanism for achieving greater flexibility and improved design in cases where the scope of proposed modifications to pre-stated standards exceeds that permitted through a Lot Development Option. A Lot Development Option allows minor modifications to required specification standards on an individual lot of record. The procedures for a Lot Development Option are identified in Chapter 2.12 - Lot Development Option.

a. The Procedures of this Chapter are Applicable When -

1. A property owner requests a Conceptual and/or Detailed Development Plan concurrent with a specific project review; or

2. A Nonresidential or Residential Planned Development Overlay, established in accordance with the provisions of Chapter 3.32 - Nonresidential PD (Planned Development) Overlay or Chapter 3.33 - Residential PD (Planned Development) Overlay, respectively, exists on the site and is shown on the City's Official Zoning Map.

Depending on the level of detail provided in a Planned Development application, a Planned Development project proposal is called a Conceptual Development Plan or a Detailed Development Plan. A Conceptual Development Plan provides general concepts for development on a site. A Detailed Development Plan provides the specifics for development on a site and is required following or simultaneously with approval of a Conceptual Development Plan. When a Detailed Development Plan is processed simultaneously with a Conceptual Development Plan, it is called a Conceptual and Detailed Development Plan. Upon Planning Commission approval of a Detailed Development Plan or a Conceptual and Detailed Development Plan, Building Permits are issued consistent with that Plan.

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d. **On Nonresidentially Designated Properties** - Upon approval of a Conceptual Development Plan on nonresidentially designated land, a Nonresidential Planned Development Overlay is placed on the site and shown on the Official Zoning Map for as long as the Conceptual Development Plan remains active (unexpired). Upon approval of a Detailed Development Plan on nonresidentially designated land, a Nonresidential Planned Development Overlay is placed on the site and shown on the Official Zoning Map for as long as the Detailed Development Plan remains active, as defined in Section 2.5.50.09.c. In cases where an approved Conceptual and/or Detailed Development Plan is no longer active, the associated Nonresidential Planned Development Overlay is automatically removed from the Official Zoning Map.

Section 2.5.20 - PURPOSES

Planned Development review procedures are established in this Chapter for the following purposes:

a. Promote flexibility in design and permit diversification in location of structures;

b. Promote efficient use of land and energy, and facilitate a more economical arrangement of buildings, circulation systems, land uses, and utilities;

c. Preserve, to the greatest extent possible, existing Significant Natural Features and landscape features and amenities, and use such features in a harmonious fashion;

d. Provide for more usable and suitably located pedestrian and/or recreational facilities and other public and/or common facilities than would otherwise be provided under conventional land development procedures;

e. Combine and coordinate architectural styles, building forms, and building relationships within the Planned Development;

f. Provide the applicant with reasonable assurance of ultimate approval before expenditure of complete design monies, while providing the City with assurances that the project will retain the character envisioned at the time of approval;

g. Provide greater compatibility with surrounding land uses than would otherwise be provided under conventional land development procedures; and

h. Provide benefits within the development site that compensate for the variations from development standards such that the intent of the development standards is still met.

2.5.40.04 - Review Criteria

Requests for the approval of a Conceptual Development Plan shall be reviewed to ensure consistency with the purposes of this Chapter, policies and density requirements of the Comprehensive Plan, and any other applicable policies and standards adopted by the City Council. The application shall demonstrate compatibility in the areas in "a," below, as applicable, and shall meet the Natural Resource and Natural Hazard criteria in "b," below:

a. **Compatibility Factors -**

1. Compensating benefits for the variations being requested;
2. Basic site design (the organization of Uses on a site and the Uses' relationships to neighboring properties);
3. Visual elements (scale, structural design and form, materials, etc.);
4. Noise attenuation;
5. Odors and emissions;
6. Lighting;
7. Signage;
8. Landscaping for buffering and screening;
9. Transportation facilities;
10. Traffic and off-site parking impacts;
11. Utility infrastructure;
12. Effects on air and water quality (note: a DEQ permit is not sufficient to meet this criterion);
13. Design equal to or in excess of the types of improvements required by the standards in Chapter 4.10 - Pedestrian Oriented Design Standards[1]; and

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14. Preservation and/or protection of Significant Natural Features, consistent with Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting, Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, and Chapter 4.13 - Riparian Corridor and Wetland Provisions. Streets shall also be designed along contours, and structures shall be designed to fit the topography of the site to ensure compliance with these Code standards.

b. Natural Resources and Natural Hazards Factors -

1. Any proposed variation from a standard within Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, or Chapter 4.13 - Riparian Corridor and Wetland Provisions shall provide protections equal to or better than the specific standard requested for variation; and
2. Any proposed variation from a standard within Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, or Chapter 4.13 - Riparian Corridor and Wetland Provisions shall involve an alternative located on the same development site where the specific standard applies.

2.5.50.04 - Review Criteria for Determining Compliance with Conceptual Development Plan

Request for approval of a Detailed Development Plan shall be reviewed to determine whether it is in compliance with the Conceptual Development Plan. The Detailed Development Plan shall be deemed to be in conformance with the Conceptual Development Plan and may be approved provided it is consistent with the review criteria in Section 2.5.40.04 above, provides a clear and objective set of development standards for residential Detailed Development Plans (considering the Detailed Development Plan proposal, required adherence to this Code, and Conditions of Approval), and does not involve any of the factors that constitute a major change in the Planned Development. See Section 2.5.60.02 - Thresholds that Separate a Minor Planned Development Modification from a Major Planned Development Modification.

2.5.50.09 - Effective Period of Detailed Development Plan Approval

Detailed Development Plan approval shall be effective for a five-year period from the date of approval. The approval shall expire if the applicant has not, within the five-year period:

a. **Single-phase Development -**

1. Installed and/or bonded for all public improvements related to the project; or

2. Applied for and received foundation permits for at least one building approved as part of the project.

b. **Multi-phase Development -**

1. Installed and/or bonded for all public improvements related to at least the first phase of the project; or

2. Applied for and received foundation permits for at least one building approved as part of the project.

c. **An active Detailed Development Plan is defined as one that has -**

1. Not expired or been nullified;

2. A Final Subdivision or Land Partition Plat filed and recorded;

3. A Property Line Adjustment filed;

4. Any Building or Construction Permits issued; or

5. Any activities associated with Development as defined in Chapter 1.6 - Definitions.

WILLAMETTE RIVER GREENWAY CONDITIONAL DEVELOPMENT

2.3.30.04 - Review Criteria

Requests for Conditional Developments shall be reviewed to ensure consistency with the purposes of this Chapter, policies of the Comprehensive Plan, and any other applicable policies and standards adopted by the City Council. The application shall demonstrate compatibility in the following areas, as applicable:

a. Basic site design (the organization of Uses on a site and the Uses' relationships to neighboring properties);

b. Visual elements (scale, structural design and form, materials, etc.);

c. Noise attenuation;

d. Odors and emissions;

e. Lighting;

f. Signage;

g. Landscaping for buffering and screening;

h. Transportation facilities;

i. Traffic and off-site parking impacts;

j. Utility infrastructure;

k. Effects on air and water quality (note: a DEQ permit is not sufficient to meet this criterion);

l. Consistency with the applicable development standards, including the applicable Pedestrian Oriented Design Standards; and

m. Preservation and/or protection of Significant Natural Features, consistent with Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting, Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, and Chapter 4.13 - Riparian Corridor and Wetland Provisions. Streets shall also be designed along contours, and structures shall be designed to fit the topography of the site to ensure compliance with these Code standards.

GENERAL INDUSTRIAL ZONE – PERMITTED USES

Section 3.24.20 - PERMITTED USES

3.24.20.01 - Ministerial Development

a. Primary Uses Permitted Outright

1. Civic Use Types -

   a) Major Services and Utilities

   b) Minor Utilities - with towers not exceeding 75 ft. in height, subject to standards in Chapter 4.9 - Additional Provisions

   c) Parking Services

   d) Public Safety Services

   e) Freestanding Wireless Telecommunication Facilities up to 120 ft. in height, subject to the standards in Chapter 4.9 - Additional Provisions.

2. Commercial Use Types -

   a) Agricultural Sales

   b) Agricultural Services

   c) Animal Sales and Services -

      1) Grooming - in conjunction with veterinary

      2) Kennels

      3) Auctioning

   d) Automotive and Equipment

      1) Fleet Storage

      2) Repairs - Heavy Equipment

      3) Sales/Rentals of Farm and Heavy Equipment Note: Sales/Rentals of Light Equipment requires a Conditional Development Review

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e) Building Maintenance Services

f) Construction Sales and Services

g) Laundry Services

h) Research Services

i) Scrap Operations

j) Technical Support Center

k) Telemarketing Center

l) Temporary Outdoor Markets

m) Wholesaling, Storage, and Distribution

1) Light

2) Mini Warehouses

3. Industrial Use Types -

a) General Industrial

b) Limited Manufacturing

c) Technological Production

b. Accessory Uses Permitted Outright

1. Essential Services

2. Required off-street parking for Uses permitted in the zone in accordance with Chapter 4.1 - Parking, Loading, and Access Requirements.

3. Other development customarily incidental to the Primary Use in accordance with Chapter 4.3 - Accessory Development Regulations.

4. Colocated/attached Wireless Telecommunication Facilities on nonresidential structures that do not increase the height of the existing structures by more than 20 ft., subject to the standards in Chapter 4.9 - Additional Provisions.

3.24.20.02 - Special Development

Conditional Development - Subject to review in accordance with Chapter 2.3 - Conditional Development and other applicable provisions of this Code.

a. Automotive and Equipment - Sales/Rentals, Light Equipment to be reviewed in accordance with Section 3.24.30.07 below.

b. Freestanding Wireless Telecommunication Facilities greater than 120 ft. in height, subject to the standards in Chapter 4.9 - Additional Provisions.

c. Freestanding Wireless Telecommunication Facilities that do not meet the setback or spacing standard requirements of Sections 4.9.60.02.b and 4.9.60.02.c in Chapter 4.9 - Additional Provisions.

d. Colocated/attached Wireless Telecommunication Facilities that increase the height of the existing structures by more than 20 ft., subject to the standards in Chapter 4.9 - Additional Provisions.

3.24.20.03 -General Development

Plan Compatibility Review - Subject to review in accordance with Chapter 2.13 - Plan Compatibility Review and other applicable provisions of this Code.

a. Explosive or Fuel Storage

b. Major Services and Utilities

c. Projections such as chimneys, spires, domes, and towers, not used for human occupancy and exceeding 75 ft. in height, in accordance with Section 4.9.50 of Chapter 4.9 - Additional Provisions. Note: Flagpoles subject to requirements in Section 4.7.70.b of Chapter 4.7 - Sign Regulations

Section 3.24.30 - DEVELOPMENT STANDARDS

3.24.30.02 - Setbacks

a. **Boundary Area -**

1. A setback of not less than 100 ft. shall be provided from any residential, Agriculture-Open Space, or Willamette River Greenway property line. Off-street parking and loading shall be permitted in this setback area, except for the 35 ft. nearest the residential, Agriculture-Open Space, or Willamette River Greenway property line, which shall not be used for any Permitted Use, activity, or structure other than fences or walls, and shall be maintained and improved in accordance with 3.24.30.03 below.

2. Exemptions from These Requirements -

   a) Those portions of property lines where driveways, accessways, and walkways are provided; and

   b) Lands along the Southern Pacific Railroad line south from Avery Avenue to the City limits.

b. **Along Streets** - The following minimum setback for any structure shall apply:

1.	Arterial Streets	-	50 ft.
2.	Collector Streets	-	40 ft.
3.	All other streets	-	25 ft.

Where a yard abuts both a street and a zone boundary line, the 35 ft. nearest the zone boundary shall not be used for any Permitted Use, activity, or structure other than fences or walls, and shall be maintained and improved in accordance with Section 3.24.30.03 below. The boundary area as required in "a," above, may be counted in the calculation of required setbacks along streets.

WILLAMETTE RIVER GREENWAY OVERLAY STANDARDS

Section 3.30.10 - PURPOSE

The Willamette River Greenway is an Overlay that coincides with the adopted Greenway boundary and applies to all development permitted by the underlying zones. The objectives of this Overly and this Chapter are as follows:

a. Protect, conserve, enhance, and maintain the natural, scenic, historical, economic, and recreational qualities of lands along the Willamette River;

b. Maintain or improve air and water quality within the Greenway;

c. Implement goals and policies of the State's Willamette River Greenway Program as required by the Oregon Revised Statutes, as amended;

d. Implement policies of the City's Comprehensive Plan;

e. Establish standards and requirements for the use of lands within the Willamette River Greenway in the City of Corvallis;

f. Provide for review of any intensification of Use, change of Use, or development within the Greenway;

g. Increase and maintain public access to and along the Willamette River to create urban recreational opportunities, provide linkages to other transportation corridors, and provide for multiple use of urban land; and

h. Ensure development is consistent with floodwater flow mitigation and management of a Natural Resource or Natural Hazard.

Section 3.30.20 - CONDITIONAL DEVELOPMENT

Development within this Overly, regardless of the classification in the underlying zone, requires Conditional Development approval in accordance with the provisions of Chapter 2.3 - Conditional Development. In addition to notification requirements of Chapter 2.0 - Public Hearings, written public notice and a Notice of Disposition shall be mailed to the Oregon Department of Parks and Recreation. Development as used in this Section includes change of Use, intensification of land, or intensification of Water-dependent or Water-related Uses, except for those activities listed as exemptions in Section 3.30.30 below. Development also includes proposed increases in air discharges that require permit approval by the Oregon Department of Environmental Quality (DEQ).

Section 3.30.40 - REVIEW CRITERIA

Conditional Development within the Willamette Greenway Overlay may be approved only when the Planning Commission, after considering cumulative effects within the City's Greenway, finds that the development standards in Section 3.30.50 and the following criteria are met:

a. Public access to and along the river shall be provided to the maximum extent practicable and to the extent that public access does not interfere with established Uses on the property.

b. Significant Natural Hazards and Natural Resources shall be protected consistent with the requirements of Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, Chapter 4.13 - Riparian Corridor and Wetland Provisions, and the Natural Resource provisions of Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting.

c. Significant natural and scenic areas, viewpoints, and vistas shall be preserved.

d. The quality of air, water, and land resources in the Greenway shall be protected to the maximum extent practicable.

e. The Minimum Assured Development Area (MADA) shall be consistent with Chapter 4.11 - Minimum Assured Development Area (MADA).

f. The natural vegetative fringe along the river shall be protected and enhanced to the maximum extent practicable to ensure scenic quality, protection of wildlife, protection from erosion, and screening of Uses from the river.

g. Any public Recreational Use or facility shall not substantially interfere with established Uses on adjoining property.

h. Maintenance of public safety and protection of public and private property, especially from vandalism and trespass, shall be provided to the maximum extent practicable.

i. Extraction of aggregate deposits shall be conducted in a manner designed to minimize adverse effects on water quality, fish and wildlife, vegetation, bank stabilization, stream flow, visual quality, noise, and safety, and to guarantee necessary reclamation.

j. Development, change, or intensification of Use shall provide the maximum possible landscaped area, open space, or vegetation between the activity and the river.

k. Development shall be sited to maximize distance from the river to the greatest extent practicable.

l. In applying "a," through "k," above, to development proposals within the Willamette River Greenway, consideration should be given to the provisions of this Code, Corvallis 2020 Vision Statement, Comprehensive Plan, Downtown Streetscape Plan, Riverfront Commemorative Park Plan, and other applicable City documents. However, where conflicts arise, direction must be taken from the Corvallis Comprehensive Plan and this Code.

Section 3.30.50 - DEVELOPMENT STANDARDS

Proposed development within the Willamette Greenway Overlay shall comply with the following standards:

a. **Site Modifications**

1. Except as provided in Section 3.30.30, above, existing predominant topographical features of the bank line and escarpment shall be protected and maintained.

2. Disturbance necessary for construction or establishment of a Water-related or Water-dependent Use, as defined in Chapter 1.6 - Definitions, and measures necessary to reduce existing or potential bank and escarpment erosion, landslides, or flood hazard conditions may be permitted upon approval by the Director.

3. Stability shall be assured considering the stress imposed on the bank and land area between the low water mark of the river and Top-of-bank.

4. The hydraulic and flood carrying capacity of the river and the hydraulic effect of the river on the bank shall be considered, and steps shall be taken to ensure minimal adverse effects by and upon the proposal.

5. The applicant shall demonstrate adherence to the provisions of Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, Chapter 4.13 - Riparian Corridor and Wetland Provisions, and the Natural Resource provisions of Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting.

6. If applicable, the applicant shall submit certification by a registered professional engineer that the standards specified in "2," and "3," above, have been met. Where necessary to properly evaluate a proposal, an applicant may be required to furnish further studies such as a soils survey and analysis, foundation study, or hydrologic study performed by competent professionals.

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b. **Landscaping, Natural Hazards, and Natural Resources** - The following provisions shall apply:

1. All areas of the site within the WRG Overlay shall be landscaped and addressed consistent with the provisions of the underlying zone; and the provisions of Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting, Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, and Chapter 4.13 - Riparian Corridor and Wetland Provisions.

2. Required landscaped areas shall be continuously maintained, irrigated with permanent facilities sufficient to maintain the plant material, and covered by living plant material capable of attaining 90 percent ground coverage within three years. Required vegetation areas shall be subject to the provisions of Section 4.13.50.d. Landscaping and lighting shall be in accordance with Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting. If there is a conflict between the provisions of Section 4.13.50.d and Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting, Section 4.13.50.d shall prevail.

3. Living plant materials shall be compatible with and enhance the riparian environment.

c. **Structures** - All buildings and structures, including supporting members, and all exterior mechanical equipment shall be screened, colored, or surfaced to blend with the riparian environment. Surfaces shall be nonreflective.

d. **Signs and Graphics** - In addition to compliance with applicable provisions relating to signs and graphics in Chapter 4.7 - Sign Regulations, no sign or graphic display inconsistent with the purposes of the Greenway shall have a display surface oriented toward or visible from the Willamette River.

e. **Parking and Unenclosed Storage Areas**

1. Parking, loading, and unenclosed storage areas located within the WRG Overlay shall be screened from the river to the extent practicable in accordance with Chapter 4.1 - Parking, Loading, and Access Requirements and Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting.

2. Parking, loading, and unenclosed storage areas located outside of but adjacent to the WRG Overlay shall be screened from such Overlay to the extent practicable.

f. **Greenway Setback** - Minimum building setback distances from the ordinary high water line of the Willamette River shall be as outlined in Table 3.30-1 - Minimum Setbacks.

Table 3.30-1 - Minimum Setbacks		
	Area	**Minimum Setback**
1.	Lands in the WRG Overlay from the northern City limits to the southern edge of 777 NE Second Street (Assessor Map No. 11-5-35AD, Tax Lot 3000)	20 ft. westerly from Top-of-bank
2.	Lands in the WRG Overly from the southern edge of 777 NE Second Street (Assessor Map No. 11-5-35AD, Tax Lot 3000) to Harrison Street	50 ft. westerly from Top-of-bank
3.	Lands in the WRG Overly between Harrison Street and B Street, at the Top-of-bank and including the existing bike path	A landscaping strip sufficient to separate the bike path, and consistency with the Riverfront Commemorative Park Plan
4.	Lands in the WRG Overlay south of B Street to the southerly City limits	100 ft. westerly from Top-of-bank
Setback distances do not apply to Water-dependent Uses that require a river bank location, or Water-related Uses that require direct access to the river.		
None of the minimum setbacks in this table shall conflict with the provisions of Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, Chapter 4.13 - Riparian Corridor and Wetland Provisions, or the Natural Resource provisions of Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting. Should a conflict arise, the stricter provision shall prevail.		

4.0.60 - PUBLIC AND PRIVATE STREET REQUIREMENTS

a. Traffic evaluations shall be required of all development proposals in accordance with the following:

1. Any proposal generating 30 or more trips per hour shall include Level of Service (LOS) analyses for the affected intersections. A Traffic Impact Analysis (TIA) is required, if required by the City Engineer. The TIA shall be prepared by a registered professional engineer. The City Engineer shall define the scope of the traffic impact study based on established procedures. The TIA shall be submitted for review to the City Engineer. The proposed TIA shall reflect the magnitude of the project in accordance with accepted traffic engineering practices. The

applicant shall complete the evaluation and present the results with an overall site development proposal.

e. Development sites shall be provided with access from a public street or a private street that meets the criteria in "d," improved to City standards in accordance with the following:

1. Where a development site abuts an existing public street not improved to City standards, the abutting street shall be improved to City standards along the full frontage of the property concurrently with development. Where a development site abuts an existing private street not improved to City standards, and the private street is allowed per the criteria in "d", above, the abutting street shall meet all the criteria in "d", above and be improved to City standards along the full frontage of the property concurrently with development.

k. Location, grades, alignments, and widths for all public and private streets shall be considered in relation to existing and planned streets, topographical conditions, public convenience and safety, and proposed land use. Where topographical conditions present special circumstances, exceptions to these standards may be granted by the City Engineer provided that the safety and capacity of the street network is not adversely effected. The following standards shall apply:

8. Right-of-way and improvement widths shall be as specified in the Transportation Plan and Table 4.0-1 - Street Functional Classification System.

4.0.30 - PEDESTRIAN REQUIREMENTS

a. Sidewalks shall be required along both sides of all streets, as follows:

2. <u>Sidewalks on Arterial, Collector, and Neighborhood Collector Streets -</u> Sidewalks along Arterial, Collector, and Neighborhood Collector Streets shall be separated from curbs by a planted area. The planted area shall be a minimum of 12 ft. wide and landscaped with trees and plant materials approved by the City. The sidewalks shall be a minimum of five ft. wide. An exception to these provisions is that this separated tree planting area shall not be provided adjacent to sidewalks where they are allowed to be located within Natural Resource areas governed by Chapter 4.12 – Significant Vegetation Protection Provisions and Chapter 4.13 - Riparian Corridor and Wetland Provisions. This separated tree planting area shall also not be provided adjacent to sidewalks where they are allowed to be located within drainageway areas governed by regulations in Chapter 4.5 - Natural Hazard and Hillside Development Provisions.

3. <u>Sidewalk Installation Timing</u> - The timing of the installation of sidewalks shall be as follows:

a) Sidewalks and planted areas along Arterial, Collector, and Neighborhood Collector Streets shall be installed with street improvements.

d. To provide for orderly development of an effective pedestrian network, pedestrian facilities installed concurrently with development of a site shall be extended through the site to the edge of adjacent property(ies).

f. Prior to development, applicants shall perform a site inspection and identify any Contractor Sidewalk/street Stamps in existing sidewalks that will be impacted by the development. If such a Contractor Sidewalk/street Stamp exists, it shall either be left in its current state as part of the existing sidewalk, or incorporated into the

new sidewalk for the development site, as close as possible to the original location and orientation.

4.0.40 - BICYCLE REQUIREMENTS

a. On-street Bike Lanes - On-street bike lanes shall be required on all Arterial, Collector, and Neighborhood Collector Streets and constructed at the time of street Improvements

4.0.50 - TRANSIT REQUIREMENTS

a. Development sites located along existing or planned transit routes shall, where appropriate, incorporate transit stops and shelters into the site design. These improvements shall be installed in accordance with the guidelines and standards of the Corvallis Transit System.
b. Development sites at or near existing or planned transit stops shall provide safe, convenient access to the transit system, as follows:
   1. All Commercial and Civic Use developments shall provide a prominent entrance oriented toward Arterial, Collector, and Neighborhood Collector Streets, with front setbacks reduced as much as possible to provide access for pedestrians, bicycles, and transit.
   2. All developments shall provide safe, convenient pedestrian walkways between the buildings and the transit stop, in accordance with the provisions of Section 4.0.30.b.

4.0.60 - PUBLIC AND PRIVATE STREET REQUIREMENTS

q. Development shall include underground electric services, light standards, wiring and lamps for streetlights according to the specifications and standards of the City Engineer. The developer shall be responsible for installation of underground conduit for street lighting along all public streets improved in conjunction with such development in accordance with the following:
   1. The developer shall coordinate with the City Engineer to determine the location of future street light poles.
   2. The streetlight plan shall be designed to provide illumination meeting standards set by the City Engineer.
   3. The standard street light installation is a wood pole.

   The developer shall install such facilities and make the necessary arrangements with the serving electric utility for the City-owned and operated street lighting system to be served at the lowest applicable rate available to the City. Upon City's acceptance of such development improvements, the street lighting system, exclusive of utility-owned service lines, shall be and become the property of the City.

4.0.70 - PUBLIC UTILITY REQUIREMENTS (OR INSTALLATIONS)
a. All development sites shall be provided with public water, sanitary sewer, storm drainage, and street lights.
b. Where necessary to serve property as specified in "a" above, required public utility installations shall be constructed concurrently with development.
c. Off-site public utility extensions necessary to fully serve a development site and adjacent properties shall be constructed concurrently with development.
d. To provide for orderly development of adjacent properties, public utilities installed

concurrently with development of a site shall be extended through the site to the edge of adjacent property(ies).

e. All required public utility installations shall conform to the City's adopted facilities master plans.

f. Private on-site sanitary sewer and storm drainage facilities may be allowed, provided all the following conditions exist:
   1. Extension of a public facility through the site is not necessary for the future orderly development of adjacent properties;
   2. The development site remains in one ownership and Land Division does not occur, with the exception of Land Divisions that may occur under the provisions of Section 4.0.60.d, above; and
   3. The facilities are designed and constructed in accordance with the Uniform Plumbing Code and other applicable codes, and permits are obtained from the Development Assistance Center prior to commencement of work.

4.0.100 - LAND FOR PUBLIC PURPOSES

a. Easements for public sanitary sewer, water, storm drain, streetlight, transit, pedestrian and bicycle facilities shall be provided whenever these facilities are located outside a public right-of-way. The minimum easement width for a single utility is 15 ft. The minimum easement width for two adjacent utilities is 20 ft. The easement width shall be centered on the utility to the greatest extent practicable. Wider easements may be required for unusually deep facilities.

b. Utility easements with a minimum width of seven ft. shall be granted to the public adjacent to all street rights-of-way for franchise utility installations.

Section 4.2.20 - GENERAL PROVISIONS

a. Required Landscaping -

1. Landscaping and Irrigation Plans - Where a landscape plan is required by this Code, by a particular proposal, and/or by Conditions of Approval, detailed planting plans, irrigation plans and other related plans shall be submitted for review and approval with Building Permit applications and/or prior to the recordation of a Final Plat, as applicable. Building Permits, including Foundation Permits, shall not be issued until the Director has determined that the plans comply with the purposes clause and specific standards in this Chapter, any specific proposal(s), and/or Conditions of Approval that apply to the particular project. On a case by case basis, and where no Significant Natural Features would be impacted, the Director may grant an exception and allow the issuance of permits. Required landscaping shall be reviewed and approved by the Director, and in no case shall landscaping be less than that required by this Chapter. Landscaping shall consist of ground cover, shrubbery, and trees.

2. Installation - All required landscaping and related improvements, such as irrigation, etc., shall be completed prior to the issuance of a Certificate of Occupancy. Additionally, all required landscaping and related improvements within the public right-of-way, and/or required by Conditions of Approval in conjunction with recording of the Final Plat, shall be completed or financially guaranteed prior to the recording of a Final Plat. If an applicant chooses to financially secure landscaping and related improvements in order to record a Final Plat, such financial security shall be consistent with the provisions of this Code, shall be reviewed and approved by the Director, and shall be for an amount at least equivalent to 120 percent of the cost of the installation of the landscaping and related improvements.

3. Coverage within Three Years - All required landscaping shall provide a minimum 90 percent ground coverage within three years. A financial guarantee shall be provided for new residential development, with the exception of areas within single-family or Duplex lots. A financial guarantee shall also be provided for new nonresidential development, and nonresidential redevelopment that involves a 3,000 sq. ft. or 20 percent expansion, whichever is less, except that 20 percent expansions less than 500 sq. ft. are exempt. The financial guarantee shall cover maintenance for a three-year period from the date that the landscaping was installed by the applicant and accepted by the City. This guarantee shall be established prior to the issuance of a Final Certificate of Occupancy and prior to recording of a Final Plat. Additionally, this guarantee shall be consistent with the provisions of this Code, shall be reviewed and approved by the Director, and shall be for an amount that is at least equivalent to 50 percent of the cost of installation of required landscaping and related improvements, plus 20 percent of the 50 percent figure.
To release this guarantee at the end of the three-year period, the developer shall provide a report to the Director. This report shall be prepared by a licensed arborist or licensed landscape contractor and shall verify that 90 percent ground coverage has been achieved, either by successful plantings or by the installation of replacement plantings. The Director shall approve the report prior to release of the guarantee.

c. Protection of Shrub, Ground Cover and Tree Specimens in Inventoried Areas of the Adopted Natural Features Inventory Map dated December 20, 2004 -

1. For shrub, groundcover, and tree specimens within the areas inventoried as part of the Natural Features Inventory, preservation requirements shall be in accordance with the provisions of Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, and Chapter 4.13 - Riparian Corridor and Wetland Provisions. See Adopted Natural Features Inventory Map dated December 20, 2004, for information regarding areas inventoried as part of the Natural Features Inventory.
2. Plants to be preserved and methods of protection shall be indicated on the detailed planting plan submitted for approval. Existing trees and shrubs shall be considered preserved if the standards in Section 4.12.60.f are met.

4.2.30 - REQUIRED TREE PLANTINGS AND MAINTENANCE

a. Tree Plantings -

Tree plantings in accordance with this Section are required for all landscape areas, including but not limited to parking lots for four or more cars, public street frontages, private streets, multi-use paths, sidewalks that are not located along streets, alleys, and along private drives more than 150 ft. long.

1. Street Trees -

a) Along streets, trees shall be planted in designated landscape parkway areas or within areas specified in a City-adopted street tree plan.
Where there is no designated landscape parkway area, street trees shall be planted in yard areas adjacent to the street, except as allowed elsewhere by "d," below;

4. Conditions of Approval for individual development projects may require additional tree plantings to mitigate removal of other trees, or as part of landscape buffering or screening efforts;

5. The distance between required trees shall be determined by the type of tree used. See Table 4.2-1 - Street Trees and Table 4.2-2 - Parking Lot Trees;

b. Areas Where Trees May Not be Planted -

1. Trees may not be planted within five ft. of permanent hard surface paving or walkways, unless special planting techniques and specifications are used and particular species of trees are planted, as outlined in Section 4.2.40.c or approved by the Director. These limitations apply most frequently in areas such as landscape parkways, pedestrian walkways, and plaza areas, where there may be tree grates.
2. Unless approved otherwise by the City Engineer, trees may not be planted:
   a) Within 10 ft. of fire hydrants and utility poles;
   b) Within 20 ft. of street light standards;
   c) Within five ft. from an existing curb face, except where required for street trees;
   d) Within 10 ft. of a public sanitary sewer, storm drainage, or water line; or
   e) Where the Director determines the trees may be a hazard to the public interest or general welfare.

Section 4.2.50 - SCREENING (HEDGES, FENCES, WALLS, AND BERMS)
Screening is required where unsightly views or visual conflicts must be obscured or blocked and/or where privacy and security are desired. Fences and walls used for screening may be constructed of wood, concrete, stone, brick, wrought iron, or other commonly used fencing/wall materials. Acoustically designed fences and walls shall also be used where noise pollution requires mitigation.
Where landscaping is used for required screening, it shall be at least six ft. in height and be at least 80 percent opaque, as seen from a perpendicular line of sight, within 18 months following establishment of the primary use of the site.

HIGHLY PROTECTED RIPARIAN CORRIDOR DEVELOPMENT STANDARDS

Table 4.13-1 - Base Riparian Corridor Widths Easement Widths are different and are addressed in Section 4.13.70	
Drainage Basin - as established in the Natural Features Inventory and shown on the Riparian Corridors and Wetlands Map	**Base Riparian Corridor Width - Riparian Corridors may be required to be expanded to address Riparian-related Areas**
Less Than 20 Acres	50-ft. Riparian Corridor
20 to 160 Acres	75-ft. Riparian Corridor
More Than 160 Acres	100-ft. Riparian Corridor
Willamette River, Marys River and Their Channels (e.g Boone's Slough)	120-ft. Riparian Corridor
Note: When a Stream segment is inventoried as part of a Wetland, and a Wetland Delineation reduces the dimensions of the Wetland area surrounding the Stream, in no case shall the Riparian Corridor width of that Stream be reduced below the appropriate width stated above.	

Section 4.13.50 - USE LIMITATIONS AND EXCEPTIONS WITHIN HIGHLY PROTECTED RIPARIAN CORRIDORS AND RIPARIAN-RELATED AREAS

Highly Protected Riparian Corridors are those which have been identified as warranting a high level of protection due to their environmental importance and Natural Resource quality. Riparian-related Areas are defined as Proximate Wetlands, drainage easements and drainage dedications under the City's jurisdiction, and open space tracts that have been created for Riparian Corridor protection purposes. Additionally, 100-year Floodplain area serves an important Riparian Function. This area is mapped on the City's Natural Hazards Map, and is subject to the protections outlined in Chapter 4.5 - Natural Hazard and Hillside Development Provisions.

In addition to the requirements of the underlying zone, the following limitations and exceptions shall apply to activities within Highly Protected Riparian Corridors and Riparian-related Areas, as mapped on the City's Riparian Corridors and Wetlands Map.

a. **Removal of Vegetation** - Removal of vegetation from Riparian Corridors and Riparian-related Areas is prohibited, except for the following purposes:

   1. Stream restoration and enhancement programs;

   2. Removal of Invasive and/or Noxious Vegetation as defined in Chapter 1.6 - Definitions. If necessary, in conjunction with vegetation removal non-rip-rap erosion control measures shall be utilized;

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6. Perimeter mowing/cutting of vegetation for fire hazard prevention/fuel reduction, provided such mowing/cutting occurs no more than 20 ft. around structures;

7. Continuation of agricultural activities occurring on a property prior to December 31, 2004, such as grazing livestock, growing crops, etc. However, the use of herbicides or other pesticides, the application of synthetic fertilizers, and the storage of toxic materials in these areas is subject to applicable state and federal regulations, as well as the restrictions set forth in the Corvallis Municipal Code.

8. Maintenance and protection of the function of City utilities and transportation facilities located within Riparian Corridors and Wetlands;

9. Allowance of activities under an Oregon Department of Fish and Wildlife-approved restoration plan for improving Riparian Function. As a component of this plan, and as a means of controlling the spread of the weeds throughout the Watershed, livestock may be permitted in areas with identified Invasive and/or Noxious Vegetation; and

10. Removal of Hazardous Trees - Requests for removal of Hazardous Trees, except in emergency circumstances, shall be reviewed by the City Urban Forester (or another qualified arborist) and approved, conditionally approved, or denied by the Community Development Director. Any trees removed shall be replaced by like native species or alternative approved native species listed on the City of Corvallis Native Plant List.

b. **Building, Paving, and Grading Activities** - The placement of structures or impervious surfaces, as well as grading, excavation, and the placement of fill, are prohibited. Exceptions to the drainageway restrictions may be made for the purposes identified in items 1-7 of this Section, provided they are designed and constructed to minimize adverse impacts to Riparian Corridors and Riparian-related Areas.

2. The location and construction of streets, utilities, bridges, bicycle, and pedestrian facilities within Highly Protected Riparian Corridors and Riparian-related Areas must be deemed necessary to maintain a functional system by the City Engineer. This Code, City Transportation and Utility Master Plans, and other adopted City plans shall guide this determination. The design standards of Chapter 4.0 - Improvements Required with Development shall be applied to minimize the impact to the subject area;

Article 6. Willamette River Greenway

6.0 Background

A special natural feature of the Corvallis Urban Growth Boundary is the Willamette River. The State of Oregon has recognized the significance of the Willamette to both individual communities and the State as a whole by a series of legislative acts culminating in Statewide Planning Goal 15 - Willamette River Greenway.

The general purpose statement of this Statewide Planning Goal is as follows:

> "To protect, conserve, enhance, and maintain the natural, scenic, historical, agricultural, economic, and recreational qualities of lands along the Willamette River as the Willamette River Greenway."

Statewide Planning Goal 15 requires the collection of a variety of specific data; requires that each City and County Comprehensive Plan be based on specific boundary, acquisition, and management considerations; outlines the required contents of the Oregon Department of Transportation (ODOT) Greenway Plan; requires the establishment of cooperative management plans between local governments and the ODOT; and requires implementing measures through ordinance provisions.

The main purpose of the Willamette River Greenway is to protect and enhance the natural qualities of lands along the Willamette River while allowing development which is compatible with these qualities. This is to be accomplished both by purchase, or scenic easement of significant lands, and by City and County land use review.

There is no intention to purchase all the lands along the river, and much of the land will remain in private ownership. It should be noted that in Corvallis a majority of the land area within the Greenway boundary is in public ownership, already provides public access to the river, and if developed with sensitivity, will constitute a major asset to the City.

6.1 Relevant Vision Statement Elements

"We value our rivers, our streams, and our watershed, carefully managing them to protect the purity of our water, their aesthetic and biological qualities, and their value as recreational areas. The City's streams and wetlands act as the backbone for a system of "green fingers" which weave through and connect the City's open space resources."

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6.2 Willamette River Greenway

Findings

6.2.a *Statewide Planning Goal 15, Willamette River Greenway, mandates local government to establish Greenway boundaries, allowed uses within the Greenway, and potential acquisition areas.*

6.2.b *The City of Corvallis has an adopted Willamette River Greenway Boundary.*

6.2.c *The Willamette River flood plain functions as a part of the river channel during flood events and is part of the river system.*

6.2.d *Local jurisdictions retain the primary responsibility for implementation of the Willamette River Greenway, Statewide Planning Goal 15.*

6.2.e *The Corvallis Land Development Code requires a Conditional Development review for any intensification, change of use, or development within the Greenway boundaries, unless the proposal qualifies for an exemption.*

6.2.f *The Willamette River Greenway is an important part of the open space system of the Corvallis Urban Growth Boundary.*

6.2.g *The Willamette River forms the eastern edge of the Corvallis urban area.*

6.2.h *The Greenway includes both urban and rural segments. The urban segment includes Greenway lands between the Urban Growth Boundary on the south and where Highway 20 separates from the Willamette River on the northeast edge of the City. Lands beyond the urban segment will remain rural.*

6.2.i *The Willamette River Greenway is urban in character within the downtown area.*

6.2.j *Maintenance of public access along the river is important to Corvallis citizens and is a requirement of the Willamette River Greenway, Statewide Planning Goal 15.*

6.2.k *The downtown riverfront area extends from the Willamette / Marys Rivers confluence, north to a point where the 2nd Street right-of-way converges with the Willamette River.*

6.2.l *The private lands in the Greenway located within the downtown area are suitable for commercial development and housing provided public access to the Greenway is maintained.*

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H. Protect adjacent private properties from the negative impact of public recreation uses and facilities;

I. Protect from the negative impacts of mineral extraction; and

J. Protect riverbank stability in a manner that protects fish and wildlife habitat and riparian vegetation.

6.2.3 The City shall work with Benton and Linn Counties on proposed developments in the Greenway and proposed amendments to Comprehensive Plan policies or development standards related to the Greenway.

6.2.4 The City shall work cooperatively with Benton and Linn Counties to maintain the natural characteristics of the Willamette River Greenway.

6.2.5 Residential, commercial, and open space / recreation uses that are consistent with adopted Greenway policy and development regulations shall be encouraged along the downtown riverfront.

6.2.6 The City shall develop a linear park on appropriate public land through the downtown riverfront area consistent with the January 7, 1997 Riverfront Commemorative Park Master Plan, or its successors.

6.2.7 The City shall identify hazardous bank areas and identify suitable, environmentally sensitive mechanisms for riverbank stabilization.

6.2.8 The City shall protect and enhance the natural features and flood plain functions of City lands within the Willamette River Greenway on the east side of the river.

6.2.9 The City shall manage the uses on lands within or near the Greenway at the time of district designation, in order to maintain the qualities of the Greenway.

6.3 Supporting Documents

Item	Date	Location of Document
Comprehensive Plan Report - Willamette River Greenway	1980	Corvallis Planning Division Library
Riverfront Commemorative Park Master Plan	1997	Corvallis - Benton County Public Library
Comprehensive Plan Amendments	1980	Corvallis Planning Division Library

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1980

7a

WILLAMETTE RIVER GREENWAY

Comprehensive Plan Report

City of Corvallis

Corvallis Planning Department

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WILLAMETTE RIVER GREENWAY

CORVALLIS PLANNING DEPARTMENT

APPROVED BY PLANNING COMMISSION - JULY 16, 1980

APPROVED BY CITY COUNCIL - AUGUST 4, 1980

Prepared By: Leon Laptook, Planner

Assisted By: Tom Coffee, Planning Director
Rene Moye, Parks and Recreation Director
Kathleen Hann, Associate Planner
Sue Bruer, Associate Planner
Maud Smith, Assistant Planner
Pam Wheeler, Word Processor

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CORVALLIS URBAN WILLAMETTE GREENWAY BOUNDARY MAPS

Plate I	-	Southern Section
Plate II	-	Northern Section
Plate III	-	Downtown Section
Plate V	-	Parks and South Third Street Detail
Plate VI	-	Flood Plain Area
Plate VII	-	Greenway Boundary

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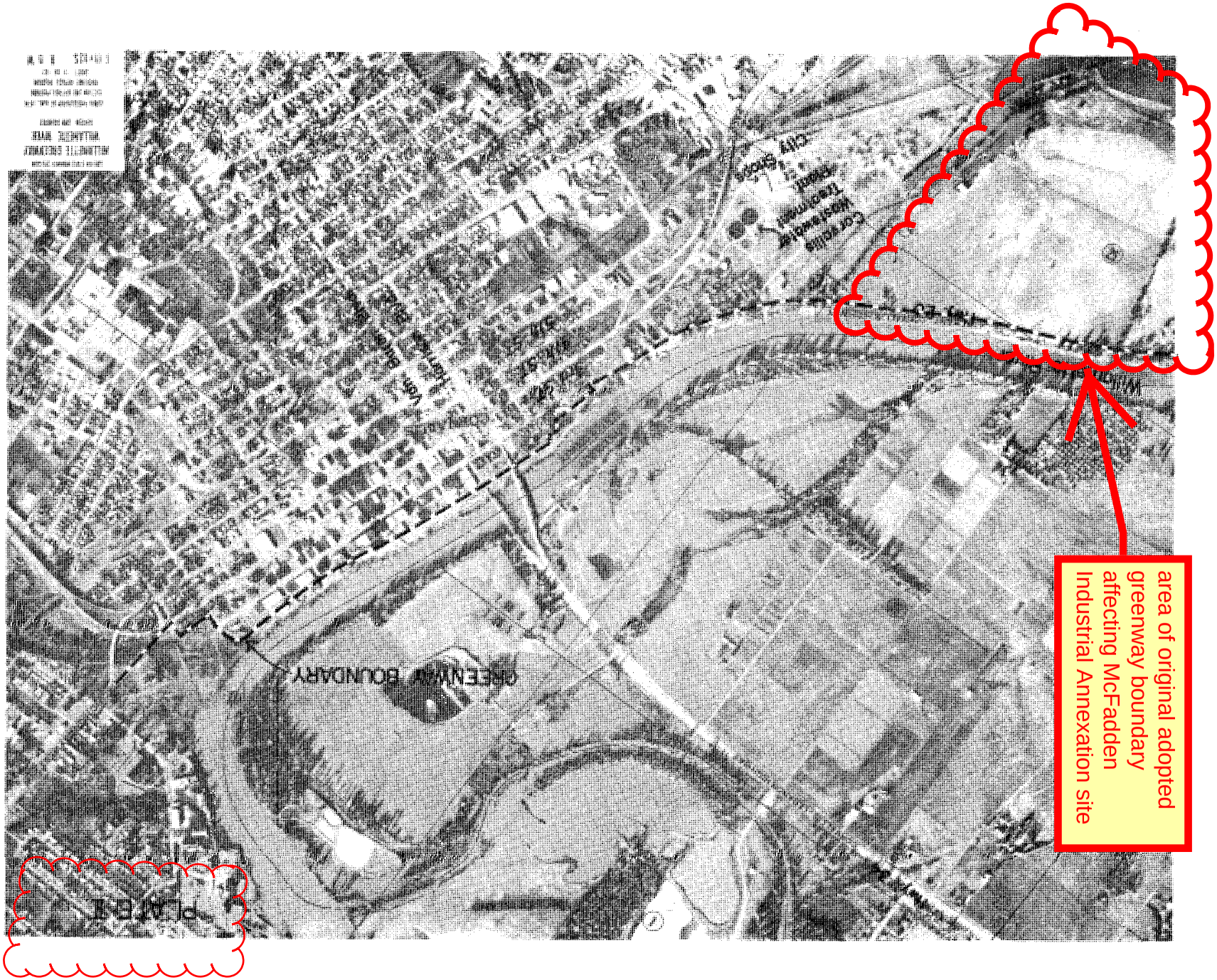

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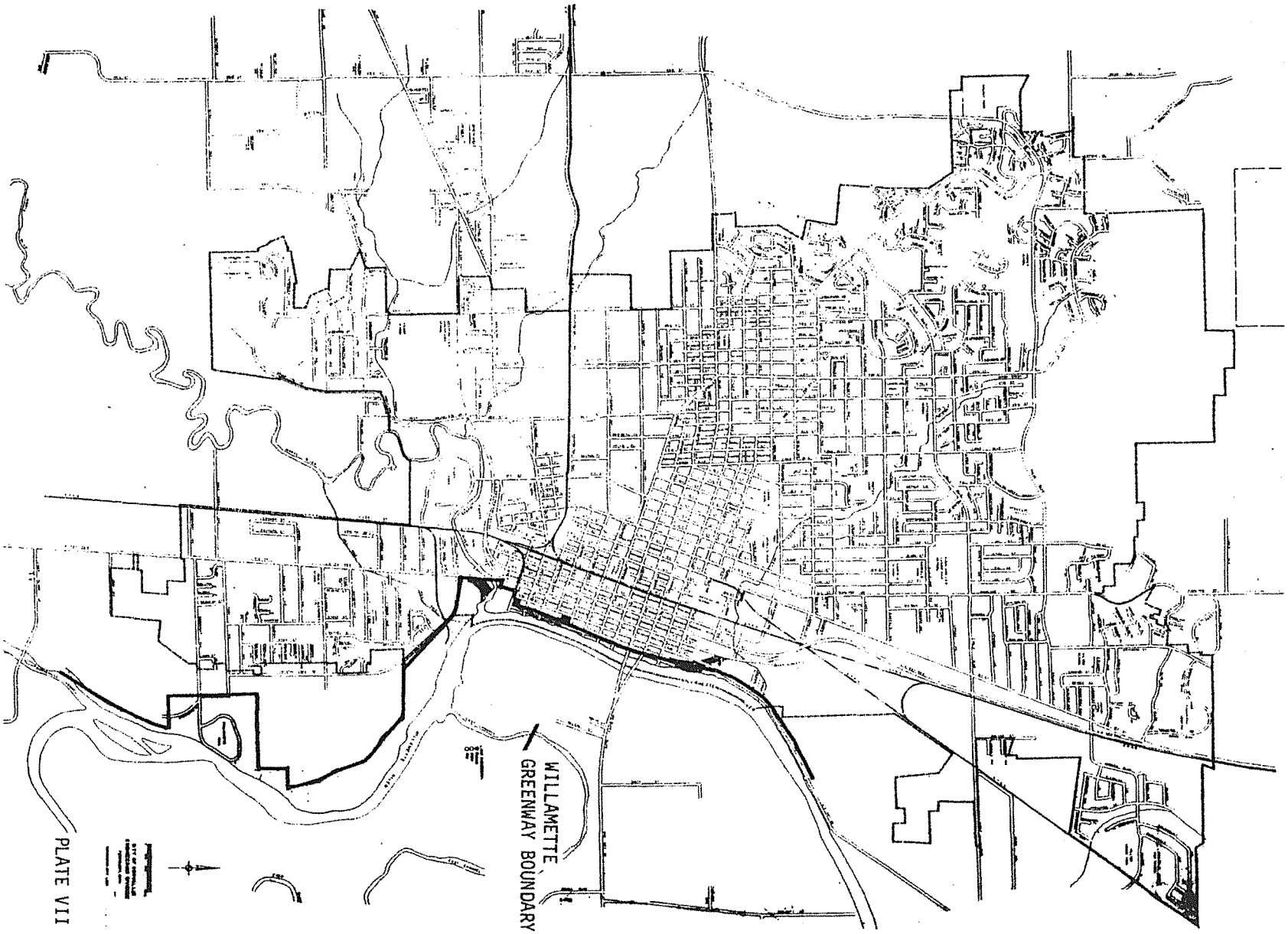

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water angling. (Book Three, Sheet 63 of 197, River mile 134.5, Class I, 30.60 acres (Benton County).)

Justification: Recommended by the Department of Transportation as suitable for acquisition. This site is beyond the urban Corvallis Greenway but should be included within the Benton County Greenway. Acquisition will provide river-oriented picnicking, day use fishing opportunities.

e. Right-of-way along Highway 20 to provide a bicycle/pedestrian pathway from Corvallis to the state park property at Half Moon Bend.

Justification: This park, planned for day use, will offer an easy destination for bicyclists and hikers. The Half Moon Bend State Park should have convenient access from Highway 20 as well as from the river. It should not be restricted to use by boaters only, as is presently the case.

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FINDINGS AND RECOMMENDED POLICIES

The 1978 Comprehensive Plan contains findings and policies pertaining to the Greenway. Subsequent to the adoption of these findings and policies correspondence with the Oregon Department of Transportation (which along with LCDC is the principal review agency for the Greenway Goal) indicated that several of the policies were deficient in complying with the requirements of the Greenway Goal. The following findings and policies incorporate the revisions suggested by the Department of Transportation.

2.2 WILLAMETTE GREENWAY

FINDINGS

a. The City of Corvallis has an adopted Willamette River Greenway Boundary.

New - Statewide Planning Goal 15, Willamette River Greenway, mandates local government to establish Greenway Boundaries, allowed uses within the Greenway, and potential acquisition areas.

New - Local jurisdictions retain the primary responsibility for implementation of the Willamette River Greenway goal.

New - Compatibility review permits are required by the City of Corvallis for any intensification, change of use or development within the Greenway boundaries.

b. The Willamette River Greenway is an important segment of the open space system of the Corvallis planning area.

c. The Willamette River forms an edge to the urban area of Corvallis.

Delete d. Within the planning area, there are sections of the Greenway which have resource potential. More information related to these resources is necessary.

e. The Greenway includes both urban and rural segments. It is anticipated that land uses south of the water intake and east of the area where Highway 20 leaves the Willamette River northeast of the existing City limits will remain rural.

f. The Willamette Greenway is urban in character within the downtown area.

g. Maintenance of public access along the river is a requirement of the Willamette River Greenway Goal.

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CITY OF CORVALLIS
MINUTES OF THE PARKS, NATURAL AREAS AND RECREATION BOARD
MAY 19, 2011

Attendance
Betty Griffiths, Chair
Alejandra Gonzalez
Nick Todorovich
Randy Willard
Phillip Hays
Marc Vomocil
Don Williams

Absent/Excused
Jen de-Vries
Lynda Wolfenbarger, Vice-Chair
Kent Daniels
Charley Fisher
Joel Hirsch, Council Liaison

Staff
Steve DeGhetto, Assistant Director
Dave Phillips, Parks Ops. Supervisor
David Neighbor, Parks Ops. & Admin. Supervisor
James Mellein, Aquatic Supervisor
Jackie Rochefort, Park Planner
Mark Lindgren, Recorder

Visitors
Jason Yaich
James Ellison
Bill Ten Pas
Sandra Gazeley
Tim McFadden
Louise Marquering
Lyle Hutchens

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SUMMARY OF DISCUSSION

Agenda Item	Information Only	Held for Further Review	Recommendations
II. Introductions	X		
III. Approval of Minutes	X		
IV. Visitors' Propositions	X		
V. McFadden Property Annexation & Trail Proposal	X		
VI. Fenced Dog Park Location	X		
VII. Fee Review			Motion passed to recommend not raising rates for Osborn Aquatic for FY 11-12. Motion passed to recommend raising all other fees.
VIII. Goals Update	X		
IX. Staff Reports	X		
X. Subcommittee Updates	X		
XI. Board Member/City Council Liaison Reports	X		
XII. Adjournment	X		The next regular Parks, Natural Areas and Recreation Board meeting is scheduled for 6:30 p.m., June 16, 2011 at the Downtown Fire Station Main Meeting Room.

CONTENT OF DISCUSSION

I. CALL TO ORDER: Chair Betty Griffiths called the meeting to order at 6:33 p.m.

II. **INTRODUCTIONS.** Marc Vomocil, new board member, related he was Senior Forestry Manager for Starker Forest Inc. and previously helped refurbish the Avery Park locomotive. New board member Don Williams related that he was a manager at Good Samaritan.

III. **APPROVAL OF MINUTES**. Griffiths said that in the beginning of the second sentence of the last paragraph of packet page 7, the name "Emery" should be deleted. The second sentence of the fifth paragraph on page 8 should read, "..one-third of dogs in the city are unlicensed." Randy Willard said the first sentence under Visitors' Propositions should read, "Corvallis City Councilor Jeanne Raymond, *speaking as a citizen,..*". Phil Hays said that on packet page 4, the first sentence of the second paragraph under Bald Hill Land Acquisition should read, "GLT retains a conservation easement on *part of* the adjacent Bald Hill Natural Area,..". He said the last sentence on packet page 8 should read, "..Van Buren intersection and the slip lane..". Hays moved to passed April 21, 2011 minutes as corrected; Willard seconded; motion passed.

IV. **VISITORS' PROPOSITIONS.** Louise Marquering related that management plans for the Witham Hill Natural Area, which the City owns, had been put on hold until a joint management plan could be developed with the previous owner. She emphasized the need to remove fast-growing Doug Fir trees that are crowding the native White Oaks. She said she'd previously brought the issue forward several times and suggested at least girdling the Doug Fir on the south slope there so they stop growing, since otherwise, the oaks will die soon. Operations Supervisor Dave Phillips replied that staff would investigate it this summer. Assistant Director Steve DeGhetto cautioned about Land Development Code considerations related to the property. Marquering said people at OSU Forestry had offered to assist in removal of the trees once they are identified. Phillips noted that the department had lost staff.

V. **McFADDEN PROPERTY ANNEXATION AND TRAIL PROPOSAL.** Community Development Planner Jason Yaich related that the Planning Division had received a request for annexation. He highlighted information in the packet. He sought comments, concerns and recommendations associated with possible Parks and Recreation facilities, such as trails identified in the Trails Master Plan. The Planning Commission will get the PNARB minutes to see PNARB concerns; it will then forward its recommendation to the Council and voters will then decide on the annexation.

The property is on 85 acres on Highway 20 near Hewlett-Packard. The property is currently farmed, with two residences. Yaich displayed maps and photos of the site. City facilities plans include a1996 Transportation Plan Trails Master Plan, which includes bikeways. He noted the plan is conceptual in nature and often changes over time. A potential bikeway is roughly parallel to the railroad tracks. The 2000 Park and Recreation Facilities Plan includes a Trails Plan that includes a multiuse trail that could be located along Highway 20. Yaich said the concept of a trail along the Willamette River goes back many years; it's connected to the State Plan for the Willamette River Greenway, with a trail running along the river to Portland.

He said Planning staff have been discussing key components of the application with applicants for a couple years. The application currently includes a 6' public sidewalk consistent with public arterial highway standards along Highway 20; the location would depend on where the curb ends up. Depending on the intensity of proposed development, ODOT may require highway improvements such as turn lanes.

Hays noted the joint city/county trails connection planning process begun last summer includes the Corvallis-Albany path. Since there is an effort underway to make the connection (the path could leave the Highway 20 north of Circle) it would be wise to get an easement on a small corner of the property; it should not be a big impact on the property. Lyle Hutchens said the applicants would be in agreement

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with that. He said the area with the railroad tracks with natural features overlays would be available for a path. Sandra Gazeley said a sidewalk would connect to a sidewalk on H-P property. Planner Rochefort said ultimately the site would have both a sidewalk and a multiuse path, it just depends when they get to that part of their project.

Willard asked whether bike riders would use the sidewalk or ride on Highway 20; Yaich replied there were constraints to extending the sidewalk further south. There would be big impacts to several residences; also, further south, the Garfield drainage basin has a culvert under Highway 20 with a big slope; a sidewalk would require bringing in a lot of fill dirt into the riparian corridor. Yaich said the current application's detailed development plan includes a sidewalk and landscape berm; a condition of approval would likely include a condition of approval that future detailed development plans, as the site develops, would provide a multiuse path along the frontage. Griffiths asked whether there would be both a sidewalk and a multiuse path; Yaich replied that he sought comment on whether there should be a shared wide sidewalk/multiuse path pedestrian-bike facility; Griffiths said she preferred as little concrete as possible. Rochefort asked Griffith about having a path along the railroad tracks; Griffiths said if the applicants agreed to an easement for it on the corner then that would be OK.

Marc Vomocil said he felt a sidewalk along the highway should be sufficient. DeGhetto said the city and the county were working on a path to go north along the railroad tracks. The plan presented tonight includes a potential sidewalk along Highway 20, which is an extension of the existing sidewalk. Rochefort said the applicants have the requirement to build a sidewalk and a multiuse path; whether or not a multiuse path and a sidewalk should be combined or separated is the question and there are many options available. Hays said the plan for a path along the railroad is still very preliminary and could be funded by grants; Rochefort added the piece on the property could be funded by development; this is a common situation. Often, the only way to get a complete system built is to do it in pieces, though it can be awkward.

Griffiths asked for discussion on whether the board recommended a sidewalk *and* multiuse path along Highway 20, or whether it should be combined. Vomocil said he preferred a combined multiuse and sidewalk. Rochefort said a multiuse path would be 12' wide. Rochefort said the City/County were planning a trail along the railroad but there are also other plans of the greenway corridor along the Willamette River that show a trail. She asked Yaich whether he envisioned a possible conflict between pedestrians and bicyclists in a combined path; he replied that that is always a concern; wider is usually better. Rochefort related she's been yelled at by pedestrians for riding her bike on a multiuse path (walkers felt it was a sidewalk). Griffiths felt it should be combined; Hays agreed.

Griffiths asked for discussion on the issue of the applicants providing an easement or asking them to build the path. Vomocil suggested getting an easement. Hays noted getting an easement only required a very small part of the property and getting an easement was critical for the railroad path, though it may never happen; Griffiths agreed. Hays said if we ask for a multiuse path on Highway, then we should definitely ask for an easement along the railroad.

Gazeley asked the width of a possible easement; Yaich replied the LDC specifies a roughly 15' easement. Hays asked whether the McFaddens property to the east and south would be a connection to development on that adjacent property; Hutchens replied that that was in 100 year floodplain, was zoned as EFU and had many more restrictions on it. The property in question tonight is in the UGB.

VI. FENCED DOG PARK LOCATION. James Ellison related that he's long lived near the downtown dog park. He related that many of the dogs there are poorly controlled, poorly trained and are noisy. He said 33 residences are near the park and most residents hate it. He said there are typically 80-100 dogs a

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
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EXHIBIT F-173

BICYCLE AND PEDESTRIAN ADVISORY COMMISSION
MINUTES
June 3, 2011
DRAFT

Present
Brad Upton, Chair
Joel Rea
Susan Christie
Dan Herford
Evan Sorce
Mike Beilstein, City Council

Absent
Cora Borradaile, excused
Charles Fletcher

Staff
Lisa Namba, Public Works

Visitors
Vernon Huffman
Jim Bowey
Ali Bonakdar
Theresa Conley
Dean Codo
Kelly Potter
Lynn Evans
Jason Yaich
Sandra Gazeley
Lyle Hutchens
Rose Clarke
Alden Gray
John Roullier
Walter Prichard
Laura Duncan Allen

SUMMARY OF DISCUSSION

Agenda Item	Information Only	Held for Further Review	Recommendations
I. Call Meeting to Order/ Introductions	n/a		
II. Review of May 6, 2011 Minutes			Approved as amended
III. Visitor Comments	X		
IV. Old Business • None	n/a		
V. New Business • Corvallis Area MPO - Bicycle safety education project • McFadden Annexation multi-use path review • Proposed downtown portable sign regulations • Bike parking standards review	 X X n/a		BPAC offered conditional support
VI. Information Sharing	n/a		
VII. Commission Requests and Reports	n/a		
VIII. Pending Items	n/a		

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Ali Bonakdar of the Corvallis Area Metropolitan Planning Organization (CAMPO) stated that CAMPO was given $10,000 by the FHWA for a project focusing on bicycle safety and education. The project must be finished by the end of summer. Mr. Bonakdar asked BPAC for input on bicycle safety and education issues. Theresa Conley, also of CAMPO, presented a draft of the plan to the Commissioners. Chair Upton provided background on BPAC's safety and education recommendations from 2007 and stated that he has given that information to CAMPO. Ms. Conley detailed some ideas CAMPO is considering and stated that education on the rules of the road is key and will be a focus of the project.

Councilor Beilstein suggested CAMPO both contact Gigi Simms with Safe Routes to School regarding projects involving the end of the school year and coordinate with World Car Free Day in September. Ms. Conley said that she has spoken to these groups and is choosing to focus on the adult population. Chair Upton suggested providing education for motorists as well as bicyclists. Commissioner Herford encouraged CAMPO to fund at least one actual training event. Commissioner Christie suggested placing information on the City and OSU's web pages. She noted the number of new drivers in town in the fall and asked about speeding up the process of those new drivers getting used to the "bike culture" of Corvallis. Commissioner Sorce suggested holding an event on campus during the first week of school to provide outreach to students. Mr. Bonakdar stated that time is a limitation and that the project should be wrapped up in early September, though there is the possibility of some flexibility.

Mr. Bonakdar reported that CAMPO's Regional Transportation Plan is being updated and that it will incorporate BPAC's feedback. CAMPO will hold a public meeting on June 15.

McFadden Annexation multi-use path review

Jason Yaich from the Community Development Department's Planning Division presented an annexation request and asked BPAC for feedback. The proposed plan includes a public sidewalk along the site's Highway 20 frontage. The trails plan component of the City's Parks and Recreation Plan and Transportation System Plans show a future multi-use path in this location and along the western property line. Planning is asking BPAC to consider the merits of having the developer install a multi-use path (MUP) along the Highway 20 frontage instead of the sidewalk. In May the Parks, Natural Areas, and Recreation Board (PNARB) recommended a 12-foot wide MUP along the Highway 20 frontage and an easement along the west property line for a future MUP. This trail connection is shown in the above-noted planning documents. Mr. Yaich provided details of the Land Development Code standards for sidewalks along arterial highways (a 12-foot wide park strip and 6-foot wide sidewalk). A high-volume MUP must be 12 feet in width. In response to a question, Mr. Yaich stated that the Comprehensive Plan designation for the site is General Industrial and the applicant is proposing a General Industrial zone. There was discussion about the need for a sidewalk on the east side of the highway but the Commission recognized it wasn't possible to ask for that in conjunction with this annexation. The Commission agreed with the recommendation from PNARB for both the installation of a MUP along the Highway 20 frontage and an easement for a future MUP on the west property line.

Proposed downtown portable sign regulations

Kelly Potter from the Community Development Department's Planning Division presented proposed changes to the Land Development Code (LDC) that would establish standards for temporary and portable signs on sidewalks in the Central Business District and Riverfront areas of the downtown. The changes were developed and are recommended by the Downtown Commission. BPAC asked about the possibility of running this as a pilot or test program. Ms. Potter stated that that is not typical within the LDC, but that the regulations could be re-evaluated some time after implementation. In response to a question from Commissioner Sorce, Ms. Potter responded that enforcement would be complaint driven. Code

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EXHIBIT F-175

Yaich, Jason

From: John.G.deTar@odot.state.or.us
Sent: Friday, October 07, 2011 3:26 PM
To: Yaich, Jason; Duane.J.Liner@odot.state.or.us
Subject: ODOT Case # 3590 McFadden Annexation/Zone Change

Hello Jason,

A note for your staff reports: The Oregon Highway Plan (OHP)'s mobility standard for a Regional Highway inside a Metropolitan Planning Organization (MPO) area is measured as a volume/capacity ratio. The OHP's standard inside an HPO is currently a V/C standard of 0.85. However, in January 2012, that standard will become a V/C target of 0.95. This could have implications to the extent of development that can be allowed on the property. I have attached a link to the proposed changes to the OHP.

http://www.oregon.gov/ODOT/TD/TP/OHP2011.shtml

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-176

Oregon
John A. Kitzhaber, M.D., Governor

Department of Transportation
Region 2 Tech Center
455 Airport Road SE Building A
Salem, Oregon 97301-5397
Telephone (503) 986-2990
Fax (503) 986-2839

Date: **October 6, 2011** **File: T31-1**

To: **Jason Yaich**
City of Corvallis

Re: **McFadden Property Annexation**
Revised TIA Review

Lancaster Engineering submitted a memo on September 21, 2011 to respond to comments made by ODOT and the City of Corvallis, regarding the revised TIA for the McFadden Property Annexation request. The June 17, 2011 revision of the aforementioned TIA still has missing information and invalid assumptions, and is not acceptable to ODOT.

This first set of comments is in response to the September 21, 2011 memo from Lancaster Engineering.

Page	Paragraph	Comment
2	2 of 12	This comment states supporting documentation and pages from prior reports were included in the Appendix. Granted, but the Appendix of the June 17, 2011 revised report still does not contain photocopies of the CAMPO and CWRC data sets, used to establish a Base Year set of volumes for this study. These data sets need to be provided to understand what data was used in the analysis.
2	4 of 12	This seems reasonable.
2	6 of 12	The June 17, 2011 revised report still does not clearly state the analysis years assumed in this study. This is standard analysis procedure.
2	10 of 12	As stated previously, photocopies of the traffic volumes used in the CAMPO and CWRC studies were not included in the June 17th revision. These copies need to be provided to understand what data was used in the analysis.
3	4 of 8	It is correct to state that the Corvallis Willamette River Crossing (CWRC) Study included development of the applicant's property. The analysis for the CRWC included consideration of a no-build condition and build conditions before concluding that construction of a two-lane Van Buren Bridge would not resolve the traffic congestion problems in Downtown Corvallis.

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Page	Paragraph	Comment
3	4 of 8 (Cont.)	The analysis and the addendum state that the analysis was completed for a near-term development of the site, and then proceed to do analysis including transportation facilities that no government agency assumes will be constructed within the 2030 planning horizon. It is not a standard analysis procedure to make assumptions about transportation facilities that are not included within the effective transportation system plan.
3	7 of 8	This seems reasonable.
4	4 of 10	The Preliminary Signal Warrant analysis presented in the Appendix is adequate.
4	10 of 10	The CWRC Report was completed in early 2009. It is reasonable to assume the signal timing used in this report was from 2007 or 2008. Signal timing is a dynamic process, and it is likely the timing in 2011 differs from what was used in the CWRC analysis. Updated signal timing sheets should have been used for this analysis rather than relying upon timing in use several years ago.
7	1 of 6	The table presented on this page shows 6 years of ATR data on OR 34, as the sole justification for the "no-growth" assumption. This is an error in logic. Six years of data from an ATR does not define a growth projection on a highway. ODOT uses 20 years of data, projected forward, to determine a growth rate. This is an industry standard. Also, one ATR does not define the growth rate for an entire city; particularly one the size of Corvallis, which has so many highway routes into and out of the community. Growth rate projections for Corvallis need to be based on data from the Corvallis Transportation Model.

This set of comments are based on discrepancies noted in the June 17, 2011 revised TIA.

Page	Paragraph	Comment
10	8 of 9	This paragraph cites data used in this traffic study was gleaned from the Corvallis Area Metropolitan Transportation Plan, Destination 2030 (CAMPO) report and the Corvallis Willamette River Crossing (CWRC) report. However, photocopies of these data sets were not included in the Appendix of the Lancaster study.
10	8 of 9	This paragraph cites the CAMPO, CWRC and manual count data were not factored to a common analysis year, because the consultant observed that one ATR site shows that traffic volumes in Corvallis had been relatively stable over the past few years. Developing a common analysis year is a standard procedure when preparing a traffic analysis, but that common analysis year should be based upon the transportation model, and not one data gathering location. No data was supplied in the Appendix of the June 17th revision, to allow verification of this assumption.

Page	Paragraph	Comment
13	2 of 7	This paragraph contends a Saturation Flow Rate of 1800 pcphpl was assumed for the Lancaster study, in accordance with the assumed flow rate used in the CAMPO and CWRC studies. This is a reasonable assumption.
16	1 of 3	This section states the assumed trip distribution was based on a Select Zone Analysis (SZA) from the City of Corvallis' Travel Demand Model. However, a copy of the SZA was not included in the Appendix of the Lancaster study, to allow for assumption verification.
App.	Manual Count Data, CAMPO Table 4, CWRC Figure 4 & 5.	The results listed in the CAMPO Study Table 4 indicate an analysis year of 2005. The results listed in the CWRC Figures 4 & 5 indicate an analysis year of 2007. The two manual counts were collected in August of 2009. A data set was compiled for this analysis from these three dissimilar sources, without factoring for growth and seasonality. This is an inappropriate assumption, especially when data supporting a "no-growth" contention is not available for review. Also, is data collected during August acceptable to Corvallis? In the past, staff has told ODOT that traffic counts conducted in August are unacceptable to the city because the community experiences such significant changes in traffic conditions during that month.

If you have any questions regarding these comments, please contact me by phone at (503) 986-2857, or by e-mail at stephen.b.wilson@odot.state.or.us.

Cc: John deTar
Todd Mobley
File

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-179

Oregon
John A. Kitzhaber, M.D., Governor

Department of Transportation
Region 2 Planning
3700 SW Philomath Blvd.
Corvallis, OR, 97333-1147
Phone: (541) 757-8287
Fax: (541) 757-4290

FILE CODE:

May 20, 2011

Jason Yaich
Community Development Department
City of Corvallis
Corvallis, OR 97333

Letter submitted electronically only

Subject: McFadden Zone Change, ZDC11-00002

Dear Mr. Yaich:

Thank you for providing the Oregon Department of Transportation (ODOT) with notice of this proposed land use action and the application materials. This letter is submitted to be part of the public hearing record. ODOT should be considered a party to the land use action and should be notified if new information is submitted, if more hearings are to be held, or if the hearing is extended.

The Corvallis Development Code specifies that a zone change application must describe the increased demand for facilities that will be generated by the proposed change in land use designations. The Code also calls for applications to identify additional facilities required to meet increased demand, and phasing of such facilities in accordance with projected demand. The code also calls for a traffic impact study (TIS), if required by the City Engineer. The application includes a TIS to respond to these application requirements.

The City of Corvallis provided ODOT with an electronic copy of the most recent transportation impact analysis (TIA) on May 16, 2011. City staff requested all comments to be submitted by May 20, 2011. In this short time period, ODOT has been able to only partially review the TIA. Listed below are issues we have been able to identify in the last few days. In the following table, I have referred to page numbers and "PDF Pages." Page numbers were provided in the report, but not in the appendix. Where "PDF Page" is used, it refers to the page number of the PDF document provided to ODOT.

Document Location	Issue
General reliance upon other documents	The TIS states at several locations that information produced in other reports, two of which were prepared by ODOT, has been relied upon to prepare the TIS. However, the references used in the TIS are so general that it is not possible to understand what information has been used, and in what manner. The TIS should cite specific references to these other documents so that the reader can actually determine what information has been used. Where analysis from other reports has been used, photocopies of that other analysis should be included as an appendix. This condition affects much of the analysis performed in the TIS. Without more precise references, it is unclear what source justifies critical factors in the intersection capacity analyses, such as lane capacity, truck volumes, and peak hour factors. The ODOT reports referenced were prepared at different times. It is not possible to glean from the TIS what was done to provide a common analysis year for the TIS analysis.
Queuing	The TIS should have included queuing analyses and traffic progression analysis at all intersections with traffic signals and at all intersections where traffic signals are proposed. As a result, it is unclear how intersections will be affected by site-related traffic.
Page 3 Paragraph #4	The report does not make clear what assumptions have been used to address future growth in background traffic volumes. The analysis assumes the project is fully built-out in the "near future," but does not establish what the "near future" means.
Page 5, Paragraph 1	The description of the OR-99W/Circle Blvd intersection is not correct. The northbound approach contains two northbound left-turn lanes.
Page 9 Paragraph 5	The report references "historic traffic counts," but it does not establish when these counts were taken and no copies of the referenced traffic counts were included in the appendix. Without this information, it is not possible to determine whether the counts were accomplished during an acceptable time of year.
Page 13 and Page 21	The operation of existing intersections is provided on page 13. The same intersections are evaluated with additional vehicle traffic on page 21. Figures 4 and 5 indicate 38 percent of site-generated traffic passes through the Circle Blvd/4 Acres Road intersection, but intersection operations do not change. It is highly unlikely that this additional volume would pass through the intersection without having a measurable affect.
Page 17 (Figure 4) Page 18 (Figure 5) Page 19 (Figure 6)	The TIA inappropriately distributes site-generated vehicle trips into the transportation system. Van Buren Avenue is an arterial street entering the downtown area, but no inbound vehicles are generated from this street west of Fourth Street (Figures 4 and 6). Ten percent of outbound vehicles are distributed to Second Street south of Van Buren Avenue (Figures 5 and 6). This misallocates through traffic to a local street with a posted speed of 20 MPH that provides access to downtown businesses.

	Through traffic should be assigned to Fourth Street via Harrison Boulevard. Outbound vehicles on OR-99W entering downtown from the north are not considered in the traffic distribution.
Page 22 Paragraph 4	A two-lane Van Buren Bridge is assumed to exist for this portion of the analysis as the only "practical mitigation" for intersection operations. This bridge is neither planned nor is it programmed. A two-lane bridge does not exist, and there is no project in the State Transportation Improvement Program to construct a bridge. The Corvallis Metropolitan Planning Organization's Regional Transportation Plan does not assume that such a bridge will be constructed within the 2030 planning horizon. It is inappropriate to rely upon this facility unless this improvement is needed in conjunction with property development.
Page 24 (Figure 7) Page 25 (Figure 8)	It is not clear what the traffic volumes in these figures mean. For example, site traffic exiting the site southbound and the southbound US-20 traffic volume does not equal the traffic volumes shown at the Second Street/Harrison Boulevard Intersection (#9). This intersection is the gateway intersection to trip distribution throughout downtown—if this intersection volume is incorrect, the intersection volumes at other locations may not reliable.
Page 23 Paragraph	This discussion presumes that major improvements to state highway facilities exist: a separate eastbound right-turn lane on Circle Blvd at US-20, a two-lane Van Buren Bridge, and two northbound right-turn lanes at the OR-34/Corvallis Bypass intersection. None of these projects are planned or programmed for construction. Including these components in the analysis then reallocates vehicle trips throughout the analysis area, resulting in significantly improved traffic conditions. It is not appropriate to consider such mitigations unless the project is: 1) a funded project in the State Transportation Improvement Program; 2) called for in the financially constrained portion of the Regional Transportation Plan, or 3) is a mitigation to be funded in conjunction with the change in zoning.
PDF Pages 43 & 65 Signal Warrant Analysis	The signal warrant analysis combines 2030 traffic conditions with site development. This does not follow the procedures established by ODOT for preliminary traffic signal warrants on a state highway. The TIS does not substantiate how its 2030 highway volumes were developed. Also, the application does not contain sufficient information to understand how the minor and major approach volumes were developed for the signal warrant analysis.
PDF Pages 51 & 52	The OR-34/Corvallis Bypass intersection configuration does not include a southbound right-turn lane at the intersection. Only one lane exists for southbound traffic. There is no discussion in the document about this change in the intersection configuration.
PDF Pages 46-70	Analysis pages in the TIS appendix have used different traffic flow parameters—at some locations, the parameter used is 1750 vehicles per hour per lane (vphpl); at others, 1800 vphpl, and at others 1900 vphpl.

	The TIS does not provide a basis for these different values. A consistent traffic flow parameter should have been used at all evaluated locations except where documentation is provided demonstrating that other parameters are appropriate. However, the TIS does not provide any justification for using three different parameters.
PDF Pages 46-70	The TIS should clarify what information was used to determine the traffic signal timing used in these analyses.

The factors described above lead ODOT to conclude that the application does not fairly describe the increased demand on facilities from the land uses that would be provided by the application and the proposed rezoning. Without this information, it cannot be reasonably determined what additional facilities should be provided to respond to the increased demand. The TIS needs substantial modification in order to present the needed information.

Please provide ODOT with a complete notice of decision, including any conditions of approval. The notice may be provided electronically to:

ODOTR2PLANMGR@ODOT.STATE.OR.US

If you prefer, a paper document can be mailed to:

Planning and Development Manager
ODOT Region 2 Headquarters
455 Airport Road, Building B
Salem, OR 97301-5395

Please call if you have any questions.

Yours truly,

John G. deTar
Senior Region Planner

electronic cc:

Jeff McConnell, City of Corvallis
Ted Reese, City of Corvallis
Som Sartnurak, City of Corvallis
Lyle Hutchins, Devco Engineering
Todd Mobley, Lancaster Engineering
Lisa Nell, ODOT
Ann Batten, ODOT
Dorothy Upton, ODOT

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-183

Yaich, Jason

From: DETAR John G [John.G.DETAR@odot.state.or.us]
Sent: Tuesday, May 17, 2011 4:36 PM
To: Yaich, Jason
Subject: McFadden Annexation/Change in Zoning

Jason

ODOT agrees that the application materials dealing with the package treatment plant, Willamette River water right and extant well production are sufficient to demonstrate that the industrial use of the property described in the application could occur in Benton County. In ODOT's opinion, the TPR would not apply to the development that is proposed, if the City of Corvallis includes the measures stated in my previous email as conditions of site development:

a) the trip cap limitation on the scale of possible development should be described in the chain of title so that purchasers are informed about the extent of development that is possible, and

b) an additional condition of approval should call for reconsideration of OAR 660-012-0060 before the vehicle trip cap is changed to allow more trips.

ODOT will present a separate email reviewing the traffic study that has been submitted.

"A society grows great when old men plant trees in whose shade they will not sit." Greek Proverb

John G. deTar
Senior Region Planner, ODOT Region 2
3700 SW Philomath Blvd., Corvallis, OR 97333
541.757.4159

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-184

Oregon Administrative Rule 660-012-0060

Plan and Land Use Regulation Amendments

(1) Where an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation would significantly affect an existing or planned transportation facility, the local government shall put in place measures as provided in section (2) of this rule to assure that allowed land uses are consistent with the identified function, capacity, and performance standards (e.g. level of service, volume to capacity ratio, etc.) of the facility. A plan or land use regulation amendment significantly affects a transportation facility if it would:

(a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

(b) Change standards implementing a functional classification system; or

(c) As measured at the end of the planning period identified in the adopted transportation system plan:

(A) Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

(B) Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP or comprehensive plan; or

(C) Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.

(2) Where a local government determines that there would be a significant effect, compliance with section (1) shall be accomplished through one or a combination of the following:

(a) Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.

(b) Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of this division; such amendments shall include a funding plan or mechanism consistent with section (4) or include an amendment to the transportation finance plan so that the facility, improvement, or service will be provided by the end of the planning period.

(c) Altering land use designations, densities, or design requirements to reduce demand for automobile travel and meet travel needs through other modes.

(d) Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.

(e) Providing other measures as a condition of development or through a development agreement or similar funding method, including transportation system management measures, demand management or minor transportation improvements. Local governments shall as part of the amendment specify when measures or improvements provided pursuant to this subsection will be provided.

(3) Notwithstanding sections (1) and (2) of this rule, a local government may approve an amendment that would significantly affect an existing transportation facility without assuring that the allowed land uses are consistent with the function, capacity and performance standards of the facility where:

(a) The facility is already performing below the minimum acceptable performance standard identified in the TSP or comprehensive plan on the date the amendment application is submitted;

(b) In the absence of the amendment, planned transportation facilities, improvements and services as set forth in section (4) of this rule would not be adequate to achieve consistency with the identified function, capacity or performance standard for that facility by the end of the planning period identified in the adopted TSP;

(c) Development resulting from the amendment will, at a minimum, mitigate the impacts of the amendment in a manner that avoids further degradation to the performance of the facility by the time of the development through one or a combination of transportation improvements or measures;

(d) The amendment does not involve property located in an interchange area as defined in paragraph (4)(d)(C); and

(e) For affected state highways, ODOT provides a written statement that the proposed funding and timing for the identified mitigation improvements or measures are, at a minimum, sufficient to avoid further degradation to the performance of the affected state highway. However, if a local government provides the appropriate ODOT regional office with written notice of a proposed amendment in a manner that provides ODOT reasonable opportunity to submit a written statement into the record of the local government proceeding, and ODOT does not provide a written statement, then the local government may proceed with applying subsections (a) through (d) of this section.

(4) Determinations under sections (1)-(3) of this rule shall be coordinated with affected transportation facility and service providers and other affected local governments.

(a) In determining whether an amendment has a significant effect on an existing or planned transportation facility under subsection (1)(c) of this rule, local governments shall rely on existing transportation facilities and services and on the planned transportation facilities, improvements and services set forth in subsections (b) and (c) below.

(b) Outside of interstate interchange areas, the following are considered planned facilities, improvements and services:

(A) Transportation facilities, improvements or services that are funded for construction or implementation in the Statewide Transportation Improvement Program or a locally or regionally adopted transportation improvement program or capital improvement plan or program of a transportation service provider.

(B) Transportation facilities, improvements or services that are authorized in a local transportation system plan and for which a funding plan or mechanism is in place or approved. These include, but are not limited to, transportation facilities, improvements or services for which: transportation systems development charge revenues are being collected; a local improvement district or reimbursement district has been established or will be established prior to development; a development agreement has been adopted; or conditions of approval to fund the improvement have been adopted.

(C) Transportation facilities, improvements or services in a metropolitan planning organization (MPO) area that are part of the area's federally-approved, financially constrained regional transportation system plan.

(D) Improvements to state highways that are included as planned improvements in a regional or local transportation system plan or comprehensive plan when ODOT provides a written statement that the improvements are reasonably likely to be provided by the end of the planning period.

(E) Improvements to regional and local roads, streets or other transportation facilities or services that are included as planned improvements in a regional or local transportation system plan or comprehensive plan when the local government(s) or transportation service provider(s) responsible for the facility, improvement or service provides a written statement that the facility, improvement or service is reasonably likely to be provided by the end of the planning period.

(c) Within interstate interchange areas, the improvements included in (b)(A)-(C) are considered planned facilities, improvements and services, except where:

(A) ODOT provides a written statement that the proposed funding and timing of mitigation measures are sufficient to avoid a significant adverse impact on the Interstate Highway system, then local governments may also rely on the improvements identified in paragraphs (b)(D) and (E) of this section; or

(B) There is an adopted interchange area management plan, then local governments may also rely on the improvements identified in that plan and which are also identified in paragraphs (b)(D) and (E) of this section.

(d) As used in this section and section (3):

(A) Planned interchange means new interchanges and relocation of existing interchanges that are authorized in an adopted transportation system plan or comprehensive plan;

(B) Interstate highway means Interstates 5, 82, 84, 105, 205 and 405; and

(C) Interstate interchange area means:

(i) Property within one-half mile of an existing or planned interchange on an Interstate Highway as measured from the center point of the interchange; or

(ii) The interchange area as defined in the Interchange Area Management Plan adopted as an amendment to the Oregon Highway Plan.

(e) For purposes of this section, a written statement provided pursuant to paragraphs (b)(D), (b)(E) or (c)(A) provided by ODOT, a local government or transportation facility provider, as appropriate, shall be conclusive in determining whether a transportation facility, improvement or service is a planned transportation facility, improvement or service. In the absence of a written statement, a local government can only rely upon planned transportation facilities, improvements and services identified in paragraphs (b)(A)-(C) to determine whether there is a significant effect that requires application of the remedies in section (2).

(5) The presence of a transportation facility or improvement shall not be a basis for an exception to allow residential, commercial, institutional or industrial development on rural lands under this division or OAR 660-004-0022 and 660-004-0028.

(6) In determining whether proposed land uses would affect or be consistent with planned transportation facilities as provided in 0060(1) and (2), local governments shall give full

credit for potential reduction in vehicle trips for uses located in mixed-use, pedestrian-friendly centers, and neighborhoods as provided in (a)-(d) below;

(a) Absent adopted local standards or detailed information about the vehicle trip reduction benefits of mixed-use, pedestrian-friendly development, local governments shall assume that uses located within a mixed-use, pedestrian-friendly center, or neighborhood, will generate 10% fewer daily and peak hour trips than are specified in available published estimates, such as those provided by the Institute of Transportation Engineers (ITE) Trip Generation Manual that do not specifically account for the effects of mixed-use, pedestrian-friendly development. The 10% reduction allowed for by this section shall be available only if uses which rely solely on auto trips, such as gas stations, car washes, storage facilities, and motels are prohibited;

(b) Local governments shall use detailed or local information about the trip reduction benefits of mixed-use, pedestrian-friendly development where such information is available and presented to the local government. Local governments may, based on such information, allow reductions greater than the 10% reduction required in (a);

(c) Where a local government assumes or estimates lower vehicle trip generation as provided in (a) or (b) above, it shall assure through conditions of approval, site plans, or approval standards that subsequent development approvals support the development of a mixed-use, pedestrian-friendly center or neighborhood and provide for on-site bike and pedestrian connectivity and access to transit as provided for in 0045(3) and (4). The provision of on-site bike and pedestrian connectivity and access to transit may be accomplished through application of acknowledged ordinance provisions which comply with 0045(3) and (4) or through conditions of approval or findings adopted with the plan amendment that assure compliance with these rule requirements at the time of development approval; and

(d) The purpose of this section is to provide an incentive for the designation and implementation of pedestrian-friendly, mixed-use centers and neighborhoods by lowering the regulatory barriers to plan amendments which accomplish this type of development. The actual trip reduction benefits of mixed-use, pedestrian-friendly development will vary from case to case and may be somewhat higher or lower than presumed pursuant to (a) above. The Commission concludes that this assumption is warranted given general information about the expected effects of mixed-use, pedestrian-friendly development and its intent to encourage changes to plans and development patterns. Nothing in this section is intended to affect the application of provisions in local plans or ordinances which provide for the calculation or assessment of systems development charges or in preparing conformity determinations required under the federal Clean Air Act.

(7) Amendments to acknowledged comprehensive plans and land use regulations which meet all of the criteria listed in (a)-(c) below shall include an amendment to the comprehensive plan, transportation system plan the adoption of a local street plan, access management plan, future street plan or other binding local transportation plan to provide for on-site alignment of streets or accessways with existing and planned arterial, collector, and local streets surrounding the site as necessary to implement the requirements in Section 0020(2)(b) and Section 0045(3) of this division:

(a) The plan or land use regulation amendment results in designation of two or more acres of land for commercial use;

(b) The local government has not adopted a TSP or local street plan which complies with Section 0020(2)(b) or, in the Portland Metropolitan Area, has not complied with Metro's requirement for street connectivity as contained in Title 6, Section 3 of the Urban Growth Management Functional Plan; and

(c) The proposed amendment would significantly affect a transportation facility as provided in 0060(1).

(8) A "mixed-use, pedestrian-friendly center or neighborhood" for the purposes of this rule, means:

(a) Any one of the following:

(A) An existing central business district or downtown;

(B) An area designated as a central city, regional center, town center or main street in the Portland Metro 2040 Regional Growth Concept;

(C) An area designated in an acknowledged comprehensive plan as a transit oriented development or a pedestrian district; or

(D) An area designated as a special transportation area as provided for in the Oregon Highway Plan.

(b) An area other than those listed in (a) which includes or is planned to include the following characteristics:

(A) A concentration of a variety of land uses in a well-defined area, including the following:

(i) Medium to high density residential development (12 or more units per acre);

(ii) Offices or office buildings;

(iii) Retail stores and services;

(iv) Restaurants; and

(v) Public open space or private open space which is available for public use, such as a park or plaza.

(B) Generally include civic or cultural uses;

(C) A core commercial area where multi-story buildings are permitted;

(D) Buildings and building entrances oriented to streets;

(E) Street connections and crossings that make the center safe and conveniently accessible from adjacent areas;

(F) A network of streets and, where appropriate, accessways and major driveways that make it attractive and highly convenient for people to walk between uses within the center or neighborhood, including streets and major driveways within the center with wide sidewalks and other features, including pedestrian-oriented street crossings, street trees, pedestrian-scale lighting and on-street parking;

(G) One or more transit stops (in urban areas with fixed route transit service); and

(H) Limit or do not allow low-intensity or land extensive uses, such as most industrial uses, automobile sales and services, and drive-through services.

Stat. Auth.: ORS 183 & 197.040
Stats. Implemented: ORS 195.025, 197.040, 197.230, 197.245, 197.610 - 197.625, 197.628 - 197.646, 197.712, 197.717 & 197.732
Hist.: LCDC 1-1991, f. & cert. ef. 5-8-91; LCDD 6-1998, f. & cert. ef. 10-30-98; LCDD 6-1999, f. & cert. ef. 8-6-99; LCDD 3-2005, f. & cert. ef. 4-11-05

RECEIVED
APR 06 2011
DEPARTMENT OF STATE LANDS

WETLAND LAND USE NOTIFICATION FORM
(this form is to be completed only by planning department staff for mapped wetlands/waterways)

DEPARTMENT OF STATE LANDS WETLANDS PROGRAM
West side of Cascades, send to: 775 Summer Street NE, Suite 100; Salem, OR 97301-1279; (503) 986-5200
East side of Cascades, send to: 1645 NE Forbes Rd., Suite 112 Bend, OR 97701; (541) 388-6112

1. County: BENTON — Local Case File #: ANN11-00001
City: CORVALLIS — DSL File #: WN 2011-0038 (completed by DSL)
Responsible Jurisdiction: ☒ City ☐ County — DSL Project #: 52139 (completed by DSL)

2. **APPLICANT:** GAZELY AND ASSOCIATES (name) — **LANDOWNER:** ARTHUR MCFADDEN (name)
7275 NE HAUGEN ROAD (mailing address) — 401 SW ALDER (mailing address)
CORVALLIS, OR 97333 (city, state zip) — PORTLAND, OR 97204 (city, state zip)
(541)745-5368 (phone) — (503)961-2652 (phone)

RECEIVED
APR 21 2011
Community Development
Planning Division

3. **LOCATION**
T 11S R 5W S 25 ¼ Tax Lot(s) 1308
Address 1350-1520 NE HIGHWAY 20
City CORVALLIS
NWI quad map name CORVALLIS LWI – NORTH SUBAREA – N-GAR-W-1

4. **ATTACHMENTS**
Attach all the following (with site marked): • LWI / NWI Map (if no LWI map) • Parcel Map • Site Plan (if any)
If applicable attach: ☐ Other

5. **SITE INFORMATION**
LWI/NWI Wetland Classification Codes(s)
Adjacent Waterway (if any) — Zoning industrial (currently in county)

6. **PROPOSED ACTIVITY**
☒ site plan approval ☐ subdivision ☒ Other annexation
☐ grading permit ☒ planned unit development
☐ conditional use permit ☐ building permit (new structures)
Project Description Annexation of 85.38 acre McFadden Industrial site, application of City GI (General Industrial) zone upon annexation, and approval of a Conceptual and Detailed Development Plan in phases
Completed by/Contact JASON YAICH Date APRIL 1, 2011 E-Mail Jason.yaich@ci.corvallis.or.us
Address PO BOX 1083, CORVALLIS, OR 97339-1083 Phone: (541) 766-6908

DSL RESPONSE
☒ A removal-fill permit is required from the Department of State Lands for > 50 cyds of cumulative removal plus fill volume in wetlands.
☐ A removal-fill permit will be required when the development project proceeds
☐ A removal-fill permit may be required
☐ A permit may be required by the Corps of Engineers (503-808-4373)
☒ Information needed includes:
☒ A wetland determination/delineation report – see comments
☐
* hydric soils indicate that wetlands may be present
☐ State Permit # ☐ was issued ☐ has been applied for
☐ No removal-fill permit is required for the described project if/because:
Comments: The county soil survey shows soils with *hydric (wet) inclusions on the lot. Prior to development an onsite inspection by a qualified consultant is recommended to determine if wetlands are present. If present a wetland delineation is needed to determine precise wetland boundaries.
☐ On-Site Visit By: Date:
Response completed by: Caroline Stimson Date: April 18, 2011
* If the project is changed to involve fill or removal from the wetlands area, a state removal-fill permit will be required.

http://www.oregonstatelands.us/wetlanduse.htm ☐ Mailings Completed ☒ Data Entry Completed September 2008

44.5787 –123.2477

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-192

Yaich, Jason

From: Punton, Amanda [amanda.punton@state.or.us]
Sent: Friday, April 29, 2011 1:19 PM
To: Yaich, Jason
Cc: Moore, Ed W
Subject: Corvallis PAPA 001-11(ANN11-001)

Jason,

Ed More asked that I send these comments on your proposed annexation directly. Some of this we have already discussed on the phone:

> The proposal submitted with the PAPA notice states that, "the applicant's natural resource protection plan consists of maintaining the minimum 'safe harbor' setbacks from all significant resources. [Page 10] It is not evident that this plan is consistent with the city's protection requirements for significant riparian areas and wetlands on the property.
>
> The proposal submitted with the PAPA notice does not address planning and review considerations for the portion of the property that is within the boundary of the Willamette River Greenway. However, correspondence with the city confirms that city staff is aware of Goal 15 consistency issues. Notice to Oregon State Parks is required for all proposed new uses, expansions and intensifications of uses within the Greenway. Findings that the proposed bike path and other development within Greenway is consistent with Goal 15 and the city's implementation code should support a decision to approve the annexation and rezoning if these decisions will authorize the new use.

Please call if you have any questions.

Amanda

Amanda Punton | Natural Resource Specialist
Planning Services Division | Oregon Coastal Management Program
Oregon Dept. of Land Conservation and Development
800 NE Oregon #18 | Portland, OR 97232
Office: (971) 673-0961| Fax: (971) 673-0911
amanda.punton@state.or.us | www.oregon.gov/LCD/

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-193

Yaich, Jason

From: Kathy Schutt [kathy.schutt@state.or.us]
Sent: Tuesday, May 10, 2011 9:23 AM
To: Yaich, Jason
Subject: RE: I'm the Planning Manager at OPRD....

That's fine. Here's the address.
OPRD
Attn: Kathy Schutt
725 Summer St NE, Ste C
Salem OR 97301-1266

We get a lot of these. We will decline to comment. Thanks.

>>> "Yaich, Jason" <Jason.Yaich@ci.corvallis.or.us> 5/10/2011 7:51 AM >>>
Thank you for your help on this Kathy. Our local zoning ordinance requires that we send Oregon State Parks a public notice of the land use hearings as well as a copy of the final decision, even if the original WRG boundary is unchanged. In this case, the development consists of nothing more than a public sidewalk along the west side of Highway 20 (the river is on the east side of the highway - immediately on the other side of the highway guardrail)

Can you confirm a mailing address and contact name for such mailings? Currently we have the contact as Tammy Metherell at the following address :

Attn: Tammy Metherell

Oregon Parks & Rec.

725 Summer Street NE, Suite 'C'

Salem, OR 97301

Jason

From: Kathy Schutt [mailto:kathy.schutt@state.or.us]
Sent: Monday, May 02, 2011 7:55 AM
To: Yaich, Jason
Subject: RE: I'm the Planning Manager at OPRD....

Jason, unless the applicant wants to move the location of the WG boundary line itself, you don't need anything from OPRD. If they do, Amanda can give you the specific point in your process that you submit a request to us. That would be in the form of a letter asking for our comment on the proposed boundary change, attached to a copy of the application.

If they are asking to apply an overlay on one side or the other of the current greenway boundary line, or on both sides. You don't need our official comment on it. In fact, we only comment on local zoning, even along the river, if there are proprietary interests for OPRD such as state park next door.

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-194

Remember that your WG boundary line may be different than the boundary of a zone you might have. If this is confusing let's talk on the phone. 503.986.0745 Kate

>>> "Yaich, Jason" <Jason.Yaich@ci.corvallis.or.us> 4/29/2011 2:00 PM >>>
Hi Kathy
It sounds like the property owner / applicant for this annexation request will be also applying a Willamette River Greenway Overlay to the property (as a zoning overlay), if the property is annexed into the City of Corvallis. The property already has a Willamette River Greenway Overlay on it as part of the Benton County zoning classification.

I checked the original ODOT greenway maps (and the copy officially adopted by the City of Corvallis in 1982 as part of the Greenway program), and it looks like this property should have the greenway overlay on it.

The development application includes a public sidewalk, which will likely be within the Willamette River Greenway (abutting the existing US Highway 20, on the west side of the highway). The Willamette River is on the east side of the highway.

They will be required to go through our WRG / Conditional Use process to account for any development within the newly applied greenway.

Do you have a standard form for land use notifications for jurisdictions, so that I can send a copy of the land use application for your review ? Or is our correspondence enough to get the ball rolling?

Here is a link to an on-line version of the application if that works. Otherwise, we can send paper:

Folder: Application

http://archive.ci.corvallis.or.us/Browse.aspx?startid=297203

Please let me know if you have any updated process information for land use notifications. Thank you for your time.

Jason Yaich
Associate Planner (City of Corvallis)

From: Kathy Schutt [mailto:kathy.schutt@state.or.us]
Sent: Tuesday, April 12, 2011 1:33 PM
To: Yaich, Jason
Cc: Amanda Punton
Subject: I'm the Planning Manager at OPRD....

I was forwarded our email with questions about the WRG boundary criteria. I have fielded many questions like this from local jurisdictions over the last few years.

You should talk with Amanda Punton at DLCD. You never know what DLCD's view will be on each of these specific situations without asking them. DLCD had been working on mapping but we have heard that they cut the position of the person who was working on that. OPRD does not keep mapping of the boundary.

My advice, generally, is to keep the boundary where it is and the local government's record of the location is the best record of where that is. Changing the line location may not be the best, most

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-195

feasible, way to get where you want to go regarding what is allowed on either side of the line. Zoning should do that for you. Most jurisdictions who have considered moving the line have ended up deciding it is not worth the potentially difficult process. Proposing to move the line can bring out real controversy. But, it would be good for you to work with DLCD. Kate

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-196

Yaich, Jason

From: Yaich, Jason
Sent: Wednesday, May 11, 2011 2:21 PM
To: VERRET Greg J
Subject: RE: LAND USE CASE REVIEW - McFadden Annexation Revisions

Hi Greg,
See my comments below.

From: VERRET Greg J [mailto:Greg.VERRET@Co.Benton.OR.US]
Sent: Wednesday, May 11, 2011 2:00 PM
To: Yaich, Jason
Subject: RE: LAND USE CASE REVIEW - McFadden Annexation Revisions

Jason,
I have a couple of questions for clarification:

1. Is it clear that the subject property does not include land south of Hwy 20 (i.e., between the highway and the river)? It looks that way from the survey, but I would not want to see a remainder from the annexation to be created as a stand-alone parcel of land.[Yaich, Jason] The owner has confirmed that a portion of Tax Lot 1300 extends all the way from near Circle Blvd., down along the east side of Highway 20, abutting the Willamette River, and directly across from the subject site. Though we suggested inclusion of this property, the owner has declined to include this property in their annexation proposal, and we felt they were not legally obligated to include it per LDC standards.

2. It looks like the proposed annexation will leave a small island of County-jurisdiction land surrounded by City-jurisdiction – the 3 small residential parcels to the southwest. Does the city have any interest in encouraging these to annex at the same time? I know we recently missed out on an opportunity to annex some land on the other side of town that had a non-remonstrance agreement in place and would have resolved some issues to get annexed (I'm thinking of the properties off of Clarence Circle near the extension of Circle, which contain land in the City and land in the County). Just want to make sure we don't miss something.[Yaich, Jason] We raised this with the applicant, but I am unsure of what conversations they have had, if any, with those owners.

And a couple comments that may or may not be pertinent:
3. The applicant's map showing land use plan with natural features shows "100-year floodplain", but does not identify the protection level of that floodplain as a Natural Feature. Under County jurisdiction, this is "High Protection Floodplain." I don't know if that is supposed to carry over upon annexation, or if it would be "Partial Protection", but either way should probably be noted as such on the plan.[Yaich, Jason] The City considers that High Protection as well, and our existing (and newly adopted maps per the FEMA update) maintain that status.

4. This site is included in the Benton County Inventory of Historic Resources (Site #609). It was not included on the Register of Historic Resources.[Yaich, Jason] Good to know. I'll include this info in the Planning Commission packet.

5. Benton County gave land use approval to a wetland mitigation project in the northern portion of the property (within the floodplain), File No. LU-06-26. I doubt this will have bearing on the annexation, but thought I would mention it.[Yaich, Jason] Thanks for the info. That was part of

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-197

the Home Depot project, wasn't it? The developer intends to fully protect the Natural Resources on site, throughout all phases of development (at least at this time). The site does not qualify for MADA, so technically,they should not encroach at all into the mapped Resource and Hazard areas, except for their sidewalk and access driveway on Hwy 20 (Highly Protected Riparian Corridor associated with Willamette River).

If you have questions about any of these, let me know.

-Greg.

~~~~~~
Greg Verret, Director
Benton County Community Development Dept.
360 SW Avery Ave., Corvallis OR 97333
(541) 766-6819 FAX:(541) 766-6891
greg.verret@co.benton.or.us
www.co.benton.or.us/cd
~~~~~~

From: Yaich, Jason [mailto:Jason.Yaich@ci.corvallis.or.us]
Sent: Friday, May 06, 2011 4:53 PM
To: McConnell, Jeff; Reese, Ted; Young, Kevin; Braun, Gene; Penpraze, Tom; Rampenthal, Ron; Moser, Bruce; Brooks, Clay; Rochefort, Jacqueline; Sassaman, Jon; Fegles, Mike; Pusateri, Carla; City Attorney Brewer; Louie, Kathy; ODOT Reg 2 Planning Manager; MARDIS Joe L; IRVIN Roger M; VERRET Greg J; DETAR John G
Subject: LAND USE CASE REVIEW - McFadden Annexation Revisions

The applicant for the McFadden Annexation submitted revisions this afternoon. Please review and return any comments to me as soon as you can. The applicants are hoping to get this in front of the Planning Commission on June 1st.

Please let me know if you have any questions.

CITY OF CORVALLIS - ARCHIVES
The following information is being provided to you at your request.

Folder: 5-6-2011 REVISIONS
http://archive.ci.corvallis.or.us/Browse.aspx?startid=300499

Jason Yaich

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-198

McFadden Annexation

An Application for
Annexation
Zone Change
Planned Development
and
Conditional Development in WRG Zone

Submitted to

The City of Corvallis
501 SW Madison Avenue
Corvallis, Oregon 97333

Submitted by:

Gazeley & Associates
7275 NE Haugen Road
Corvallis, OR 97330

Devco Engineering, Inc.
245 NE Conifer Blvd.
Corvallis, OR 97330

Revised August 4, 2011

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-199

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Planned Development Narrative ..... 16 pages

Conditional Development Narrative ..... 14 pages

Graphics

Attachment 1 ..... Benton County Assessor's Map
Attachment 2 ..... Annexation Boundary Survey
Attachment 3 ..... Existing Highway Improvements
Attachment 4 ..... Legal Description
Attachment 5 ..... Parcel Boundary Survey
Attachment 6 ..... Supplemental Parcel Boundary Survey

Figure 1 ..... Public Notice Map
Figure 2 ..... Zoning Designations
Figure 3 ..... Comprehensive Plan Designations
Figure 4 ..... Existing Land Use Map
Figure 5 ..... Significant Natural Features
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Drawing C2.0B ..... General Land Use Plan
Drawing C2.1 ..... Conceptual Development Plan
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Transportation Impact Analysis, Lancaster Engineering, ~~May 6, 2011~~, As Revised June 17, 2011

Letter to Jason Yaich, City of Corvallis
Original March 29, 2011, Revised May 5, 2011/Transportation Planning Rule

Letter to Jason Yaich, City of Corvallis
Original March 28, 2011, Revised May 5, 2011/Planned Development

Letter to John deTar, ODOT District 4
May 5, 2011, Supplemental Information Supporting Development Assumptions Under County Zoning

Water, Sanitary Sewer, and Storm Water Demand Calculations

Addendum to Water and Storm Water Demand Calculations

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-201

McFadden Annexation
4 August 2011

NARRATIVE

- Annexation
- Zone Change
- Planned Development
- Conditional Development in WRG Overlay Zone

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-202

Applicant/Property Owner	Arthur McFadden 401 SW Alder Street Portland, OR 97204
Proposal	Consolidated Application for: • *Annexation of 85.43 Acres of General Industrial Designated Land, Currently in the Urban Growth Boundary;* • *Zone Change from Benton County Urban Industrial to City of Corvallis General Industrial/Planned Development;* • *Conceptual and Detailed Development Plans;* • *Conditional Development/Willamette River Greenway Permit*
Site Address and Assessor's Map Number	1350 to 1520 NE Hwy. 20 Corvallis, OR 97330 T11S., R.5W., S.25, TL 1308
Project Planners:	*Gazeley & Associates* Sandra Gazeley Creed A. Eckert 7275 NE Haugen Drive Corvallis, OR 97330 (541) 745-5368
Project Design Management, Engineering and Surveying:	*Devco Engineering* Lyle Hutchens Steve Hattori, PE Brian Sailor, PLS 245 NE Conifer Corvallis, OR 97330 (541) 757-8991
Traffic Engineer:	*Lancaster Engineering* Todd Mobley, PE, PTOE 321 SW 4th Avenue, Ste 400 Portland, OR 97204 (503) 248-0313

Site Summary

Site Area	85.43 Acres
Corvallis Comprehensive Plan Designation	Urban Growth Boundary, General Industrial (GI)
Current Benton County Zoning and Plan Designation	Urban Industrial - 20 Acre Minimum Planned Unit Development Overlay (UI 20 / PUD); Willamette River Greenway Overlay; Benton County Floodplain Management Overlay; Natural Features Overlay in Corvallis Urban Fringe
Proposed Corvallis Zoning	General Industrial (GI)/Planned Development Willamette River Greenway Overlay
Proposed Comprehensive Plan Designation	General Industrial
Significant Natural Resources	Highly Protected Riparian Corridors; Wetlands of Special Significance; 100 Year Flood Plain and Willamette River Greenway
Current Uses	Two Single-Family Dwellings; Barn; Horse Stables; Former Clubhouse Structure; Leased for Field Crops

1. City of Corvallis Land Development Information Report, March 2011
2. Bruce Laird, Clean Technology Recruiter, Business Oregon, Personal Communication
3. Michael Williams, Industrial Lands Specialist, Business Oregon (Attached Letter)
4. John Sechrest, (Attached Memorandum)
5. "Prosperity That Fits," October 2006
6. Economic Productivity of Employment and Industrial Land, Business Oregon, June 2009
7. Corvallis, Buildable Lands Inventory, June 1998

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-204

BACKGROUND AND PROPOSAL:

The subject parcel is an 85.43 acre parcel of land, currently in residential and agricultural uses. It is located immediately west and adjacent to Hewlett Packard's campus near the corner of Circle Boulevard and State Highway 20.

It appears, from information provided by City Planning staff, that the subject property has been included in the Corvallis Urban Growth Boundary (UGB) since that political boundary was formed in 1974, following Oregon's passage of Senate Bill 100, which created our statewide land use program and resulted in UGB planning.

In 1978, the Corvallis Comprehensive Plan designation for the proposed Annexation site and the adjacent HP property was changed from Low Density Residential to Industrial (City of Corvallis land use application number CPA-77-2), and the portion of the HP campus that abuts Circle Boulevard was annexed into the City. Various annexations since 1980 would bring additional portions of the current HP campus into the Corvallis city limits.[1]

This proposal is to annex the subject 85.43 acres of UGB land into the city limits with a General Industrial / Planned Development Zoning and Comprehensive Plan Designation, the same Zone and Plan designation identified as appropriate for this site by the City's Comprehensive Plan since 1978.

The application is for a Major Annexation, pursuant to Section 2.6.30.01.b of the City of Corvallis Land Development Code (LDC.) There is no industrial development proposed or currently pending, although approval of this application would provide the opportunity for future development under City, rather than Benton County, development standards.

The Annexation application is consolidated with the requisite Zone Change, as well as Conceptual and Detailed Development Plans, which include proposed Conditions that would fix the maximum Floor Area Ratio (FAR) and a trip generation cap for the entire site. Implementation of the DDP will establish the entire site as an active Planned Development and permanently affix Conditions of Approval to the site. A maximum Floor Area Ratio of 0.23 would apply to the Planned Development in perpetuity. This FAR is based upon actual development in the vicinity.

The current Benton County Urban Industrial zone allows a broad range of uses, many of which are comparable to those allowed in the City's GI zone in terms of traffic impacts. The application of a maximum FAR and trip generation cap to the entire site, as a Condition of the Planned Development, provides that the parcel's development potential under City jurisdiction will not exceed a "reasonable worst case scenario" greater than that presently allowed under Benton County jurisdiction. (Please refer to the Appendix for a more detailed discussion of development potential under County standards, along with concurrence by Benton County's Development Director of trip generation potential under county regulations.)

The final application in this consolidated set of applications is a Conditional Development Permit Application for development in the Willamette River Greenway.

1. City of Corvallis Land Development Information Report, March 2011
2. Bruce Laird, Clean Technology Recruiter, Business Oregon, Personal Communication
3. Michael Williams, Industrial Lands Specialist, Business Oregon (Attached Letter)
4. John Sechrest, (Attached Memorandum)
5. "Prosperity That Fits," October 2006
6. Economic Productivity of Employment and Industrial Land, Business Oregon, June 2009
7. Corvallis, Buildable Lands Inventory, June 1998

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-205

Annexation and the establishment of the Planned Development would ensure protection of more than 28.5 acres of sensitive, inventoried natural resources occurring in the northwest portion of the site, as per City of Corvallis environmental standards. An additional 5.6 acres, located along the southerly boundary and lying within the Willamette River Greenway Overlay, could only be developed per the City's Conditional Development Permit standards.

This parcel is presently bound on three sides by Corvallis city limits, constituting approximately 79% of the parcel's exterior boundary. The majority of abutting properties are zoned City of Corvallis General Industrial, with the exception of a .32 acre residential parcel, T.L. 1400 (11,5,25), located at the subject tract's southwesterly corner, and also lying within the Corvallis UGB. That parcel is zoned Benton County Low Density Residential; however, it has a Corvallis Comprehensive Plan designation of General Industrial (GI). Resource Overlays, as noted on Page ANX-2, occur on the property, as well. Two additional UGB residential parcels, T.L. 1500 (11,5,25) and T.L. 100 (11,5,35AA), are located west of T.L. 1400, and are zoned Benton County, Urban Residential, 5 acre minimum (UR-5), although T.L. 100 may have some City jurisdiction and zoning applicable on its western edge. The Corvallis Comprehensive Plan ultimately calls for Medium Density Residential designations on these two parcels.

South of the site are Oregon State Highway 20; the Willamette River; Trysting Tree Golf Course, and Linn County rural resource zoned land. Abutting the annexation site on its east and north sides is the GI Zoned HP campus discussed previously. Also on the north, is a storage yard for Delta Fire, Inc., lessees from Hewlett Packard. Adjacent to the tract's northwesterly edge is the railroad right of way. West of the site is City of Corvallis GI Zoned land associated with the Corvallis Fire Department's learning facility, and the City's Public Works facilities.

ANNEXATION APPLICATION REQUIREMENTS:

> *2.6.30.03 Prior to formal submittal of an application, the applicant is encouraged to participate in an informal pre-application conference with Community Development Department staff to discuss the proposal, the applicant's requirements, and applicant's materials developed in response to the Code's applicable requirements.*

The applicant and his representatives have met with Corvallis Community Development, Public Works, Legal and Engineering Department staff in pre-application and other conferences, beginning in May 2009, to fully discuss the pending applications and applicable requirements. Oregon Department of Transportation representatives were also in attendance.

> *Applications for Annexation shall be made on forms provided by the Director and shall be accompanied by the following:*
>
> *a. Location and description of the subject property(ies), including all of the following, as relevant: address; tax assessor map and tax lot number' parcel number; written description of the boundaries of the proposal' and one set of assessor's maps of the subject site and surrounding area, with the subject site outlined in red.*

1. City of Corvallis Land Development Information Report, March 2011
2. Bruce Laird, Clean Technology Recruiter, Business Oregon, Personal Communication
3. Michael Williams, Industrial Lands Specialist, Business Oregon (Attached Letter)
4. John Sechrest, (Attached Memorandum)
5. "Prosperity That Fits," October 2006
6. Economic Productivity of Employment and Industrial Land, Business Oregon, June 2009
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The subject property's address, tax assessor and tax lot numbers are provided on the cover page of this set of applications and on the City's Application Forms.

A copy of the pertinent Benton County assessor map is included at Attachment 1.

A legal description of the proposed annexation site appears at Attachment 4.

> *b. Signed consent by the subject property owner(s) and/or the owner's legal representative(s) to dispense with an election of the area to be annexed as provided by state law.*

The property owner has signed the application Form, including an application for Annexation. He is aware of and agrees to an election.

c, d and e. These items specify the number, format and quality of the Application Narrative and Graphics. Submittal of these materials has been coordinated with City staff and submitted as required.

> *f. Boundary Survey of the property to be Annexed, certified by a registered surveyor; and a legal description of the property and associated right-of-way adjacent to the property. Copies of the legal description shall be provided in both written and electronic format..."*

Please see Attachment 4 for these requirements.

Graphic Requirements

Graphics shall include the following information where applicable:

1. *Public Notice Map.* Provided as Figure 1.
2. *Existing Zoning Map.* Provided as Figure 2.
3. *Comprehensive Plan Map Designations* Provided as Figure 3.
4. *Existing Land Use Map.* Provided as Figure 4.
5. *Significant Natural Features Map.* Provided as Figure 5.

Additional Graphics are provided as follows:

City of Corvallis Adopted Willamette River Greenway- Figure 6

Benton County Floodplain Management Overlay-Figure 7

Benton County Natural Features Overlay in the Corvallis Urban Fringe -Figure 8

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6. Stipulates Further Graphics Requirements:

a) Vicinity Map. Provided as Figure 9.

b) General Land Use Plan Provided at Drawings C2.0A and C2.0B

c) The applicant may provide a more detailed General Land Use Plan and may consolidate the Annexation proposal with other applications such as a Tentative Subdivision Plat. However, a Detailed Development Plan is not required at the Annexation phase. If the applicant chooses to consolidate land use applications, all of the submittal requirements as stated in other chapters of this Code shall be met.

The applicant's General Land Use Plan is provided to demonstrate that the site can reasonably and feasibly develop to City of Corvallis urban standards, with greater amenities and protections than are required by Benton County.

i. Narrative Requirements

The Narrative for this Consolidated Application set is comprised of four chapters and an Appendix, which is hereby incorporated in its entirety.

A written statement shall include the following information:

1. Statement of the availability, capacity, and status of existing water, sewer, storm drainage, transportation, park and school facilities; and franchise utilities. The franchise utility companies shall provide a written statement confirming the ability to serve the site. The applicant shall obtain information from the affected service and utility providers using GIS base maps where available.

2. Statement of increased demand for the facilities that will be generated by the proposed Annexation. The applicant shall refer to the criteria of the City's facility master plans, available via the City Engineer, to determine the methodology used to estimate public facility demands. Information related to an actual development proposal may be included for informational purposes. At minimum, the demand calculations associated with the full range of development potential (min. to max.) under proposed land use designations shall be addressed in the analysis;

3. Statement of additional facilities required to meet the increased demand and phasing of such facilities in accordance with projected demand. The applicant shall review adopted public facility plans, master plans, and capital improvement programs, and state whether additional facilities are planned or programmed for the Annexation area. Information related to an actual development proposal may be included for informational purposes.

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At minimum, the demand calculations associated with the full range of development potential (min. to max. under the proposed land use designations shall be addressed in the analysis;

4. Traffic impact study, if required by the City Engineer. The City Engineer shall define the scope of the traffic impact study based on established procedures. Information related to an actual development proposal may be included for informational purposes. At minimum, the traffic calculations associated with the full range of development potential (min. to max.) under the proposed land uses designations shall be addressed in the analysis. See also Section 4.0.60.a;

5. Statement outlining the method and source of financing required to provide additional facilities.

Because the proposed Annexation does not involve any industrial development, there is no increased demand or required additional facilities at this time. Demand calculations evaluate the full range of development potential, as specified by the LDC. Any actual change in demand for the above applicable facilities will be determined in conjunction with a future proposal for industrial development.

WATER

The subject property is located in the first level water service area, and is included in the study area of the Corvallis Water Distribution System Facility Plan. A 16" main exists along the southerly edge of the site, and a 30" main exists along the northerly edge of the site. As a City of Corvallis Phase 2 Improvement (50,000 to 60,000 population) the Facility Plan calls for a 16" connection between the two existing mainlines across the easterly boundary of this site.

The Applicant recognizes that this new line is required to be installed, at the developer's expense (subject to applicable SDC reimbursement) in conjunction with future industrial site development.

The Facility Plan does not identify any other needed improvements to the backbone system in the vicinity of the proposed annexation site.

Demand Calculations are included in the Appendix to the Application set.

SANITARY SEWER

The subject property is located in the northeast basin of the City of Corvallis Waste Water Utility Plan, and is included in the Plan study area. A 36" mainline exists along the westerly and northerly boundaries of the property. The Master Plan does not indicate any hydraulic grade deficiencies up through 60,000 population. At 80,000 population, and approaching full build-out in the urban growth boundary, this line may have to be upsized to 48".

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Sanitary sewer improvements needed to serve future industrial uses will be installed at the developer's expense, in conjunction with actual industrial site development.

Demand calculations for Sanitary Sewer are included in the Appendix to this Application set.

STORM DRAINAGE

The proposed Annexation site is located in the Garfield Creek Drainage Basin, which discharges under Highway 20 to the Willamette River. The Garfield drainage-way is generally located immediately west of the proposed annexation site, on land owned by the City of Corvallis. In the City's Storm Water Master Plan, the property is designated for industrial uses. The Storm Water Master Plan does identify that *"the culvert crossing under Highway 20 is undersized during the 10 year storm event, but there appears to be adequate storage volume in the overbank area for water that leaves the main channel."*

From the highway to the railroad tracks along the northerly boundary of the subject property, storm water modeling *"showed no velocities exceeding the erosion criteria."*

Based upon the requirements of Appendix F of the Storm Water Master Plan, development of the site should demonstrate the safe passage of the 100 year storm event flows. The existing 36" culvert crossing under Highway 20 is undersized to convey 100 year storm event flows. The applicant's Storm Water Calculations, provided in the Appendix, confirm that the existing 36" pipe does not have the capacity to convey the 100 year storm event.

The Storm Water Calculations show and recommend that a new 48-inch culvert should replace the existing 36-inch culvert under Hwy. 20. Sketch SK-1, included in the applicant's Storm Water Calculations, shows the limits of the 100-year storm event surface water elevation. It clearly shows that no existing habitable structure will be inundated by a 100-year storm event. This sketch should demonstrate the safe passage of the 100-year storm event.

Any future development on the property would be required to meet Storm Water Master Plan and LDC requirements for detention and water quality. Development drainage patterns would follow historic drainage paths across the McFadden property to the Garfield Creek drainage-way. Storm water detention would meter drainage at rates which would match the historic site discharge rates in the undeveloped condition. Thus, there would be no perceptible impact to flows or water levels in Garfield Creek.

As an alternative, also per the Storm Water Master Plan, the applicant could elect to discharge treated water directly to the Willamette River through a new discharge pipe under Highway 20, all, of course, subject to approval of the permitting authorities.

Improvements to the storm water drainage system would be constructed in conjunction with proposed industrial development. Other than any portion eligible for SDC reimbursement, all improvements would be at the developer's expense.

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TRANSPORTATION

The site fronts on US Highway 20 and presently has one primary road approach and a residential driveway onto the highway. These can be seen most clearly on the Existing Improvements map, Figure 10. The applicant's Transportation Impact Analysis (TIA) is located in the Appendix to this Application set. The scope of work for the TIA was agreed upon with City engineering staff.

The applicant is proposing a limitation on the maximum gross floor area and a trip generation cap for future development at a level below that allowable under the existing County zoning. In order to make the limitation enforceable, the proposed Annexation and Zone change are accompanied by a concurrent Conceptual and Detailed Development Plan, to which this Condition would be applied. Conditions of Approval of the proposed CDP/DDP would provide assurance that significant site development may not occur in advance of needed mitigation.

The CDP/DDP proposes a maximum Floor Area Ratio (FAR) of 0.23 for the entire site and any individual development within, and a cap on trip generation for all development. This FAR is consistent with actual City of Corvallis GI development in the immediate vicinity.

It is important to note that this proposal will not result in an increase in trip generation potential over that currently allowed and planned, since a development of the same or greater intensity could be constructed under the County zoning jurisdiction.

For purposes of analysis and LDC compliance, the TIA assumes a hypothetical scenario in which the site develops to full build-out immediately upon annexation. As a practical matter, this manner of development is clearly not a realistic expectation. It does, however, provide a useful assessment of the potential long-term transportation impacts to the capacity of transportation infrastructure in the same manner that impacts to infrastructure are examined for water, storm water and sewer capacity.

The TIA analyzes maximum potential future trips as they would impact the existing transportation system, and mitigations have been identified. At the time of actual, proposed industrial development on the site, a detailed traffic impact study will be required, including detailed operational analyses of roadways and intersections that will be impacted by the proposed development. As appropriate, mitigation will be implemented to accompany development on the site at that time. The TIA identifies a number of mitigations that would be privately funded by the developer. With annexation, SDC's, property taxes, and, in some instances, proportional share payments can make significant contributions to larger scale projects that are community-wide or regional in scope. Inherent in the accompanying Planned Development is the mechanism that provides assurance that significant development on the site may not occur prior to necessary mitigation to the transportation system.

It is noteworthy that maximum build-out would not result in the functional re-classification of any streets or roadways, and impacts would be mitigated through Conditions of the Planned Development, including but not limited to placing a maximum limit upon Floor Area Ratios (FAR's.)

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Industrial development on the subject property is assumed in the City's Comprehensive Plan. The proposed Annexation, with accompanying CDP/ DDP, will not cause any increase in trip generation potential above that already permitted and assumed in the City's transportation system plans. Please refer to the Transportation Impact Analysis, located in the Appendix, for detailed analyses, graphics and calculations.

PARKS

The nearest park to the property is Garfield Park. Parks department personnel stated that they are not aware of any instance of industrial development having had a notable impact upon Corvallis public parks in the past. As is the case with many community services and facilities, property taxes and SDC's associated with future development will contribute to community-wide benefits in park services and facilities.

SCHOOLS

Because the property is already zoned for Benton County industrial uses, rezoning to City General Industrial uses should have no effect upon availability, capacity or status of Corvallis schools. No further analysis appears necessary.

FRANCHISE UTILITIES

All applicable franchise utilities have provided letters confirming their ability to serve the site. Please refer to the Attachments Section of this Annexation Chapter.

PROPOSED DDP

All improvements and maintenance associated with the proposed DDP will be executed by the property owner. As advised by City staff, a financial guarantee will be provided in an amount and form approved by the City, prior to the City Council hearing on the proposed annexation.

> *6. Discussion demonstrating the public need for the Annexation. To provide consistency in reviewing Annexations, the applicant shall use the information sources and methodology described in Section 2.6.30. 07; and*

Please see the applicant's discussion of the *Annexation Review Criteria*, LDC 2.6.30.06, for a thorough description of the public need for this Annexation.

> *7. Comprehensive narrative of potential positive and negative effects of the proposed Annexation related to "a," though "c," below. For properties containing a Natural Resource and/or Natural Hazard Overlay, the narrative shall include a discussion of the applicable provisions of Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, and Chapter 4.13 - Riparian Corridor and Wetland Provisions.*

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a) Issues of need, serviceability, economics, environmental, and related social effects of the proposed Annexation on the community as a whole;

The following discussion of the Annexation Review Criteria; the public need for the proposed action; and the application's substantial conformance with the City's "Community-wide Livability Indicators and Benchmarks for Annexation Proposals" comprises the comprehensive narrative of potential positive and negative effects of the Annexation under this chapter. Additional supporting evidence relative to serviceability appears in earlier portions of this document, as well as in the Appendix; while economic and social effects are addressed following the thirteen compatibility factors of 2.6.30.06.e.

b) Issues of need, serviceability, economics, environmental, and related social effects of the proposed Annexation on the comprehensive neighborhood of which the Annexation will become a part; and

It is anticipated that effects upon the comprehensive neighborhood relative to the above categories will be similar to those for the community as a whole, but on a more localized scale.

c) Proposed actions to mitigate negative effects/impacts.

As part of the DDP, the applicant proposes providing a landscaped, earthen berm and substantial buffer plantings adjacent to the only residential neighbors to mitigate for impacts of future construction and industrial activity on the site. Any required mitigation for traffic or other impacts of a future development proposal can be addressed through the DDP process. There should be no negative impacts associated with approval of Annexation.

The information provided by the applicant shall be used to assist in weighing the advantages and disadvantages of the proposed Annexation. The information shall address all aspects of the review criteria in Section 2.6.30.06, and the advantages and disadvantage shall be discussed in terms of those listed in the review criteria and further detailed in Section 2.6.30.07.

The following discussion of the Annexation Review Criteria constitutes the applicant's advantages and disadvantages analysis required under the above LDC subsection. Please see specifically, the discussions on "Determining five year supply of serviceable land: (2.6.30.07.a); "The availability of sufficient land of this type to ensure choices in the market place" (2.6.30.07.b); and the finding that this proposal complies with seventeen of the nineteen applicable community-wide livability indicators and benchmarks ("Community-wide Livability Indicators and Benchmarks Table" appears at the end of this chapter.)

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ANNEXATION DECISION CRITERIA:

2.6.30.06 - Review Criteria
Requests for Annexations shall be reviewed to ensure consistency with the purposes of this Chapter, applicable policies of the Comprehensive Plan, particularly Article 14, and other applicable policies and standards adopted by the City Council and State of Oregon.

PURPOSE OF THIS CHAPTER

Consistency with the purpose of this chapter is ensured by the application's adherence to the application submittal requirements and satisfaction of the decision criteria contained in this chapter of the LDC. The applicant's discussion of Comprehensive Plan Policies appears immediately following these Decision Criteria.

OTHER POLICIES AND/OR STANDARDS

The applicant has not been advised of any other applicable policies or standards which are required to be addressed in this Application set.

Section 2.6.30.06 continues:
Annexations can only be referred to the voters when the proposed Annexation site is within the City's Urban Growth Boundary (UGB), and where the findings below are made. The criteria are highlighted in bold type.

As discussed above, this parcel has been included within the City's UGB, designated as General Industrial land for at least 32 years.

2.6.30.06.a. The applicant has demonstrated a public need for the Annexation -

2. Major Annexations - Factors to be considered in evaluating public need for Major Annexations shall include, but are not limited to:

a) The five-year supply of serviceable land of the Annexation's land use category (single-family, multi-family, Commercial, or Industrial). Annexations of land designated as Public Institutional, Open Space-Conservation, or Open Space-Agriculture on the Comprehensive Plan Map are exempt from this criteria;

b) Availability of sufficient land of this type (single-family, multifamily, Commercial, or Industrial) to ensure choices in the market place; and

c) Compliance with adopted community-wide livability indicators and benchmarks relative to Major Annexations, as identified in Section 2.6.30.07.c.

1. City of Corvallis Land Development Information Report, March 201:
2. Bruce Laird, Clean Technology Recruiter, Business Oregon, Personal Communication
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(* Please note: Because the final sentence of LDC Section 2.6.30.06.a.2. references Section 2.6.30.07. a and b for "*data sources and methodologies*" for establishing public need for annexations, those subsections are excerpted and addressed here.)

Section 2.6.30.07 details the three approaches for establishing public need, which are listed in LDC 2.6.30.06.a.2.a.-c., above. This narrative addresses all of these, with particular attention to the *second* and *third* approaches, concerning adequacy of the *range of choices* in the GI Zone market place and conformance with *identified community livability indicators and benchmarks.*

In evaluating the public need for this annexation proposal, we have relied upon the following data and sources of information:

The 2010 Corvallis Land Development Information Report (LDIR), March 2011

City of Corvallis Comprehensive Plan (June 2000)

DLCD Industrial and Other Employment Lands Analysis Guidebook, (October 2005)

Corvallis Buildable Lands Inventory (June 1998)

"Prosperity That Fits", An Economic Development Plan for Corvallis and Benton County, Report and Action Plan, (October 2006)

Other sources of information are referenced within the body of the text.

> ***2.6.30.07.a. Determining Five-Year Supply of Serviceable Land*** *- Serviceable land is land within the City limits capable of being served by public facilities.*
>
> *When calculating a five-year supply of serviceable land, applicants shall refer to and follow the Council Policy addressing the five-year supply, as amended from time to time. This Policy outlines the accepted methodology and will result in more uniform application submittals.*

Community Development staff indicate that the City Council policy referred to in the above section of the LDC has yet to be developed and adopted. Absent a local standard and methodology, Planning staff advised the applicant's representatives to focus the "need" discussion on an evaluation of the City's existing supply of GI Zoned land, as depicted in the 2010 Land Development Information Report (LDIR) and the 1998 Buildable Lands Inventory (BLI), compared with the types of site characteristics which are necessary to provide an adequate range of market choices under LDC Section 2.6.30.06.a.2.b., above "*Availability of sufficient land of this type (single-family, multifamily, commercial, or industrial) to ensure choices in the market place.*"

Prior to proceeding to that discussion, however, the applicant presents the following background information:

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The State of Oregon is focusing its investments for recruitment and infrastructure dollars on key industry sectors (businessoregon.com) including two that are particularly compatible with the identified goals of this community:

Clean Technology/Renewable Energy; and
High Technology

The community-supported *"Prosperity That Fits" Report and Action Plan* identifies certain targeted industry sectors as particularly desirable for this market, including:

Alternative/Renewable Energy;
Pharmaceutical Device Delivery;
Microtechnology;
High Technology; and
Nanometrology.

Bruce Laird, Clean Technology Recruitment Officer for the State of Oregon, states that there is a demand for larger parcels of vacant industrial land to accommodate the types of employers which this community has identified as desirable. [2][5] Michael Williams, Industrial Land Specialist with the State's "Business Oregon", notes that, "Globalization has increased the average project size so that we are seeing a number of larger projects on a regular basis."[3]

Mr. Williams cites a few recent successful Oregon project examples, at least some of which would be considered compatible with the Corvallis "Prosperity That Fits" Action Plan:

Sanyo Solar, located in Salem on approx. 20 acres with an option on an additional 16 acres; SolarWorld, located in Hillsboro on over 70 acres; Genentech, located in Hillsboro on over 50 acres; and SoloPower, which considered Corvallis, has since committed to a large industrial park in Portland.

Michael Williams points out the need to have an inventory of multiple industrial sites, and states that Corvallis is consistently passed over by potential businesses requiring sites of over twenty acres due to this community's lack of inventory.[3]

John Sechrest, with first-hand knowledge of Corvallis industrial recruitment efforts, having served as the Economic Development Director for Corvallis from 2006-2010, provided a written analysis of the Corvallis Industrial Land inventory relative to five year supply and market choice, and notes that companies in need of a large tract of land, such as a solar production facility, are unable to find suitable sites in Corvallis.[4]

A breakdown of the data provided in the City's 2010 LDIR shows sixteen parcels of ten acres or less in the City's GI inventory. These are somewhat dispersed throughout the City, with the majority located in the southwest and northwest quadrants. That may be adequate for the City's planning horizon for parcels of that size. Many industries, however, have needs for larger sites.[2][3][4]

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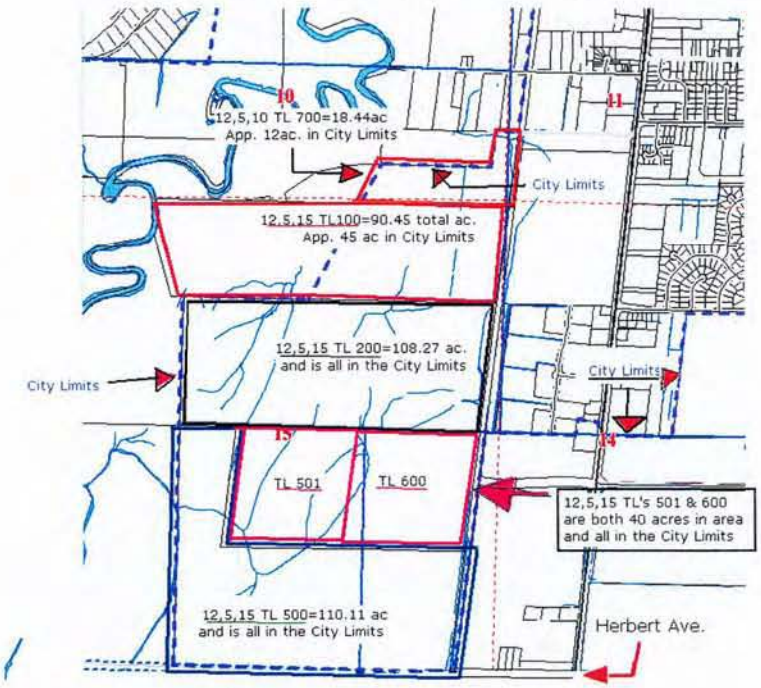
For purposes of this proposed Annexation evaluation, we are addressing the need for vacant GI land 20 acres or greater in area.

The current LDIR identifies 406 acres of vacant GI in the City's inventory (399 acres when Natural Features Constraints are factored in.)

These raw numbers may give the impression that this acreage is adequate to meet the City's current and long range need for GI land. Upon examination, however, it becomes questionable whether quantity of land, alone, is sufficient to attract new industrial employers.

There are approximately 352 acres of vacant GI land in parcels of 20 acres or greater. These sites are located in South Corvallis and are shown on the accompanying graphic.

Vacant GI Zoned Parcels 20 acres or Greater are all
Located in South Corvallis under Two Ownerships



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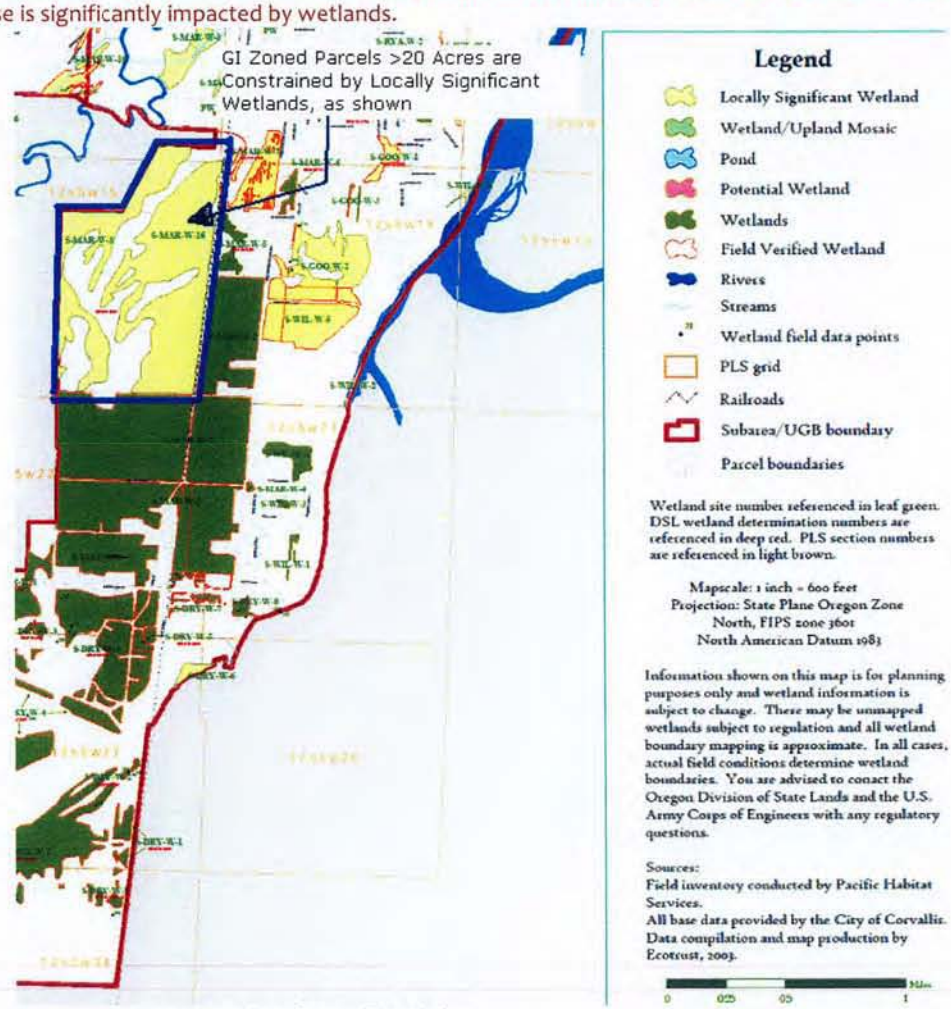
The City's LDIR considers certain natural features as constraints to development, and deducts a corresponding amount from the gross land area (about 7 acres of GI land is deducted.)

The Corvallis LDIR does not factor in wetlands as constraints; however, the State of Oregon identifies wetlands as a key limiting factor in determining the economic potential of employment lands.[6]

As shown on the City's Local Wetlands Inventory map, the vast majority of the City's vacant GI employment-land base is significantly impacted by wetlands.



Source: City of Corvallis website:
http://www.ci.corvallis.or.us/downloads/cd/PLANNING/2006 LDC/LWI_Map.pdf

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Mr. Sechrest reports that it took nearly six years to get the first 42 acres within the Airport Industrial Park shovel-ready, due in substantial part to the presence of wetlands, and the processes and agency reviews involved in wetland mitigation. He concludes that the predominance of wetlands on these sites, alone, makes it unlikely that they could be considered viable employment lands in the City's five year supply.[4]

Provision of services on vacant, South Corvallis 20 acre+ parcels of GI land and the proposed Annexation site is discussed below:

WATER
SOUTH GI ZONE
There are six (6) vacant GI Zoned parcels which are 20 acres or greater in area. These are all located along the west side of the railroad, extending from Hebert Avenue on the south, to Goodnight Avenue on the north. (One additional parcel, T.L. 600 (12,5,14) is located on the east side of the tracks, but is partially developed.)

Five of the six westerly parcels are adjacent to a 24" water main, which extends along the west side of the railroad tracks, from Goodnight Avenue to Weltzin Drive, serving the Airport Industrial Park (AIP). T.L. 501 is a landlocked parcel, although it is in contiguous ownership with T.L. 500. T.L. 501 does not lie directly adjacent to public water facilities.

Phase III of the City's Water Master Facilities Plan, intended to serve a population of 60,000-80,000, calls for extending 24" water lines east/west along Herbert and 16-20" lines internally within this portion of the GI Zone, as well as within the Airport Industrial Park.

PROPOSED ANNEXATION SITE
The subject property is located in the first level water service area, and is included in the study area of the Corvallis Water Distribution System Facility Plan. A 16" main exists along the southerly site boundary, and a 30" main exists along the northerly site boundary. The Facility Plan calls for a Phase II improvement (50,000 to 60,000 population) of a 16" connection between the two existing mainlines across the easterly boundary of the property. The Applicant is aware that installation of the new line will be required at the developer's expense (subject to any SDC-eligible reimbursements) with any future industrial building related development proposals.

The Facility Plan does not identify any other needed improvements to the backbone water system in the vicinity of the McFadden property.

SANITARY SEWER
SOUTH GI ZONE
A 33" sanitary sewer main runs along the east side of Tax Lots 500 and 600, turning to the east about midway north/south up the easterly boundary of T.L. 600. Near the intersection of Kiger Island Dr. and US Highway 99W, the public sanitary sewer again turns northerly in the highway right-of-way. A City Public Works staff person confirms that Tax Lots 100 and 200 (12,5,15) are not adjacent to a sanitary sewer line. Contributing about 44 acres and 108 acres respectively, two of the City's three largest GI zoned parcels do not currently have sanitary sewer lines, and would require fairly significant extensions in order to be served.

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In the case of T.L. 100, sanitary sewer is presently located approximately 2,000 feet to the south, and service to this lot would require at least that much new public line. Serving T.L. 200 from the south could mean a minimum 600 foot extension of public sewer, if connection at this nearest existing juncture, where the line diverts east toward Kiger Island, is even feasible.

It is unknown whether it may be feasible for T.L. 100 to connect to existing sanitary sewer facilities to the north. This would still require a minimum 400 to 500 foot extension.

PROPOSED ANNEXATION SITE

The subject property is located in the northeast basin of the City of Corvallis Waste Water Utility Plan, and is included in the Plan study area. A 36" mainline exists along the westerly and northerly boundaries of the property. The Master Plan does not indicate any hydraulic grade line deficiencies up through 60,000 population. At 80,000 population and approaching full build-out in the urban growth boundary, this line may have to be upsized to 48."

POWER

SOUTH GI ZONE

There are about 4 megawatts of power currently available for all of the southerly GI sites and the Airport Industrial Park, according to Mr. Erik Andersson, spokesperson for Pacificorp.

If a prospective industry required it, up to 60-90 megawatts could potentially be provided upon construction of a new substation. The cost would be in the millions of dollars, and would require improvements up to the existing Mary's River substation. Mr. Andersson notes that such improvements are typically at the user's expense and "PP&L does not build power facilities on speculation."

PP&L indicated that an alternative to the above might be to upgrade the existing Mary's River Substation to provide 5-7 megawatts total. PP&L may eventually pay for the project under a long a range plan.

He noted that the north end of town currently has higher quality and capacity power than the south end. Power at the south end of town is not redundant, meaning that if one source shuts down, power is not readily available from another substation.

PROPOSED ANNEXATION SITE

Mr. Andersson states that there is approximately 20 MW of power currently available to the proposed Annexation site, or "enough to serve most of the recent solar industry leads from the State of Oregon." Unlike the supply to the southerly industrial sites, the electrical power at this site is redundant power, so if one source is off-line, power is available from another substation.

TRANSPORTATION

SOUTH GI ZONE

With the exception of one already partially developed GI parcel which lies on the east side of the RR track and one lot which fronts on SW Goodnight Avenue, the public access for the southerly GI parcels in the city limits is SW Herbert Avenue from the south, possibly SW Goodnight Avenue from the north, or an extension of

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SE Rivergreen Ave. SW Herbert Avenue is a gravel road from its apron onto Highway 99W westward to and beyond the rural railroad crossing. SW Goodnight Avenue is a rural gravel road.

The railroad crossings at SW Herbert Avenue and SW Goodnight Avenues are minimally improved rural-type crossings. According to Dave Lanning, with ODOT Rail Crossing and Safety Section, prior to any significant development on the west side of the tracks, the crossings would be required to be brought up to at least a minimum standard of an at-grade crossing with signalization.

Associated with any significant level of industrial development on these GI parcels would be the costs of improving a rural standard road to city standards; constructing railroad crossing(s) to ODOT standards; intersection improvements at Hwy. 99W with a traffic signal and right turn lane; frontage road(s) on the west side of the railroad to urban standards, and potentially, the extension of SW Rivergreen Ave.

Traffic flow on Highway 99W to and from these southerly sites is constrained and congested at times, due to numerous residential and commercial properties occurring at short intervals with direct driveway access onto the highway. An additional factor in this congestion is the school zone in the vicinity of Lincoln Elementary School to the north of the existing GI Zoned lands.

PROPOSED ANNEXATION SITE

By comparison, the proposed annexation site fronts on an improved arterial highway with existing bicycle lanes on both sides. No traffic is generated from the southeasterly side of US Highway 20 because of the location of the Willamette River. Individual driveway accesses to the highway are more limited in this location.

This request is for the annexation of primarily vacant industrial land, which could develop now under Benton County standards. Annexation, with the requested CDP/DDP, affords greater controls for the City with respect to the transportation system. Traffic impacts of the site's maximum development potential are addressed in the applicant's Transportation Impact Analysis, which notes transportation system constraints and identifies mitigation measures.

The developer would carry the burden of meeting City and ODOT standards in effect at the time of proposed development. Transportation system improvements would be assured, prior to significant future industrial development on any portion of the parcel, through the mechanism of the Detailed Development Plan process and Conditions of Approval of the currently proposed Conceptual Development Plan, applicable to the entire site. Please refer to the related discussion in this chapter, Sec.2.6.30.06.e.8- Compatibility - Transportation Facilities (p. Anx-32.)

ALTERNATIVES TO AUTOMOBILE TRAVEL

SOUTH GI ZONE

GI zoned parcels in South Corvallis do not offer alternatives to automobile transportation comparable to those afforded by the proposed annexation site. The South GI Zone is not served by improved streets, bicycle or pedestrian facilities. The nearest Corvallis Transit System stop proximate to these sites is Stop B on Route 6, "Rivergreen and Villa." This is over a mile away from Herbert Avenue, a likely means of vehicular, bike and pedestrian access for the southerly GI Zone (approximately 5,475' down Highway 99W, to Herbert Avenue, to the railroad.)

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PROPOSED ANNEXATION SITE

By comparison, there are existing bike lanes on both sides of Highway 20 along the entire frontage of the subject site. An existing sidewalk is located along a section of the site's southeasterly Hwy. 20 frontage, extending along a southerly portion of the HP campus. The Detailed Development Plan, consolidated with this Annexation Application, proposes construction of a pedestrian facility along the entire Hwy. 20 frontage of the subject site.

The site is also currently served by the following specific routes of the Corvallis Transit System (CTS):

Route C2 has a designated stop located near Hewlett Packard's (HP's) southerly entrance to US Highway 20. This stop is approximately 1,400' (just over ¼ mile) from the proposed annexation site.

CTS Route C2 provides limited service and has a stop approximately one half mile (.5 mile) southwest of the subject property, between NE Byron Place and NE Rennie Place.

Routes 1 and 7 serve HP's north side from Circle Boulevard. The nearest stop to the subject site for Routes 1 and 7 is just .43 miles from the approximate center of site.

The Linn Benton Loop Transit also stops at this HP site a number of times a day during the business week.

In summary, the proposed Annexation area is better situated relative to infrastructure, serviceability and alternatives to automobile travel than the vacant southerly GI zones. Larger quantities of redundant electrical power can be provided within more reasonable time frames to the proposed annexation site than to the larger existing, vacant GI parcels currently in the City's inventory. As noted, extensive wetland mitigation would be required at the southerly GI sites. These factors directly affect a site's viability within a five year time frame.

> ***2.6.30.07.b. Providing information on land availability to ensure choices in the market place*** - *Comprehensive Plan Policy 14.3.6 states that "factors to be considered in evaluating public need for Annexation may include... the availability of sufficient land of this type to ensure choices in the market place...Appropriate and encouraged market choice topics include, but are not limited to:*
>
> *1. Information regarding a housing/jobs balance;*
>
> *4. A comparison of housing costs related to incomes, land prices, and land availability.*

Among the above factors, jobs/housing balance and industrial land vacancy rates appear to be the most pertinent to an industrial annexation request; however, the City does not currently have any information relative to a local jobs/housing balance, and is awaiting participation in a future regional study to evaluate this aspect. Thus, there is no baseline or targeted housing/jobs balance benchmark. Without a City identified standard, desirable ratio or benchmark, applicants cannot reasonably address this sub-criterion.

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Much of the information in this section pertains to vacant GI zoned land currently in the city limits, as inventoried in the City's 2010 Land Development Information Report (LDIR). The LDC and Comprehensive Plan do not require applicants for annexation to address land outside the City limits, however, because the Airport Industrial Park (AIP) is serviced with city water, sewer and streets, we will also be referencing the AIP at points in our discussion.

As noted earlier in this chapter, the City's 2010 LDIR shows sixteen parcels of ten acres or less in the City's GI inventory. These are somewhat dispersed throughout the City, with the majority located in the southwest and northwest quadrants. These may be sufficient for the City's planning horizon for parcels of that size; however, as established above, many industries have needs for larger sites.[2][3][4]

In the Planned Development chapter of this consolidated Application set, the applicant proposes a maximum Floor Area Ratio (FAR) as a Condition of Approval, applied to the entire site, in perpetuity. While this FAR may eliminate the site's potential to develop under a "worst case" build-out scenario, it does not limit the site's viability for many firms seeking sites of at least twenty acres. This is illustrated if we look at some recent developments in the U.S.

Pacific Northwest Examples:

Sanyo Solar, Salem; 130,000 s.f. on 19.77 Ac. with an option on an additional 16 Ac.; Opened in Nov. 2009. $80,000,000 investment (SustainableBusinessOregon.com, May 23, 2011; OregonLive.com, Nov. 2009; City of Salem press release, Oct. 2008.)

SolarWorld, Hillsboro; 480,000 s.f. on a site over 70 acres in size. Opened in April 2008. Added 210,000 s.f. one year later. $440,000,000 plant (SustainableBusinessOregon.com, Oct. 2008; OregonLive.com, Oct. 2009.)

Genentech, Hillsboro; 340,000 s.f. on 75 Ac. (described as a "park-like setting" on Genentech website) Operational by phases: July 2008-April 2010; $400,000,000 investment (OregonLive.com, April 2010; PharmaceuticalTechnology.com, 2011; Genentech "Backgrounder").

SGL/BMW (Carbon fiber components for all-electric cars) Moses Lake, WA.; 154,250 s.f. on 60 Ac.; $100,000,000 plant under construction; Anticipated to be operational in 3rd quarter, 2011 (autoevolution.com, July 2010; The Seattle Times-Business /Technology, July 2010; sglgroup.com/international, May 2011.)

SoloPower, Portland; Announced in Jan. 2011, Originally planned 500,000 s.f. on a 26 acre site, but now scheduled to break ground in 2011 within a 2,800 hundred acre industrial park. Upon completion, estimated $340,000,000 investment (SustainableBusinessOregon.com, May 23, 20111; OregonLive.com, Jan. 2011; Michael Williams, Business Oregon[3]; The Oregonian, May 13, 2011)

Other Recent U.S. Examples:

Schott Solar, New Mexico; 200,000 s.f. on 80 Ac. Operational in spring 2009; Over $100,000,000 investment (RenewableEnergyWorld.com, May 2009; Greentechmedia.com, May 2009; Reuters, June 2008).

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Proterra, Greenville, South Carolina; (Fast charge batteries for zero-emission, electric buses) Planned 220,000 s.f. on 25 Ac., estimated $33,000,000 facility (energyrelatednews.com, Feb. 2010).

Confluence Solar, Clinton, Tennessee; 200,000 s.f. on 25 ac. Construction planned to begin summer 2011; estimated $200,000,000 facility (cleanenergy.org, Jan. 2011; knoxvillebiz.com, Jan. 2011).

The City of Corvallis Buildable Lands Inventory (BLI) recognizes that *"parcel size and location are important factors in providing a balanced land supply."*

The Corvallis LDIR map shows the City's inventory of vacant GI land, designated in purple on the corresponding graphic, opposite. An important aspect of the City's vacant GI parcels greater than 20 acres, also applicable to the Airport Industrial Park, is that 100% of the land is located in the extreme southern quadrant of the City. Choices in the market place are significantly narrowed by that factor alone.[4][7]

The Citizens' Advisory Committee to the South Corvallis Refinement Plan, adopted in 1998, noted that virtually all of the City's vacant GI land was located in South Corvallis. This was apparently perceived as a geographic imbalance at the time, and is a condition which continues through the present. A marked geographic imbalance in available land can also have the effect of limiting the economic interests that have a voice in determining GI Zone development, potential employment patterns and outcomes.

The proposed annexation site offers considerable balance in location of the City's GI land base.

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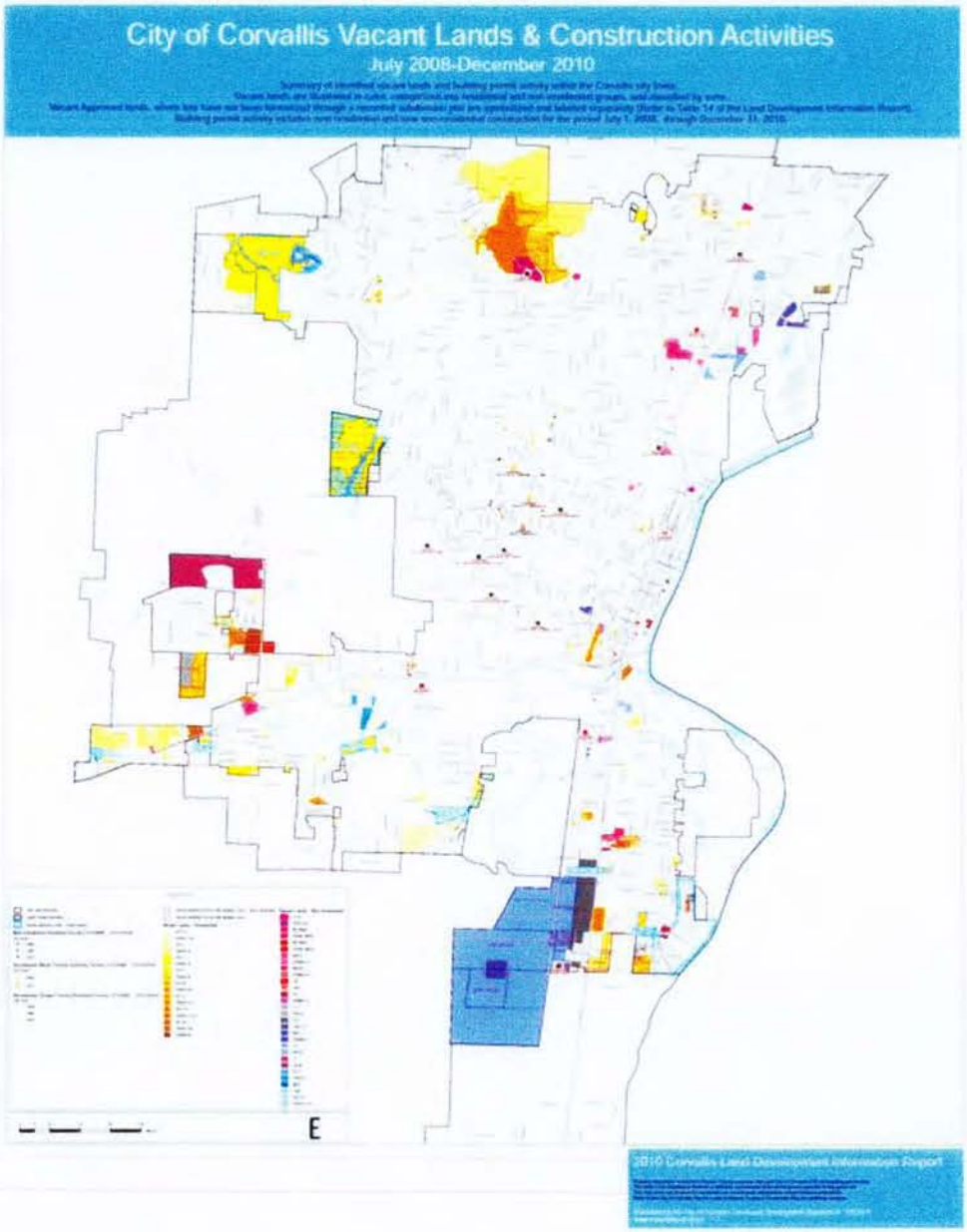

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In addition to parcel size and location, the immediate availability of power can be a critical factor in attracting industries that are cited as among those most compatible with the Corvallis culture and environment. The time and financial expenditures necessary to upgrade power facilities can be a deal breaker when it comes to recruiting the most desirable industrial employers.[4]

As referenced above, there are presently about 4 MW of power available for all of the southerly GI sites and the Airport Industrial Park, which is outside the city limits. A Pacific Power spokesperson reports this is more than adequate to serve the tenants presently located at the AIP, and in fact, provides a surplus for similar types of power usage.

He points out, however, that "many industries targeted by the State of Oregon, like 'clean tech' and 'data centers', require watts in the double figures." Twenty MW of redundant power is available to the proposed annexation site.

We would also note that all of the 20+ ac. vacant GI parcels are held in two ownerships. The City's Buildable Lands Inventory notes, *"In some cases, such a condition can limit the true availability of vacant land in the City's inventory, and may be considered a constraint, limiting market choices."*

Another issue which can be a determining factor constraining market choice of GI land is the presence of the *Airport Overlay Zone / Approach Safety Zone*, which affects about 100 acres of the southern GI land and a portion of the Airport Industrial Park. The Corvallis City limits is shown with the blue dashed line on the applicable section of Benton County's *Airport Overlay Zone* map, opposite, and the *Approach Safety Zone* is depicted by the gold line.

Federal Aviation Regulations prohibit certain uses in the Airport Overlay Zone, including those that may cause electrical interference with navigational signals or radio communication; result in glare in the eyes of pilots; with smoke or steam which could impair visibility; and places of public assembly among others. They further prohibit uses that create bird strike hazards such as water impoundment, which would prove problematic for storm drainage detention.

Mr. Sechrest notes a further significant constraint relative to the AIP, is that land cannot be privately owned, and that proved to be an insurmountable obstacle in attempting to recruit some businesses.[4]

The percentage of vacant land in the City has seen steady decline since the late 1980's and early 1990's, dropping from just above 25% in 1986 to about 16% as of the most recent LDIR. This indicates that the overall demand for developable land in the city has remained generally constant. During that time, however, the vast majority of City limits acreage zoned for GI uses has remained vacant and unused.

Fully 354 acres of the City's existing vacant GI land inventory has been within the city limits for 25 years (LDIR.) All of the large GI parcels on the west side of the RR were annexed in 1986. So, for the past 25 years, this agricultural land, designated General Industrial has stood vacant. These properties are technically considered City of Corvallis "employment lands" yet they remain undeveloped, and have not contributed substantially to the City's employment base.

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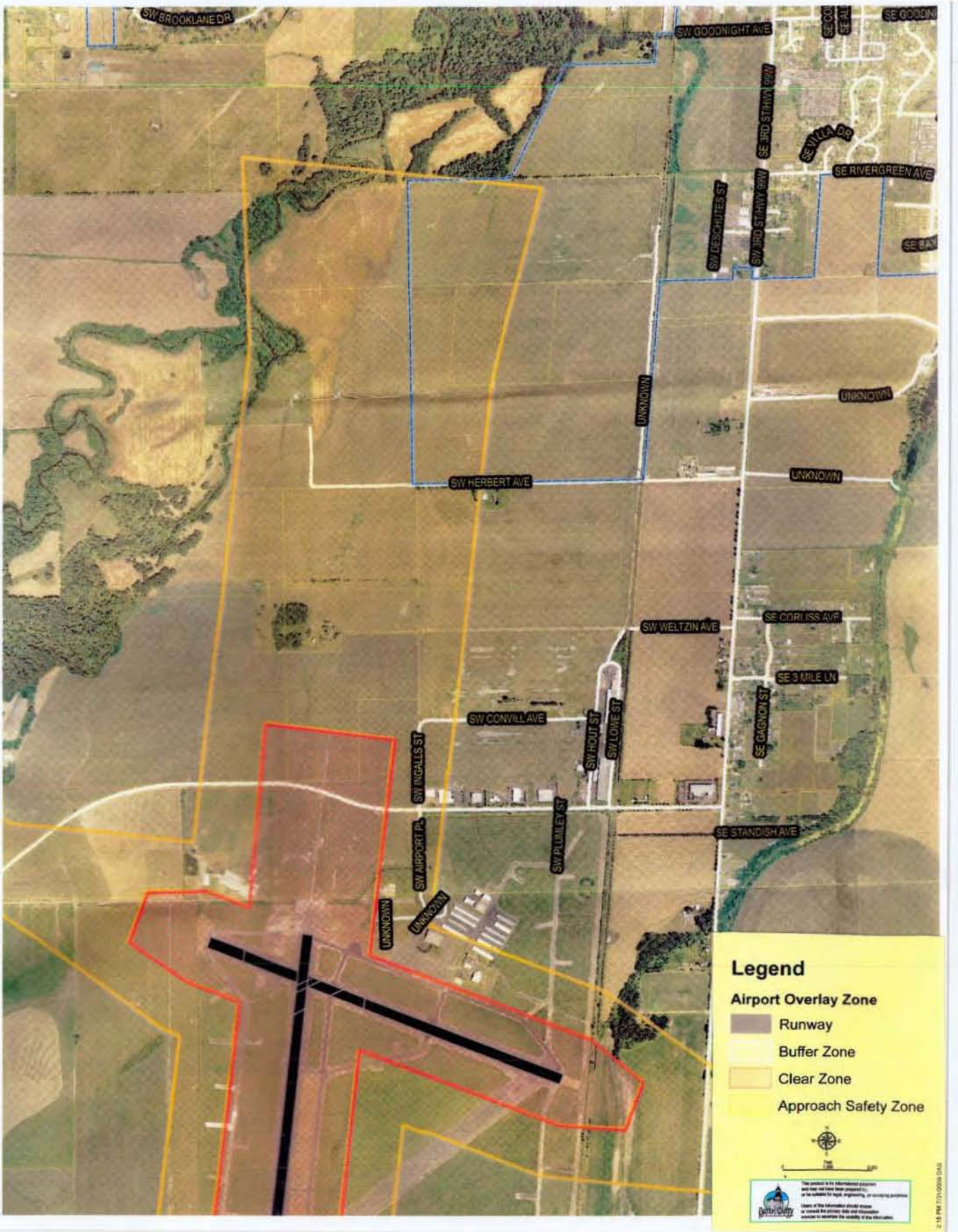

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The fact that Corvallis is being routinely passed over by otherwise highly compatible industries is, to a very significant degree, due to a lack of adequate choices in the market place.[3] [4]

Considering the locational, wetlands, power, limited ownership and use-restriction characteristics of the existing GI parcels, there are supportable, community-based findings for annexation of the subject 85 acre parcel to markedly broaden industrial land market choices in the City.

EMPLOYMENT LANDS

Corvallis and Benton County have not been insulated against business closures and job losses. With a January 2011 unemployment rate of about 7 percent compared to about 4 percent ten years ago, Corvallis can no longer be assured of the *"stable economic conditions"* referenced in Article 8 of the Comprehensive Plan, which addresses the City's Economy. Unemployment statistics don't take into account people who are underemployed, have mandatory furlough days, have foregone wage increases, have taken salary cuts or have ceased to look for employment.

This Comprehensive Plan Article recognizes that *"The challenge Corvallis faces for the future is to continue to diversify its economic base while retaining its quality of life that has marked its past."*

By significantly broadening the scope of type and location of GI land available in the market place, the addition of the proposed Annexation site to the City's industrial inventory can help facilitate meeting that challenge.

2.6.30.07.c. Providing information on community-wide livability indicators and determining compliance with adopted community-wide benchmarks –

1. The City has just begun the process of identifying livability indicators to ultimately assist in the development of community-wide benchmarks. Additionally, many of the community-wide livability indicators are not applicable to Annexation proposals.

2. Table 2.6-1- Livability Indicators and Benchmark Criteria provides interim direction to applicants in addressing livability indicator and benchmark criteria. As the community further develops these livability indicators and benchmarks, this Section of this Code shall be updated accordingly.

a) The livability indicators and benchmarks in the following table are intended to be balanced and identified as advantages and disadvantages relative to an Annexation proposal. Compliance with all benchmarks is not required.

However, when balanced and viewed in aggregate, the decision makers need to find that the advantages to the community outweigh the disadvantages.

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b) The number of applicable livability indicators and benchmarks varies, depending on the Comprehensive Plan Map designation(s) of the property involved in the Annexation request, as well as whether the Annexation is categorized as a Minor Annexation or a Major Annexation.

c) For those livability indicators and benchmarks that require distance measurements from an amenity to a proposed Annexation site, measurements shall be taken from the average point within the Annexation site.

Section 2.6.30.07.c. is intended to guide applicants in addressing the community-wide livability indicators and benchmarks, and has been followed in preparing this application.

Consistent with *subsection 2.a.* of the above excerpted LDC language, the applicants have utilized an evaluation of this proposal's conformance with the City's identified livability indicators and benchmarks as a significant measure for weighing the advantages and disadvantages of the Annexation application.

The proposed Annexation meets a substantial majority of applicable Community-wide Livability Standards and Benchmarks. Please refer to the Community-Wide Livability Indicators and Benchmarks Table, immediately following the narrative in this chapter.

2.6.30.06.b. The Annexation provides more advantages to the community than disadvantages *- To provide guidance to applicants, examples of topics to address for the advantages versus disadvantages discussion are highlighted in Section 2.6.30.07.*

2. Major Annexations - Major Annexation proposals shall include a discussion of advantages and disadvantages in terms of the methodologies outlined in Section 2.6.30.07. Applicants are required to document the methodologies and criteria used.

Please refer to the previous discussions on "Determining Five Year Supply of Serviceable Land" (2.6.30.07a) and "The availability of sufficient land of this type to ensure choices in the market place" (2.6.30.07b.)

In addition to relying upon the objective facts provided in the City's land use inventory, records and Local Wetlands Inventory the applicant's market choice discussions were provided by recognized professionals in the field, who have relied upon a market approach methodology.[2][3][4] Sources of information were identified as stipulated in LDC 2.6.30.07b.

The proposed Annexation provides a significant advantage to the community, in that it addresses a public need for additional choices in the City's current inventory of GI Zoned land.

The benefits of this proposal are further illustrated by its conformance with the majority of the City's identified livability indicators and benchmarks.

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In fact, the application complies with 17 of the 19 applicable livability indicators and benchmarks. Five of the 24 livability indicators and benchmarks do not apply to industrial annexations. In complying with 17 of the City's 19 applicable livability indicators and benchmarks, and by meeting an identified public need, the application demonstrates that the advantages of annexation outweigh the disadvantages.

> ***2.6.30.06.c. The site is capable of being served by urban services and facilities required with development** - The developer is required to provide urban services and facilities to and through the site. At minimum, both Minor and Major Annexations shall include consideration of the following:*

City of Corvallis Construction Engineering personnel advised the applicants' representatives that they consider all land within the city limits to be "serviceable" with public facilities. While this is undoubtedly true, some locations present more challenges than others when providing water, sewer, power, storm drainage and transportation facilities. In some cases 'servicing' one site over another can prove to be a very serious economic consideration and represent major public expenditures. This is especially true when vacant land does not abut an improved public street and/ or is not located adjacent to or near existing critical public utilities.

With Corvallis city limits and urban development on three sides, the proposed Annexation site stands ready to be fully serviced. Water mainlines, fire hydrants, and sanitary sewer mainlines are already on site. Public and private improvements would be constructed as part of the private investment at the time of future development.

All pertinent private utility providers with franchise agreements with the City of Corvallis have provided written consent to provide services to the Annexation site. (Please see the Attachments immediately following this chapter.)

> *1. Sanitary sewer facilities consistent with the City's Sanitary Sewer Master Plan and Chapter 4.0 - Improvements Required with Development;*

The subject property is located in the northeast basin of the City of Corvallis Waste Water Utility Plan, and is included in the Plan study area. A 36" mainline exists along the westerly and northerly boundaries of the property. The Master Plan does not indicate any hydraulic grade deficiencies up through 60,000 population. At 80,000 population, and approaching full build-out in the urban growth boundary, this line may have to be upsized to 48".

Sanitary sewer improvements will be installed at the developer's expense, in conjunction with future proposed industrial development.

Demand calculations are included in the Appendix to this Application set.

> *2. Water facilities consistent with the City's Water Master Plan, Chapter 4.0 - Improvements Required with Development, and fire flow and hydrant placement;*

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The subject property is located in the first level water service area, and is included in the study area of the Corvallis Water Distribution System Facility Plan. A 16" main exists along the southerly edge of the site, and a 30" main exists along the northerly edge of the site. As a City of Corvallis Phase 2 Improvement (50,000 to 60,000 population) the Facility Plan calls for a 16" connection between the two existing mainlines across the easterly boundary of this site.

This new line will be installed, at the developer's expense (subject to applicable SDC reimbursement) in conjunction with proposed future industrial development. The Facility Plan does not identify any other needed improvements to the backbone system in the vicinity of the proposed annexation site.

Demand Calculations are included in the Appendix to the Application set.

> *3. Storm drainage facilities and drainageway corridors consistent with the City's Stormwater Master Plan, Chapter 4.0 – Improvements Required with Development, Chapter 4.5 - Natural Hazard and Hillside Development Provisions, and Chapter 4.13 - Riparian Corridor and Wetland Provisions;*

The subject property is located in the Garfield Creek Drainage Basin which discharges under Highway 20 to the Willamette River. The Garfield drainage-way is generally located immediately west of this property on City of Corvallis owned land. In the City's Storm Water Master Plan, the subject property is designated for industrial uses.

The Storm Water Master Plan does identify that "*the culvert crossing under Highway 20 is undersized during the 10 year storm event, but there appears to be adequate storage volume in the overbank area for water that leaves the main channel.*" From the highway to railroad tracks along the northerly boundary of the McFadden property, storm water modeling "*showed no velocities exceeding the erosion criteria.*"

Any future development on the property would be required to meet Storm Water Master Plan and LDC requirements for detention and water quality. Development drainage patterns would follow historic drainage paths across the site to the Garfield Creek drainage-way. Storm water detention would meter drainage at rates which would match the historic site discharge rates in the undeveloped condition. Thus, there would be no perceptible impact to flows or water levels in Garfield Creek.

As an alternative, also per the Storm Water Master Plan, the applicant could elect to discharge treated water directly to the Willamette River through a new discharge pipe under Highway 20, all of course subject to approval of the permitting authorities.

Storm drainage improvements associated with future development would be the responsibility of the developer, although some portion may be eligible for SDC reimbursement.

Storm drainage demand calculations are included in the Appendix of this application.

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4. Transportation facilities consistent with the City's Transportation Plan and Chapter 4.0 - Improvements Required with Development; and

The subject site has frontage and access to US Highway 20, an improved public "highway arterial" street, and can be fully served with transportation facilities consistent with this section and adopted City and ODOT plans, policies, and standards.

As future development is proposed under Planned Development procedures, traffic impact studies will be undertaken by the developer, to fully evaluate traffic impacts relative to City of Corvallis and State of Oregon standards. Appropriate mitigation will be implemented in conjunction with future industrial development.

Implementation of the Planned Development, submitted in conjunction with the Annexation application, will provide for Conditions of Approval to ensure that necessary improvements will occur with proposed development.

The proposed Annexation/ Zone Change/ Planned Development is consistent with the City's adopted Comprehensive Plan. This proposal will not result in an increase in trip generation potential on the site beyond levels already incorporated in the City's transportation planning. The transportation system considered in the Regional Transportation Plan reflects the long-term operation of the system with urban development on the site.

Approval of these Consolidated Applications will not alter the functional classification of any surrounding roadways.

5. Park facilities consistent with the City's Parks Master Plan.

The nearest park to the annexation site is Garfield Park. The applicant notes that the distance to parks benchmark of Table 2.6-1 is not applicable to industrial annexations. In personal communication with the applicant's representative, City Parks' personnel stated they have not observed any prior instance of notable impacts on parks from industrial development. As is the case with many community services and facilities, property taxes and SDC's associated with future development will contribute to community-wide benefits in park facilities and services.

2.6.30.06.d. If the Annexation proposal includes areas planned for open space, general community use, or public or semi-public ownerships, the Annexation request shall be accompanied by a Comprehensive Plan Map Amendment as outlined in "1," and "2," below -

1. Areas planned for open spaces or future general community use, including planned parks, preserves, and general drainageway corridors, shall be re-designated on the Comprehensive Plan Map as Open Space-Conservation.

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There are no open space or general community use areas associated with this Annexation and CDP/DDP. City staff have indicated the City does not desire dedication of the Garfield Creek drainageway, which will, nonetheless, be protected under LDC 4.13.

The subject property is already designated as General Industrial on the Corvallis Comprehensive Plan. No Comprehensive Plan Map Amendment is necessary under this section.

> *2. Existing, proposed, or planned areas of public or semi-public ownership, such as Oregon State University facilities or lands, school sites, City reservoirs, and portions of the Corvallis Municipal Airport, shall be re-designated on the Comprehensive Plan Map as Public Institutional.*
>
> *Such required Comprehensive Plan Map Amendments shall be filed by the applicant concurrent with the Annexation request, in accordance with Chapter 2.1 - Comprehensive Plan Amendment Procedures.*

No such uses are proposed.

> ***2.6.30.06.e. Compatibility - The application shall demonstrate compatibility in the following areas, as applicable:***
>
> *1. Basic site design - the organization of Uses on a site and its relationship to neighboring properties.*

No industrial uses are proposed with this application package.

Reviewing future proposed uses under the PD public processes will help to ensure optimal site design, including the relationship of such uses to neighboring properties.

A landscaped berm has been added to the DDP, as a direct result of input received at a neighborhood meeting, to buffer existing residences at the site's southwestern corner from noise and visual impacts of future activities on site.

> *2. Visual elements (scale, structural design and form, materials, etc.);*

The applicant has sought and responded to input of the neighbors and modified the original Detailed Development Plan to:

a. Install a substantial, landscaped earthen berm adjacent to existing residences on the southwest; and

b. Provide significant landscaping on and in the vicinity of the earthen berm to provide further visual buffering and screening.

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The scale and structural design, etc. of all future development would be subject to the City's Detailed Development Plan review process and standards. Beyond the proposed DDP comprised of sidewalk, associated landscaped berm, and buffer plantings, no development is proposed at this time.

3. Noise attenuation;

The above referenced earthen berm and associated landscaping proposed in the CDP/DDP are intended and designed to have substantial positive benefits relative to noise attenuation. Any potential noise impacts associated with a future development proposal can be addressed through the Planned Development review process.

4. Odors and emissions;

None are associated with the applicant's proposal.

5. Lighting;

As stipulated in the PD Chapter of this Application Set, the applicant's Detailed Development Plan (DDP) proposes constructing the berm and installing buffer landscaping so that it may be established and benefit neighboring properties prior to any other development occurring on the parcel. As with all properties within the City of Corvallis, lighting would be required to be shielded and directed away from neighbors, and to otherwise comply with the City's lighting standards.

6. Signage;

None is proposed at this time.

7. Landscaping for buffering and screening;

Consists of plantings associated with the earthen berm, and is illustrated on Drawing C2.2.

8. Transportation facilities;

An evaluation of potential transportation facility impacts has been undertaken by the applicant's technical team, in consultation with City Engineering and Planning Staff, the Benton County Development Director and ODOT Staff. This assessment included analysis of development scenarios under the existing County zoning and the proposed City designation with proposed Planned Development Conditions. An evaluation of the manner in which the State Transportation Planning Rule applies was incorporated.

Because the City of Corvallis does not place conditions of approval on annexations or zone changes, a Planned Development, with Conceptual and Detailed Development Plan, is being requested concurrently with the Annexation/Zone Change. Implementation of the DDP will establish the entire site as an active Planned Development and permanently affix conditions of approval to the property. As future development is

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proposed under Planned Development procedures, detailed traffic impact studies will be undertaken by the developer, to fully evaluate traffic impacts relative to City of Corvallis and State of Oregon standards. Appropriate mitigation will be implemented in conjunction with future industrial development.

A number of private-investment transportation mitigations associated with future site development have been identified in the applicant's TIA, and would be the responsibility of the developer. SDC's, Property Taxes and, in some instances, Proportional Share Payments can contribute to larger-scale improvements that are community-wide or regional in nature.

The current Benton County Urban Industrial zone, allows a broad range of uses, many of which are comparable to those allowed in the City's GI zone in terms of traffic impacts. The application of a maximum FAR and trip generation cap to the entire site as a Condition of the Planned Development, provides that the parcel's development potential under City jurisdiction will not exceed a "reasonable worst case scenario" than presently allowed under Benton County jurisdiction.

The County development scenario assumes: utilization of the applicant's extensive water rights and capacity; on-site treatment for potable water; a water tower or pond for fire protection; and the use of a package sewer treatment plant. Please refer to the Appendix for a more detailed discussion of development potential under County standards, along with concurrence by Benton County's Development Director.

The applicant is proposing a maximum building area in the City zoning district that is less traffic intensive than a reasonable worst-case development scenario under the current Benton County zone. By agreeing to a Condition enforcing this limitation, the applicant is invoking subsection (2)(e) of the State Transportation Planning Rule. The proposed Conditions of Approval ensure trip generation from the site will not exceed levels that are currently permitted under the existing zoning district. In fact, the proposed Annexation, with its associated Planned Development, will actually reduce the possible trip generation from the site.

With this maximum building area limitation, the Transportation Planning Rule will be satisfied and the potential significant effect on the transportation system will be mitigated. The Planned Development mechanism facilitates placement of appropriate Conditions of Approval that will apply to all subsequent industrial development on the property. With these Conditions of Approval in place, no further measures are necessary to ensure compliance with the Transportation Planning Rule.

Annexation and Zone Change from an urban industrial County zone to a City industrial zone will not change the functional classification of any surrounding roadways.

For detailed discussion and calculations, please refer to information provided by Lancaster Engineering and Devco Engineering, located in the Appendix.

9. Traffic and off-site parking impacts;

The discussions immediately above, in earlier sections of this chapter and as referenced in the Appendix, relate to traffic impacts. The proposed Annexation will necessitate a change in zoning with the transfer from Benton County to City of Corvallis jurisdiction. With the proposed maximum building area and trip generation

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under the proposed GI/Planned Development, the subject site will generate fewer trips than a reasonable worst-case development scenario under the existing Benton County Urban Industrial zoning designation.

With the maximum level of development on the site, a FAR of 0.23 would result. This amount of building coverage will result in ample site area to provide all necessary parking supply to meet the demand of future development. No off-site parking will be necessary. For comparison, the adjacent HP campus also has a FAR of 0.23, where all parking is contained on site.

10. Utility infrastructure;

Prior discussions of this Chapter have established that the subject property can reasonably be serviced with utilities. Please refer to the Appendix for Utility Demand Calculations.

11. Effects on air and water quality (note: a DEQ permit is not sufficient to meet this criterion);

The City's General Industrial Zone does not permit those more intensive industrial activities which are normally associated with observable adverse impacts upon air and / or water quality. No such negative effects would be expected to result from Annexation. The DDP criteria, applicable to any future development proposal(s), provide further protection from such impacts.

12. Consistency with the applicable development standards, including the applicable Pedestrian Oriented Design Standards;

Annexation and the City's Planned Development procedures ensure that future development addresses all of the City's applicable development standards, which may appear a more desirable alternative for decision makers and voters than the site developing under Benton County development regulations.

Consistency with the POD's will be demonstrated at the Detailed Development stage for all future development proposals.

13. Preservation and/or protection of Significant Natural Features, consistent with Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting, Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, and Chapter 4.13 - Riparian Corridor and Wetland Provisions. Streets shall also be designed along contours, and structures shall be designed to fit the topography of the site to ensure compliance with these Code standards.

Portions of the proposed annexation site contain sensitive natural resources, the majority of which lie in an approximate 28.5 acre area of the site's northwesterly section.

Figure 5 (Significant Natural Features) depicts an area of 100 year flood plain, which is designated "high protection" according to the city's natural hazards inventory mapping; a riparian corridor subject to high

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protection status under LDC 4.13; and wetlands of special significance also occur within the floodplain area, and are locally protected (*City of Corvallis Riparian Corridor and Wetlands Map*).

Along the site's southerly frontage with Hwy. 20 lies a 5.61 acre section designated as Willamette River Greenway (WRG) Overlay. Within the same area, 3.03 acres are designated as a Riparian Corridor associated with the river. These are depicted on Figures 5 and 6.

The areas designated as WRG and riparian corridor along the frontage with Hwy. 20 have been extensively farmed in field crops for decades. The remaining portion of these overlays are physically comprised of a residence with associated yard and driveway; and a road serving the buildings on the north portion of the site. As part of this application set, a CDP/DDP proposes a sidewalk be constructed to City standards. This facility would lie within the WRG and Riparian Overlays adjacent to Hwy. 20. A Conditional Development Permit / Willamette River Greenway Application accompanies this Consolidated Applications. There do not appear to be any true natural resources impacted by the proposed sidewalk, and this is discussed more fully in the associated Planned Development and Conditional Development chapters.

No significant vegetation is indicated on the City's natural resources inventory as occurring on the subject property.

With 40% of the site designated with protected overlays, MADA provisions of the code do not apply. The site is relatively flat, so the code's hillside development standards do not apply, except that a "Landslide Risk Area" associated with the northerly bank of the Willamette River is located within 500 feet of the Annexation site. This is discussed in greater detail in subsequent portions of this Application Set.

No other natural resources or hazards beyond those discussed above are known to be present on site. Conformance with LDC requirements relative to natural resources and overlays is ensured through Annexation, as these areas would then come under City jurisdiction and standards. Conformance may be further assured through Conditions of the applicant's Conceptual and Detailed Development Plan. The applicant's CDP also volunteers a 25 foot 'safe harbor' setback from the more sensitive protected natural areas for all development activities.

These positive environmental impacts upon the comprehensive neighborhood of which the Annexation site is a part could not be assured if development were to occur under the less stringent, Benton County development regulations and environmental protections.

Preserving sensitive natural resources on this site under City of Corvallis regulations would have positive aesthetic impacts, as well as positive health and livability impacts for neighbors in terms of protecting against the risk of water and air quality impacts, and maintaining natural storm drainage patterns.

These same positive impacts enjoyed by the comprehensive neighborhood would also benefit the community as a whole.

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SOCIAL AND ECONOMIC EFFECTS OF THE ANNEXATION

The private investments associated with the proposed Annexation help to support desirable social services in the community. Economic diversification is recognized as a community goal. Providing a wider range of employment land can help to further that goal. Future business structures on the site can make a significant positive impact, helping to strengthen the City's tax base and to stabilize funding for important facilities, social programs and services.

The social effects of the site's annexation upon the community as a whole would be similar in nature to those upon the comprehensive neighborhood. Among these, the positive environmental impacts discussed in the section immediately above are considered a very significant and beneficial social impact for all citizens of Corvallis, protecting water quality, green areas and habitat.

Landscaping improvements associated with future urban development would benefit the comprehensive neighborhood and the community as a whole.

Positive economic effects accruing as a result of annexation, including increasing the City's opportunities to attract traded-sector employers, augmenting the tax base and contributing to a thriving local economy, would likely be observed more readily on a community-wide scale.

COMPREHENSIVE PLAN

The following policies of the Corvallis Comprehensive Plan demonstrate the consistency of this Annexation application with the goals and objectives of the City of Corvallis, as expressed in Plan Policy:

> *2.2.9 The City shall seek participation from citizens within the entire Urban Growth Boundary in all land use planning.*

Consistent with this policy, the annexation application process involves public hearings before the Planning Commission and City Council, and also requires subsequent ratification by Corvallis voters.

The Annexation would help to advance the desired land use pattern within the UGB by preserving significant natural features, making efficient use of existing public facilities and promoting an efficient use of the developable area, after natural resources are protected, as mentioned above. This is consistent with the following Corvallis Comprehensive Plan policy:

> *3.2.1 The desired land use pattern within the Corvallis Urban Growth Boundary will emphasize:*
>
> *A. Preservation of significant open space and natural features;*
>
> *B. Efficient use of land;*
>
> *C. Efficient use of energy and other resources;*

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D. Compact urban form;

E. Efficient provision of transportation and other public services; and

The proposed implementation of an active Planned Development will help to ensure thorough review for all applicable City standards and desired land-use patterns.

The applicant's preservation of sensitive protected resources is consistent with the following specific plan policies, from Article 4 of the plan, pertaining to environmental issues:

> *4.2.2 Natural features and areas determined to be significant shall be preserved, or have their losses mitigated, and/or reclaimed. The City may use conditions placed upon development of such lands, private nonprofit*
>
> *4.7.3 Prior to development, the City of Corvallis may require site-specific soil surveys and geologic studies where potential hazards are identified based upon available geologic and soils evidence. When natural hazards are identified, the City shall require that special design considerations and construction measures be taken to offset the soil and geologic constraints present in order to protect life and property, and to protect environmentally hazardous areas.*
>
> *4.9.1 Significant watercourses, lakes, and wetlands shall be preserved, or have their losses mitigated, in order to: maintain clean water, support natural vegetation, protect the aquatic habitat, retain existing significant public vistas, and provide wildlife habitat and recreation sites. Site-specific buffering and setback requirements may be required, as necessary, to achieve protection.*
>
> *4.10.2 Significant riparian lands within the Urban Growth Boundary shall be identified and inventoried by the City or through the development process, and the City shall work to preserve and enhance native stream corridor vegetation on both public and private lands.*
>
> *4.10.3 Significant drainageways shall be kept in a natural state to protect tree lines, maintain their natural functions, and enhance native plant species, to the maximum extent practicable.*
>
> *4.10.4 Within the Urban Growth Boundary, appropriate drainageway dedications and easements adequate for flood protection, conveyance of stormwater, channel access and maintenance protection of riparian environment, and channel migration shall be secured along all open drainageways needed for public conveyance of stormwater, prior to or at the time of development.*
>
> *4.10.5 The City shall develop stream corridor width and other standards and programs that preserve the properly functioning condition of streams. These standards can be varied by reach or basin and shall be determined based on functional objectives such as:*

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A. Preservation of the hydrologic conveyance and storage capacity;
B. Allowance for natural channel lateral migration and bank failure;
C. Allowance for channel widening and other channel modification that result from changes in hydrology from future urban development;
D. Proper shading of the stream to maintain or improve water quality;
E. Allowance for a vegetative management strategy that encourages native riparian species;
F. Provision of a pollutant filtering zone for surface runoff;
G. Allowance for natural stream processes to minimize stream channel, bank, and corridor maintenance needs;
H. Buffering of urban uses from stream processes;
I. Provision of a source and delivery of large wood;
J. Preservation of the 0.2-foot floodway; and
K. Preservation or enhancement of habitat.

4.10.18 The City shall inventory and identify natural intermittent streams within the Corvallis Urban Growth Boundary that provide important hydrological, water quality and aquatic habitat functions. Those that are used for stormwater functions shall be protected using mechanisms such as drainageway dedications and easements.

4.11.17 The City shall continue to maximize preservation and restoration of existing upland natural resource areas and wetlands by use of development standards in the Land Development Code.

4.11.18 The City shall develop and implement incentives for developers and property owners to protect, enhance, and re-establish wetlands, natural swales, vegetation, and groundwater for stormwater functions.

Annexation permits the City to implement the above policies relative to protection and mitigation measures for significant natural resources and drainage functions within the UGB.

5.5.11 The significant entry corridors that should be preserved or enhanced are the following:

Highway 99W, both north and south of the City Center; Highway 34, between Tangent and the City Center; Highway 20/34, between the City Center and Philomath; and Highway 20,between north Albany and the City Center.

City Planning Staff advise that the Annexation site is not recognized as an entry or gateway corridor to the City, therefore not subject to this policy and its implementing code. However, in conjunction with future development, annexation will provide for City landscaping and development standards rather than the inherently more rural provisions of Benton County.

7.3.7 The City of Corvallis shall actively promote the use of modes of transportation that minimize impacts on air quality.

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Annexation would actively promote air quality in that the site is located proximate to existing public transit and bicycle facilities.

> *8.2.1 The City and County shall support diversity in type, scale, and location of professional, industrial, and commercial activities to maintain a low unemployment rate and to promote diversification of the local economy.*

> *8.3.4 The City shall seek opportunities to minimize unemployment among all segments of the community.*

> *8.9.1 The City shall designate appropriate and sufficient land in a variety of different parcel sizes and locations to fulfill the community's industrial needs.*

> *8.9.2 In designating new industrial properties, and in re-designating properties to industrial zoning from other designations, the City shall work to diversify the locations of industrial properties within the community.*

It is imperative to provide a range in characteristics, sizes, ownerships and location of General Industrial land in order to promote the economic vitality, desired employment levels and economic diversity targeted by these policies.

> *10.2.5 The City shall consider the level and type of public facilities that can be provided when planning for various densities and types of urban land uses.*

As demonstrated in this application, the proposed Annexation site is well situated relative to urban services, with some already located on the site.

> *10.2.8 The expansion of public facilities or services within City Limits or the extension of public facilities or services to newly-annexed areas shall be accomplished through the Capital Improvement Plan, as funding allows, or as a condition of development, or a combination of both.*

Annexation will permit the City to ensure public facilities improvements, included in Master Facility Plans, will be completed through the subject property, as a Condition of future development.

> *10.4.1 Community land use planning shall be coordinated with utility agencies to assure the availability of services when needed.*

All applicable franchise utility providers have attached written consent to provide service to the Annexation area.

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> *10.7.4 To promote a City standard of fire protection in areas annexed after adoption of this plan, new development in these areas shall be required to be served with municipal-level fire protection.*

The Annexation application meets the City's identified benchmark for maximum distance from a fire station.

> *11.2.2 The transportation system shall be managed to reduce existing traffic congestion and facilitate the safe, efficient movement of people and commodities within the community.*

Please refer to the Transportation Impact Analysis. While no industrial development is associated with the Annexation and Zone Change applications, proposed Planned Development Conditions satisfy the above policy, providing assurances that the Plan Policy can continue to be met for all future development on the subject parcel.

> *11.6.8 The Oregon Department of Transportation shall construct sidewalks at the time of highway improvements as an integral part of the improvement and pay the sidewalk improvement costs with ODOT project funds.*

The applicant proposes private investment, as opposed to the use of public monies for this purpose.

> *12.2.5 The City shall encourage land use patterns and development that promote clustering and multiple stories, take advantage of energy efficient designs, and have ready access to transit and other energy efficient modes of transportation. A location where this is desirable is in the Central City.*

> *12.2.6 The City shall actively promote the use of energy efficient modes of transportation.*

The proposed annexation site has ready access to local and regional transit.

> *14.2.4 Upon annexation, all lands shall be districted in a manner consistent with Comprehensive Plan designations*

The GI/PD zoning proposed for the Annexation site is consistent with the Corvallis Comprehensive Plan designation of General Industrial, applied to this property over thirty years ago.

> *14.3.2 Conversion of urbanizable land to urban uses shall be based on orderly, economic provision of public utilities, facilities, and services.*

Providing public utilities, facilities and services to the Annexation site is demonstrated herein to be orderly, consistent with existing public utility plans.

1. City of Corvallis Land Development Information Report, March 2011
2. Bruce Laird, Clean Technology Recruiter, Business Oregon, Personal Communication
3. Michael Williams, Industrial Lands Specialist, Business Oregon (Attached Letter)
4. John Sechrest, (Attached Memorandum)
5. "Prosperity That Fits," October 2006
6. Economic Productivity of Employment and Industrial Land, Business Oregon, June 2009
7. Corvallis, Buildable Lands Inventory, June 1998

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-242

14.3.5 Annexations can only be recommended to the voters where the following findings are made:

A. There is a demonstrated public need for the annexation.
B. The advantages to the community resulting from the annexation shall outweigh the disadvantages.
C. The City and other jurisdictions are capable of providing urban services and facilities required by the annexed area, when developed.

14.3.6 Factors to be considered in evaluating the public need for annexation may include, but are not limited to the following:

A. The 5-year supply of serviceable land of this type to meet projected demand;
B. The availability of sufficient land of this type to ensure choices in the market place; and
C. Other factors, including livability benchmarks, as delineated in the Land Development Code.

The above Plan policies have been incorporated into the LDC as review criteria for Annexation applications and are addressed herein.

14.3.8 Information shall be provided to decision makers and the public related to consistency of the annexation proposal with established City policies and development regulations.

This Consolidated Application set seeks to satisfy all applicable Comprehensive Plan Policies and LDC Decision Criteria, providing findings that support annexation.

1. City of Corvallis Land Development Information Report, March 2011
2. Bruce Laird, Clean Technology Recruiter, Business Oregon, Personal Communication
3. Michael Williams, Industrial Lands Specialist, Business Oregon (Attached Letter)
4. John Sechrest, (Attached Memorandum)
5. "Prosperity That Fits," October 2006
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MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-243

Benchmark and Livability Indicators/McFadden Annexation

Livability Indicators	Description	Benchmarks	Applicant's Discussion (i.e. How does the application compare with livability indicator and benchmark)	Complies?
Relating to the Corvallis Vision 2020 Statement Category of "Where People Live"				
Rural Development Potential	Type of County development that could occur if the property was not annexed (depends on County land use policies in effect at the time of the proposed annexation.)	Development on land within the Urban Growth Boundary (UGB) is done in a fashion that does not preclude urban-level development on the subject site and/or adjacent properties within the UGB.	The BCDC permits the wide range of activities below: "(1) Research facility, testing laboratory and facility for the manufacturing, processing and/or assembling of products, provided a permit is not required from the Oregon Department of Environmental Quality. (2) Vehicle and manufactured dwelling sales and/or repair. (3) Transportation terminals and warehouses. (4) Vocational school. (5) Aggregate processing, and concrete and asphalt batch plants. (6) Outside storage of materials, except junkyards as defined in BCDC 51.020. (7) One dwelling required for the employer or employee for management or safeguarding of the industrial use. (8) Farm use and forest use. (9) Accessory use or structure.[11] Section 72.205 lists Conditional Uses in UI 20 Zone:	Yes

* BCDC is the Benton County Development Code

[11] Annexation Density, the first livability indicator/benchmark of Table 2.6-1, was omitted as not applicable

Benchmark and Livability Indicators/McFadden Annexation

Livability Indicators	Description	Benchmarks	Applicant's Discussion (i.e. How does the application compare with livability indicator and benchmark)	Complies?
			(1) A research facility, correctional and law enforcement facilities, junkyard, or testing laboratory or facility for the manufacturing, fabrication, processing or assembly of products which requires a permit from the Oregon Department of Environmental Quality may be allowed in the Industrial Zone by conditional use permit approved by the Planning Official. The decision to approve a conditional use permit shall be based on findings that the public health and safety will not be substantially affected by the proposed use when considering smoke, dust, odor, gas, fumes, glare, vibration, noise water pollution, radiation hazard or other noxious impacts. (2) Mining of aggregate or mineral resources may be allowed in the Industrial Zone by conditional use permit approved by the Planning Commission, pursuant to BCDC 53.215 through 53.235. In addition to the conditional use criteria of BCDC 53.215, approval requires the Planning Commission make the following findings: (a) Mining will not significantly diminish the ability of the land to be used for other industrial uses in the future; and (b) The mined land will be reclaimed to a topographic character and stability comparable to, or more conducive to general, non-mining industrial uses than, the characteristics existing prior to mining. (3) Radio or communication tower and accessory facilities." Annexation permits urban-level development of subject property Annexation neither hinders nor precludes future urban-level development of adjacent UGB properties.	

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[1] Annexation Density, the first livability indicator/benchmark of Table 2.6-1, was omitted as not applicable

Benchmark and Livability Indicators/McFadden Annexation

Livability Indicators	Description	Benchmarks	Applicant's Discussion (i.e. How does the application compare with livability indicator and benchmark)	Complies?
Adjacency to the City	Percentage of the perimeter of the Annexation site that is enclosed within the City limits.	It is considered an advantage if >50 percent of the perimeter of an annexation site is within the City limits.	79% of site perimeter enclosed by City limits.	Yes
Development Plans	Concurrent processing of Detailed Development Plan and/or Tentative Subdivision Plat with annexation request.	It is not considered a disadvantage and may be considered as advantageous if an Annexation request is processed concurrently with a Detailed Development Plan and/or Tentative Subdivision Plat, even though such land use decisions may be changed after annexation.	Conceptual and Detailed Development Plans accompany the Annexation request.	Yes
Distance to Bicycle and Pedestrian Access	Distance to bike lanes Distance to sidewalk Distance to multi-use path	.5 miles to bike lane .25 miles to sidewalk .5 miles to multi-use path	Site fronts Hwy. 20 which has bike lanes both sides. Existing sidewalk terminates at SE corner of site. Two multi-use paths located approximately .48 miles from site: 1. Adjacent to HP's Circle Blvd. entrance and 2. Across RR tracks	Yes
Connectivity and Extension of Bicycle and Pedestrian Facilities	It is considered advantageous if improvements proposed as part of the annexation request would connect to and extend existing bicycle and pedestrian facilities.	Connection to existing pedestrian facilities and extension of them by at least 350 ft.; or connection to existing pedestrian facilities and filling a gap between existing pedestrian facilities of at least 100 ft. Connection to existing bicycle facilities and extension of them by at least 350 ft.; or connection to existing bicycle facilities and filling a gap between existing bicycle facilities of at least 100 ft.	The DDP proposes extension of a new sidewalk facility along the entire site/highway frontage, connecting with the easterly HP property. This extension would be between 1,468' and 1,719', exceeding the 350' sought in this benchmark. Additional bicycle facilities will be included as part of a future DDP.	Yes

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[1] Annexation Density, the first livability indicator/benchmark of Table 2.6-1, was omitted as not applicable

Benchmark and Livability Indicators/McFadden Annexation

Livability Indicators	Description	Benchmarks	Applicant's Discussion (i.e. How does the application compare with livability indicator and benchmark)	Complies?
Planned Public Transportation Improvements	Type and extent of public transportation improvements (street, bicycle, pedestrian) that are listed in City master plans and would occur with urban-level development of Annexation site.	It is considered an advantage if public transportation improvements (street, bicycle, pedestrian) are installed with the annexation, as listed in City Master Plan, and this would enable other sites within the Urban Growth Boundary to ultimately develop.	Pedestrian improvements associated with Annexation and Zone Change to City of Corvallis General Industrial would be consistent with Corvallis transportation planning documents and executed at time of Annexation via concurrent CDP and DDP applications. Site and highway improvements associated with ultimate industrial development under a future DDP will facilitate urban level development of adjacent UGB lands at such time as owners' desire.	Yes
Distance to Shopping	Distance from neighborhood shopping opportunities (both existing and planned).	Annexation site is within .5 miles of neighborhood shopping opportunities (existing or planned). More advantages are associated with shorter distances from existing (as opposed to planned) shopping opportunities and/or location within .5 miles from existing shopping opportunities.	Annexation site is .39 miles from a nearby shopping center. Site is .5 miles from fronts of both Big K and Carmike Theaters.	Yes
Affordable Housing	Housing affordability.	It is considered an advantage if more than 50 percent of the proposed housing units are classified as "affordable".	Not applicable to this Annexation.	N/A
Relating to the Corvallis Vision 2020 Statement Category of "Economic Vitality"				
Employment/Housing	Balance of jobs and housing.	To be developed as part of a future update of this Code, and following completion of regional studies.	No standard or desired benchmark identified to date by City, and the regional studies referenced in the benchmark have not been executed. Annexation would facilitate additional job creation in the City of Corvallis, in a nation-wide stressed economic environment.	N/A

* BCDC is the Benton County Development Code

[iii] Annexation Density, the first livability indicator/benchmark of Table 2.6-1, was omitted as not applicable

Benchmark and Livability Indicators/McFadden Annexation

Livability Indicators	Description	Benchmarks	Applicant's Discussion (i.e. How does the application compare with livability indicator and benchmark)	Complies?
Economic Diversification	Diversity in type, scale, and location of professional, industrial, and commercial activities to maintain a low unemployment rate and to promote diversification of the local economy.	It is considered an advantage if the annexation request supports diversity in the type, scale, and location of professional, industrial, and commercial activities to maintain a low unemployment rate and to promote diversification of the local economy.	It is the applicant's objective to diversify the City's industrial land base by adding a relatively large parcel where a wide range of lesser intensive industrial uses could occur, and locating GI zoned land in north Corvallis as opposed to virtually all vacant industrial land in the city being located in south Corvallis. It is hoped that this increased diversity in the range of choices in GI zoned sites will lead to increased employment opportunities in the City of Corvallis.	Yes
Natural Features	Acres and percentage of annexation site with Significant Natural Features	Consistency with Significant Natural Feature protections specified by Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting, Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, and Chapter 4.13 - Riparian Corridor and Wetland Provisions. It is considered an advantage if Significant Natural Features are protected through Annexation, since they may be better protected within the City.	Annexation site contains 40% Significant Natural Features including 100 year floodplain, highly protected riparian corridors and locally protected wetlands. Natural Resource protection is proposed consistent with the pertinent sections of the LDC. Limited vegetation removal associated with the new public sidewalk is permitted under applicable code provisions. Annexation provides greater environmental protections under City of Corvallis regulations as compared with current County and State protections, regulations.	Yes

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(1) Annexation Density, the first livability indicator/benchmark of Table 2.6-1, was omitted as not applicable

Benchmark and Livability Indicators/McFadden Annexation

Livability Indicators	Description	Benchmarks	Applicant's Discussion (i.e. How does the application compare with livability indicator and benchmark)	Complies?
Distance to Transit	Distance from an existing transit line and/or bus stop.	The annexation site is within .5 mile of an existing transit line and/or bus stop.	Three CTS Routes (Routes 1,7,C2) all provide service within .5 miles or less of Annexation site 2 bus stop locations on HP campus are located approximately .25 and .45 miles from site, respectively. One bus stop location outside HP campus (between NE Byron Place and NE Rennie Place) is about .5 mile from center of Annexation site.	Yes
Distance to Major Street	Distance to nearest Collector and/or Arterial Street(s) that would serve the proposed Annexation site and is fully improved to City standards or is improved to City standards with regard to bicycle and pedestrian facilities.	Distance to nearest Collector and/or Arterial Street(s) that would serve the proposed Annexation site is < .25 miles and is either fully improved to City standards or is improved to City standards with regard to bicycle and pedestrian facilities.	Southeast boundary of Annexation site directly abuts a section of US Hwy 20 for 275 lineal feet which is improved to city standards with regard to bicycle and pedestrian facilities; with bicycle lanes extending across the subject property and a right of way sidewalk terminating 275' west of the Annexation site's southeasterly corner. These conditions exceed the benchmark of less than .25 miles to an improved collector / arterial street relative to bike and pedestrian facilities.	Yes
Intersection	Levels of Service for intersections of arterial and/or collector streets, as determined by the City's Traffic Engineer, within a one-mile radius of the site.	Levels of service for intersections of arterial and/or collector streets affected by the proposal, as determined by the City's Traffic Engineer, and generally within a one-mile radius of the site, will be a level of service "D" or better following urban level development of the Annexation site.	Existing Levels of Service for streets and intersections near the Annexation site are not conducive to meeting this benchmark.	No
Truck Traffic Routes	Determination of truck traffic route(s).	Truck traffic associated with urban level development of the proposed annexation will not result in primary travel routes on local or local connector streets through residential neighborhoods.	Truck traffic, if any, associated with future urban level development will be routed onto US Highway 20 and will not impact local or local connector streets through residential neighborhoods.	Yes

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(1) Annexation Density, the first livability indicator/benchmark of Table 2.6-1, was omitted as not applicable

Benchmark and Livability Indicators/McFadden Annexation

Livability Indicators	Description	Benchmarks	Applicant's Discussion (i.e. How does the application compare with livability indicator and benchmark)	Complies?
Local School Capacity / Travel Time	Student enrollment, capacity, and average class size of public schools to serve the annexation site. Distance to public elementary school.	Public schools that would serve the Annexation site are not overcrowded. Corvallis School District goals for average class sizes may vary among grades.	Not applicable to industrial annexation requests per LDC Table 2.6-1	N/A
Police Response Time	Number of police officers per 1,000 persons residing within City limits.	At least 1.2 officers per 1,000 persons residing within City limits.	City Manager's office indicates a City population of 54,890 on March 25, 2011. 66 officers are necessary to meet the benchmark. Corvallis Police Department employs 58 sworn officers, with 48 patrolling the streets. City has between an 8-18 officer deficit per the benchmark. Annexation would not affect this condition	No, City is out of compliance. Approval has no direct effect
Distance from Fire Station	Distance from an existing fire station.	All buildable portions of the annexation area are within 1.5 miles of a fire station with an engine company*	Downtown fire station is approximately 1.07 miles from center of Annexation site.	Yes
Public Improvements	Type and extent of public improvements developed to City standards; and urban-level development, such as clustered housing, etc., existing on the proposed annexation site.	Annexation of partially developed land within the Urban Growth Boundary (UGB) that already contains some public improvements developed to City standards, and urban-level development on part of the site, is considered more advantageous to the City than annexation of undeveloped land.	Annexation site is partially developed. City water mains, fire hydrants, a sanitary sewer main and associated easements are already located on site.	Yes

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[1] Annexation Density, the first livability indicator/benchmark of Table 2.6-1, was omitted as not applicable

Benchmark and Livability Indicators/McFadden Annexation

Livability Indicators	Description	Benchmarks	Applicant's Discussion (i.e. How does the application compare with livability indicator and benchmark)	Complies?
Distance to Sewer and Water	Distance to adequately sized public sanitary sewer and water lines needed to serve the site.	Sanitary sewer and water facilities are proximate to the annexation site. After some monitoring, distances for this benchmark may be specified in a future update of this Code.	An existing 36" sanitary sewer line lies within the northerly perimeter of the Annexation site. A 30" public water main is also located in this area. The site also contains a 16" water main near its southerly boundary within an easement that could contain sanitary sewer in the future, and is currently served by City water.	Yes
Planned Public Utilities	Types and extent of public utility improvements of sanitary sewer, water and storm drainage that are listed in City master plans, and which would occur with urban-level development of the annexation site.	It is considered an advantage of the installation of public utilities of sanitary sewer, water and storm drainage, listed in City master plans, would enable other sites within the UGB to ultimately develop.	The City's Water Master Plan depicts future 16" water line connecting existing mains described above. This could help facilitate future urban-level service to UGB sites SW of annexation site.	Yes
Distance to Parks	Distance from an existing public park.	Annexation site is within .5 miles of an existing public park.	Not applicable to industrial annexation requests per LDC Table 2.6-1	N/A
Relating to the Corvallis Vision 2020 Statement Category of "Central City"				
Distance to Downtown	Distance of the annexation from the Central Commercial Business Zone intersection of SW Third Street and SW Monroe Avenue.	It is considered an advantage if an annexation site is within 3.8 miles from the intersection of SW Third Street and SW Monroe Avenue, within the boundaries of the Central Business Zone.	Annexation site approximately 1.25 miles from this intersection.	Yes

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(i) Annexation Density, the first livability indicator/benchmark of Table 2.6-1, was omitted as not applicable

REFERENCES, ANNEXATION APPLICATION

1. City of Corvallis Land Development Information Report, March 2011

2. Bruce Laird, Clean Technology Recruiter, Business Oregon, Personal Communications

3. Michael Williams, Industrial Lands Specialist, Business Oregon, Attached Letter

4. John Sechrest, Attached Memorandum

5. "Prosperity That Fits," An Economic Development Plan for Corvallis and Benton County, Report and Action Plan, October 2006

6. Economic Productivity of Employment and Industrial Lands, Economic Mapping Pilot Project, Business Oregon, June 2009

7. Corvallis, Buildable Lands Inventory, June 1998

ATTACHMENTS, ANNEXATION APPLICATION

Letter, March 30, 2011, Michael Williams, Industrial Lands Specialist, Business Oregon

Memorandum, March 20, 2011, John Sechrest

Letters from Franchise Utilities

Notice of Neighborhood Meeting

business oregon
where business grows

March 30, 2011

Jason Yaich, Senior Planner
City of Corvallis
Community Development Department
2300 NW Walnut Blvd.
Corvallis, OR 97330

RE: Proposed Annexation of McFadden Industrial Site / Corvallis UGB. Also advising under the authority of ORS 197.717

Dear Mr. Yaich:

We are writing this letter in support of the annexation of the McFadden Industrial site in Corvallis Oregon. Globalization has increased the average project size so that we are seeing a number of larger projects on a regular basis. Corvallis has been repeatedly and routinely bypassed for scale projects over 20 acres due to a lack of ready to go larger parcel land inventory. In your case, the absence of visible demand is evidence of the absence of inventory. No one shops at a store with no or limited inventory.

We would also like to emphasize the need to have an inventory of multiple sites. Large users have very specific site needs that are not met by most sites. Further, multiple choices increase the community's competitiveness because potential users will more likely make the effort to evaluate and visit your community if they have choices, reducing risk and increasing their chances for success.

From our experience in your community and with companies looking for sites similar to the McFadden parcel, several things recommend and differentiate the site in your overall City site inventory.

- Potential larger size of parcel
- Availability of scale (larger capacity) quality electrical service
- Site neighborhood/proximity to HP campus/access to services
- Topography/mostly level
- Transportation connectivity

Recent successful project examples in Oregon:

- Genentech, located Hillsboro: Over 50 acres
- SolarWorld, located Hillsboro: Over 70 acres
- SoloPower, locating in Wilsonville (considered Corvallis) 500,000 SF on approx 26 acres.
- Sanyo Solar, located Salem, around 20 acres (plus or minus) plus option adjacent 16 acres. Total around 36 acre range.

775 Summer St. NE, Suite 200 • Salem, OR 97301-1280
503-986-0123 • fax 503-581-5115 • TTY 800-735-2900 • www.oregon4biz.com

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-253

Worldwide, there is strong interest and development in renewable energy and related technologies. The table below is a list of companies that have made announcements since the beginning of 2009. While none of these firms landed in Oregon, we were considered by many of the firms.

Large Clean Tech Facility Announcements (2009-2010)

Company	Acres	Location	Industry
Tokuyama*	494	Malaysia	Solar
Tesla/Toyota	380	California	Electric Cars
Xtreme Power/Clairvoyant Energy	320	Michigan	Solar
Vestas*	300	Colorado	Wind
US REG - A Power	150	Nevada	Wind
REC*	150	Singapore	Solar
Tindall	144	Kansas	Wind
Green2V	124	New Mexico	Solar
LG Chem Ltd.	120	Michigan	Battery
Autoport/AC Propulsion	102	Delaware	Electric Vehicles
Siemens	100	Kansas	Wind
Undisclosed**	100	Oregon/Nation	Battery
Energy Composites Corps	94	Wisconsin	Wind
Tesla	90	California	Electric Cars
Mitsubishi Heavy Industries*	90	Arkansas	Wind
Schott Solar*	80	New Mexico	Solar
Enerdel	75	Indiana	Batteries
BMW	60	Washington	Electric Car Supplier
Nissan Leaf Battery	67	Tennessee	Battery
Energy Composites Corporation	54	Wisconsin	Wind
Proterra*	50	South Carolina	Electric Buses
Confluence	50	Tennessee	Solar
Bosch Solar	50	Germany	Solar

* Considered Oregon/**Source: OBD (2010)

Source: News Reports & Business Oregon

We consider this addition to Corvallis' industrial inventory to be relatively modest, given the City's size, current inventory of industrial sites, labor force, and University related investments. Corvallis is incredibly competitive in this space and we would encourage the addition of suitable land inventory like the McFadden site into your community.

Sincerely,

Michael Williams
Industrial Lands Specialist

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-254

To: Jason Yaich, City of Corvallis
From: John Sechrest
Date: March 20, 2011
Subject: McFadden Industrial Property Annexation

As the Economic Development Director for Corvallis from 2006 through 2010, I was responsible for the evaluation and marketing of sites in Benton county. The McFadden Industrial Property was a topic of discussion during my time in Corvallis, and based on a market approach methodology, I would like to outline my understanding of the opportunity.

The McFadden Property provides a significant opportunity for Corvallis to diversify industrial property inventory, ensuring an adequate supply of available General Industrial Land supply and providing a significant choice in the market place. The current properties available have significant barriers to development and do not represent an adequate supply of property to ensure choices in the marketplace.

In Corvallis, the primary available industrial zoned property is the Corvallis Airport Industrial Park (CAIP) . This is typically the first and only property which is submitted in response to a site selector inquiry in Corvallis. It provides 42 acres of shovel ready property, with a possible expansion to 192 acres of available property. When marketing the CAIP for prospective clients, several barriers have come up in discussions. When talking to Solar manufacturing companies, the quantity and redundancy of the power at the CAIP was a stalling point in the conversation. With some cooperation and coordination with the Power company, the Airport Commission was making some progress on reducing the amount time and cost for putting a power station at the CAIP. This effort has not yet been completed. For companies which were moving a significant amount of product by truck, the issue of the school zone on south Third street was presented as a barrier to getting to the I-5 Highway corridor. However, the most frequently articulated issue was the issue of private ownership of land. There are several development professionals who rejected opportunities at the CAIP based on the land ownership.

There are additional properties directly north of the CAIP which constitute the bulk of the industrial properties available in the county. While the industrial zoned property from Goodnight to Herbert Avenue would provide for private ownership of property, those properties still have the same issues with a lack of power redundancy and capacity as well as the traffic issues. Additionally, looking at the Local Wetland Inventory (LWI), much of this land is identified as Wetland or Locally Significant Wetland. When you add to this that the bulk of the property is on the west side of a railway right of way, with minimal crossing improvements, the actual availability of this property is doubtful. These barriers significantly limit the likelihood that any of these properties will be considered when compared against industrial properties in the neighboring counties.

It took close to six years to get the first 42 acres of CAIP property shovel ready. This involved working with several state and federal agencies, coordinating with consultants, and waiting for various analyses to be done. The wetland delineation, the creation of the mitigation plan, and the associated communication with the Oregon Department of State Lands, the US Army Corps of Engineers and the EPA all added to the complexity of the process. Land requiring similar or greater improvements and procedures is not a viable part of a five year supply of industrial land.

An alternative industrial property is the Reservoir Road site. While it does not have the same traffic issues as the south Corvallis industrial sites and has more flexibility with respect to power, it is zoned Intensive Industrial. As a general planning policy, it makes sense to reserve land with this zone designation for more intensive industrial land uses that can only be sited within the II zone, rather than the less intensive uses of the GI zone.

The Hewlett-Packard (HP) Facilities on Circle Blvd are the largest remaining industrial zoned property. This facility has been built out to the plan. Industries that require a building(s) or site layout to their own specifications would be ruled out. Those economic development opportunities which do not mesh with the current facilities security needs or structure are unlikely to make any headway. The HP facilities border the McFadden property. Annexation of this site would provide opportunities for clustering related businesses for renewable energy or related manufacturing industries. Connecting to the work being done at the ONAMI – Oregon Nano and Micro Institute, would amplify the opportunity for the area. The power infrastructure provided to the HP facilities are the best in the county, currently providing 20MW of available power with redundant power feeds.

The majority of other industrial properties in the Land Inventory are small and scattered properties. They are usually too small for the inquiries coming from the Business Oregon program.

The State Business Lead process from Business Oregon funnels inquiries from site selectors for companies around the country. These leads ask for available properties which are able to meet the needs of the potential client. There are many inquiries from the state for which there are no properties which address the criteria of the client. As an example, companies which need private ownership of a large tract of land such as a Solar production facility are unable to find suitable sites in Corvallis. The McFadden property would provide a meaningful alternative to the CAIP and the GI farm parcels within the city limits. This property provides for 51 acres which would have the ability to have private ownership, 20MW of Power and redundant power service. There are no school zones between the property and the I-5 Highway corridor.

Annexation of this property helps ensure that Corvallis actually has build-able property which addresses the five year supply of General Industrial Land. It also provides a significant alternative to the CAIP and south Corvallis GI properties, providing an important choice in the market place for industrial employers.

From an economic development perspective, it would be worth while to not only annex this property, but to take the further steps of submitting this property to the Oregon Governors Shovel Ready Program.

John Sechrest

John Sechrest
Corvallis Economic Development Director (2006-2010)

Comcast Cable Communications,Inc
150 NW Lewisburg Avenue
Corvallis, Or 97330

Comcast will be able to provide service, to the McFadden Industrial site tax lot 1308, if the property is developed.

Construction Coordinator
Mike Allen
541-230-0219

NW Natural
7133 SUPRA DRIVE SW
ALBANY, OR 97321
TEL 541.926.4253
www.nwnatural.com

March 4, 2011

Mr. Tim McFadden
C/O Sandra Gazeley
7275 NE Haugen Drive
Corvallis, OR 97330

This information is furnished in response to your request for NW Natural ability to serve natural gas service to your proposed annexation site located at T11S., R.5W., Section 25, Tax Lot 1308.

Northwest Natural Gas Company (Company) will provide natural gas service for normal use in the above described location and such service will be available at the lot line of each lot therein at or prior to the time of sale or lease thereof.

Northwest Natural Gas Company operates under the jurisdiction and subject to the Rules and Regulations of the Public Utility Commissioner (PUC) of Oregon. Service is provided pursuant to the Tariff (rates, rules and regulations) of the Company on file with the PUC. Such Tariff is subject to change as provided by law. The Company installs, owns and maintains all facilities up to and including the meter pursuant to the provisions of such Tariff. Facilities beyond the meter are the responsibility of the builder or owner.

Copies of its rates, rules and regulations and additional information may be obtained by contacting the Company.

Sincerely,

Nancy Ann Whitley
NW Natural

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-258

ALLIED WASTE

To whom it may concern:

This letter is to serve as formal commitment that Allied Waste of Corvallis will provide Solid Waste removal at the proposed McFadden development. This development lies within our franchised service area and any and all future Recycling or Solid Waste removal needs will be met within the parameters of our business plan.

Sincerely:
Marc Wibbens
Site Supervisor
Allied Waste of Corvallis

Allied Waste of Corvallis, 110 N.E. Walnut Blvd.
Corvallis, OR 97330
541.754.0444 / FAX 541.754.0448
www.alliedwaste.com

PACIFIC POWER
A DIVISION OF PACIFICORP

830 Old Salem Road
Albany, Oregon 97321

March 24, 2011

To Whom It May Concern:

Regarding Benton County tax lot #1308 (Township 11S, Range 5W, Section 25), Pacific Power maintains three-phase overhead facilities along the Albany-Corvallis Highway (US Hwy 20). It appears from the property description received from the title company, we have adequate existing facilities to serve electrical power via an overhead or underground line extension. If anyone is interested in requesting new electrical service, please call our Business Center at (888) 221-7070 to make the request.

Please do not hesitate to call if you have any further questions.

Kara McDonald, Estimator
Pacific Power
(541) 967-6193

Qwest
Spirit of Service™

March 4, 2011

To:
Mr. Tim McFadden
7275 NE Haugen Dr
Corvallis, Or 97330

RE:
McFadden Industrial Annexation
1350 NE Hwy 20, 1370 NE hwy 20
& 1520 NE Hwy 20
Tax Lot 1308
Map T 11S; R 5W; Sec 25.
Corvallis, Or. 97330

To Whom It May Concern,
Qwest Corporation can and will provide telephone service to the property described as Tax lot 1308 of Benton County records map T 11S, R 5W, Sec 25.
Addresses given to Qwest were 1350, 1370 and 1520 NE Highway 20, Corvallis, OR 97330.

Yours Truly,

Curt Meadows

Curt Meadows

Qwest Sr. Design Engineer
541-484-7632
Curt.Meadows@Qwest.com

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
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Neighborhood Meeting Notice
for the Proposed Annexation at
1350 NW Highway 20
Corvallis, Oregon

Gazeley & Associates and Devco Engineering are assisting the property owners/applicants with an application for annexation to the City of Corvallis and we would like your input. We will be conducting our first informal neighborhood meeting at 7:00 pm on March 15, 2011, at the Corvallis-Benton County Chamber Coalition office, 420 NW 2nd Street, Corvallis, Oregon. Participants will have an opportunity to review the proposal and provide comments before the annexation application is submitted to the City. The meeting will be in the Starker Meeting Room of the Chamber offices.

We have attempted to notify all property owners and residents within the City's notification area and would encourage you to contact others who you feel may have an interest in the proposal.

The attached drawing shows the subject property.

If you would like additional information or have any questions about the annexation application, please contact Sandra Gazeley at Gazeley & Associates, (541)745-5368 or Lyle Hutchens at Devco Engineering, (541)757-8991.

When: March 15, 2011

Time: 7:00 PM

Where: Corvallis- Benton County Chamber Coalition Office
420 NW 2nd Street
Corvallis, Oregon

Re: Proposed Annexation to the City of Corvallis

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
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EXHIBIT F-262

ZONE CHANGE

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
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ZONE CHANGE

The proposal is to change the zoning jurisdiction and district of the proposed Annexation site, from Benton County Urban Industrial, PUD Overlay (also including three additional overlays: "Greenway Management Overlay"; "Floodplain Management Overlay"; and "Natural Features Overlay in the Corvallis Fringe") to a City of Corvallis General Industrial district with Planned Development Overlay. In addition, because approximately 5.61 acres of the 85.43 acre parent parcel appear to fall within the Willamette River Greenway (WRG), as identified by the State of Oregon and administered under Statewide Planning Goal 15, annexation also requires re-zoning the affected portion of the site to "WRG Overlay".

2.2.40.02 - Application Requirements
When the Director deems any requirement below unnecessary for the proper evaluation of a proposed application, it may be waived.

a. General Requirements

1. The subject address and Benton County Tax Assessor's map numbers are provided on the cover page of this application set. A copy of the assessor's map is located at Attachment 1, with the subject property outlined in red. A legal description of the property is located at Attachment 4.

2. Signed consent by the property owner is provided on the City's Application Form. The owner and applicant's contact information appear in the same location.

Items 3-5 stipulate the form and quantity of application materials, and these have been submitted as required.

6. *Graphic Requirements -*

Graphics meeting these requirements have been provided as follows:

a.	Public Notice Map	Figure 1
b.	Zoning Map	Figure 2
c.	Comprehensive Plan Designations	Figure 3
d.	Existing Land Use Map	Figure 4
e.	Significant Natural Features Map	Figure 5

7. Vicinity Map

The Vicinity Map appears as: Figure 9.

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8. Statement of availability, capacity, and status of existing water, sewer, storm drainage, transportation, park and school facilities. The applicant shall obtain this information using GIS base maps where available;

9. Statement of increased demand for the facilities that will be generated by the proposed change in land use designation. The applicant shall refer to the criteria of the City's facility master plans, available via the City Engineer, to determine the methodology used to estimate public facility demands. Information related to an actual development proposal may be included for informational purposes.

At minimum, the demand calculations associated with the full range of development potential (min. to max.) under current vs. proposed land uses designations shall be addressed in the analysis;

10. Statement of additional facilities required to meet the increased demand and phasing of such facilities in accordance with projected demand. The applicant shall review adopted public facility plans, master plans and capital improvement programs, and state whether additional facilities are planned or programmed for the subject area. Information related to an actual development proposal may be included for informational purposes. At minimum, the demand calculations associated with the full range of development potential (min. to max.) under current vs. proposed land uses designations shall be addressed in the analysis;

11. Traffic Impact Study, if required by the City Engineer. The City Engineer shall define the scope of the Traffic Impact Study based on established procedures. Information related to an actual development proposal may be included for informational purposes. At minimum, the traffic calculations associated with the full range of development potential (min. to max.) under current vs. proposed land uses designations shall be addressed in the analysis. See also Section 4.0.60.a. Statement outlining the method and source of financing required to provide additional facilities; and

Because this proposal does not involve any industrial development, there is no actual increased demand or required additional facilities at this time. Demand calculations and analysis evaluate the full range of development potential, as specified in the LDC. Any actual change in demand for the above applicable facilities will be determined in conjunction with a future proposal for industrial development.

WATER

The subject property is located in the first level water service area, and is included in the study area of the Corvallis Water Distribution System Facility Plan. A 16" main exists along the southerly edge of the site, and a 30" main exists along the northerly edge of the site. As a City of Corvallis Phase 2 Improvement (50,000 to 60,000 population) the Facility Plan calls for a 16" connection between the two existing mainlines across the easterly boundary of this site.

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The Applicant recognizes that this new line will be installed at the developer's expense (subject to applicable SDC reimbursement) in conjunction with future industrial site development.

The Facility Plan does not identify any other needed improvements to the backbone system in the vicinity of the proposed annexation site.

Demand Calculations are included in the Appendix to the Application set.

SANITARY SEWER

The subject property is located in the northeast basin of the City of Corvallis Waste Water Utility Plan, and is included in the Plan study area. A 36" mainline exists along the westerly and northerly boundaries of the property. The Master Plan does not indicate any hydraulic grade deficiencies up through 60,000 population. At 80,000 population, and approaching full build-out in the urban growth boundary, this line may have to be upsized to 48".

Sanitary sewer improvements needed to serve future industrial uses will be installed at the developer's expense, in conjunction with actual industrial site development.

Demand calculations are included in the Appendix to this Application set.

STORM DRAINAGE

This site is located in the Garfield Creek Drainage Basin, which discharges under Highway 20 to the Willamette River. The Garfield drainage-way is generally located immediately west of the proposed annexation site, on land owned by the City of Corvallis. In the City's Storm Water Master Plan, the property is designated for industrial uses. The Storm Water Master Plan does identify that *"the culvert crossing under Highway 20 is undersized during the 10 year storm event, but there appears to be adequate storage volume in the overbank area for water that leaves the main channel."*

From the highway to the railroad tracks along the northerly boundary of the subject property, storm water modeling *"showed no velocities exceeding the erosion criteria."*

Based upon the requirements of Appendix F of the Storm Water Master Plan, development of the site should demonstrate the safe passage of the 100 year storm event flows. The existing 36" culvert crossing under Highway 20 is undersized to convey 100 year storm event flows. The applicant's Storm Water Calculations, provided in the Appendix, confirm that the existing 36" pipe does not have the capacity to convey the 100 year storm event.

The Storm Water Calculations show and recommend that a new 48-inch culvert should replace the existing 36-inch culvert under Hwy. 20. Sketch SK-1, included in the applicant's Storm Water Calculations, shows the limits of the 100-year storm event surface water elevation. It clearly shows that no existing habitable structure will be inundated by a 100-year storm event. This sketch should demonstrate the safe passage of the 100-year storm event.

Any future development on the property would be required to meet Storm Water Master Plan and LDC requirements for detention and water quality. Development drainage patterns would follow historic drainage paths across the McFadden property to the Garfield Creek drainage-way. Storm water detention would meter drainage at rates which would match the historic site discharge rates in the undeveloped condition. Thus, there would be no perceptible impact to flows or water levels in Garfield Creek.

As an alternative, also per the Storm Water Master Plan, the applicant could elect to discharge treated water directly to the Willamette River through a new discharge pipe under Highway 20, all, of course, subject to approval of the permitting authorities.

Improvements to the storm water drainage system would be constructed in conjunction with proposed industrial development. Other than any portion eligible for SDC reimbursement, all improvements would be at the developer's expense.

TRANSPORTATION

The site fronts on US Highway 20 and presently has one primary road approach and a residential driveway onto the highway. These can be seen most clearly on the Existing Improvements map, Figure 10. The applicant's Transportation Impact Analysis (TIA) is located in the Appendix to this Application set. The scope of work for the TIA was agreed upon with City engineering staff.

The applicant is proposing a limitation on the maximum gross floor area and a trip generation cap for future development at a level below that allowable under the existing County zoning. In order to make the limitation enforceable, the proposed Annexation and Zone change are accompanied by a concurrent Conceptual and Detailed Development Plan, to which this Condition would be applied. Conditions of Approval of the proposed CDP/DDP would provide assurance that significant site development may not occur in advance of needed mitigation.

The CDP/DDP proposes a maximum Floor Area Ratio (FAR) of 0.23 for the entire site and any individual development within, and a cap on trip generation for all development. This FAR is consistent with actual City of Corvallis GI development in the immediate vicinity.

It is important to note that this proposal will not result in an increase in trip generation potential over that currently allowed and planned, since a development of the same or greater intensity could be constructed under the County zoning jurisdiction.

For purposes of analysis and LDC compliance, the TIA assumes a hypothetical scenario in which the site develops to full build-out immediately upon annexation. As a practical matter, this manner of development is clearly not a realistic expectation. It does, however, provide a useful assessment of the potential long-term transportation impacts to the capacity of transportation infrastructure in the same manner that impacts to infrastructure are examined for water, storm water and sewer capacity.

The TIA analyzes potential future trips as they would impact the existing transportation system, and appropriate mitigations have been identified.

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It is noteworthy that maximum build-out would not result in the functional re-classification of any streets or roadways, and impacts would be mitigated through Conditions of the Planned Development, including but not limited to placing a maximum limit upon Floor Area Ratios (FAR's.)

At the time of actual, proposed industrial development on the site, a detailed traffic impact study will be required, including detailed operational analyses of roadways and intersections that will be impacted by the proposed development. As appropriate, mitigation will be implemented to accompany development on the site at that time. Any additional and upgraded facilities specific to proposed future development on this site will be constructed consistent with City and ODOT standards. Inherent in the accompanying Planned Development, is the mechanism that also provides assurance that significant development on the site may not occur prior to necessary mitigation to the transportation system.

Industrial development on the subject property is assumed in the City's Comprehensive Plan. The proposed Corvallis General Industrial Zone designation, with accompanying CDP/ DDP, will not cause any increase in trip generation potential above that already permitted and assumed in the City's transportation system plans.

Please refer to the Transportation Impact Analysis, located in the Appendix for further discussion and analysis.

PARKS
The nearest park to the property is Garfield Park. Parks department personnel stated that they are not aware of any instance of industrial development having had a direct impact upon Corvallis public parks in the past, and no further analysis under this category appears warranted.

SCHOOLS
Because the property is already zoned for Benton County industrial uses, rezoning to City General Industrial uses should have no effect upon availability, capacity or status of Corvallis schools. No further analysis appears necessary.

> *12. Statement of the reasons for the Change, and how the proposal meets the review criteria in Section 2.2.40.05.*

The site is currently zoned Benton County Urban Industrial (UI), Twenty Acre Minimum Lot Size, Planned Unit Development (UI/ 20-PUD), with a number of additional overlay zones affecting the site as noted on Page ZC-1 of this chapter.

In the event of City approval of the proposed Annexation, a Zone Change is required to re-district the site from a Benton County to a City of Corvallis industrial district. The applicant proposes a zoning district of City of Corvallis, General Industrial, Planned Development (GI/PD), consistent with the long-standing Comprehensive Plan designation for the site of General Industrial (GI). In addition, because 5.61 acres of the site are located within the Willamette River Greenway (WRG) as identified by the State of Oregon, the affected portion of the site must also be rezoned to reflect a WRG Overlay.

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This Application set consolidates the Annexation request with the requisite Zone Change application; Conceptual and Detailed Development Plans; and Conditional Development Permit in the WRG Zone, to permit construction of a public use sidewalk per the applicant's proposed DDP.

The following discussion illustrates how the proposal conforms to the City's review criteria for a Zone Change.

> *2.2.40.05 - Review Criteria*
> *a. Review Criteria for Zone Changes, Except Those Requesting to Apply or Remove a Historic Preservation Overlay*
>
> *Quasi-judicial Zone Changes shall be reviewed to determine how they affect City facilities and services, and to ensure consistency with the purposes of this Chapter, policies of the Comprehensive Plan, and any other applicable policies and standards adopted by the City Council. The application shall demonstrate compatibility in the following areas, as applicable:*
>
> *1. Basic site design (e.g., the organization of uses on a site and the uses' relationships to neighboring properties);*

This Consolidated Application set includes a Conceptual and Detailed Development Plan, which ensure protection of significant natural resources, while providing that all future development proposals are reviewed for standards and policies in place at the time.

As a direct result of input received at a neighborhood meeting, a landscaped berm and landscaping north of the berm, have been added to the applicant's proposed Detailed Development Plan, to buffer existing residences at the site's southwestern corner from potential noise and visual impacts of future activities on site.

> *2. Visual elements (scale, structural design and form, materials, etc.)*

The scale and structural design, etc. of all future development would be subject to the City's Detailed Development Plan review process and standards. Beyond the sidewalk proposed with the accompanying DDP, and buffer improvements, as specified in items (a) and (b) below, no development is proposed at this time.

The applicant has sought and responded to input of the neighbors and modified the original Detailed Development Plan to:

(a) Install a substantial, landscaped earthen berm adjacent to existing residences to the southwest; and

(b) Provide significant landscaping on and in the vicinity of the earthen berm to provide further visual buffering and screening.

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3. Noise attenuation;

The earthen berm and associated landscaping are intended and designed to have substantial positive benefits relative to noise attenuation. Potential noise impacts associated with a future development proposal can be addressed through the Planned Development review process.

4. Odors and emissions;

None are associated with the applicant's proposal.

5. Lighting;

As stipulated in the following PD Chapter of this application set, the applicant's Detailed Development Plan (DDP) proposes constructing the berm and installing buffer landscaping, so that it may be established and benefit neighboring properties prior to any other development occurring on the parcel. This will help mitigate potential future light impacts.

As with all properties within the City of Corvallis, lighting would be required to be shielded and directed away from neighbors, and to otherwise comply with the City's lighting standards.

6. Signage;

None is proposed at this time.

7. Landscaping for buffering and screening;

Consists of plantings associated with the earthen berm and buffer area, as illustrated on Drawing C2.2.

8. Transportation facilities;

Please see the applicant's Transportation Impact Analysis set. Beyond a public sidewalk, no new transportation facilities are proposed in conjunction with this Zone Change.

9. Traffic and off-site parking impacts;

Please see the TIA concerning traffic impacts. No off-site parking will occur in conjunction with this proposal, nor is it foreseeable with any future development. The site is 85.43 acres in area, and is fully capable of containing all future parking on-site.

10. Utility infrastructure;

As discussed in prior sections of this Zone Change chapter; in the Annexation chapter; and in the Utility Demand Calculations (located in the Appendix) this proposed Zone Change would not have an adverse impact upon public utility infrastructure.

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11. Effects on air and water quality (note: a DEQ permit is not sufficient to meet this criterion);

The proposed General Industrial Zone does not permit those more intensive industrial activities normally associated with observable adverse impacts upon air and / or water quality. Such uses, if allowed, are more appropriately located in an intensive industrial zoning districts. No such negative effects would be expected to result from the Zone Change. The Planned Development process provides further protection from such impacts.

The applicant is proposing the following Condition of Approval to further protect neighbors and the community against adverse impacts upon water, air, noise and other resources:

"The following uses are normally permitted in the City's General Industrial (GI) Zone but are prohibited in the McFadden Industrial Planned Development:

3.24.20.01.a.2. (c)(2) Kennels
3.24.20.01.a.2. (i) Scrap Operations; and
3.24.20.03.a. Explosive Storage."

12. Consistency with the applicable development standards, including the applicable Pedestrian Oriented Design Standards;

Future proposed development will be reviewed through the PD process for consistency with applicable development standards. The applicant's Detailed Development Plan is consistent with applicable development standards.

13. Preservation and/or protection of Significant Natural Features, consistent with Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting, Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, and Chapter 4.13 - Riparian Corridor and Wetland Provisions. Streets shall also be designed along contours, and structures shall be designed to fit the topography of the site to ensure compliance with these Code standards.

Figure 5 depicts Significant Natural Features. The applicant proposes maintaining a minimum 25-foot "safe harbor" setback from all significant resources. While the required placement of the proposed sidewalk is within a WRG and Riparian Overlay, no actual resources or riparian vegetation exist within these overlays. (Please refer to the last chapter in the Application set.)

The safe harbor approach for the balance of significant features on the site precludes encroachment upon the floodplain, wetlands and protected riparian corridor associated with Garfield Creek. Please see Drawing C2.1., Conceptual Development Plan.

Upon Annexation and adoption of the proposed CDP, the natural resource area depicted on the applicant's CDP will be subject to the City's jurisdiction and environmental protections.

The City WRG Overlay may be applied to the site upon Annexation and Zone Change.

The DDP process can ensure that any future interior streets and structures are designed to fit the contours of the site consistent with this standard.

CITY FACILITIES AND SERVICES
Please refer to the preceding discussions of this Chapter, Zone Change Application Requirements, LDC Section 2.2.40.02.a. #8, #9 and#10, for a discussion of the proposed Zone Change's maximum potential effect on public facilities. Further discussions also appear in the Appendix, as well as in the Annexation Chapter of this Application set.

The "Attachments" section of the Annexation chapter contains commitment to service letters from all relevant franchise utilities in the City.

PURPOSES OF CHAPTER 2.2
Include the following:

> *a. Maintain sound, stable, and desirable development within the City;*
>
> *b. Permit changes in zone boundaries where appropriate;*
>
> *c. Ensure Zone Changes are consistent with the community's land use policies and goals;*
>
> *d. Lessen the influence of individual economic interests in the land use decision-making process;*
>
> *e. Establish procedures and criteria for applying Historic Preservation Overlays to, or removing Historic Preservation Overlays from, Designated Historic Resources; and*
>
> *f. Establish procedures and criteria for reclassifying a Designated Historic Resource in a National Register of Historic Places Historic District.*

Items e. and f., above, are not applicable.

With respect to items a.- d., above:

Annexation and Zone Change, with the associated transition from rural to urban standards of development, helps to ensure more desirable and compatible development within this predominantly urban environment.

The applicant's proposal to place a Planned Development designation on the entire property ensures that all development on the industrially zoned site is subject to the detailed City and public review procedures of the Conceptual and Detailed Development Plan processes. This ensures consistency with applicable policies, as well as standards of the LDC, intended to address sub (a), above.

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The site has been designated as General Industrial / UGB on the Comprehensive Plan map since 1978, demonstrating its planned use and its appropriateness for a City of Corvallis General Industrial zoning district (item b).

The Comprehensive Plan is the chief source of a community's land-use related policies and goals. A discussion of the Consolidated Application's consistency with the goals and policies of the Comprehensive Plan appears in the Annexation Chapter.

As noted in the Annexation Chapter, the Citizens Advisory Committee (CAC) to the South Corvallis Refinement Plan, adopted in 1998, noted at that time, that virtually all of the City's vacant, General Industrial-zoned land was located in South Corvallis. This was apparently perceived as a geographic imbalance. Such a circumstance can also have the effect of limiting the economic interests which have a voice in determining GI Zone development patterns and outcomes.

Moreover, all of the fully vacant, 20 acre or greater GI Zoned parcels in the City's current inventory, a total of six tax lots, are under two ownerships. This extremely limited ownership pattern risks rendering a substantial portion of the City's industrial land base unavailable as employment lands.

Diversifying both the geographic balance and ownership pattern of the City's existing GI Zone land base works directly to: "Lessen the influence of individual economic interests in the land use decision-making process." (From item d, above.)

COMPREHENSIVE PLAN

As mentioned above, please refer to the Annexation Chapter of this document for a thorough discussion of the Consolidated Application's substantial conformance with the goals and policies of the Corvallis Comprehensive Plan.

OTHER POLICIES AND STANDARDS

Any remaining policies and standards of the City of Corvallis not discussed in this Consolidated Application set can be addressed through subsequent Detailed Development Plan review.

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PLANNED DEVELOPMENT

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CONCEPTUAL AND DETAILED DEVELOPMENT PLAN

OVERVIEW

This application is submitted pursuant to LDC Chapter 2.5.10.a, which provides that a Conceptual and Detailed Development Plan may be submitted simultaneously. A Conceptual Development Plan (CDP) is proposed for the entire parcel, as shown in Drawing C2.1. A Detailed Development Plan (DDP) is proposed for a sidewalk parallel to Hwy. 20, a landscaped berm and additional landscape buffer adjacent to neighboring residential properties. These are depicted in Drawing C2.2.

With its location proximate to the industrially zoned HP Campus, adjacent residences, frontage on Hwy. 20 and with significant environmentally sensitive resources, this site lends itself to the Planned Development provisions.

There are no buildings, industrial uses or interior site improvements proposed at this time. No phasing or land division is proposed in conjunction with this CDP/DDP. Future design, including any proposed buildings, site design beyond the current DDP, or any proposed land division will be subject to the full review and requirements of the CDP/DDP sections of the LDC. City standards in effect at the time of a development proposal will be met or exceeded, ensured by the City's DDP process.

Proposed Conditions of Conceptual Development Plan Approval on the entire PD would fix the maximum Floor Area Ratio and trip generation, and provide the mechanism for assurance of mitigation measures to address future traffic-related impacts, including those that may be required by the Transportation Planning Rule.

Once Conditions of Approval are established with this CDP/DDP, they are binding upon the entire site. Financially guaranteeing and subsequently constructing the improvements described above renders this Nonresidential Planned Development "active" per LDC definition. The establishment of an active Planned Development provides that Conditions of Approval are carried forward in perpetuity.

REQUIREMENTS AND CRITERIA
CONCEPTUAL DEVELOPMENT PLAN

2.5.40.01 - Application Requirements, Conceptual Development Plan
When the Director deems any requirement below unnecessary for proper evaluation of a proposed application, it may be waived.

There are no buildings, industrial uses or interior site improvements proposed at this time, nor is there phasing or land division in conjunction with this CDP/DDP. The Planning Director has, therefore, waived certain requirements of Chapter 2.5 that would otherwise be required when there is a specific development proposal. This application makes full note of these exceptions.

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Prior to formal submittal of an application, the applicant is encouraged to participate in an informal pre-application conference with Community Development staff to discuss the proposal, the applicant's requirements, and the applicant's materials developed in response to this Code's applicable requirements.

The design and applications before you are the result of more than two years of coordination between the applicant and his project team with City Public Works, Legal and Community Development personnel and ODOT staff.

Additionally, following an informal information-sharing meeting, to which all nearby residents and property owners were invited, the applicant's initial development plans were modified, based upon input from the attendees.

Those changes are reflected in the CDP/DDP before this body, and include the creation of a landscaped berm and the establishment of a landscaped area to the north of the berm for visual and noise buffering.

LDC 2.5.40.01 further prescribes materials required as part of a CDP Application:

a. The subject address and Benton County Tax Assessor's map numbers are provided on the cover page of the Annexation Chapter of this Application Set. A copy of the assessor's map is located at Attachment 1, with the subject property outlined in red. A legal description of the property is located at Attachment 4.

b. Signed consent by the property owner is provided on the City's Application Form

c. through *e.* stipulate the form and quantity of application materials, and these have been submitted as required.

f. Graphic Requirements

Graphics meeting these requirements have been provided as follows:

1. Public Notice Map, Figure 1

2. Zoning Map, Figure 2

3. Comprehensive Plan Map, Figure 3

4. Existing Land Use Map, Figure 4

5. Significant Natural Features Map, Figure 5

6. *Site Plan and Related Graphics* requirements are provided at Figures 10 and 11 and Drawings C2.0A and C2.0B

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The proposed Conceptual Development Plan is shown on Drawing C2.1 , and the proposed Detailed Development Plan is shown on Drawing C2.2.

There are no buildings, industrial uses or interior site improvements proposed at this time. There is no phasing or land division in conjunction with this CDP/DDP. Future design, including any proposed buildings, site design beyond the current DDP, or any proposed land division, will be subject to the full review and requirements of the CDP/DDP sections of the LDC.

City standards in effect at the time of a development proposal will be met or exceeded, ensured by the City's DDP process.

Since no land division, structural or other development is presently proposed beyond that depicted on the DDP (Drawing C2.2) many aspects of future industrial development on the site are unknown at this time. All proposed aspects will be subject to full civic and public review through the DDP process.

The following conceptual PD graphic elements from LDC 2.5.40.01.f.6.(b) are either not applicable or infeasible for this Application Set and were waived by the Planning Director until there is a subsequent DDP for development beyond the current sidewalk, berm and landscaping, shown on Drawing C2.2.

LDC 2.5.40.01.f.6.(b) subsection (2) is not applicable because no new lots are being created; subsection (3) as no structures are proposed; and elements of (5) and (6) are not feasible since exact street and pedestrian facility configurations are yet to be determined. Note the applicant's General Land Use Plan does provide a general vehicular circulation pattern as required under LDC Annexation provisions. Item (10) was also deferred until a subsequent DDP.

Future site design will be reviewed pursuant to provisions of the DDP chapter and other standards of the LDC, along with Conditions of Approval attached in conjunction with the current CDP/DDP.

g. Narrative Requirements

A written statement shall include the following information

1. Statement of planning objectives to be achieved by the subject development. This statement shall include a description of the proposed development, the rationale behind the assumptions and choices made, and a discussion of how the application meets the review criteria in 2.5.40.04 below, including the development standards required by this Code;

As stated in the Overview, with its location proximate to the industrially zoned HP Campus, adjacent residences, frontage on Hwy. 20 and with significant environmentally sensitive

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resources, this site lends itself to the purposes and objectives of the Planned Development provisions.

Additionally, applying a CDP/DDP to the proposed annexation site facilitates the attachment of Conditions of Approval that ensure satisfaction of the Oregon Transportation Planning Rule (TPR). Proposed Conditions of Conceptual Development Plan Approval affecting the entire parcel would fix the maximum Floor Area Ratio for all future development, and provide the mechanism for assurance of mitigation measures to address future traffic-related impacts, including those that may be required by the TPR.

Because the LDC does not permit the City to attach conditions to annexations or zone changes, and due to the fact that the TPR requires potential traffic impacts be addressed at the time of a Zone Change, the applicant, City, and ODOT concurred that a CDP appeared as the appropriate means to address potential traffic impacts of the annexation and GI zoning.

The Corvallis Parks, Natural Areas and Resource Board (PNARB) and the Bicycle & Pedestrian Commission (BPAC) have reviewed this proposal relative to adopted City plans that show future multi-use paths or trails located through this site. Both bodies have requested a fifteen-foot easement near the property's northerly boundary and the railroad right-of-way for a potential future public trail.

Both the PNARB and BPAC also expressed a preference that, ultimately, there would be a shared bicycle/pedestrian facility fronting on Hwy. 20. There was no recommendation from either body regarding timing of construction of a full-width, multi-use path. As noted earlier, there are currently bicycle lanes on both sides of Hwy. 20 in this vicinity. The applicant proposes that design and construction of a full-width, multi-use path, as well as any interior bicycle and pedestrian ways, be reviewed with a future DDP as part of an integrated approach to providing both the neighborhood and this site with options for multiple transportation modes.

Conditions of Conceptual Development Plan Approval will help to ensure compatibility with neighboring uses and provide assurance that public improvements, including but not limited to transportation improvements, are met. By establishing "active", thereby non-rescindable, Planned Development status by means of the near term construction and installation of improvements specified with the proposed DDP, adopted Conditions follow the entire site in perpetuity.

Following are the applicant's proposed Conditions of Conceptual Development Plan Approval:

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PROPOSED CONDITIONS OF APPROVAL

1. Prior to City Council's hearing of the McFadden Annexation application, specific public improvements shall be financially secured in accordance with LDC 2.4.40.08.

   The public improvements include the construction of a public sidewalk located parallel to Highway 20 along the southerly boundary of the subject, and providing a public access easement over the sidewalk's route.

   In order to financially secure the public improvements, the applicant shall prepare Public Improvement by Private Contract (PIPC) permit documents. The PIPC design and plans shall be authorized for construction by the City engineer and all required permit documents shall be completed and on file with Development Review Engineering. Prior to the City Council hearing, the permit shall be complete and ready to issue and the Public Access Easement shall be in the possession of Development Review Engineering and ready for filing should the annexation request be successful.

2. Future development proposals on the subject property shall be limited to a maximum Floor Area Ratio (FAR) of 0.23. The maximum FAR for the site being calculated as 0.23 (85.43 acres x 43,560 square feet/acre) = 855,906 square feet of floor area. The maximum floor area for an incremental application approach shall be proportioned in relation to the developable area included in each application. The cumulative total floor area of all increments shall not exceed 855,906 square feet.

3. Future development proposals on the subject property shall calculate trip ends for traffic analysis purposes based upon the current applicable International Traffic Engineers (ITE) land use code. However the total trip ends at full build out shall not exceed the following categories of total trips, which are based upon the current ITE land use code for industrial parks.

AM peak hour 0.84/1,000 sf x 855,906 sf = 719 trip ends
PM peak hour 0.86/1,000 sf x 855,906 sf = 736 trip ends
Weekday 6.96/1,000 sf x 855,906 sf = 5,957 trip ends

Trip ends for incremental applications shall not exceed a proportional calculation using the above rates.

For either an individual application or for the cumulative total of all applications at full build out, the floor area shall be the lesser of the FAR calculation or the floor area used in the trip end calculation methodology.

4. The applicant shall grant a fifteen-foot easement parallel and proximate to the railroad right-of-way, along the subject parcel's northerly boundary, for the purpose of a potential future public-use trail or path. Said easement shall be in the possession

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of Development Review Engineering and ready for filing, should the annexation be successful.

5. Future Detailed Development Plans shall incorporate consideration of the City's adopted plans for multi-use path(s) or trail(s) within the subject property. If determined appropriate by the City, this will include, but not be limited to, widening the currently proposed sidewalk to a full-width multi-use path.

6. The following uses which are otherwise permitted in the City's General Industrial (GI) Zone, are prohibited in the subject Industrial Planned Development:

   3.24.20.01.a.2.(c)(2) Kennels
   3.24.20.01.a.2.(i) Scrap Operations; and
   3.24.20.03.a. Explosive Storage.

7. Future development applications for the subject property shall be processed through the City's Planned Development process in place at the time the application is made.

The Floor Area Ratio of 0.23, proposed in the above conditions, is based upon actual development conditions in the vicinity. The adjacent Hewlett Packard property is also zoned Planned Development (General Industrial) and has an active Detailed Development Plan (DDP). The HP Campus DDP fixed the maximum building floor area at 1.8 million square feet. Over the 178.54 acres of gross land area on the HP campus, that equates to a floor area ratio of 0.23.

With the above conditions, mutual planning objectives of the applicant, City of Corvallis and State of Oregon are met.

Consistency with the purposes and substance of the PD criteria is discussed further under the LDC 2.5.40.04., *Review Criteria*, below.

Discussion of the proposed DDP's conformance with the Conceptual Development Plan review criteria, LDC 2.5.40.04. follows this section.

2. Quantitative data for the following where appropriate:

As discussed, there are no buildings, industrial uses or interior site improvements proposed at this time. Future design, including any proposed buildings, site design beyond the current DDP, or any proposed land division will be subject to the full review and requirements of the CDP/DDP sections of the LDC. City standards in effect at the time of a development proposal will be met or exceeded, ensured by the City's DDP process.

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Much of the information requested under this section is applicable to a subsequent DDP for additional development beyond the public sidewalk, berm and landscaping proposed by the applicant's DDP, Drawing C2.2. As such, the following conceptual PD narrative elements from 2.5.40.01.g.2 are either not applicable or not feasible for this Application Set and were waived by the Planning Director pending a subsequent DDP for development beyond the current public sidewalk, berm and landscaping shown on Drawing C2.2:

LDC 2.5.40.01.g.2.(a) is not applicable to industrial PD's; subsection (b), (d), (e) and (h) are not applicable since no new structures are proposed. Note that we do not know Floor Area Ratios of specific future development, however, the site as a whole may not exceed a FAR of 0.23. Finally, item (g) is not feasible since off street parking requirements associated with future industrial development cannot be determined at this time.

The balance of information required under this section appears below:

c) Parcel size; 85.43 Acres

f) Total square footage of Green Area;

As defined in LDC Ch. 1.6, with the exception of the existing residential use, the entire WRC associated with this DDP would remain as Green Area. Upon Annexation, Green Area would comprise well in excess of 40% of the proposed 85.43 acre Planned Development, due to the area that would be designated for Natural Resource protection.

3. General statement outlining timing, responsibilities, and financial assurances for all public and non-public improvements such as irrigation, private roads and drives, landscape, and maintenance;

All improvements and maintenance associated with the current DDP will be executed by the property owner, except that maintenance responsibility for the public sidewalk will be determined following the expiration of a one year maintenance agreement between the owner and city. According to City Planning personnel, for the initial year following construction, the owner shall be responsible for maintaining the sidewalk; after that point, the city and owner will work together to identify who will assume maintenance responsibility.

Also, as advised by City staff, a financial guarantee must be provided in an amount and form approved by the City, prior to the City Council hearing on the annexation. All improvements will be installed within eighteen months of annexation or sooner. (This is somewhat dependent upon review times by local and state agencies, advisory committee(s), as well as PIPC and other permitting procedures.)

4. Statement describing phases of project, if proposed.

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Phasing is not proposed. Future building development proposals must be submitted to the City for Detailed Development Plan review and public hearing. If any phasing is proposed in the future, it will be subject to the provisions of LDC 2.5.40.01.g.4.(a)-(d) and the DDP review criteria.

In the event future phasing is proposed, the "*permanent transitional features, buffers, (and) protective areas*" implemented as part of this CDP/DDP will help to prevent "*detriment to... adjoining properties not in the Planned Development*" (item d. in this subsection).

Buffering in excess of minimum standards is being proposed between this site and neighboring residential uses as a part of the current DDP.

> 5. *Traffic impact study, if required by the City Engineer. The City Engineer shall define the scope of the traffic impact study based on established procedures. See Section 4.0.60.a; and*

The applicant's traffic analysis, provided by Lancaster Engineering, is located in the Appendix to this Application Set. It notes that Conditions attached to the Planned Development provide assurances to help satisfy the TPR and future City requirements.

There are no negative traffic impacts associated with this CDP/DDP, rather it helps further the City's goals of facilitating alternatives to individual automobile transportation. Specifically, the site is adjacent to or within a half mile of three bus routes and designated stops. This proposal also promotes the City's goal of facilitating transportation modes other than those, which are petroleum-based. The site abuts existing bicycle facilities in US Highway 20; additionally, the DDP will implement a public use sidewalk along the site's frontage with Hwy. 20, well in advance of future interior development. The proposed sidewalk will connect with the existing facility along HP's southerly boundary, and will serve to enhance safety of pedestrians, both in the near term, and as future development occurs. Please refer to Drawing C2.2.

> 7. *Information required by Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, and Chapter 4.13 - Riparian Corridor and Wetland Provisions, as applicable.*

It is noted that a "High Risk Landslide Area" associated with the north bank of the Willamette River is indicated as a very narrow zig-zag line on the City's Natural Hazards Inventory Map. The location of the highway interceding between the riverbank and proposed sidewalk construction appears to significantly minimize any risk of riverbank failure resulting from the DDP.

The typical LDC requirement for a geotechnical report and site assessment for any development within 500 feet of such a feature should not apply for construction of the

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sidewalk and earthen berm, since the feature in question relates only to the established river bank and that feature is separated from the subject property by the adjoining Highway 20. The applicant seeks relief from this standard under the PD procedures.

MADA provisions of Chapter 4.11 do not apply to the subject property, and no significant vegetation is inventoried on the property or affected by the CDP/DDP. Riparian and wetland areas occurring in the north and westerly portions of the property will be protected under the applicant's CDP, consistent with LDC Chapter 4.13. Please see Drawing C2.1, Conceptual Development Plan.

A portion of the DDP lies within a Protected Riparian Corridor associated with the Willamette River, as well as a portion of the Willamette River Greenway Overlay. This Consolidated Application set, therefore, includes application for Conditional Development in the WRG Overlay. Please refer to the discussion under the corresponding criterion in the following chapter, Conditional Development in WRG Overlay Zone (LDC 2.3.30.01.g.)

> **2.5.40.04 - *Review Criteria***
> *Requests for the approval of a Conceptual Development Plan shall be reviewed to ensure consistency with the purposes of this Chapter, policies and density requirements of the Comprehensive Plan, and any other applicable policies and standards adopted by the City Council. The application shall demonstrate compatibility in the areas in "a," below, as applicable, and shall meet the Natural Resource and Natural Hazard criteria in "b," below:*

PLANNED DEVELOPMENT PURPOSES

The particular purposes of planned development, LDC 2.5.20.a.-h., which are most pertinent to this CDP/DDP include sub(c) concerning preserving Significant Natural Features to the greatest extent possible; sub(d) with respect to providing off-street pedestrian facilities along the subject frontage for a more "useable and suitably located" facility; (e) regarding providing the applicant with a reasonable assurance of approval prior to the expenditure of complete design monies and assuring the City of the character of the development; and (g), which encourages increasing compatibility with neighbors over conventional development approaches.

As discussed above, only one variation to development standards, referenced under purpose (h) is requested with this CDP/DDP.

COMPREHENSIVE PLAN

The discussion of pertinent comprehensive plan policies contained in the Annexation Chapter of this Application Set satisfies this portion of the criterion and is hereby incorporated by reference into this Planned Development Chapter.

All City plans and policies will be adhered to as applicable to this CDP/DDP.

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a. Compatibility Factors -
1. Compensating benefits for the variations being requested;

The Planned Development is not proposed primarily to seek relief from development standards, but to permit attaching Conditions of Approval to address potential future traffic impacts of the annexation site. The CDP/DDP provides substantial benefits in that it affords a mechanism for detailed analyses and mitigating measures relative to potential future traffic impacts; protection of significant natural resources; compatibility measures for residential and corporate neighbors above those provided under County standards; implementation of urban rather than rural development; and opportunities for further staff and public review against standards and requirements in effect at the time of all proposed future industrial development.

Additional benefits are that the DDP sidewalk construction, with a substantial setback from the highway travel lanes, is proposed to take place prior to interior site development, ensuring that it is in place for the safety of pedestrians, regardless of the timing, location, scale or potential future phasing of any industrial development. These provisions would appear to more than compensate for the requested deviation to standards.

The applicant requests variation to the standard at LDC 4.5.70.03, which requires a Site Assessment and Geotechnical Report for constructing the sidewalk within 500 feet of the Willamette River's north bank.

The location of Highway 20 between the DDP and the riverbank greatly increases the stability of land contours on site. That highway facility and the State's ongoing involvement to ensure river bank stability significantly reduces the risk of slope failure on the Willamette River bank as a result of proposed DDP construction on the opposite side of the highway.

The applicant further notes that requiring full landscaping installation in the twelve foot wide planting strip along Hwy. 20 prior to any further site development and before the exact nature of future development is known, makes it highly likely that most of the landscaping would be destroyed in the process of future development of (an) identified industrial user(s) and constructing the associated highway improvements. This factor and the benefits of the proposed CDP/DDP support the applicant's request to defer full landscaping until a future DDP is brought before the City. In the interim, the applicant proposes reseeding and maintaining the affected area for erosion control.

The benefits associated with the proposed Planned Development appear to significantly compensate for the variation requested.

2. Basic site design (the organization of Uses on a site and the Uses' relationships to neighboring properties);

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Basic site design is to be determined in conjunction with a future DDP for additional development beyond that depicted on Drawing C2.2.

The near term construction of a berm and installation of landscaping associated with the applicant's current DDP will buffer neighboring residences from future construction and industrial activities on the site. Please see Drawing C2.2.

The proposed maximum Floor Area Ratio is consistent with that of the adjacent active General Industrial Planned Development, the HP campus.

3. Visual elements (scale, structural design and form, materials, etc.);

The buffering depicted on Drawing C2.2 will work to reduce visual impacts of future activities on the property upon the only neighboring residents, to the southwest.

4. Noise attenuation;

The landscaped earthen berm and additional buffer landscaping of the DDP are designed and intended to provide noise attenuation benefits for the neighboring residents.

5. Odors and emissions;

No odor or emissions impacts are anticipated in conjunction with this CDP/DDP. This potential impact category will be evaluated upon a future DDP for additional development on the site.

6. Lighting;

No lighting is proposed. This element is to be reviewed through the DDP process at the time of further development.

7. Signage;

No signage is proposed.

8. Landscaping for buffering and screening;

Please see Drawing C2.2, Applicant's DDP, for proposed landscape buffering in the vicinity of the nearest residential neighbors.

9. Transportation facilities;

No new transportation facilities are proposed beyond extension of the public sidewalk. Please see the applicant's traffic analysis located in the Appendix of this document.

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10. Traffic and off-site parking impacts;

Because there are no proposed new buildings or industrial uses, it's unknown what level of transportation-related improvements will be required in conjunction with future proposed development. The CDP would ensure, through Conditions of Approval, that there is a trip generation cap and maximum Floor Area Ratio for any development and the site as a whole, and further provides a mechanism for the City to require that future proposed development on the site must mitigate its traffic impacts.

Aside from the above FAR and trip generation limitations, protection of the environmentally sensitive resources, and conformance with City development standards, it is unknown at this time what the future site design may be.

The site is over 85 acres in area, and as such, is capable of satisfying off-street parking requirements of the LDC entirely on-site at such time as those are determined.

Please see the applicant's Traffic Impact Analysis at the Appendix to this document.

11. Utility infrastructure;

This Application Set has demonstrated in prior discussions that the property can be serviced with public utilities without public expense, but rather with private investment, and without compatibility issues.

12. Effects on air and water quality (note: a DEQ permit is not sufficient to meet this criterion);

None are anticipated to result from the current CDP/DDP. This will be evaluated through the DDP review process at the time of a further development proposal for the property.

13. Design equal to or in excess of the types of improvements required by the standards in Chapter 4.10 - Pedestrian Oriented Design Standards1; and

This will be evaluated upon the City's receipt of a development proposal beyond the sidewalk, berm and landscaping depicted on the current DDP.

14. Preservation and/or protection of Significant Natural Features, consistent with Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting, Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, and Chapter 4.13 - Riparian Corridor and Wetland Provisions. Streets shall also be designed along contours, and structures shall be designed to fit the topography of the site to ensure compliance with these Code standards.

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The Significant Natural Features on the site (Figure 5) are protected through a safe harbor minimum setback of 25', depicted on C2.1, Conceptual Development Plan (CDP). No encroachment upon natural features will be permitted with any future development per conditions of this CDP approval.

No new streets are proposed with the CDP/DDP. DDP requirements for future development will ensure that any interior streets and structures comply with this compatibility measure.

The DDP associated with this application does lie within an area designated as a riparian area and within the WRG. The applicant has observed no actual natural resources in this vicinity, as it is across an improved highway section and has been in farm and residential use for decades. Please refer to the following chapter, Conditional Development in WRG Overlay Zone.

In summary, Conditions of Conceptual Development Plan Approval will help to ensure compatibility with neighboring uses, protection of natural features and provide assurance that public improvements, including but not limited to transportation improvements, are constructed in a timely manner in conjunction with future development.

By establishing "active", thereby non-rescindable, Planned Development status through the near-term construction and installation of improvements specified with this proposed CDP/DDP, adopted Conditions will follow the entire site in perpetuity.

> **b. Natural Resources and Natural Hazards Factors -**
> *1. Any proposed variation from a standard within Chapter 4.5 – Natural Hazard and Hillside Development Provisions, Chapter 4.11 – Minimum Assured Development Area (MADA), Chapter 4.12 – Significant Vegetation Protection Provisions, or Chapter 4.13 - Riparian Corridor and Wetland Provisions shall provide protections equal to or better than the specific standard requested for variation; and*

The applicant requests variation to the standard at LDC 4.5.70.03, which requires a Site Assessment and Geotechnical Report for constructing the sidewalk within 500 feet of the Willamette River's north bank. The location of the highway interceding between the riverbank and proposed sidewalk construction appears to significantly minimize any risk of riverbank failure resulting from the DDP.

Please see the prior discussion in this chapter, which illustrates how the public benefits provided by the CDP/DDP substantially compensate for the requested deviation. Aside from a temporary *deferral* of highway frontage landscaping, no variation of development standards or other requirements of the LDC is proposed with this CDP/DDP beyond that described immediately above.

> *2. Any proposed variation from a standard within Chapter 4.5 – Natural Hazard and Hillside Development Provisions, Chapter 4.11 – Minimum*

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> *Assured Development Area (MADA), Chapter 4.12 – Significant Vegetation Protection Provisions, or Chapter 4.13 - Riparian Corridor and Wetland Provisions shall involve an alternative located on the same development site where the specific standard applies.*

While a variation to the requirement for a Site Assessment and Geotechnical Report is being requested, this criterion does not appear to apply.

Section 2.5.50 - DETAILED DEVELOPMENT PLAN REVIEW PROCEDURES

OVERVIEW

The DDP is submitted for the design and construction of a public sidewalk, which is separated from the travel lanes of Hwy. 20 by a twelve foot wide planting strip to city standards; design and construction of a landscaped berm to serve as a visual and sound buffer between the existing residences and future industrial development and construction activities; and the creation of a landscaped area north of the landscaped berm to provide additional buffering for the nearby residences. Please see the applicant's DDP at Drawing C2.2.

The location and improvements standards before you were developed in consultation with City Engineering and Planning Staff. The precise, final location of the sidewalk cannot be determined as of this writing, pending Planning Commission determinations and the PIPC process. For that reason, as recommended by City staff, the DDP illustrates the approximate proposed sidewalk location and graphically depicts the most northerly *potential* boundary of the sidewalk, should there be adjustments necessary.

City standards for an arterial highway require a twelve-foot planting strip between the curb and sidewalk. Based upon the recommendations of City Engineering, the proposed DDP conforms with this and other standards for a pedestrian facility along an arterial highway.

REQUIREMENTS AND CRITERIA

> **2.5.50.01 - *Application Requirements***
>
> *When the Director deems any requirement below unnecessary for the proper evaluation of a proposed application, it may be waived.*

LDC items 2.5.50.01.a.1.; 2; 6; and 8 are most suitably deferred until such time as a development plan is proposed beyond the public sidewalk, berm and buffer plantings. Items 3, 9 and 10 are not applicable to a planned industrial development.

With respect to item 4, until such time as there is a proposed use with associated approved DDP, the applicant is requesting that the landscape planting between the highway curb and sidewalk be deferred. Because it is unknown at this time what the specific site design for a future proposed industry might be, a significant portion of any landscaping installed

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concurrently with the public sidewalk would likely be destroyed with required improvements to US Highway 20 and future on-site development.

The applicant understands that the planting strip and street trees will be required. Design and installation of landscaping in this area would be more appropriate in conjunction with proposed GI/PD building development. Rather than install the improvements at this time, it is proposed that this area be reseeded for erosion control as part of this development.

Please note that this request for deferment does not include the landscaped berm or planting area north of the berm depicted in Drawing C2.2. The establishment of these elements is seen as a desirable near-term improvement to help provide buffering and noise attenuation for nearby homes.

Because the balance of the Planned Development outside the current DDP is subject to the full requirements of the CDP/DDP provisions, and due to the fact that any landscaping improvements along Hwy. 20 installed at this time are likely to be destroyed during construction, the applicant is requesting that landscaping associated with the sidewalk installation be completed at the time of further development of the site.

b. Narrative Requirements
In addition to the narrative requirements specified for a Conceptual Development Plan in Section 2.5.40.01 above, the Detailed Development Plan shall include:

1. Proposals for setbacks or building envelopes, lot areas where Land Division is anticipated, and number of parking spaces to be provided (per gross floor area or per number of units);

Not applicable to this DDP.

2. Detailed statement outlining timing, responsibilities, and assurances for all public and non-public improvements such as irrigation, private roads and drives, landscape, and maintenance;

All improvements and maintenance associated with the current DDP will be executed by the property owner. As advised by City staff, a financial guarantee must be provided in an amount and form approved by the City, prior to the City Council hearing on the annexation.

All improvements will be installed within eighteen months of annexation or sooner. (This is somewhat dependent upon review times by local and state agencies and permitting procedures.)

3. Proposed methods of energy conservation; and

This is most pertinent to a future DDP for industrial development of the subject property.

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4. Statement addressing compatibility of proposed development to adjacent land uses relating to such items as architectural character, building type, and height of proposed structures.

To be evaluated in conjunction with a future DDP proposal.

2.5.50.03 - Staff Evaluation
The Director shall prepare a report that evaluates whether the Detailed Development Plan complies with the review criteria in Section 2.5.50.04 below. The report shall include a recommendation for approval or denial and, if needed, a list of conditions for the Planning Commission to consider if an approval is granted.

Please see the prior discussion in this chapter of the applicant's proposed Conditions of Approval for Conceptual Development Plan. No DDP conditions are proposed.

2.5.50.04 - Review Criteria for Determining Compliance with Conceptual Development Plan

Request for approval of a Detailed Development Plan shall be reviewed to determine whether it is in compliance with the Conceptual Development Plan.

The Detailed Development Plan shall be deemed to be in conformance with the Conceptual Development Plan and may be approved provided it is consistent with the review criteria in Section 2.5.40.04 above, provides a clear and objective set of development standards for residential Detailed Development Plans (considering the Detailed Development Plan proposal, required adherence to this Code, and Conditions of Approval), and does not involve any of the factors that constitute a major change in the Planned Development. See Section 2.5.60.02 - Thresholds that Separate a Minor Planned Development Modification from a Major Planned Development Modification.

The DDP is submitted concurrently with and fully consistent with the CDP.

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CONDITIONAL DEVELOPMENT IN WRG OVERLAY ZONE

CONDITIONAL DEVELOPMENT PERMIT FOR DDP CONSTRUCTION IN THE WILLAMETTE RIVER GREENWAY

BACKGROUND AND PROPOSAL:

Currently, the subject property is zoned as Benton County, Urban Industrial, with a Planned Unit Development overlay. Additional County overlays affecting the site include the "Greenway Management Overlay", associated with the Willamette River Greenway; "Floodplain Management Overlay" and a "Natural Features Overlay" in the Corvallis Urban Fringe. A City of Corvallis overlay zone corresponding to the County's Greenway Management Overlay, "Willamette River Greenway", would be applied to the zone map, in the event of approval of this consolidated Application set.

The 1973 Oregon legislature passed the Willamette River Greenway Act. In 1975, the Oregon Department of Land Conservation and Development included the Willamette River Greenway as one of Oregon's Statewide Planning Goals, Goal 15, requiring that public access, native vegetation, and scenic views be considered when planning new developments[1].

Because the proposed Detailed Development Plan (DDP) includes sidewalk construction within a portion of the State of Oregon's Willamette River Greenway, the Corvallis LDC requires an application for Conditional Development Permit to facilitate the DDP. Please refer to Figure 6 for a graphic illustration of the Greenway, and the applicant's DDP, Drawing C2.2, for the relationship of the proposed sidewalk to the greenway boundary.

The sidewalk location and improvement standards before you were developed in consultation with City Engineering and Planning Staff. The precise, final location of the sidewalk cannot be determined as of this writing, pending determinations by the Planning Commission; City Council; further staff review of the recommendations of the Parks, Natural Areas and Recreation Board (PNARB) and Bicycle and Pedestrian Advisory Committee (BPAC); ODOT requirements; and the PIPC process.

For that reason, the DDP illustrates the location stipulated by City staff, and graphically depicts the most northerly *potential* boundary of the sidewalk, should there be adjustments necessary following those reviews. The ultimate engineered plans will reflect final determinations following the above-referenced reviews.

City standards for an arterial highway require a twelve foot planting strip between the curb and sidewalk, and, based upon the recommendations of City Engineering, the DDP conforms to this and other standards for a pedestrian facility along an arterial highway. As discussed in the Planned Development chapter, the applicant requests deferment of full landscaping installation until there is future site development and highway improvements.

The proposed sidewalk would adjoin the existing sidewalk along the southern boundary of the HP campus.

[1] Willamette Greenway Act (2002), by Kathy Tucker, from the Oregon History Project.
[2] *City of Shoreline, WA website: http://www.cityofshoreline.com/index.aspx/page=595*

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Remaining elements of the DDP, specifically, the landscaped berm and landscaped buffer area, are located outside of the WRG.

CODE REQUIREMENTS FOR CONDITIONAL DEVELOPMENT PERMIT IN THE WRG OVERLAY ZONE

The Corvallis LDC describes the Willamette River Greenway Overlay Zone:

> ***CHAPTER 3.30***
> ***WILLAMETTE RIVER GREENWAY (WRG) OVERLAY***
>
> ***Section 3.30.10 – PURPOSE***
>
> *The Willamette River Greenway is an Overlay that coincides with the adopted Greenway boundary and applies to all development permitted by the underlying zones. The objectives of this Overlay and this Chapter are as follows:*
>
> *a. Protect, conserve, enhance, and maintain the natural, scenic, historical, economic, and recreational qualities of lands along the Willamette River;*
>
> *b. Maintain or improve air and water quality within the Greenway;*
>
> *c. Implement goals and policies of the State's Willamette River Greenway Program as required by the Oregon Revised Statutes, as amended;*
>
> *d. Implement policies of the City's Comprehensive Plan;*
>
> *e. Establish standards and requirements for the use of lands within the Willamette River Greenway in the City of Corvallis;*
>
> *f. Provide for review of any intensification of use, change of use, or development within the Greenway;*
>
> *g. Increase and maintain public access to and along the Willamette River to create urban recreational opportunities, provide linkages to other transportation corridors, and provide for multiple use of urban land; and*
>
> *h. Ensure development is consistent with floodwater flow mitigation and management of a Natural Resource or Natural Hazard.*

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Section 3.30.20 - CONDITIONAL DEVELOPMENT

Development within this Overlay, regardless of the classification in the underlying zone, requires Conditional Development approval in accordance with the provisions of Chapter 2.3 - Conditional Development. In addition to notification requirements of Chapter 2.0 - Public Hearings, written public notice and a Notice of Disposition shall be mailed to the Oregon Department of Parks and Recreation. Development as used in this Section includes change of use, intensification of land, or intensification of Water-dependent or water-related uses, except for those activities listed as exemptions in Section 3.30.30 below.

Development also includes proposed increases in air discharges that require permit approval by the Oregon Department of Environmental Quality (DEQ).

Consistent with the above requirement for Conditional Development Permit approval for any development within the WRG Overlay, this chapter now proceeds to a discussion of LDC Chapter 2.3, requirements for Conditional Development Permit.

LDC 2.3.30.01.g. Narrative Requirements for a Conditional Development Permit:

A written statement shall include the following information:

1. Statement of the planning objectives to be achieved by the proposed development. This statement shall include a description of the proposed development, the rationale behind the assumptions and choices made, and a discussion of how the application meets the review criteria in Section 2.3.30.04 below, including the development standards required by this Code;

Construction of a City standard sidewalk is proposed, as discussed in the previous PD Chapter, and as illustrated on Drawing C2.2. The pedestrian facility would be built along the site's frontage on Hwy. 20. The new pedestrian way is proposed to be constructed well in advance of future industrial development, in fact within eighteen months or less of annexation, ensuring timely provision of the pedestrian facility for the entire site's frontage, regardless of the scale, location or timing of a future initial industrial development proposal.

Construction of the proposed sidewalk renders this entire site an "Active Planned Development." Among other objectives, the Planned Development aspect of this application will facilitate the attachment of Conditions of Approval that ensure satisfaction of the Oregon Transportation Planning Rule (TPR). The Planned Development also establishes protections for the significant, environmentally sensitive resources along the northerly and westerly portions of the site.

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As discussed above and in the Planned Development chapter of these consolidated applications, the DDP is submitted for the design and construction of a public sidewalk along the site's frontage on US Highway 20; design and construction of a landscaped berm to provide a visual buffer and noise attenuation between the existing residences and future industrial development and construction activities on the site; and the creation of a landscaped area north of the landscaped berm to provide additional buffering for these nearby residences.

This request is consistent with the purposes of the Conditional Development Permit chapter as specified in Chapter 2.3.20. in that it:

> *"Permit(s)... public and private development that provide(s) a community service in locations related to their service areas;*
>
> *Ensures that Conditional Development is compatible with its immediate area and the affected part of the community; (and)*
>
> *Permits uses when potentially adverse effects can be mitigated."*

Adverse impacts are not anticipated as a result of this request, as there are no actual WRG resources within this area. River views will not be impacted by construction of the sidewalk and view protection can be incorporated into landscape design.

The proposed sidewalk provides private investment in a public facility, promoting enhanced safety for pedestrians in the near term and in the future.

As discussed in the PD Chapter, this proposal only seeks relief from one applicable development standard, contrary to the numerous deviations to standards sometimes requested under the PD umbrella. Please see the PD Chapter for the applicant's request to waive a geotechnical site assessment and report for the proposed sidewalk, a requirement based solely upon the proximity of the Willamette River bank, which is actually located on the opposite side of the highway from the subject property. The applicant seeks deferment of, but not relief from, installation of full landscaping in the planting strip.

This application demonstrates compliance with remaining development standards of the City of Corvallis, including but not limited to those applicable in the WRG Overlay Zone. Subsequent discussions of this chapter illustrate the application's conformance with the review criteria for a Conditional Development Permit.

2. *Quantitative data for the following, where appropriate:*

a) *Total number and type of dwelling units;*

This criterion is not applicable to the CDP/WRG.

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b) Square footages of all structures;

N.A.

c) Parcel size;

The subject property/entire proposed Planned Development is 85.43 acres in area. Please see Attachment 2, Boundary Survey. No land division is proposed.

d) Proposed lot coverage of buildings and structures, where known;

N.A.

e) Gross densities per acre;

N.A.

f) Total square footage of Green Area;

As defined in LDC Ch. 1.6, with the exception of the existing residential use, the entire WRG associated with this DDP would remain as Green Area. Upon Annexation, Green Area would comprise well in excess of 40% of the proposed 85.43 acre Planned Development, due to the area that would be designated for Natural Resource protection.

g) Total number of parking spaces (compact, standard, handicapped, bicycle) and a breakdown of how parking is consistent with this Code's requirements; and

N.A.

h) Total square footage of nonresidential construction;

N.A.

3. *Detailed statement outlining timing, responsibilities, and financial assurances for all public and non-public improvements such as irrigation, private roads and drives, landscape, and maintenance;*

All required improvements and other infrastructure associated with the DDP would be installed at the property owner's expense. Likewise, all maintenance associated with the current DDP will be executed by the applicant. Following a standard one year maintenance agreement between the owner and City, under which the owner agrees to maintain the sidewalk for the initial year following construction, the applicant understands that permanent maintenance responsibility for the sidewalk will be established with either the owner or city, per standard procedures of the City of Corvallis.

A financial guarantee for construction of the proposed public facility will be provided in an amount and form approved by the City, prior to the City Council hearing on these consolidated applications. All improvements will be installed within eighteen months of

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annexation or sooner. (This is somewhat dependent upon review times by local and state agencies, as well as permitting and inspection procedures.)

4. *Statement describing phases of project, if proposed. Phases shall be:*

   a) *Substantially and functionally self-contained and self-sustaining with regard to access, parking, utilities, Green Areas, and similar physical features; and capable of substantial occupancy, operation, and maintenance upon completion of construction and development;*

   b) *Arranged to avoid conflicts between higher and lower density development;*

   c) *Properly related to other services of the community as a whole and to those facilities and services yet to be provided; and*

   d) *Provided with such temporary or permanent transitional features, buffers, or protective areas as may be required to prevent damage or detriment to any completed phases and to adjoining properties not in the Conditional Development.*

There is no phasing associated with the Conditional Development Permit Application, the DDP or Consolidated Application set. The sidewalk, berm and landscaping would all be constructed within the stipulated eighteen month time frame.

While phasing is not proposed, it is noted that the proposed landscaped berm and additional landscaped buffer area for neighboring residences are proposed to be installed in conjunction with the sidewalk, well in advance of urban industrial development. This will allow the landscaping to more fully mature, thereby more effectively screening and buffering nearby residential properties.

5. *Traffic impact study, if required by the City Engineer. The City Engineer shall define the scope of the traffic impact study based on established procedures. See Section 4.0.60.a;*

None associated with the CDP/WRG Application.

6. *Statement addressing compatibility of proposed development with adjacent land uses relating to such items as architectural character, building type, and height of proposed structures; and*

N.A.

7. *Proposals for setbacks or building envelopes, lot areas where land division is anticipated, and number of parking spaces to be provided per gross floor area or per number of units.*

N.A.

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8. *Information required by Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, and Chapter 4.13 - Riparian Corridor and Wetland Provisions, as applicable.*

Among the above, only Chapter 4.13, (Riparian Corridor) provisions, apply to this Conditional Development Permit. The proposed sidewalk encroaches upon an area designated as a "Highly Protected Riparian Corridor" for the Willamette River. It is noted, however, that the vast majority of this area depicted as riparian corridor has been in agricultural use for many years. In addition to the farmed field crops, the area consists of a field approach road, roadway for uses at the back of the site, home site with associated driveway and yard area.

Following is a discussion of the applicable sections of LDC Chapter 4.13:

> *Section 4.13.50 - USE LIMITATIONS AND EXCEPTIONS WITHIN HIGHLY PROTECTED RIPARIAN CORRIDORS AND RIPARIAN-RELATED AREAS*
>
> *...In addition to the requirements of the underlying zone, the following limitations and exceptions shall apply to activities within Highly Protected Riparian Corridors and Riparian related Areas, as mapped on the City's Riparian Corridors and Wetlands Map.*
>
> a. **Removal of Vegetation** - *Removal of vegetation from Riparian Corridors and Riparian-related Areas is prohibited, except for the following purposes:*
>
> 2. *Removal of Invasive and/or Noxious Vegetation as defined in Chapter 1.6 -Definitions. If necessary, in conjunction with vegetation removal non-rip-rap erosion control measures shall be utilized;*
>
> 3. *Substitution of local source native plant species for non-native plants. Such local source native plant species shall originate from stock collected from wild plants within 75 miles of planting site;*

As discussed elsewhere in this section, the designated riparian area in this vicinity is not what would be considered a natural resource. The site has been farmed with rotating field crops and in residential use for decades. The only vegetation that would be removed would be non-native, invasive and/or noxious. The owner's required maintenance of landscaped areas within the riparian zone of the Willamette River would be consistent with LDC 4.13.50.f.

b. **Building, Paving, and Grading Activities** - *The placement of structures or impervious surfaces, as well as grading, excavation, and the placement of fill, are prohibited. Exceptions to the drainage way restrictions may be made for the purposes identified in*

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items 1-7 of this Section, provided they are designed and constructed to minimize adverse impacts to Riparian Corridors and Riparian-related Areas.

2. The location and construction of streets, utilities, bridges, bicycle, and pedestrian facilities within Highly Protected Riparian Corridors and Riparian related areas must be deemed necessary to maintain a functional system by the City Engineer.

This Code, City Transportation and Utility Master Plans, and other adopted City plans shall guide this determination. The design standards of Chapter 4.0 - Improvements Required with Development shall be applied to minimize the impact to the subject area;

City development standards, codes and policies require that sidewalks be constructed along public streets either in conjunction with or prior to urban development, and the City Engineer has confirmed that this is required. As detailed in the PD chapter, this proposed pedestrian facility is proposed for construction prior to future urban development, thereby helping to maintain a functional system.

The applicant agrees to provide a riparian corridor easement, consistent with Table 4.13-2. In addition, a public access easement will permit public use of the sidewalk on private property.

It is noted that the City's mapping of the WRG may be in need of a map refinement and/or correction in order to accurately portray the Greenway. This does not apply to the mapping of the riparian corridor. This consolidated application set does not seek to affect any map amendment, refinement or correction relative to natural features or the Comprehensive Plan.

2.3.30.04 - Review Criteria for Conditional Development Plan

Requests for Conditional Developments shall be reviewed to ensure consistency with the purposes of this Chapter, policies of the Comprehensive Plan, and any other applicable policies and standards adopted by the City Council.

The application shall demonstrate compatibility in the following areas, as applicable:

a. Basic site design - the organization of Uses on a site and its relationship to neighboring properties.

The proposed location of the sidewalk, while potentially subject to modification, is consistent with City standards for an arterial highway, incorporating a twelve foot wide planting strip between the curb and sidewalk. Actual sidewalk construction drawings will reflect final design determinations.

The proposed sidewalk has been designed on the site to (a) provide linkage to the existing public sidewalk along HP's southerly boundary; and (b) serve the interior of the Planned

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Development up front, regardless of how large or small a percentage of the entire PD is proposed for future development, and regardless of the time frame or the location of an initial development proposal.

The ultimate installation of urban landscaping within the twelve foot wide planting strip will encourage drivers to reduce speeds.[2] Pedestrians must currently use the striped bicycle lanes within the highway. The proposed sidewalk will provide significant separation of pedestrians from travel lanes. Both of the above enhance the safety of the existing system.

Ultimate urban landscaping within this area will also add attractive visual elements, resulting in health benefits such as improved air quality.

The proposed DDP, which is the subject of this Conditional Development Permit, has been designed to respond to existing conditions in the neighborhood.

b. Visual elements (scale, structural design and form, materials, etc.);

As discussed, the only development proposed within the WRG, and thereby requiring Conditional Development Permit approval, is the required public sidewalk depicted on the DDP. No structural or significant other development is proposed.

Beyond the sidewalk and associated landscaping strip, the berm and buffer plantings, no development is proposed at this time.

The applicant has sought and responded to input of the neighbors and modified the original Detailed Development Plan to:

1. Install a substantial, landscaped earthen berm adjacent to existing residences on the southwest; and

2. Provide a substantial landscaped buffer on and in the vicinity of the earthen berm to provide further visual buffering and screening.

Neither of the above proposed improvements occurs within the WRG.

c. Noise attenuation;

Beyond temporary impacts of construction, no noise impacts are associated with the DDP.

The earthen berm and associated landscaping, while located outside of the riparian corridor and WRG, are intended and designed to have substantial positive benefits relative to noise attenuation for residents relative to future construction and industrial activities on the site.

d. Odors and emissions;

None are associated with the applicant's proposal.

[2] *City of Shoreline, WA website: http://www.cityofshoreline.com/index.aspx/page=595*

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e. Lighting;

No lighting is proposed in association with this Conditional Development Permit application. As stipulated in the PD Chapter of this Application Set, the applicant's Detailed Development Plan (DDP) proposes constructing the berm and installing buffer landscaping so that it may be well established and benefit neighboring properties both visually and with light and noise attenuation prior to any development occurring on the parcel's interior.

f. Signage;

None is proposed.

g. Landscaping for buffering and screening;

Illustrated on Drawing C2.2 and located outside of the WRG Overlay.

h. Transportation facilities;

Other than as discussed earlier in this chapter, no transportation facilities are impacted.

i. Traffic and off-site parking impacts;

N. A.

j. Utility infrastructure;

The DDP and associated construction in the WRG should have no adverse impact upon the public utility infrastructure. The presence of utility easements in the vicinity will be incorporated into the design review PIPC process.

k. Effects on air and water quality (note: a DEQ permit is not sufficient to meet this criterion);

No negative effects would be expected to result from the DDP within the WRG.

l. Consistency with the applicable development standards, including the applicable Pedestrian Oriented Design Standards;

Approval of the proposed Conditional Development within the WRG will help to facilitate implementation of the City's POD standards and facilitates pedestrian travel and access in general. All construction will be to City and ODOT standards.

m. Preservation and/or protection of Significant Natural Features, consistent with Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting, Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, and Chapter 4.13 - Riparian Corridor and Wetland Provisions. Streets shall

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also be designed along contours, and structures shall be designed to fit the topography of the site to ensure compliance with these Code standards.

While the DDP does lie within an area designated for riparian protection and as WRG, no physical resources have been observed within this area.

The proposed sidewalk will be designed to fit the topography of the site.

2.3.30.10 - Review Criteria for Determining Compliance with an Approved Conditional Development

A. Building Permit or other site development permit request shall be reviewed to determine whether the request is in substantial compliance with the approved Conditional Development. It shall be deemed to be in substantial compliance if it is consistent with the review criteria in Section 2.3.30.04, does not involve modifications to this Code's development standards, and does not involve changes to any specific requirements established at the time of Conditional Development approval.

Specific requirements include Conditions of Approval, this Code's requirements, and all aspects of the applicant's proposal that were approved as part of the Conditional Development.

As discussed above, the applicant's DDP, as proposed, has minimal impacts upon the WRG and riparian zone. The applicant understands that Conditions of Approval may limit the DDP's encroachment upon the WRG and associated protected riparian area.

Section 3.30.40 – Review Criteria for Conditional Development in the WRG Overlay Zone

Conditional Development within the Willamette Greenway Overlay may be approved only when the Planning Commission, after considering cumulative effects within the City's Greenway, finds that the development standards in Section 3.30.50 and the following criteria are met:

a. Public access to and along the river shall be provided to the maximum extent practicable and to the extent that public access does not interfere with established uses on the property.

The applicant notes that the bank on the south side of the highway is not wide enough and is too steep to facilitate public access to the river along this stretch.
More importantly, for purposes of this application, the subject property and proposed sidewalk are located across the US Highway 20 right-of-way from the Willamette River, and as such, would not impact any existing or potential future public access to the river.

b. Significant Natural Hazards and Natural Resources shall be protected consistent with the requirements of Chapter 4.5 - Natural Hazard and Hillside Development Provisions, Chapter 4.11 - Minimum Assured Development Area

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(MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, Chapter 4.13 - Riparian Corridor and Wetland Provisions, and the Natural Resource provisions of Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting.

Please see prior discussions of this chapter and consolidated Application Set for a demonstration of how the proposal conforms to this criterion.

c. Significant natural and scenic areas, viewpoints, and vistas shall be preserved.

None are identified on or immediately abutting the subject property.

d. The quality of air, water, and land resources in the Greenway shall be protected to the maximum extent practicable.

Construction of a public sidewalk in the WRG, on the opposite side of the highway from the river bank, is not expected to have any adverse impacts upon air, water or land resources in the Greenway or abutting areas.

Conditions of approval and provisions of the LDC can limit the extent of any impacts of future activities within the WRG.

e. The Minimum Assured Development Area (MADA) shall be consistent with Chapter 4.11 - Minimum Assured Development Area (MADA).

The MADA is not applicable to this chapter or application.

f. The natural vegetative fringe along the river shall be protected and enhanced to the maximum extent practicable to ensure scenic quality, protection of wildlife, protection from erosion, and screening of uses from the river.

The DDP would not have an effect upon the vegetative fringe along the river, because the subject property and proposed construction activity are separated from the river bank by the extensive highway right of way.

g. Any public Recreational Use or facility shall not substantially interfere with established uses on adjoining property.

N.A.

h. Maintenance of public safety and protection of public and private property, especially from vandalism and trespass, shall be provided to the maximum extent practicable.

Placement of the public sidewalk twelve feet from the future curb for US Highway 20 enhances the safety of pedestrians utilizing the facility.

i. Extraction of aggregate deposits shall be conducted in a manner designed to minimize adverse effects on water quality, fish and wildlife, vegetation, bank stabilization, stream flow, visual quality, noise, and safety, and to guarantee necessary reclamation.

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No aggregate or mineral extraction is planned with this DDP.

> *j. Development, change, or intensification of use shall provide the maximum possible landscaped area, open space, or vegetation between the activity and the river.*

The DDP is separated from the river by US Highway 20. The City requires a minimum of twelve feet of landscaped area between the curb of an arterial highway and any future sidewalk. City Engineering staff have indicated that any greater separation is undesirable, as it reduces the likelihood that pedestrians will use the facility. The DDP proposes the maximum landscaped area between the river and new sidewalk as recommended by city staff.

> *k. Development shall be sited to maximize distance from the river to the greatest extent practicable.*

Please see the above paragraph.

> *l. In applying "a," through "k," above, to development proposals within the Willamette River Greenway, consideration should be given to the provisions of this Code, Corvallis 2020 Vision Statement, Comprehensive Plan, Downtown Streetscape Plan, Riverfront Commemorative Park Plan, and other applicable City documents.*
>
> *However, where conflicts arise, direction must be taken from the Corvallis Comprehensive Plan and this Code.*

No conflict with provisions of this code; the Corvallis 2020 Vision Statement; Comprehensive Plan; Downtown Streetscape Plan; Riverfront Commemorative Park Plan or any other applicable City document has been identified by the applicant or staff.

The activities proposed within the WRG are permitted, based upon positive findings of fact relative to applicable sections of the LDC, as cited above.

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GRAPHICS

Attachment 1 ..... Benton County Assessor's Map
Attachment 2 ..... Annexation Boundary Survey
Attachment 3 ..... Existing Highway Improvements
Attachment 4 ..... Legal Description
Attachment 5 ..... Parcel Boundary Survey
Attachment 6 ..... Supplemental Parcel Boundary Survey
Attachment 7 ..... Annexation Boundary Survey with Willamette River Greenway Boundary

Figure 1 ..... Public Notice Map
Figure 2 ..... Zoning Designations
Figure 3 ..... Comprehensive Plan Designations
Figure 4 ..... Existing Land Use Map
Figure 5 ..... Significant Natural Features
Figure 6 ..... Willamette River Greenway
Figure 7 ..... Benton County Floodplain Management Overlay
Figure 8 ..... Benton County Natural Features Overlay in the Corvallis Urban Fringe
Figure 9 ..... Vicinity Map
Figure 10 ..... Existing Improvements
Figure 11 ..... Existing Property Boundary and Easements

Drawing C2.0A ..... General Land Use Plan
Drawing C2.0B ..... General Land Use Plan
Drawing C2.1 ..... Conceptual Development Plan
Drawing C2.2 ..... Detailed Development Plan

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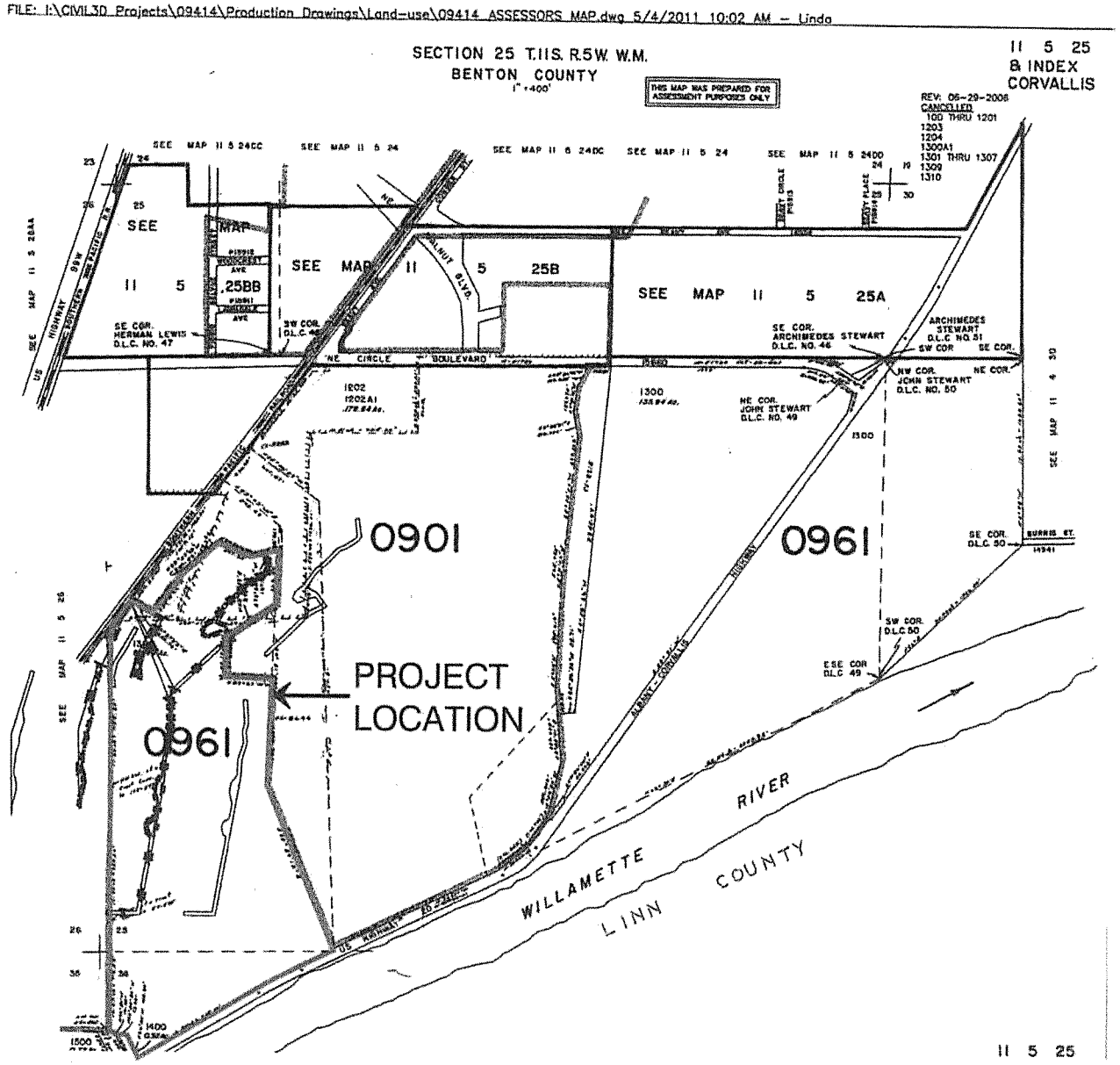


MCFADDEN PROPERTY
ANNEXATION

BENTON COUNTY ASSESSOR'S MAP
T11S, R5W, SECTION 25, T.L 308

Attachment 1

May 6, 2011

ANNEXATION BOUNDARY SURVEY

LOCATED IN THE JOHN STEWERT DLC No. 49 AND
IN THE WEST 1/2 OF SECTION 25 OF
TOWNSHIP 11 SOUTH, RANGE 5 WEST OF
THE WILLAMETTE MERIDIAN, BENTON COUNTY, OREGON
FOR: ARTHUR L. McFADDEN
DATE: MAY 2, 2011

FOR APPLICATION PURPOSES ONLY

SURVEYOR'S NARRATIVE:

PURPOSE

THE PURPOSE OF THIS SURVEY IS TO DEPICT THE PROPOSED ANNEXATION BOUNDARY FOR THE PROPERTY SURVEYED IN BENTON COUNTY SURVEY No. 10469 AND INCLUDE THE HIGHWAY 20 RIGHT OF WAY IN SAID BOUNDARY.

BASIS OF BEARINGS

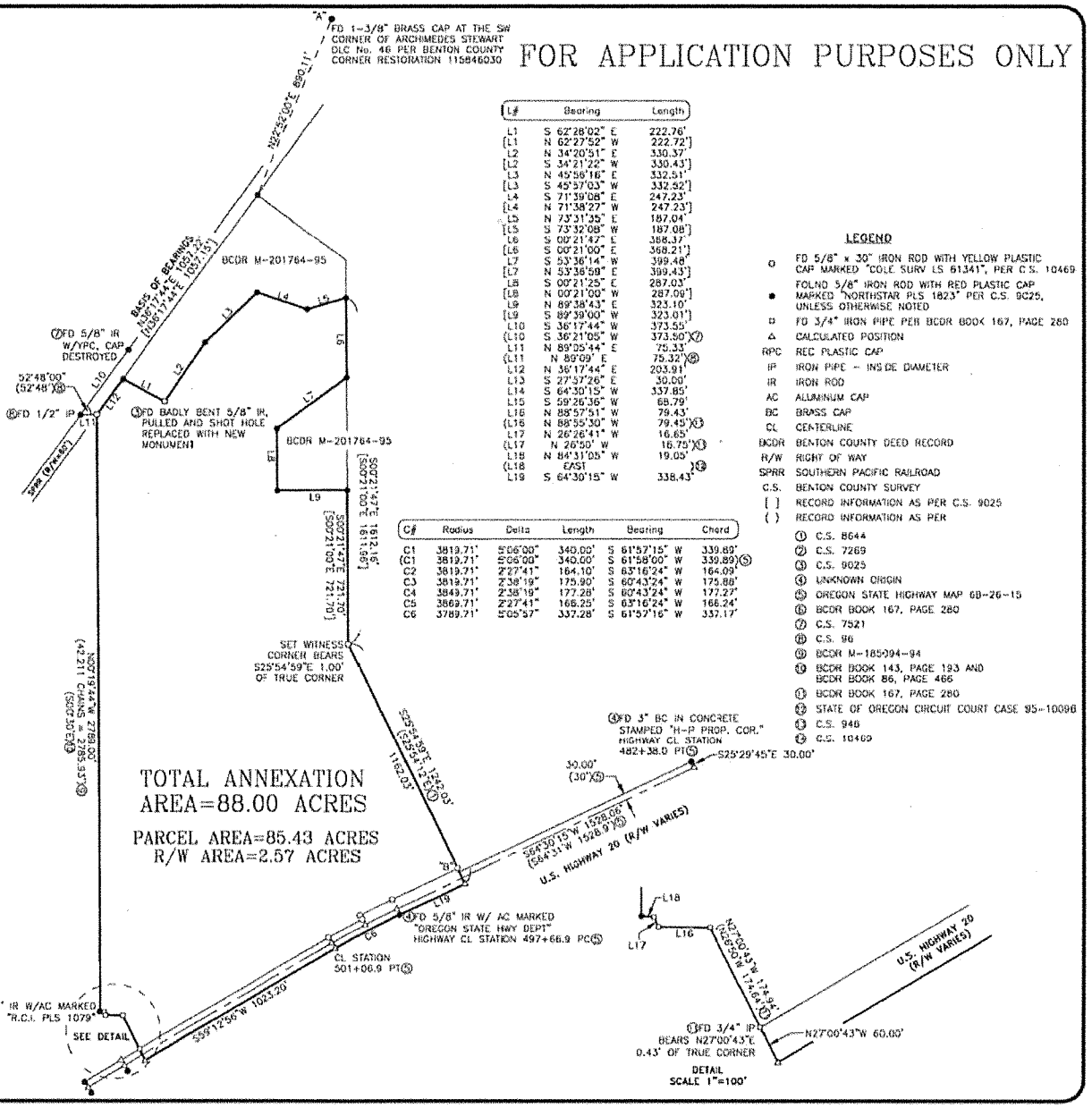
THE BASIS OF BEARINGS IS THE EASTERLY LINE OF THE SOUTHERN PACIFIC RAILROAD AS SHOWN, PER BENTON COUNTY SURVEY 9025.

BOUNDARY DETERMINATION

THE PROPERTY LINES WERE DETERMINED IN BY THIS OFFICE IN BENTON COUNTY SURVEY No. 10469. THE MOST SOUTHERLY SOUTHWEST CORNER OF THE PROPERTY AND COORESPONDING RIGHT OF WAY WAS CORRECTED IN BENTON COUNTY SURVEY No. 10478.

CITY OF CORVALLIS CONTROL TIE

THE MONUMENT AT "A" IS PART OF THE CITY OF CORVALLIS CONTROL SURVEY AND IS CONTROL STATION No. 106 (NORTHING:348,477.47 EASTING:1,284,797.96). THE MONUMENT AT "B" HAS BEEN TIED INTO THE CONTROL NETWORK USING VARIOUS OTHER CITY OF CORVALLIS CONTROL STATIONS (NORTHING:344,505.97 EASTING:1,285,240.58).



L#	Bearing	Length
L1	S 62°28'02" E	222.76'
[L1	N 62°27'52" W	222.72']
L2	N 34°20'51" E	330.37'
[L2	S 34°21'22" W	330.43']
L3	N 45°56'16" E	332.51'
[L3	S 45°57'03" W	332.52']
L4	S 71°39'06" E	247.23'
[L4	N 71°38'27" W	247.23']
L5	N 73°31'35" E	187.04'
[L5	S 73°32'08" W	187.08']
L6	S 00°21'42" E	388.37'
[L6	S 00°21'00" E	388.21']
L7	S 53°36'14" W	399.48'
[L7	N 53°36'59" E	399.43']
L8	S 00°21'25" E	287.03'
[L8	N 00°21'00" W	287.09']
L9	N 89°38'43" E	323.10'
[L9	S 89°39'00" W	323.01']
L10	S 36°17'44" W	373.55'
(L10	S 36°21'05" W	373.50')(2)
L11	N 89°05'44" E	75.33'
(L11	N 89°09' E	75.32')(6)
L12	N 36°17'44" E	203.91'
L13	S 27°57'26" E	30.00'
L14	S 64°30'15" W	337.85'
L15	S 59°26'36" W	68.79'
L16	N 88°57'51" W	79.43'
(L16	N 88°55'30" W	79.45')(3)
L17	N 26°26'41" W	16.65'
(L17	N 26°50' W	16.75')(1)
L18	N 84°31'05" W	19.05'
(L18	EAST	)(3)
L19	S 64°30'15" W	338.43'

C#	Radius	Delta	Length	Bearing	Chord
C1	3819.71'	5°06'00"	340.00'	S 61°57'15" W	339.89'
(C1	3819.71'	5°06'00"	340.00'	S 61°58'00" W	339.89')(5)
C2	3819.71'	2°27'41"	164.10'	S 63°16'24" W	164.09'
C3	3819.71'	2°38'19"	175.90'	S 60°43'24" W	175.88'
C4	3849.71'	2°38'19"	177.28'	S 60°43'24" W	177.27'
C5	3869.71'	2°27'41"	166.25'	S 63°16'24" W	166.24'
C6	3789.71'	5°05'57"	337.28'	S 61°57'16" W	337.17'

LEGEND

- o FD 5/8" x 30" IRON ROD WITH YELLOW PLASTIC CAP MARKED "COLE SURV LS 61341", PER C.S. 10469
- ● FOUND 5/8" IRON ROD WITH RED PLASTIC CAP MARKED "NORTHSTAR PLS 1823" PER C.S. 9025, UNLESS OTHERWISE NOTED
- ⊡ FD 3/4" IRON PIPE PER BCDR BOOK 167, PAGE 280
- △ CALCULATED POSITION
- RPC REC PLASTIC CAP
- IP IRON PIPE – INSIDE DIAMETER
- IR IRON ROD
- AC ALUMINUM CAP
- BC BRASS CAP
- CL CENTERLINE
- BCDR BENTON COUNTY DEED RECORD
- R/W RIGHT OF WAY
- SPRR SOUTHERN PACIFIC RAILROAD
- C.S. BENTON COUNTY SURVEY
- [ ] RECORD INFORMATION AS PER C.S. 9025
- ( ) RECORD INFORMATION AS PER
- (1) C.S. 8644
- (2) C.S. 7269
- (3) C.S. 9025
- (4) UNKNOWN ORIGIN
- (5) OREGON STATE HIGHWAY MAP 6B-26-15
- (6) BCDR BOOK 167, PAGE 280
- (7) C.S. 7521
- (8) C.S. 96
- (9) BCDR M-185094-94
- (10) BCDR BOOK 143, PAGE 193 AND BCDR BOOK 86, PAGE 466
- (11) BCDR BOOK 167, PAGE 280
- (12) STATE OF OREGON CIRCUIT COURT CASE 95-10096
- (13) C.S. 946
- (14) C.S. 10469

TOTAL ANNEXATION AREA=88.00 ACRES

PARCEL AREA=85.43 ACRES
R/W AREA=2.57 ACRES

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JANUARY 11, 2005
BRIAN SCOTT SAILOR
61341

EXPIRES 6/30/12

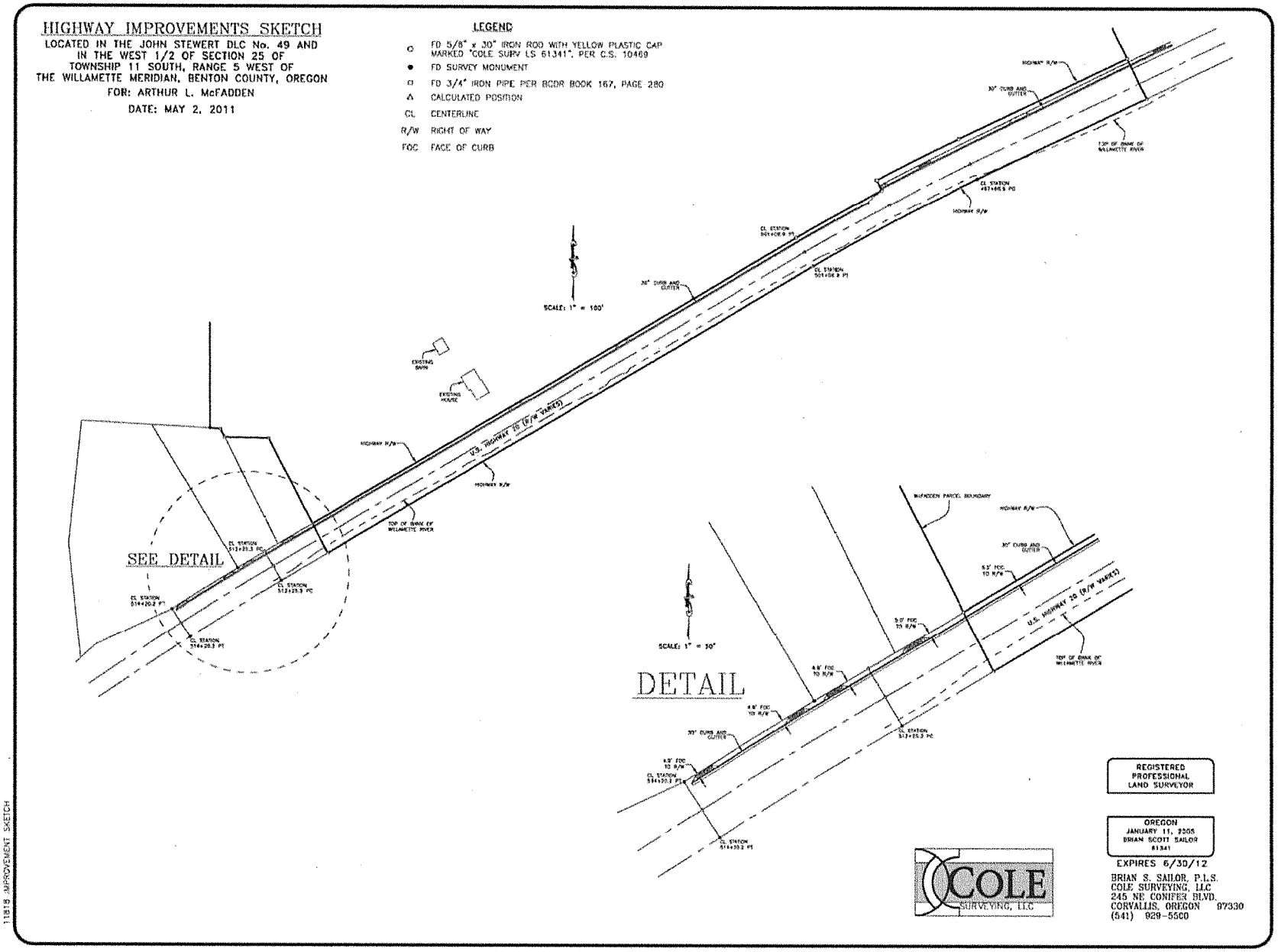
BRIAN S. SAILOR, P.L.S.
COLE SURVEYING, LLC
245 NE CONIFER BLVD.
CORVALLIS, OREGON 97330
(541) 929-5500

SCALE: 1" = 300'

COLE SURVEYING, LLC

11818C50

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-307



MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-308

Legal Description of Arthur L. McFadden Property and
Portion of U.S. Highway 20 Right of Way for Annexation

Commencing at a 1-3/8 inch brass cap at the southwest corner of the Archimedes Stewart Donation Land Claim No. 46 in the west one-half of Section 25 of Township 11 South, Range 5 West of the Willamette Meridian, Benton County, Oregon; thence South 22°52'00" West 890.11 feet to a 5/8 inch iron rod at the most northerly corner of that property conveyed to Hewlett-Packard Company in Benton County Deed Record M-201764-95; thence along the most northerly line of said Hewlett-Packard property South 36°17'44" West 1057.22 feet to a 5/8 inch iron rod at the most westerly corner of said Hewlett-Packard property, being the TRUE POINT OF BEGINNING; thence along the lines of said Hewlett-Packard property the following courses: South 62°28'02" East 222.76 feet to a 5/8 inch iron rod, North 34°20'51" East 330.37 feet to a 5/8 inch iron rod, North 45°56'16" East 332.51 feet to a 5/8 inch iron rod, South 71°39'08" East 247.23 feet to a 5/8 inch iron rod, North 73°31'35" East 187.04 feet to a 5/8 inch iron rod, South 00°21'47" East 368.37 feet to a 5/8 inch iron rod, South 53°36'14" West 399.48 feet to a 5/8 inch iron rod, South 00°21'25" East 287.03 feet to a 5/8 inch iron rod, North 89°38'43" East 323.10 feet to a 5/8 inch iron rod, South 00°21'47" East 721.70 feet to a point being witnessed by a 5/8 inch iron rod which bears South 25°54'59" East 1.00 feet of the true corner; thence continuing along said Hewlett-Packard west line South 25°54'59" East 1162.03 feet to a 5/8 inch iron rod at the northerly right of way line of U.S. Highway 20, said additional highway right of way acquired by the City of Corvallis in the State of Oregon Circuit Court Case No. 95-10096; thence along the northerly right of way line of said Highway 20 South 64°30'15" West 337.85 feet to a 5/8 inch iron at the point of curvature (Highway 20 centerline station 497+66.9); thence continuing along said northerly right of way line along a 3869.71 foot radius curve to the left 166.25 feet (the long chord of which bears South 63°16'24' West 166.24 feet) to a 5/8 inch iron rod at the end of said additional right of way acquired by the City of Corvallis (Highway 20 centerline station 499+31.0); thence along the end of said additional right of way South 27°57'26" East 20.00 feet to a 5/8 inch iron rod at the northerly right of way line of said Highway 20; thence along the northerly right of way line of Highway 20 along a 3849.71 foot radius curve to the left 177.28 feet (the long chord of which bears South 60°43'24" West 177.27 feet) to a 5/8 inch iron rod at the point of tangency (Highway 20 centerline station 501+06.9); thence continuing along said northerly right of way line of Highway 20 South 59°12'56" West 1019.40 feet to the southeast corner of that property conveyed to Linn and Sylvia Averill in Benton County Deed Record Book 167, Page 280, said point being witnessed by a 3/4 inch iron pipe which bears North 27°00'43" East 0.43 feet of the true corner; thence along the east line of said Averill property North 27°00'43" West 174.94 feet to a 3/4 inch iron pipe at the northeast corner of said Averill property; thence along the north line of said Averill property North 88°57'51" West 79.43 feet to a 3/4 inch iron pipe at the northwest corner of said Averill property, also being on the east line of that property conveyed to Kathleen and William Ten Pas in Benton County Deed Record 2004-365498; thence along the east line of said Ten Pas property North 26°26'41" West 16.65 feet to a 3/4 inch iron pipe at the northeast corner of said Ten Pas property; thence along the north line of said Ten Pas property North 84°31'05" West 19.05 feet to a 5/8 inch iron rod at the most westerly southwest corner of that property

conveyed to Arthur McFadden in Benton County Deed Record M-185094-94; thence along the west line of said McFadden property North 00°19'44" West 2789.00 feet to a 5/8 inch iron rod at the most westerly northwest corner of said McFadden property, also being on the easterly right of way line of the Southern Pacific Railroad; thence along said easterly right of way line North 36°17'44" East 203.91 feet to the true point of beginning. Containing 85.43 acres of land, more or less.

Together and with that portion of U.S. Highway right of way described as follows: Beginning at the aforementioned Southeast corner of said Averill property; thence South 27°00'43" East 60.00 feet to the southerly right of way line of Highway 20; thence along said southerly right of way line North 59°12'56" East 1023.20 to the point of tangency (Highway centerline station 501+06.9); thence continuing along said southerly right of way line along a 3789.71 foot radius curve to the right 337.28 feet (the long chord of which bears North 61°57'16" East 337.17 feet) to a 5/8 inch iron rod at the point of curvature (Highway 20 centerline station 497+66.9); thence continuing along said southerly right of way line North 64°30'15" East 338.43 feet; thence North 25°54'59" West 80.00 feet to a 5/8 inch iron rod at the northerly right of way line of U.S. Highway 20, said additional highway right of way acquired by the City of Corvallis in the State of Oregon Circuit Court Case No. 95-10096; thence along the northerly right of way line of said Highway 20 South 64°30'15" West 337.85 feet to a 5/8 inch iron at the point of curvature (Highway 20 centerline station 497+66.9); thence continuing along said northerly right of way line along a 3869.71 foot radius curve to the left 166.25 feet (the long chord of which bears South 63°16'24' West 166.24 feet) to a 5/8 inch iron rod at the end of said additional right of way acquired by the City of Corvallis (Highway 20 centerline station 499+31.0); thence along the end of said additional right of way South 27°57'26" East 20.00 feet to a 5/8 inch iron rod at the northerly right of way line of said Highway 20; thence along the northerly right of way line of Highway 20 along a 3849.71 foot radius curve to the left 177.28 feet (the long chord of which bears South 60°43'24" West 177.27 feet) to a 5/8 inch iron rod at the point of tangency (Highway 20 centerline station 501+06.9); thence continuing along said northerly right of way line of Highway 20 South 59°12'56" West 1019.40 feet to the southeast corner of that property conveyed to Linn and Sylvia Averill in Benton County Deed Record Book 167, Page 280, said point being witnessed by a 3/4 inch iron pipe which bears North 27°00'43" East 0.43 feet of the true corner and being the point of beginning. Containing 2.57 acres of land, more or less.

The above described properties contain a total of 88.00 acres of land, more or less. The Basis of Bearings for the above described area is from Benton County Survey No. 9025.

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JANUARY 11, 2005
BRIAN SCOTT SAILOR
61341

BOUNDARY SURVEY

LOCATED IN THE JOHN STEWERT DLC No. 49 AND
IN THE WEST 1/2 OF SECTION 25 OF
TOWNSHIP 11 SOUTH, RANGE 5 WEST OF
THE WILLAMETTE MERIDIAN, BENTON COUNTY, OREGON
FOR: ARTHUR L. McFADDEN

DATE: MARCH 23, 2011

Benton County
Surveyor's Office
C.S. FILE NO. 10469
FILING DATE 5-25-11
FILE SIZE 18x24

SURVEYOR'S NARRATIVE:

PURPOSE

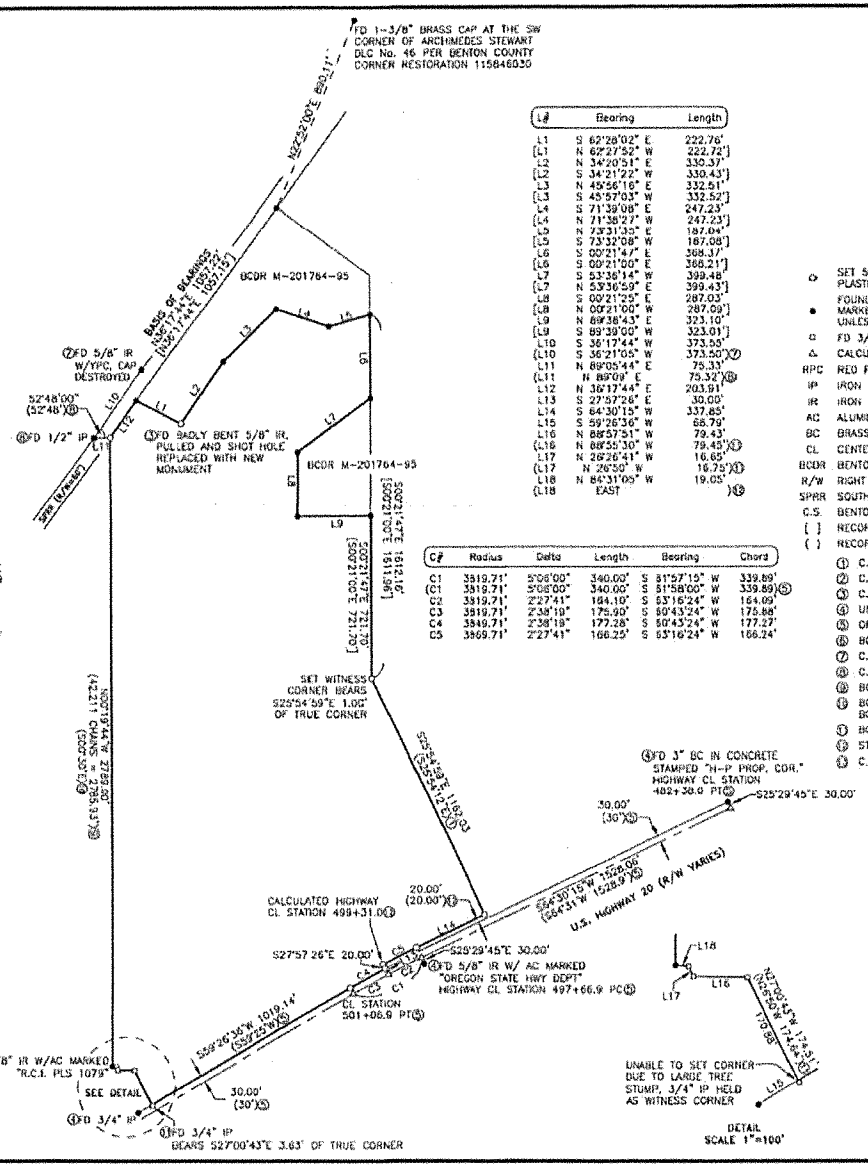
THE PURPOSE OF THIS SURVEY IS TO DETERMINE THE ARTHUR L. McFADDEN PROPERTY DESCRIBED IN BENTON COUNTY DEED RECORD M-185094-94, OF WHICH TWO TRACTS WERE CONVEYED TO HEWLETT-PACKARD COMPANY IN BENTON COUNTY DEED RECORD M-201764-95 AND MONUMENTED IN BENTON COUNTY SURVEY 9025.

BASIS OF BEARINGS

THE BASIS OF BEARINGS IS THE EASTERLY LINE OF THE SOUTHERN PACIFIC RAILROAD AS SHOWN, PER BENTON COUNTY SURVEY 9025.

BOUNDARY DETERMINATION

THE NORTHWEST CORNER OF THE PROPERTY WAS DETERMINED BY HOLDING THE EASTERLY RIGHT OF WAY LINE OF THE RAILROAD AND RECORD ANGLE TURNED FROM THE IRON PIPE FOUND ON THE WESTERLY RIGHT OF WAY LINE PER C.S. 96. THE WEST LINE OF THE PROPERTY WAS DETERMINED BY HOLDING THE ABOVE DETERMINED NORTHWEST CORNER AND THE IRON ROD TO THE SOUTH. ALTHOUGH THERE IS NO RECORD OF THIS MONUMENT, THE LINE FIT RELATIVELY WELL WITH RECORD DEED DISTANCE ALONG THE WEST LINE AND THE EXISTING FENCES. BCDR M-185094-94 DESCRIBES THIS LINE AS BEING NORTH 30' WEST FOR A DISTANCE OF 25.011 CHAINS AND THEN CONTINUING ALONG THE LINE NORTH 17.20 CHAINS TO THE RAILROAD RIGHT OF WAY. HOWEVER, THE DEEDS FOR THE NEIGHBORING PARCELS AND OTHER RECORD DOCUMENTS (EASEMENTS, ETC.) ALL CALL FOR A BEARING OF SOUTH 0°30' EAST FOR THE LINE. FURTHER, BCDR M-185094-94 HAS SOME CALLS ALONG LINES THAT DO NOT HAVE BEARINGS OR ARE SIMPLY WEST, EAST, NORTH OR SOUTH. THUS, THE WEST LINE OF THE PROPERTY IS DETERMINED TO BE A STRAIGHT LINE. THE REMAINING MONUMENTS FOUND IN THE SOUTHWEST CORNER OF THE PROPERTY WERE HELD. THE HIGHWAY CENTERLINE WAS DETERMINED BY HOLDING A LINE 30 FEET FROM THE BRASS CAPS FOUND AT STATION 482+38.0 PT AND STATION 497+66.9 PC AS SHOWN. THE RECORD CURVE DATA WAS THEN HELD TO GET TO THE CALCULATED CENTERLINE STATION 501+06.9 PT. THIS CENTERLINE WAS THEN OFFSET THE RECORD 30 FEET TO THE NORTH. A LINE WAS THEN RUN FROM THE IRON PIPE FOUND NEAR THE SOUTHWEST CORNER OF THE PROPERTY TO THE PT. THIS PIPE IS OF UNKNOWN ORIGIN BUT FITS VERY WELL WITH THE RIGHT OF WAY AS DETERMINED AND ALSO WITH THE ACTUAL AS TRAVELED HIGHWAY CENTERLINE. AN ADDITIONAL 20 FEET OF RIGHT OF WAY WAS PROVIDED FOR THE HIGHWAY PER STATE OF OREGON CIRCUIT COURT CASE 95-10096. THE ADDITIONAL RIGHT OF WAY IS DESCRIBED USING CENTERLINE STATIONING AS SHOWN. THE MONUMENT SET AT THE ANGLE POINT IN THE EAST LINE WAS DETERMINED BY HOLDING A LINE THROUGH THE MONUMENTS FOUND ALONG THE EAST LINE AND THE RECORD DISTANCE. THE CORNER FALLS IN THE FOOTING OF A FENCE POST, SO A WITNESS MONUMENT WAS SET. THE RECORD ANGLE WAS THEN HELD AT THIS ANGLE POINT TO DETERMINE THE REMAINING PORTION OF THE EAST LINE.



L#	Bearing	Length
L1	S 62°28'02" E	222.76'
[L1	N 62°27'52" W	222.72']
L2	N 34°20'51" E	330.37'
[L2	S 34°21'22" W	330.43']
L3	N 45°56'16" E	332.51'
[L3	S 45°57'03" W	332.52']
L4	S 71°39'08" E	247.23'
[L4	N 71°38'27" W	247.23']
L5	N 73°31'35" E	187.04'
[L5	S 73°32'08" W	187.08']
L6	S 00°21'47" E	368.37'
[L6	S 00°21'00" E	368.21']
L7	S 53°36'14" W	399.48'
[L7	N 53°36'59" E	399.43']
L8	S 00°21'25" E	287.03'
[L8	N 00°21'00" W	287.09']
L9	N 89°38'43" E	323.10'
[L9	S 89°39'00" W	323.01']
L10	S 36°17'44" W	373.53'
[L10	S 36°21'05" W	373.50']
L11	N 88°05'44" E	75.33'
[L11	N 89°09' E	75.32']
L12	N 36°17'44" E	203.91'
L13	S 27°57'26" E	30.00'
L14	S 64°30'15" W	337.85'
L15	S 59°26'36" W	66.79'
L16	N 88°57'51" W	79.43'
[L16	N 88°55'30" W	79.45']
L17	N 26°26'41" W	16.65'
[L17	N 26°50' W	16.75']
L18	N 86°31'05" W	19.05'
[L18	EAST	]

C#	Radius	Delta	Length	Bearing	Chord
C1	3819.71'	5°08'00"	340.00'	S 81°57'15" W	339.89'
[C1	3819.71'	5°08'00"	340.00'	S 81°58'00" W	339.89']
C2	3819.71'	2°27'41"	164.10'	S 63°16'24" W	164.09'
C3	3819.71'	2°38'19"	175.90'	S 60°43'24" W	175.88'
C4	3849.71'	2°38'19"	177.28'	S 60°43'24" W	177.27'
C5	3869.71'	2°27'41"	166.25'	S 63°16'24" W	166.24'

LEGEND

- SET 5/8" x 30" IRON ROD WITH YELLOW PLASTIC CAP MARKED "COLE SURV LS 61341"
- FOUND 5/8" IRON ROD WITH RED PLASTIC CAP MARKED "NORTHSTAR PLS 1823" PER C.S. 9025, UNLESS OTHERWISE NOTED
- FD 3/4" IRON PIPE PER BCDR BOOK 167, PAGE 280
- △ CALCULATED POSITION

RPC RED PLASTIC CAP
IP IRON PIPE - INSIDE DIAMETER
IR IRON ROD
AC ALUMINUM CAP
BC BRASS CAP
CL CENTERLINE
BCDR BENTON COUNTY DEED RECORD
R/W RIGHT OF WAY
SPRR SOUTHERN PACIFIC RAILROAD
C.S. BENTON COUNTY SURVEY
[ ] RECORD INFORMATION AS PER C.S. 9025
( ) RECORD INFORMATION AS PER

1. C.S. 8644
2. C.S. 7269
3. C.S. 9025
4. UNKNOWN ORIGIN
5. OREGON STATE HIGHWAY MAP 6B-26-15
6. BCDR BOOK 167, PAGE 280
7. C.S. 7521
8. C.S. 96
9. BCDR M-185094-94
10. BCDR BOOK 143, PAGE 193 AND BCDR BOOK 86, PAGE 466
11. BCDR BOOK 167, PAGE 280
12. STATE OF OREGON CIRCUIT COURT CASE 95-10096
13. C.S. 846

REGISTERED PROFESSIONAL AND SURVEYOR
OREGON
JANUARY 11, 2005
BRIAN SCOTT SAILOR
61341
EXPIRES 6/30/12

BRIAN S. SAILOR, P.L.S.
COLE SURVEYING, LLC
245 NE CONIFER BLVD.
CORVALLIS, OREGON 97330
(541) 929-6500

COLE SURVEYING, LLC

11515C501

ATTACHMENT 5

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-311

BOUNDARY SURVEY

LOCATED IN THE JOHN STEWERT DLC No. 49 AND
IN THE WEST 1/2 OF SECTION 25 OF
TOWNSHIP 11 SOUTH, RANGE 5 WEST OF
THE WILLAMETTE MERIDIAN, BENTON COUNTY, OREGON
FOR: ARTHUR L. McFADDEN

DATE: MAY 2, 2011

SURVEYOR'S NARRATIVE:

PURPOSE

THE PURPOSE OF THIS SURVEY IS TO CORRECT AN ERROR IN THE ESTABLISHMENT OF THE MOST SOUTHERLY SOUTHWEST CORNER OF THE PROPERTY SURVEYED IN BENTON COUNTY SURVEY No. 10469 BASED ON ADDITIONAL FOUND MONUMENTATION.

BASIS OF BEARINGS

THE BASIS OF BEARINGS IS THE WESTERLY LINE OF THE PROPERTY SURVEYED IN BENTON COUNTY SURVEY No. 10469 AS SHOWN.

BOUNDARY DETERMINATION

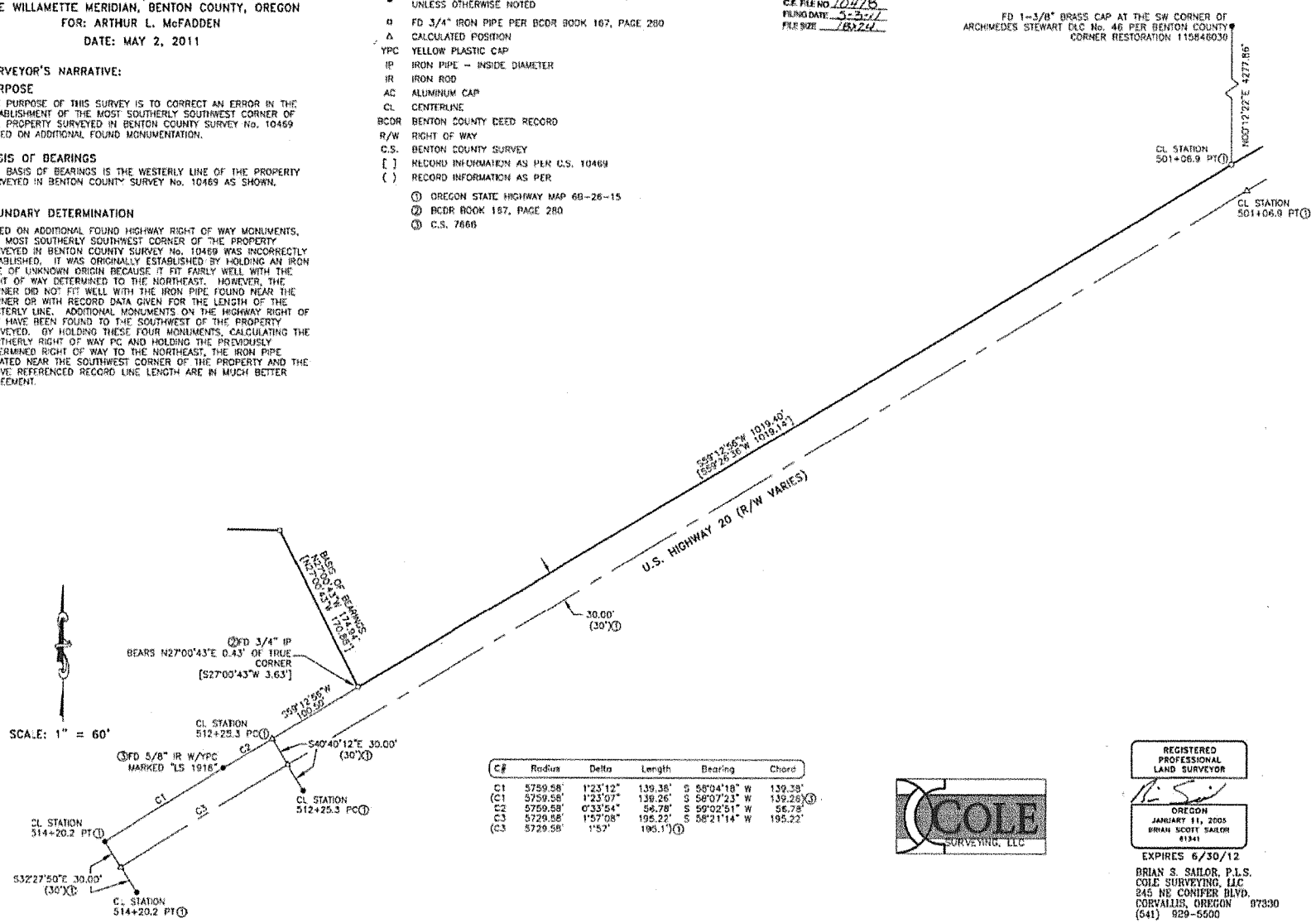
BASED ON ADDITIONAL FOUND HIGHWAY RIGHT OF WAY MONUMENTS, THE MOST SOUTHERLY SOUTHWEST CORNER OF THE PROPERTY SURVEYED IN BENTON COUNTY SURVEY No. 10469 WAS INCORRECTLY ESTABLISHED. IT WAS ORIGINALLY ESTABLISHED BY HOLDING AN IRON PIPE OF UNKNOWN ORIGIN BECAUSE IT FIT FAIRLY WELL WITH THE RIGHT OF WAY DETERMINED TO THE NORTHEAST. HOWEVER, THE CORNER DID NOT FIT WELL WITH THE IRON PIPE FOUND NEAR THE CORNER OR WITH RECORD DATA GIVEN FOR THE LENGTH OF THE WESTERLY LINE. ADDITIONAL MONUMENTS ON THE HIGHWAY RIGHT OF WAY HAVE BEEN FOUND TO THE SOUTHWEST OF THE PROPERTY SURVEYED. BY HOLDING THESE FOUR MONUMENTS, CALCULATING THE NORTHERLY RIGHT OF WAY PC AND HOLDING THE PREVIOUSLY DETERMINED RIGHT OF WAY TO THE NORTHEAST, THE IRON PIPE LOCATED NEAR THE SOUTHWEST CORNER OF THE PROPERTY AND THE ABOVE REFERENCED RECORD LINE LENGTH ARE IN MUCH BETTER AGREEMENT.

LEGEND

o	FD 5/8" x 30" IRON ROD WITH YELLOW PLASTIC CAP MARKED "COLE SURV LS 61341", PER C.S. 10469
•	FD 5/8" IRON ROD W/ AC MARKED "OREGON STATE HWY DEPT", UNLESS OTHERWISE NOTED
¤	FD 3/4" IRON PIPE PER BCDR BOOK 167, PAGE 280
Δ	CALCULATED POSITION
YPC	YELLOW PLASTIC CAP
IP	IRON PIPE – INSIDE DIAMETER
IR	IRON ROD
AC	ALUMINUM CAP
CL	CENTERLINE
BCDR	BENTON COUNTY DEED RECORD
R/W	RIGHT OF WAY
C.S.	BENTON COUNTY SURVEY
[ ]	RECORD INFORMATION AS PER C.S. 10469
( )	RECORD INFORMATION AS PER

① OREGON STATE HIGHWAY MAP 68-26-15
② BCDR BOOK 187, PAGE 280
③ C.S. 7666

Benton County
Surveyor's Office
C.S. FILE NO 10478
FILING DATE 5-3-11
FILE SIZE 18x24



C#	Radius	Delta	Length	Bearing	Chord
C1	5759.58'	1°23'12"	139.38'	S 58°04'18" W	139.38'
(C1	5759.58'	1°23'07"	139.26'	S 58°07'23" W	139.26')③
C2	5759.58'	0°33'54"	56.78'	S 59°02'51" W	56.78'
C3	5729.58'	1°57'08"	195.22'	S 58°21'14" W	195.22'
(C3	5729.58'	1°57'	195.1')①		

COLE SURVEYING, LLC

REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON
JANUARY 11, 2005
BRIAN SCOTT SAILOR
61341

EXPIRES 6/30/12

BRIAN S. SAILOR, P.L.S.
COLE SURVEYING, LLC
845 NE CONIFER BLVD.
CORVALLIS, OREGON 97330
(541) 929-5500

11818C502

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-312

ANNEXATION BOUNDARY SURVEY and WILLAMETTE RIVER GREENWAY BOUNDARY

FOR APPLICATION PURPOSES ONLY

LOCATED IN THE JOHN STEWERT DLC No. 49 AND
IN THE WEST 1/2 OF SECTION 25 OF
TOWNSHIP 11 SOUTH, RANGE 5 WEST OF
THE WILLAMETTE MERIDIAN, BENTON COUNTY, OREGON
FOR: ARTHUR L. McFADDEN
DATE: MAY 2, 2011

SURVEYOR'S NARRATIVE:

PURPOSE

THE PURPOSE OF THIS SURVEY IS TO DEPICT THE PROPOSED ANNEXATION BOUNDARY FOR THE PROPERTY SURVEYED IN BENTON COUNTY SURVEY No. 10469 AND INCLUDE THE HIGHWAY 20 RIGHT OF WAY IN SAID BOUNDARY.

BASIS OF BEARINGS

THE BASIS OF BEARINGS IS THE EASTERLY LINE OF THE SOUTHERN PACIFIC RAILROAD AS SHOWN, PER BENTON COUNTY SURVEY 9025.

BOUNDARY DETERMINATION

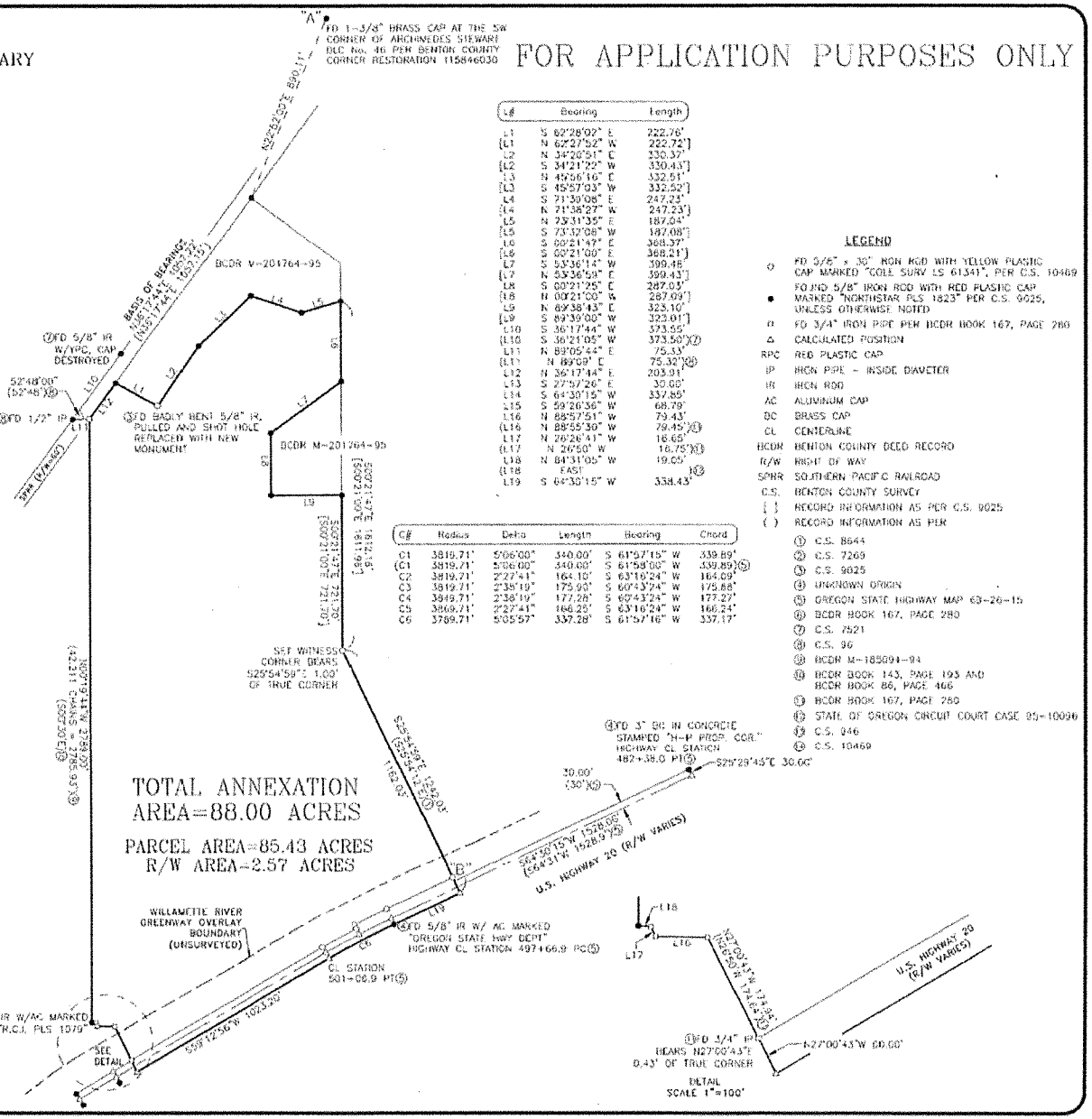
THE PROPERTY LINES WERE DETERMINED IN BY THIS OFFICE IN BENTON COUNTY SURVEY No. 10469. THE MOST SOUTHERLY SOUTHWEST CORNER OF THE PROPERTY AND CORRESPONDING RIGHT OF WAY WAS CORRECTED IN BENTON COUNTY SURVEY No. 10470.

CITY OF CORVALLIS CONTROL TIE

THE MONUMENT AT "A" IS PART OF THE CITY OF CORVALLIS CONTROL SURVEY AND IS CONTROL STATION No. 106 (NORTHING:548,477.47 EASTING:1,284,787.86). THE MONUMENT AT "B" HAS BEEN TIED INTO THE CONTROL NETWORK USING VARIOUS OTHER CITY OF CORVALLIS CONTROL STATIONS (NORTHING:544,505.97 EASTING:1,285,240.58).

WILLAMETTE RIVER GREENWAY OVERLAY

THE WILLAMETTE RIVER GREENWAY OVERLAY BOUNDARY SHOWN ON THIS DRAWING IS A GRAPHIC REPRESENTATION OF CITY OF CORVALLIS PLANNING INFORMATION. THIS LINE WAS DETERMINED BY SCALING ITS LOCATION FROM PLANNING DOCUMENTS AND HAS NOT BEEN FIELD VERIFIED OR SURVEYED.



L#	Bearing	Length
L1	S 62°28'02" E	222.76'
(L1	N 62°27'52" W	222.72')
L2	N 34°20'51" E	330.37'
(L2	S 34°21'22" W	330.43')
L3	N 45°56'16" E	332.51'
(L3	S 45°57'03" W	332.52')
L4	S 71°30'08" E	247.23'
(L4	N 71°38'27" W	247.23')
L5	N 73°31'35" E	187.04'
(L5	S 73°32'08" W	187.08')
L6	S 60°21'47" E	368.37'
(L6	S 60°21'00" E	368.21')
L7	S 53°36'14" W	399.46'
(L7	N 53°36'59" E	399.43')
L8	S 00°21'25" E	287.65'
(L8	N 00°21'00" W	287.09')
L9	N 69°38'43" E	323.10'
(L9	S 89°39'00" W	323.01')
L10	S 36°17'44" W	373.55'
(L10	S 36°21'05" W	373.50')⑦
L11	N 89°05'44" E	75.33'
(L11	N 89°09' E	75.32')⑧
L12	N 36°17'44" E	203.91'
L13	S 27°57'26" E	30.00'
L14	S 64°30'15" W	337.85'
L15	S 59°26'36" W	68.79'
L16	N 88°57'51" W	79.43'
(L16	N 88°55'30" W	79.45')⑩
L17	N 26°26'41" W	16.65'
(L17	N 26°50' W	16.75')⑩
L18	N 84°31'05" W	19.05'
(L18	EAST	16)⑩
L19	S 64°30'15" W	338.43'

C#	Radius	Delta	Length	Bearing	Chord
C1	3819.71'	5°06'00"	340.00'	S 61°57'15" W	339.89'
(C1	3819.71'	5°06'00"	340.00'	S 61°58'00" W	339.89')⑤
C2	3819.71'	2°27'41"	164.10'	S 63°16'24" W	164.09'
C3	3819.71'	2°35'19"	175.98'	S 60°43'24" W	175.88'
C4	3849.71'	2°38'19"	177.28'	S 60°43'24" W	177.27'
C5	3869.71'	2°27'41"	166.25'	S 63°16'24" W	166.24'
C6	3789.71'	5°05'57"	337.28'	S 61°57'16" W	337.17'

LEGEND

⊙	FD 5/8" x 30" IRON ROD WITH YELLOW PLASTIC CAP MARKED "COLE SURV LS 61341", PER C.S. 10469
●	FOUND 5/8" IRON ROD WITH RED PLASTIC CAP MARKED "NORTHSTAR PLS 1823" PER C.S. 9025, UNLESS OTHERWISE NOTED
⊓	FD 3/4" IRON PIPE PER BCDR BOOK 167, PAGE 280
△	CALCULATED POSITION
RPC	RED PLASTIC CAP
IP	IRON PIPE - INSIDE DIAMETER
IR	IRON ROD
AC	ALUMINUM CAP
BC	BRASS CAP
CL	CENTERLINE
BCDR	BENTON COUNTY DEED RECORD
R/W	RIGHT OF WAY
SPNR	SOUTHERN PACIFIC RAILROAD
C.S.	BENTON COUNTY SURVEY
[ ]	RECORD INFORMATION AS PER C.S. 9025
( )	RECORD INFORMATION AS PER
	① C.S. 8644
	② C.S. 7269
	③ C.S. 9025
	④ UNKNOWN ORIGIN
	⑤ OREGON STATE HIGHWAY MAP 63-26-15
	⑥ BCDR BOOK 167, PAGE 280
	⑦ C.S. 7521
	⑧ C.S. 96
	⑨ BCDR M-185094-94
	⑩ BCDR BOOK 143, PAGE 193 AND BCDR BOOK 86, PAGE 466
	⑪ BCDR BOOK 167, PAGE 280
	⑫ STATE OF OREGON CIRCUIT COURT CASE 95-10096
	⑬ C.S. 946
	⑭ C.S. 10469

REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON
JANUARY 11, 2005
BRIAN SCOTT SAILOR
61341
EXPIRES 6/30/12

BRIAN S. SAILOR, P.L.S.
COLE SURVEYING, LLC
245 NE CONIFER BLVD.
CORVALLIS, OREGON 97330
(541) 929-5580

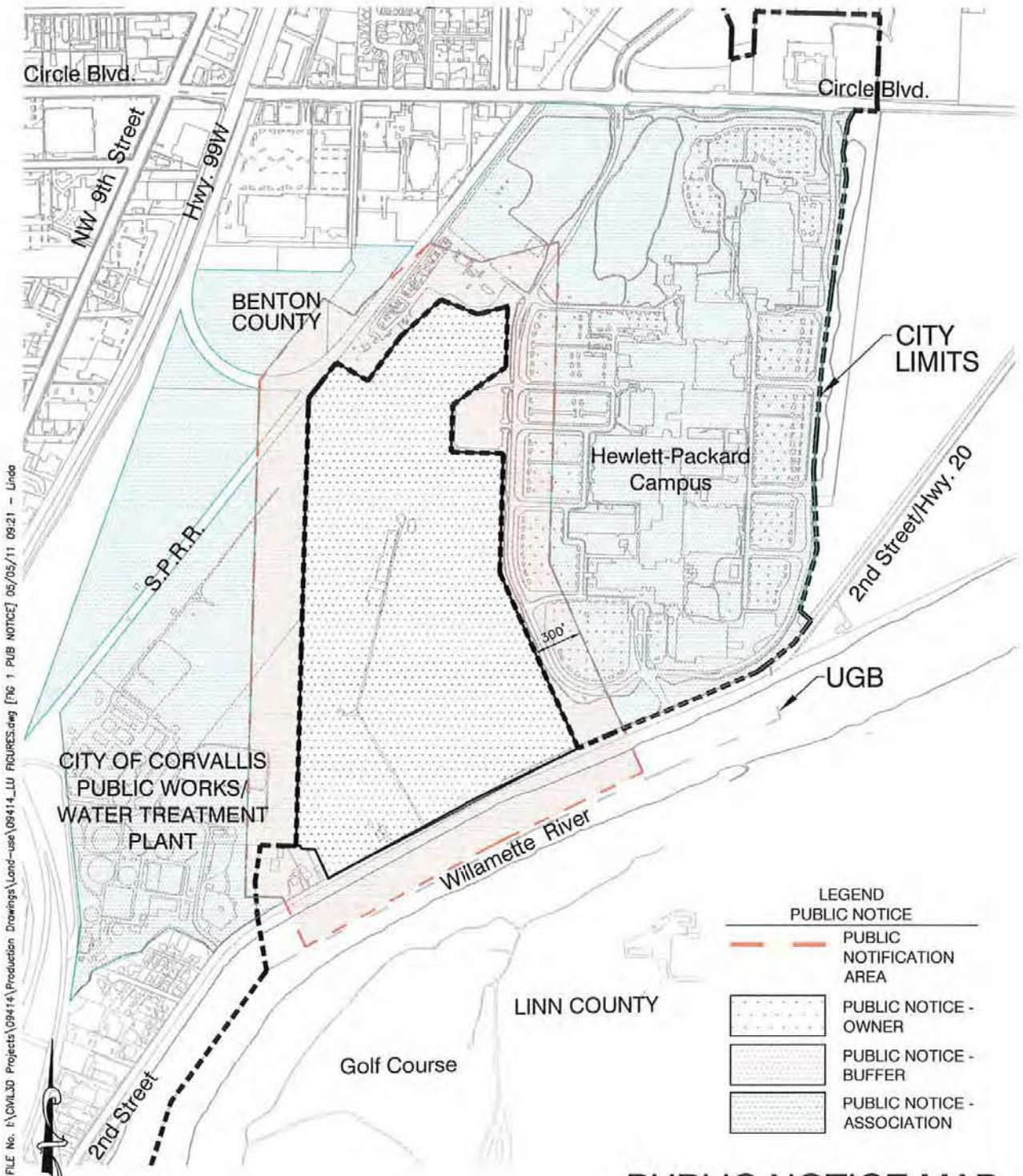
SCALE: 1" = 300'

COLE SURVEYING, LLC

11818C501

ATTACHMENT 7

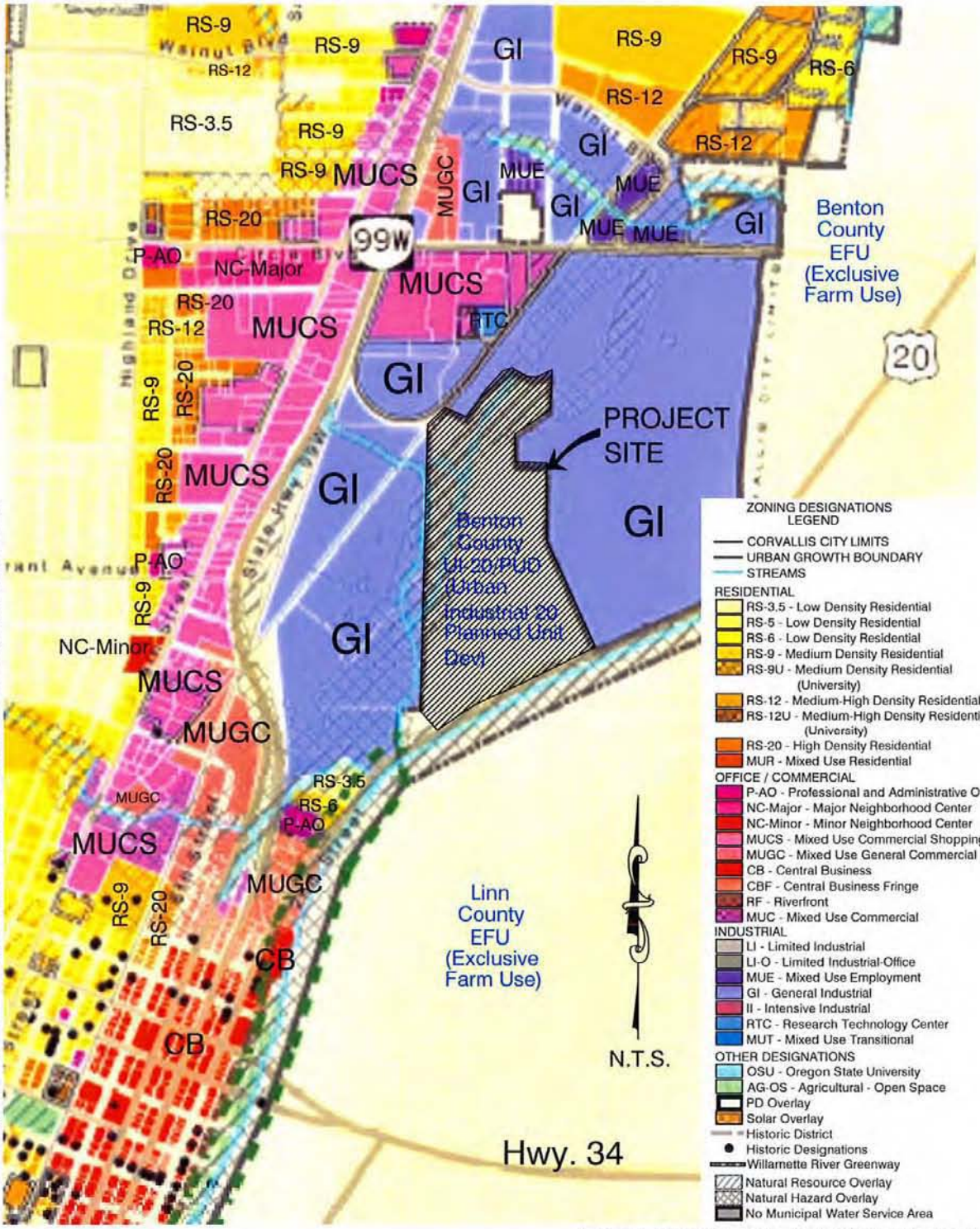
MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-313



PUBLIC NOTICE MAP

MCFADDEN PROPERTY ANNEXATION
TL 308 MAP 11-05-25-0001
Corvallis, Oregon
Figure 1
May 6, 2011

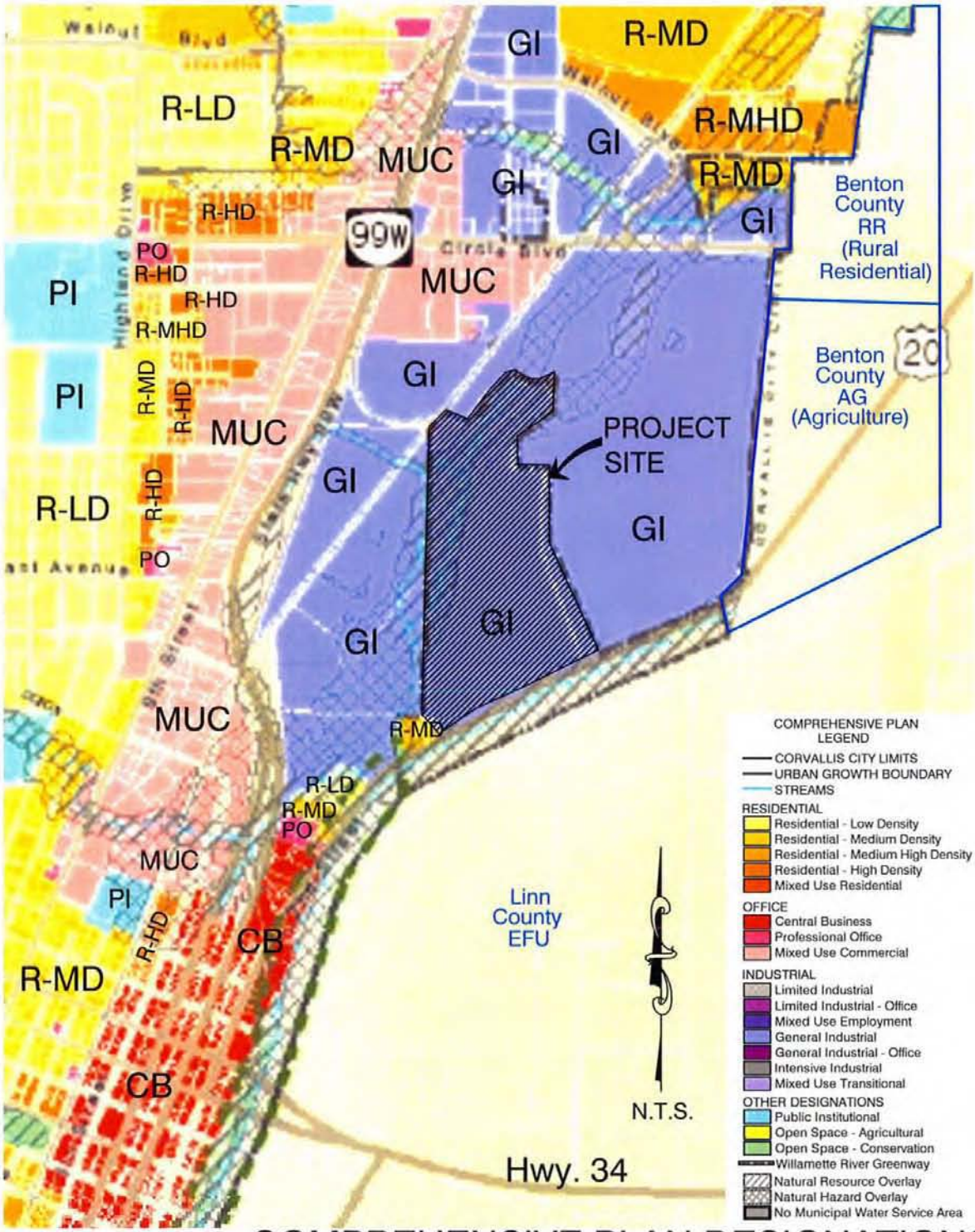
MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-314



FILE No. I:\CIVIL3D Projects\09414\Production Drawings\Land-use\09414_CVO_ZONING.dwg [FIG 2 ZONING PLAN] 05/05/11 09:18 - Linda

ZONING DESIGNATIONS

MCFADDEN PROPERTY
ANNEXATION
TL 308 MAP 11-05-25-0001
Corvallis, Oregon
Figure 2
May 6, 2011



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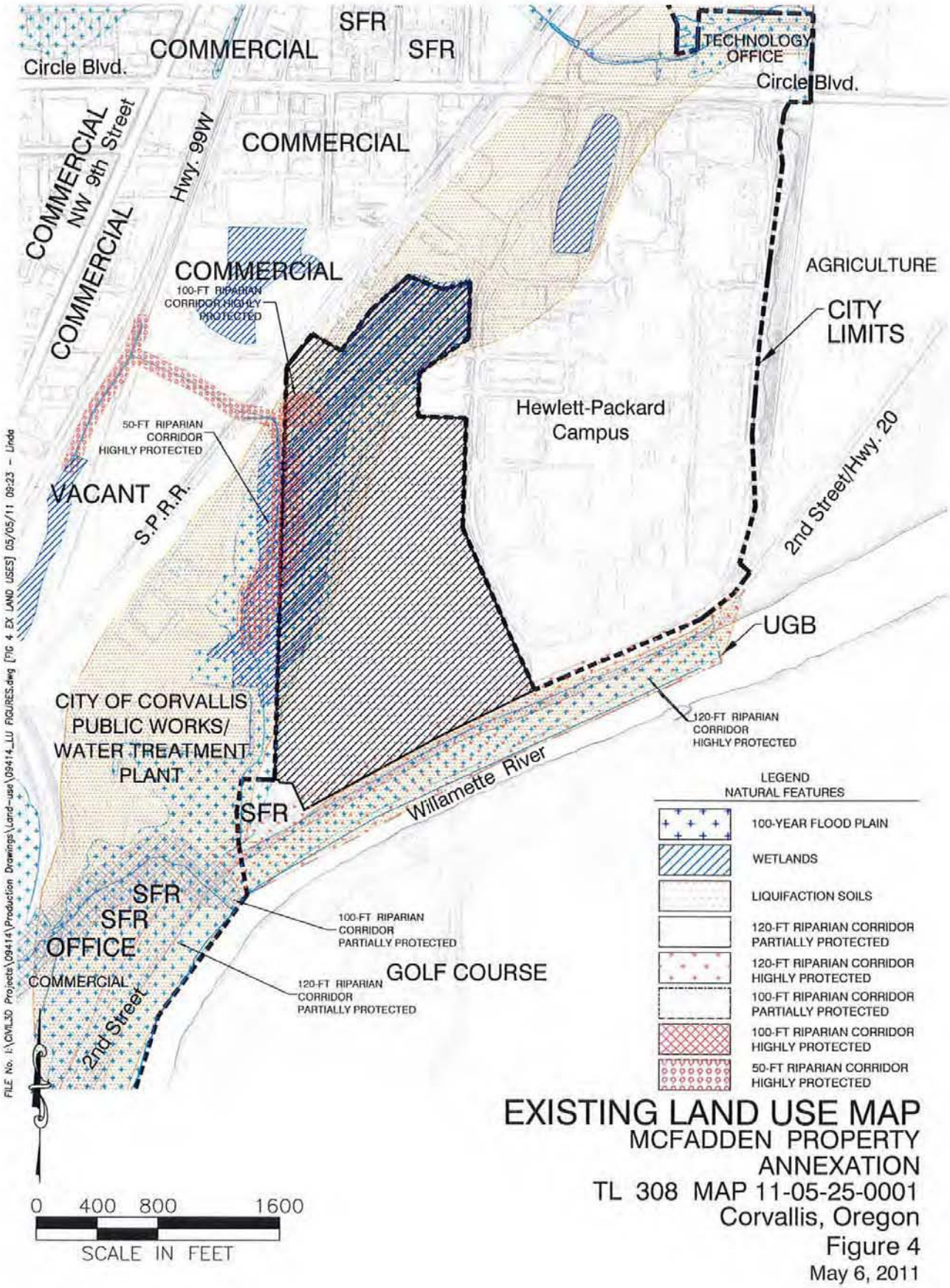
COMPREHENSIVE PLAN DESIGNATIONS

MCFADDEN PROPERTY
ANNEXATION
TL 308 MAP 11-05-25-0001
Corvallis, Oregon
Figure 3
May 6, 2011

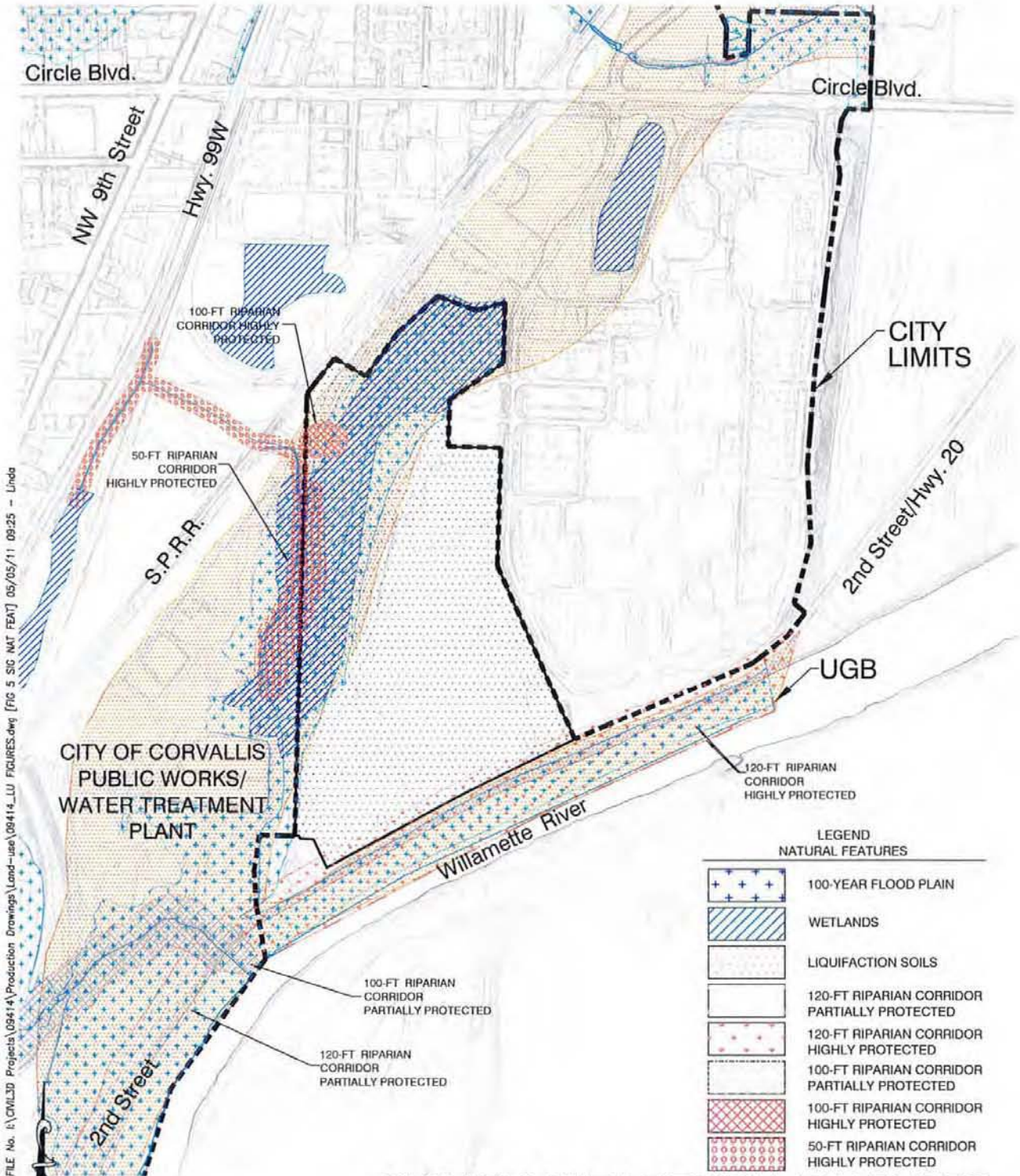
MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-316



EXISTING LAND USE MAP

MCFADDEN PROPERTY
ANNEXATION
TL 308 MAP 11-05-25-0001
Corvallis, Oregon
Figure 4
May 6, 2011

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-317

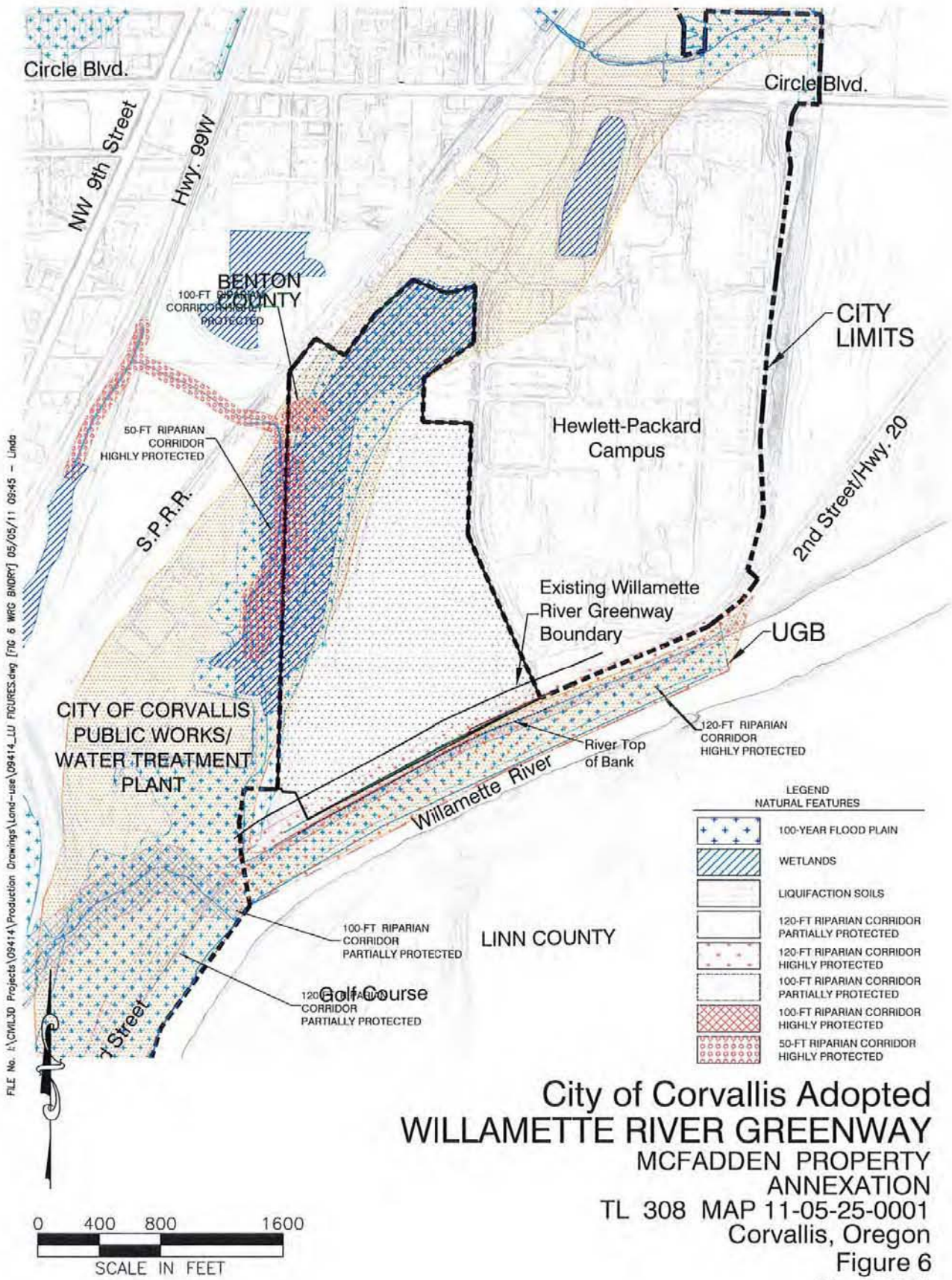


FILE No. I:\CIVIL3D Projects\09414\Production Drawings\Land-use\09414_LU FIGURES.dwg [FIG 5 SIG NAT FEAT] 05/05/11 09:25 -- Linda

SIGNIFICANT NATURAL FEATURES

MCFADDEN PROPERTY
ANNEXATION
TL 308 MAP 11-05-25-0001
Corvallis, Oregon
Figure 5
May 6, 2011

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-318



City of Corvallis Adopted
WILLAMETTE RIVER GREENWAY
MCFADDEN PROPERTY
ANNEXATION
TL 308 MAP 11-05-25-0001
Corvallis, Oregon
Figure 6
May 6, 2011

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
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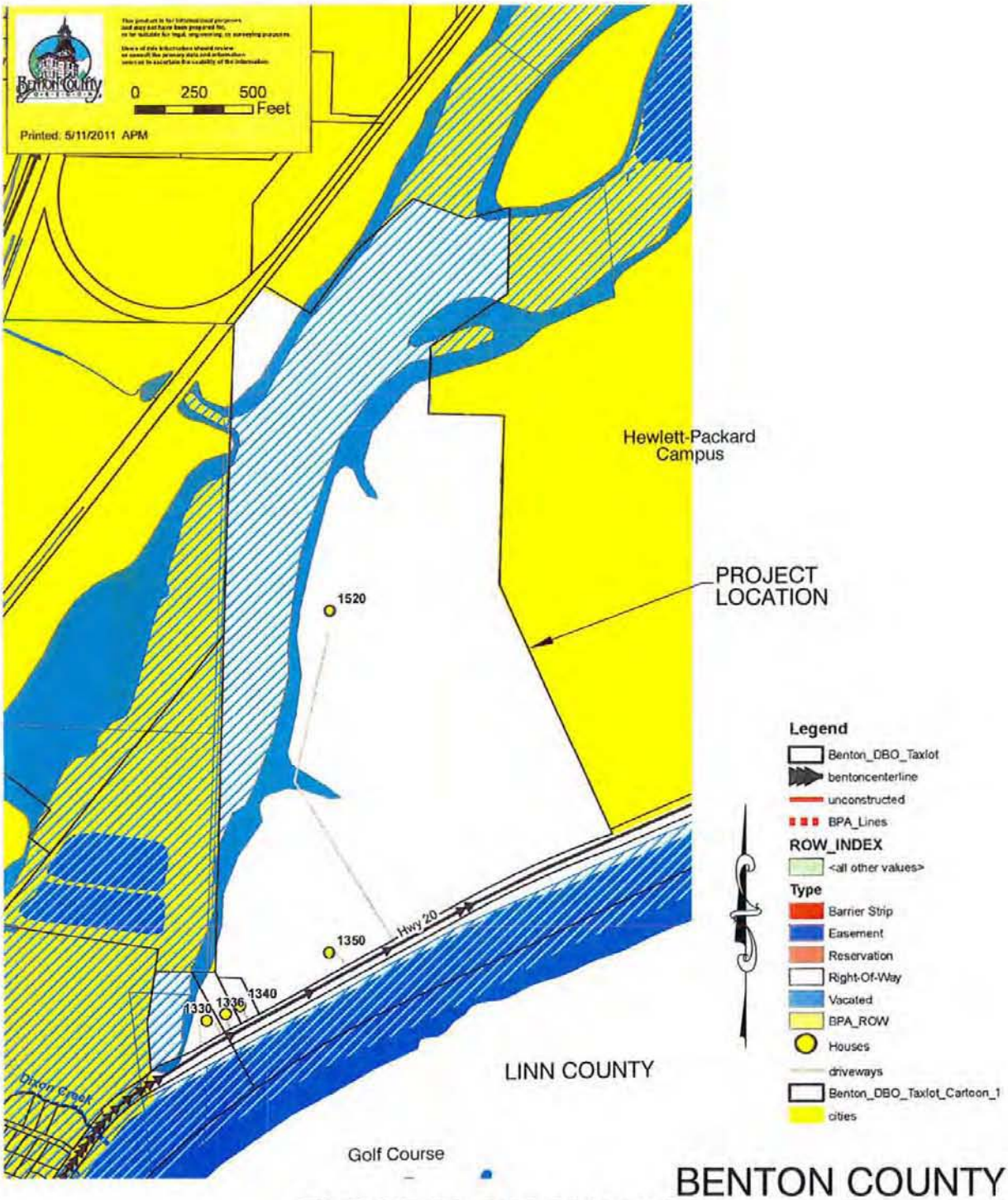
EXHIBIT F-319



FILE No. L:\CIVIL3D Projects\09414\Production Drawings\Land-use\09414_LU FIGURES.dwg [FIG 7 BC FLOODPLAIN] 05/05/11 11:07 - Linda

BENTON COUNTY FLOODPLAIN MANAGEMENT OVERLAY

MCFADDEN PROPERTY
ANNEXATION
TL 308 MAP 11-05-25-0001
Corvallis, Oregon
Figure 7
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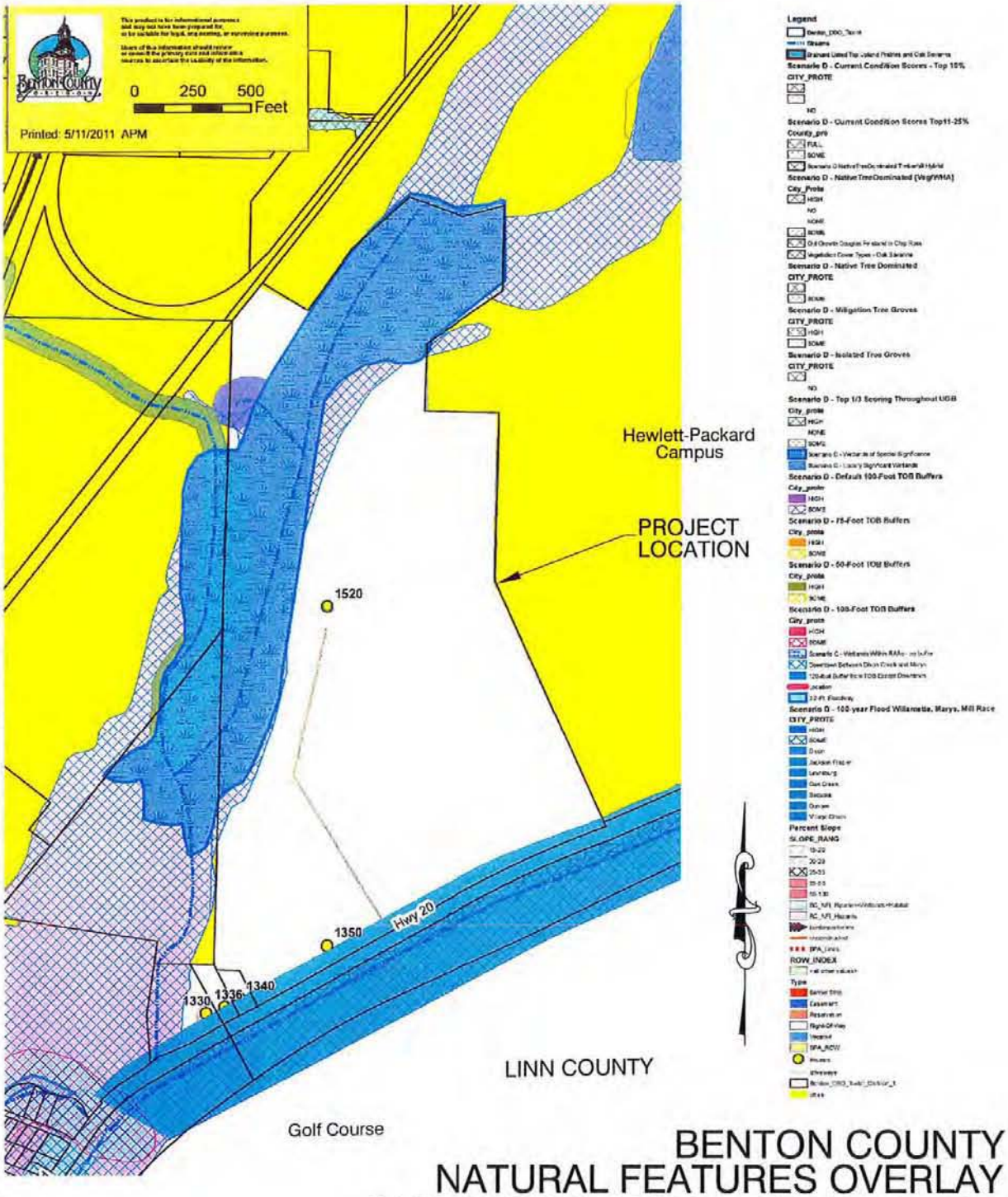
MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-320



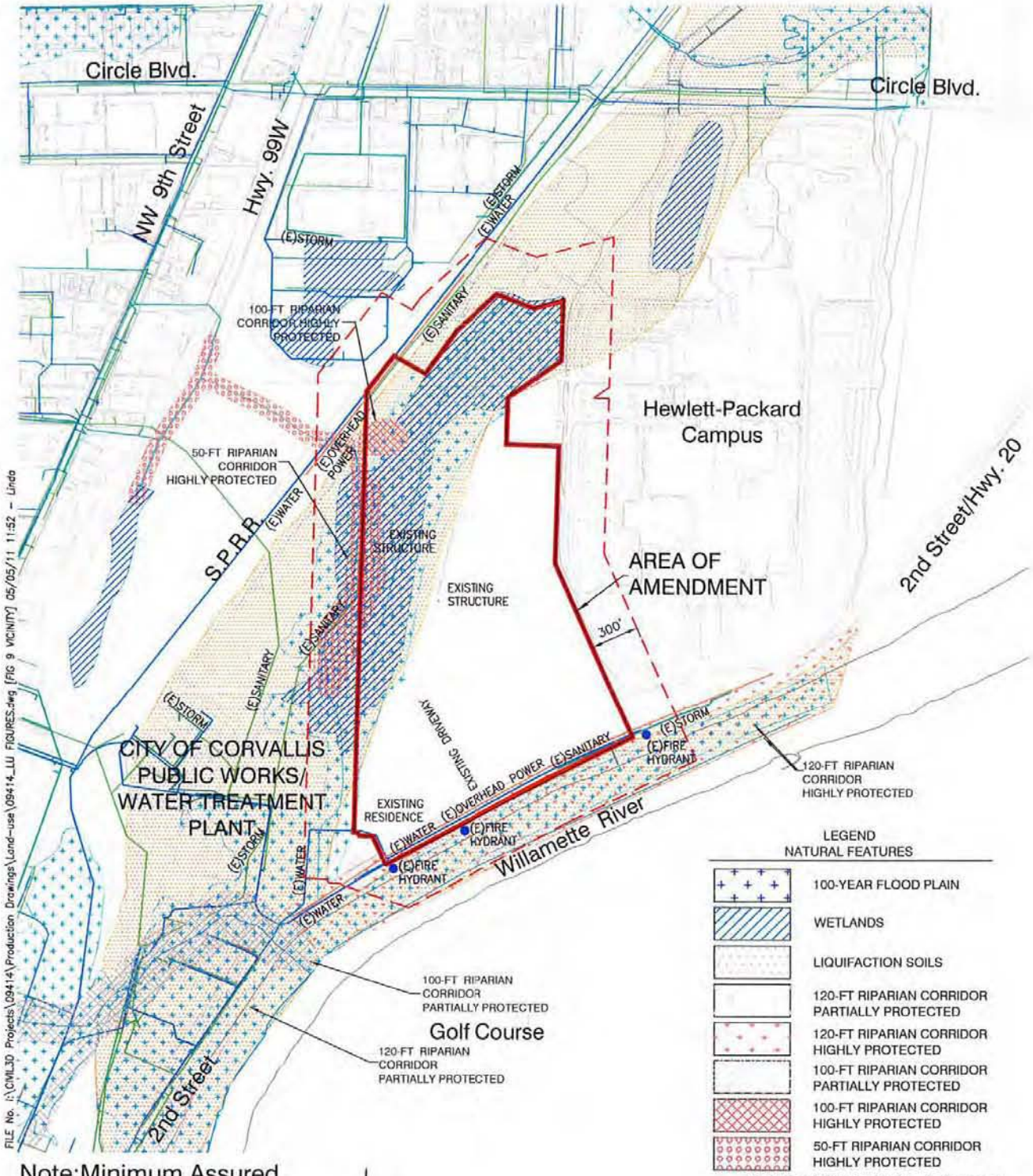
FILE No. I:\CIVIL3D Projects\09414\Production Drawings\Land-use\09414_LU FIGURES.dwg [FIG 8 BC NAT FEAT] 05/05/11 10:57 - Linda

BENTON COUNTY NATURAL FEATURES OVERLAY IN THE CORVALLIS URBAN FRINGE

MCFADDEN PROPERTY ANNEXATION
TL 308 MAP 11-05-25-0001
Corvallis, Oregon

Figure 8

May 6, 2011



Note:Minimum Assured Development Area (MADA) not applicable.

0 400 800 1600

SCALE IN FEET

VICINITY MAP

MCFADDEN PROPERTY ANNEXATION

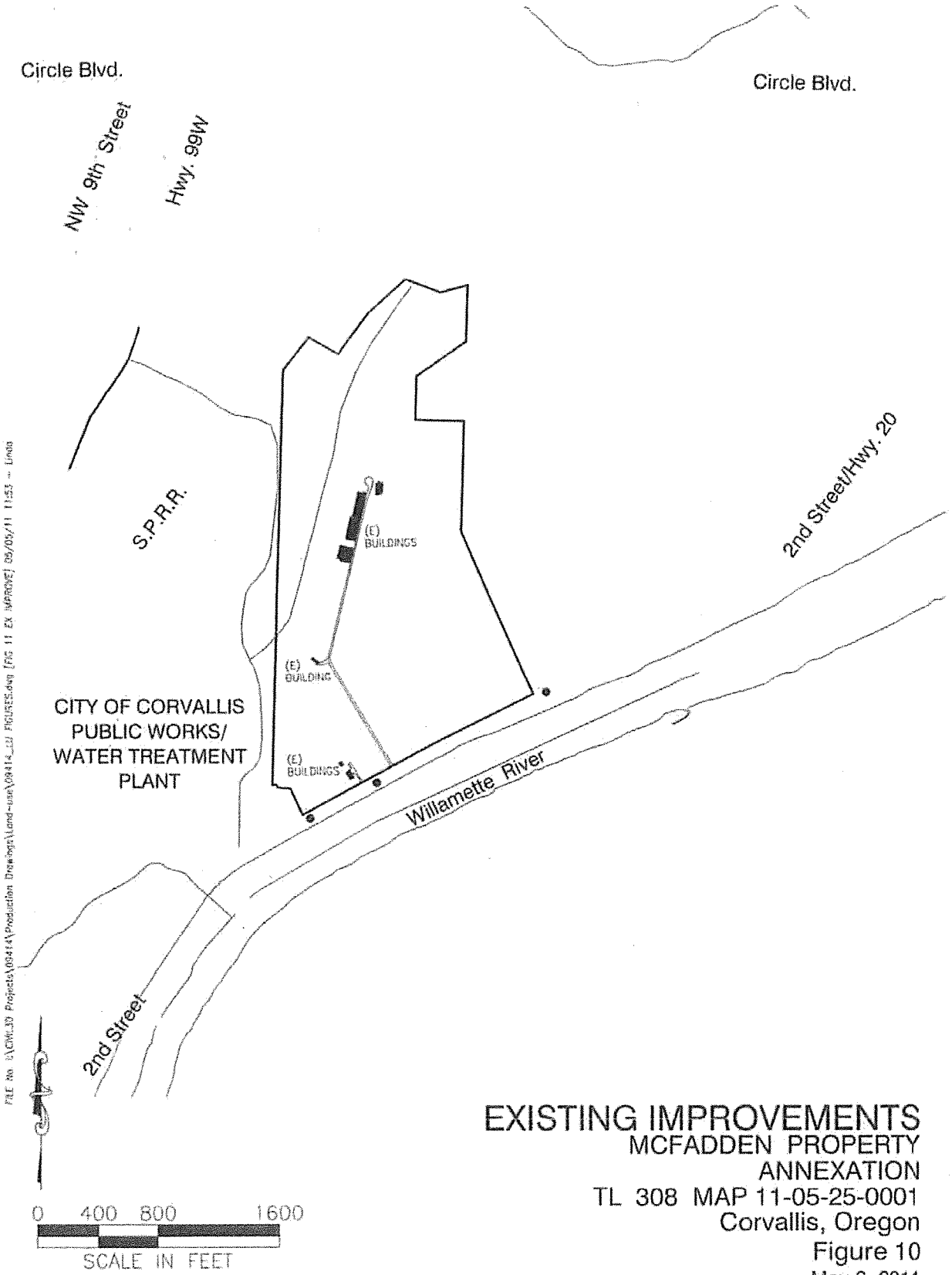
TL 308 MAP 11-05-25-0001

Corvallis, Oregon

Figure 9

May 6, 2011

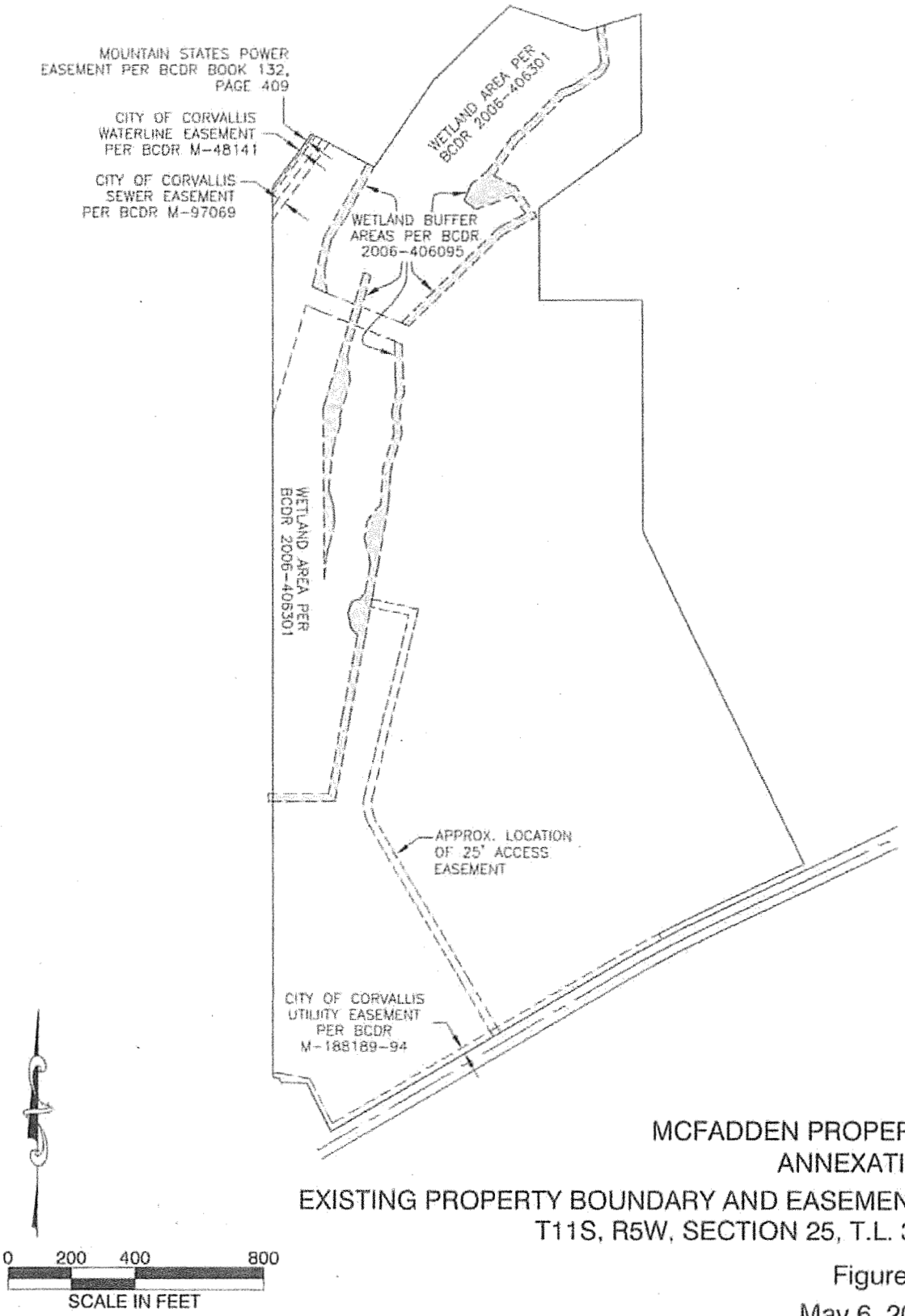
MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-322



EXISTING IMPROVEMENTS

MCFADDEN PROPERTY
ANNEXATION
TL 308 MAP 11-05-25-0001
Corvallis, Oregon
Figure 10
May 6, 2011

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-323



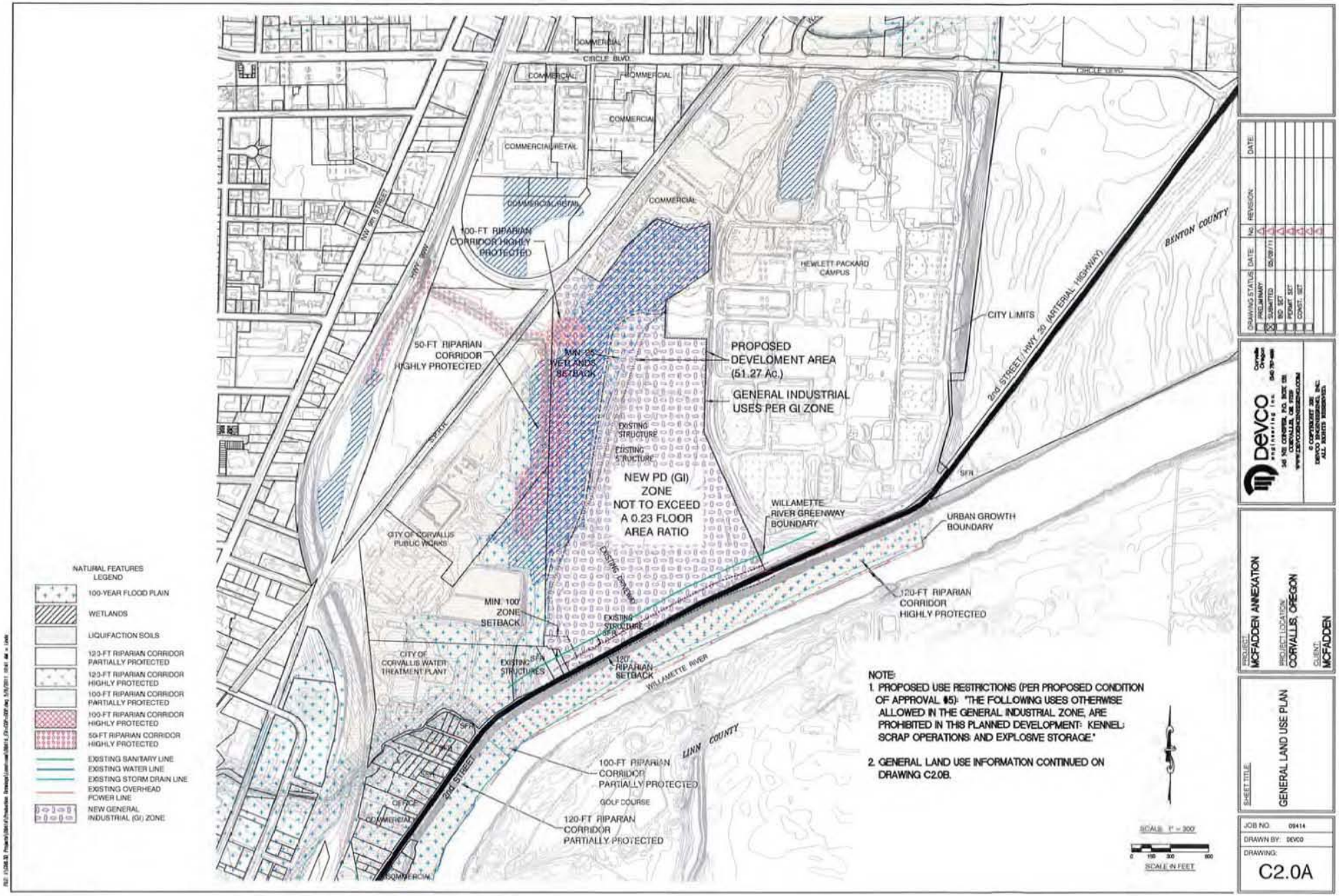
MCFADDEN PROPERTY
ANNEXATION

EXISTING PROPERTY BOUNDARY AND EASEMENTS
T11S, R5W, SECTION 25, T.L. 308

Figure 11

May 6, 2011

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-324



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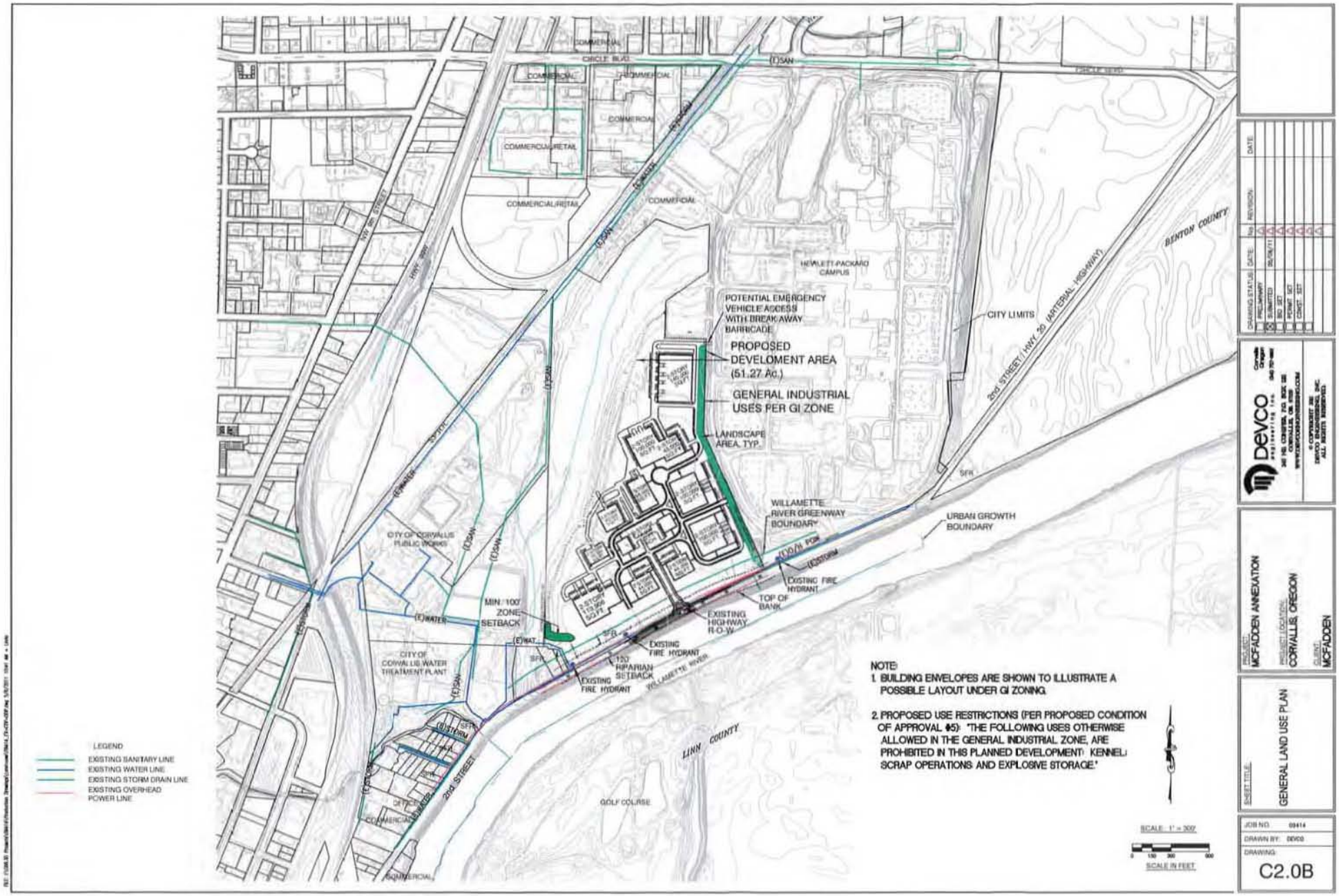
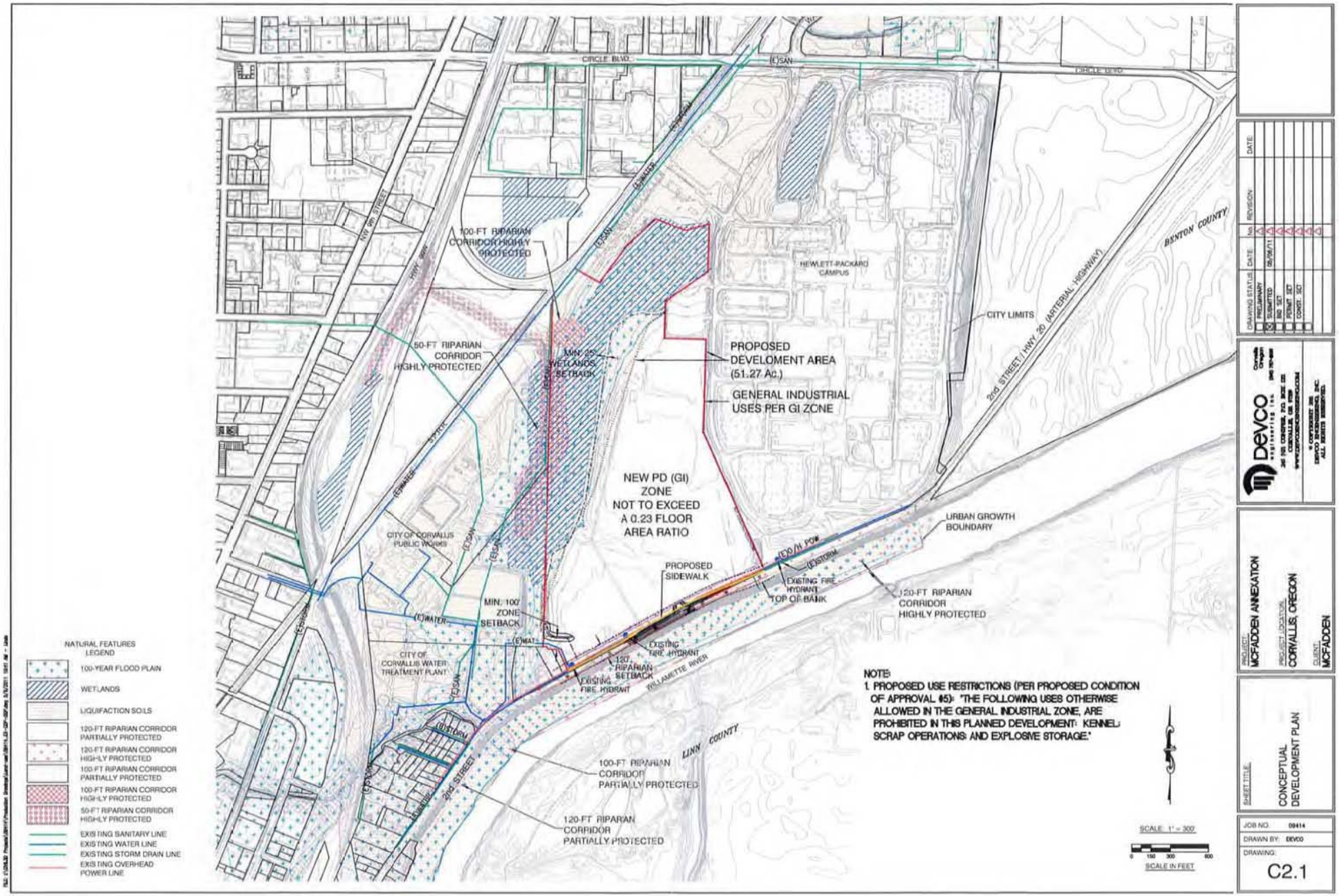
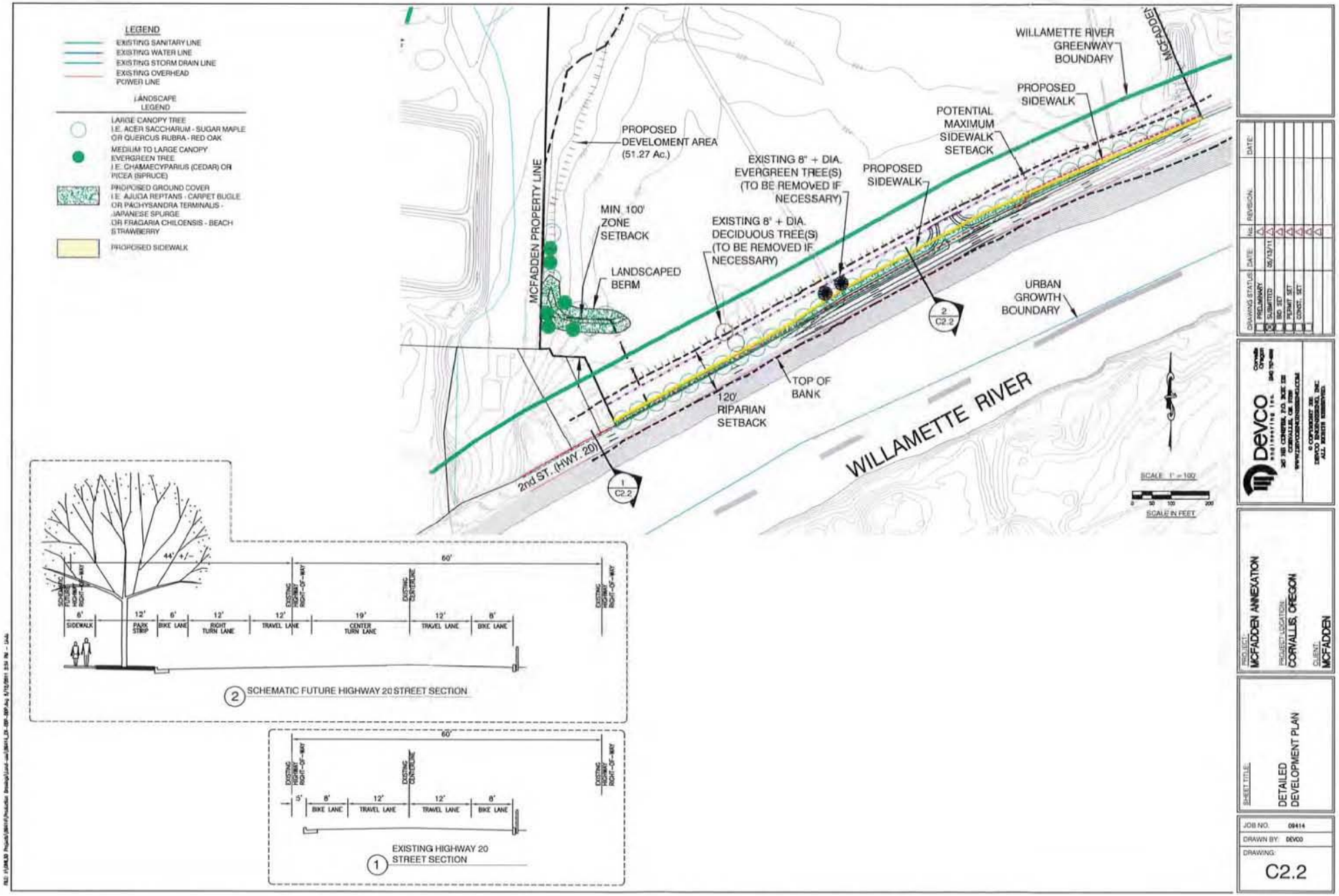
CITY COUNCIL STAFF REPORT
EXHIBIT F-325



MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-326



MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-327



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Letter to Jason Yaich, City of Corvallis
Original March 29, 2011, Revised May 5, 2011/Transportation Planning Rule

Letter to Jason Yaich, City of Corvallis
Original March 28, 2011, Revised May 5, 2011/Planned Development

Letter to John deTar, ODOT District 4
May 5, 2011, Supplemental Information Supporting Development Assumptions Under County Zoning

Water, Sanitary Sewer, and Storm Water Demand Calculations

Addendum to Water and Storm Water Demand Calculations

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MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-330

McFADDEN PROPERTY ANNEXATION
REVISED TRANSPORTATION IMPACT ANALYSIS

CORVALLIS, OREGON

DATE:
June 17, 2011

PREPARED FOR:
McFadden Family

PREPARED BY:
Catriona Sumrain
Michael Ard, PE
Todd E. Mobley, PE, PTOE

REGISTERED PROFESSIONAL ENGINEER
54853
OREGON
JULY 9, 2001
TODD E. MOBLEY
6/17/11

EXPIRES: 12/31/2012

LANCASTER ENGINEERING
321 SW 4th Ave., Suite 400 | Portland, OR 97204 | 503.248.0313 | lancasterengineering.com

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MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-332

REPORT PURPOSE

This Transportation Impact Analysis (TIA) is prepared expressly to satisfy Chapter 2.6 of the City of Corvallis Land Development Code. It is a tool for use by the City to determine the general transportation impacts from development of the site for use in planning and prioritizing transportation improvement projects. It is important to note that in this unique circumstance, *the annexation of the subject property will not result in any increase in potential trip generation*, since a development of the same intensity could be constructed currently under the County zoning designation.

Moreover, industrial development on the subject property is assumed in the City's Comprehensive Plan. The proposed annexation will not cause any increase in trip generation potential over what is already permitted and what the transportation system is already planned for. The annexation doesn't increase the necessary transportation infrastructure, but the TIA is a useful tool for the City to better prioritize the planning and implementation of infrastructure projects that have already been identified.

The scope of work for this TIA was agreed upon with City engineering staff and examines a scenario where the site develops to full build out immediately upon annexation. This was expressly required by the City. As a practical matter, this manner of development is clearly not a realistic expectation. It does however provide a useful assessment of the long-term transportation impacts to the capacity of transportation infrastructure in the same manner that impacts to infrastructure are examined for water, stormwater, and sewer capacity.

As such, this TIA is not intended to satisfy the detailed analysis policies and methodology requirements of the Oregon Department of Transportation (ODOT) for specific development projects. Other matters relevant to ODOT such as satisfaction of the Transportation Planning Rule (TPR) have been addressed in other materials, to which ODOT has agreed.

At the time of development, a detailed TIA will be required that provides a more detailed examination of traffic impacts specific to the development proposed. At that time, it will be appropriate to scope a TIA that does meet ODOT analysis requirements, since there will then be direct impacts to both City and State facilities.

Other detailed traffic analyses such as a full queuing analysis will also be provided at that time. Queuing is *not* addressed here, since this study is only intended to address the capacity of the transportation system and provide more general information regarding the level of infrastructure that will be required. Queuing is more appropriately addressed at the time of development, when there is greater certainty regarding the timing and size of development.

This revised TIA incorporates revisions based on comments received from ODOT dated May 20, 2011 and from the City of Corvallis dated June 7, 2011.

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-333

EXECUTIVE SUMMARY

1. Eighty-six acres of industrial land is proposed for annexation into the City of Corvallis. This annexation will necessitate a change in zoning from the current Benton County Urban Industrial designation to the City of Corvallis General Industrial zone.

2. Under existing conditions, nearly all of the study area intersections are operating acceptably during the morning and evening peak hours. The intersections of Highway 34 at the Newport-Corvallis Highway Bypass and Van Buren Avenue at 2nd Street are currently reported as operating with volumes exceeding intersection capacity.

3. Future development under the proposed City zoning is projected to result in a total of 719 trips during the morning peak hour. During the evening peak hour, a total of 736 trips is projected. The projected weekday traffic volume is 5,958 trips with half entering and half exiting the site.

4. The following improvements were identified to mitigate development of the site, assuming that the project was built out immediately upon annexation.

Site access at Highway 20:	Exclusive left and right-turn lanes on Highway 20 and install a traffic signal
Circle Boulevard at Highway 20:	Dual eastbound left-turn lanes and eastbound right-turn lane
South Bypass at Highway 34:	Dual northbound right-turn lanes
Van Buren Avenue at 2nd Street:	Additional lane on eastbound bridge
Harrison Avenue at 2nd Street:	Westbound right-turn lane

5. Under year 2030 traffic conditions, a number of operational deficiencies were identified in the City's Corvallis Area Metropolitan Transportation Plan, Destination 2030 report and the Corvallis Willamette River Crossing report. Appropriate mitigations were also recommended in these documents to address long-term deficiencies. The proposed zone change will not result in the need for additional off-site transportation infrastructure beyond what has already been identified in the aforementioned documents.

6. The applicant has proposed a limitation on the maximum gross floor area of future development on the subject property at 855,906 square feet, a level below that is allowable under the existing County zoning. In order to make the limitation enforceable, the annexation and zone change application will be accompanied by a concurrent development application that will have this condition applied.

7. Based on a detailed analysis of the City of Corvallis' approval criteria, the proposed annexation and zone change meets all applicable City standards.

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CITY COUNCIL STAFF REPORT
EXHIBIT F-334

EXISTING CONDITIONS ANALYSIS

INTRODUCTION

A total of approximately 86 acres of industrial land is proposed for annexation into the City of Corvallis. This annexation will necessitate a change in zoning from the current Benton County Urban Industrial designation to the City of Corvallis General Industrial zone.

Future development of the site is proposed to consist of an industrial park with a gross floor area of 855,906 square feet. This is slightly smaller than the maximum of 893,328 square feet that is allowable under the existing County zoning.

The purpose of this analysis is to address the requirements of the City of Corvallis for approval of the proposed zone change. The analysis will include an examination of existing facilities and operation, a discussion of the increased traffic that could be attributed to the proposed zone change, and a determination of what additional facilities may be required to support future development of the site.

LOCATION DESCRIPTION

The subject property is located on the northwest side of NW 2nd Street, immediately west of the existing Hewlett Packard campus and is currently under agricultural use. The site will take access exclusively via NW 2nd Street, approximately mid-way between NE Waterworks Street and the Hewlett Packard campus entrance.

Based on discussions with City of Corvallis staff, the area subject to analysis includes the intersections of:

- NW 2nd Avenue (Hwy. 20) at the Site Access
- NW 2nd Avenue (Hwy. 20) at the HP Access
- Highway 20 at NE Circle Boulevard
- NE Circle Boulevard at NE Walnut Boulevard
- NE Circle Boulevard at NE 4 Acre Street
- N Circle Boulevard at OR 99W
- NW Circle Boulevard at NW 9th Street
- Corvallis-Lebanon Highway (OR 34) at the Newport-Corvallis Highway Bypass
- NW Harrison Boulevard at NW 2nd Street
- NW Van Buren Avenue at NW 2nd Street
- NW Harrison Boulevard at NW 3rd Street
- NW Van Buren Avenue at NW 3rd Street
- NW Harrison Boulevard at NW 4th Street
- NW Van Buren Avenue at NW 4th Street

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NW 2nd Street (Highway 20) is classified by the Oregon Department of Transportation as a Regional Highway. It generally has a two-lane cross section north of NE Waterworks Street and a three-lane cross-section including a center, two-way left-turn lane to the south. South of NW Van Buren Avenue it is a one-way road southbound, with two travel lanes. NW 2nd Street has a statutory speed limit of 55 mph along the site frontage, but transitions to a 35 mph posted speed limit south of the site. It has paved shoulders in the site vicinity.

The existing HP Campus access on Highway 20 is controlled by a stop sign on the southeast-bound HP access approach. Through traffic traveling along Highway 20 is free-flowing. The northeast-bound highway approach has a left-turn lane and a through lane. The southwest-bound highway approach has a through lane and a right-turn lane. The southeast-bound HP access approach has a left/through lane and a right-turn lane. The right-turn lane is accompanied by an acceleration lane southbound on Highway 20 that allows vehicles to enter the highway under yield control and merge with through traffic.

NE Circle Boulevard has a two-lane cross-section immediately west of Highway 20, widening to a five-lane cross-section including a center two-way left-turn lane approximately 2,000 feet west of Highway 20. It has a posted speed of 45 mph between Highway 20 and NE Walnut Boulevard, and a 35 mph speed limit west of NE Walnut Boulevard.

The intersection of Highway 20 at NE Circle Boulevard is controlled by a traffic signal. The northeast-bound approach has a left-turn lane and a through lane. The southwest-bound approach has a through lane and a right-turn lane. The southeast-bound Circle Boulevard approach has a single lane for all movements. Vehicles turning left from Highway 20 onto NE Circle Boulevard must yield to oncoming traffic.

NE Walnut Boulevard has a three-lane cross-section including a center two-way left-turn lane and a posted speed limit of 35 mph in the vicinity of NE Circle Boulevard. It has curbs, gutters and sidewalks on both sides of the roadway.

The intersection of NE Circle Boulevard at NE Walnut Street is controlled by a traffic signal with protected/permitted left-turn phasing. The south leg of the intersection is formed by the HP Campus entrance. The eastbound approach has a left-turn lane, two through lanes and a right-turn lane. The westbound approach has a left-turn lane, a through lane and a shared through/right lane. The northbound and southbound approaches each have a left-turn lane and a shared through/right lane.

Highway 99W is classified by the Oregon Department of Transportation as a Regional Highway. It generally has a two-lane cross-section, but widens to four lanes from approximately 500 feet south of N Circle Boulevard to approximately 500 feet north of N Conifer Boulevard. Approximately 1,200 feet north of NW Buchanan Avenue it diverges to form a couplet, with northbound traffic on NW 3rd Street and southbound traffic on NW 4th Street. The posted speed limit is 50 mph in the section north of the couplet, reduces to 40 mph between the start of the couplet and 500 feet north of Polk Avenue, and reduces further to 25 mph between Polk Avenue and the south end of the couplet.

The intersection of N Circle Boulevard at Highway 99W is controlled by an eight-phase traffic signal. All approaches have protected left-turn phasing. The eastbound approach has a left-turn lane, two through lanes and a right-turn lane. The northbound approach has dual left-turn lanes, a through

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and a shared through/right-turn lane. The other two approaches each have a left-turn lane, a through lane and a shared through/right lane.

NW 9th Street has a five-lane cross-section including a center two-way left turn lane with a posted speed limit of 35 mph in the vicinity of NW Circle Boulevard. Curbs, gutters, sidewalks and bicycle lanes are in place on both sides of the roadway.

The intersection of NW Circle Boulevard at NW 9th Street is controlled by an eight-phase traffic signal. All approaches have a left-turn lane with protected phasing, a through lane, and a shared through/right lane.

The Corvallis-Lebanon Highway (OR 34) is classified by the Oregon as a Statewide Expressway. It has a five-lane cross-section including a center two-way left-turn lane east of the Newport-Corvallis Highway Bypass. To the west, it divides into a couplet formed by Harrison Boulevard and Van Buren Avenue. The Harrison Boulevard bridge has two westbound travel lanes, which widen to a three-lane cross section west of NW 2nd Street. The Van Buren Street bridge has a single eastbound travel lane, also widening to a three-lane cross-section west of NW 2nd Street. It has a posted speed limit of 45 mph in the vicinity of the Newport-Corvallis Highway Bypass, reducing to 25 mph approximately 600 feet to the west as the couplet begins.

The intersection of OR 34 at the Newport-Corvallis Highway Bypass is controlled by a traffic signal. Protected left-turn phasing is provided for the eastbound and westbound intersection approaches, while the northbound and southbound have permitted left-turn phasing. The eastbound and westbound approaches each have a left-turn lane, a through lane and a shared through/right lane. The northbound approach has a shared left/through lane and an exclusive right-turn lane. The southbound approach has a single, shared lane for all movements.

The intersection of NW Harrison Boulevard at NW 2nd Street is controlled by a traffic signal. The westbound Harrison Boulevard approach has a left/through lane and a through/right lane. The northbound 2nd Street approach has a left-turn lane and a through lane. The southbound approach has a through lane and a right-turn lane.

The intersection of NW Van Buren Avenue at NW 2nd Street is controlled by a traffic signal. The eastbound Harrison Boulevard approach has a left/through lane, an exclusive through lane and a through/right lane. The southbound approach has a left-turn lane and an exclusive through lane. The south leg of the intersection has no approach lanes since 2nd Street is a one-way road southbound south of Harrison Boulevard.

The intersection of NW Harrison Boulevard at NW 3rd Street is controlled by a traffic signal. The westbound Harrison Boulevard approach has two through lanes and a through/right lane. The northbound approach has an exclusive left-turn lane, a shared left/through lane and an exclusive through lane.

The intersection of NW Van Buren Avenue at NW 3rd Street is controlled by a traffic signal. The eastbound Van Buren Avenue approach has a left/through lane and two exclusive through lanes. The northbound approach has two exclusive through lanes and a through/right lane.

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The intersection of NW Harrison Boulevard at NW 4th Street is controlled by a traffic signal. The westbound approach has a left/through lane and two exclusive through lanes. The southbound approach has a left/through lane and an exclusive through lane.

The intersection of NW Van Buren Avenue at NW 4th Street is controlled by a traffic signal. The eastbound Van Buren Avenue approach has three exclusive through lanes and a right-turn lane. The southbound approach has a left/through lane and two exclusive through lanes.

Figure 1 on page nine shows the project study area, including the analysis intersection configurations and traffic control devices as well as the location of the subject property.

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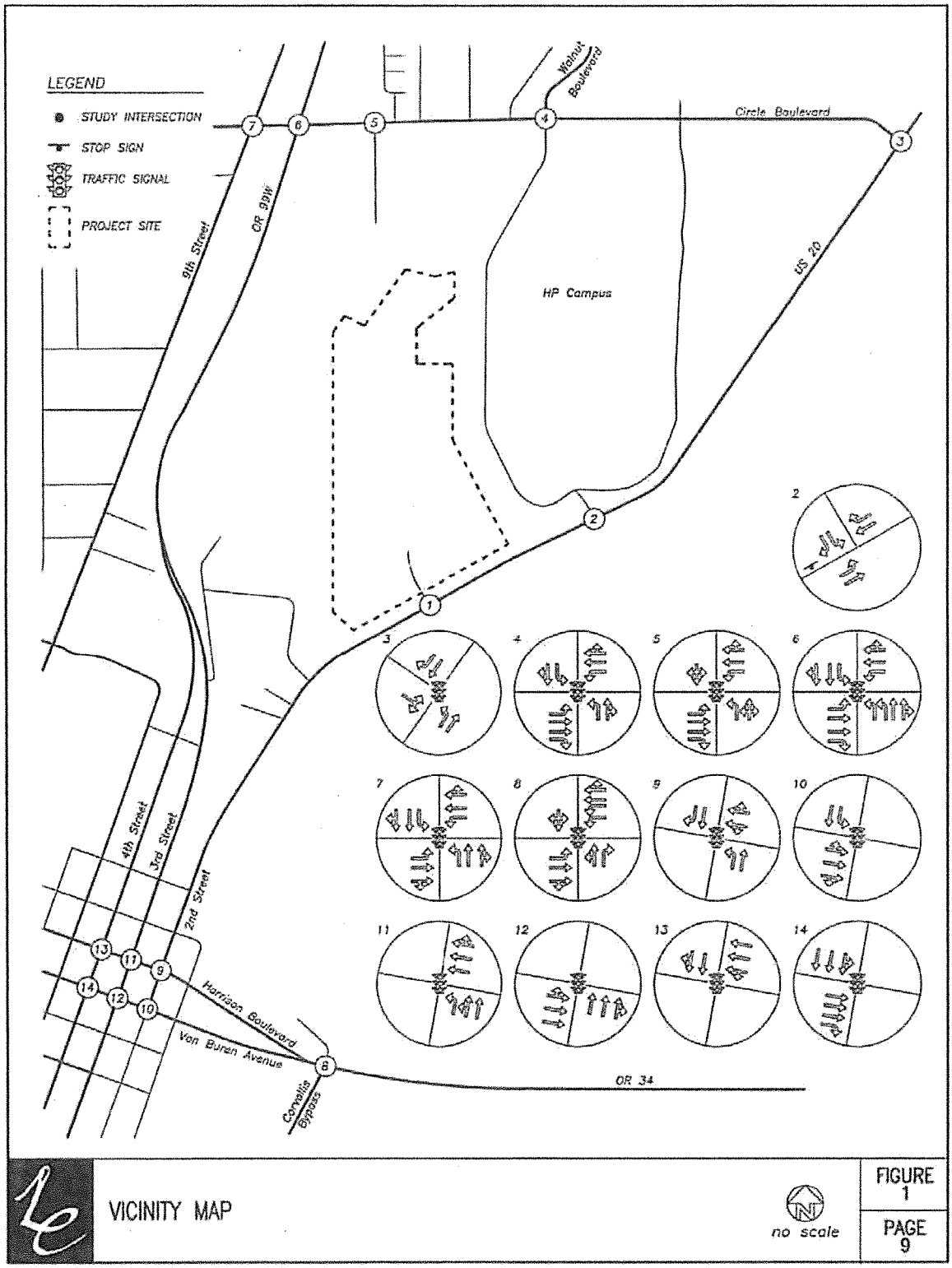

VICINITY MAP

no scale

FIGURE 1

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EXISTING TRAFFIC VOLUMES

Several transportation planning and analysis reports have been previously prepared to analyze significant intersections and determine potential mitigation. The Corvallis Area Metropolitan Transportation Plan, Destination 2030 (CAMPO) report analyzed several intersections within the City, including a number of the subject intersections. The subject intersections that are discussed in that report and are also included in this study area are:

- Circle Boulevard at 9th Street,
- Circle Boulevard at Highway 99W,
- Circle Boulevard at 4 Acres Road, and
- Circle Boulevard at Highway 20.

These intersections were analyzed for evening peak hour conditions.

An additional report, Corvallis Willamette River Crossing (CWRC), analyzed several intersections within the downtown area and also included several of the study intersections. The intersections discussed in this report are:

- 2nd Street at Harrison Bouelvard,
- 2nd Street at Van Buren Avenue,
- 3rd Street at Harrison Boulevard,
- 3rd Street at Van Buren Avenue,
- 4th Street at Harrison Boulevard,
- 4th Street at Van Buren Avenue, and
- South Corvallis Bypass at Highway 34.

These intersections were analyzed for both morning and evening peak hour conditions.

Historic traffic counts were used at the intersection of Circle Boulevard and Walnut Boulevard and the HP campus access onto Highway 20, since these intersections were not included in the aforementioned documents. Traffic count data is provided in the appendix.

For both the CAMPO and CWRC, traffic count data and available intersection analysis output were used for this report to establish baseline, or "existing" conditions. These conditions represent a baseline for examination of future conditions and have been adjusted for seasonal variations. In this report, the volumes were *not* adjusted to a common analysis year, as they are generally intended to represent baseline conditions. Moreover, traffic counts in Corvallis have been found to be relatively stable, or in some instances, decreasing, likely due to economic conditions. A variation across a small number in years for baseline conditions will not materially change the results of this analysis.

The existing traffic volumes for the morning peak hour are shown in Figure 2 on page 11. Existing traffic volumes for the evening peak hour are shown in Figure 3 on page 12.

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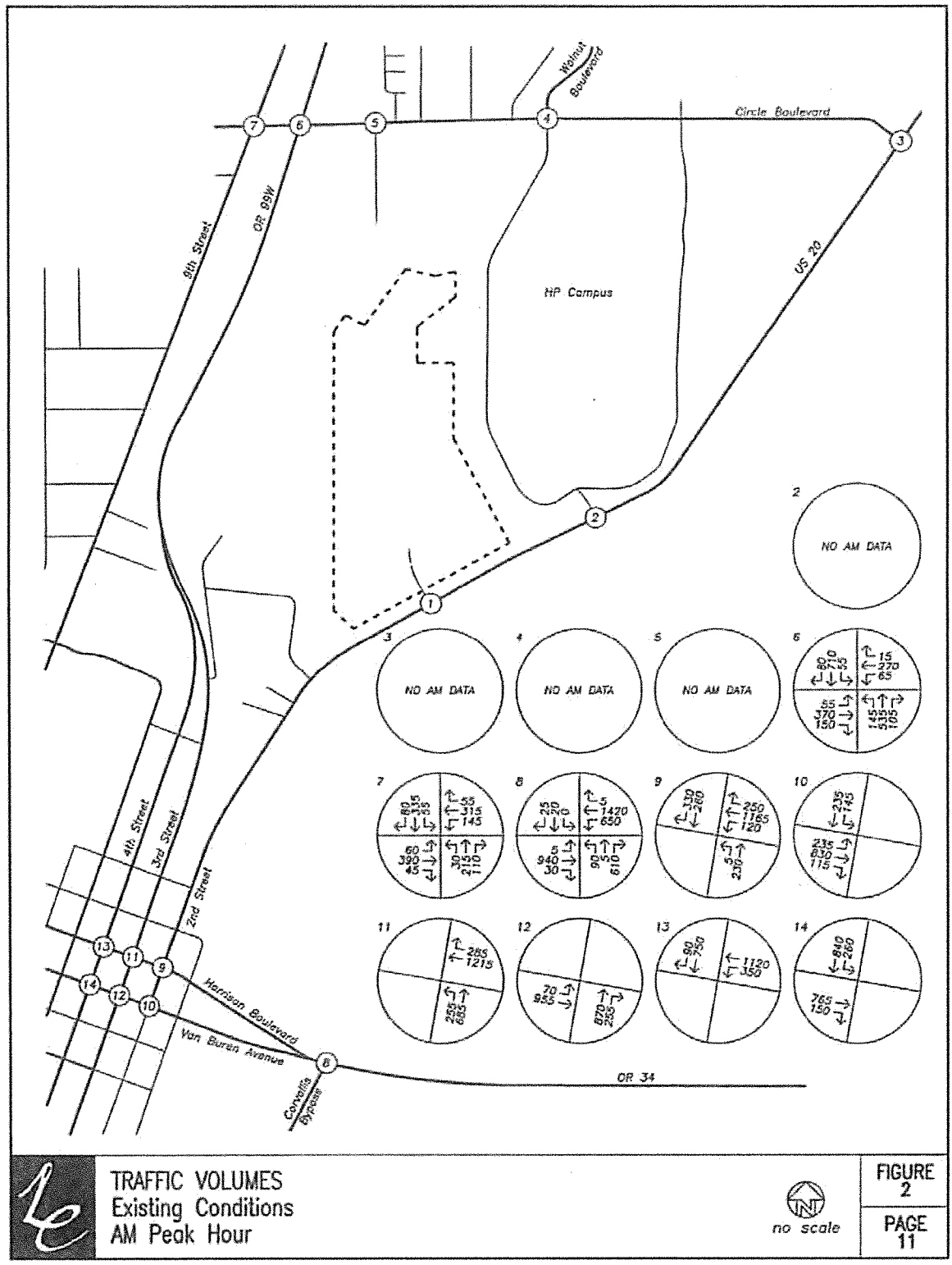

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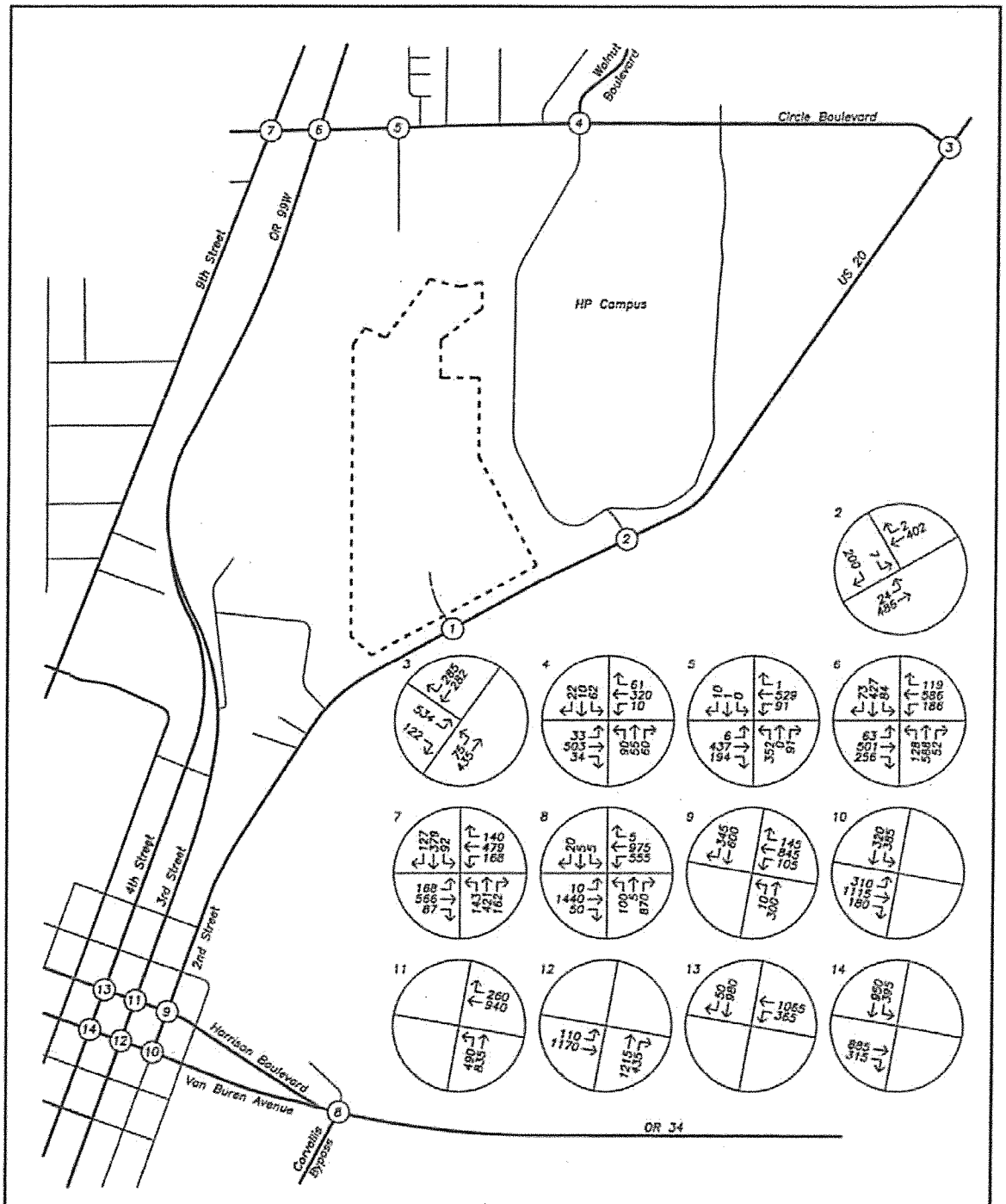

TRAFFIC VOLUMES
Existing Conditions
PM Peak Hour

no scale

FIGURE 3

PAGE 12

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INTERSECTION CAPACITY & LEVEL OF SERVICE

Both the CAMPO and Corvallis Willamette River Crossing reports analyze the study area intersections for existing conditions. The CAMPO report did not analyze for morning peak hour conditions; therefore, some of the study area intersections were only analyzed for evening peak hour conditions. Upon comparing recent manual turning movement counts and the historical data, it was determined that the evening peak hour volumes generally exceed the morning peak hour volumes. Similarly, the operational analysis results indicate that the evening peak hour is the critical period. Accordingly, the primary focus of this analysis is on intersection operation during the evening peak hour.

For all signalized intersections, a saturation flow rate of 1800 passenger cars per hour per lane was used. This is consistent with the analysis done for both CAMPO and CWRC. All analysis parameters from both documents were reproduced to the extent possible to replicate intersection performance. This includes traffic signal timing data, peak hour factors, heavy vehicle percentages, and other analysis parameters.

The CAMPO report shows that the study intersections along Circle Boulevard are functioning within acceptable city standards, although the intersection of Circle Boulevard at Highway 20 was found to exceed ODOT's v/c ratio standard.

In addition, Corvallis Willamette River Crossing report identified only two subject intersections that currently exceed either the City's or ODOT's operational standards. The intersection of 2nd Street at Van Buren Avenue is functioning over capacity during the evening peak hour as well as functioning with reasonably high delays. Much of the reason this intersection operates unacceptably is the number of lanes is reduced from three travel lanes to one. This results in a lane imbalance and long queues in the center through lane.

The intersection of the South Bypass at Highway 34 was also shown to exceed ODOT's operational standards. The document also reports that the intersection is subject to high delays and long queues in the westbound direction.

Level of service and v/c ratios for the morning and evening peak hours at the study intersections are shown in the tables on pages 24 and 25.

City of Corvallis establishes level of service and v/c ratio standards for signalized and unsignalized intersections in the 1996 Transportation Plan. These standards are based on analysis procedures dating back to 1985, which are rather antiquated compared to modern intersection analysis methods. For this report, levels of service and v/c ratios are reported based on current methodology in the *Highway Capacity Manual 2000*. Other documents which are used directly in this report, such as CAMPO and CWRC also use this same methodology, so consistency is critical. The exception to this is the intersection of the HP campus access with Highway 20, which is discussed in detail later this report.

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POTENTIAL SITE DEVELOPMENT

TRIP GENERATION

To estimate trips for both City and County zoning scenarios, trip rates from the manual *Trip Generation*, Eighth Edition, published by the Institute of Transportation Engineers (ITE) were used. Since both agencies allow urban industrial uses in the two zones being compared, land use code 130, *Industrial Park*, was used in both scenarios. In addition, vocational schools are allowed as an outright use in the County zoning district. Specific uses are addressed in more detail below.

As established in other application materials, a baseline level of development in the current Benton County Urban Industrial zone has been established by a maximum floor area ratio (FAR) of 0.4. Benton County Community Development concurred with the use of this FAR. A total of 51.27 acres are developable and not encumbered by City natural features overlays. Using this acreage and FAR, a total of 893,328 square feet of building area could be constructed. Under the City zoning, the applicant is proposing a maximum floor area of 855,906 square feet, or 37,422 square feet less than the reasonable worst-case development under the County zoning.

Although there is no specific industrial use proposed at this time, the range of uses that would be allowed in the County zoning district were examined. County code allows typical urban industrial uses such as research, testing, manufacturing, and assembly of products. The best match for this wide variety of uses is either *General Light Industrial* or *Industrial Park*. Of the two, *General Light Industrial* has the highest trip rates. In order to maintain a reasonable development assumption, the higher of the two uses was thrown out, and *Industrial Park* was used.

In addition to the previously mentioned industrial uses, the County zoning district allows a vocational school. Accordingly, it was assumed that the total building area in the County of 893,328 square feet would include 80,000 square feet devoted to a vocational school, with the balance as Industrial Park. To calculate the trip generation of the vocational school, trip rates were used from land-use code 540, *Junior/Community College*. The trip rates are based on the building floor area. The description in the ITE manual of this category states, "This land use includes two-year junior, community, or technical colleges."

For consistency and for a reasonable development assumption, the land-use category *Industrial Park* was used for development under the City zoning district. The City zoning code does not specifically allow vocational schools as an outright allowed use.

The table below offers a comparison of the trip generation potential for each scenario. Detailed trip generation calculations are attached to this memorandum.

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TRIP GENERATION SUMMARY			
	AM Peak Hour	*PM Peak Hour*	*Weekday*
County Zoning			
80,000 sf Vocational School	239	203	2,200
813,328 sf Industrial Park	683	699	5,660
Total County Zoning	922	902	7,860
City Zoning			
893,328 sf Industrial Park	750	768	6,218
Net Change due to Annexation	*-172*	*-134*	*-1,642*
City Zoning (as Proposed)			
855,906 sf Industrial Park	719	736	5,958

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TRIP DISTRIBUTION

The directional distribution of the trips was derived based on the assumption that all site trips will enter and exit via a single point of access on NW 2nd Avenue. In addition, destination data taken from a Select Zone Assignment (SZA) obtained from ODOT's Travel Demand Model for the Corvallis area was compared with existing travel patterns in the project study area.

In this revised TIA, the trip distribution pattern was revised to decrease the amount of traffic assigned to NW 2nd Street south of NW Van Buren Avenue, despite the SZA from the model showing this as a prominent route. ODOT had raised concern regarding the appropriateness of the prior distribution, since SW 2nd Avenue is a local street. In this revised report, fewer trips are assigned to SW 2nd Avenue and more trips are assigned to NW Harrison and NW Van Buren Avenues east of SW 4th Street.

Figure 4 on page 17 shows the directional distribution and assignment of site trips during the morning peak hour. Figure 5 on page 18 shows the directional distribution and assignment of site trips during the evening peak hour. Figure 6 on page 19 shows a detail view of the inbound and outbound trip distribution percentages through the Downtown Corvallis grid.

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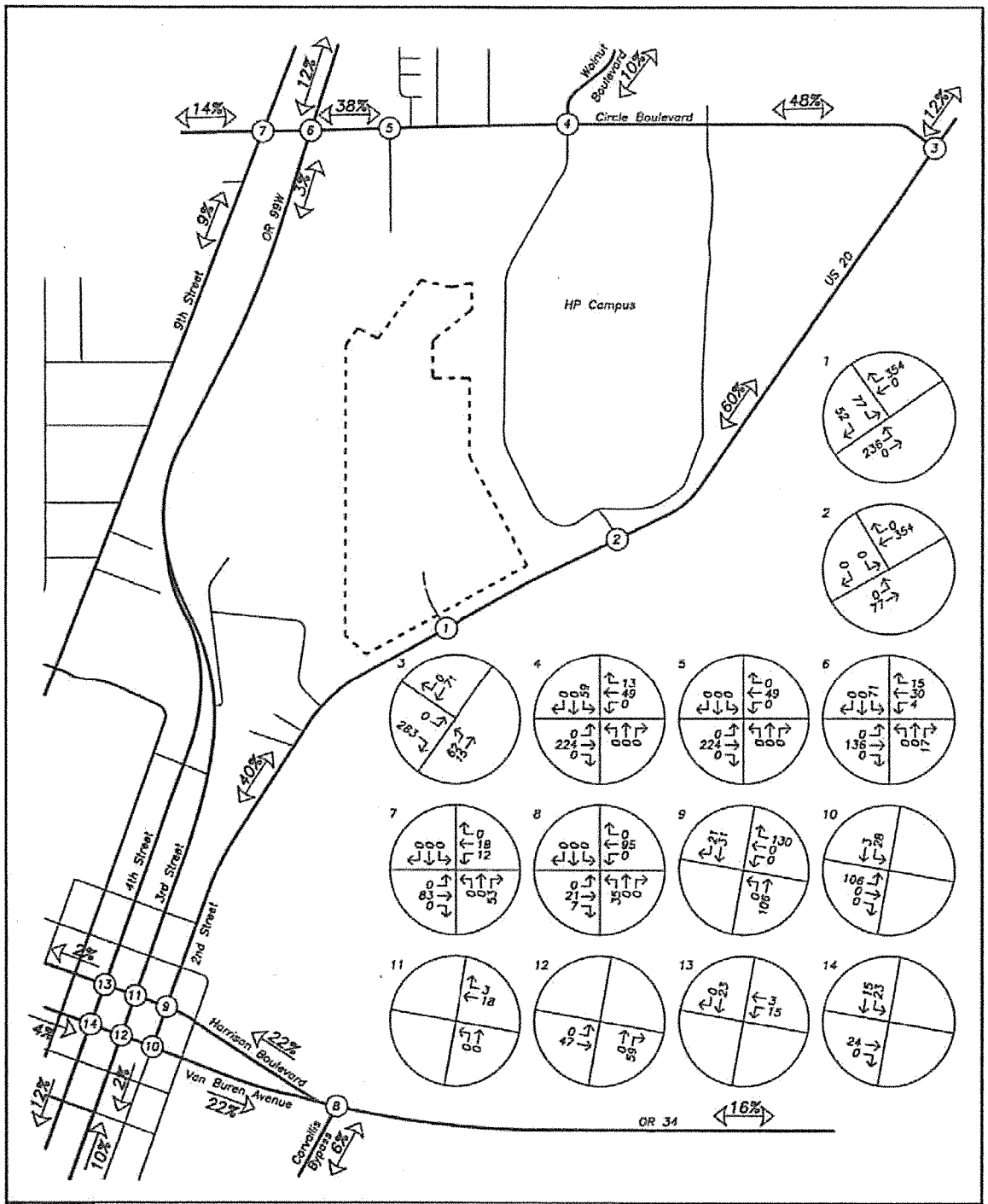

SITE TRIP DISTRIBUTION & ASSIGNMENT
Inbound & Outbound Percentages
AM Peak Hour

no scale

FIGURE 4

PAGE 17

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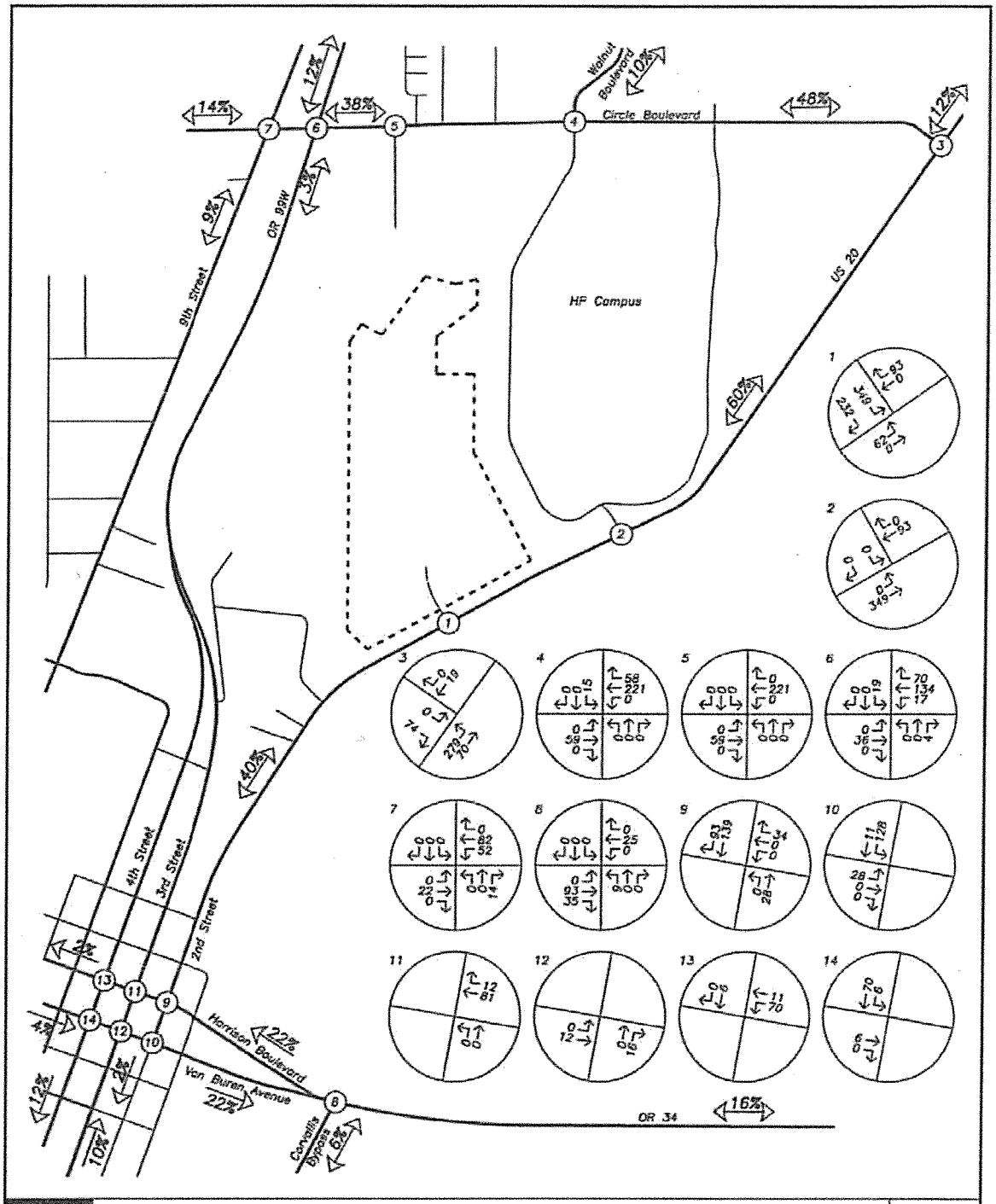

SITE TRIP DISTRIBUTION & ASSIGNMENT
Inbound & Outbound Percentages
PM Peak Hour

no scale

FIGURE 5

PAGE 18

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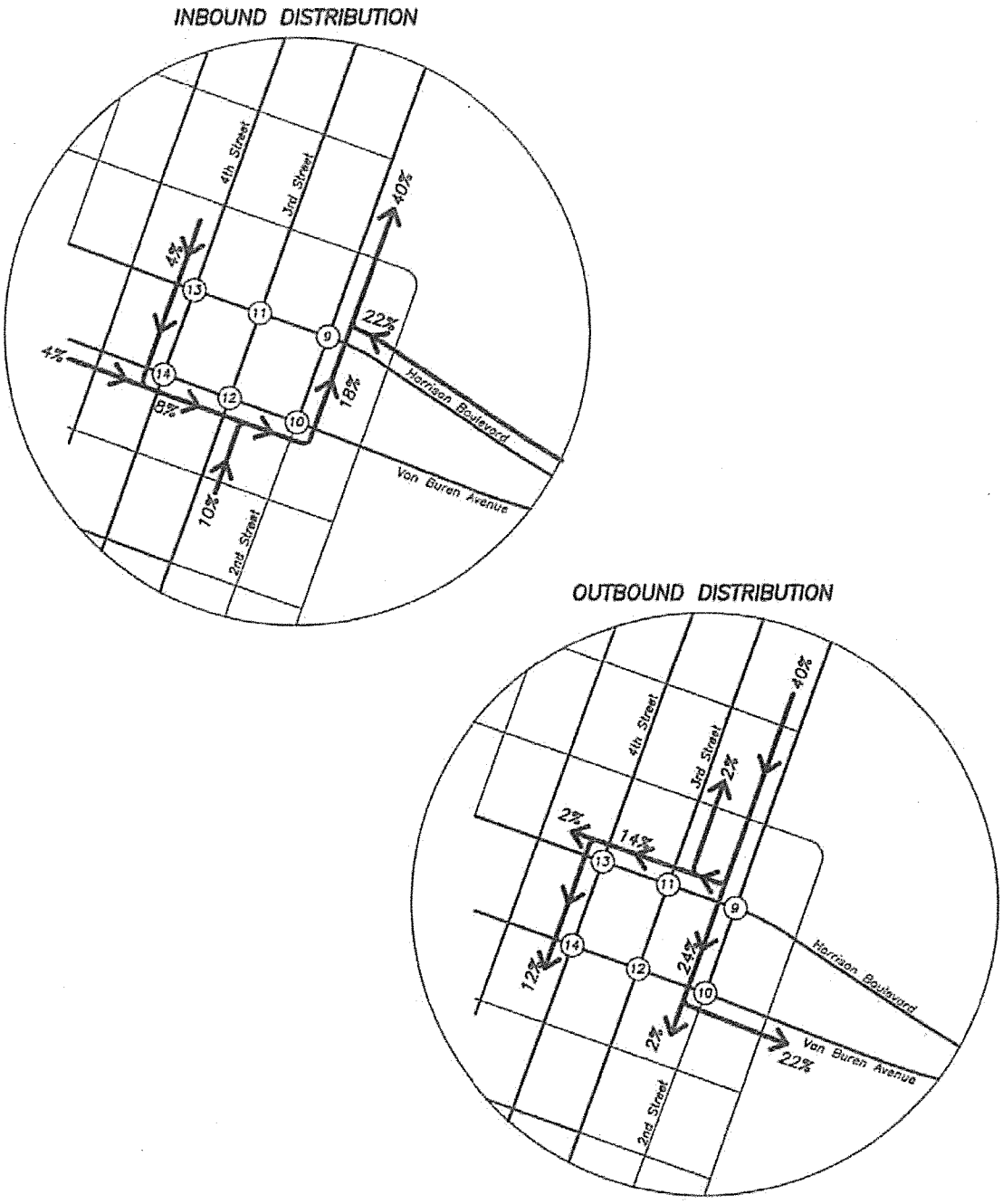

SITE TRIP DISTRIBUTION
Downtown Grid Detail
AM & PM Peak Hours

no scale

FIGURE 6

TRANSPORTATION PLANNING RULE ANALYSIS

Oregon's Transportation Planning Rule (TPR) ensures that the transportation system is capable of supporting potential increases in traffic intensity that could result from changes to adopted plans and land use regulations.

The annexation and change from an urban industrial County zone to a City industrial zone will not change the functional classifications of any surrounding roadways.

As explained in the Trip Generation section of this analysis, the applicant is proposing a maximum building area in the City zoning district that is considerably less traffic intensive than a reasonable worst-case development under the current Benton County zoning. By limiting the maximum level of development permissible on the property to a level that does not exceed what is allowable under existing conditions, the applicant has assured that increases in traffic from the proposed development cannot result in a significant affect as defined under the TPR.

Because the City of Corvallis does not place conditions of approval on annexation or zone change applications, a Planned Development Overlay request and a Detail Development Plan application will be submitted concurrently with the zoning application. This enables the City to affix conditions of approval to the property and ensure that they will apply to any subsequent development plans for the property as additional development occurs in the future.

A detailed memorandum addressing each specific element of the Transportation Planning Rule is included in the technical appendix.

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SITE IMPACTS & FUTURE CONDITIONS

SITE DEVELOPMENT IMPACTS

To determine the impacts of development on the study area intersection, the site traffic volumes from Figures 4 and 5 were added to the existing morning and evening peak hour traffic volumes. Figures 7 & 8 on pages 22 and 23 show the sum of existing traffic volumes and site trips from development of the site. This was done at the direction of City of Corvallis staff to demonstrate the incremental impacts of site development on the transportation system in accordance with LDC 2.6.30.03.i.2. For intersections that require mitigation upon the addition of traffic, improvements were identified to mitigate the impacts of site traffic in accordance with LDC 2.6.30.03.i.3.

The tables on pages 24 and 25 show the operation of the study area intersections both for existing conditions and with development of the site. Detailed capacity analysis worksheets are included in the appendix.

In general, mitigations were selected that are consistent with identified transportation projects in both CAMPO and CWRC. The intersections of the South Bypass at Highway 34, Van Buren Avenue at 2nd Street, and Harrison Boulevard at 2nd Street experience poor operation during the peak hours, which is well documented in prior analyses. To mitigate the impacts of the site, local improvements were identified that are not called out specifically in CAMPO or CWRC. Long-term transportation planning efforts such as the CWRC report seek system-wide solutions to this traffic congestion. As explained in detail in this report, traffic from development of the site is included in these long-term planning efforts and a system-wide solution is still appropriate. However, to satisfy the City's LDC, smaller local improvements were identified that would mitigate the impacts from development of the site.

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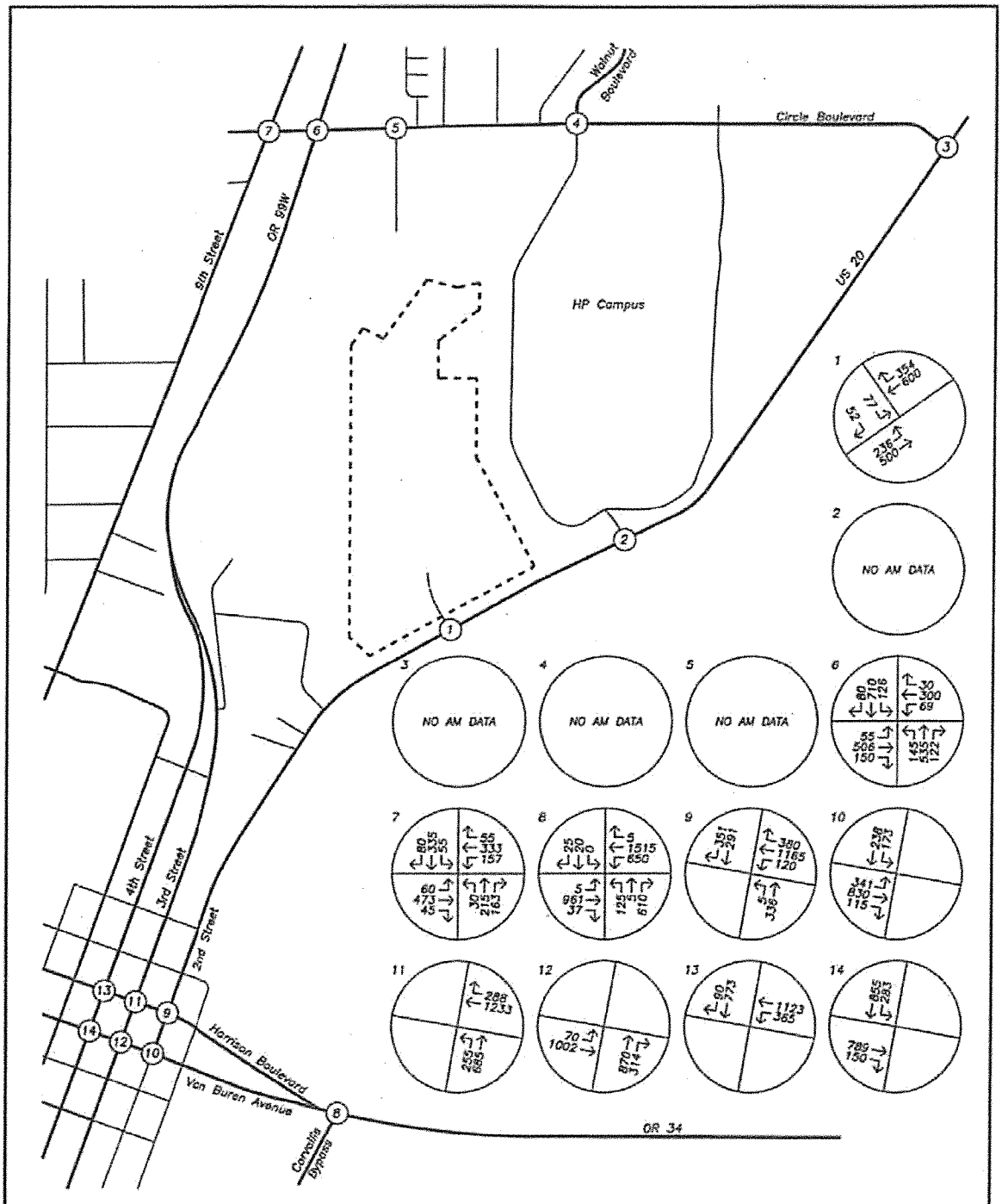

TRAFFIC VOLUMES
Existing plus Site Trips Conditions
AM Peak Hour

no scale

FIGURE 7

PAGE 22

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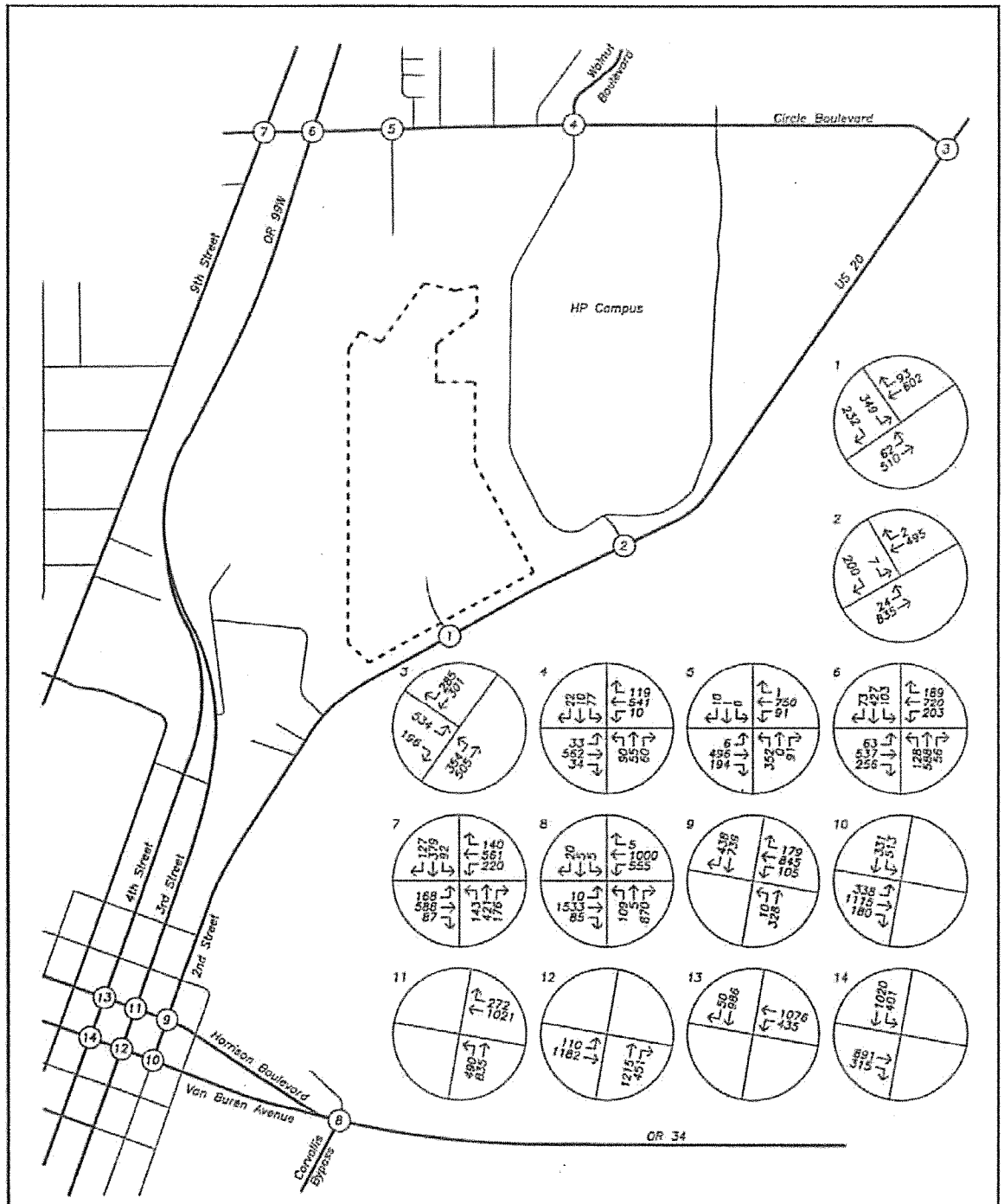

TRAFFIC VOLUMES
Existing plus Site Trips Conditions
PM Peak Hour

no scale

FIGURE 8

LEVEL OF SERVICE SUMMARY

Table 1 of 2

	AM Peak Hour		PM Peak Hour	
	LOS	v/c	LOS	v/c
Site Access/Highway 20				
Existing Conditions	--	--	--	--
Existing + Site Trips	F	>1.0	F	>1.0
Exist + Site, Mitigated*	D	0.76	C	0.85
* Install signal, NB left-turn lane, SB right-turn lane, 2 egress lanes				
HP Access/Highway 20				
Existing Conditions	--	--	C	0.03
Existing + Site Trips	--	--	E*	0.07
*LOS D based on Reserve Capacity & 1996 Transportation Plan				
Circle Boulevard/Highway 20				
Existing Conditions	--	--	D	0.88
Existing + Site Trips	--	--	F	1.18
Exist + Site, Mitigated*	--	--	C	0.84
* Construct separate EB left and right-turn lanes on Circle Boulevard				
Circle Boulevard/Walnut Boulevard				
Existing Conditions	--	--	C	0.37
Existing + Site Trips	--	--	C	0.46
Circle Boulevard/4 Acres Street				
Existing Conditions	--	--	A	0.48
Existing + Site Trips	--	--	B	0.58
Circle Boulevard/Highway 99W				
Existing Conditions	--	--	C	0.72
Existing + Site Trips	--	--	D	0.82
Circle Boulevard/9th Street				
Existing Conditions	--	--	B	0.69
Existing + Site Trips	--	--	D	0.75

LOS = Level of Service
v/c = Volume-to-Capacity Ratio

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LEVEL OF SERVICE SUMMARY

Table 2 of 2

	AM Peak Hour		PM Peak Hour	
	LOS	v/c	LOS	v/c
South Bypass/Highway 34				
Existing Conditions	E	0.98	F	1.28
Existing + Site Trips	E	1.04	F	1.33
Exist + Site, Mitigated*	E	0.92	F	1.06
* Construct dual NB right-turn lanes on South Bypass				
Harrison Boulevard/2nd Street				
Existing Conditions	F	0.82	C	0.79
Existing + Site Trips	F	0.88	C	0.90
Exist + Site, Mitigated*	C	0.74	C	0.83
* Construct WB right-turn lane on Harrison Boulevard				
Van Buren Avenue/2nd Street				
Existing Conditions	D	0.76	F	1.08
Existing + Site Trips	D	0.76	F	1.18
Exist + Site, Mitigated *	C	0.52	C	0.87
* Bridge widening or replacement for two EB travel lanes				
Harrison Boulevard/3rd Street				
Existing Conditions	A	0.65	A	0.63
Existing + Site Trips	B	0.65	A	0.65
Van Buren Avenue/3rd Street				
Existing Conditions	B	0.64	D	0.89
Existing + Site Trips	B	0.69	D	0.90
Harrison Boulevard/4th Street				
Existing Conditions	B	0.56	B	0.59
Existing + Site Trips	B	0.57	B	0.61
Van Buren Avenue/4th Street				
Existing Conditions	A	0.47	B	0.57
Existing + Site Trips	B	0.49	B	0.60

LOS = Level of Service
v/c = Volume-to-Capacity Ratio

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Highway 20 at Site Access

With complete build out of the site, the access to Highway 20 will fail and operate over capacity as an unsignalized intersection. Traffic signal warrants will clearly be satisfied, and separate left and right-turn lanes on Highway 20 will also be required. With these mitigations in place, the intersection will operate acceptably at site build out as shown in the tables above.

The site access intersection was analyzed for traffic signal warrants in accordance with procedures from ODOT's Analysis Procedures Manual. Two of the traffic signal warrants from the 2009 Manual on Uniform Control Devices (MUTCD), published by the U.S. Department of Transportation, Federal Highway Administration, were evaluated at the intersection under the existing plus site trips conditions. The two warrants evaluated are the Minimum Vehicular Volume Warrant, Warrant 1, and the Peak Hour Warrant, Warrant 3. The right-turn reduction was calculated in accordance with ODOT policy. The 70-percent warrants were used since travel speeds on Highway 20 are in excess of 40 mph.

Highway 20 at HP Access

Based on *Highway Capacity Manual 2000* methodology, this intersection degrades from level of service C to level of service E with addition of site trips. It is important to understand that this level of service applies *only* to the left turns exiting the campus. This volume is very low, with only seven vehicles during the evening peak hour. The remaining 1,556 vehicles entering the intersection during the peak hour are either free flowing with no delay or are operating at a favorable level of service. This left-turn volume is very low since drivers headed north are much more conveniently served by the direct access to Circle Boulevard.

For these reasons, it is neither practical nor recommended mitigation be provided for only seven vehicles during the peak hour. Moreover, when examined in terms of Reserve Capacity, which is consistent with the City's 1996 Transportation Plan, the left-turn movement out of the site has a reserve capacity of 112 vehicles. This equates to an acceptable level of service D in Table 3-10 of the Transportation Plan.

Highway 20 at Circle Boulevard

Presently there is only a single eastbound lane on Circle Boulevard as it approaches Highway 20. The CAMPO report identifies a four-lane cross-section on Circle Boulevard as a Financially Constrained Project. While there is a right-turn flare at the intersection, a queue of left-turning vehicles easily blocks access to the flared approach. Installing dual left-turn lanes and a right-turn lane would mitigate the impacts from site development and generally be consistent with the configuration of Circle Boulevard that is considered in the CAMPO report.

South Bypass at Highway 34, Van Buren Avenue at 2nd Street, and Harrison Boulevard at 2nd Street

As discussed previously, these three intersections are currently operating over capacity during peak conditions, which will be exacerbated by additional traffic from the site. There are no Financially Constrained improvements identified in either the CAMPO or CWRC reports for this intersection, since these documents consider a system-wide improvement.

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2030 CONDITIONS

The 2030 projected traffic volumes were obtained from the City's Corvallis Area Metropolitan Transportation Plan, Destination 2030 (CAMPO) report. The report includes 2030 volumes for the study intersections along Circle Boulevard.

For the intersections in the downtown area, the Corvallis Willamette River Crossing report was used. This report includes projected 2030 traffic volumes for the subject intersections in the downtown area. The Corvallis Willamette River Crossing report includes multiple build scenarios that identify specific improvements to the subject streets and intersections. It is stated in the summary of the report that the no-build scenario conformed most closely to the volumes analyzed in the CAMPO report and for this reason, the no-build volumes were used for this analysis.

Because the subject property is within the Urban Growth Boundary and is included as developable area in the City's Comprehensive Plan, the impacts of the industrial development within the City are included in the CAMPO and Corvallis Willamette River Crossing reports. The conclusions and mitigations for 2030 conditions shown in those report will include the site traffic. While some operational problems are identified under the year 2030 no-build conditions analysis, appropriate mitigations are also identified for these deficiencies. The proposed City zoning will not result in the need for additional mitigations in 2030 beyond those contemplated in the previous analyses.

Figure 9 on page 28 shows the year 2030 evening peak hour traffic volumes.

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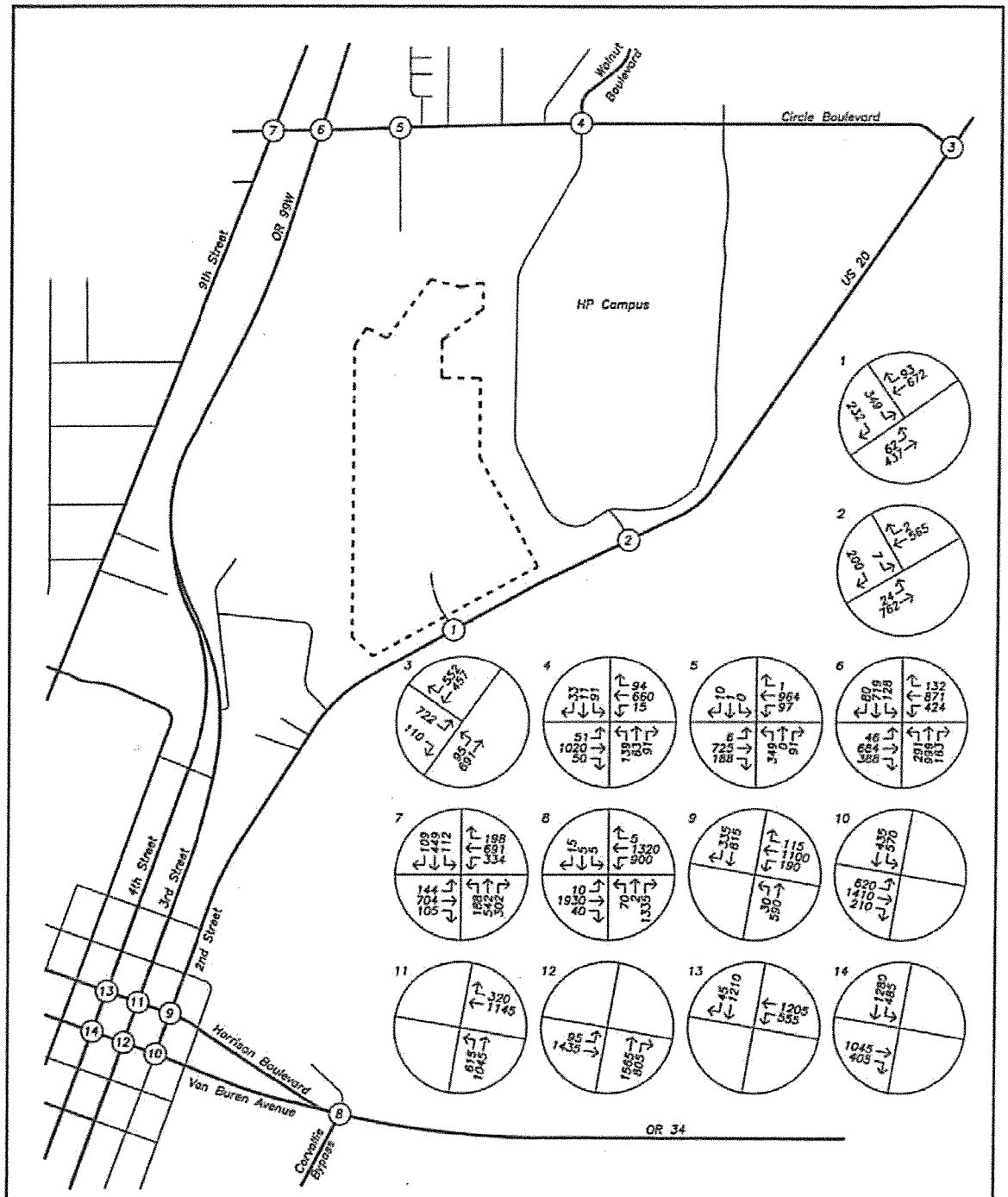

TRAFFIC VOLUMES
Year 2030 Background plus Site Trips Conditions
PM Peak Hour

no scale

FIGURE 9

CONCLUSIONS & RECOMMENDATIONS

PROPOSED LIMITATION ON DEVELOPMENT

The applicant has proposed that a maximum gross floor area of 855,906 square feet be established for the subject property. This limitation will ensure that the maximum development potential of the subject property is below what is allowable under the existing County zoning.

In order to make the proposed maximum floor area enforceable, the applicant has proposed a development concurrently with the annexation and zone change proposal. The development will consist only of installation of a sidewalk along the site frontage; however it will be encumbered with the proposed maximum gross floor area restriction, which will apply to all future development applications for the property. Using this approach, the applicant and City have an appropriate means to create an enforceable limitation on future development of the property.

SATISFACTION OF APPROVAL CRITERIA

City of Corvallis Land Development Code Chapter 2.6 contains review criteria for annexations. The criteria that apply to transportation and traffic impacts are quoted in *italics* and addressed individually below.

2.6.30.03(i)(1)
Statement of availability, capacity, and status of existing water, sewer, storm drainage, transportation, park, and school facilities; and franchise utilities. The franchise utility companies shall provide a written statement confirming the ability to serve the site. The applicant shall obtain information from the affected service and utility providers using GIS base maps where available;

The existing capacity and operation of the transportation system is addressed in the Existing Conditions section beginning on page five.

2.6.30.03(i)(2)
Statement of increased demand for the facilities that will be generated by the proposed Annexation. The applicant shall refer to the criteria of the City's facility master plans, available via the City Engineer, to determine the methodology used to estimate public facility demands. Information related to an actual development proposal may be included for informational purposes. At minimum, the demand calculations associated with the full range of development potential (min. to max.) under proposed land uses designations shall be addressed in the analysis;

To examine the incremental impacts of development on the site, the site trips were added to existing morning and evening peak hour traffic volumes. The impacts of the site were quantified and resulting intersection improvements were identified. This is explained in detail in the Site Development Impacts section beginning on page 21.

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2.6.30.03(i)(3)
Statement of additional facilities required to meet the increased demand and phasing of such facilities in accordance with projected demand. The applicant shall review adopted public facility plans, master plans, and capital improvement programs, and state whether additional facilities are planned or programmed for the Annexation area. Information related to an actual development proposal may be included for informational purposes. At minimum, the demand calculations associated with the full range of development potential (min. to max.) under the proposed land uses designations shall be addressed in the analysis;

With the proposed limitation on development on the site, the *increased* demand as a result of the proposed annexation is zero. The eventual development will be consistent with the City of Corvallis Comprehensive Plan and will not increase development potential above what was considered in the Transportation System Plan. Still, development of the site will add trips to the transportation system that are currently not present. As stated previously, site trips were added to existing intersection volumes and mitigations were identified as a result of site development. These mitigations are identified on page 21.

2.6.30.03(i)(4)
Traffic impact study, if required by the City Engineer. The City Engineer shall define the scope of the traffic impact study based on established procedures. Information related to an actual development proposal may be included for informational purposes. At minimum, the traffic calculations associated with the full range of development potential (min. to max.) under the proposed land uses designations shall be addressed in the analysis. See also Section 4.0.60.a;

The scope of work for this traffic impact study was negotiated with the City of Corvallis. In addition, the Oregon Department of Transportation (ODOT) did provide a detailed scope of work for a traffic impact study in July of 2009. That scope of work was prepared considering an assumed *increase* in development potential on the site in moving from the Benton County Urban Industrial zone to the City of Corvallis General Industrial zone. As demonstrated in the Trip Generation analysis on page 14, the annexation as proposed will *decrease* the development potential of the site. Because of this, the scope of this report is more limited in scope than the July 2009 scope provided by ODOT.

It is recognized that at the time of significant development on the site, a detailed traffic impact study will be required, including detailed operational analyses of roadways and intersections that will be impacted by the development as proposed. As appropriate, mitigation will be proposed to accommodate development on the site at that time.

2.6.30.06(c)(4)
Transportation facilities consistent with the City's Transportation Plan and Chapter 4.0 - Improvements Required with Development

At the time of significant development on the site, transportation facilities will be improved as appropriate to comply with Chapter 4.0. Because the annexation and change in zoning is consistent with the City's adopted Comprehensive Plan and will not result in an increase in trip generation potential on the site, the transportation system considered in the Regional Transportation Plan reflects the long-term operation of the system with urban development on the site.

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2.6.30.06(e)(8)
Compatibility with transportation facilities

The City's Comprehensive Plan considers urban industrial development on this site, and the proposed GI designation is consistent with the Plan. As such, the annexation, establishment of the GI zone, and eventual development on the site is generally compatible with surrounding transportation facilities.

2.6.30.06(e)(9)
Compatibility with traffic and off-site parking impacts

Future development will be proposed in a manner that provides all necessary parking on-site, and there will be no off-site parking impacts.

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APPENDIX

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-362

LANCASTER
ENGINEERING

Technical Appendix

Lancaster Engineering

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CITY COUNCIL STAFF REPORT
EXHIBIT F-363

TECHNICAL MEMORANDUM

LANCASTER
ENGINEERING

321 SW 4th Ave., Suite 400
Portland, OR 97204
phone: 503.248.0313
fax: 503.248.9251
lancasterengineering.com

TO: Jason Yaich, City of Corvallis

FROM: Todd E. Mobley, PE, PTOE

DATE: September 21, 2011

SUBJECT: McFadden Annexation
Response to Comments & TIA Addendum

INTRODUCTION

This memorandum is written in response to comments from both the Oregon Department of Transportation (ODOT) and the City of Corvallis. Comments from both agencies were received following the submittal of the June 17, 2011 Revised Transportation Impact Analysis (TIA). The memorandum should be considered an addendum to the TIA.

Before addressing these comments, it is important to reiterate some points from the *Report Purpose* section on page three of the TIA. The following points are discussed in detail in that section:

- → The annexation of the subject property will not result in any increase in potential trip generation. That is, the level of development considered in this TIA could be constructed today, without the subject annexation, within the current County zoning.
- → This is intended to be a limited-scope report. The scope of work was agreed upon with the City of Corvallis before work on the TIA began. It is *not* intended to satisfy ODOT's detailed analysis policies and methodology requirements. The Transportation Planning Rule has already been addressed to the satisfaction of ODOT.
- → The TIA is prepared expressly to satisfy Chapter 2.6 of the City of Corvallis Land Development Code. It is a tool for use by the City to determine the reasonable worst-case transportation impacts from development of the site for use in planning and prioritizing transportation improvement projects.
- → Trips from development of this site are already accounted for in recent transportation planning documents such as CAMPO and the Corvallis Willamette River Crossing (CWRC) reports.

ODOT COMMENTS

Originally, comments were received from ODOT following the submittal of the prior May 6, 2011 TIA. The ODOT comments are dated May 20, 2011. The TIA was subsequently revised and the current June 17, 2011 version incorporated many of the ODOT comments. This is explained in the last paragraph on page three of the current TIA. Despite these revisions, ODOT simply re-issued their May 20, 2011 comments in response to the June 17, 2011 TIA. Those comments are quoted in *italics* below with a response immediately following. Where appropriate, individual comments are truncated for brevity.

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The TIS states at several locations that information produced in other reports, two of which were prepared by ODOT, has been relied upon to prepare the TIS...Where analysis from other reports has been used, photocopies of that other analysis should be included as an appendix...

In the June 17 TIA, supporting documentation and pages from prior reports are included in the appendix. In addition, specific references are included in the TIA to make it clear which report is referenced and for what data.

The TIS should have included queuing analyses and traffic progression analysis at all intersections with traffic signals and at all intersections where traffic signals are proposed. As a result, it is unclear how intersections will be affected by site-related traffic.

As explained on page three of the TIA and below in item #18 of the City of Corvallis comments, queuing calculations are not provided, nor are they necessary for the purpose of this analysis. Queuing calculations will be included in subsequent traffic impact studies that will be required at the time of development. This was discussed with City staff prior to the submittal of the June 17, 2011 TIA.

The report does not make clear what assumptions have been used to address future growth in background traffic volumes. The analysis assumes the project is fully built-out in the "near future," but does not establish what "near future" means.

The June 17, 2011 TIA clearly documents that the site trips from full development of the site were added to existing traffic volumes. The reasoning for this approach is discussed in detail on page three of the TIA.

The description of the OR-99W/Circle Blvd intersection is not correct. The northbound approach contains two northbound left-turn lanes.

The description was corrected in the June 17, 2011 TIA.

The report references "historic traffic counts," but it does not establish when these counts were taken and no copies of the referenced traffic counts were included in the appendix.

In the June 17, 2011 TIA and below in item #7 of the City comments, the dates and details of specific traffic count data are given. In addition, traffic count data was included in the appendix.

...Figures 4 and 5 indicate 38 percent of site-generated traffic passes through the Circle Blvd/4 Acres Road intersection, but intersection operations do not change...

The entire capacity analysis was updated in the June 17, 2011 TIA and this comment is no longer applicable. The revised TIA shows a measurable impact from site traffic.

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The TIA inappropriately distributes site-generated vehicle trips into the transportation system. Van Buren Avenue is an arterial street entering the downtown area, but no inbound vehicles are generated from this street west of Fourth Street. Ten percent of outbound vehicles are distributed to Second Street south of Van Buren Avenue. This misallocates through traffic to a local street with a posted speed of 20 mph that provides access to downtown businesses...

The trip distribution was revised following the May 6, 2011 TIA to address these comments as well as others from the City of Corvallis. The revised June 17, 2011 TIA reflects the updated distribution. This is also discussed in item #9 below in the City of Corvallis comments.

A two-lane Van Buren bridge is assumed to exist for this portion of the analysis as the only "practical mitigation" for intersection operations. The bridge is neither planned nor is it programmed. A two-lane bridge does not exist, and there is no project in the State Transportation Improvement Program to construct a bridge. The Corvallis Metropolitan Planning Organization's Regional Transportation Plan does not assume that such a bridge will be constructed within the 2030 planning horizon. It is inappropriate to rely upon this facility unless this improvement is needed in conjunction with property development.

A two-lane bridge is not "relied upon" in the TIA. It is not the burden of this TIA to show that improvements to accommodate the annexation are planned or even funded. It has been well established, and ODOT has agreed, that the site can generate as much traffic today, under the County zoning, as it will after annexation into the City. As such, there is no increase in trip generation potential as a result of this annexation, and the planned long-term transportation system need not change as a result of this application. It is true that neither the STIP nor CAMPO consider a two-lane bridge. Still, the need for a transportation solution is evident, hence the preparation of the Corvallis Willamette River Crossing (CWRC) report. A transportation solution like those considered in the CWRC report is needed for future growth throughout Corvallis as well as portions of Benton and Linn Counties.

Chapter 2.6 of the Corvallis Land Development Code requires that infrastructure needs be identified. A two-lane bridge is identified as a solution to a recognized capacity constraint and absent any other adopted or planned improvement, the TIA notes that this would resolve the constraint.

...site traffic exiting the site southbound and the southbound US-20 traffic volume does not equal the traffic volumes shown at the Second Street/Harrison Boulevard intersection...

These volumes are not equal, nor should they be equal. Between the site access location and the intersection of Second Street and Harrison Boulevard there are five public street intersections and many commercial driveways. It is impossible for the traffic volumes between these locations to balance.

This discussion presumes that major improvements to state highway facilities exist...It is not appropriate to consider such mitigations unless the project is : 1) a funded project in the State Transportation Improvement Program, 2) called for in the financially constrained portion of the Regional

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Transportation Plan, or 3) is a mitigation to be funded in conjunction with the change in zoning.

As explained in detail on page three of the TIA, this report is intended only to address Chapter 2.6 of the Corvallis Land Development Code (LDC). The LDC does not mandate that assumed improvements be planned or funded in the same manner that the Transportation Planning Rule does. It is absolutely appropriate to consider improvements that may not be reflected in the three items stated. Chapter 2.6 simply requires that needed infrastructure be identified, which this TIA does.

The signal warrant analysis combines 2030 traffic conditions with the site development. This does not follow the procedures established by ODOT...

The prior TIA based the signal warrant on 2030 conditions, however this has been revised. The June 17, 2011 TIA makes use of ODOT's preliminary signal warrant analysis sheet for existing traffic volumes plus site trips from assumed development on the site. Supporting material is included in the appendix.

The OR-34/Corvallis Bypass intersection configuration does not include a southbound right-turn lane at this intersection. Only one lane exists for southbound traffic.

This comment was noted and the TIA was revised accordingly in the June 17, 2011 report.

Analysis pages in the TIS appendix have used different traffic flow parameters - at some locations, the parameter used is 1750 vehicles per hour per lane (vphpl); at others, 1800 vphpl, and at others, 1900 vphpl...A consistent traffic flow parameter should be used.

For the revised TIA, a saturation flow rate of 1800 vphpl was used for all signalized intersections. This is consistent with the parameter used in both the CAMPO and CWRC reports.

The TIS should clarify what information was used to determine the traffic signal timing in these analyses.

When available, traffic signal timing was taken directly from the analysis done for the CWRC report. In fact, the existing conditions analyses at these intersections directly use the signal timing and capacity analysis output from this report. The output in the appendix from the CWRC is noted as such.

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CITY OF CORVALLIS COMMENTS

Comments from the City are contained in the September 7, 2011 memo from Ted Reese in Public Works Engineering. Like the ODOT comments, each are quoted in italics with a response immediately following.

1. *John DeTar from ODOT sent an e-mail to Jason Yaich on September 7, 2011 stating that ODOT does not have any additional comments beyond their May 20, 2011 review. In addition they stated that the revised TIA did not address their concerns. Please address ODOT's comments.*

ODOT comments were addressed individually in the previous section of this memorandum.

2. *In the Executive Summary, item 4 identifies mitigation for the development site. The mitigation identified should also identify their constraints.*
   - *The installation of a traffic signal at the sites access will require an approved ODOT access permit.*
   - *The mitigation at Circle Blvd and Hwy 20 specifies duel (sic) eastbound left turn lanes, however there are not duel (sic) northbound lanes to accept those turn lanes.*
   - *The mitigation at the South Bypass and Hwy 34 should identify that ODOT is already in the planning stages of this improvement.*
   - *The addition of a lane on the Van Buren Bridge will require a new bridge. This is not a planned ODOT improvement in the future.*
   - *The addition of a westbound right turn lane from Harrison Ave to 2nd Street may require the widening of the Harrison Street Bridge and this is not a planned ODOT improvement in the future.*

Constraints for identified mitigation are noted. It should be understood that the TIA is tasked with identifying infrastructure that would be necessary if the site were to develop to its maximum potential immediately upon annexation. In some instances, the individual improvements may not be part of an adopted plan. In the case of the intersections along Harrison and Van Buren in the downtown core, a larger solution is being considered by ODOT and the City, as examined in great detail in the Corvallis Willamette River Crossing study. Still, this TIA is tasked with identifying improvements at individual intersections to mitigate impacts on a system that is already expected to operate over capacity. As such, some of these improvements identified in the TIA are not part of an adopted plan, and if a larger community-wide or regional solution is adopted, some of the improvements identified in the TIA may not be necessary.

3. *The above improvements were identified to mitigate development of the site. Please provide a conclusion that discusses the feasability (sic) of proposed mitigation solutions.*

Some of the improvements identified in the TIA, such as construction of a new bridge or widening an existing bridge, would be quite expensive, which has spurred investigation by the City and ODOT into larger solutions. Development on the subject site is *already considered* in long-range transportation planning efforts such as CAMPO and the Corvallis Willamette River Crossing reports. Devel-

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opment on this site, just like the majority of future development in Corvallis as well as portions of Benton and Linn Counties, can help facilitate these types of large-scale transportation solutions that cannot reasonably be required of a single applicant.

Other improvements are quite feasible. For example, construction of a driveway to serve the site from Highway 20 will require an approach permit from ODOT and the eventual installation of a traffic signal would also require similar approvals. These are expected and typical of development projects, particularly projects of this potential size.

4. *On page 6, 2nd paragraph, the description of lanes includes a left/through lane exiting the HP campus. A through lane in this location does not exist.*

The correction is noted. This is a "T" shaped intersection and the subject lane is simply a left-turn lane with no shared through movement.

5. *On page 7, 7th paragraph describing the Van Buren and 2nd Street intersection, Harrison Blvd is described.*

The correction is noted. The description of Harrison Boulevard was in error, as it was intended to describe Van Buren Avenue.

6. *On page 8, 1st paragraph, the southbound approach at this intersection does not have a left/through lane, although it does have a right/through lane.*

The correction is noted. This is a text error and should read that the shared lane is a right-turn and through lane. The intersection analysis was conducted with the correct configuration.

7. *On page 10 it is stated that the traffic volumes used from previous reports were not adjusted to a common analysis year. All volumes should be adjusted to the same analysis year.*

Page 10 includes justification for why baseline traffic volume data was not adjusted to a common year. In discussing this in more detail on our September 13, 2011 conference call, City staff requested additional data to document that traffic volumes have been stable or decreasing in recent years. The table below shows traffic volumes from the Automatic Traffic Recorder (ATR) Station on Highway 34 a short distance east of Corvallis. This is the nearest ATR to Corvallis and provides the best historic traffic count data.

The table also notes when the traffic counts were collected for the CAMPO and Corvallis Willamette River Crossing reports. As clearly shown, traffic volumes have generally declined beginning in 2008. Moreover, the traffic counts conducted for the two subject reports were collected in 2005 and 2007, the two highest of the previous six years. 2010 showed an increase in traffic volume, but still not to the level of either 2005 or 2007.

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Automatic Traffic Recorder Station 22-020, OR 34 near Riverside Drive

Year	Average Daily Traffic	Notes
2005	28,201	CAMPO data collected
2006	27,813	
2007	27,927	CWRC data collected
2008	26,342	
2009	26,861	
2010	27,576	

These data demonstrate that the baseline traffic volumes used in the TIA are accurate and defensible and that no adjustment is needed to create a common analysis in year. In fact, the CAMPO and CWRC would have to be factored *down* to represent current conditions.

8. *On page 13 in the 1st paragraph it is stated that "upon comparing recent manual turning movement counts and the historical data, it was determined that the evening peak hour volumes generally exceed the morning peak hour volumes." Please include the data that was used to make this conclusion.*

The data referred to is included in the TIA. While there may be instances at specific locations where morning peak hour volumes are higher, the evening peak hour is generally higher throughout the majority of the transportation system. Also, City staff agreed in a conference call on September 13, 2011 that use of the evening peak hour, and the morning peak hour where data is available, is acceptable.

9. *On page 16 the trip distribution is discussed. The trip distribution assignments for AM and PM peak hours are the same. Reviewing Figures 2 and 3 the existing trips for the AM and PM peak hours do not have the same percentage distribution. In addition, the majority of AM peak hour for Hwy 20 is not presented in order to make a valid comparison. It would be expected that the trip distributions for AM and PM peak hours would more closely follow the existing trips.*

As addressed in the previous section on ODOT comments, the trip distribution was originally questioned in the May 20, 2011 memo from ODOT. Following this, the distribution was discussed with City staff and several changes were made. Specifically, the distribution of trips within the downtown grid was adjusted as well as the assignment of trips in the northwest portion of the study area along Circle Boulevard at Walnut Boulevard and Highway 99W.

Page 16 of the TIA explains that the trip distribution was derived based on data from ODOT's Travel Demand Model for the Corvallis area and was compared to existing travel patterns in the project study area. The primary concern with the original distribution was that it reflected conditions at the end of the planning period and that the analysis is in the TIA considers near-term conditions. As such, the above-referenced changes were discussed with City staff and revisions were made.

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Use of the Travel Demand Model to determine the trip distribution is the most accurate methodology in this case, as the model examines macroscopic, region-wide trip origins and destinations and assigns trips to the system accordingly. Some manual adjustments to the model results are appropriate to make modifications when looking at a smaller study area such as this. This method is superior to simply examining existing traffic volumes alone.

For example, the 60% that is shown to and from the north on Highway 20 includes trips to Circle Boulevard, Highway 99W to the north and Highway 20 to the north, since this is the most direct route for these trips. That is not to say that 60 percent of existing traffic volume on Highway 20 is from the north. To use such a small, specific sample of data would ignore the regional context of trips that are generated by a development of this size. The model provides that context, with appropriate manual adjustments to the distribution to reflect near-term travel patterns.

10. *On page 24, in the Level of Service Summary table, the mitigation proposed for Circle Blvd and Hwy 20 conflicts with the mitigation proposed in the Executive Summary and the HCM Signalized Intersection Capacity Analysis.*

For brevity because it is a note within a table, the mitigation in the level of service summary table is less descriptive than the full text and the Executive Summary. To clarify, the subject mitigation includes dual left-turn lanes and a separate right-turn lane.

11. *On pages 24 and 25, the Level of Service Summary tables report the LOS as well as the Volume over Capacity (V/C) for the study intersections. The City of Corvallis has adopted a LOS table in the City's 1996 Transportation Plan, table 3-7. The reported LOS for City intersections in the analysis do not match the LOS criteria found in table 3-7 of the Transportation Plan. The TIA did not document an alternative method of determining the LOS. Please include tables, charts, and/or explanations to document why the reported V/C would report a LOS that does not match the City's adopted standards, or report the LOS based on the City's standards using V/C per table 3-7.*

The paragraph at the bottom of page 13 of the TIA documents the use of the current industry standard for level of service calculation in lieu of the methodology in the City's Transportation Plan. The level of service standard is based on delay and is enumerated in the appendix of the TIA.

12. *On page 24 and 25, the Level of Service Summary tables displays (sic) a number of inconsistencies.*
    - *At the site access and Hwy 20 intersection for the existing + site tips, mitigated scenario, the AM peak hour displays a V/C of 0.76 with a LOS of D while the PM peak hour displays a higher V/C of 0.85 and a lower LOS of C.*
    - *At the HP access and Hwy 20 intersection for the existing + site trips scenario, the PM peak hour V/C is displayed as only 0.07 but the LOS is failing at E.*
    - *At the intersection for Harrison Blvd and 2nd Street, the AM peak hour for existing + site trips displays a V/C of 0.88 and a LOS of F. For the PM peak hour it displays a V/C of 0.90*

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and a LOS C. There is no explanation why the PM peak hour V/C can be higher but also have a lower LOS.

- *At the intersection for Harrison Blvd and 2nd Street, the PM peak hour for existing + site trips, mitigated displays a V/C of 0.83 and a LOS of C. The same intersection for AM peak hour existing conditions displays a lower V/C of 0.82 but a worse LOS of F.*
- *At the intersection of Van Buren Blvd and 2nd Street, the existing + site trips, mitigated PM peak hour displays a V/C of 0.87 and a LOS of C while the AM peak hour existing and existing + site trips display lower V/C's of 0.76 for both and higher LOS's of D for both.*

The bulleted comments above do not indicate inconsistencies. The results are correct, and consistent with industry-standard intersection analysis methodologies. There appears to be two fundamental areas of misunderstanding:

→ Level of service is assigned a letter grade based only on *average delay per vehicle*. Volume-to-capacity ratio is a separate measure that does not determine level of service.
→ The relationship between v/c ratio of level of service can be *much* different at unsignalized intersections compared to signalized intersections.

At a signalized intersection, it is entirely possible to have a higher v/c ratio with a favorable level of service in one scenario, and have the reverse be true in another. Due to variations in traffic volumes or signal timing, one scenario could operate more efficiently than the other, contributing to this result. Still, the results are not inconsistent or incorrect. The most significant factor to consider is that unlike in the 1996 Transportation Plan, level of service is determined by delay, not the v/c ratio.

At an unsignalized intersection such as the HP access to Highway 20, it may be difficult to turn left from the campus access onto the highway, and drivers may incur long delays (and poor level of service) making this movement. Still, the *capacity* for left turns can be considerably higher than the demand volume. This results in poor level of service based on delay, but a low v/c ratio.

13. *On page 26 signal warrants are discussed for the sites access to Hwy 20, however the warrant analysis is not included in the appendix.*

There is a Preliminary Traffic Signal Warrant analysis sheet using ODOT procedures in the appendix of the TIA. It is the third sheet behind the "Site Access" tab in the appendix.

14. *On page 26 there is discussion about the dual left turn lanes at the intersection of Circle and Hwy 20. There is also a comment about a right turn lane. This shows inconsistency with the other mentions of turn lane configurations throughout the report as well as not discussing the need for an additional lane on Hwy 20 in order to receive the dual turn lanes.*

As explained in item #10 above, the mitigation considered is the addition of dual eastbound left-turn lanes and a separate right-turn lane. This would require the construction of a second northbound lane on Highway 20 to serve as a second receiving lane for the dual left movement.

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15. *The appendix includes Level of Service Criteria and a table relating delay to LOS. The City determines LOS based on V/C per table 3-7 of the City's 1996 Transportation Plan. LOS throughout the report should be based on the City's adopted standards for LOS, unless ODOT has specific mobility standards that would supercede (sic) the City's. Those ODOT standards should be clearly defined.*

The City's 1996 Transportation Plan makes use of methodology contained in the 1985 Highway Capacity Manual (HCM). All recent transportation planning efforts such as CAMPO and CWRC make use of the current methodologies established in the 1994 HCM. Prior City of Corvallis comments raised this issue and requested that the TIA either utilize the older methods or justify the use of something different. The aforementioned discussion on page 13 of the TIA provides the requested justification. ODOT standards are based on v/c ratios, but still make use of the newer methodology.

16. *The appendix includes 2 pages of count data. This count data is for PM peak hour only, it does not include AM peak hour counts.*

The count data included in the appendix is for the intersections of Highway 20 at the HP campus access and Circle Boulevard at Walnut Boulevard. No morning peak hour data is available at these intersections. A discussion of the morning peak hour data and analysis is provided in item #8 above, and City staff confirmed that this is acceptable in a conference call on September 13, 2011.

17. *The appendix includes 2 pages of count data. Both the raw count numbers and count numbers adjusted with the peak hour factor do not correlate to those listed in figure 3, page 12.*

In some instances, the raw count data shown in the appendix was rounded to the nearest five vehicles, which is common practice in preparation of a TIA. For through traffic, particularly at the intersection of the HP access with Highway 20, the through traffic volumes were balanced with adjacent intersections to provide consistency in the data as required by ODOT. Also, this balancing of volumes resulted in slightly higher volumes for through traffic, resulting in a more conservative analysis.

18. *The appendix includes 2 pages of Operational Analysis Results from the Corvallis Willamette River Crossing / Van Buren Bridge Proposed Solutions. Within the results are existing 95th percentile queues. Site trips were not added to those queues in this analysis so a full understanding of the impacts from the site are (sic) not available. The existing queues are hundreds of feet long. Adding hundreds of more cars to these queues will have a huge effect.*

The referenced queues from the CWRC report are for existing conditions, and in some cases, intersections that are over capacity. If trips are added to these intersections that are over capacity, then queues will increase accordingly. However, the purpose of this analysis is to identify intersection improvements should the site develop immediately to the maximum allowable density. In those instances when intersections are over capacity, improvements are identified to improve intersection operation, which would also mitigate excessive queuing.

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Moreover, queuing is not intended to be a part of the scope of this TIA and is not included, as discussed on page three of the TIA. This was discussed with City staff at a meeting on June 7, 2011 and agreed upon prior to submittal of the report.

19. *The HCM Signalized Intersection Capacity Analysis reports included in the appendix are reporting inaccurate LOS and V/C. The V/C ratios for individual movements were not balanced and therefore reflect results that are not accurate to how the signals are or will be timed in the field.*

The reported LOS and v/c ratios in the appendix are not "inaccurate", they are consistent with adopted transportation plans such as the CWRC. In many instances, traffic signal timing is not implemented in the field that would balance v/c ratios for individual movements. These baseline results are included in the appendix, but they are the product of in-depth analyses from CAMPO and CWRC that were completed with many months of review and input from the public, ODOT, and the City of Corvallis. The scope of those reports is considerably larger than this limited-scope TIA. For the purpose of this TIA, the results from CAMPO and CWRC are taken to be accurate and correct.

SUMMARY & CONCLUSIONS

While a number of text errors and similar minor edits are recognized through the comments received from ODOT and the City, the technical results and findings of the TIA are reliable and defensible. The TIA addresses Chapter 2.6 of the LDC, which is its express purpose. The scope is consistent with that agreed upon by City staff at the beginning of the TIA preparation.

Through the preparation and subsequent revisions of the TIA, the applicant and Lancaster Engineering have worked closely with City staff to ensure that applicable approval criteria are satisfied. It should be noted that an earlier version of the TIA was revised and resubmitted, based primarily on ODOT's comments, with cooperation of City staff.

TECHNICAL MEMORANDUM

LANCASTER
ENGINEERING

321 SW 4th Ave., Suite 400
Portland, OR 97204
phone 503.248.0313
fax 503.248.9251
lancasterengineering.com

TO: Jason Yaich, City of Corvallis

COPY: Sandra Gazeley, Gazeley and Associates
Lyle Hutchens, Devco Engineering

FROM: Todd E. Mobley, PE, PTOE TEM

DATE: May 5, 2011

SUBJECT: McFadden Property Annexation
UPDATED: Transportation Planning Rule Compliance

INTRODUCTION

This memorandum is intended to replace the prior technical memorandum prepared by Lancaster Engineering, dated March 28, 2011. Revisions to the analysis have been made in response to comments and meetings between the applicant's consultant team, the City of Corvallis, and the Oregon Department of Transportation (ODOT). In addition, a Transportation Impact Analysis (TIA) has been prepared and is submitted under separate cover. The TIA is prepared specifically to address the transportation criteria contained in the City of Corvallis Land Development Code Chapter 2.6 (Annexations). For this reason, criteria in Chapter 2.6 are not addressed in this memorandum; rather, criteria in the Transportation Planning Rule (TPR) are examined. Specifically, the change in trip generation potential of the site due to the proposed annexation is analyzed.

A total of approximately 86 acres of industrial land is proposed for annexation into the City of Corvallis. This annexation will necessitate a change in zoning from the current Benton County Urban Industrial designation to the City of Covallis General Industrial zone. This zone change necessitates the need to address the requirements of the Transportation Planning Rule (TPR) as set forth in Oregon Administrative Rules (OAR) 660-012-0060.

This memorandum addresses the applicable criteria from both sources and compares the reasonable worst-case trip generation potential of the annexation property under both the existing and proposed zoning designations.

TRIP GENERATION COMPARISON

To estimate trips for both City and County zoning scenarios, trip rates from the manual *Trip Generation*, Eighth Edition, published by the Institute of Transportation Engineers (ITE) were used. Since both agencies allow urban industrial uses in the two zones being compared, land use code 130, *Industrial Park*, was used in both scenarios. In addition, vocational schools are allowed as an outright use in the County zoning district. Specific uses are addressed in more detail below.

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As established in other application materials, a baseline level of development in the current Benton County Urban Industrial zone has been established by a maximum floor area ratio (FAR) of 0.4. Benton County Community Development concurred with the use of this FAR. A total of 51.27 acres are developable and not encumbered by City natural features overlays. Using this acreage and FAR, a total of 893,328 square feet of building area could be constructed. Under the City zoning, the applicant is proposing a maximum floor area of 855,906 square feet, or 37,422 square feet less than the reasonable worst-case development under the County zoning.

Although there is no specific industrial use proposed at this time, the range of uses that would be allowed in the County zoning district were examined. County code allows typical urban industrial uses such as research, testing, manufacturing, and assembly of products. The best match for this wide variety of uses is either *General Light Industrial* or *Industrial Park*. Of the two, *General Light Industrial* has the highest trip rates. In order to maintain a reasonable development assumption, the higher of the two uses was thrown out, and *Industrial Park* was used.

In addition to the previously mentioned industrial uses, the County zoning district allows a vocational school. Accordingly, it was assumed that the total building area in the County of 893,328 square feet would include 80,000 square feet devoted to a vocational school, with the balance as Industrial Park. To calculate the trip generation of the vocational school, trip rates were used from land-use code 540, *Junior/Community College*. The trip rates are based on the building floor area. The description in the ITE manual of this category states, "This land use includes two-year junior, community, or technical colleges."

For consistency and for a reasonable development assumption, the land-use category *Industrial Park* was used for development under the City zoning district. The City zoning code does not specifically allow vocational schools as an outright allowed use.

The table below offers a comparison of the trip generation potential for each scenario. Detailed trip generation calculations are attached to this memorandum.

TRIP GENERATION SUMMARY

	AM Peak Hour	*PM Peak Hour*	*Weekday*
County Zoning			
80,000 sf Vocational School	239	203	2,200
813,328 sf Industrial Park	683	699	5,660
Total County Zoning	922	902	7,860
City Zoning			
893,328 sf Industrial Park	750	768	6,218
Net Change due to Annexation	*-172*	*-134*	*-1,642*
City Zoning (as Proposed)			
855,906 sf Industrial Park	719	736	5,958

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TRANSPORTATION PLANNING RULE

The TPR is in place to ensure that the transportation system is capable of supporting possible increases in traffic intensity that could result from changes to adopted plans and land use regulations. The applicable elements of the TPR are each quoted directly in *italics* below, with a response directly following.

660-012-0060

(1) Where an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation would significantly affect an existing or planned transportation facility, the local government shall put in place measures as provided in section (2) of this rule to assure that allowed land uses are consistent with the identified function, capacity, and performance standards (e.g. level of service, volume to capacity ratio, etc.) of the facility. A plan or land use regulation amendment significantly affects a transportation facility if it would:

(a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

(b) Change standards implementing a functional classification system; or

(c) As measured at the end of the planning period identified in the adopted transportation system plan:

(A) Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

(B) Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP or comprehensive plan; or

(C) Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.

In this case, subsections (a) and (b) do not apply since the proposed annexation is consistent with the City of Corvallis Comprehensive Plan and other long-term planning documents such as the Corvallis Area MPO Regional Transportation Plan assume urban development on the subject property. Moreover, the annexation and change from an urban industrial County zone to a City industrial zone will not change the functional classifications of any surrounding roadways.

Subsection (c) does apply however, as subsection (C) would likely be satisfied without a limitation on the level of development under the City zoning scenario. The Regional Transportation Plan (RTP) referenced above shows significant congestion and a number of intersections that are within the potential influence area of this site that are projected to perform below minimum performance standards at the planning horizon. To the extent that the proposed annexation and change in zoning could increase the trip generation potential of the site, there would be a significant affect per 660-012-0060(1)(c)(C).

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
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EXHIBIT F-377

(2) Where a local government determines that there would be a significant effect, compliance with section (1) shall be accomplished through one or a combination of the following:

(a) Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.

(b) Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of this division; such amendments shall include a funding plan or mechanism consistent with section (4) or include an amendment to the transportation finance plan so that the facility, improvement, or service will be provided by the end of the planning period.

(c) Altering land use designations, densities, or design requirements to reduce demand for automobile travel and meet travel needs through other modes.

(d) Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.

(e) Providing other measures as a condition of development or through a development agreement or similar funding method, including transportation system management measures, demand management or minor transportation improvements. Local governments shall as part of the amendment specify when measures or improvements provided pursuant to this subsection will be provided.

As explained in the Trip Generation Comparison section of this memo, the applicant is proposing a maximum building area in the City zoning district that is considerably less traffic intensive than a reasonable worst-case development under the current Benton County zone. By agreeing to condition enforcing such a limitation, the applicant is invoking subsection (2)(e) and proposing to limit development on the property through conditions of approval that ensure the trip generation from the site will not exceed levels that are currently possible under the existing zoning district. In fact, the proposed annexation will actually *reduce* the possible trip generation from the site.

Because the City of Corvallis does not place conditions of approval on annexation or zone change applications, a Planned Development Overlay request and a Detail Development Plan application will be submitted concurrently. As explained in other application materials, this enables the City to affix conditions of approval to the property and ensure that they will apply to subsequent Detail Development Plans for the property as additional development occurs in the future.

SUMMARY & CONCLUSIONS

The proposed annexation of the McFadden property will necessitate a change in zoning with the transfer from Benton County to the City of Corvallis. With the proposed maximum building area of 855,906 square feet under the proposed City of Corvallis General Industrial zoning designation, the subject site will generate *fewer* trips than a reasonable worst-case development under the existing Benton County Urban Industrial zoning designation.

With this maximum building area limitation, the TPR in OAR 660-012-0060 will be satisfied and the potential significant effect to the transportation system will be mitigated. A mechanism is proposed that will ensure the appropriate conditions of approval will be put in place and will apply to all subsequent industrial development on the property. With these conditions of approval in place, no further mitigations are necessary to ensure compliance with the TPR.

REGISTERED PROFESSIONAL ENGINEER
54853
OREGON
JULY 9, 2001
TODD E. MOBLEY
5/5/11
EXPIRES: 12/31/2012

LEVEL OF SERVICE

Level of service is used to describe the quality of traffic flow. Levels of service A to C are considered good, and rural roads are usually designed for level of service C. Urban streets and signalized intersections are typically designed for level of service D. Level of service E is considered to be the limit of acceptable delay. For unsignalized intersections, level of service E is generally considered acceptable. Here is a more complete description of levels of service:

Level of service A: Very low delay at intersections, with all traffic signal cycles clearing and no vehicles waiting through more than one signal cycle. On highways, low volume and high speeds, with speeds not restricted by other vehicles.

Level of service B: Operating speeds beginning to be affected by other traffic; short traffic delays at intersections. Higher average intersection delay than for level of service A resulting from more vehicles stopping.

Level of service C: Operating speeds and maneuverability closely controlled by other traffic; higher delays at intersections than for level of service B due to a significant number of vehicles stopping. Not all signal cycles clear the waiting vehicles. This is the recommended design standard for rural highways.

Level of service D: Tolerable operating speeds; long traffic delays occur at intersections. The influence of congestion is noticeable. At traffic signals many vehicles stop, and the proportion of vehicles not stopping declines. The number of signal cycle failures, for which vehicles must wait through more than one signal cycle, are noticeable. This is typically the design level for urban signalized intersections.

Level of service E: Restricted speeds, very long traffic delays at traffic signals, and traffic volumes near capacity. Flow is unstable so that any interruption, no matter how minor, will cause queues to form and service to deteriorate to level of service F. Traffic signal cycle failures are frequent occurrences. For unsignalized intersections, level of service E or better is generally considered acceptable.

Level of service F: Extreme delays, resulting in long queues which may interfere with other traffic movements. There may be stoppages of long duration, and speeds may drop to zero. There may be frequent signal cycle failures. Level of service F will typically result when vehicle arrival rates are greater than capacity. It is considered unacceptable by most drivers.

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
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EXHIBIT F-380

LEVEL OF SERVICE CRITERIA
FOR SIGNALIZED INTERSECTIONS

LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (Seconds)
A	< 10
B	10-20
C	20-35
D	35-55
E	55-80
F	> 80

LEVEL OF SERVICE CRITERIA
FOR UNSIGNALIZED INTERSECTIONS

LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (Seconds)
A	< 10
B	10-15
C	15-25
D	25-35
E	35-50
F	> 50

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-381

1e

TRAFFIC COUNTS

Highway 20 at HP Access
Circle Boulevard at Walnut Boulevard

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-382

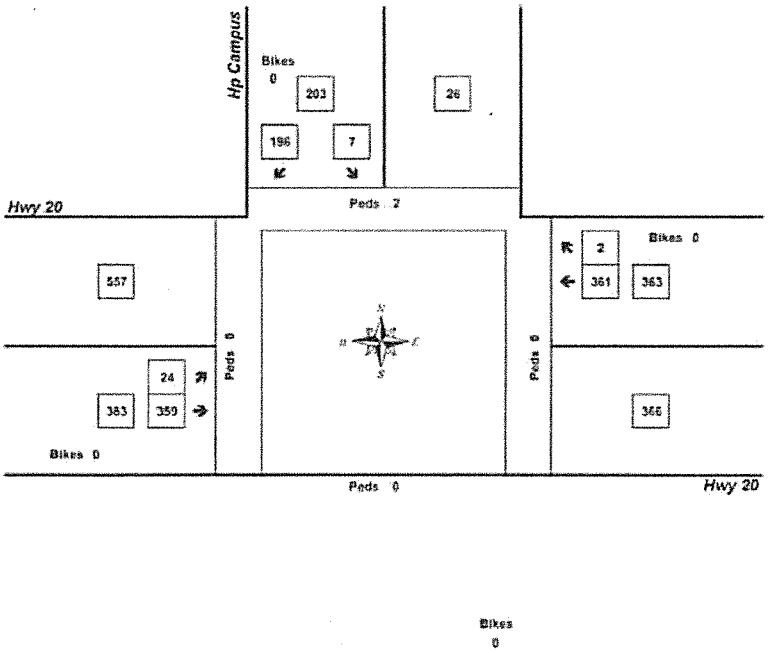
Peak Hour Summary

All Traffic Data

Clay Carney
(503) 833-2743

Hp Campus & Hwy 20

3:40 PM to 4:40 PM
Tuesday, August 04, 2009



Approach	PHF	HV%	Volume
EB	0.85	3.9%	383
WB	0.88	2.8%	363
NB	0.00	0.0%	0
SB	0.76	0.5%	203
Intersection	0.88	2.7%	949

Count Period: 3:00 PM to 6:00 PM

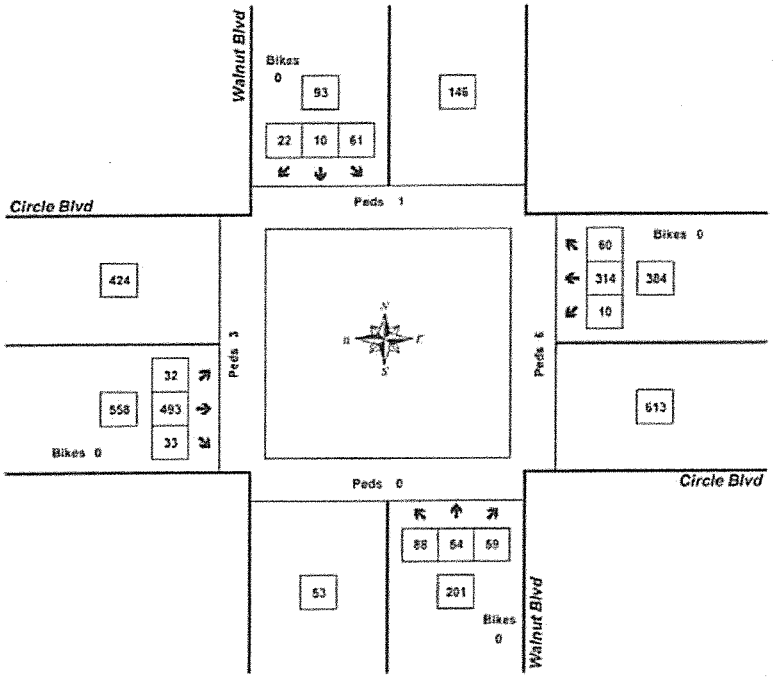
Peak Hour Summary

All Traffic Data

Clay Carney
(800) 833-2740

Walnut Blvd & Circle Blvd

4:35 PM to 5:35 PM
Tuesday, August 04, 2009



Approach	PHF	HV%	Volume
EB	0.92	1.4%	558
WB	0.81	1.3%	384
NB	0.79	1.5%	201
SB	0.70	3.2%	93
Intersection	0.92	1.5%	1,236

Count Period: 3:00 PM to 6:00 PM

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-384

TRIP GENERATION

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-385

1e

TRIP GENERATION CALCULATIONS

Land Use: Junior/Community College
Land Use Code: 540
Variable: 1000 Sq Ft Gross Floor Area
Variable Value: 80

AM PEAK HOUR

Trip Rate: 2.99

	Enter	Exit	Total
Directional Distribution	74%	26%	
Trip Ends	177	62	239

PM PEAK HOUR

Trip Rate: 2.54

	Enter	Exit	Total
Directional Distribution	58%	42%	
Trip Ends	118	85	203

WEEKDAY

Trip Rate: 27.49

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	1,100	1,100	2,200

SATURDAY

Trip Rate: 11.23

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	449	449	898

Source: TRIP GENERATION, Eighth Edition

TRIP GENERATION CALCULATIONS

Land Use: Industrial Park
Land Use Code: 130
Variable: 1,000 Square Feet
Variable Quantity: 813.3

AM PEAK HOUR

Trip Rate: 0.84

	Enter	Exit	Total
Directional Distribution	82%	18%	
Trip Ends	**560**	**123**	**683**

PM PEAK HOUR

Trip Rate: 0.86

	Enter	Exit	Total
Directional Distribution	21%	79%	
Trip Ends	**147**	**552**	**699**

WEEKDAY

Trip Rate: 6.96

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**2,830**	**2,830**	**5,660**

SATURDAY

Trip Rate: 2.49

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**1,013**	**1,013**	**2,026**

Source: TRIP GENERATION, Eighth Edition

TRIP GENERATION CALCULATIONS

Land Use: Industrial Park
Land Use Code: 130
Variable: 1,000 Square Feet
Variable Quantity: 893.3

AM PEAK HOUR

Trip Rate: 0.84

	Enter	Exit	Total
Directional Distribution	82%	18%	
Trip Ends	**615**	**135**	**750**

PM PEAK HOUR

Trip Rate: 0.86

	Enter	Exit	Total
Directional Distribution	21%	79%	
Trip Ends	**161**	**607**	**768**

WEEKDAY

Trip Rate: 6.96

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**3,109**	**3,109**	**6,218**

SATURDAY

Trip Rate: 2.49

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**1,112**	**1,112**	**2,224**

Source: TRIP GENERATION, Eighth Edition

TRIP GENERATION CALCULATIONS

Land Use: Industrial Park
Land Use Code: 130
Variable: 1,000 Square Feet
Variable Quantity: 855.9

AM PEAK HOUR

Trip Rate: 0.84

	Enter	Exit	Total
Directional Distribution	82%	18%	
Trip Ends	**590**	**129**	**719**

PM PEAK HOUR

Trip Rate: 0.86

	Enter	Exit	Total
Directional Distribution	21%	79%	
Trip Ends	**155**	**581**	**736**

WEEKDAY

Trip Rate: 6.96

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**2,979**	**2,979**	**5,958**

SATURDAY

Trip Rate: 2.49

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**1,066**	**1,066**	**2,132**

Source: TRIP GENERATION, Eighth Edition

Table 4. V/C Analysis Result – Existing (2005) Condition

	Primary Road Name	Secondary Road Name	Mobility Standard	V/C Ratio	LOS	Deficiency Identified?
1*	99 W	Conifer Boulevard	0.85[1]	0.68	B	NO
2*	99 W	Circle Boulevard	0.85[1]	0.72	C	NO
3*	Circle Boulevard	4 Acres Street	LOS D[3]	0.48	A	NO
4*	3rd Street (99 W)	Western Avenue	0.90[2]	0.58	A	NO
5*	4th Street (99 W)	Western Avenue	0.90[2]	0.59	A	NO
6*	99 W	Crystal Lake Drive	0.85[1]	0.80	D	NO
7*	99 W	Alexander Avenue	0.85[1]	0.45	A	NO
8	99 W	Airport Road	0.85[1]	0.26	A	NO
9	99 W	Llewellyn Road	0.70[1]	0.07	A	NO
10*	9th Street	Walnut Boulevard	LOS D[3]	0.64	B	NO
11*	9th Street	Circle Boulevard	LOS D[3]	0.69	B	NO
12*	US-20	Circle Boulevard	0.85[1]	0.88	D	YES
13*	US-20/OR-34	15th Street	0.80[1]	0.95	E	YES
14*	US-20/OR-34	35th Street	0.80[1]	0.86	D	YES
15*	Western Avenue	35th Street	LOS D[3]	0.79	C	NO
16*	US-20/OR-34	Technology Loop	0.80[1]	0.99	E	YES
17*	US-20/OR-34	53rd Street	0.80[1]	0.94	E	YES
18	US-20	OR-34	0.80[1]	0.33	A	NO

1) Mobility Standards based on ODOT, OHP, and City of Corvallis Standards: (1) ODOT OHP Mobility Standard, (2) ODOT OHP Mobility Standard – STA, and (3) City of Corvallis.
2) Intersections with an asterisk (*) were evaluated with the traffic signal in place.
3) Highlighted cells represent the location where mobility standard was not satisfied.

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
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Figure 4: 2007 Traffic Operations – Weekday AM Peak Hour

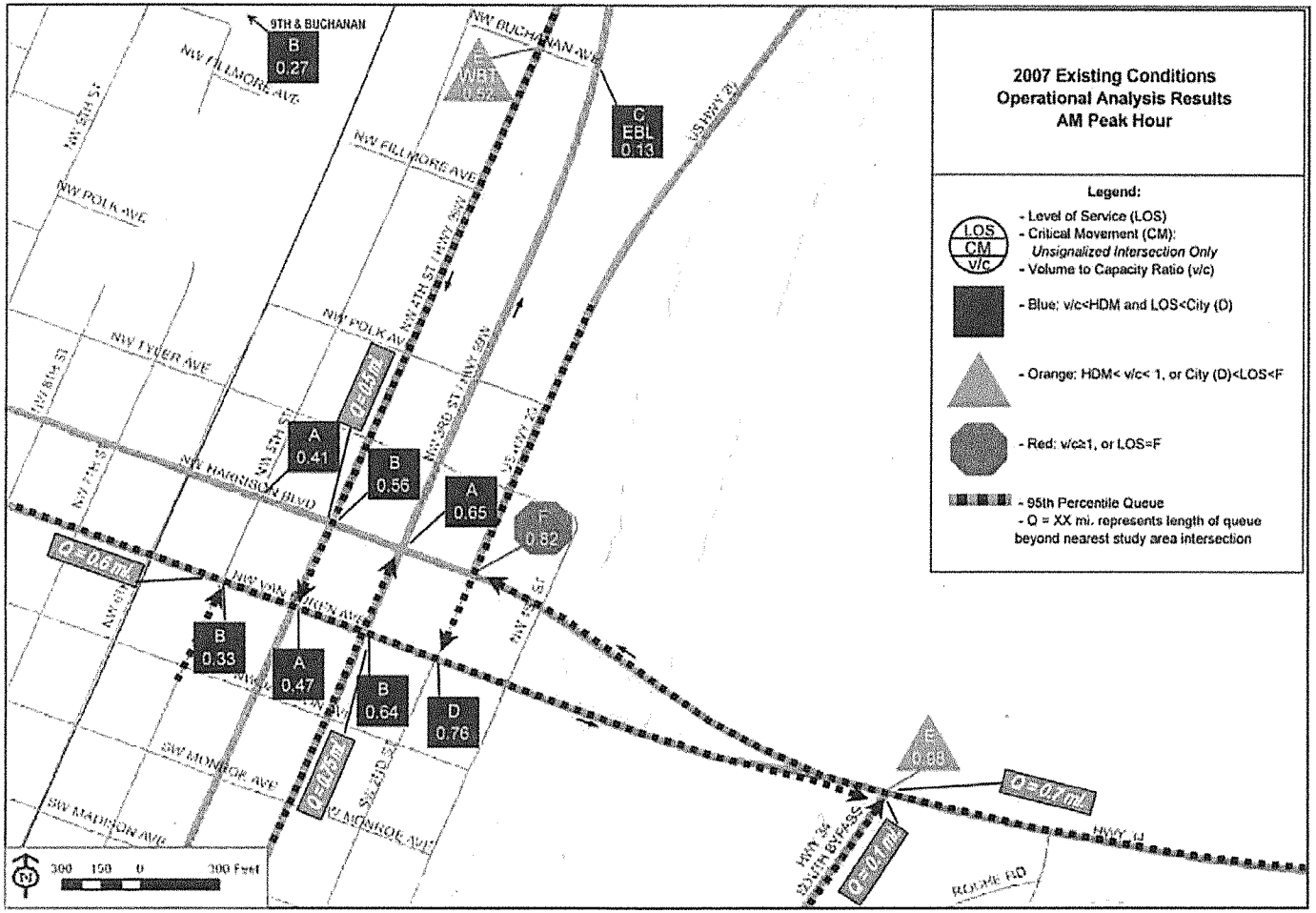
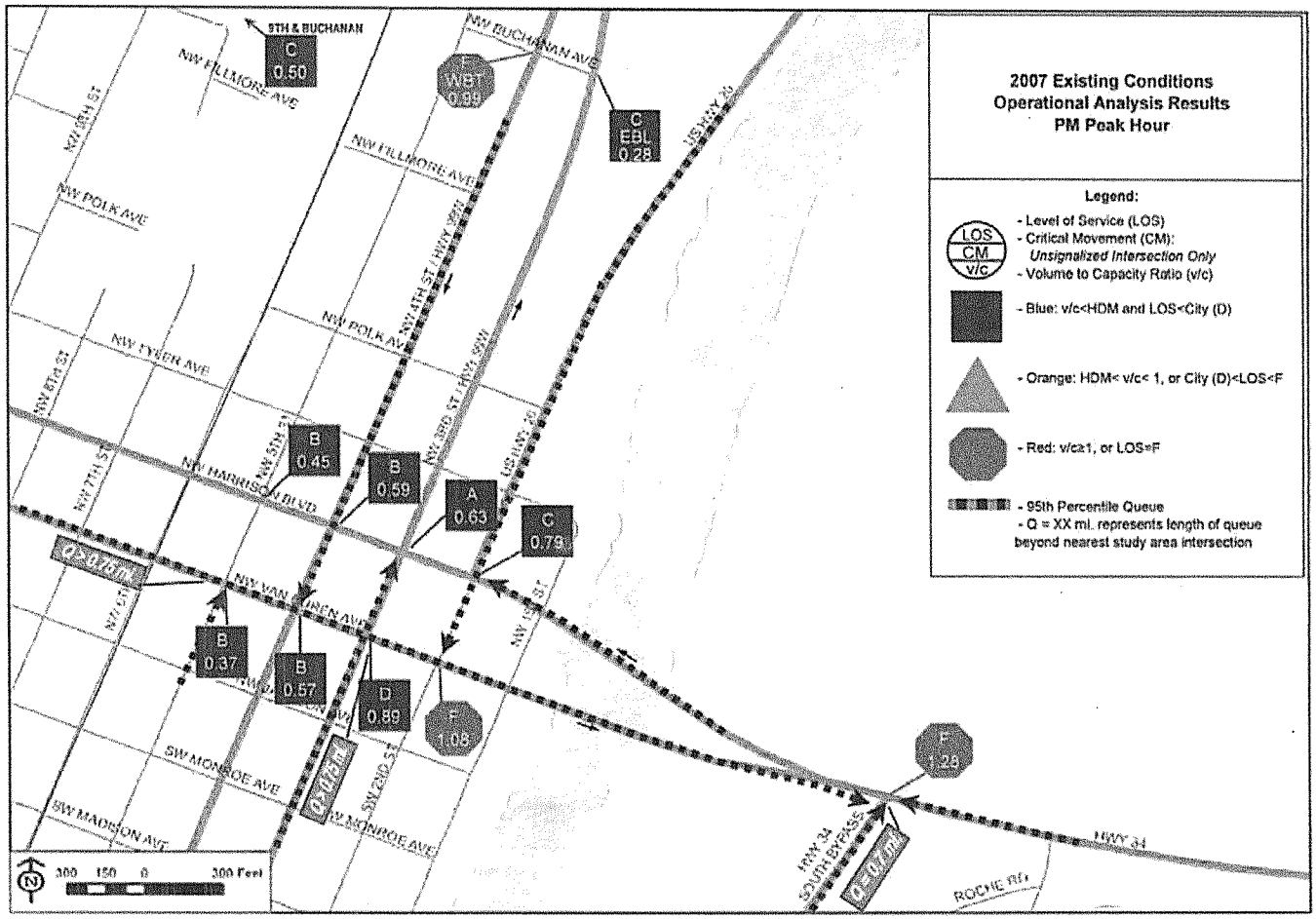


Figure 5: 2007 Traffic Operations – Weekday PM Peak Hour



MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-392

1e

SITE ACCESS

Existing plus Site Trips Conditions
Traffic Signal warrants
Existing plus Site Trips – Mitigated

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-393

HCM Unsignalized Intersection Capacity Analysis
19: Highway 20 & Site Access 6/2/2011

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	236	500	600	354	77	52
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	268	568	682	402	88	59
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1084				1786	682
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1084				1786	682
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	58				0	87
cM capacity (veh/h)	636				52	452

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	268	568	682	402	88	59
Volume Left	268	0	0	0	88	0
Volume Right	0	0	0	402	0	59
cSH	636	1700	1700	1700	52	452
Volume to Capacity	0.42	0.33	0.40	0.24	1.68	0.13
Queue Length 95th (ft)	52	0	0	0	209	11
Control Delay (s)	14.7	0.0	0.0	0.0	502.6	14.2
Lane LOS	B				F	B
Approach Delay (s)	4.7		0.0		305.7	
Approach LOS					F	

Intersection Summary			
Average Delay	23.6		
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-394

HCM Unsignalized Intersection Capacity Analysis
19: Highway 20 & Site Access 6/3/2011

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	62	510	602	93	349	232
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	70	580	684	106	397	264
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	790				1405	684
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	790				1405	684
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	91				0	41
cM capacity (veh/h)	821				141	450

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	70	580	684	106	397	264
Volume Left	70	0	0	0	397	0
Volume Right	0	0	0	106	0	264
cSH	821	1700	1700	1700	141	450
Volume to Capacity	0.09	0.34	0.40	0.06	2.81	0.59
Queue Length 95th (ft)	7	0	0	0	901	92
Control Delay (s)	9.8	0.0	0.0	0.0	881.9	23.7
Lane LOS	A				F	C
Approach Delay (s)	1.1		0.0		539.2	
Approach LOS					F	

Intersection Summary			
Average Delay	169.9		
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-395

Oregon Department of Transportation

Transportation Development Branch

Transportation Planning Analysis Unit

Preliminary Traffic Signal Warrant Analysis[1]

Major Street:	Highway 20	**Minor Street:**	Site Access
Project:	McFadden Annexation	**City/County:**	Corvallis
Year:	2030	**Alternative:**	Existing + Site

Preliminary Signal Warrant Volumes

Number of Approach lanes		ADT on major street approaching from both directions		ADT on minor street, highest approaching volume	
Major Street	Minor Street	Percent of standard warrants 100	70	Percent of standard warrants 100	70
Case A: Minimum Vehicular Traffic					
1	1	8850	6200	2650	1850
2 or more	1	10600	7400	2650	1850
2 or more	2 or more	10600	7400	3550	2500
1	2 or more	8850	6200	3550	2500
Case B: Interruption of Continuous Traffic					
1	1	13300	9300	1350	950
2 or more	1	15900	11100	1350	950
2 or more	2 or more	15900	11100	1750	1250
1	2 or more	13300	9300	1750	1250
	100 percent of standard warrants				
X	70 percent of standard warrants[2]				

Preliminary Signal Warrant Calculation

	Street	Number of Lanes	Warrant Volumes	Approach Volumes	Warrant Met
Case A	Major	2	7400	11120	Y
	Minor	2	2500	3490	
Case B	Major	2	11100	11120	Y
	Minor	2	1250	3490	
Analyst and Date:	CS	6/2/2011	Reviewer and Date:		

[1] Meeting preliminary signal warrants does **not** guarantee that a signal will be installed. When preliminary signal warrants are met, project analysts need to coordinate with Region Traffic to initiate the traffic signal engineering investigation as outlined in the Traffic Manual. Before a signal can be installed, the engineering investigation must be conducted or reviewed by the Region Traffic Manager who will forward signal recommendations to headquarters. Traffic signal warrants must be met and the State Traffic Engineer's approval obtained before a traffic signal can be installed on a state highway.

[2] Used due to 85th percentile speed in excess of 40 mph or isolated community with population of less than 10,000.

Analysis Procedures Manual
February 2009

HCM Signalized Intersection Capacity Analysis
19: Highway 20 & Site Access

6/3/2011

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1644	1731	1748	1485	1693	1515
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1644	1731	1748	1485	1693	1515
Volume (vph)	236	500	600	354	77	52
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	268	568	682	402	88	59
RTOR Reduction (vph)	0	0	0	255	0	42
Lane Group Flow (vph)	268	568	682	147	88	17
Heavy Vehicles (%)	4%	4%	3%	3%	1%	1%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	9.0	35.0	22.0	22.0	17.0	17.0
Effective Green, g (s)	9.0	35.0	22.0	22.0	17.0	17.0
Actuated g/C Ratio	0.15	0.58	0.37	0.37	0.28	0.28
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	247	1010	641	545	480	429
v/s Ratio Prot	c0.16	0.33	c0.39		c0.05	
v/s Ratio Perm				0.10		0.01
v/c Ratio	1.09	0.56	1.06	0.27	0.18	0.04
Uniform Delay, d1	25.5	7.8	19.0	13.4	16.3	15.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	81.8	0.7	53.8	0.3	0.8	0.2
Delay (s)	107.3	8.5	72.8	13.6	17.1	15.8
Level of Service	F	A	E	B	B	B
Approach Delay (s)		40.1	50.8		16.6	
Approach LOS		D	D		B	

Intersection Summary			
HCM Average Control Delay	44.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-397

HCM Signalized Intersection Capacity Analysis
19: Highway 20 & Site Access

6/3/2011

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1644	1731	1748	1485	1693	1515
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1644	1731	1748	1485	1693	1515
Volume (vph)	62	510	602	93	349	232
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	70	580	684	106	397	264
RTOR Reduction (vph)	0	0	0	62	0	179
Lane Group Flow (vph)	70	580	684	44	397	85
Heavy Vehicles (%)	4%	4%	3%	3%	1%	1%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	3.0	31.0	24.0	24.0	18.3	18.3
Effective Green, g (s)	3.0	31.0	24.0	24.0	18.3	18.3
Actuated g/C Ratio	0.05	0.54	0.42	0.42	0.32	0.32
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	86	936	732	622	541	484
v/s Ratio Prot	0.04	c0.34	c0.39		c0.23	
v/s Ratio Perm				0.03		0.06
v/c Ratio	0.81	0.62	0.93	0.07	0.73	0.18
Uniform Delay, d1	26.9	9.1	15.9	10.0	17.3	14.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	42.3	1.2	18.9	0.0	8.6	0.8
Delay (s)	69.2	10.3	34.8	10.0	25.9	14.9
Level of Service	E	B	C	B	C	B
Approach Delay (s)		16.7	31.5		21.5	
Approach LOS		B	C		C	

Intersection Summary			
HCM Average Control Delay	23.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	57.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-398

2

HP ACCESS/HIGHWAY 20

Existing Conditions
Existing plus Site Trips

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-399

HCM Unsignalized Intersection Capacity Analysis
10: Highway 20 & HP Access 6/2/2011

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	24	486	402	2	7	200
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	27	552	457	2	8	227
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	459				1064	457
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	459				1064	457
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				97	62
cM capacity (veh/h)	1091				242	606

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	27	552	457	2	8	227
Volume Left	27	0	0	0	8	0
Volume Right	0	0	0	2	0	227
cSH	1091	1700	1700	1700	242	606
Volume to Capacity	0.02	0.32	0.27	0.00	0.03	0.38
Queue Length 95th (ft)	2	0	0	0	3	43
Control Delay (s)	8.4	0.0	0.0	0.0	20.4	14.5
Lane LOS	A				C	B
Approach Delay (s)	0.4		0.0		14.7	
Approach LOS					B	

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	40.2%	ICU Level of Service	A
Analysis Period (min)	15		

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-400

HCM Unsignalized Intersection Capacity Analysis
10: Highway 20 & HP Access 6/2/2011

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	24	835	495	2	7	200
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	27	949	562	2	8	227
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	565				1566	562
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	565				1566	562
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				93	57
cM capacity (veh/h)	997				120	528

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	27	949	562	2	8	227
Volume Left	27	0	0	0	8	0
Volume Right	0	0	0	2	0	227
cSH	997	1700	1700	1700	120	528
Volume to Capacity	0.03	0.56	0.33	0.00	0.07	0.43
Queue Length 95th (ft)	2	0	0	0	5	54
Control Delay (s)	8.7	0.0	0.0	0.0	37.2	16.9
Lane LOS	A				E	C
Approach Delay (s)	0.2		0.0		17.6	
Approach LOS					C	

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-401

2e

HIGHWAY 20/CIRCLE BOULEVARD

Existing Conditions
Existing plus Site Trips Conditions
Existing plus Site – Mitigated

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-402

HCM Signalized Intersection Capacity Analysis
1: Circle Boulevard & Highway 20 6/3/2011

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	0.96		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1670		1676	1765	1748	1485
Flt Permitted	0.96		0.95	1.00	1.00	1.00
Satd. Flow (perm)	1670		1676	1765	1748	1485
Volume (vph)	534	122	75	435	282	285
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	562	128	79	458	297	300
RTOR Reduction (vph)	8	0	0	0	0	205
Lane Group Flow (vph)	682	0	79	458	297	95
Heavy Vehicles (%)	1%	1%	2%	2%	3%	3%
Turn Type			Prot			Perm
Protected Phases	2		1	4	8	
Permitted Phases						8
Actuated Green, G (s)	28.7		6.5	22.7	22.7	22.7
Effective Green, g (s)	28.7		6.5	22.7	22.7	22.7
Actuated g/C Ratio	0.40		0.09	0.32	0.32	0.32
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	671		153	561	556	472
v/s Ratio Prot	c0.41		c0.05	c0.26	0.17	
v/s Ratio Perm						0.06
v/c Ratio	1.02		0.52	0.82	0.53	0.20
Uniform Delay, d1	21.4		31.0	22.4	20.0	17.7
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	38.8		2.9	9.0	1.0	0.2
Delay (s)	60.1		33.9	31.4	21.0	18.0
Level of Service	E		C	C	C	B
Approach Delay (s)	60.1			31.8	19.5	
Approach LOS	E			C	B	

Intersection Summary			
HCM Average Control Delay	38.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	71.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-403

HCM Signalized Intersection Capacity Analysis
1: Circle Boulevard & Highway 20 6/3/2011

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.96		1.00	1.00	1.00	0.85
Flt Protected	0.96		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1657		1676	1765	1748	1485
Flt Permitted	0.96		0.95	1.00	1.00	1.00
Satd. Flow (perm)	1657		1676	1765	1748	1485
Volume (vph)	534	196	354	505	301	285
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	562	206	373	532	317	300
RTOR Reduction (vph)	15	0	0	0	0	196
Lane Group Flow (vph)	753	0	373	532	317	104
Heavy Vehicles (%)	1%	1%	2%	2%	3%	3%
Turn Type			Prot			Perm
Protected Phases	2		1	4	8	
Permitted Phases						8
Actuated Green, G (s)	27.7		9.6	27.1	27.1	27.1
Effective Green, g (s)	27.7		9.6	27.1	27.1	27.1
Actuated g/C Ratio	0.36		0.12	0.35	0.35	0.35
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	589		207	614	608	517
v/s Ratio Prot	c0.45		c0.22	c0.30	0.18	
v/s Ratio Perm						0.07
v/c Ratio	1.28		1.80	0.87	0.52	0.20
Uniform Delay, d1	25.1		34.2	23.7	20.2	17.8
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	138.2		379.5	12.3	0.8	0.2
Delay (s)	163.3		413.6	36.0	21.0	18.0
Level of Service	F		F	D	C	B
Approach Delay (s)	163.3			191.6	19.6	
Approach LOS	F			F	B	

Intersection Summary			
HCM Average Control Delay	135.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	77.9	Sum of lost time (s)	13.5
Intersection Capacity Utilization	92.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-404

HCM Signalized Intersection Capacity Analysis
1: Circle Boulevard & Highway 20

6/15/2011

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3285	1515	1676	1765	1748	1485
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3285	1515	1676	1765	1748	1485
Volume (vph)	534	196	354	505	301	285
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	562	206	373	532	317	300
RTOR Reduction (vph)	0	104	0	0	0	201
Lane Group Flow (vph)	562	102	373	532	317	99
Heavy Vehicles (%)	1%	1%	2%	2%	3%	3%
Turn Type		pm+ov	Prot			Perm
Protected Phases	2	1	1	4	8	
Permitted Phases		2				8
Actuated Green, G (s)	18.6	37.8	19.2	25.4	25.4	25.4
Effective Green, g (s)	18.6	37.8	19.2	25.4	25.4	25.4
Actuated g/C Ratio	0.24	0.49	0.25	0.33	0.33	0.33
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	797	836	420	584	579	492
v/s Ratio Prot	c0.17	0.03	c0.22	c0.30	0.18	
v/s Ratio Perm		0.04				0.07
v/c Ratio	0.71	0.12	0.89	0.91	0.55	0.20
Uniform Delay, d1	26.5	10.5	27.7	24.6	21.0	18.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.2	0.1	19.7	18.5	1.1	0.2
Delay (s)	31.7	10.6	47.5	43.0	22.0	18.6
Level of Service	C	B	D	D	C	B
Approach Delay (s)	26.1			44.9	20.4	
Approach LOS	C			D	C	

Intersection Summary			
HCM Average Control Delay	32.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	76.7	Sum of lost time (s)	13.5
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-405

1e

CIRCLE BOULEVARD/WALNUT BOULEVARD

Existing Conditions
Existing plus Site Trips Conditions

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-406

HCM Signalized Intersection Capacity Analysis
7: Circle Boulevard & Walnut Boulevard

6/3/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.92		1.00	0.90	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1693	3386	1515	1693	3293		1676	1599		1660	1553	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1693	3386	1515	1693	3293		1676	1599		1660	1553	
Volume (vph)	33	503	34	10	320	61	90	55	60	62	10	22
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	35	529	36	11	337	64	95	58	63	65	11	23
RTOR Reduction (vph)	0	0	27	0	24	0	0	34	0	0	14	0
Lane Group Flow (vph)	35	529	9	11	377	0	95	87	0	65	20	0
Confl. Peds. (#/hr)						1			6			3
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	3%	3%	3%
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	4.0	17.5	17.5	0.8	14.3		7.2	32.5		3.2	28.5	
Effective Green, g (s)	4.0	17.5	17.5	0.8	14.3		7.2	32.5		3.2	28.5	
Actuated g/C Ratio	0.06	0.25	0.25	0.01	0.20		0.10	0.46		0.05	0.41	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	97	847	379	19	673		172	742		76	632	
v/s Ratio Prot	0.02	c0.16		0.01	c0.11		c0.06	c0.05		0.04	0.01	
v/s Ratio Perm			0.01									
v/c Ratio	0.36	0.62	0.02	0.58	0.56		0.55	0.12		0.86	0.03	
Uniform Delay, d1	31.8	23.3	19.8	34.4	25.0		29.9	10.6		33.2	12.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.3	1.4	0.0	36.3	1.1		3.8	0.3		56.8	0.1	
Delay (s)	34.1	24.8	19.8	70.7	26.1		33.7	10.9		90.0	12.6	
Level of Service	C	C	B	E	C		C	B		F	B	
Approach Delay (s)		25.0			27.3			20.9			63.4	
Approach LOS		C			C			C			E	

Intersection Summary			
HCM Average Control Delay	27.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	41.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-407

HCM Signalized Intersection Capacity Analysis
7: Circle Boulevard & Walnut Boulevard 6/3/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.92		1.00	0.90	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1693	3386	1515	1693	3282		1676	1601		1660	1554	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1693	3386	1515	1693	3282		1676	1601		1660	1554	
Volume (vph)	33	562	34	10	541	119	90	55	60	77	10	22
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	35	592	36	11	569	125	95	58	63	81	11	23
RTOR Reduction (vph)	0	0	25	0	32	0	0	41	0	0	16	0
Lane Group Flow (vph)	35	592	11	11	662	0	95	80	0	81	18	0
Confl. Peds. (#/hr)						1			6			3
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	3%	3%	3%
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	4.0	18.2	18.2	0.8	15.0		6.4	21.4		3.6	18.6	
Effective Green, g (s)	4.0	18.2	18.2	0.8	15.0		6.4	21.4		3.6	18.6	
Actuated g/C Ratio	0.07	0.30	0.30	0.01	0.25		0.11	0.36		0.06	0.31	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	113	1027	460	23	821		179	571		100	482	
v/s Ratio Prot	0.02	c0.17		0.01	c0.20		c0.06	c0.05		0.05	0.01	
v/s Ratio Perm			0.01									
v/c Ratio	0.31	0.58	0.02	0.48	0.81		0.53	0.14		0.81	0.04	
Uniform Delay, d1	26.7	17.6	14.7	29.4	21.1		25.4	13.1		27.9	14.5	
Progression Factor	0.48	0.54	0.04	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	0.7	0.0	14.8	5.8		3.0	0.5		37.2	0.1	
Delay (s)	14.2	10.2	0.6	44.2	26.9		28.4	13.6		65.1	14.6	
Level of Service	B	B	A	D	C		C	B		E	B	
Approach Delay (s)		9.9			27.2			20.1			50.2	
Approach LOS		A			C			C			D	

Intersection Summary			
HCM Average Control Delay	21.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-408

CIRCLE BOULEVARD/4 ACRE STREET

Existing Conditions
Existing plus Site Trips Conditions

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-409

HCM Signalized Intersection Capacity Analysis
18: Circle Boulevard & 4 Acres Road

6/3/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95			1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99			0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.95			0.88	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.97			1.00	
Satd. Flow (prot)	1693	3386	1486	1676	3352		1608	1542			1530	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.60	0.70			1.00	
Satd. Flow (perm)	1693	3386	1486	1676	3352		1022	1107			1530	
Volume (vph)	6	437	194	91	529	1	352	0	91	0	1	10
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	6	465	206	97	563	1	374	0	97	0	1	11
RTOR Reduction (vph)	0	0	128	0	0	0	0	32	0	0	8	0
Lane Group Flow (vph)	6	465	78	97	564	0	203	236	0	0	4	0
Confl. Peds. (#/hr)			4						4			9
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type	Prot		pm+ov	Prot			pm+pt			Perm		
Protected Phases	7	4	5	3	8		5	2			6	
Permitted Phases			4				2			6		
Actuated Green, G (s)	0.8	15.5	21.7	4.8	19.5		26.7	26.7			16.0	
Effective Green, g (s)	0.8	16.0	22.7	4.8	20.0		27.2	27.2			16.5	
Actuated g/C Ratio	0.01	0.27	0.38	0.08	0.33		0.45	0.45			0.28	
Clearance Time (s)	4.0	4.5	4.5	4.0	4.5		4.5	4.5			4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	23	903	661	134	1117		529	550			421	
v/s Ratio Prot	0.00	0.14	0.01	c0.06	c0.17		0.04	c0.05			0.00	
v/s Ratio Perm			0.04				0.13	c0.15				
v/c Ratio	0.26	0.51	0.12	0.72	0.50		0.38	0.43			0.01	
Uniform Delay, d1	29.3	18.7	12.1	27.0	16.0		10.4	11.1			15.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	6.0	0.5	0.1	17.5	0.4		0.5	0.5			0.0	
Delay (s)	35.3	19.2	12.2	44.5	16.4		10.9	11.7			15.9	
Level of Service	D	B	B	D	B		B	B			B	
Approach Delay (s)		17.2			20.5			11.3			15.9	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	16.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-410

HCM Signalized Intersection Capacity Analysis
18: Circle Boulevard & 4 Acres Road

6/3/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95			1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	0.99			0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.95			0.88	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.97			1.00	
Satd. Flow (prot)	1693	3386	1484	1676	3352		1608	1542			1530	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.60	0.68			1.00	
Satd. Flow (perm)	1693	3386	1484	1676	3352		1012	1077			1530	
Volume (vph)	6	496	194	91	750	1	352	0	91	0	1	10
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	6	528	206	97	798	1	374	0	97	0	1	11
RTOR Reduction (vph)	0	0	125	0	0	0	0	34	0	0	8	0
Lane Group Flow (vph)	6	528	81	97	799	0	203	234	0	0	4	0
Confl. Peds. (#/hr)			4						4			9
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type	Prot		pm+ov	Prot			pm+pt			Perm		
Protected Phases	7	4	5	3	8		5	2			6	
Permitted Phases			4				2			6		
Actuated Green, G (s)	0.8	17.0	22.5	4.8	21.0		25.2	25.2			15.2	
Effective Green, g (s)	0.8	17.5	23.5	4.8	21.5		25.7	25.7			15.7	
Actuated g/C Ratio	0.01	0.29	0.39	0.08	0.36		0.43	0.43			0.26	
Clearance Time (s)	4.0	4.5	4.5	4.0	4.5		4.5	4.5			4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	23	988	680	134	1201		493	508			400	
v/s Ratio Prot	0.00	0.16	0.01	c0.06	c0.24		0.04	c0.05			0.00	
v/s Ratio Perm			0.04				0.14	c0.15				
v/c Ratio	0.26	0.53	0.12	0.72	0.67		0.41	0.46			0.01	
Uniform Delay, d1	29.3	17.8	11.6	27.0	16.2		11.4	12.2			16.4	
Progression Factor	1.00	1.00	1.00	1.28	0.46		1.00	1.00			1.00	
Incremental Delay, d2	6.0	0.6	0.1	14.8	1.2		0.6	0.7			0.0	
Delay (s)	35.3	18.4	11.7	49.2	8.6		11.9	12.9			16.4	
Level of Service	D	B	B	D	A		B	B			B	
Approach Delay (s)		16.7			13.0			12.5			16.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-411

1e

CIRCLE BOULEVARD/HIGHWAY 99W

Existing Conditions
Existing plus Site Trips Conditions

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-412

HCM Signalized Intersection Capacity Analysis
6: Circle Boulevard & Highway 99W

6/3/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1693	3386	1479	1693	3280		3252	3307		1660	3241	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1693	3386	1479	1693	3280		3252	3307		1660	3241	
Volume (vph)	63	501	256	186	586	119	128	588	52	84	427	73
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	71	563	288	209	658	134	144	661	58	94	480	82
RTOR Reduction (vph)	0	0	212	0	26	0	0	11	0	0	22	0
Lane Group Flow (vph)	71	563	76	209	766	0	144	708	0	94	540	0
Confl. Peds. (#/hr)			10			21			7			2
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	3%	3%	3%
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	2.9	16.4	16.4	7.5	21.0		3.6	15.2		4.9	16.5	
Effective Green, g (s)	2.9	16.4	16.4	7.5	21.0		3.6	15.2		4.9	16.5	
Actuated g/C Ratio	0.05	0.26	0.26	0.12	0.34		0.06	0.25		0.08	0.27	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	79	896	391	205	1111		189	811		131	863	
v/s Ratio Prot	0.04	0.17		c0.12	c0.23		0.04	c0.21		0.06	c0.17	
v/s Ratio Perm			0.05									
v/c Ratio	0.90	0.63	0.19	1.02	0.69		0.76	0.87		0.72	0.63	
Uniform Delay, d1	29.4	20.1	17.7	27.2	17.7		28.8	22.5		27.9	20.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	67.3	1.4	0.2	68.0	1.8		16.5	12.6		17.1	3.4	
Delay (s)	96.7	21.5	17.9	95.3	19.5		45.3	35.0		44.9	23.4	
Level of Service	F	C	B	F	B		D	D		D	C	
Approach Delay (s)		26.2			35.3			36.7			26.5	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	31.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	62.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	64.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-413

HCM Signalized Intersection Capacity Analysis
6: Circle Boulevard & Highway 99W

6/3/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1693	3386	1479	1693	3256		3252	3303		1660	3241	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1693	3386	1479	1693	3256		3252	3303		1660	3241	
Volume (vph)	63	537	256	203	720	189	128	588	56	103	427	73
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	71	603	288	228	809	212	144	661	63	116	480	82
RTOR Reduction (vph)	0	0	206	0	35	0	0	12	0	0	22	0
Lane Group Flow (vph)	71	603	82	228	986	0	144	712	0	116	540	0
Confl. Peds. (#/hr)			10			21			7			2
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	3%	3%	3%
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	2.9	17.4	17.4	7.5	22.0		3.2	14.2		4.9	15.9	
Effective Green, g (s)	2.9	17.4	17.4	7.5	22.0		3.2	14.2		4.9	15.9	
Actuated g/C Ratio	0.05	0.28	0.28	0.12	0.35		0.05	0.23		0.08	0.26	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	79	950	415	205	1155		168	756		131	831	
v/s Ratio Prot	0.04	0.18		c0.13	c0.30		0.04	c0.22		0.07	c0.17	
v/s Ratio Perm			0.06									
v/c Ratio	0.90	0.63	0.20	1.11	0.85		0.86	0.94		0.89	0.65	
Uniform Delay, d1	29.4	19.5	17.0	27.2	18.5		29.2	23.5		28.3	20.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	67.3	1.4	0.2	96.2	6.3		32.5	21.2		45.6	3.9	
Delay (s)	96.7	20.9	17.2	123.4	24.8		61.6	44.7		73.8	24.5	
Level of Service	F	C	B	F	C		E	D		E	C	
Approach Delay (s)		25.4			42.8			47.5			32.9	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	62.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-414

1e

CIRCLE BOULEVARD/9TH STREET

Existing Conditions
Existing plus Site Trips Conditions

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-415

HCM Signalized Intersection Capacity Analysis
14: Circle Boulevard & 9th Street

6/3/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1693	3306		1693	3254		1693	3231		1693	3225	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1693	3306		1693	3254		1693	3231		1693	3225	
Volume (vph)	168	566	87	168	479	140	143	421	162	92	379	127
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	181	609	94	181	515	151	154	453	174	99	408	137
RTOR Reduction (vph)	0	18	0	0	39	0	0	55	0	0	47	0
Lane Group Flow (vph)	181	685	0	181	627	0	154	572	0	99	498	0
Confl. Peds. (#/hr)			12			8			3			22
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	9.6	16.1		9.6	16.1		8.8	22.6		4.7	18.5	
Effective Green, g (s)	9.6	16.6		9.6	16.6		8.8	23.1		4.7	19.0	
Actuated g/C Ratio	0.14	0.24		0.14	0.24		0.13	0.33		0.07	0.27	
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	232	784		232	772		213	1066		114	875	
v/s Ratio Prot	0.11	c0.21		0.11	c0.19		c0.09	c0.18		0.06	0.15	
v/s Ratio Perm												
v/c Ratio	0.78	0.87		0.78	0.81		0.72	0.54		0.87	0.57	
Uniform Delay, d1	29.2	25.7		29.2	25.2		29.4	19.1		32.3	22.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	15.5	10.6		15.5	6.5		11.5	1.9		45.7	2.7	
Delay (s)	44.7	36.3		44.7	31.7		40.9	21.0		78.0	24.7	
Level of Service	D	D		D	C		D	C		E	C	
Approach Delay (s)		38.1			34.5			24.9			32.9	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	32.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-416

HCM Signalized Intersection Capacity Analysis
14: Circle Boulevard & 9th Street

6/3/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1693	3309		1693	3270		1693	3221		1693	3225	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1693	3309		1693	3270		1693	3221		1693	3225	
Volume (vph)	168	588	87	220	561	140	143	421	176	92	379	127
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	181	632	94	237	603	151	154	453	189	99	408	137
RTOR Reduction (vph)	0	17	0	0	32	0	0	63	0	0	47	0
Lane Group Flow (vph)	181	709	0	237	722	0	154	579	0	99	498	0
Confl. Peds. (#/hr)			12			8			3			22
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	9.7	16.4		10.0	16.7		8.8	22.5		4.8	18.5	
Effective Green, g (s)	9.7	16.9		10.0	17.2		8.8	23.0		4.8	19.0	
Actuated g/C Ratio	0.14	0.24		0.14	0.24		0.12	0.33		0.07	0.27	
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	232	791		239	796		211	1048		115	867	
v/s Ratio Prot	0.11	c0.21		0.14	c0.22		c0.09	c0.18		0.06	0.15	
v/s Ratio Perm												
v/c Ratio	0.78	0.90		0.99	0.91		0.73	0.55		0.86	0.57	
Uniform Delay, d1	29.5	26.1		30.3	26.0		29.8	19.6		32.6	22.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	15.5	12.8		55.7	13.9		11.9	2.1		44.1	2.8	
Delay (s)	45.0	38.8		86.0	39.9		41.7	21.7		76.7	25.1	
Level of Service	D	D		F	D		D	C		E	C	
Approach Delay (s)		40.1			50.9			25.6			33.1	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	38.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-417

1e

HIGHWAY 34/SOUTH BYPASS

WCR Worksheets
Existing plus Site Trips
Existing plus Site – Mitigated

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-418

HCM Signalized Intersection Capacity Analysis
12: Van Buren & Bypass

1/7/2008

Movement	EBL	EBT	EBR	WBL	WBR	WBR2	NBL	NBT	NBR	SBT	SBR2
Lane Configurations											
Volume (vph)	5	940	30	650	1420	5	90	5	610	20	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	5.0		4.0	5.0			4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		0.97	0.88			1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00
Frt	1.00	1.00		1.00	0.85			1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	1.00	1.00
Satd. Flow (prot)	1710	3339		3100	2590			1479	1404	1800	1530
Flt Permitted	0.95	1.00		0.95	1.00			0.74	1.00	1.00	1.00
Satd. Flow (perm)	1710	3339		3100	2590			1146	1404	1800	1530
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	1022	33	707	1543	5	98	5	663	22	27
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	9	0	19
Lane Group Flow (vph)	5	1052	0	707	1548	0	0	103	654	22	8
Confl. Peds. (#/hr)											
Heavy Vehicles (%)	0%	2%	0%	7%	4%	0%	17%	0%	9%	0%	0%
Turn Type	Prot			Prot	custom		Perm		pm+ov		Perm
Protected Phases	7	4		3				2	3	6	
Permitted Phases					8		2		2		6
Actuated Green, G (s)	0.9	30.7		17.0	46.8			24.5	41.5	24.5	24.5
Effective Green, g (s)	0.9	30.7		17.0	46.8			24.5	41.5	24.5	24.5
Actuated g/C Ratio	0.01	0.36		0.20	0.55			0.29	0.49	0.29	0.29
Clearance Time (s)	4.0	5.0		4.0	5.0			4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	18	1203		619	1423			330	750	518	440
v/s Ratio Prot	0.00	0.32		c0.23					c0.17	0.01	
v/s Ratio Perm					c0.60			0.09	0.29		0.01
v/c Ratio	0.28	0.87		1.14	1.09			0.31	0.87	0.04	0.02
Uniform Delay, d1	41.8	25.5		34.1	19.2			23.8	19.5	21.9	21.7
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00
Incremental Delay, d2	8.3	7.3		82.2	51.5			2.5	10.9	0.2	0.1
Delay (s)	50.1	32.8		116.3	70.7			26.2	30.4	22.0	21.8
Level of Service	D	C		F	E			C	C	C	C
Approach Delay (s)		32.9						29.8		21.9	
Approach LOS		C						C		C	

Intersection Summary			
HCM Average Control Delay	60.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	85.2	Sum of lost time (s)	4.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-419

HCM Signalized Intersection Capacity Analysis
12: Van Buren & Bypass

1/7/2008

Movement	EBL	EBT	EBR	WBL	WBR	WBR2	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations												
Volume (vph)	10	1440	50	555	975	2	100	2	870	2	5	20
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		0.97	0.88			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.85			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.99	1.00
Satd. Flow (prot)	1710	3338		3100	2589			1470	1404		1775	1530
Flt Permitted	0.95	1.00		0.95	1.00			0.74	1.00		0.96	1.00
Satd. Flow (perm)	1710	3338		3100	2589			1139	1404		1731	1530
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	1565	54	603	1060	2	109	2	946	2	5	22
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	1	0	0	16
Lane Group Flow (vph)	11	1616	0	603	1062	0	0	111	945	0	7	6
Heavy Vehicles (%)	0%	2%	0%	7%	4%	0%	17%	0%	9%	0%	0%	0%
Turn Type	Prot			Prot	custom		Perm		pm+ov	Perm		Perm
Protected Phases	7	4		3				2	3		6	
Permitted Phases					8		2		2	6		6
Actuated Green, G (s)	0.9	30.7		17.0	46.8			24.5	41.5		24.5	24.5
Effective Green, g (s)	0.9	31.7		17.0	47.8			24.5	41.5		24.5	24.5
Actuated g/C Ratio	0.01	0.37		0.20	0.56			0.29	0.49		0.29	0.29
Clearance Time (s)	4.0	5.0		4.0	5.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	18	1242		619	1453			328	750		498	440
v/s Ratio Prot	0.01	c0.48		0.19					c0.25			
v/s Ratio Perm					0.41			0.10	0.42		0.00	0.00
v/c Ratio	0.61	1.30		0.97	0.73			0.34	1.26		0.01	0.01
Uniform Delay, d1	42.0	26.8		33.9	13.9			24.0	21.8		21.7	21.7
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	48.7	141.5		29.5	1.9			2.8	127.6		0.1	0.1
Delay (s)	90.7	168.2		63.4	15.8			26.7	149.5		21.8	21.8
Level of Service	F	F		E	B			C	F		C	C
Approach Delay (s)		167.7						136.6			21.8	
Approach LOS		F						F			C	

Intersection Summary			
HCM Average Control Delay	108.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.28		
Actuated Cycle Length (s)	85.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-420

HCM Signalized Intersection Capacity Analysis
4: Van Buren Avenue & Corvallis Bypass

6/2/2011

Movement	EBL	EBT	EBR	WBL	WBR	WBR2	NBL	NBT	NBR	SBT	SBR2
Lane Configurations											
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	0.88			1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.85			1.00	0.85	0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	1.00	
Satd. Flow (prot)	1676	3334		3100	2640			1684	1404	1633	
Flt Permitted	0.95	1.00		0.95	1.00			0.70	1.00	1.00	
Satd. Flow (perm)	1676	3334		3100	2640			1231	1404	1633	
Volume (vph)	5	961	37	650	1515	5	125	5	610	20	25
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	1045	40	707	1647	5	136	5	663	22	27
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	16	20	0
Lane Group Flow (vph)	5	1082	0	707	1652	0	0	141	647	29	0
Heavy Vehicles (%)	2%	2%	2%	7%	2%	2%	2%	2%	9%	2%	2%
Turn Type	Prot			Prot	custom		Perm		pm+ov		
Protected Phases	7	4		3				2	3	6	
Permitted Phases					8		2		2		
Actuated Green, G (s)	4.1	34.4		16.5	46.8			20.6	37.1	20.6	
Effective Green, g (s)	4.6	34.9		17.0	47.3			21.1	38.1	21.1	
Actuated g/C Ratio	0.05	0.41		0.20	0.56			0.25	0.45	0.25	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)	91	1369		620	1469			306	695	405	
v/s Ratio Prot	0.00	c0.32		0.23					c0.19	0.02	
v/s Ratio Perm					c0.63			0.11	0.27		
v/c Ratio	0.05	0.79		1.14	1.12			0.46	0.93	0.07	
Uniform Delay, d1	38.1	21.9		34.0	18.9			27.1	22.2	24.4	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	
Incremental Delay, d2	0.3	3.2		81.4	65.5			4.9	19.2	0.3	
Delay (s)	38.4	25.1		115.4	84.4			32.0	41.4	24.8	
Level of Service	D	C		F	F			C	D	C	
Approach Delay (s)		25.1						39.7		24.8	
Approach LOS		C						D		C	

Intersection Summary			
HCM Average Control Delay	65.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-421

HCM Signalized Intersection Capacity Analysis
4: Van Buren Avenue & Corvallis Bypass 6/2/2011

Movement	EBL	EBT	EBR	WBL	WBR	WBR2	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		0.97	0.88			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.85			1.00	0.85		0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.99	
Satd. Flow (prot)	1676	3327		3100	2640			1684	1404		1589	
Flt Permitted	0.95	1.00		0.95	1.00			0.72	1.00		0.97	
Satd. Flow (perm)	1676	3327		3100	2640			1265	1404		1550	
Volume (vph)	10	1533	85	555	1000	5	109	5	870	5	5	20
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	1666	92	603	1087	5	118	5	946	5	5	22
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	2	0	16	0
Lane Group Flow (vph)	11	1753	0	603	1092	0	0	123	944	0	16	0
Heavy Vehicles (%)	2%	2%	2%	7%	2%	2%	2%	2%	9%	2%	2%	2%
Turn Type	Prot			Prot	custom		Perm		pm+ov	Perm		
Protected Phases	7	4		3				2	3		6	
Permitted Phases					8		2		2	6		
Actuated Green, G (s)	0.3	34.1		13.5	47.3			22.5	36.0		22.5	
Effective Green, g (s)	0.8	34.6		14.0	47.8			23.0	37.0		23.0	
Actuated g/C Ratio	0.01	0.41		0.17	0.57			0.28	0.44		0.28	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5	4.5		4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	16	1377		519	1509			348	689		426	
v/s Ratio Prot	0.01	c0.53		0.19					c0.23			
v/s Ratio Perm					0.41			0.10	0.44		0.01	
v/c Ratio	0.69	1.27		1.16	0.72			0.35	1.37		0.04	
Uniform Delay, d1	41.3	24.5		34.8	13.1			24.3	23.3		22.2	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	80.1	128.8		92.4	1.7			2.8	175.9		0.2	
Delay (s)	121.4	153.3		127.2	14.8			27.1	199.2		22.4	
Level of Service	F	F		F	B			C	F		C	
Approach Delay (s)		153.1						179.4			22.4	
Approach LOS		F						F			C	

Intersection Summary			
HCM Average Control Delay	121.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	83.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	117.8%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-422

HCM Signalized Intersection Capacity Analysis
4: Van Buren Avenue & Corvallis Bypass

6/3/2011

Movement	EBL	EBT	EBR	WBL	WBR	WBR2	NBL	NBT	NBR	SBT	SBR2
Lane Configurations											
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	0.88			1.00	0.88	1.00	
Frt	1.00	0.99		1.00	0.85			1.00	0.85	0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	1.00	
Satd. Flow (prot)	1676	3334		3100	2640			1684	2470	1633	
Flt Permitted	0.95	1.00		0.95	1.00			0.70	1.00	1.00	
Satd. Flow (perm)	1676	3334		3100	2640			1231	2470	1633	
Volume (vph)	5	961	37	650	1515	5	125	5	610	20	25
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	1045	40	707	1647	5	136	5	663	22	27
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	28	20	0
Lane Group Flow (vph)	5	1082	0	707	1652	0	0	141	635	29	0
Heavy Vehicles (%)	2%	2%	2%	7%	2%	2%	2%	2%	9%	2%	2%
Turn Type	Prot			Prot	custom		Perm		pm+ov		
Protected Phases	7	4		3				2	3	6	
Permitted Phases					8		2		2		
Actuated Green, G (s)	4.1	34.4		16.5	46.8			20.6	37.1	20.6	
Effective Green, g (s)	4.6	34.9		17.0	47.3			21.1	38.1	21.1	
Actuated g/C Ratio	0.05	0.41		0.20	0.56			0.25	0.45	0.25	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0	3.0	
Lane Grp Cap (vph)	91	1369		620	1469			306	1223	405	
v/s Ratio Prot	0.00	c0.32		0.23					c0.10	0.02	
v/s Ratio Perm					c0.63			0.11	0.15		
v/c Ratio	0.05	0.79		1.14	1.12			0.46	0.52	0.07	
Uniform Delay, d1	38.1	21.9		34.0	18.9			27.1	16.9	24.4	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	
Incremental Delay, d2	0.3	3.2		81.4	65.5			4.9	0.4	0.3	
Delay (s)	38.4	25.1		115.4	84.4			32.0	17.2	24.8	
Level of Service	D	C		F	F			C	B	C	
Approach Delay (s)		25.1						19.8		24.8	
Approach LOS		C						B		C	

Intersection Summary			
HCM Average Control Delay	61.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-423

HCM Signalized Intersection Capacity Analysis
4: Van Buren Avenue & Corvallis Bypass 6/3/2011

Movement	EBL	EBT	EBR	WBL	WBR	WBR2	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		0.97	0.88			1.00	0.88		1.00	
Frt	1.00	0.99		1.00	0.85			1.00	0.85		0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.99	
Satd. Flow (prot)	1676	3327		3100	2640			1684	2470		1589	
Flt Permitted	0.95	1.00		0.95	1.00			0.72	1.00		0.97	
Satd. Flow (perm)	1676	3327		3100	2640			1265	2470		1550	
Volume (vph)	10	1533	85	555	1000	5	109	5	870	5	5	20
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	1666	92	603	1087	5	118	5	946	5	5	22
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	3	0	16	0
Lane Group Flow (vph)	11	1753	0	603	1092	0	0	123	943	0	16	0
Heavy Vehicles (%)	2%	2%	2%	7%	2%	2%	2%	2%	9%	2%	2%	2%
Turn Type	Prot			Prot	custom		Perm		pm+ov	Perm		
Protected Phases	7	4		3				2	3		6	
Permitted Phases					8		2		2	6		
Actuated Green, G (s)	0.3	34.1		13.5	47.3			22.5	36.0		22.5	
Effective Green, g (s)	0.8	34.6		14.0	47.8			23.0	37.0		23.0	
Actuated g/C Ratio	0.01	0.41		0.17	0.57			0.28	0.44		0.28	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5	4.5		4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	16	1377		519	1509			348	1211		426	
v/s Ratio Prot	0.01	c0.53		c0.19					c0.13			
v/s Ratio Perm					0.41			0.10	0.25		0.01	
v/c Ratio	0.69	1.27		1.16	0.72			0.35	0.78		0.04	
Uniform Delay, d1	41.3	24.5		34.8	13.1			24.3	19.8		22.2	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	80.1	128.8		92.4	1.7			2.8	3.2		0.2	
Delay (s)	121.4	153.3		127.2	14.8			27.1	23.1		22.4	
Level of Service	F	F		F	B			C	C		C	
Approach Delay (s)		153.1						23.5			22.4	
Approach LOS		F						C			C	

Intersection Summary			
HCM Average Control Delay	85.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	83.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-424

1e

HARRISON BOULEVARD/2ND STREET

WCR Worksheets
Existing plus Site Trips
Existing plus Site – Mitigated

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-425

HCM Signalized Intersection Capacity Analysis
7: Harrison & 2nd Street

1/7/2008

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	120	1165	250	5	230	0	0	260	330
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)					4.5		4.5	4.5			4.5	4.5
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frt					0.98		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3216		1710	1800			1782	1515
Flt Permitted					1.00		0.54	1.00			1.00	1.00
Satd. Flow (perm)					3216		977	1800			1782	1515
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	0	0	128	1239	266	5	245	0	0	277	351
RTOR Reduction (vph)	0	0	0	0	20	0	0	0	0	0	0	9
Lane Group Flow (vph)	0	0	0	0	1613	0	5	245	0	0	277	342
Heavy Vehicles (%)	0%	0%	0%	2%	4%	1%	0%	0%	0%	0%	1%	1%
Turn Type				Perm			Perm					Perm
Protected Phases					8			2			6	
Permitted Phases				8			2					6
Actuated Green, G (s)					32.5		38.5	38.5			38.5	38.5
Effective Green, g (s)					32.5		38.5	38.5			38.5	38.5
Actuated g/C Ratio					0.41		0.48	0.48			0.48	0.48
Clearance Time (s)					4.5		4.5	4.5			4.5	4.5
Lane Grp Cap (vph)					1307		470	866			858	729
v/s Ratio Prot								0.14			0.16	
v/s Ratio Perm					0.50		0.01					c0.23
v/c Ratio					1.23		0.01	0.28			0.32	0.47
Uniform Delay, d1					23.8		10.8	12.5			12.7	13.9
Progression Factor					1.00		0.72	0.56			1.00	1.00
Incremental Delay, d2					112.1		0.0	0.8			1.0	2.2
Delay (s)					135.9		7.8	7.8			13.7	16.1
Level of Service					F		A	A			B	B
Approach Delay (s)		0.0			135.9			7.8			15.0	
Approach LOS		A			F			A			B	

Intersection Summary			
HCM Average Control Delay	92.9	HCM Level of Service	F
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-426

HCM Signalized Intersection Capacity Analysis
7: Harrison & 2nd Street

1/7/2008

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	105	845	145	10	300	0	0	600	345
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)					4.0		4.0	4.0			4.0	4.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frt					0.98		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3226		1710	1800			1782	1515
Flt Permitted					1.00		0.22	1.00			1.00	1.00
Satd. Flow (perm)					3226		400	1800			1782	1515
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	0	0	112	899	154	11	319	0	0	638	367
RTOR Reduction (vph)	0	0	0	0	15	0	0	0	0	0	0	30
Lane Group Flow (vph)	0	0	0	0	1150	0	11	319	0	0	638	337
Heavy Vehicles (%)	0%	0%	0%	2%	4%	1%	0%	0%	0%	0%	1%	1%
Turn Type				Perm			Perm					Perm
Protected Phases					8			2			6	
Permitted Phases				8			2					6
Actuated Green, G (s)					32.5		38.5	38.5			38.5	38.5
Effective Green, g (s)					33.0		39.0	39.0			39.0	39.0
Actuated g/C Ratio					0.41		0.49	0.49			0.49	0.49
Clearance Time (s)					4.5		4.5	4.5			4.5	4.5
Lane Grp Cap (vph)					1331		195	878			869	739
v/s Ratio Prot								0.18			c0.36	
v/s Ratio Perm					0.36		0.03					0.22
v/c Ratio					0.86		0.06	0.36			0.73	0.46
Uniform Delay, d1					21.4		10.8	12.8			16.4	13.5
Progression Factor					1.00		0.86	0.70			1.00	1.00
Incremental Delay, d2					7.6		0.5	1.1			5.5	2.0
Delay (s)					29.1		9.8	10.0			21.8	15.5
Level of Service					C		A	B			C	B
Approach Delay (s)		0.0			29.1			10.0			19.5	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	22.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	121.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-427

HCM Signalized Intersection Capacity Analysis
16: Harrison Boulevard & Highway 20 6/2/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)					4.5		4.5	4.5			4.5	4.5
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frt					0.97		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3190		1676	1765			1782	1515
Flt Permitted					1.00		0.51	1.00			1.00	1.00
Satd. Flow (perm)					3190		901	1765			1782	1515
Volume (vph)	0	0	0	120	1165	380	5	336	0	0	291	351
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	0	0	128	1239	404	5	357	0	0	310	373
RTOR Reduction (vph)	0	0	0	0	34	0	0	0	0	0	0	9
Lane Group Flow (vph)	0	0	0	0	1737	0	5	357	0	0	310	364
Heavy Vehicles (%)	2%	2%	2%	2%	4%	1%	2%	2%	2%	2%	1%	1%
Turn Type				Perm			Perm					Perm
Protected Phases					8			2			6	
Permitted Phases				8			2					6
Actuated Green, G (s)					32.5		38.5	38.5			38.5	38.5
Effective Green, g (s)					32.5		38.5	38.5			38.5	38.5
Actuated g/C Ratio					0.41		0.48	0.48			0.48	0.48
Clearance Time (s)					4.5		4.5	4.5			4.5	4.5
Lane Grp Cap (vph)					1296		434	849			858	729
v/s Ratio Prot								0.20			0.17	
v/s Ratio Perm					0.54		0.01					c0.24
v/c Ratio					1.34		0.01	0.42			0.36	0.50
Uniform Delay, d1					23.8		10.8	13.5			13.0	14.2
Progression Factor					1.00		1.31	0.86			1.00	1.00
Incremental Delay, d2					158.3		0.0	1.4			1.2	2.4
Delay (s)					182.0		14.2	13.0			14.2	16.6
Level of Service					F		B	B			B	B
Approach Delay (s)		0.0			182.0			13.1			15.5	
Approach LOS		A			F			B			B	

Intersection Summary			
HCM Average Control Delay	119.9	HCM Level of Service	F
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	117.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-428

HCM Signalized Intersection Capacity Analysis
16: Harrison Boulevard & Highway 20 6/2/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)					4.0		4.0	4.0			4.0	4.0
Lane Util. Factor					0.95		1.00	1.00			1.00	1.00
Frt					0.98		1.00	1.00			1.00	0.85
Flt Protected					1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)					3216		1676	1765			1782	1515
Flt Permitted					1.00		0.11	1.00			1.00	1.00
Satd. Flow (perm)					3216		187	1765			1782	1515
Volume (vph)	0	0	0	105	845	179	10	328	0	0	739	438
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	0	0	112	899	190	11	349	0	0	786	466
RTOR Reduction (vph)	0	0	0	0	19	0	0	0	0	0	0	30
Lane Group Flow (vph)	0	0	0	0	1182	0	11	349	0	0	786	436
Heavy Vehicles (%)	2%	2%	2%	2%	4%	1%	2%	2%	2%	2%	1%	1%
Turn Type				Perm			Perm					Perm
Protected Phases					8			2			6	
Permitted Phases				8			2					6
Actuated Green, G (s)					32.5		38.5	38.5			38.5	38.5
Effective Green, g (s)					33.0		39.0	39.0			39.0	39.0
Actuated g/C Ratio					0.41		0.49	0.49			0.49	0.49
Clearance Time (s)					4.5		4.5	4.5			4.5	4.5
Lane Grp Cap (vph)					1327		91	860			869	739
v/s Ratio Prot								0.20			c0.44	
v/s Ratio Perm					0.37		0.06					0.29
v/c Ratio					0.89		0.12	0.41			0.90	0.59
Uniform Delay, d1					21.8		11.2	13.1			18.8	14.7
Progression Factor					1.00		0.06	0.16			1.00	1.00
Incremental Delay, d2					9.3		2.5	1.3			14.6	3.4
Delay (s)					31.1		3.2	3.4			33.4	18.2
Level of Service					C		A	A			C	B
Approach Delay (s)		0.0			31.1			3.4			27.8	
Approach LOS		A			C			A			C	

Intersection Summary			
HCM Average Control Delay	26.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	133.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-429

HCM Signalized Intersection Capacity Analysis
16: Harrison Boulevard & Highway 20 6/3/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)					4.5	4.5	4.5	4.5			4.5	4.5
Lane Util. Factor					0.95	1.00	1.00	1.00			1.00	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					3279	1515	1676	1765			1782	1515
Flt Permitted					1.00	1.00	0.51	1.00			1.00	1.00
Satd. Flow (perm)					3279	1515	901	1765			1782	1515
Volume (vph)	0	0	0	120	1165	380	5	336	0	0	291	351
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	0	0	128	1239	404	5	357	0	0	310	373
RTOR Reduction (vph)	0	0	0	0	0	240	0	0	0	0	0	9
Lane Group Flow (vph)	0	0	0	0	1367	164	5	357	0	0	310	364
Heavy Vehicles (%)	2%	2%	2%	2%	4%	1%	2%	2%	2%	2%	1%	1%
Turn Type				Perm		Perm	Perm					Perm
Protected Phases					8			2			6	
Permitted Phases				8		8	2					6
Actuated Green, G (s)					32.5	32.5	38.5	38.5			38.5	38.5
Effective Green, g (s)					32.5	32.5	38.5	38.5			38.5	38.5
Actuated g/C Ratio					0.41	0.41	0.48	0.48			0.48	0.48
Clearance Time (s)					4.5	4.5	4.5	4.5			4.5	4.5
Lane Grp Cap (vph)					1332	615	434	849			858	729
v/s Ratio Prot								0.20			0.17	
v/s Ratio Perm					0.42	0.11	0.01					c0.24
v/c Ratio					1.03	0.27	0.01	0.42			0.36	0.50
Uniform Delay, d1					23.8	15.8	10.8	13.5			13.0	14.2
Progression Factor					1.00	1.00	1.31	0.86			1.00	1.00
Incremental Delay, d2					31.6	1.1	0.0	1.4			1.2	2.4
Delay (s)					55.3	16.9	14.2	13.0			14.2	16.6
Level of Service					E	B	B	B			B	B
Approach Delay (s)		0.0			46.6			13.1			15.5	
Approach LOS		A			D			B			B	

Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-430

HCM Signalized Intersection Capacity Analysis
16: Harrison Boulevard & Highway 20 6/3/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)					4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor					0.95	1.00	1.00	1.00			1.00	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.99	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					3277	1515	1676	1765			1782	1515
Flt Permitted					0.99	1.00	0.11	1.00			1.00	1.00
Satd. Flow (perm)					3277	1515	187	1765			1782	1515
Volume (vph)	0	0	0	105	845	179	10	328	0	0	739	438
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	0	0	112	899	190	11	349	0	0	786	466
RTOR Reduction (vph)	0	0	0	0	0	112	0	0	0	0	0	30
Lane Group Flow (vph)	0	0	0	0	1011	78	11	349	0	0	786	436
Heavy Vehicles (%)	2%	2%	2%	2%	4%	1%	2%	2%	2%	2%	1%	1%
Turn Type				Perm		Perm	Perm					Perm
Protected Phases					8			2			6	
Permitted Phases				8		8	2					6
Actuated Green, G (s)					32.5	32.5	38.5	38.5			38.5	38.5
Effective Green, g (s)					33.0	33.0	39.0	39.0			39.0	39.0
Actuated g/C Ratio					0.41	0.41	0.49	0.49			0.49	0.49
Clearance Time (s)					4.5	4.5	4.5	4.5			4.5	4.5
Lane Grp Cap (vph)					1352	625	91	860			869	739
v/s Ratio Prot								0.20			c0.44	
v/s Ratio Perm					0.31	0.05	0.06					0.29
v/c Ratio					0.75	0.13	0.12	0.41			0.90	0.59
Uniform Delay, d1					20.0	14.6	11.2	13.1			18.8	14.7
Progression Factor					1.00	1.00	0.06	0.16			1.00	1.00
Incremental Delay, d2					3.8	0.4	2.5	1.3			14.6	3.4
Delay (s)					23.8	15.0	3.2	3.4			33.4	18.2
Level of Service					C	B	A	A			C	B
Approach Delay (s)		0.0			22.4			3.4			27.8	
Approach LOS		A			C			A			C	

Intersection Summary			
HCM Average Control Delay	22.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	104.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-431

1e

VAN BUREN AVENUE/2ND STREET

WCR Worksheets
Existing plus Site Trips
Existing plus Site – Mitigated

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-432

HCM Signalized Intersection Capacity Analysis
11: Van Buren & 2nd Street

1/7/2008

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	235	830	115	0	0	0	0	0	0	145	235	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5	4.5							4.5	4.5	
Lane Util. Factor	1.00	1.00	1.00							1.00	1.00	
Frt	1.00	1.00	0.85							1.00	1.00	
Flt Protected	0.95	1.00	1.00							0.95	1.00	
Satd. Flow (prot)	1524	1748	1350							1629	1782	
Flt Permitted	0.95	1.00	1.00							0.95	1.00	
Satd. Flow (perm)	1524	1748	1350							1629	1782	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	261	922	128	0	0	0	0	0	0	161	261	0
RTOR Reduction (vph)	0	0	58	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	261	922	70	0	0	0	0	0	0	161	261	0
Heavy Vehicles (%)	1%	3%	2%	0%	0%	0%	0%	0%	0%	5%	1%	0%
Parking (#/hr)	0		0									
Turn Type	Perm		Perm							Perm		
Protected Phases		4									6	
Permitted Phases	4		4							6		
Actuated Green, G (s)	43.5	43.5	43.5							27.5	27.5	
Effective Green, g (s)	43.5	43.5	43.5							27.5	27.5	
Actuated g/C Ratio	0.54	0.54	0.54							0.34	0.34	
Clearance Time (s)	4.5	4.5	4.5							4.5	4.5	
Lane Grp Cap (vph)	829	950	734							560	613	
v/s Ratio Prot		c0.53									c0.15	
v/s Ratio Perm	0.17		0.05							0.10		
v/c Ratio	0.31	0.97	0.09							0.29	0.43	
Uniform Delay, d1	10.0	17.6	8.8							19.1	20.2	
Progression Factor	2.03	1.97	5.51							2.22	1.19	
Incremental Delay, d2	0.8	19.8	0.2							1.3	1.4	
Delay (s)	21.2	54.6	48.6							43.7	25.4	
Level of Service	C	D	D							D	C	
Approach Delay (s)		47.3			0.0			0.0			32.4	
Approach LOS		D			A			A			C	

Intersection Summary			
HCM Average Control Delay	43.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-433

HCM Signalized Intersection Capacity Analysis
11: Van Buren & 2nd Street

1/7/2008

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	310	1115	180	0	0	0	0	0	0	385	320	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0							4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00							1.00	1.00	
Frt	1.00	1.00	0.85							1.00	1.00	
Flt Protected	0.95	1.00	1.00							0.95	1.00	
Satd. Flow (prot)	1693	1748	1500							1629	1782	
Flt Permitted	0.95	1.00	1.00							0.95	1.00	
Satd. Flow (perm)	1693	1748	1500							1629	1782	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	344	1239	200	0	0	0	0	0	0	428	356	0
RTOR Reduction (vph)	0	0	80	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	344	1239	120	0	0	0	0	0	0	428	356	0
Heavy Vehicles (%)	1%	3%	2%	0%	0%	0%	0%	0%	0%	5%	1%	0%
Turn Type	Perm		Perm							Perm		
Protected Phases		4									6	
Permitted Phases	4		4							6		
Actuated Green, G (s)	43.5	43.5	43.5							27.5	27.5	
Effective Green, g (s)	44.0	44.0	44.0							28.0	28.0	
Actuated g/C Ratio	0.55	0.55	0.55							0.35	0.35	
Clearance Time (s)	4.5	4.5	4.5							4.5	4.5	
Lane Grp Cap (vph)	931	961	825							570	624	
v/s Ratio Prot		c0.71									0.20	
v/s Ratio Perm	0.20		0.08							c0.26		
v/c Ratio	0.37	1.29	0.15							0.75	0.57	
Uniform Delay, d1	10.2	18.0	8.8							22.9	21.1	
Progression Factor	1.78	1.63	4.10							1.90	1.40	
Incremental Delay, d2	0.6	134.6	0.2							6.7	2.6	
Delay (s)	18.7	163.9	36.3							50.3	32.2	
Level of Service	B	F	D							D	C	
Approach Delay (s)		121.6			0.0			0.0			42.1	
Approach LOS		F			A			A			D	

Intersection Summary			
HCM Average Control Delay	97.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	138.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-434

HCM Signalized Intersection Capacity Analysis
11: Van Buren Avenue & 2nd Avenue 6/2/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5	4.5							4.5	4.5	
Lane Util. Factor	1.00	1.00	1.00							1.00	1.00	
Frt	1.00	1.00	0.85							1.00	1.00	
Flt Protected	0.95	1.00	1.00							0.95	1.00	
Satd. Flow (prot)	1693	1748	1500							1629	1782	
Flt Permitted	0.95	1.00	1.00							0.95	1.00	
Satd. Flow (perm)	1693	1748	1500							1629	1782	
Volume (vph)	341	830	115	0	0	0	0	0	0	173	238	0
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	379	922	128	0	0	0	0	0	0	192	264	0
RTOR Reduction (vph)	0	0	58	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	379	922	70	0	0	0	0	0	0	192	264	0
Heavy Vehicles (%)	1%	3%	2%	2%	2%	2%	2%	2%	2%	5%	1%	2%
Turn Type	Perm		Perm							Perm		
Protected Phases		4									6	
Permitted Phases	4		4							6		
Actuated Green, G (s)	43.5	43.5	43.5							27.5	27.5	
Effective Green, g (s)	43.5	43.5	43.5							27.5	27.5	
Actuated g/C Ratio	0.54	0.54	0.54							0.34	0.34	
Clearance Time (s)	4.5	4.5	4.5							4.5	4.5	
Lane Grp Cap (vph)	921	950	816							560	613	
v/s Ratio Prot		c0.53									c0.15	
v/s Ratio Perm	0.22		0.05							0.12		
v/c Ratio	0.41	0.97	0.09							0.34	0.43	
Uniform Delay, d1	10.7	17.6	8.7							19.5	20.2	
Progression Factor	2.15	1.97	5.68							1.17	1.15	
Incremental Delay, d2	1.0	19.2	0.2							1.3	1.7	
Delay (s)	24.0	53.9	49.7							24.2	24.9	
Level of Service	C	D	D							C	C	
Approach Delay (s)		45.6			0.0			0.0			24.6	
Approach LOS		D			A			A			C	

Intersection Summary			
HCM Average Control Delay	40.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	130.8%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-435

HCM Signalized Intersection Capacity Analysis
11: Van Buren Avenue & 2nd Avenue 6/2/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0	4.0							4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00							1.00	1.00	
Frt	1.00	1.00	0.85							1.00	1.00	
Flt Protected	0.95	1.00	1.00							0.95	1.00	
Satd. Flow (prot)	1693	1748	1500							1629	1782	
Flt Permitted	0.95	1.00	1.00							0.95	1.00	
Satd. Flow (perm)	1693	1748	1500							1629	1782	
Volume (vph)	338	1115	180	0	0	0	0	0	0	513	331	0
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	376	1239	200	0	0	0	0	0	0	570	368	0
RTOR Reduction (vph)	0	0	80	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	376	1239	120	0	0	0	0	0	0	570	368	0
Heavy Vehicles (%)	1%	3%	2%	2%	2%	2%	2%	2%	2%	5%	1%	2%
Turn Type	Perm		Perm							Perm		
Protected Phases		4									6	
Permitted Phases	4		4							6		
Actuated Green, G (s)	43.5	43.5	43.5							27.5	27.5	
Effective Green, g (s)	44.0	44.0	44.0							28.0	28.0	
Actuated g/C Ratio	0.55	0.55	0.55							0.35	0.35	
Clearance Time (s)	4.5	4.5	4.5							4.5	4.5	
Lane Grp Cap (vph)	931	961	825							570	624	
v/s Ratio Prot		c0.71									0.21	
v/s Ratio Perm	0.22		0.08							c0.35		
v/c Ratio	0.40	1.29	0.15							1.00	0.59	
Uniform Delay, d1	10.4	18.0	8.8							26.0	21.3	
Progression Factor	1.68	1.58	3.30							0.97	0.94	
Incremental Delay, d2	0.7	134.5	0.2							26.0	1.9	
Delay (s)	18.2	162.8	29.2							51.3	21.9	
Level of Service	B	F	C							D	C	
Approach Delay (s)		118.2			0.0			0.0			39.8	
Approach LOS		F			A			A			D	

Intersection Summary			
HCM Average Control Delay	91.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	146.9%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-436

HCM Signalized Intersection Capacity Analysis
11: Van Buren Avenue & 2nd Avenue 6/3/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.5	4.5								4.5	4.5	
Lane Util. Factor	1.00	0.95								1.00	1.00	
Frt	1.00	0.98								1.00	1.00	
Flt Protected	0.95	1.00								0.95	1.00	
Satd. Flow (prot)	1693	3264								1629	1782	
Flt Permitted	0.95	1.00								0.95	1.00	
Satd. Flow (perm)	1693	3264								1629	1782	
Volume (vph)	341	830	115	0	0	0	0	0	0	173	238	0
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	379	922	128	0	0	0	0	0	0	192	264	0
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	379	1036	0	0	0	0	0	0	0	192	264	0
Heavy Vehicles (%)	1%	3%	2%	2%	2%	2%	2%	2%	2%	5%	1%	2%
Turn Type	Perm									Perm		
Protected Phases		4									6	
Permitted Phases	4									6		
Actuated Green, G (s)	43.5	43.5								27.5	27.5	
Effective Green, g (s)	43.5	43.5								27.5	27.5	
Actuated g/C Ratio	0.54	0.54								0.34	0.34	
Clearance Time (s)	4.5	4.5								4.5	4.5	
Lane Grp Cap (vph)	921	1775								560	613	
v/s Ratio Prot		c0.32									c0.15	
v/s Ratio Perm	0.22									0.12		
v/c Ratio	0.41	0.58								0.34	0.43	
Uniform Delay, d1	10.7	12.2								19.5	20.2	
Progression Factor	2.15	2.16								1.16	1.14	
Incremental Delay, d2	1.0	1.1								1.4	1.9	
Delay (s)	24.0	27.4								24.1	24.9	
Level of Service	C	C								C	C	
Approach Delay (s)		26.5			0.0			0.0			24.6	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	26.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	99.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-437

HCM Signalized Intersection Capacity Analysis
11: Van Buren Avenue & 2nd Avenue 6/3/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	4.0	4.0								4.0	4.0	
Lane Util. Factor	1.00	0.95								1.00	1.00	
Frt	1.00	0.98								1.00	1.00	
Flt Protected	0.95	1.00								0.95	1.00	
Satd. Flow (prot)	1693	3256								1629	1782	
Flt Permitted	0.95	1.00								0.95	1.00	
Satd. Flow (perm)	1693	3256								1629	1782	
Volume (vph)	338	1115	180	0	0	0	0	0	0	513	331	0
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	376	1239	200	0	0	0	0	0	0	570	368	0
RTOR Reduction (vph)	0	16	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	376	1423	0	0	0	0	0	0	0	570	368	0
Heavy Vehicles (%)	1%	3%	2%	2%	2%	2%	2%	2%	2%	5%	1%	2%
Turn Type	Perm									Perm		
Protected Phases		4									6	
Permitted Phases	4									6		
Actuated Green, G (s)	43.5	43.5								27.5	27.5	
Effective Green, g (s)	44.0	44.0								28.0	28.0	
Actuated g/C Ratio	0.55	0.55								0.35	0.35	
Clearance Time (s)	4.5	4.5								4.5	4.5	
Lane Grp Cap (vph)	931	1791								570	624	
v/s Ratio Prot		c0.44									0.21	
v/s Ratio Perm	0.22									c0.35		
v/c Ratio	0.40	0.79								1.00	0.59	
Uniform Delay, d1	10.4	14.4								26.0	21.3	
Progression Factor	1.68	1.65								0.95	0.92	
Incremental Delay, d2	0.7	2.0								26.7	2.1	
Delay (s)	18.2	25.8								51.4	21.6	
Level of Service	B	C								D	C	
Approach Delay (s)		24.2			0.0			0.0			39.7	
Approach LOS		C			A			A			D	

Intersection Summary			
HCM Average Control Delay	29.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	117.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-438

HARRISON BOULEVARD/3RD STREET

WCR Worksheets
Existing plus Site Trips

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-439

HCM Signalized Intersection Capacity Analysis
6: Harrison & 3rd Street

1/7/2008

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	1215	285	255	685	0	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)					4.5		4.5	4.5				
Lane Util. Factor					0.91		0.91	0.91				
Frt					0.97		1.00	1.00				
Flt Protected					1.00		0.95	1.00				
Satd. Flow (prot)					4631		1541	3238				
Flt Permitted					1.00		0.95	1.00				
Satd. Flow (perm)					4631		1541	3238				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	0	1306	306	274	737	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	49	0	7	3	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1563	0	240	761	0	0	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	1%	12%	1%	1%	0%	0%	0%	0%
Turn Type							Perm					
Protected Phases					8			2				
Permitted Phases							2					
Actuated Green, G (s)					32.5		38.5	38.5				
Effective Green, g (s)					32.5		38.5	38.5				
Actuated g/C Ratio					0.41		0.48	0.48				
Clearance Time (s)					4.5		4.5	4.5				
Lane Grp Cap (vph)					1881		742	1558				
v/s Ratio Prot					c0.34							
v/s Ratio Perm							0.16	0.23				
v/c Ratio					0.83		0.32	0.49				
Uniform Delay, d1					21.3		12.8	14.1				
Progression Factor					0.57		0.05	0.18				
Incremental Delay, d2					0.4		0.8	0.8				
Delay (s)					12.5		1.4	3.2				
Level of Service					B		A	A				
Approach Delay (s)		0.0			12.5			2.8			0.0	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM Average Control Delay	8.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-440

HCM Signalized Intersection Capacity Analysis
6: Harrison & 3rd Street

1/7/2008

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	940	260	490	835	0	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)					4.0		4.0	4.0				
Lane Util. Factor					0.91		0.91	0.91				
Frt					0.97		1.00	1.00				
Flt Protected					1.00		0.95	1.00				
Satd. Flow (prot)					4598		1541	3232				
Flt Permitted					1.00		0.95	1.00				
Satd. Flow (perm)					4598		1541	3232				
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	0	1011	280	527	898	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	56	0	21	7	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1235	0	438	960	0	0	0	0
Heavy Vehicles (%)	0%	0%	0%	0%	1%	12%	1%	1%	0%	0%	0%	0%
Turn Type							Perm					
Protected Phases					8			2				
Permitted Phases							2					
Actuated Green, G (s)					32.5		38.5	38.5				
Effective Green, g (s)					33.0		39.0	39.0				
Actuated g/C Ratio					0.41		0.49	0.49				
Clearance Time (s)					4.5		4.5	4.5				
Lane Grp Cap (vph)					1897		751	1576				
v/s Ratio Prot					c0.27							
v/s Ratio Perm							0.28	0.30				
v/c Ratio					0.65		0.58	0.61				
Uniform Delay, d1					18.9		14.7	14.9				
Progression Factor					0.63		0.02	0.17				
Incremental Delay, d2					1.2		0.3	0.2				
Delay (s)					13.1		0.7	2.7				
Level of Service					B		A	A				
Approach Delay (s)		0.0			13.1			2.0			0.0	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM Average Control Delay	7.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	112.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-441

HCM Signalized Intersection Capacity Analysis
14: Harrison Boulevard & 3rd Street 6/15/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)					4.5		4.5	4.5				
Lane Util. Factor					0.91		0.91	0.91				
Frpb, ped/bikes					0.99		1.00	1.00				
Flpb, ped/bikes					1.00		0.93	1.00				
Frt					0.97		1.00	1.00				
Flt Protected					1.00		0.95	1.00				
Satd. Flow (prot)					4595		1437	3244				
Flt Permitted					1.00		0.95	1.00				
Satd. Flow (perm)					4595		1437	3244				
Volume (vph)	0	0	0	0	1233	288	255	685	0	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	0	1326	310	274	737	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	48	0	6	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1588	0	268	737	0	0	0	0
Confl. Peds. (#/hr)						20	45					
Heavy Vehicles (%)	2%	2%	2%	2%	1%	12%	1%	1%	2%	2%	2%	2%
Turn Type							Perm					
Protected Phases					8			2				
Permitted Phases							2					
Actuated Green, G (s)					32.5		38.5	38.5				
Effective Green, g (s)					32.5		38.5	38.5				
Actuated g/C Ratio					0.41		0.48	0.48				
Clearance Time (s)					4.5		4.5	4.5				
Lane Grp Cap (vph)					1867		692	1561				
v/s Ratio Prot					c0.35							
v/s Ratio Perm							0.19	0.23				
v/c Ratio					0.85		0.39	0.47				
Uniform Delay, d1					21.5		13.2	13.9				
Progression Factor					0.60		0.40	0.40				
Incremental Delay, d2					0.5		1.0	0.6				
Delay (s)					13.5		6.3	6.2				
Level of Service					B		A	A				
Approach Delay (s)		0.0			13.5			6.2			0.0	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	101.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-442

HCM Signalized Intersection Capacity Analysis
14: Harrison Boulevard & 3rd Street 6/2/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)					4.0		4.0	4.0				
Lane Util. Factor					0.91		0.91	0.91				
Frt					0.97		1.00	1.00				
Flt Protected					1.00		0.95	1.00				
Satd. Flow (prot)					4607		1541	3233				
Flt Permitted					1.00		0.95	1.00				
Satd. Flow (perm)					4607		1541	3233				
Volume (vph)	0	0	0	0	1021	272	490	835	0	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	0	1098	292	527	898	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	56	0	15	6	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1334	0	449	955	0	0	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	1%	12%	1%	1%	2%	2%	2%	2%
Turn Type							Perm					
Protected Phases					8			2				
Permitted Phases							2					
Actuated Green, G (s)					32.5		38.5	38.5				
Effective Green, g (s)					33.0		39.0	39.0				
Actuated g/C Ratio					0.41		0.49	0.49				
Clearance Time (s)					4.5		4.5	4.5				
Lane Grp Cap (vph)					1900		751	1576				
v/s Ratio Prot					c0.29							
v/s Ratio Perm							0.29	0.30				
v/c Ratio					0.70		0.60	0.61				
Uniform Delay, d1					19.4		14.8	14.9				
Progression Factor					0.81		0.10	0.13				
Incremental Delay, d2					1.3		0.3	0.2				
Delay (s)					17.1		1.8	2.2				
Level of Service					B		A	A				
Approach Delay (s)		0.0			17.1			2.0			0.0	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	117.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-443

e

VAN BUREN AVENUE/3RD STREET

WCR Worksheets
Existing plus Site Trips

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-444

HCM Signalized Intersection Capacity Analysis
10: Van Buren & 3rd Street

1/7/2008

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	955	0	0	0	0	0	870	225	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.5						4.5				
Lane Util. Factor		0.91						0.91				
Frt		1.00						0.97				
Flt Protected		1.00						1.00				
Satd. Flow (prot)		4758						4669				
Flt Permitted		1.00						1.00				
Satd. Flow (perm)		4758						4669				
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	90	1224	0	0	0	0	0	1115	288	0	0	0
RTOR Reduction (vph)	0	10	0	0	0	0	0	19	0	0	0	0
Lane Group Flow (vph)	0	1304	0	0	0	0	0	1384	0	0	0	0
Heavy Vehicles (%)	2%	3%	0%	0%	0%	0%	0%	2%	2%	0%	0%	0%
Parking (#/hr)	0		0									
Turn Type	Perm											
Protected Phases		4						2				
Permitted Phases	4											
Actuated Green, G (s)		37.5						33.5				
Effective Green, g (s)		37.5						33.5				
Actuated g/C Ratio		0.47						0.42				
Clearance Time (s)		4.5						4.5				
Lane Grp Cap (vph)		2230						1955				
v/s Ratio Prot								c0.30				
v/s Ratio Perm		0.27										
v/c Ratio		0.58						0.71				
Uniform Delay, d1		15.6						19.2				
Progression Factor		0.61						1.00				
Incremental Delay, d2		1.1						2.2				
Delay (s)		10.6						21.4				
Level of Service		B						C				
Approach Delay (s)		10.6			0.0			21.4			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-445

HCM Signalized Intersection Capacity Analysis
10: Van Buren & 3rd Street

1/7/2008

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	1170	0	0	0	0	0	1215	435	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0						4.0				
Lane Util. Factor		0.91						0.91				
Frt		1.00						0.96				
Flt Protected		1.00						1.00				
Satd. Flow (prot)		4754						4627				
Flt Permitted		1.00						1.00				
Satd. Flow (perm)		4754						4627				
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	141	1500	0	0	0	0	0	1558	558	0	0	0
RTOR Reduction (vph)	0	4	0	0	0	0	0	9	0	0	0	0
Lane Group Flow (vph)	0	1637	0	0	0	0	0	2107	0	0	0	0
Heavy Vehicles (%)	2%	3%	0%	0%	0%	0%	0%	2%	2%	0%	0%	0%
Turn Type	Perm											
Protected Phases		4						2				
Permitted Phases	4											
Actuated Green, G (s)		37.5						33.5				
Effective Green, g (s)		38.0						34.0				
Actuated g/C Ratio		0.48						0.42				
Clearance Time (s)		4.5						4.5				
Lane Grp Cap (vph)		2258						1966				
v/s Ratio Prot								c0.46				
v/s Ratio Perm		0.34										
v/c Ratio		0.73						1.07				
Uniform Delay, d1		16.8						23.0				
Progression Factor		0.76						1.00				
Incremental Delay, d2		1.9						42.7				
Delay (s)		14.7						65.7				
Level of Service		B						E				
Approach Delay (s)		14.7			0.0			65.7			0.0	
Approach LOS		B			A			E			A	

Intersection Summary			
HCM Average Control Delay	43.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-446

HCM Signalized Intersection Capacity Analysis
8: Van Buren Avenue & 3rd Street 6/2/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.5						4.5				
Lane Util. Factor		0.91						0.91				
Frt		1.00						0.96				
Flt Protected		1.00						1.00				
Satd. Flow (prot)		4758						4626				
Flt Permitted		1.00						1.00				
Satd. Flow (perm)		4758						4626				
Volume (vph)	70	1002	0	0	0	0	0	870	314	0	0	0
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	90	1285	0	0	0	0	0	1115	403	0	0	0
RTOR Reduction (vph)	0	10	0	0	0	0	0	16	0	0	0	0
Lane Group Flow (vph)	0	1365	0	0	0	0	0	1502	0	0	0	0
Heavy Vehicles (%)	2%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm											
Protected Phases		4						2				
Permitted Phases	4											
Actuated Green, G (s)		37.5						33.5				
Effective Green, g (s)		37.5						33.5				
Actuated g/C Ratio		0.47						0.42				
Clearance Time (s)		4.5						4.5				
Lane Grp Cap (vph)		2230						1937				
v/s Ratio Prot								c0.32				
v/s Ratio Perm		0.29										
v/c Ratio		0.61						0.78				
Uniform Delay, d1		15.8						20.0				
Progression Factor		0.66						1.00				
Incremental Delay, d2		1.2						3.1				
Delay (s)		11.6						23.1				
Level of Service		B						C				
Approach Delay (s)		11.6			0.0			23.1			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-447

HCM Signalized Intersection Capacity Analysis
8: Van Buren Avenue & 3rd Street

6/2/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0						4.0				
Lane Util. Factor		0.91						0.91				
Frt		1.00						0.96				
Flt Protected		1.00						1.00				
Satd. Flow (prot)		4755						4622				
Flt Permitted		1.00						1.00				
Satd. Flow (perm)		4755						4622				
Volume (vph)	110	1182	0	0	0	0	0	1215	451	0	0	0
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	141	1515	0	0	0	0	0	1558	578	0	0	0
RTOR Reduction (vph)	0	4	0	0	0	0	0	8	0	0	0	0
Lane Group Flow (vph)	0	1652	0	0	0	0	0	2128	0	0	0	0
Heavy Vehicles (%)	2%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm											
Protected Phases		4						2				
Permitted Phases	4											
Actuated Green, G (s)		37.5						33.5				
Effective Green, g (s)		38.0						34.0				
Actuated g/C Ratio		0.48						0.42				
Clearance Time (s)		4.5						4.5				
Lane Grp Cap (vph)		2259						1964				
v/s Ratio Prot								c0.46				
v/s Ratio Perm		0.35										
v/c Ratio		0.73						1.08				
Uniform Delay, d1		16.9						23.0				
Progression Factor		0.78						1.00				
Incremental Delay, d2		1.9						47.1				
Delay (s)		15.2						70.1				
Level of Service		B						E				
Approach Delay (s)		15.2			0.0			70.1			0.0	
Approach LOS		B			A			E			A	

Intersection Summary			
HCM Average Control Delay	46.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-448

1e

HARRISON BOULEVARD/4TH STREET

WCR Worksheets
Existing plus Site Trips

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-449

HCM Signalized Intersection Capacity Analysis
5: Harrison & 4th Street 1/7/2008

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	350	1120	0	0	0	0	0	750	90
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)					4.5						4.5	
Lane Util. Factor					0.91						0.91	
Frt					1.00						0.98	
Flt Protected					0.99						1.00	
Satd. Flow (prot)					4774						4663	
Flt Permitted					0.99						1.00	
Satd. Flow (perm)					4774						4663	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	361	1155	0	0	0	0	0	773	93
RTOR Reduction (vph)	0	0	0	0	25	0	0	0	0	0	18	0
Lane Group Flow (vph)	0	0	0	0	1491	0	0	0	0	0	848	0
Heavy Vehicles (%)	0%	0%	0%	4%	1%	0%	0%	0%	0%	0%	4%	1%
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Actuated Green, G (s)					43.5						27.5	
Effective Green, g (s)					43.5						27.5	
Actuated g/C Ratio					0.54						0.34	
Clearance Time (s)					4.5						4.5	
Lane Grp Cap (vph)					2596						1603	
v/s Ratio Prot											c0.18	
v/s Ratio Perm					0.31							
v/c Ratio					0.57						0.53	
Uniform Delay, d1					12.1						21.1	
Progression Factor					0.54						1.00	
Incremental Delay, d2					0.6						1.3	
Delay (s)					7.1						22.3	
Level of Service					A						C	
Approach Delay (s)		0.0			7.1			0.0			22.3	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-450

HCM Signalized Intersection Capacity Analysis
5: Harrison & 4th Street

1/7/2008

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	365	1065	0	0	0	0	0	980	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)					4.0						4.0	
Lane Util. Factor					0.91						0.91	
Frt					1.00						0.99	
Flt Protected					0.99						1.00	
Satd. Flow (prot)					4768						4697	
Flt Permitted					0.99						1.00	
Satd. Flow (perm)					4768						4697	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	376	1098	0	0	0	0	0	1010	52
RTOR Reduction (vph)	0	0	0	0	10	0	0	0	0	0	7	0
Lane Group Flow (vph)	0	0	0	0	1464	0	0	0	0	0	1055	0
Heavy Vehicles (%)	0%	0%	0%	4%	1%	0%	0%	0%	0%	0%	4%	1%
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Actuated Green, G (s)					43.5						27.5	
Effective Green, g (s)					44.0						28.0	
Actuated g/C Ratio					0.55						0.35	
Clearance Time (s)					4.5						4.5	
Lane Grp Cap (vph)					2622						1644	
v/s Ratio Prot											c0.22	
v/s Ratio Perm					0.31							
v/c Ratio					0.56						0.64	
Uniform Delay, d1					11.7						21.8	
Progression Factor					0.43						1.00	
Incremental Delay, d2					0.7						1.9	
Delay (s)					5.7						23.7	
Level of Service					A						C	
Approach Delay (s)		0.0			5.7			0.0			23.7	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-451

HCM Signalized Intersection Capacity Analysis
13: Harrison Boulevard & 4th Street

6/2/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)					4.5						4.5	
Lane Util. Factor					0.91						0.91	
Frt					1.00						0.98	
Flt Protected					0.99						1.00	
Satd. Flow (prot)					4772						4665	
Flt Permitted					0.99						1.00	
Satd. Flow (perm)					4772						4665	
Volume (vph)	0	0	0	365	1123	0	0	0	0	0	773	90
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	376	1158	0	0	0	0	0	797	93
RTOR Reduction (vph)	0	0	0	0	22	0	0	0	0	0	18	0
Lane Group Flow (vph)	0	0	0	0	1512	0	0	0	0	0	872	0
Heavy Vehicles (%)	2%	2%	2%	4%	1%	2%	2%	2%	2%	2%	4%	1%
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Actuated Green, G (s)					43.5						27.5	
Effective Green, g (s)					43.5						27.5	
Actuated g/C Ratio					0.54						0.34	
Clearance Time (s)					4.5						4.5	
Lane Grp Cap (vph)					2595						1604	
v/s Ratio Prot											c0.19	
v/s Ratio Perm					0.32							
v/c Ratio					0.58						0.54	
Uniform Delay, d1					12.2						21.2	
Progression Factor					0.54						1.00	
Incremental Delay, d2					0.6						1.3	
Delay (s)					7.2						22.5	
Level of Service					A						C	
Approach Delay (s)		0.0			7.2			0.0			22.5	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-452

HCM Signalized Intersection Capacity Analysis
13: Harrison Boulevard & 4th Street

6/2/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)					4.0						4.0	
Lane Util. Factor					0.91						0.91	
Frt					1.00						0.99	
Flt Protected					0.99						1.00	
Satd. Flow (prot)					4756						4697	
Flt Permitted					0.99						1.00	
Satd. Flow (perm)					4756						4697	
Volume (vph)	0	0	0	435	1076	0	0	0	0	0	986	50
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	448	1109	0	0	0	0	0	1016	52
RTOR Reduction (vph)	0	0	0	0	9	0	0	0	0	0	7	0
Lane Group Flow (vph)	0	0	0	0	1548	0	0	0	0	0	1061	0
Heavy Vehicles (%)	2%	2%	2%	4%	1%	2%	2%	2%	2%	2%	4%	1%
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Actuated Green, G (s)					43.5						27.5	
Effective Green, g (s)					44.0						28.0	
Actuated g/C Ratio					0.55						0.35	
Clearance Time (s)					4.5						4.5	
Lane Grp Cap (vph)					2616						1644	
v/s Ratio Prot											c0.23	
v/s Ratio Perm					0.33							
v/c Ratio					0.59						0.65	
Uniform Delay, d1					12.0						21.8	
Progression Factor					0.57						1.00	
Incremental Delay, d2					0.7						2.0	
Delay (s)					7.5						23.8	
Level of Service					A						C	
Approach Delay (s)		0.0			7.5			0.0			23.8	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-453

e

VAN BUREN AVENUE/4TH STREET

WCR Worksheets
Existing plus Site Trips

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-454

HCM Signalized Intersection Capacity Analysis
9: Van Buren & 4th Street

1/7/2008

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	765	150	0	0	0	0	0	0	260	840	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.5	4.5								4.5	
Lane Util. Factor		0.91	1.00								0.91	
Frt		1.00	0.85								1.00	
Flt Protected		1.00	1.00								0.99	
Satd. Flow (prot)		4865	1530								4718	
Flt Permitted		1.00	1.00								0.99	
Satd. Flow (perm)		4865	1530								4718	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	841	165	0	0	0	0	0	0	286	923	0
RTOR Reduction (vph)	0	0	50	0	0	0	0	0	0	0	36	0
Lane Group Flow (vph)	0	841	115	0	0	0	0	0	0	0	1173	0
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	6%	2%	0%
Parking (#/hr)	0											
Turn Type			Perm							Perm		
Protected Phases		4									6	
Permitted Phases			4							6		
Actuated Green, G (s)		32.5	32.5								38.5	
Effective Green, g (s)		32.5	32.5								38.5	
Actuated g/C Ratio		0.41	0.41								0.48	
Clearance Time (s)		4.5	4.5								4.5	
Lane Grp Cap (vph)		1976	622								2271	
v/s Ratio Prot		c0.17										
v/s Ratio Perm			0.07								0.25	
v/c Ratio		0.43	0.18								0.52	
Uniform Delay, d1		17.0	15.2								14.3	
Progression Factor		0.20	0.02								0.61	
Incremental Delay, d2		0.6	0.6								0.7	
Delay (s)		4.0	0.9								9.5	
Level of Service		A	A								A	
Approach Delay (s)		3.5			0.0			0.0			9.5	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-455

HCM Signalized Intersection Capacity Analysis
9: Van Buren & 4th Street

1/7/2008

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	885	315	0	0	0	0	0	0	395	950	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0								4.0	
Lane Util. Factor		0.91	1.00								0.91	
Frt		1.00	0.85								1.00	
Flt Protected		1.00	1.00								0.99	
Satd. Flow (prot)		4865	1530								4694	
Flt Permitted		1.00	1.00								0.99	
Satd. Flow (perm)		4865	1530								4694	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	973	346	0	0	0	0	0	0	434	1044	0
RTOR Reduction (vph)	0	0	36	0	0	0	0	0	0	0	24	0
Lane Group Flow (vph)	0	973	310	0	0	0	0	0	0	0	1454	0
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	6%	2%	0%
Turn Type			Perm							Perm		
Protected Phases		4									6	
Permitted Phases			4							6		
Actuated Green, G (s)		32.5	32.5								38.5	
Effective Green, g (s)		33.0	33.0								39.0	
Actuated g/C Ratio		0.41	0.41								0.49	
Clearance Time (s)		4.5	4.5								4.5	
Lane Grp Cap (vph)		2007	631								2288	
v/s Ratio Prot		0.20										
v/s Ratio Perm			c0.20								0.31	
v/c Ratio		0.48	0.49								0.64	
Uniform Delay, d1		17.3	17.3								15.2	
Progression Factor		0.36	0.28								0.90	
Incremental Delay, d2		0.7	2.4								1.2	
Delay (s)		7.0	7.3								14.9	
Level of Service		A	A								B	
Approach Delay (s)		7.1			0.0			0.0			14.9	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-456

HCM Signalized Intersection Capacity Analysis
5: Van Buren Avenue & 4th Street 6/2/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.5	4.5								4.5	
Lane Util. Factor		0.91	1.00								0.91	
Frt		1.00	0.85								1.00	
Flt Protected		1.00	1.00								0.99	
Satd. Flow (prot)		4865	1500								4713	
Flt Permitted		1.00	1.00								0.99	
Satd. Flow (perm)		4865	1500								4713	
Volume (vph)	0	789	150	0	0	0	0	0	0	283	855	0
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	867	165	0	0	0	0	0	0	311	940	0
RTOR Reduction (vph)	0	0	48	0	0	0	0	0	0	0	33	0
Lane Group Flow (vph)	0	867	117	0	0	0	0	0	0	0	1218	0
Heavy Vehicles (%)	2%	1%	2%	2%	2%	2%	2%	2%	2%	6%	2%	2%
Turn Type			Perm							Perm		
Protected Phases		4									6	
Permitted Phases			4							6		
Actuated Green, G (s)		32.5	32.5								38.5	
Effective Green, g (s)		32.5	32.5								38.5	
Actuated g/C Ratio		0.41	0.41								0.48	
Clearance Time (s)		4.5	4.5								4.5	
Lane Grp Cap (vph)		1976	609								2268	
v/s Ratio Prot		c0.18										
v/s Ratio Perm			0.08								0.26	
v/c Ratio		0.44	0.19								0.54	
Uniform Delay, d1		17.2	15.3								14.5	
Progression Factor		1.00	1.00								0.41	
Incremental Delay, d2		0.7	0.7								0.8	
Delay (s)		17.9	16.0								6.7	
Level of Service		B	B								A	
Approach Delay (s)		17.6			0.0			0.0			6.7	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-457

HCM Signalized Intersection Capacity Analysis
5: Van Buren Avenue & 4th Street

6/2/2011

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		4.0	4.0								4.0	
Lane Util. Factor		0.91	1.00								0.91	
Frt		1.00	0.85								1.00	
Flt Protected		1.00	1.00								0.99	
Satd. Flow (prot)		4865	1500								4699	
Flt Permitted		1.00	1.00								0.99	
Satd. Flow (perm)		4865	1500								4699	
Volume (vph)	0	891	315	0	0	0	0	0	0	401	1020	0
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	979	346	0	0	0	0	0	0	441	1121	0
RTOR Reduction (vph)	0	0	29	0	0	0	0	0	0	0	23	0
Lane Group Flow (vph)	0	979	317	0	0	0	0	0	0	0	1539	0
Heavy Vehicles (%)	2%	1%	2%	2%	2%	2%	2%	2%	2%	6%	2%	2%
Turn Type			Perm							Perm		
Protected Phases		4									6	
Permitted Phases			4							6		
Actuated Green, G (s)		32.5	32.5								38.5	
Effective Green, g (s)		33.0	33.0								39.0	
Actuated g/C Ratio		0.41	0.41								0.49	
Clearance Time (s)		4.5	4.5								4.5	
Lane Grp Cap (vph)		2007	619								2291	
v/s Ratio Prot		0.20										
v/s Ratio Perm			c0.21								0.33	
v/c Ratio		0.49	0.51								0.67	
Uniform Delay, d1		17.3	17.5								15.6	
Progression Factor		1.00	1.00								0.49	
Incremental Delay, d2		0.9	3.0								1.3	
Delay (s)		18.1	20.5								9.0	
Level of Service		B	C								A	
Approach Delay (s)		18.8			0.0			0.0			9.0	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-458

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-459

DEVCO engineering inc. 245 NE Conifer P.O. Box 1211 Corvallis, OR 97339 (541) 757-8991 Fax (541) 757-9867

~~March 29, 2011~~
May 5, 2011

Mr. Jason Yaich
Associate Planner
Development Services
City of Corvallis
P.O. Box 1083
Corvallis, OR 97339

SUBJECT: McFadden Annexation and Rezone with PD Overlay

Dear Jason:

As discussed in our March 28, 2011 letter, the Transportation Planning Rule (TPR) must be considered with this annexation request. The first aspect in determining any TPR impact is to establish the baseline traffic generation for the property under its present zoning which is Benton County Urban Industrial. The accompanying letter and its concurrence by Benton County Community Development establish a baseline level of development under the County zoning, that being a floor area ratio (FAR) of 0.4.

For the McFadden property that FAR relates to ~~898,729~~ 893,328 square feet of urban industrial floor space. This is calculated as

0.4 x (~~51.58~~ 51.27 acres x 43,560 sq ft/acre) = ~~898,729~~ 893,328 sq ft.

We have used ~~51.58~~ 51.27 acres for the McFadden property as that is the area of property not encumbered by City natural features overlays.

As you will note in our March 28, 2011 letter, the maximum floor area proposed by the applicant is ~~866,255~~ 855,906 sq ft, ~~32,000~~ 27,000 plus square feet less that the County baseline.

Because of the mix of industrial uses which are possible under both the County and City zoning designations, the appropriate ITE Land Use Code for traffic generation calculations is Industrial Park (Code 130).

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-460

The basic trip generation calculations for both zoning designations compare as follows:

	Rate	Trip Ends County Zoning	Trip Ends City Zoning
		898,729 sf	866,225 sf
	Superseded by May 5, 2011 Technical		
AM Peak Hour	0.84/1000sf	755	728
PM Peak Hour	Memorandum by Lancaster Engineering		
Weekday	6.96/1000sf	6256	6028

The Floor Area Ratio of 0.23 proposed for the McFadden property under the City zoning of General Industrial also is based upon actual development conditions. The adjacent Hewlett Packard property is also zoned general industrial and has an active Detail Development Plan. The HP Campus land use approval fixed the maximum building area at 1.8 million square feet. Over the 178.54 acres of gross land area on the HP campus that equates to a floor area ratio of 0.23.

If you have any questions, please do not hesitate to call me.

Sincerely,

Lyle E. Hutchens
Project Manager

LEH/nre
09-414 jasonyaich 05-05-2011-a.doc

cc: Sandra Gazeley, Gazeley and Associates

DEVCO engineering inc.

February 15, 2011

Mr. Greg Verret
Community Development Director
Benton County Community Development
Planning Division
360 SW Avery Avenue
Corvallis, OR 97333-1139

SUBJECT: Proposed McFadden Annexation
to City of Corvallis
TL 1308 Map 11 5 25 86.46 acres

Dear Greg:

We are part of the consultant team which is assisting the McFadden Family with this annexation application. As part of the application we are required to prepare a Traffic Impact Analysis which addresses the State's Transportation Planning Rule. In order to determine the incremental change in trips between the present county Urban Industrial Zoning and the proposed City's General Industrial Zoning, we must establish a baseline for how this property could be developed under the County zoning.

We have prepared the following information and attachments to document a reasonable expectation of the intensity of the development of the McFadden property under the present Benton County Urban Industrial Zoning.

As an example of how the McFadden property might develop, we have studied a portion of the developed industrial property in Tangent (TIP). That study is summarized in the attached Floor Area Ratio (FAR) table. This particular development was selected for its similarities to the McFadden property which includes

- Developable Area:
  TIP = 65.56 acres;
  McFadden = (86.46 area less 35.28 acres of natural features) = 51.58 acres

- TIP is served by an on-site community water system, as McFadden would have to be.

- The TIP study area is generally served by a single point of access to Old Highway 34. The McFadden property would also have only a single point of access to Highway 20.

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
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EXHIBIT F-462

- The TIP uses are allowed under BCDC Chapter 72, Urban Industrial which is the present zoning of the McFadden property.

- The TIP lots sizes and siting standards meet the BCDC Chapter 72 requirements.

- We acknowledge that the TIP has City of Tangent sanitary sewer service, and that such municipal service would not be available to the McFadden property. Thus, the TIP study area includes over 13 acres (20% of the study land area) as vacant and which could be allocated to an on-site sanitary sewer treatment facility.

In summary, we believe the developable land area of the McFadden property could be developed under its BCDC Chapter 72, Urban Industrial Zoning to floor area ratio of 0.40. We are requesting your concurrence with this conclusion.

If you have any questions, please do not hesitate to call me.

Sincerely,

Lyle E. Hutchens
Project Manager

LEH/nre
09-414 gverret 02-15-2011.doc

Concurrence: _____
Greg Verret, Community Development Director
Benton County

Attachments:

Tangent Industrial Property (TIP) Floor Area Ratio Table
TIP Tax Map with Properties Highlighted
TIP Aerial Photo with Tax Lots and Areas
McFadden Annexation Vicinity Map
McFadden, County Zoning Map
Benton County Development Code, Chapter 72, Urban Industrial

Floor Area Ration (FAR) Table
Tangent Industrial Property

Tax Lot No.	Owner	Present Use	Use Category Per BCAC Ch 72 Urban Industrial	Lot Area Acres	Existing Building Floor Area (Sq. Ft.)	Outside Storage Area (Acres)	Floor Area Ration (10
2107	TIP	Transportation Terminal Warehouse	Transportation Terminal Warehouse	3.17	54,000	-	0.39
2124	TIP	↑	↑	3.43	54,000	-	0.36
2200	TIP	↑	↑	1.62	12,000	-	0.17
2208	TIP	↑	↑	1.88	30,000	-	0.37
2125	TIP	Vacant	↑	5.09	-	-	0
2121	TIP	Transportation Terminal Warehouse	↑	4.64	85,248	-	0.42
2127	TIP	↑	↑	3.13	50,000	-	0.37
2129	TIP	Vacant	↑	1.88	-	-	0
2113	TIP	Transportation Terminal Warehouse	↑	3.08	51,840	-	0.39
2126	TIP	Vacant	↑	1.72	-	-	0
2123	TIP	Transportation Terminal Warehouse	↑	1.79	16,464	-	0.21
2122	TIP	↑	↑	8.70	152,064	-	0.4
2120	MBI	Vacant	Outside storage of materials	4.74	-	-	0
2202	MBI	Construction Yard	↑	5.81	-	2.91	0.5
2201	MBI	Construction Yard	↑	10.88	11,870	10.6	1
2204	Safe Haven	Animal Shelter	Conditional use	4.00	30,000	-	0.17
			Totals	65.56	547,486	13.51	0.4

"TIP" Tangent Industrial Park
"MBI" Morse Bros. Inc.
"Safe Haven" Safe Haven Humane Society

(1) Floor Area Ratio (FAR) calculated as (Floor Area + Storage Area) ÷ (Land Area) = FAR

TIP – STUDY AREA

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CITY COUNCIL STAFF REPORT
EXHIBIT F-465

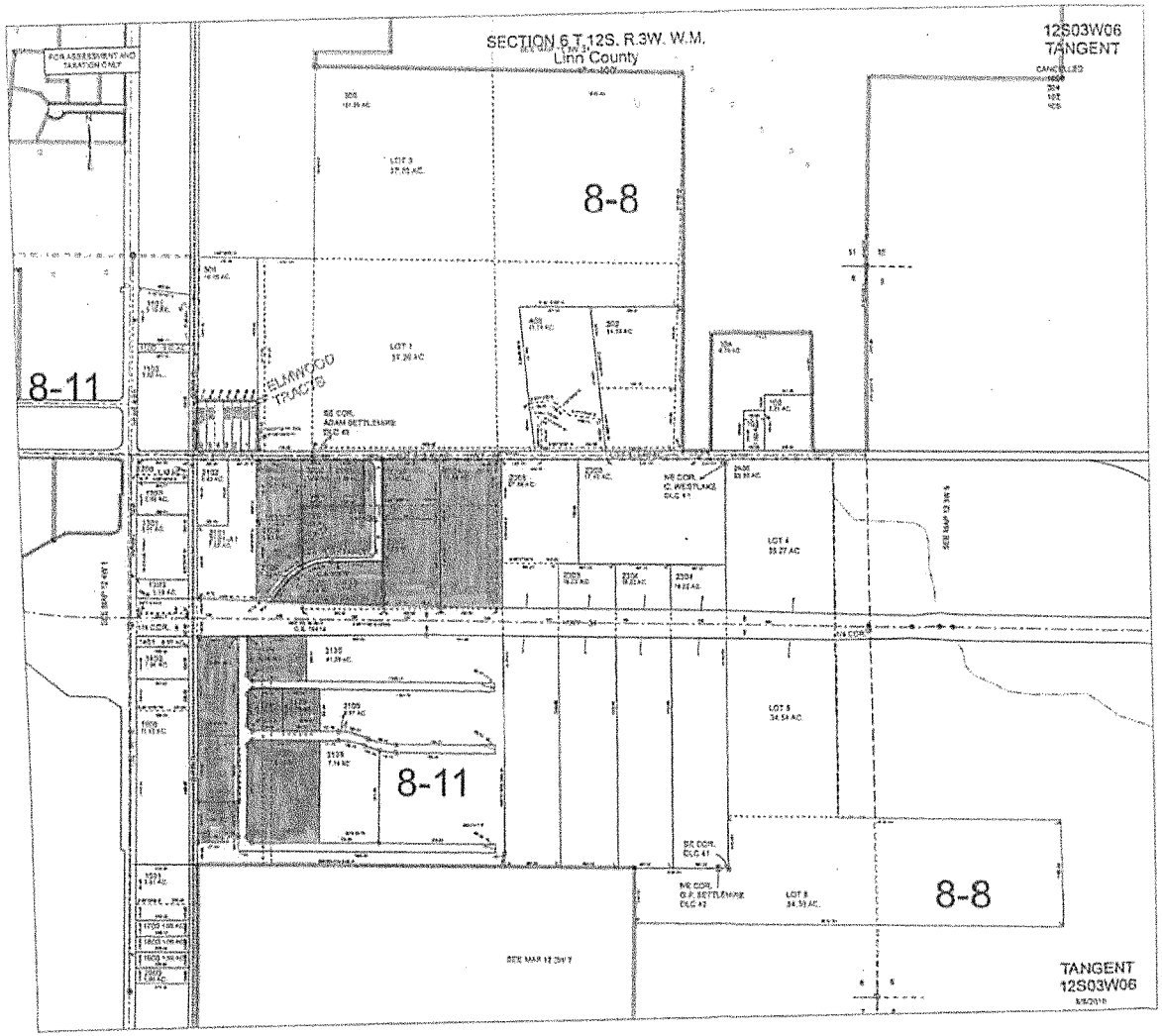

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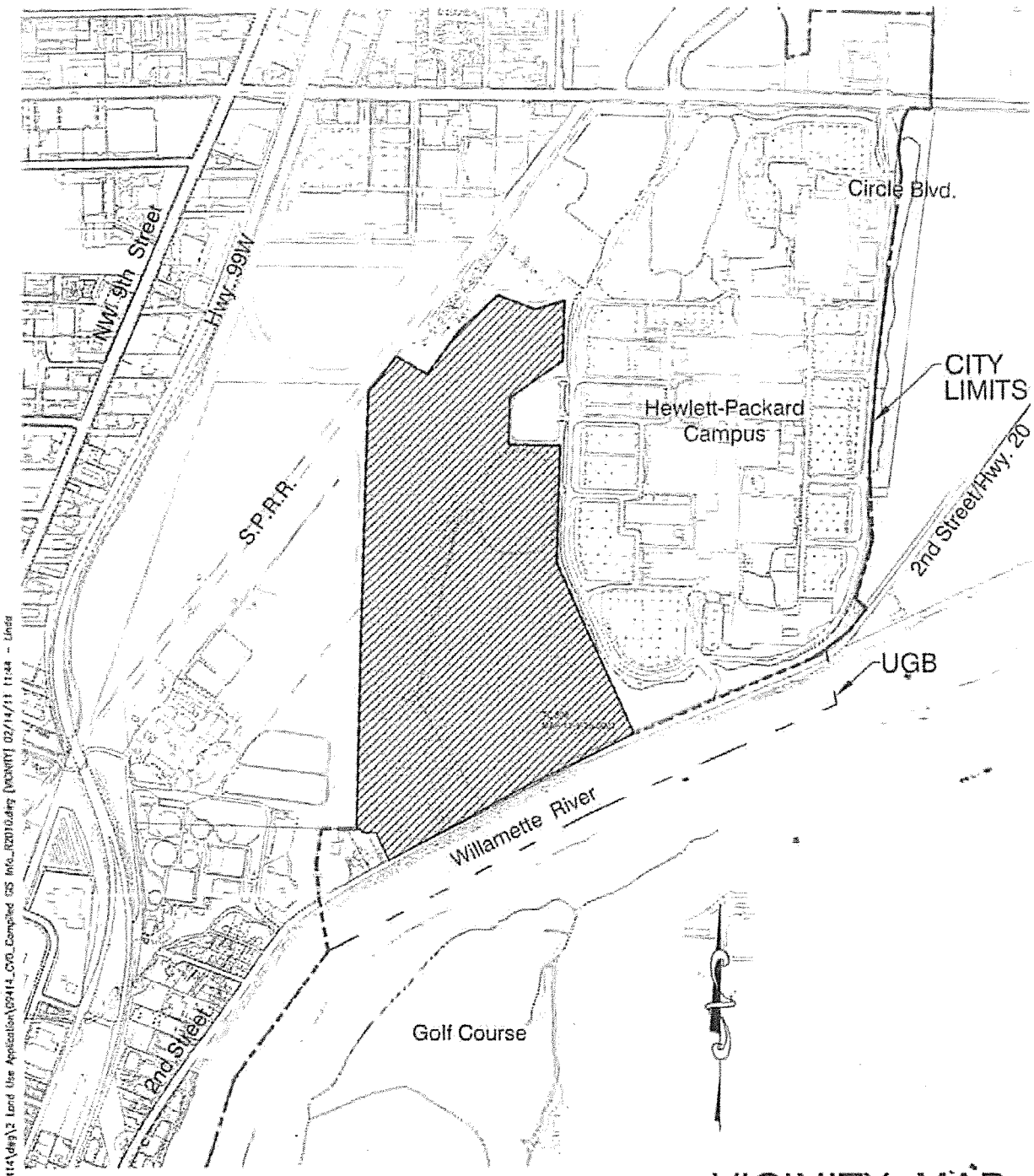
EXHIBIT F-466

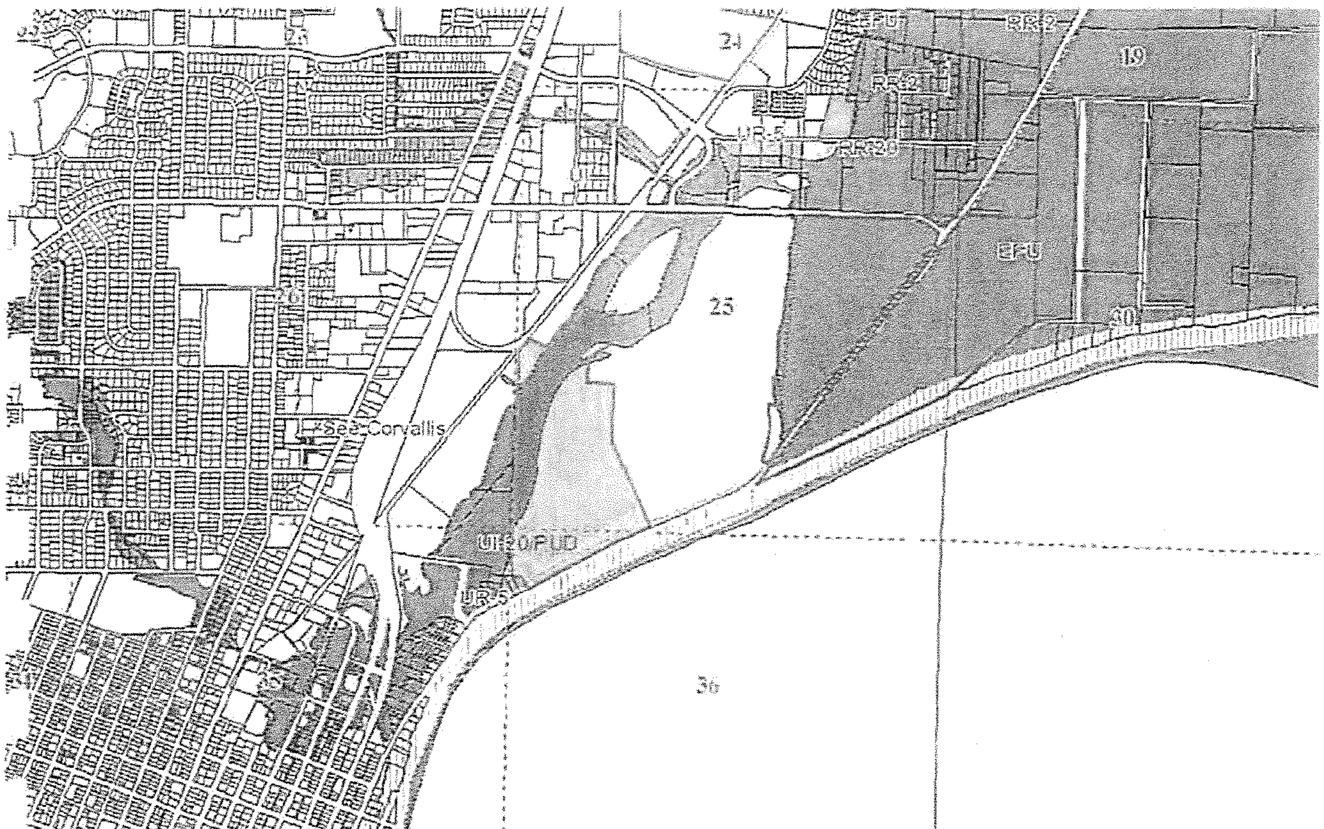


VICINITY MAP

MCFADDEN PROPERTY
TL 308 MAP 11-05-25-0001
CORVALLIS, OREGON
August 2009

0 400 800 1600
SCALE IN FEET

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-467



Easting: 7493264 ft, Northing: 350604 ft, Lon: 123° 13' 14" W Lat: 44° 35' 47" N

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Chapter 72
Urban Industrial (I)

72.005 Purpose. The Urban Industrial Zone shall provide areas where manufacturing or other industrial activities can occur inside urban growth boundaries within Benton County. [Ord 26, Ord 90-0069, Ord 2007-0222]

72.010 Application. The Urban Industrial Zone shall apply to areas designated Industrial on the adopted Comprehensive Plan Map located inside urban growth boundaries. [Ord 26, Ord 90-0069, Ord 2007-0222]

72.105 Permitted Uses. The following uses are allowed in the Urban Industrial Zone:

(1) Research facility, testing laboratory and facility for the manufacturing, processing and/or assembling of products, provided a permit is not required from the Oregon Department of Environmental Quality.

(2) Vehicle and manufactured dwelling sales and/or repair.

(3) Transportation terminals and warehouses.

(4) Vocational school.

(5) Aggregate processing, and concrete and asphalt batch plants.

(6) Outside storage of materials, except junkyards as defined in BCC 51.020.

(7) One dwelling required for the employer or employee for management or safeguarding of the industrial use.

(8) Farm use and forest use.

(9) Accessory use or structure.

[Ord 26, Ord 90-0069, Ord 2001-0172, Ord 2007-0222]

72.205 Conditional Uses.

(1) A research facility, correctional and law enforcement facilities, junkyard, or testing laboratory or facility for the manufacturing, fabrication, processing or assembly of products which requires a permit from the Oregon Department of Environmental Quality may be allowed in the Industrial Zone by conditional use permit approved by the Planning Official. The decision to approve a conditional use permit shall be based on findings that the public health and safety will not be substantially affected by the proposed use when considering smoke, dust, odor, gas, fumes, glare, vibration, noise water pollution, radiation hazard or other noxious impacts.

(2) Mining of aggregate or mineral resources may be allowed in the Industrial Zone by conditional use permit approved by the Planning Commission, pursuant to BCC 53.215 through 53.235. In addition to the conditional use criteria of BCC 53.215, approval requires the Planning Commission make the following findings:

(a) Mining will not significantly diminish the ability of the land to be used for other industrial uses in the future; and

(b) The mined land will be reclaimed to a topographic character and stability comparable to, or more conducive to general, non-mining industrial uses than, the characteristics existing prior to mining.

(3) Radio or communication tower and accessory facilities.

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[Ord 26, Ord 90-0069, Ord 99-0146, Ord 2001-0172, Ord 2007-0222]

72.305 Minimum Parcel or Lot Size. (1) The minimum parcel or lot size for any parcel or lot zoned "I-20" on the Official Zoning Map shall be twenty (20) acres.

(2) Where no suffix number follows the "I" designation on the Official Zoning Map, the minimum parcel or lot size in the Industrial Zone shall be determined by the type of public facilities available. The minimum parcel or lot size shall be:

(a) Two (2) acres when both an individual water supply system and a sewage disposal system are used.

(b) One (1) acre when either a community water supply system or a community sewage disposal system is used.

(c) Fifteen thousand (15,000) square feet when both a community sewage disposal system and community water system are used. [Ord 26, Ord 90-0069, Ord 96-0118]

72.405 Site Development Plan. When a building addition, new construction, or placement of a structure is proposed in the Urban Industrial Zone, the applicant shall submit a site development plan prior to the issuance of building permits. A site development plan shall contain an appropriate level of detail showing existing and proposed locations of buildings, access, parking, loading, landscaping, drainage, water supply, sewage disposal, public utilities, and exterior lighting. The plan shall demonstrate compliance with siting standards provided in BCC 72.410 and other provisions of this code. [Ord 90-0069, Ord 2007-0222]

72.410 Siting Standards. All structures located in the Urban Industrial Zone shall be sited in compliance with BCC Chapter 99 and the following additional standards:

(1) Either every site shall be adequately served by water, sewage disposal, sidewalks and improved roads, or final approval of the site development plan shall be contingent on assurances for the provision of the necessary facilities.

(2) The setback to a road right-of-way shall be at least sixty (60) feet. Twenty-five (25) feet adjacent to the road right-of-way shall be utilized primarily for landscaping, fences, walls and driveways.

(3) A side or rear setback shall be at least ten (10) feet, except when adjacent to a residential zone, in which case twenty-five (25) feet of landscaped buffer, including a visual screen of no less than five (5) feet in height, shall be provided.

(4) No setback is required for a structure of 120 square feet or less. Except when adjacent to a residential zone, a side or rear setback for an accessory structure may be reduced to three (3) feet if the structure:

(a) Is detached from other buildings by five (5) feet or more;

(b) Does not exceed a height of twenty (20) feet; and

(c) Does not exceed an area of 500 square feet.

(5) Architectural features shall not project more than two (2) feet into a required setback.

(6) A structure which is not a water dependent use shall be placed at least fifty (50) feet from the ordinary high water line of any river or major stream. In the case of a creek and minor stream, a structure which is not a water dependent use shall be placed at least twenty-five (25) feet from the ordinary high water line.

(7) Any structure within the Corvallis Urban Growth Boundary shall be at least twenty-five (25) feet from the edge of riparian habitat, evidenced by existing non-aquatic vegetation which is generally dependent upon a seasonally high table, or at least forty (40) feet from the edge of the drainageway, whichever is greater.

(8) A landscape plan shall be submitted for the first twenty-five (25) feet of all setbacks adjacent to a road in compliance with the following minimum standards:

(a) Seventy-five percent (75%) of the area shall contain live landscape materials (grass, trees, or shrubs);

(b) A vision clearance area shall be maintained at the intersection of two rights-of-way or a right-of-way and a driveway. The vision clearance area shall extend thirty (30) feet from the intersection of the right-of-way lines or a right-of-way line and a driveway. No structure, vegetation or embankment shall be permitted in a vision clearance area in excess of two (2) feet in height above the center of the road or driveway; and

(c) Off-street parking areas and setbacks adjacent to non-industrial zoned areas shall be adequately landscaped and screened.

(9) A structure shall not exceed sixty (60) feet in height. Structures such as chimneys, spires, domes, elevator shaft housings, towers, aerials, flagpoles, agricultural buildings, and other similar objects not used for human occupancy are not subject to the building height limitations of this code.

(10) Off-street parking and loading comply with BCC 91.605 to 91.660.

(11) Access shall be designed to cause minimum interference with traffic movements on abutting streets. Where necessary, additional rights-of-way shall be dedicated to maintain adequate traffic circulation. Setbacks shall be reviewed when requiring a dedication of an additional right-of-way.

(12) The arrangement of buildings, parking areas, signs and other facilities shall be designed and oriented to minimize noise and glare effects on adjacent properties.

(13) Artificial lighting, including illuminated signs and lights for parking areas, shall be arranged and constructed to avoid direct glare or unreasonable interference with the use and enjoyment of adjacent properties. [Ord 26, Ord 90-0069, Ord 92-0092, Ord 2007-0222]

DEVCO engineering inc. 245 NE Conifer P.O. Box 1211 Corvallis, OR 97339 (541) 757-8991 Fax (541) 757-9885

~~March 28, 2011~~
May 5, 2011

Mr. Jason Yaich
Associate Planner
Development Services
City of Corvallis
P.O. Box 1083
Corvallis, OR 97339

SUBJECT: McFadden Annexation and Rezone with PD Overlay

Dear Mr. Yaich:

This project is primarily an application for the subject property to be annexed into the Corvallis city limits. However, due to various and conflicting process requirements of the City and State, largely based on the Transportation Planning Rule, additional applications will be included along with the annexation request: Zone Change, Planned Development Overlay, and Detailed Development Plan. The reasons and purposes of these additional applications is explained below, and are submitted at this time for your preliminary review.

All properties that are within the City of Corvallis Urban Fringe are given Comprehensive Plan Designations that are consistent with the proposed land use that would occur upon annexation to the City. For that reason, no Comprehensive Plan Amendment is required with annexation applications. However, the properties in the Urban Fringe are all zoned for Benton County land use, as is appropriate while they are under the purview of the County. Therefore, all annexation applications need to be accompanied by a Zone Change application, to revise the zoning of the property from County type to City type; in this case: from County "Urban Industrial" to City "General Industrial".

All land use applications are submitted to ODOT for their review and comment. Upon preliminary review with ODOT of this annexation and zone change request, ODOT determined that, it is appropriate to apply the State Transportation Planning Rule (TPR). The TPR requires that mitigation be provided by the applicant as a result of any negative impact on State highway traffic levels; in this case any increase in facilities as a result of the zone change from County to City.

This particular application though is probably somewhat unusual in that the applicant's proposal will actually reduce the level of development compared to that which could be achieved under the County zoning if and when the City zoning is applied per the applicant's request. The premise of the applicant's request is not that the TPR does not apply, but is that the request does not result in any degradation of the State's facilities beyond that which would be expected under the County zoning, and as such, TPR related mitigation is not required. This aspect will be discussed further in the Traffic Impact Analysis submitted with the actual application to the City.

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
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The documentation which compares the levels of development and the resulting trip generation under the County zoning to the applicant's proposal under the City zoning will be submitted under separate cover.

The applicant does recognize that an actual development application which includes traffic generation will require ODOT approach permitting and the related highway facilities mitigation which could result from such an application.

As stated above, the reason for this letter is to discuss the purpose and City process for the various applications.

The typical mechanism available for the City to ensure that development related requirements will be satisfied is by placing a Condition of Approval on an application and then requiring said Conditions to be completed or adhered to as part of the proposed development. Corvallis has been reluctant to place conditions on rule changes such as Comprehensive Plan Amendments and Zone Changes. As such, the City of Corvallis does not place Conditions of Approval on either annexation or zone change applications; only on development applications. If annexation and zone change applications for a property are submitted without an associated development plan, the City cannot condition the application. Consequently, the applicant will be submitting a Planned Development (PD) Overlay request and a Conceptual and Detailed Development Plan (CDDP) application along with the annexation and zone change application. The purpose of the PD and the CDDP is to allow for Conditions of Approval to be fixed to the property and to have them apply to subsequent DDP's. The applicant's proposed Conditions of Approval are attached hereto. These Conditions are intended to establish a framework under which future development on the property and its resulting traffic generation does not exceed the County zoning baseline and as such, does not trigger the Transportation Planning Rule.

In order to assure the Detailed Development Plan approval does not expire, as allowed under present City Land Development Code, the applicant proposes the following action which would, under the City's Land Development code provisions, fix the Detailed Development Plan approval and Conditions of Approval to the property in perpetuity, or make the Detailed Development Plan "active" in perpetuity.

a) Provide financial security for all public improvement related to the project. (LDC 2.5.50.09.a.1)

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
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The applicant recognizes that the typical timing of presenting a financial security for public improvements must be modified for this application process. The applicant also recognizes that control of these processes must be entirely in the hands of City staff prior to City Council approving the annexation to go before the voters. To that end, the applicant proposes to complete prior to the City Council hearing Item No. 1 of the "Proposed Conditions of Approval".

If you have any questions, please do not hesitate to call me.

Sincerely,

Lyle E. Hutchens
Project Manager

LEH/nre
09-414 jasonyaich 05-05-2011.doc

cc: Sandra Gazeley, Gazeley and Associates

As revised 4 August 2011

APPLICANT'S PROPOSED CONDITIONS OF APPROVAL

1. Prior to City Council's hearing of the McFadden Annexation application, specific public improvements shall be financially secured in accordance with LDC 2.4.40.08.

   The public improvements include the construction of a public sidewalk located parallel to Highway 20 along the southerly boundary of the subject, and providing a public access easement over the sidewalk's route.

   In order to financially secure the public improvements, the applicant shall prepare Public Improvement by Private Contract (PIPC) permit documents. The PIPC design and plans shall be authorized for construction by the City engineer and all required permit documents shall be completed and on file with Development Review Engineering. Prior to the City Council hearing, the permit shall be complete and ready to issue and the Public Access Easement shall be in the possession of Development Review Engineering and ready for filing should the annexation request be successful.

2. Future development proposals on the subject property shall be limited to a maximum Floor Area Ratio (FAR) of 0.23. The maximum FAR for the site being calculated as 0.23 (85.43 acres x 43,560 square feet/acre) = 855,906 square feet of floor area. The maximum floor area for an incremental application approach shall be proportioned in relation to the developable area included in each application. The cumulative total floor area of all increments shall not exceed 855,906 square feet.

3. Future development proposals on the subject property shall calculate trip ends for traffic analysis purposes based upon the current applicable International Traffic Engineers (ITE) land use code. However the total trip ends at full build out shall not exceed the following categories of total trips, which are based upon the current ITE land use code for industrial parks.

AM peak hour 0.84/1,000 sf x 855,906 sf = 719 trip ends
PM peak hour 0.86/1,000 sf x 855,906 sf = 736 trip ends
Weekday 6.96/1,000 sf x 855,906 sf = 5,957 trip ends

Trip ends for incremental applications shall not exceed a proportional calculation using the above rates.

For either an individual application or for the cumulative total of all applications at full build out, the floor area shall be the lesser of the FAR calculation or the floor area used in the trip end calculation methodology.

4. The applicant shall grant a fifteen-foot easement parallel and proximate to the railroad right-of-way, along the subject parcel's northerly boundary, for the purpose of a potential future public-use trail or path. Said easement shall be in

the possession of Development Review Engineering and ready for filing, should the annexation be successful.

5. Future Detailed Development Plans shall incorporate consideration of the City's adopted plans for multi-use path(s) or trail(s) within the subject property. If determined appropriate by the City, this will include, but not be limited to, widening the currently proposed sidewalk to a full-width multi-use path.

6. The following uses which are otherwise permitted in the City's General Industrial (GI) Zone, are prohibited in the subject Industrial Planned Development:

   3.24.20.01.a.2.(c)(2) Kennels
   3.24.20.01.a.2.(i) Scrap Operations; and
   3.24.20.03.a. Explosive Storage.

7. Future development applications for the subject property shall be processed through the City's Planned Development process in place at the time the application is made.

DEVCO engineering inc.
245 NE Conifer P.O. Box 1211 Corvallis, OR 97339 (541) 757-8991 Fax: (541) 757-9885

May 5, 2011

Mr. John G. deTar
Senior Region Planner
Oregon Department of Transportation
3700 SW Philomath Boulevard
Corvallis, OR 97333-1147

SUBJECT: McFadden Annexation
City of Corvallis Application
ANN11-00001/ZDC11-00002/PLD11-00002

Dear Mr. deTar:

This letter and accompanying information has been prepared in support of the above referenced application and specifically in response to your request to present information further supporting our premise that a 0.40 Floor Area Ratio (FAR) is an appropriate building density to which the McFadden property could be developed under the present Benton County zoning designation of Urban Industrial.

Our February 15, 2011, letter to the Benton County Community Development Director, which is included in the subject application, documents as to how the 0.40 FAR was determined.

Attached hereto are *Supplemental Calculations* and information supporting the feasibility of providing waste water treatment (human and industrial waste), water (drinking and process), fire service, and parking on the site under the present County zoning.

Please do not hesitate to call me if you have any questions.

Sincerely,

Lyle E. Hutchens
Project Manager

LEH/nre
09-414 jgdetar 05-05-2011.docx
Enclosures

cc: Mr. Jason Yaich, City of Corvallis

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-477

- Waste Water Treatment

Developable Acreage = 51.27 acres

Water demand, all uses, industrial property per City's Water Distribution Plan = 3,750 gallons per acre per day.

Daily water demand for all uses = 3,750 x 51.27 acres = 192,260 gallons per day.

The following product information documents the availability of single packaged waste water plants to treat over 200,000 gallons per day of human and industrial waste water.

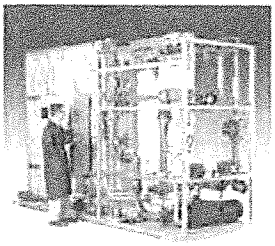
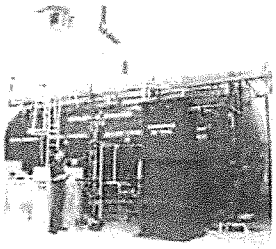
Processed water could be stored on site in conjunction with the storm water detention facilities and recycled for various uses. As the following calculations indicate over 4 acres of developable area remain for ancillary uses.

imagination at work

Water & Process Technologies

Packaged Plants

GE offers a broad line of package membrane based water and wastewater treatment plants that are ideal for flows from 100 gallons per day to 5 million gallons per day. The simple and efficient design produces safe, reliable product water while significantly reducing capital and operating costs.

Pre-assembled and factory tested

- Minimizes on-site construction costs
- Ensures quick delivery and simplifies plant start-up
- Cost-effective for virtually all water filtration applications

Superior effluent quality

- Utilizes proven ultrafiltration (UF), reverse osmosis (RO) and complementary technologies
- Ideal for direct reuse

Simple operation and maintenance

- Requires minimal operator supervision
- Most comprehensive cleaning capability ensures peak system performance
- Significantly reduces sludge generation

Industry leading design teams and long-term operating experience ensure that GE customers receive reliable and trouble-free systems for:

- Drinking Water
- Wastewater & Water Recycling

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MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-479

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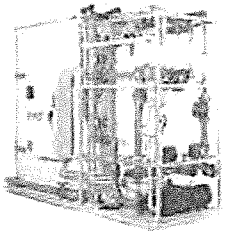
Water & Process Technologies

Z-BOX M Packaged Plant Specifications

Application

Single and dual-train, packaged plants for wastewater treatment



Capacity

Up to 110,000 GPD
(416 m^3/day) at Average Daily Flow

Up to 220,000 GPD
(832 m^3/day) at Maximum Daily Flow

Multiple Z-MOD M units can be linked together to efficiently and cost effectively provide high quality permeate to a common permeate collection pipe.

Application Dependent Options

Influent System	Grinder Pump	Pumps and valves used to grind and transfer wastewater from EQ tank to the process tank
	Waste Transfer Pump System	Pumps and valves used to transfer wastewater from the biological tank to the membrane tank
	Fine Screening System	Fine screen, screenings handling and associated equipment
	Influent Flow Measurement	Magnetic Flow Meter used for measurement of incoming wastewater flow rate
Chemical Addition	NaOCl Dosing System	Dosing pumps and associated equipment used for cleaning organic fouling
	Citric Acid Dosing System	Dosing pumps and associated equipment used for cleaning inorganic scaling
	Co-Nutrient Dosing System	Dosing pumps and associated equipment used for increasing Total Nitrogen Removal
	Coagulant Dosing System	Dosing pump and associated equipment for increased phosphorous removal
	pH Control	Dosing pump and analyzer required for pH control of the biological system
Biological Equipment	Recirculation pump	Return Activated Sludge Pump for improved TN removal
	Process Tank Aeration System	Duty/Standby Aeration Blowers for sustaining the biological system
	Process Tank Diffuser System	Diffusers and valves used for air ab in conjunction with the process tank blower to increase the absorption of oxygen into the mixed liquor
	Anoxic System Mixing	Mixer and controls required to automatically mix the anoxic system
Effluent System	Effluent Flow Measurement	Magnetic Flow Meter used for measurement and flow totaling of effluent
	Effluent Turbidity Meter	Turbidity Meter and valves used for online turbidity monitoring

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EXHIBIT F-480

	UV System	Ultraviolet System used for disinfecting the effluent
Other	Spare Pumps and Blowers	Shelf Spares for pumps and blowers can be supplied for emergency maintenance
	Allen-Bradley PLC	Upgrade to Allen-Bradley PLC components and HMI from Koyo
	ZenoTrac™	GE proprietary data analysis and tracking system
	Commissioning	ZENON trained personnel for plant start-up and operator training

Z-MOD M System Configurations

Model	ADF (GPD)	MDF (GPD)**	Tie Point Connections			Dimensions			Operating Weight (lbs)
			Influent	Effluent	Drain	L	W	H	
M4	20,000	40,000	2"	1.5"	3"	9'8"	4'2"	9'	11,000
M8	40,000	80,000	3"	2"	4"	12'5"	4'2"	9'	15,000
M2*	10,000	20,000	1.5"	1.5"	3"	11'10"	6'5"	9'	22,000
M4*	20,000	40,000	2"	2"	3"	11'10"	6'5"	9'	22,000
M8*	40,000	80,000	3"	2"	4"	11'10"	6'5"	9'	22,000
M16*	80,000	160,000	3"	3"	6"	15'6"	7'3"	9'	29,000
M44*	110,000	220,000	3"	3"	6"	15'6"	7'3"	9'	29,000

* Dual train systems.

** Maximum 24 hour period/month

Major Equipment Manufacturers

Z-MOD M Equipment	Manufacturer
Permeate pump	G & L
Backpulse pump	G & L
Submersible pumps	ABS
Membrane Blower	Rietschle
Process Blower	Aerzen
Valves	Keystone, Chemline
Chemical pumps	Prominent
Flow and level measurement	E & H
PLC components	Koyo

Key Benefits

Complete pre-engineered package system from screening to disinfection
Flexible pre-engineered options
Short timeline from submittal to an operating system
Simple to install and operate
In-Situ cleaning capability
Full redundancy at average daily flow
Compact footprint
Repidly expandable
Easily integrated into an existing facility
Dual train systems are fully redundant at average daily flows

Standard Features

Epoxy coated carbon steel membrane tanks and equipment frame

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CITY COUNCIL STAFF REPORT
EXHIBIT F-481

Permeate pumps, backpulse pumps, membrane aeration blowers, backpulse tank and associated valves are mounted on equipment frame
Control panel with Koyo PLC and HMI interface mounted on equipment frame
ZeeWeed® 500 reinforced ultrafiltration membrane

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EXHIBIT F-482

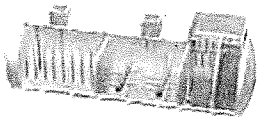
imagination at work

Water & Process Technologies

Z-MOD S Above Ground Packaged Plant

Application

Dual-train, pre-engineered above ground packaged plant for wastewater treatment



Capacity

Up to 100,000 GPD
(378 m^3/day) at Average Daily Flow

Up to 200,000 GPD
(757 m^3/day) at Maximum Daily Flow

Application Dependent Options

Influent System	Grinder Pump	Pumps and valves used to grind and transfer wastewater from EQ tank to the process tank
	Waste Transfer Pump System	Pumps and valves used to transfer wastewater from the biological tank to the membrane tank
	Fine Screening System	Fine screen, screenings handling and associated equipment
	Influent Flow Measurement	Magnetic Flow Meter used for measurement of incoming wastewater flow rate
Chemical Systems	NaOCl Dosing System	Dosing pumps and associated equipment used for cleaning organic fouling
	Citric Acid Dosing System	Dosing pumps and associated equipment used for cleaning inorganic scaling
	Co-Nutrient Dosing System	Dosing pumps and associated equipment used for increasing Total Nitrogen Removal
	Coagulant Dosing System	Dosing pump and associated equipment for increased phosphorous removal
	pH Control	Dosing pump and analyzer required for pH control of the biological system
Biological Equipment	Recirculation pump	Return Activated Sludge Pump for improved TN removal
Effluent System	Effluent Flow Measurement	Magnetic Flow Meter used for measurement and flow totaling of effluent
	Effluent Turbidity Meter	Turbidity Meter and valves used for online turbidity monitoring
	UV System	Ultraviolet System used for disinfecting the effluent
Other	Spare Pumps and Blowers	Shelf Spares for pumps and blowers can be supplied for emergency maintenance
	Allen-Bradley PLC	Upgrade to Allen-Bradley PLC components and HMI from Koyo
	ZenoTrac™	GE proprietary data analysis and tracking system

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Commissioning	GE trained personnel for plant start-up and operator training

Z-MOD S Above Ground System Configurations

Model	ADF (GPD)	MDF (GPD)	BOD & TSS (mg/L)	TN (mg/L)	Temp. (F)	Volume (gal)	
						Anoxic	Aerobic
S15	80,000	160,000	500	90	50	46,000	56,000
					60	30,000	50,500
			250	45	50	20,000	27,000
					60	13,000	25,000
S20	100,000	200,000	500	90	50	57,500	70,000
					60	37,500	63,000
			250	45	50	25,000	34,000
					60	16,000	31,000

Major Equipment Manufacturers

Z-MOD S Equipment	Manufacturer
Permeate pump	Gorman Rupp
Backpulse pump	G & L
Recirculation pump	Price
Blower	Aerzen
Valves	Keystone, Chemline
Chemical pumps	Prominent
Flow and level measurement	E & H
PLC components	Koyo

Key Benefits

Complete pre-engineered package system from screening to disinfection
Flexible pre-engineered options
Minimal on-site work - only two tie-points
Biological tank and equipment frame design minimizes footprint and construction costs
In-Situ cleaning capability
Full redundancy at average daily flow

Standard Features

Epoxy coated carbon steel tank with anoxic, aerobic and membrane chambers
Integrated self cleaning screen located in the process tank
Process and membrane aeration blowers, permeate pumps, backpulse pumps and backpules tank mounted on the equipment frame
Control panel with PLC and HMI interface mounted above ground
ZeeWeed® 500 reinforced ultrafiltration membrane

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- Water

Water demand for all industrial uses = 192,260 gallons per day

= 53 gpm

The attached well logs indicate that recent wells drilled on the adjacent Hewlett-Packard property provide over 80 gpm. Further, the applicant owns the adjacent tax lot 1300 for which they have water rights and a well producing over 400 gpm.

10

BEN T 1096

RECEIVED

FEB 28 1989

WATER RESOURCES DEPARTMENT
SALEM, OREGON

11/5a/25a

STATE OF OREGON
WATER WELL REPORT
(as required by ORS 537.765)

(START CARD) # 78109

(1) OWNER:
Name Hewlett-Packard Well Number 214
Address 1000 NE Circle Blvd.
City Corvallis State OR Zip 97330

(2) TYPE OF WORK:
☒ New Well ☐ Deepen ☐ Recondition ☐ Abandon

(3) DRILL METHOD
☐ Rotary Air ☐ Rotary Mud ☐ Cable
☒ Other reverse

(4) PROPOSED USE:
☐ Domestic ☐ Community ☐ Industrial ☐ Irrigation
☐ Thermal ☐ Injection ☒ Other dewatering

(5) BORE HOLE CONSTRUCTION:
Special Construction approval Yes ☐ No ☒ Depth of Completed Well 59½ ft.
Explosives used Yes ☐ No ☒ Type _____ Amount _____

HOLE Diameter	From	To	SEAL Material	From	To	Amount sacks or pounds
22	0	20	Bentonite	0	22	
18	20		Bore	22	59½	

How was seal placed: Method ☐ A ☐ B ☒ C ☐ D ☐ E
☐ Other _____
Backfill placed from _____ ft. to _____ ft. Material _____
Gravel placed from 40 ft. to 59½ ft. Size of gravel ¼ grit

(6) CASING/LINER: aqua #1 aqua #2 18-40

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	8"	1½	43		☒	☐	☒	☐
	8"	53	58		☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:					☐	☐	☐	☐
					☐	☐	☐	☐

Final location of shoe(s) None

(7) PERFORATIONS/SCREENS:
☐ Perforations Method _____
☒ Screens Type Johnson Material stainless steel

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
43	53	8"			8"	☒	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐

(8) WELL TESTS: Minimum testing time is 1 hour
☒ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
80			1 hr.

Temperature of water _____ Depth Artesian Flow Found N/A
Was a water analysis done? ☐ Yes By whom _____
Did any strata contain water not suitable for intended use? ☐ Too little
☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other _____
Depth of strata: _____

(9) LOCATION OF WELL by legal description:
County Benton Latitude _____ Longitude _____
Township 11 N or S Range 5 E or W WM.
Section 25 ¼ NE ¼
Tax Lot _____ Lot _____ Block _____ Subdivision _____
Street Address of Well (or nearest address) _____
Hewlett-Packard Corvallis, OR

(10) STATIC WATER LEVEL:
22 ft. below land surface. Date 02-1-89
Artesian pressure _____ lb. per square inch. Date _____

(11) WATER BEARING ZONES:
Depth at which water was first found _____

From	To	Estimated Flow Rate	SWL
22	53	80 GPM	22

(12) WELL LOG: Ground elevation _____

Material	From	To	SWL
Topsoil	0	1	
sticky brown clay	1	24	
brown sand	24	28	
black sand clay	28	30	
small gravel	30	36	
med gravel	36	49	
brown sand	49	52	
blue sandy clay	52	53	
blue sandy clay	53	59½	
5' tail pipe below screen			

Date started 1-28-89 Completed 1-28-89

(unbonded) Water Well Constructor Certification:
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.
WWC Number _____
Signed [signature] Date _____

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. all work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.
WWC Number 314
Signed [signature] Date _____

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BENT 1097

MAR 20 1989 FEB 28 1989

18/5W/25a

STATE OF OREGON
WATER WELL REPORT
(as required by ORS 537.765)

(START CARD) # 7872

WATER RESOURCES DEPARTMENT SALEM, OREGON

Well Number 209

(1) OWNER:
Name Hewlett-Packard
Address 1000 NE Circle Blvd.
City Corvallis State OR Zip 97330

(2) TYPE OF WORK:
☒ New Well ☐ Deepen ☐ Recondition ☐ Abandon

(3) DRILL METHOD
☐ Rotary Air ☐ Rotary Mud ☐ Cable
☒ Other reverse

(4) PROPOSED USE:
☐ Domestic ☐ Community ☐ Industrial ☐ Irrigation
☐ Thermal ☐ Injection ☒ Other Dewatering

(5) BORE HOLE CONSTRUCTION:
Special Construction approval Yes ☐ No ☒ Depth of Completed Well 60 ft.
Explosives used Yes ☐ No ☒ Type ____ Amount ____

HOLE Diameter	From	To	SEAL Material	From	To	Amount sacks or pounds
22	0	20	Bentonite			32 sacks
19	20	60	Bore			

How was seal placed: Method ☐ A ☐ B ☒ C ☐ D ☐ E
☐ Other ____
Backfill placed from ____ ft. to ____ ft. Material ____
Gravel placed from 37 ft. to 60 ft. Size of gravel ¼ crit

(6) CASING/LINER: 20 to 37 Auqua #4

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	8	1½	58	250	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:	No				☐	☐	☐	☐
					☐	☐	☐	☐

Final location of shoe(s) None

(7) PERFORATIONS/SCREENS:
☐ Perforations Method ____
☒ Screens Type Johnson Material Stainless steel

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
43	53	.050			8"	☒	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐

(8) WELL TESTS: Minimum testing time is 1 hour
☒ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
80 GPM			1 hr.

Temperature of water ____ Depth Artesian Flow Found X
Was a water analysis done? ☐ Yes By whom ____
Did any strata contain water not suitable for intended use? ☐ Too little
☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other ____
Depth of strata: ____

(9) LOCATION OF WELL by legal description:
County Benton Latitude ____ Longitude ____
Township 11 N or S Range 5 E or W WM.
Section 25 ¼ NE¼
Tax Lot ____ Lot ____ Block ____ Subdivision ____
Street Address of Well (or nearest address) ____
Hewlett Packard Corvallis, OR

(10) STATIC WATER LEVEL:
22 ft. below land surface. Date 1-21-89
Artesian pressure ____ lb. per square inch. Date ____

(11) WATER BEARING ZONES:
Depth at which water was first found 25

From	To	Estimated Flow Rate	SWL
24	57	80 GPM	22

(12) WELL LOG: Ground elevation ____

Material	From	To	SWL
Topsoil	0	1	
Sticky brown clay	1	25	
Brown sand & clay	25	27	
Black sand	27	31	
Black sand & small gravel	31	35	
Black sand & med. gravel	35	56	
Black sand & sparse gravel	56	57	
Blue sandy clay	57	60	
5' tailpipe below screen			

Date started 1-21-89 Completed 1-21-89

(unbonded) Water Well Constructor Certification:
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.
WWC Number ____
Signed [signature] Date ____

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. all work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.
WWC Number 514
Signed [signature] Date ____

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RECEIVED
FEB 28 1989
WATER RESOURCES DEPT.
SALEM, OREGON

Bent 39927 (START CARD) # 7873 15/5W/25a

STATE OF OREGON
WATER WELL REPORT
(as required by ORS 537.765)

(1) OWNER: Well Number 21 WATER SA
Name Hewlett-Packard
Address 1000 NE Circle Blvd
City Corvallis State OR Zip 97330

(2) TYPE OF WORK:
☒ New Well ☐ Deepen ☐ Recondition ☐ Abandon

(3) DRILL METHOD
☐ Rotary Air ☐ Rotary Mud ☐ Cable
☒ Other Reverse

(4) PROPOSED USE:
☐ Domestic ☐ Community ☐ Industrial ☐ Irrigation
☐ Thermal ☐ Injection ☒ Other Dewatering

(5) BORE HOLE CONSTRUCTION:
Special Construction approval Yes ☐ No ☒ Depth of Completed Well 60 ft.
Explosives used Yes ☐ No ☒ Type ____ Amount ____

HOLE Diameter	From	To	SEAL Material	From	To	Amount sacks or pounds
22	0	20	Bentonite	0	20	31 Sacks
18	20	60	Bare			

How was seal placed: Method ☐ A ☐ B ☒ C ☐ D ☐ E
☐ Other
Backfill placed from ____ ft. to ____ ft. Material ____
Gravel placed from 58 ft. to 60 ft. Size of gravel 1/4 grit

(6) CASING/LINER: 20-37 #4 AQUA, 37-55 1/2 grit, 55-58 #2 AQUA

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	8"	1 1/2	58	250	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner: None					☐	☐	☐	☐
					☐	☐	☐	☐

Final location of shoe(s) None

(7) PERFORATIONS/SCREENS:
☐ Perforations Method ____
☒ Screens Type Johnson Material Stainless Steel

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
43	53	.050			8"	☒	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐

(8) WELL TESTS: Minimum testing time is 1 hour
☒ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
80 GPM			1 hr.

Temperature of water ____ Depth Artesian Flow Found X
Was a water analysis done? ☐ Yes By whom ____
Did any strata contain water not suitable for intended use? ☐ Too little
☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other ____
Depth of strata: ____

(9) LOCATION OF WELL by legal description:
County Benton Latitude ____ Longitude ____
Township 11 So. N or S. Range 5 West E or W. WM.
Section NE QUARTER ¼ ____ ¼
Tax Lot ____ Lot ____ Block ____ Subdivision ____
Street Address of Well (or nearest address) Hewlett-Packard
1000 NE CIRCLE BLVD CORVALLIS, OR

(10) STATIC WATER LEVEL:
22 ft. below land surface. Date 1-22-89
Artesian pressure ____ lb. per square inch. Date ____

(11) WATER BEARING ZONES:
Depth at which water was first found 24

From	To	Estimated Flow Rate	SWL
24	57	80 GPM	22

(12) WELL LOG: Ground elevation ____

Material	From	To	SWL
Topsoil	0	2	
Brown Sticky Clay	2	25	
Clay & Brown Sand	25	26	
Black Sand	26	29	
Black Sand & Small gravel	29	35	
Black Sand & med. gravel	35	56	
Black Sand	56	57	
Blue Sandy Clay	57	60	

Date started 1-22-89 Completed 1-22-89

(unbonded) Water Well Constructor Certification:
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.
WWC Number ____
Signed [signature] Date ____

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. all work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.
WWC Number ____
Signed [signature] Date ____

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EXHIBIT F-489

16

RENT 1098

RECEIVED MAR 20 1989 WATER RESOURCES DEPARTMENT SALEM, OREGON

RECEIVED FEB 28 1989 WATER RESOURCES DEPARTMENT SALEM, OREGON

1/8/5a/25a

STATE OF OREGON
WATER WELL REPORT
(as required by ORS 537.765)

(START CARD) # 7877

Well Number 21/3

(1) OWNER:
Name Hewlett-Packard
Address 1000 NE Circle Blvd.
City Corvallis State OR Zip 97330

(2) TYPE OF WORK:
☒ New Well ☐ Deepen ☐ Recondition ☐ Abandon

(3) DRILL METHOD
☐ Rotary Air ☐ Rotary Mud ☐ Cable
☒ Other Reverse

(4) PROPOSED USE:
☐ Domestic ☐ Community ☐ Industrial ☐ Irrigation
☐ Thermal ☐ Injection ☒ Other Dewatering

(5) BORE HOLE CONSTRUCTION:
Special Construction approval Yes ☐ No ☒ Depth of Completed Well 57 1/2 ft.
Explosives used Yes ☐ No ☒ Type ____ Amount ____

HOLE Diameter	From	To	SEAL Material	From	To	Amount sacks or pounds
22	0	20	Bentonite	0	18	30 sacks
18	20	57 1/2	Bore			

How was seal placed: Method ☐ A ☐ B ☒ C ☐ D ☐ E
☐ Other ____
Backfill placed from ____ ft. to ____ ft. Material ____
Gravel placed from 32 ft. to 57 1/2 ft. Size of gravel 1/4 grit

(6) CASING/LINER: 18-32 AQUA #4

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	8	1 1/2	57 1/2	250	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner: None					☐	☐	☐	☐
					☐	☐	☐	☐

Final location of shoe(s) None

(7) PERFORATIONS/SCREENS:
☐ Perforations Method ____
☒ Screens Type Johnson Material Stainless Steel

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
42	52	050			8"	☐	☐
						☒	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐

(8) WELL TESTS: Minimum testing time is 1 hour
☒ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
80gpm			1 hr.

Temperature of water ____ Depth Artesian Flow Found X
Was a water analysis done? ☐ Yes By whom ____
Did any strata contain water not suitable for intended use? ☐ Too little
☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other ____
Depth of strata: ____

(9) LOCATION OF WELL by legal description:
County Benton Latitude ____ Longitude ____
Township 11 S.D. N or S, Range 5 West E or W WM
Section 25 NE ¼ ____ ¼
Tax Lot ____ Lot ____ Block ____ Subdivision ____
Street Address of Well (or nearest address) H-Packard
1000 NE Circle Blvd. Corvallis, OR

(10) STATIC WATER LEVEL:
22 ft. below land surface. Date 1-25-89
Artesian pressure ____ lb. per square inch. Date ____

(11) WATER BEARING ZONES:
Depth at which water was first found ____

From	To	Estimated Flow Rate	SWL
25	53	80 GPM	22

(12) WELL LOG: Ground elevation ____

Material	From	To	SWL
Topsoil	0	2	
Sticky Brown clay	2	25	
Brown sand + clay	25	26	
Black sand	26	30	
Black sand + med. gravel	30	53	
Blue Sticky clay	53	57 1/2	

Date started 1-25-89 Completed 1-25-89

(unbonded) Water Well Constructor Certification:
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.
WWC Number ____
Signed [signature] Date ____

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. all work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.
WWC Number 514
Signed Bert Jones Date ____

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CITY COUNCIL STAFF REPORT
EXHIBIT F-490

Lyle Hutchens

From: Sandra Gazeley [sgazeley@comcast.net]
Sent: Thursday, April 28, 2011 12:37 PM
To: Lyle Hutchens
Subject: McFadden-Water Rights & On-Site Sewer

Hi, Lyle,

Water

I've spoken with Arthur and gotten some information regarding water rights and water availability at the site. This is based upon his recollection and his conversation this morning with the gentleman who leases the land for ag use.

Three sources:

Property does have a water right to pump from river: currently gets about 400 gpm; water right established in 1979 & used every year; Well approximately in the middle of this site at about 500 gpm; Well on river side, opposite this site at approx. 600 gpm

I really don't have any idea what's needed to provide fire suppression and supply a sprinkler system for industrial structures. If we couldn't get enough on-site storage (perhaps with an attractive water tower) I was reading about ultra high pressure systems, which use a lot less water or a compressed air foam system. Don't know if either of those will fly with the County and State.

Sewage Treatment

You're probably very well versed in all of the technologies, but cruising online, I came across a couple of sites for onsite package plants & will send those links along to you.

Sandra

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-491

* Fire Service

Fire protection for rural development of all types is common and generally provided by systems which can include wells, ponds, elevated tanks and pressure pumps.

The National Fire Protection Association has established standards for such systems including:

NFPA 22: Standard for Water Tanks for Private Fire Protection

NFPA 24: Standard for Installation of Private Fire Service Mains and Their Appurtances

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-492

- Parking

Developable Acreage = 51.27 acres

Typical percentage of impervious surface with respect to land area = 72% [1,2]

[1] County zoning has no overall minimum green space or open space requirement.
[2] 72% is typical of urban industrial per the attached.

Typical impervious surface area = .72 x 51.27 acres
= 36.91 acres
= 1,608,000 square feet

Area allocated to building footprints based upon the 0.40 FAR and assuming all one-story buildings
= 856,000 square feet

Area allocated to 1,000 [3] **parking spaces** @ 450 [4] square feet per parking space

= 450,000 square feet

[3] Trip analysis indicates 902 pm peak hour trips under County zoning; this adds 10% additional parking spaces for any possible shift changes.

[4] Sufficient space per vehicle for all on-site parking and access.

Miscellaneous areas allocated for storm water detention and water quality[5]

= 2.4 acres
= 105,000 square feet

[5] Supported by respective calculations in application Appendix.

Excess developable area available for ancillary uses
(1,608,000 – 856,000 – 450,000 – 105,000) = 197,000 square feet[6]
= 4.52 acres

[6] If developed to parking this would add 400 parking spaces to the 1,000 accounted for above.

Table 2-2a Runoff curve numbers for urban areas [1]

Cover type and hydrologic condition	Average percent impervious area [2]	Curve numbers for hydrologic soil group A	B	C	D
Fully developed urban areas (vegetation established)					
Open space (lawns, parks, golf courses, cemeteries, etc.) [3]:					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) [4]		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82
Developing urban areas					
Newly graded areas (pervious areas only, no vegetation) [5]		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in table 2-2c).					

[1] Average runoff condition, and $I_a = 0.2S$.
[2] The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.
[3] CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.
[4] Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.
[5] Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4 based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-494

DEVCO engineering inc.

REGISTERED PROFESSIONAL ENGINEER
56483PE
OREGON
JAN. 15, 2002
STEVEN C.P. HATTORI

EXPIRES: 6/30/11

Waterline, Sanitary Sewer, and Stormwater
Calculations for

McFadden Annexation
For
McFadden

Devco Job #09-414
May 2011

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MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
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Waterline Calculations

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
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EXHIBIT F-496

DEVCO engineering inc.

Physical Address
245 NE Conifer Blvd.
Corvallis, OR 97330

Mailing Address
P.O. BOX 1211
Corvallis, OR 97339

www.devcoengineering.com

(541) 757-8991
Fax: (541) 757-9885

PROJECT: McFadden Annexation	PROJECT NO: 09-414	DESIGN: SH	DATE: 05/2011

WATERLINE CALCULATION

* CALCULATE MAXIMUM WATER DEMAND = MAXIMUM PEAK HOUR DEMAND + FIRE FLOW

* PER CITY OF CORVALLIS WATER DISTRIBUTION SYSTEM FACILITY PLAN, THE FIRE FLOW REQUIREMENT FOR AN INDUSTRIAL AREA WITHOUT PARTIAL & UNSPRINKLERED BUILDINGS IS 4,500 gpm.

* WATER DEMAND CALCULATION

  * TOTAL AREA = 85.43Ac

  * PER CITY OF CORVALLIS WDSFP, AVERAGE INDUSTRIAL DEMAND = 3,750 gpad

  * AVERAGE DEMAND = 85.43Ac (3,750 gpad)

    = 320,362.50 gal/day = 223 gpm

  * PEAK DAY DEMAND = 223 gpm (2.0) = 446 gpm

  * PEAK HOUR DEMAND = 223 gpm (4.6) = 1,026 gpm

* MAXIMUM WATER DEMAND = 1,026 gpm + 4,500 gpm

  = 5526 gpm

USED 5,530 gpm FOR CALCULATIONS

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245 NE Conifer Blvd.
Corvallis, OR 97330

Mailing Address
P.O. BOX 1211
Corvallis, OR 97339

www.devcoengineering.com

(541) 757-8991
Fax: (541) 757-9885

PROJECT: McFADDEN ANNEXATION	PROJECT NO: 09-414	DESIGN: SF	DATE: 05/2011

CON'T WATERLINE CALCULATION

* PER CITY OF CORVALLIS WDSFP, A NEW 16" MAINLINE WILL BE REQUIRED TO CREATE A LOOP CONNECTION BETWEEN THE EXISTING 30" MAINLINE TO THE NORTH OF THE PROPOSED ANNEXATION PROPERTY AND THE 16" MAINLINE LOCATED TO THE SOUTH OF THE PROPERTY ADJACENT TO HIGHWAY 20.

* VERIFY IF THE NEW 16" MAINLINE IS ADEQUATE TO SERVE THE PROPOSED ANNEXATION.

* NO FIRE HYDRANT FLOW DATA WAS PROVIDED.
  - BASED CALCULATION ON RESERVOIR LEVELS AND GROUND ELEVATIONS TO CALCULATE STATIC PRESSURES.

    → RESERVOIR LEVEL FOR FIRST LEVEL = 400'

    → AVERAGE GROUND ELEVATION OF PROPERTY = 222'

    → STATIC PRESSURE = 400' - 222' = 178' = 77 psi

* WATER SUPPLY SHOULD NOT BE AN ISSUE DUE TO THE LOOP CONNECTION BETWEEN THE ABOVE STATED EXISTING 30" AND 16".

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Corvallis, OR 97330

Mailing Address
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Corvallis, OR 97339

www.devcoengineering.com

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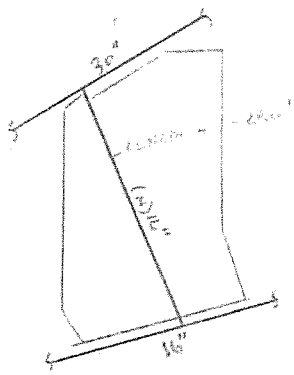
Fax: (541) 757-9885

PROJECT: McFadden Annexation	PROJECT NO: 09-414	DESIGN: SH	DATE: 05/2011

CONT WATERLINE CALCULATIONS

* TO SIMPLIFY CALCULATION AND TO BE CONSERVATIVE:

1) ANALYSIS TO ASSUME WATER IS FED IN A SINGLE DIRECTION, FROM THE 30"



* MAXIMUM WATER DEMAND = 5,530 gpm

* REQUIRED: CALCULATE RESIDUAL PRESSURE TO SATISFY FIRE FLOW REQUIREMENT. RESIDUAL PRESSURE SHALL BE GREATER THAN 20 psi

* SOLUTION:

$$H_{OUT} = H_{STATIC} - h_e - h_f$$

WHERE h_e = ELEVATION HEAD = 0

h_f = PIPE FRICTION LOSS (USE HAZEN WILLIAMS EQN AS IN PREVIOUS)

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CITY COUNCIL STAFF REPORT
EXHIBIT F-499

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Physical Address
245 NE Conifer Blvd.
Corvallis, OR 97330

Mailing Address
P.O. BOX 1211
Corvallis, OR 97339

www.devcoengineering.com

(541) 757-8991
Fax: (541) 757-9885

PROJECT: McFADDEN ANNEXATION	PROJECT NO: 09-414	DESIGN: SH	DATE: 05/2011

CON'T WATERLINE CALCULATION

* IGNORE MINOR LOSSES

HAZEN-WILLIAMS EQN

$$h_f = \frac{10.44 (L)(Q)^{1.85}}{(C)^{1.85}(d)^{4.8655}}$$

WHERE, L = LENGTH OF PIPE (ft)
Q = FLOW (gpm)
C = ROUGHNESS COEFFICIENT = 100 FOR DI
d = PIPE DIAMETER (in)

$$H_{OUT} = 178' - h_f$$

$$= 178' - \frac{10.44 (2800')(5530\,gpm)^{1.85}}{(100)^{1.85}(16)^{4.8655}}$$

$$= 178' - 67.8'$$

$$H_{OUT} = 110.2' = \underline{47.7\ psi > 20\ psi \quad OK}$$

∴ SUMMARY

- CONSTRUCT 16" MAINLINE BETWEEN THE EXISTING 30" AND 16". 16" MAINLINE SHOULD HAVE THE CAPACITY TO SERVE THE PROPOSED ANNEXATION.

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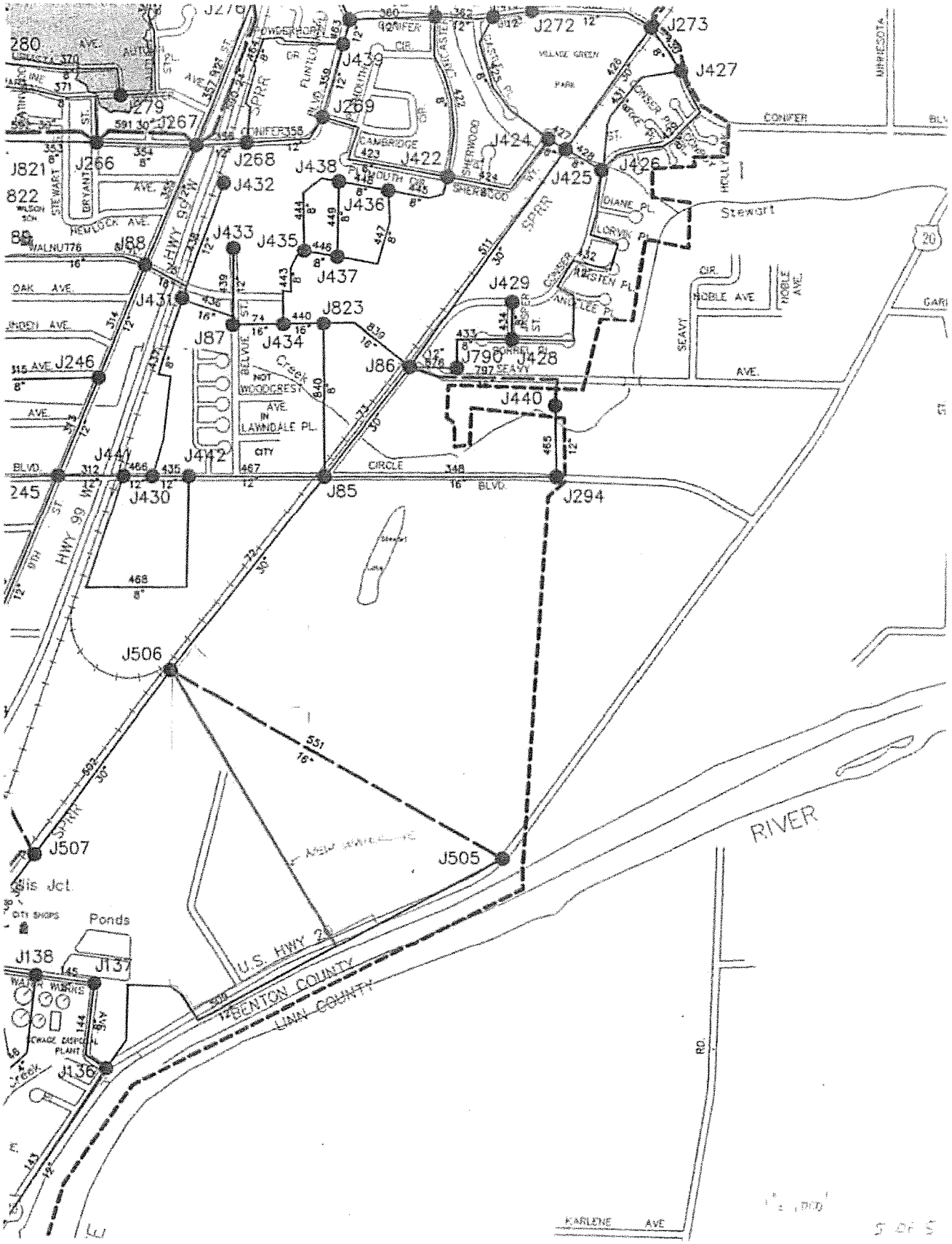

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Sanitary Sewer Calculations

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-502

DEVCO engineering inc.

Physical Address
245 NE Conifer Blvd.
Corvallis, OR 97330

Mailing Address
P.O. BOX 1211
Corvallis, OR 97339

www.devcoengineering.com

(541) 757-8991
Fax: (541) 757-9885

PROJECT: McFadden Annexation	PROJECT NO: 09-414	DESIGN: SB	DATE: 01/2011

Sanitary Sewer (Wastewater) Calculation

Northeast Basin Analysis

- Summary of Basin w/o Annexation Based on Zoning Map
  - General Industrial (GI) = 254.0 Ac [8.7 units/Acre]
  - Mixed Use Community Shopping (MUCS) = 5.2 Ac [4.4 units/Acre]
  - Mixed Use Employment (MUE) = 10.4 Ac [4.4 units/Acre]
  - Central Business Fringe (CBF) = 6.4 Ac [4.4 units/Acre]
  - Low Density Residential (RS 3.5) = 79.7 Ac [4.0 units/Acre]
  - Low Density Residential (RS 5) = 36.0 Ac [4 units/Acre]
  - Low Density Residential (RS 6) = 30.0 Ac [4.0 units/Acre]
  - Medium Density Residential (RS 9) = 75.3 Ac [9 units/Acre]
  - Medium/High Density Residential (RS 12) = 80.2 Ac [12 units/Acre]
  - High Density Residential (RS 20) = 4.7 Ac [25 units/Acre]

Total Area = 581.9 Ac

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EXHIBIT F-503

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Physical Address
245 NE Conifer Blvd.
Corvallis, OR 97330

Mailing Address
P.O. BOX 1211
Corvallis, OR 97339

www.devcoengineering.com

(541) 757-8991
Fax: (541) 757-9885

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CONT SANITARY SEWER CALCULATION

# OF DWELLING UNITS =	(254.0 Ac)(8.7 UNITS/Ac) =	2,209.8	GI
	(5.2 Ac)(4.4 UNITS/Ac) =	22.9	MUCS
	(10.4 Ac)(4.4 UNITS/Ac) =	45.8	MUE
	(6.4 Ac)(4.4 UNITS/Ac) =	28.2	CBF
	(79.7 Ac)(4.0 UNITS/Ac) =	318.8	RS 3.5
	(36.0 Ac)(4.0 UNITS/Ac) =	144.0	RS 5
	(30.0 Ac)(4.0 UNITS/Ac) =	120.0	RS6
	(75.3 Ac)(9 UNITS/Ac) =	677.7	RS9
	(80.2 Ac)(12 UNITS/Ac) =	962.4	RS12
	(4.7 Ac)(25 UNITS/Ac) =	117.5	RS20
		4647.0	

OF DWELLING UNITS = 4,647 UNITS

DESIGN FLOWS = 193 gpcd + 4,000 gal/Ac/day FOR I & I

= 193 gpcd (4647 UNITS)(2.3 PERSON/UNIT) + 4000 gal/Ac/day (581.9 Ac)

$Q_{\text{UPSTREAM FLOW}}$ = 4,390,403.3 gal/day = 3049 gpm = 6.79 cfs

$Q_{\text{PIPE CAPACITY}}$ 36" @ S=0.001 ft/ft = 21.09 cfs > 6.79 cfs OKAY!

PROPOSED ANNEXATION AREA = 85.43 Ac

ZONED GENERAL INDUSTRIAL = 8.7 UNITS/Ac

OF DWELLING UNITS = 85.43 Ac (8.7 UNITS/Ac)

= 743.2 UNITS = 745 UNITS

DEVCO engineering inc.

Physical Address
245 NE Conifer Blvd.
Corvallis, OR 97330

Mailing Address
P.O. BOX 1211
Corvallis, OR 97339

www.devcoengineering.com

(541) 757-8991
Fax: (541) 757-9885

PROJECT: McFADDEN ANNEXATION	PROJECT NO: 09-414	DESIGN: SH	DATE: 05/2011

CONT SANITARY SEWER CALCULATION

$Q_{DESIGN\ ANNEX} = 193\ gpcd\ (745\ units)(2.3\ persons/units) + 400\ gpd/ac/day\ (85.43\ ac)$

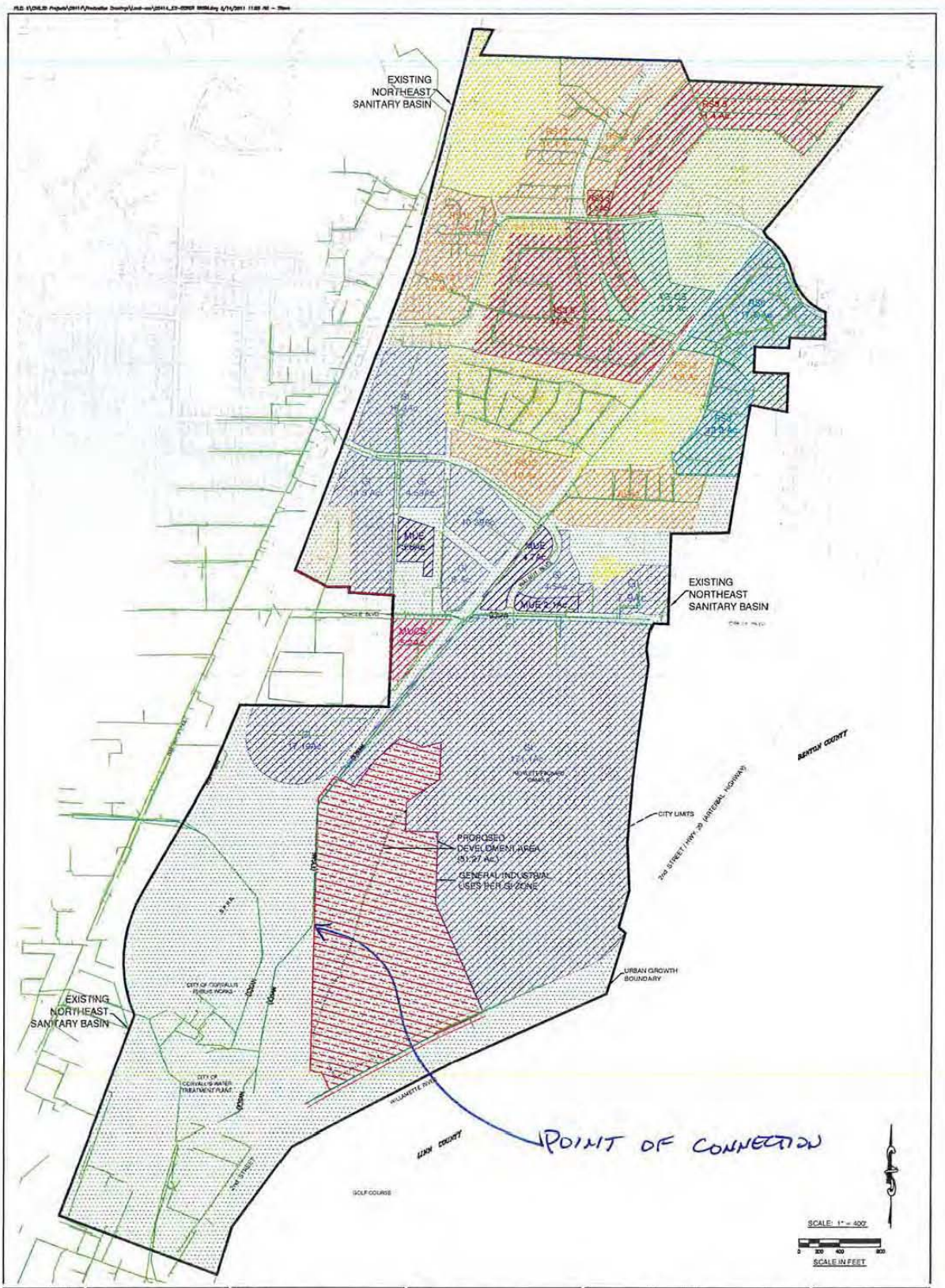
$= 672{,}426\ gpd = 467\ gpm = \underline{1.04\ cfs}$

$Q_{TOTAL} = Q_{DESIGN\ ANNEX} + Q_{UPSTREAM\ FLOW}$

$Q_{TOTAL} = 1.04\ cfs + 6.79\ cfs = \underline{7.83\ cfs} < 21.59\ cfs$ (36" PIPE CAPACITY)

∴ SUMMARY

* THE EXISTING 36" SANITARY MAINLINE HAS THE CAPACITY TO ACCOMODATE PROPOSED ANNEXATION.



CX.X	DRAWING:	DRAWN BY: DEVCO	JOB NO. 1811	SHEET TITLE: X	PROJECT: MCFADDEN ANNEXATION PROJECT LOCATION: CORVALLIS, OREGON CLIENT: MCFADDEN	DEVCO engineering inc. Corvallis Oregon © COPYRIGHT 2011 DEVCO ENGINEERING, INC. ALL RIGHTS RESERVED

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PERMIT SET				
CONST. SET				

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Unit Flow Rates	
Type	Rate
Per capita, wet season, dry weather	193 gallons per capita per day--peak rate
Per acre, wet season, wet weather	4,000 gallons per acre per day--peak for 5-year, 24-hour event

*2.14 population per EDU assumed for Master Planning purposes

Zoning Densities	
ZONE	Dwelling Units per Acre
AG-OS	-
CB	4.4
CBF	4.4
CS	4.4
GI	7.4
GI	8.7
II	8.7
LC	4.4
LI	4.4
OSU	
P-AO	4.4
PD(12U)	16
PD(CS)	4.4
PD(GI)	8.7
PD(LC)	4.4
PD(LI)	8.4
PD(P-AO)	4.4
PD(RS-12)	12.0
PD(RS-12)	16.0
PD(RS-12U)	12.0
PD(RS-12U)	16.0
PD(RS-20)	25.0
PD(RS-3.5)	4.0
PD(RS-5)	4
PD(RS-6)	4.0
PD(RS-9)	9.0
PD(RTC)	4.4
PD(SA)	4.35
RS-12	12.0
RS-12	16.0
RS-12U	12.0
RS-20	25
RS-3.5	4
RS-5	4
RS-6	4.0
RS-9	9
RTC	4.4
SA	4.35
SAU	4.35
SSD	4.4

Land Use Densities	
Land Use	Dwelling Units per Acre
Res-Low	4.0
Res-Medium	9.0
Res-MH	12-16
Commercial (SA)	4.4
Ind-Limited	8.7
Ind-Intensave	7.4

TABLE 5

CIRCULAR PIPE FLOW CAPACITY
Full Flow (cubic feet per second)

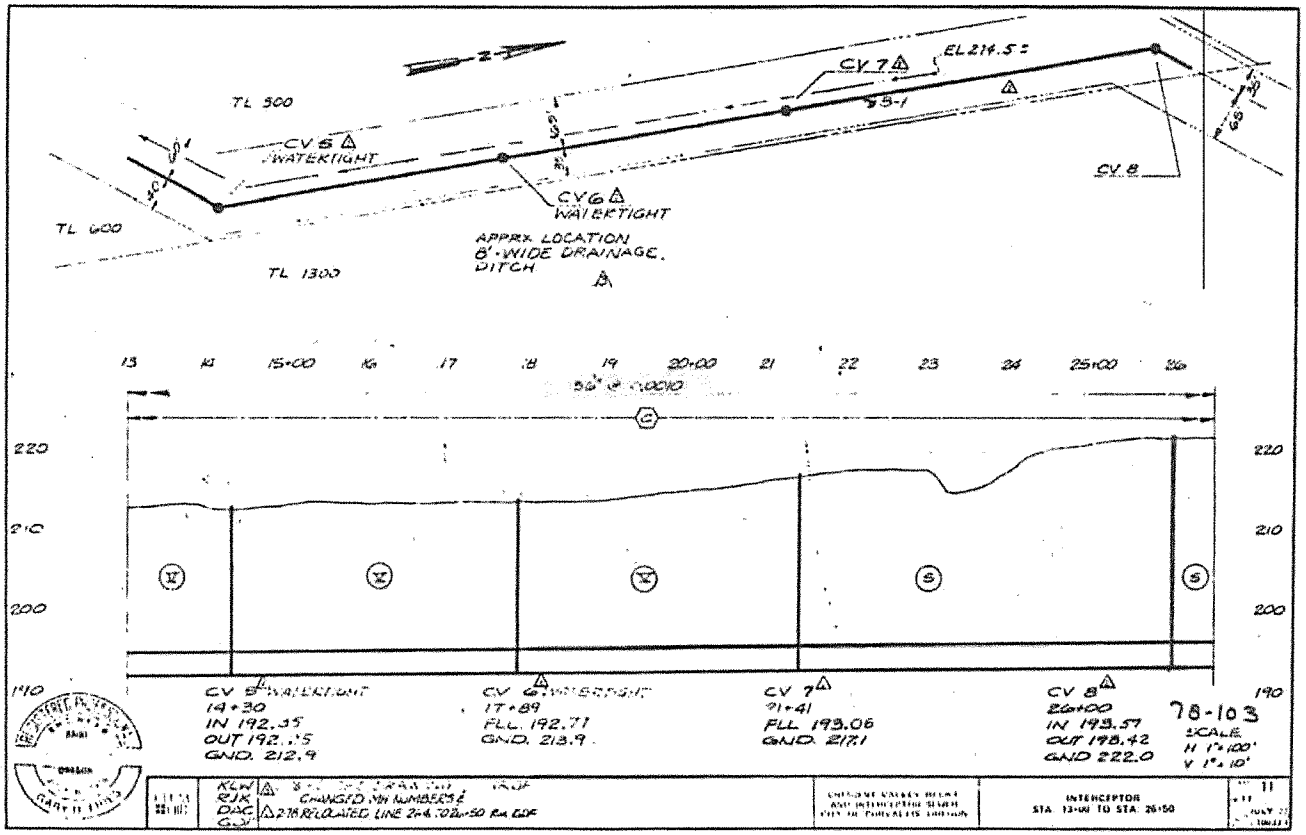
Mannings "n"= 0.013

Dia. (in.)	*Conv. Factor	% Slope (feet per 100 feet) 0.02	0.05	0.10	0.20	0.35	0.50	0.75	1.00	1.25	1.50	1.75	2.0	2.5	5.0	10.0	20.0
									(c.f.s.)								
3	0.884	0.012	0.020	0.028	0.040	0.052	0.062	0.077	0.088	0.099	0.11	0.12	0.12	0.14	0.20	0.28	0.40
4	1.903	0.027	0.043	0.060	0.085	0.113	0.135	0.165	0.190	0.213	0.23	0.25	0.27	0.30	0.43	0.60	0.85
5	3.451	0.049	0.077	0.109	0.154	0.204	0.244	0.299	0.345	0.386	0.42	0.46	0.49	0.55	0.77	1.09	1.54
6	5.611	0.079	0.125	0.177	0.251	0.332	0.397	0.486	0.561	0.627	0.69	0.74	0.79	0.89	1.25	1.77	2.51
8	12.084	0.171	0.270	0.382	0.540	0.715	0.854	1.047	1.208	1.351	1.48	1.60	1.71	1.91	2.70	3.82	5.40
10	21.91	0.31	0.49	0.69	0.98	1.30	1.55	1.90	2.19	2.45	2.68	2.90	3.10	3.46	4.90	6.93	9.80
12	35.63	0.50	0.80	1.13	1.59	2.11	2.52	3.09	3.56	3.98	4.36	4.71	5.04	5.63	7.97	11.27	15.93
15	64.60	0.91	1.44	2.04	2.89	3.82	4.57	5.59	6.46	7.22	7.91	8.55	9.14	10.21	14.44	20.43	28.89
18	105.04	1.49	2.35	3.32	4.70	6.21	7.43	9.10	10.50	11.74	12.87	13.90	14.86	16.61	23.49	33.22	46.98
21	158.45	2.24	3.54	5.01	7.09	9.37	11.20	13.72	15.85	17.72	19.41	20.96	22.41	25.05	35.43	50.11	70.86
24	226.22	3.20	5.06	7.15	10.12	13.38	16.00	19.59	22.62	25.29	27.71	29.93	31.99	35.77	50.59	71.54	101.17
27	309.70	4.38	6.93	9.79	13.85	18.32	21.90	26.82	30.97	34.63	37.93	40.97	43.80	48.97	69.3	97.9	138.5
30	410.17	5.80	9.17	12.97	18.34	24.27	29.00	35.52	41.02	45.86	50.24	54.26	58.01	64.85	91.7	129.7	183.4
36	666.98	9.43	14.91	21.09	29.83	39.46	47.16	57.76	66.70	74.57	81.69	88.23	94.33	105.46	149.1	210.9	298.3
42	1006.1	14.23	22.50	31.82	44.99	59.5	71.1	87.1	100.6	112.5	123.2	133.1	142.3	159.1	225.0	318.2	449.9
48	1436.4	20.31	32.12	45.42	64.24	85.0	101.6	124.4	143.6	160.6	175.9	190.0	203.1	227.1	321.2	454.2	642.4

* Conveyance Factor = ~~(1.486 x R2/3 x A) / n~~

$= A \cdot \frac{1.486}{n} \cdot R^{2/3}$

$Q = A \frac{1.486}{n} R^{2/3} S^{1/2}$



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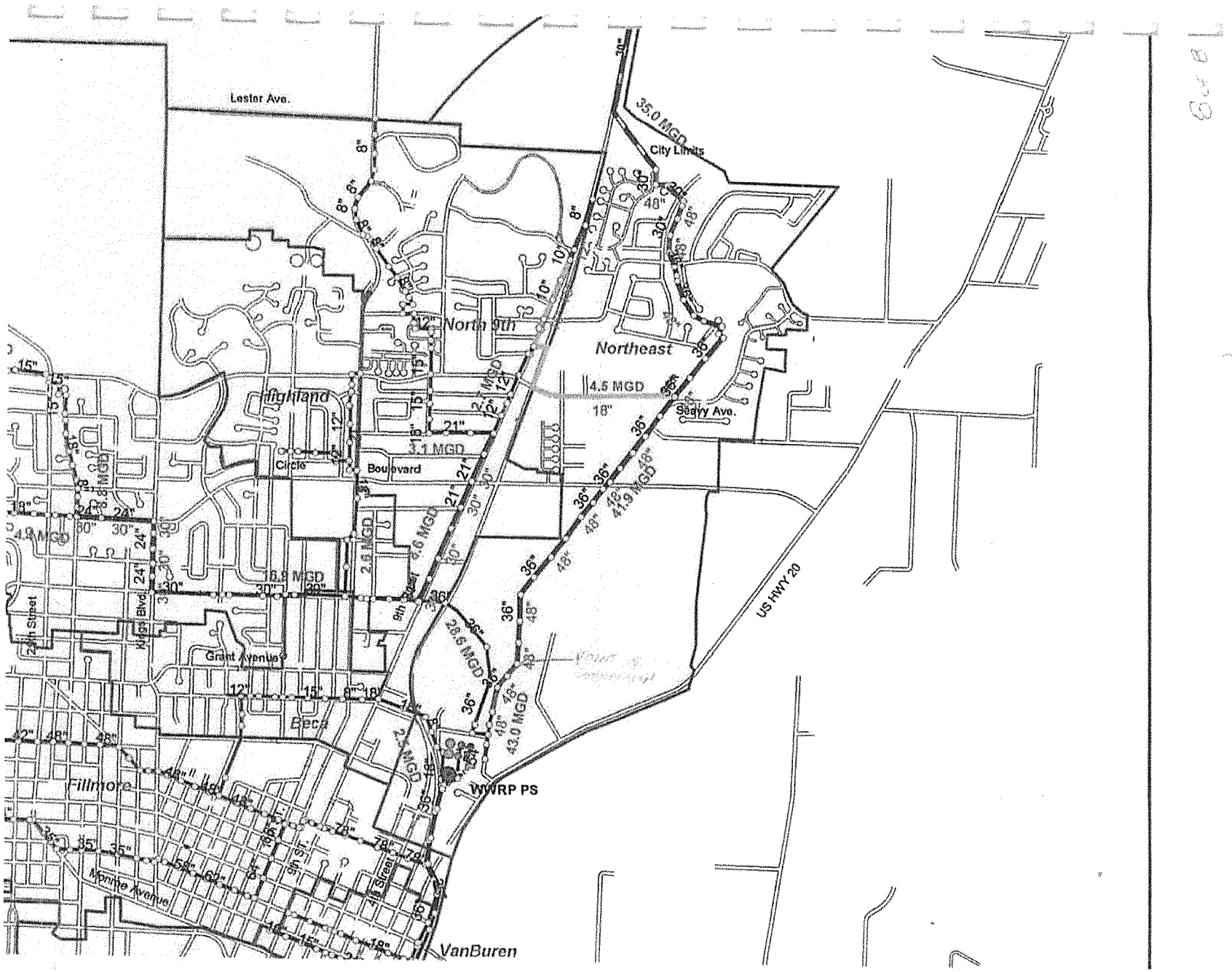

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Stormwater Calculations

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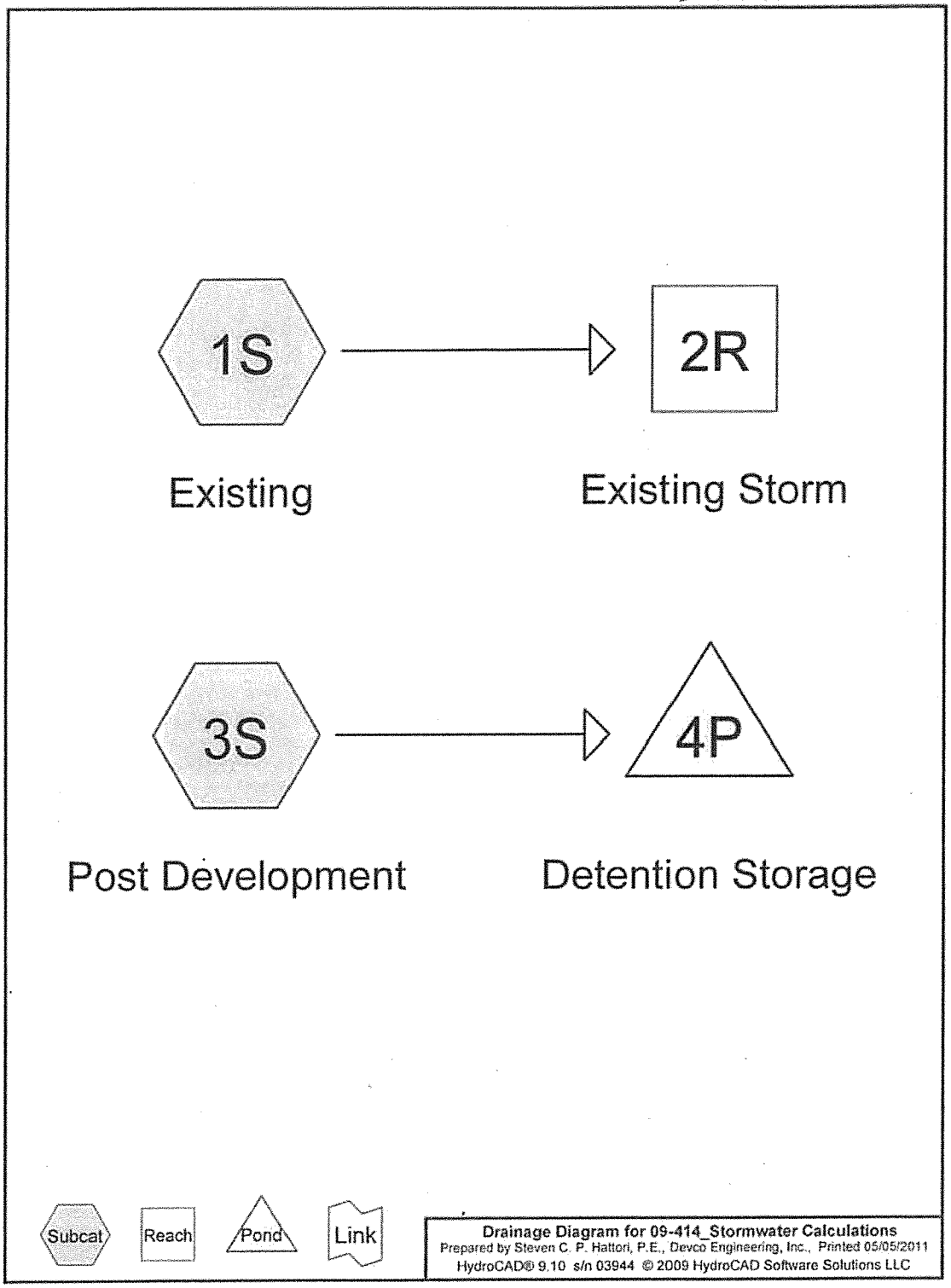
DETENTION CALCULATIONS



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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
59.288	58	Meadow, non-grazed, HSG B (1S)
15.805	65	Woods/grass comb., Fair, HSG B (1S)
10.337	72	Woods/grass comb., Good, HSG C (1S)
59.288	88	Urban industrial, 72% imp, HSG B (3S)
10.337	91	Urban industrial, 72% imp, HSG C (3S)
15.805	93	Urban industrial, 72% imp, HSG D (3S)
170.860		**TOTAL AREA**

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
134.381	HSG B	1S, 3S
20.674	HSG C	1S, 3S
15.805	HSG D	3S
0.000	Other	
170.860		**TOTAL AREA**

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
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Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Fill (inches)
1	4P	100.00	98.00	100.0	0.0200	0.013	12.0	0.0	0.0

Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Existing Runoff Area=85.430 ac 0.00% Impervious Runoff Depth>0.18"
Flow Length=1,700' Tc=71.3 min CN=61 Runoff=1.36 cfs 1.285 af

Subcatchment 3S: Post Development Runoff Area=85.430 ac 72.00% Impervious Runoff Depth>1.45"
Tc=5.0 min CN=89 Runoff=30.92 cfs 10.341 af

Reach 2R: Existing Storm Inflow=1.36 cfs 1.285 af
Outflow=1.36 cfs 1.285 af

Pond 4P: Detention Storage Peak Elev=103.85' Storage=8.787 af Inflow=30.92 cfs 10.341 af
Outflow=1.35 cfs 1.549 af

Total Runoff Area = 170.860 ac Runoff Volume = 11.626 af Average Runoff Depth = 0.82"
64.00% Pervious = 109.350 ac 36.00% Impervious = 61.510 ac

Summary for Subcatchment 1S: Existing

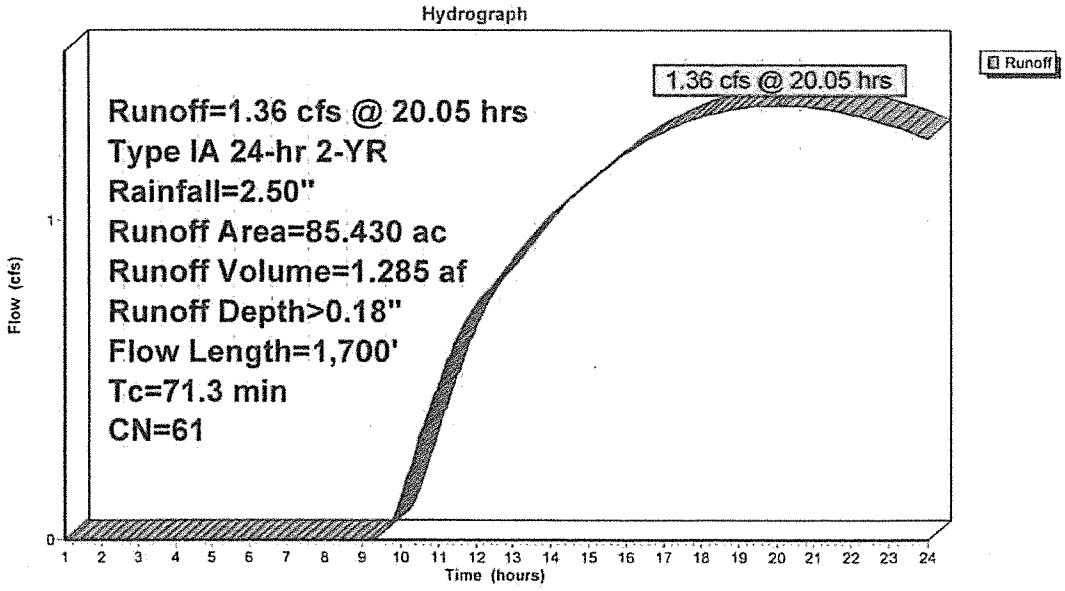
Runoff = 1.36 cfs @ 20.05 hrs, Volume= 1.285 af, Depth> 0.18"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 2-YR Rainfall=2.50"

Area (ac)	CN	Description
59.288	58	Meadow, non-grazed, HSG B
15.805	65	Woods/grass comb., Fair, HSG B
10.337	72	Woods/grass comb., Good, HSG C
85.430	61	Weighted Average
85.430		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.2	300	0.0070	0.14		**Sheet Flow, First 300'** Range n= 0.130 P2= 2.50"
35.1	1,400	0.0090	0.66		**Shallow Concentrated Flow, Remainder to Creek** Short Grass Pasture Kv= 7.0 fps
71.3	1,700	Total			

Subcatchment 1S: Existing



MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-517

Summary for Subcatchment 3S: Post Development

[49] Hint: Tc<2dt may require smaller dt

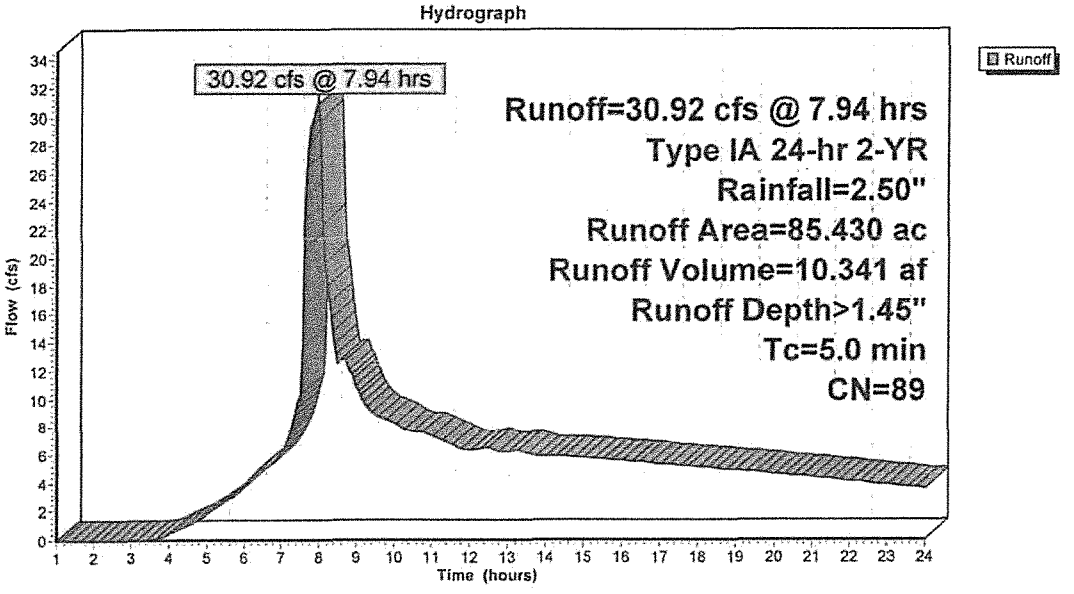
Runoff = 30.92 cfs @ 7.94 hrs, Volume= 10.341 af, Depth> 1.45"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 2-YR Rainfall=2.50"

Area (ac)	CN	Description
59.288	88	Urban industrial, 72% imp, HSG B
15.805	93	Urban industrial, 72% imp, HSG D
10.337	91	Urban industrial, 72% imp, HSG C
85.430	89	Weighted Average
23.920		28.00% Pervious Area
61.510		72.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, By Inspection**

Subcatchment 3S: Post Development



MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-518

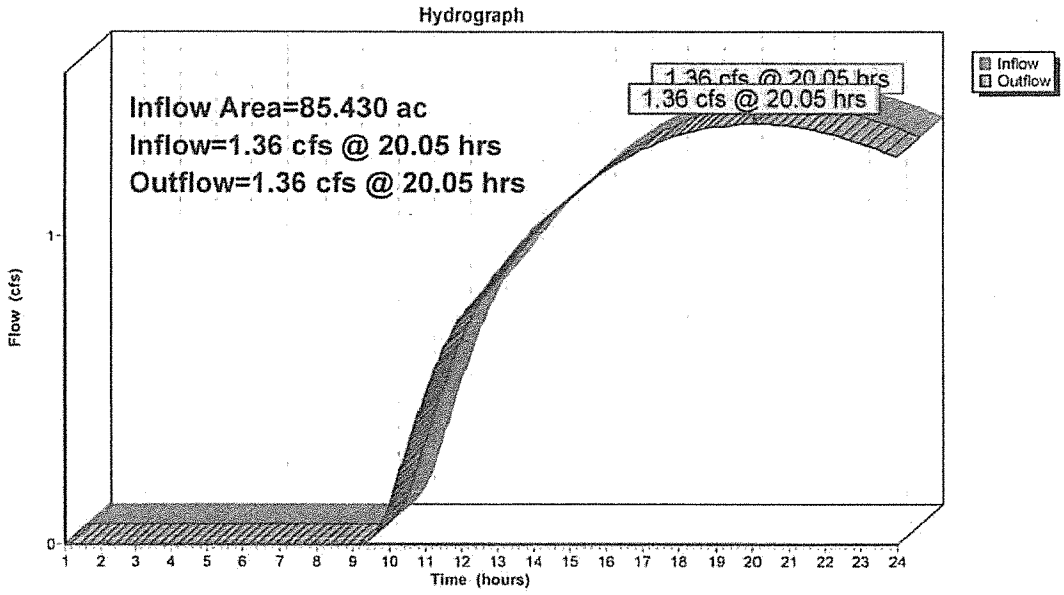
Summary for Reach 2R: Existing Storm

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area =	85.430 ac,	0.00% Impervious,	Inflow Depth >	0.18"	for 2-YR event
Inflow =	1.36 cfs @	20.05 hrs,	Volume=	1.285 af	
Outflow =	1.36 cfs @	20.05 hrs,	Volume=	1.285 af,	Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach 2R: Existing Storm



Summary for Pond 4P: Detention Storage

Inflow Area =	85.430 ac,	72.00% Impervious,	Inflow Depth >	1.45"	for 2-YR event	
Inflow =	30.92 cfs @	7.94 hrs,	Volume=	10.341 af		
Outflow =	1.35 cfs @	24.00 hrs,	Volume=	1.549 af,	Atten= 96%,	Lag= 963.8 min
Primary =	1.35 cfs @	24.00 hrs,	Volume=	1.549 af		

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 103.85' @ 24.00 hrs Surf.Area= 2.512 ac Storage= 8.787 af

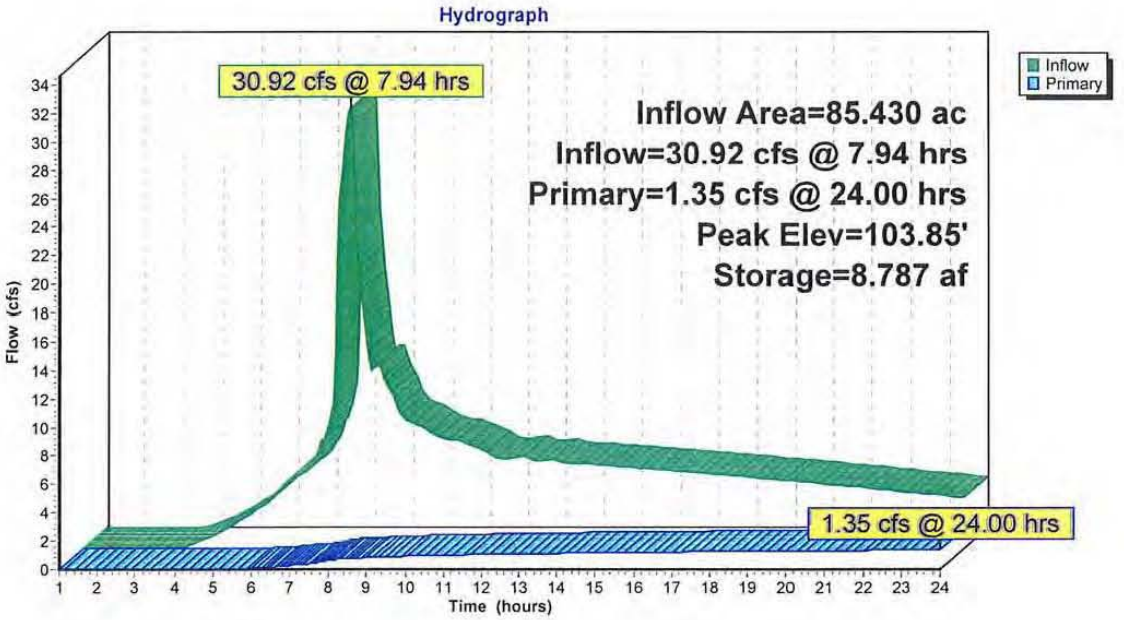
Plug-Flow detention time= 577.4 min calculated for 1.549 af (15% of inflow)
Center-of-Mass det. time= 210.9 min (984.8 - 773.9)

Volume	Invert	Avail.Storage	Storage Description
#1	100.00'	14.486 af	**300.00'W x 300.00'L x 6.00'H Prismatoid Z=4.0**

Device	Routing	Invert	Outlet Devices
#1	Primary	100.00'	**12.0" Round Culvert** L= 100.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 100.00' / 98.00' S= 0.0200 '/' Cc= 0.900 n= 0.013
#2	Device 1	100.00'	**5.2" Vert. Orifice/Grate** C= 0.600
#3	Device 1	103.85'	**5.2" Vert. Orifice/Grate** C= 0.600
#4	Device 1	104.68'	**5.5" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=1.35 cfs @ 24.00 hrs HW=103.85' (Free Discharge)
└─1=**Culvert** (Passes 1.35 cfs of 6.44 cfs potential flow)
  ├─2=**Orifice/Grate** (Orifice Controls 1.35 cfs @ 9.17 fps)
  ├─3=**Orifice/Grate** (Controls 0.00 cfs)
  └─4=**Orifice/Grate** (Controls 0.00 cfs)

Pond 4P: Detention Storage



Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Existing Runoff Area=85.430 ac 0.00% Impervious Runoff Depth>0.31"
Flow Length=1,700' Tc=71.3 min CN=61 Runoff=2.05 cfs 2.177 af

Subcatchment3S: Post Development Runoff Area=85.430 ac 72.00% Impervious Runoff Depth>1.81"
Tc=5.0 min CN=89 Runoff=39.19 cfs 12.865 af

Reach 2R: Existing Storm Inflow=2.05 cfs 2.177 af
Outflow=2.05 cfs 2.177 af

Pond 4P: Detention Storage Peak Elev=104.67' Storage=10.903 af Inflow=39.19 cfs 12.865 af
Outflow=2.05 cfs 1.958 af

Total Runoff Area = 170.860 ac Runoff Volume = 15.043 af Average Runoff Depth = 1.06"
64.00% Pervious = 109.350 ac 36.00% Impervious = 61.510 ac

Summary for Subcatchment 1S: Existing

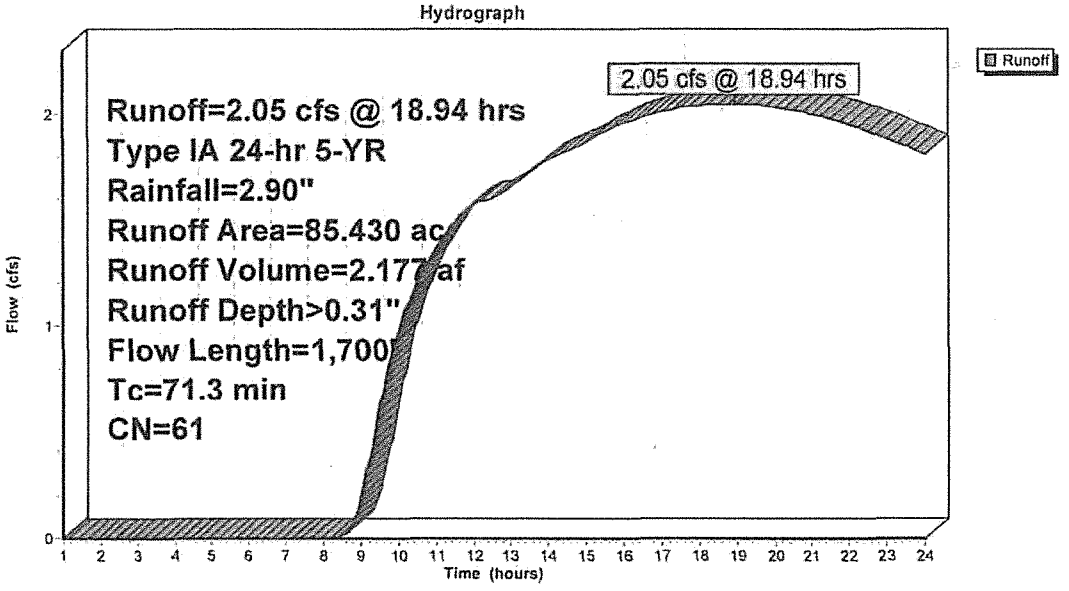
Runoff = 2.05 cfs @ 18.94 hrs, Volume= 2.177 af, Depth> 0.31"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 5-YR Rainfall=2.90"

Area (ac)	CN	Description
59.288	58	Meadow, non-grazed, HSG B
15.805	65	Woods/grass comb., Fair, HSG B
10.337	72	Woods/grass comb., Good, HSG C
85.430	61	Weighted Average
85.430		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.2	300	0.0070	0.14		**Sheet Flow, First 300'** Range n= 0.130 P2= 2.50"
35.1	1,400	0.0090	0.66		**Shallow Concentrated Flow, Remainder to Creek** Short Grass Pasture Kv= 7.0 fps
71.3	1,700	Total			

Subcatchment 1S: Existing



MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-523

Summary for Subcatchment 3S: Post Development

[49] Hint: Tc<2dt may require smaller dt

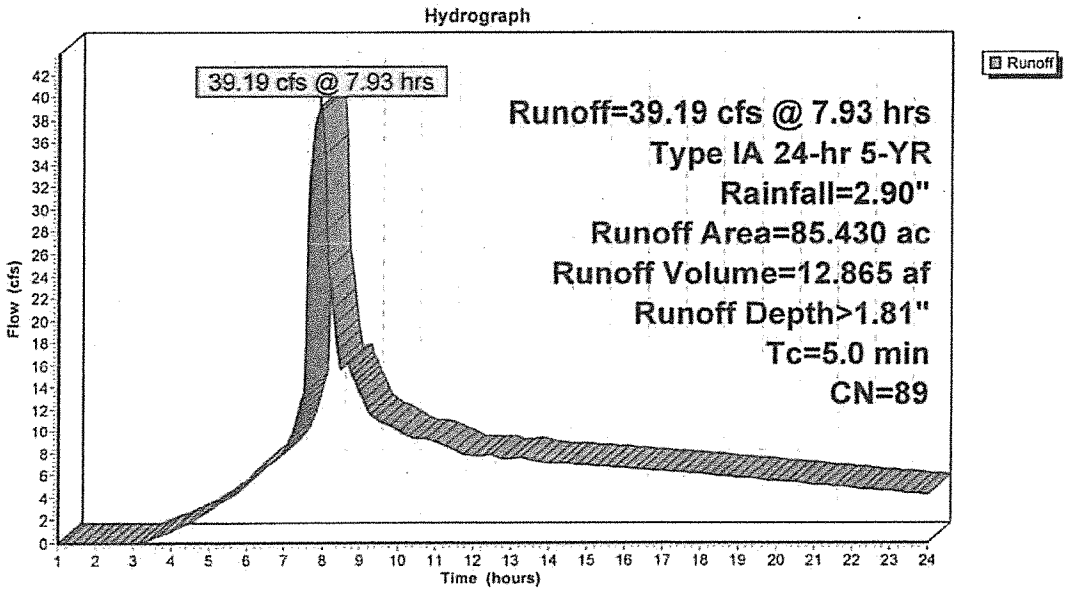
Runoff = 39.19 cfs @ 7.93 hrs, Volume= 12.865 af, Depth> 1.81"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 5-YR Rainfall=2.90"

Area (ac)	CN	Description
59.288	88	Urban industrial, 72% imp, HSG B
15.805	93	Urban industrial, 72% imp, HSG D
10.337	91	Urban industrial, 72% imp, HSG C
85.430	89	Weighted Average
23.920		28.00% Pervious Area
61.510		72.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, By Inspection**

Subcatchment 3S: Post Development



MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-524

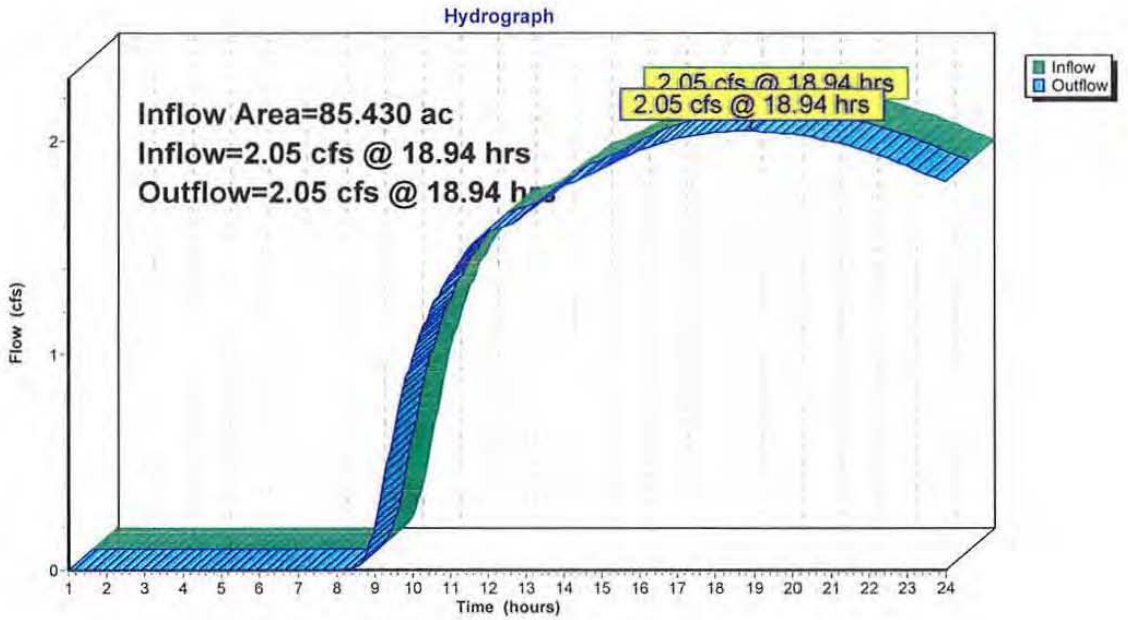
Summary for Reach 2R: Existing Storm

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area =	85.430 ac,	0.00% Impervious,	Inflow Depth >	0.31"	for 5-YR event
Inflow =	2.05 cfs @	18.94 hrs, Volume=	2.177 af		
Outflow =	2.05 cfs @	18.94 hrs, Volume=	2.177 af,	Atten= 0%,	Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach 2R: Existing Storm



Summary for Pond 4P: Detention Storage

Inflow Area =	85.430 ac, 72.00% Impervious, Inflow Depth > 1.81" for 5-YR event				
Inflow =	39.19 cfs @	7.93 hrs, Volume=	12.865 af		
Outflow =	2.05 cfs @	24.00 hrs, Volume=	1.958 af, Atten= 95%, Lag= 964.4 min		
Primary =	2.05 cfs @	24.00 hrs, Volume=	1.958 af		

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 104.67' @ 24.00 hrs Surf.Area= 2.613 ac Storage= 10.903 af

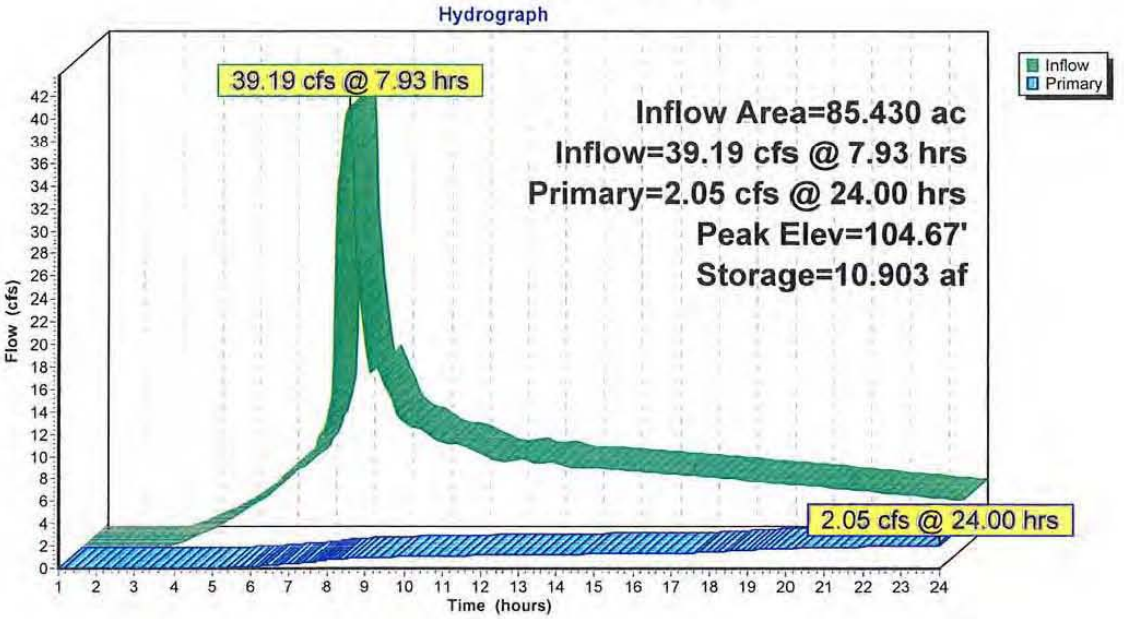
Plug-Flow detention time= 612.0 min calculated for 1.958 af (15% of inflow)
Center-of-Mass det. time= 245.2 min (1,006.5 - 761.3)

Volume	Invert	Avail.Storage	Storage Description
#1	100.00'	14.486 af	**300.00'W x 300.00'L x 6.00'H Prismatoid Z=4.0**

Device	Routing	Invert	Outlet Devices
#1	Primary	100.00'	**12.0" Round Culvert** L= 100.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 100.00' / 98.00' S= 0.0200 '/' Cc= 0.900 n= 0.013
#2	Device 1	100.00'	**5.2" Vert. Orifice/Grate** C= 0.600
#3	Device 1	103.85'	**5.2" Vert. Orifice/Grate** C= 0.600
#4	Device 1	104.68'	**5.5" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=2.05 cfs @ 24.00 hrs HW=104.67' (Free Discharge)
└─**1=Culvert** (Passes 2.05 cfs of 6.97 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 1.50 cfs @ 10.16 fps)
  ├─**3=Orifice/Grate** (Orifice Controls 0.55 cfs @ 3.74 fps)
  └─**4=Orifice/Grate** (Controls 0.00 cfs)

Pond 4P: Detention Storage



Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Existing Runoff Area=85.430 ac 0.00% Impervious Runoff Depth>0.58"
Flow Length=1,700' Tc=71.3 min CN=61 Runoff=3.46 cfs 4.153 af

Subcatchment3S: Post Development Runoff Area=85.430 ac 72.00% Impervious Runoff Depth>2.45"
Tc=5.0 min CN=89 Runoff=54.06 cfs 17.417 af

Reach 2R: Existing Storm Inflow=3.46 cfs 4.153 af
Outflow=3.46 cfs 4.153 af

Pond 4P: Detention Storage Peak Elev=105.91' Storage=14.226 af Inflow=54.06 cfs 17.417 af
Outflow=3.45 cfs 3.187 af

Total Runoff Area = 170.860 ac Runoff Volume = 21.569 af Average Runoff Depth = 1.51"
64.00% Pervious = 109.350 ac 36.00% Impervious = 61.510 ac

Summary for Subcatchment 1S: Existing

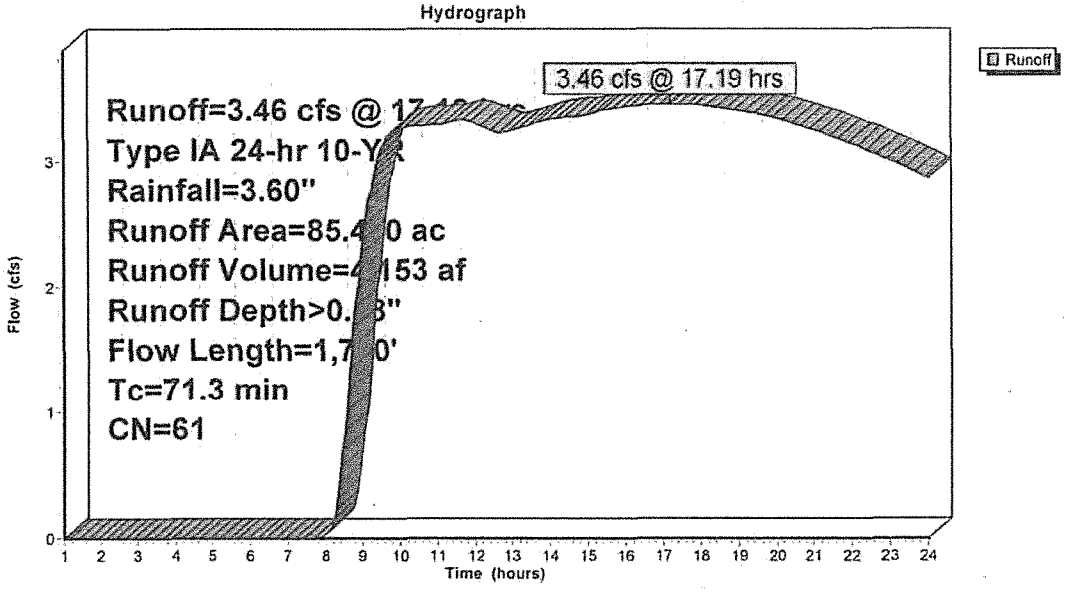
Runoff = 3.46 cfs @ 17.19 hrs, Volume= 4.153 af, Depth> 0.58"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10-YR Rainfall=3.60"

Area (ac)	CN	Description
59.288	58	Meadow, non-grazed, HSG B
15.805	65	Woods/grass comb., Fair, HSG B
10.337	72	Woods/grass comb., Good, HSG C
85.430	61	Weighted Average
85.430		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.2	300	0.0070	0.14		**Sheet Flow, First 300'** Range n= 0.130 P2= 2.50"
35.1	1,400	0.0090	0.66		**Shallow Concentrated Flow, Remainder to Creek** Short Grass Pasture Kv= 7.0 fps
71.3	1,700	Total			

Subcatchment 1S: Existing



MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-529

Summary for Subcatchment 3S: Post Development

[49] Hint: Tc<2dt may require smaller dt

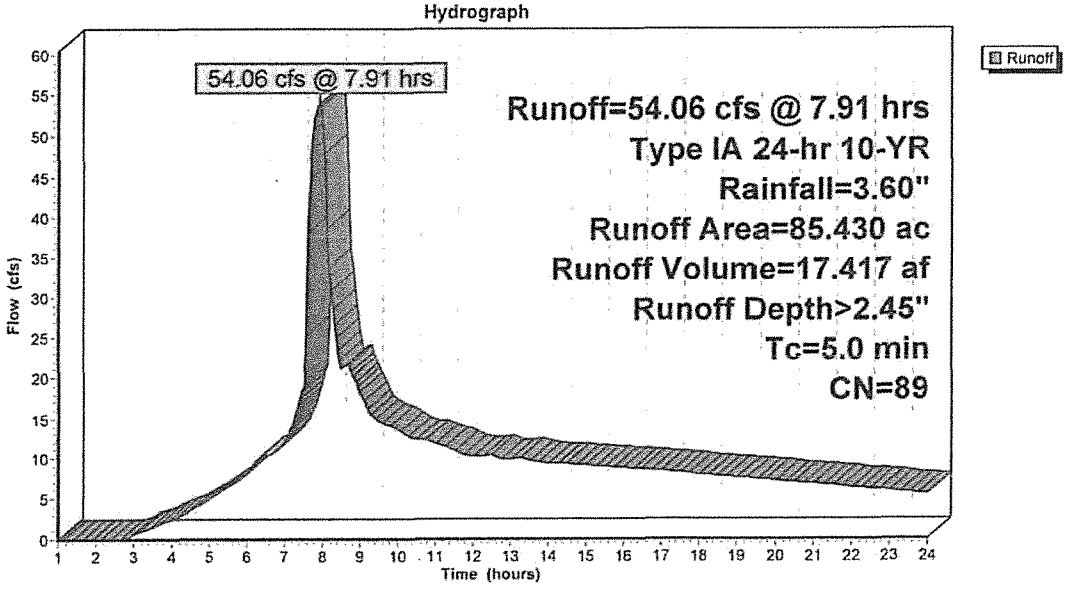
Runoff = 54.06 cfs @ 7.91 hrs, Volume= 17.417 af, Depth> 2.45"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 10-YR Rainfall=3.60"

Area (ac)	CN	Description
59.288	88	Urban industrial, 72% imp, HSG B
15.805	93	Urban industrial, 72% imp, HSG D
10.337	91	Urban industrial, 72% imp, HSG C
85.430	89	Weighted Average
23.920		28.00% Pervious Area
61.510		72.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, By Inspection

Subcatchment 3S: Post Development



MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-530

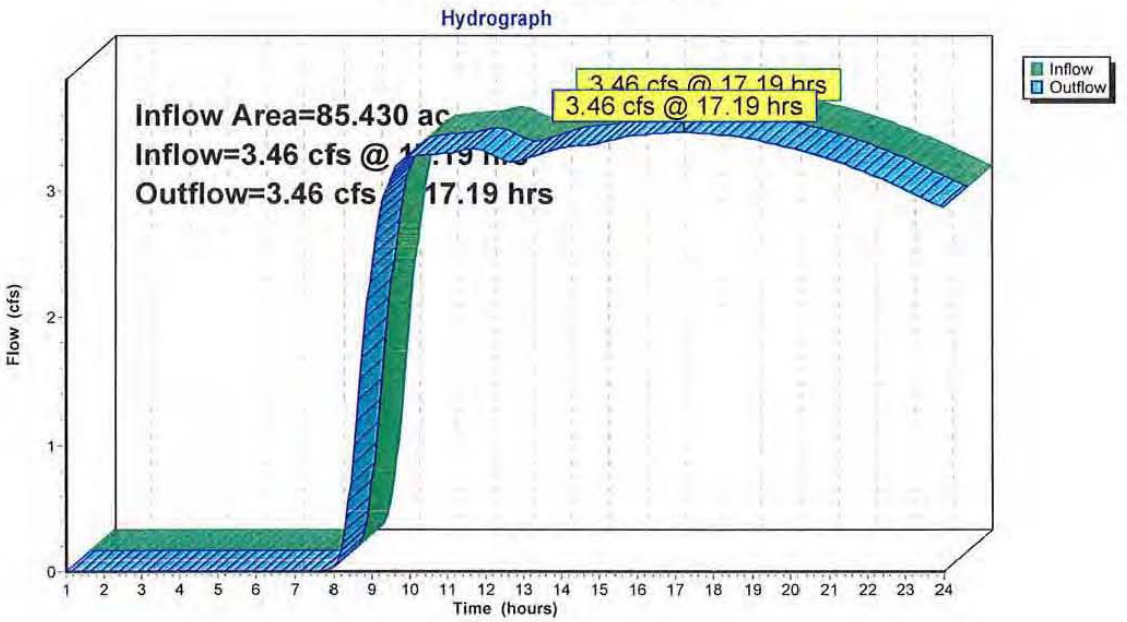
Summary for Reach 2R: Existing Storm

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area =	85.430 ac,	0.00% Impervious,	Inflow Depth >	0.58"	for 10-YR event
Inflow =	3.46 cfs @	17.19 hrs, Volume=	4.153 af		
Outflow =	3.46 cfs @	17.19 hrs, Volume=	4.153 af,	Atten= 0%,	Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach 2R: Existing Storm



MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-531

Summary for Pond 4P: Detention Storage

Inflow Area =	85.430 ac, 72.00% Impervious, Inflow Depth > 2.45" for 10-YR event				
Inflow =	54.06 cfs @	7.91 hrs, Volume=	17.417 af		
Outflow =	3.45 cfs @	24.00 hrs, Volume=	3.187 af, Atten= 94%, Lag= 965.3 min		
Primary =	3.45 cfs @	24.00 hrs, Volume=	3.187 af		

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 105.91' @ 24.00 hrs Surf.Area= 2.768 ac Storage= 14.226 af

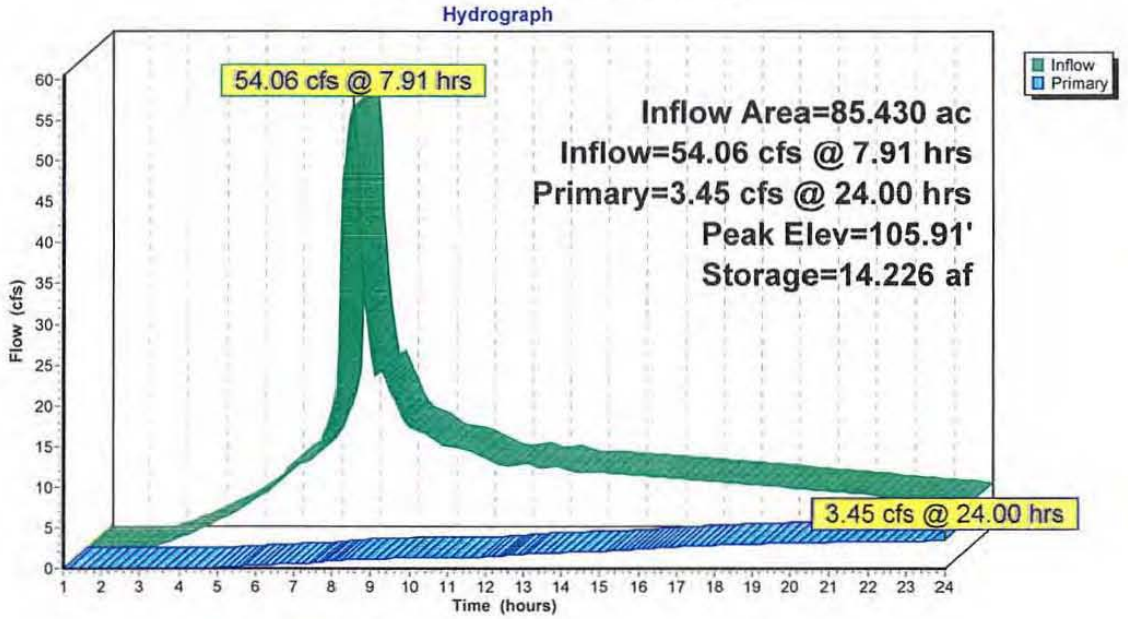
Plug-Flow detention time= 646.2 min calculated for 3.180 af (18% of inflow)
Center-of-Mass det. time= 290.6 min (1,035.2 - 744.6)

Volume	Invert	Avail.Storage	Storage Description
#1	100.00'	14.486 af	**300.00'W x 300.00'L x 6.00'H Prismatoid Z=4.0**

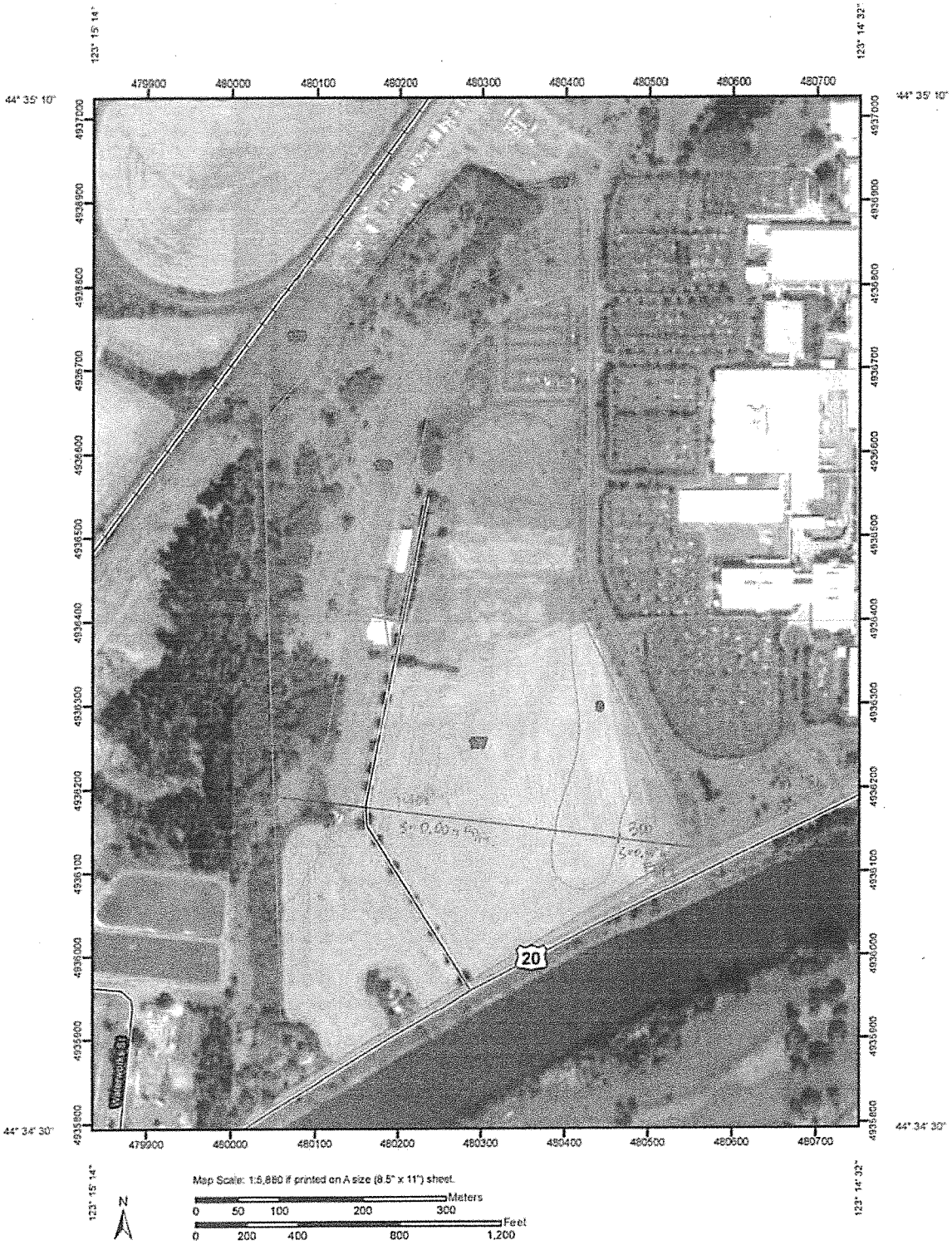
Device	Routing	Invert	Outlet Devices
#1	Primary	100.00'	**12.0" Round Culvert** L= 100.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 100.00' / 98.00' S= 0.0200 '/' Cc= 0.900 n= 0.013
#2	Device 1	100.00'	**5.2" Vert. Orifice/Grate** C= 0.600
#3	Device 1	103.85'	**5.2" Vert. Orifice/Grate** C= 0.600
#4	Device 1	104.68'	**5.5" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=3.45 cfs @ 24.00 hrs HW=105.91' (Free Discharge)
└─**1=Culvert** (Passes 3.45 cfs of 7.69 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 1.69 cfs @ 11.49 fps)
  ├─**3=Orifice/Grate** (Orifice Controls 0.96 cfs @ 6.53 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.79 cfs @ 4.81 fps)

Pond 4P: Detention Storage



Soil Map—Benton County, Oregon



MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-534

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features
- Gully
- Short Steep Slope
- Other

Political Features
- Cities

Water Features
- Oceans
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

MAP INFORMATION

Map Scale: 1:5,880 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 10N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Benton County, Oregon
Survey Area Data: Version 9, Feb 5, 2010

Date(s) aerial images were photographed: 7/18/2005; 8/4/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

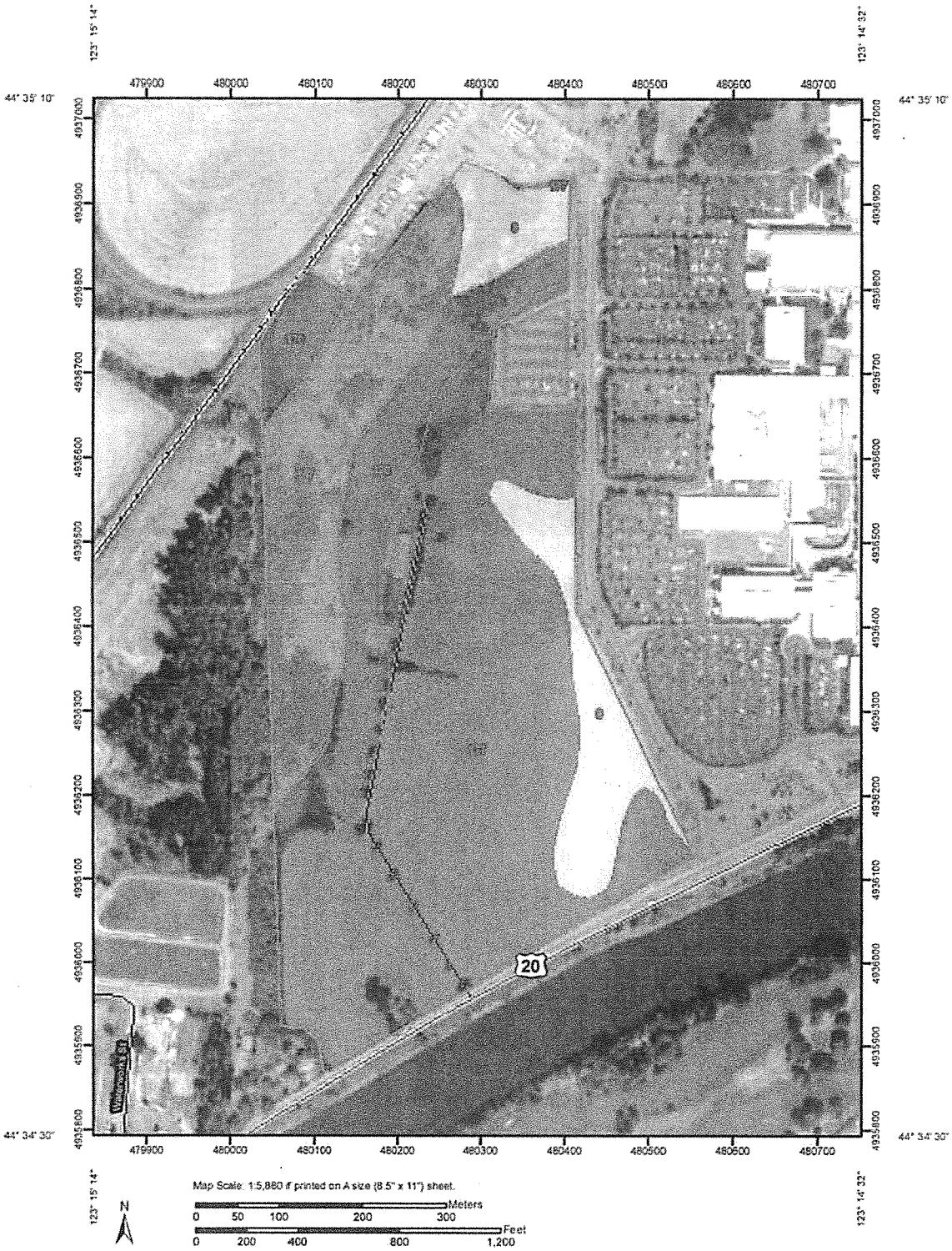
MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-535

Map Unit Legend

Benton County, Oregon (OR003)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
8	Amity silt loam, 0 to 3 percent slopes	10.5	12.1%
157	Wapato silty clay loam, 0 to 3 percent slopes	16.1	18.5%
170	Willamette silt loam, 3 to 12 percent slopes	14.3	16.5%
177	Woodburn silt loam, 0 to 3 percent slopes	46.0	52.9%
Totals for Area of Interest		**86.9**	**100.0%**

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-536

Hydrologic Soil Group—Benton County, Oregon



MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-537

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Units

Soil Ratings

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Political Features

Cities

Water Features

Oceans

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

MAP INFORMATION

Map Scale: 1:5,880 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 10N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Benton County, Oregon
Survey Area Data: Version 9, Feb 5, 2010

Date(s) aerial images were photographed: 7/18/2005; 8/4/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Benton County, Oregon				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
8	Amity silt loam, 0 to 3 percent slopes	C	10.5	12.1%
157	Wapato silty clay loam, 0 to 3 percent slopes	D	16.1	18.5%
170	Willamette silt loam, 3 to 12 percent slopes	B	14.3	16.5%
177	Woodburn silt loam, 0 to 3 percent slopes	B	46.0	52.9%
Totals for Area of Interest			**86.9**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

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Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: *None Specified*

Tie-break Rule: Lower

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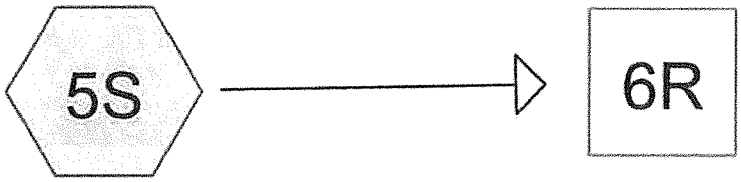
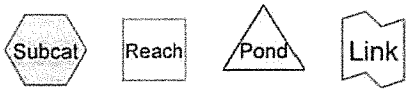
WATER QUALITY & FLOOD MITIGATION



Pollution Generating Impervious Surface

Biofiltration Swale



Drainage Diagram for 09-414_Stormwater Calculations
Prepared by Steven C. P. Hattori, P.E., Devco Engineering, Inc., Printed 05/05/2011
HydroCAD® 9.10 s/n 03944 © 2009 HydroCAD Software Solutions LLC

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
45.000	98	Pollution Generating Impervious Surface (5S)
45.000		TOTAL AREA

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
45.000	Other	5S
45.000		**TOTAL AREA**

Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 5S: Pollution Generating Runoff Area=45.000 ac 100.00% Impervious Runoff Depth>0.69"
Tc=5.0 min CN=98 Runoff=8.20 cfs 2.600 af

Reach 6R: Biofiltration Swale Avg. Flow Depth=0.33' Max Vel=0.49 fps Inflow=8.20 cfs 2.600 af
n=0.200 L=275.0' S=0.0200 '/' Capacity=51.85 cfs Outflow=7.97 cfs 2.566 af

Total Runoff Area = 45.000 ac Runoff Volume = 2.600 af Average Runoff Depth = 0.69"
0.00% Pervious = 0.000 ac 100.00% Impervious = 45.000 ac

Summary for Subcatchment 5S: Pollution Generating Impervious Surface

[49] Hint: Tc<2dt may require smaller dt

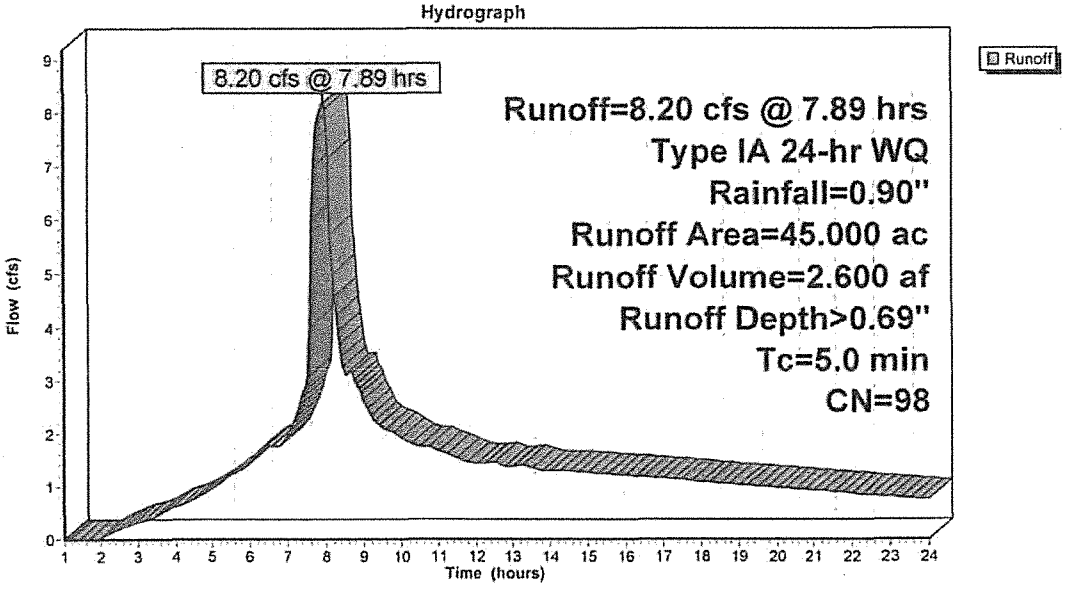
Runoff = 8.20 cfs @ 7.89 hrs, Volume= 2.600 af, Depth> 0.69"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr WQ Rainfall=0.90"

	Area (ac)	CN	Description
*	45.000	98	Pollution Generating Impervious Surface
	45.000		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, By Inspection

Subcatchment 5S: Pollution Generating Impervious Surface



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Summary for Reach 6R: Biofiltration Swale

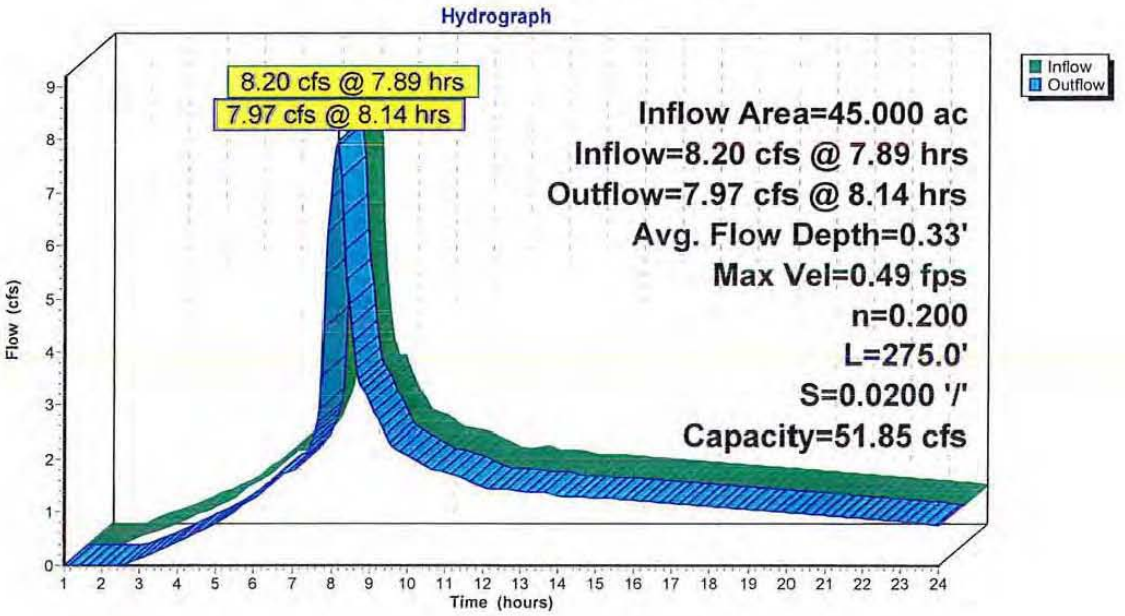
Inflow Area = 45.000 ac,100.00% Impervious, Inflow Depth > 0.69" for WQ event
Inflow = 8.20 cfs @ 7.89 hrs, Volume= 2.600 af
Outflow = 7.97 cfs @ 8.14 hrs, Volume= 2.566 af, Atten= 3%, Lag= 15.1 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.49 fps, Min. Travel Time= 9.3 min
Avg. Velocity = 0.23 fps, Avg. Travel Time= 19.6 min

Peak Storage= 4,463 cf @ 7.99 hrs
Average Depth at Peak Storage= 0.33'
Bank-Full Depth= 1.00', Capacity at Bank-Full= 51.85 cfs

48.00' x 1.00' deep channel, n= 0.200
Side Slope Z-value= 4.0 '/' Top Width= 56.00'
Length= 275.0' Slope= 0.0200 '/'
Inlet Invert= 100.00', Outlet Invert= 94.50'

Reach 6R: Biofiltration Swale



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6.3 BIOFILTRATION FACILITY DESIGNS

This section presents the methods, details of analysis, and design criteria for biofiltration swales and filter strips. Included in this section are the following specific facility designs:

- "Basic Biofiltration Swales," Section 6.3.1
- "Wet Biofiltration Swales," Section 6.3.2 (p. 6-55)
- "Continuous Inflow Biofiltration Swales," Section 6.3.3 (p. 6-58)
- "Basic Filter Strips," Section 6.3.4 (p. 6-59)
- "Narrow Area Filter Strips," Section 6.3.5 (p. 6-66).

The information presented for each facility is organized into the following two categories:

1. **Methods of Analysis:** Contains a step-by-step procedure for designing and sizing each facility.
2. **Design Criteria:** Contains the details, specifications, and material requirements for each facility.

6.3.1 BASIC BIOFILTRATION SWALES

A *biofiltration swale* is an open, gently sloped, vegetated channel designed for treatment of stormwater (see the details in Figure 6.3.1.A through Figure 6.3.1.E beginning on page 6-52). The primary pollutant removal mechanisms are filtration by grass blades which enhance sedimentation, and trapping and adhesion of pollutants to the grass and thatch. Biofiltration swales generally do not remove dissolved pollutants effectively.

Applications and Limitations

A biofiltration swale is designed so that water will flow evenly across the entire width of a densely-vegetated area. A swale may be designed for both treatment and conveyance of onsite stormwater flow. This combined use can reduce development costs by eliminating the need for separate conveyance systems.

Biofiltration swales are best applied on a relatively small scale (generally less than 5 acres of impervious surface). They work well along roadways, driveways, and parking lots. Swales are more costly to apply in situations where the swale channel would be deep; in deep swales, self-shading can inhibit the necessary grass growth, resulting in poor pollutant removal performance. Some specific considerations for biofiltration swale applications are as follows:

- A biofiltration swale **shall not be located in a shaded area**. For healthy grass growth, a swale should receive a minimum of 6 hours of sunlight daily during the summer months throughout the length of the swale.
- To maintain healthy grass growth, a **swale must dry between storms**. It shall not receive continuous base flows (such as seepage from a hill slope throughout the winter) or be located in a high groundwater area, because saturated soil conditions will kill grass. If these conditions are likely to occur, design options given under "Design Criteria" (p. 6-43) shall be used, or the wet biofiltration swale design may be used (see Section 6.3.2, p. 6-55, for details).
- Stormwater runoff carrying **high concentrations of oil and grease** impairs the treatment capability of a swale. Oil control options given in Section 6.6 (p. 6-139) should be applied in these situations.
- **Modifying an existing drainage ditch** to create an engineered biofiltration swale may be difficult due to physical constraints and because ditches often serve as conveyance for flows from larger offsite areas.

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- **Utilities** may be located in swale side slopes above the WQ design depth. However, the repair or placement of utilities in swale side slopes requires aggressive implementation of erosion control practices to prevent soil and sediment from reaching the treatment area of the swale.

Note: Consult the water quality menus in Section 6.1 (p. 6-3) for information on how this facility may be used to meet Core Requirement # 8. Also see Table 6.1.1.A on page 6-6 for guidance on which type of biofiltration swale (basic, wet or continuous inflow) to use for a given set of site characteristics.

6.3.1.1 METHODS OF ANALYSIS

Biofiltration swale sizing is based on several variables, including the peak water quality design flow, longitudinal slope, vegetation height, bottom width, side slope, required hydraulic residence time (i.e., the time required for flow to travel the full length of the swale), and design flow depth. Swales sized and built using the method of analysis outlined in this section and the required design criteria presented in Section 6.3.1.2 are expected to meet the Basic Water Quality menu goal of 80% TSS removal. Procedures for sizing swales are summarized below.

Step 1: Calculate design flows. The swale design is based on the water quality design flow Q_{wq} (see Section 6.2.1, p. 6-17, for a definition of water quality design flow). If a biofilter is used for conveyance, the capacity requirements of Core Requirement #4 must be met. These flows must be estimated using the hydrologic analysis procedures described in detail in Chapter 3. If the swale is located downstream of an onsite detention facility, the swale design flow shall be the 2-year release rate from the detention facility.

Step 2: Calculate swale bottom width. The swale bottom width is calculated based on Manning's equation for open-channel flow. This equation can be used to calculate discharges as follows:

$$Q = \frac{1.49}{n} A R^{0.67} s^{0.5} \qquad (6\text{-}1)$$

where
Q = flow rate (cfs)
n = Manning's roughness coefficient (unitless)
A = cross-sectional area of flow (sf)
R = hydraulic radius (ft) = area divided by wetted perimeter
s = longitudinal slope (ft/ft)

For shallow flow depths in swales, channel side slopes are ignored in the calculation of bottom width. Use the following equation (a simplified form of Manning's formula) to estimate the swale bottom width:

$$b = \frac{Q_{wq} n_{wq}}{1.49 y^{1.67} s^{0.5}} \qquad (6\text{-}2)$$

where
b = bottom width of swale (ft)
Q_{wq} = water quality design flow (cfs)
n_{wq} = Manning's roughness coefficient for shallow flow conditions = 0.20 (unitless)
y = design flow depth (ft)
s = longitudinal slope (along direction of flow) (ft/ft)

See "Water Depth and Base Flow" (p. 6-44) to determine the allowable design water depth. Proceed to Step 3 if the bottom width is calculated to be between 2 and 10 feet.

A minimum 2-foot bottom width is required. Therefore, if the calculated bottom width is less than 2 feet, increase the width to 2 feet and recalculate the design flow depth y using Equation (6-3) as follows:

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$$y = \left(\frac{Q_{wq} n_{wq}}{1.49 s^{0.5} b} \right)^{0.6} \tag{6-3}$$

where Q_{wq}, n_{wq}, and s are the same values as used in Equation (6-2), but $b = 2$ feet.

The maximum bottom width is 10 feet; therefore if the calculated bottom width exceeds 10 feet, then one of the following steps is necessary to reduce the design bottom width:

- Increase the longitudinal slope s to a maximum of 6 feet in 100 feet (0.06 feet per foot).
- Increase the design flow depth y to a maximum of 4 inches (0.333 feet).
- Reduce the design flow rate by rearranging the swale location with respect to detention facilities; a swale located downstream of a detention facility may have a lower flow rate due to flow attenuation in the detention facility. However, if a swale is located downstream of a detention facility providing Level 2 or Level 3 flow control, and it is located in till soils (according to the KCRTS soil group in Chapter 3), then the swale must be designed as a wet biofiltration swale (see Section 6.3.2, p. 6-55).
- Place a divider lengthwise along the swale bottom (cross section) at least three-quarters of the swale length (beginning at the inlet), without compromising the design flow depth and swale lateral slope requirements. See "Design Criteria" (p. 6-43) for swale divider requirements. A flow spreader must be provided at the inlet to evenly divide flows into each half of the swale cross section. See Section 6.2.6 (p. 6-33) for details on flow spreaders.

Step 3: Determine design flow velocity. To calculate the design flow velocity through the swale, use the flow continuity equation:

$$V_{wq} = \frac{Q_{wq}}{A_{wq}} \tag{6-4}$$

where V_{wq} = design flow velocity (fps)
A_{wq} = $by + Zy^2$ = cross-sectional area (sf) of flow at design depth
Z = side slope length per unit height (e.g., $Z = 3$ if side slopes are 3H:1V)

If the design flow velocity exceeds 1 foot per second, go back to Step 2 and modify one or more of the design parameters (longitudinal slope, bottom width, or flow depth) to reduce the design flow velocity to 1 foot per second or less. If the design flow velocity is calculated to be less than 1 foot per second, proceed to Step 4. *Note: It is desirable to have the design velocity as low as possible, both to improve treatment effectiveness and to reduce swale length requirements.*

Step 4: Calculate swale length. Use the following equation to determine the necessary swale length to achieve a hydraulic residence time of at least 9 minutes (540 seconds):

$$L = 540 V_{wq} \tag{6-5}$$

where L = minimum allowable swale length (ft)
V_{wq} = design flow velocity (fps)

The minimum swale length is 100 feet; therefore, if the swale length is calculated to be less than 100 feet, increase the length to a minimum of 100 feet, leaving the bottom width unchanged. If a larger swale could be fitted on the ***site***, consider using a greater length to increase the hydraulic residence time and improve the swale's pollutant removal capability. If the calculated length is too long for the ***site***, or if it

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would cause layout problems, such as encroachment into shaded areas, proceed to Step 5 to further modify the layout. If the swale length can be accommodated on the *site*, proceed to Step 6.

Step 5: Adjust swale layout to fit on site. If the swale length calculated in Step 4 is too long for the *site*, the length may be reduced (to a minimum of 100 feet) by increasing the bottom width up to a maximum of 16 feet, **as long as the 9 minute retention time is retained.** However, the length cannot be increased in order to reduce the bottom width because Manning's depth-velocity-flow rate relationships would not be preserved. If the bottom width is increased to greater than 10 feet, a low dividing berm is needed to split the swale cross section in half.

Length can be adjusted by finding the top area of the swale and providing an equivalent top area with the adjusted dimensions.

a) Calculate the swale treatment top area based on the swale length calculated in Step 4:

$$A_{top} = (b_i + b_{slope})\, L_i \qquad (6\text{-}6)$$

where A_{top} = top area (sf) at the design treatment depth
b_i = bottom width (ft) calculated in Step 2
b_{slope} = the additional top width (ft) above the side slope for the design water depth (for 3:1 side slopes and a 4-inch water depth, b_{slope} = 2 feet)
L_i = initial length (ft) calculated in Step 4.

b) Use the swale top area and a reduced swale length L_f to increase the bottom width, using the following equation:

$$L_f = \frac{A_{top}}{(b_f + b_{slope})} \qquad (6\text{-}7)$$

where L_f = reduced swale length (ft)
b_f = increased bottom width (ft).

c) Recalculate V_{wq} according to Step 3 using the revised cross-sectional area A_{wq} based on the increased bottom width b_f. Revise the design as necessary if the design flow velocity exceeds 1 foot per second.

d) Recalculate to assure that the 9 minute retention time is retained.

Step 6: Provide conveyance capacity for flows higher than Q_{wq}. Biofiltration swales may be designed as flow-through channels that convey flows higher than the water quality design flow rate, or they may be designed to incorporate a high-flow bypass upstream of the swale inlet. A high-flow bypass usually results in a smaller swale size (see flow splitter options, page 6-29, for more information on designing bypasses). If a high-flow bypass is provided, this step is not needed. If no high-flow bypass is provided, proceed with the procedure below.

a) Check the swale sized using Steps 2 through 5 above to determine whether the swale can convey the 25-year and 100-year peak flows consistent with the conveyance requirements of Core Requirement #4 in Chapter 1. The roughness coefficient n in Manning's equation shall be selected to reflect the deeper flow conditions with less resistance provided by grass during these high-flow events. The bottom width (Step 2) should be calculated as per Section 4.4.1.2, "Methods of Analysis" for open channels.

b) The 100-year peak flow velocity ($V_{100} = Q_{100}/A_{100}$) based on the 100-year flow depth must be less than 3.0 feet per second. If V_{100} exceeds 3.0 feet per second, return to Step 2 and increase the bottom width or flatten the longitudinal slope as necessary to reduce the 100-year peak flow velocity to 3.0 feet per second or less. If the longitudinal slope is flattened, the swale bottom width must be recalculated (Step 2) and meet all design criteria.

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c) The conveyance requirements in Core Requirement #4 (see Section 1.2.4) must be met.

6.3.1.2 DESIGN CRITERIA

An effective biofiltration swale achieves uniform sheet flow over and through a densely vegetated area for a period of several minutes. Figure 6.3.1.A (p. 6-52) shows a typical biofiltration swale schematic. Basic design requirements for achieving proper flow conditions through a biofiltration swale are described below.

Swale Geometry

1. Swale **bottom width** shall be between 2 and 16 feet.[14]
   a) **Minimum bottom width** is 2 feet to allow for ease of mowing.
   b) If the bottom width exceeds 10 feet, a length-wise divider shall be provided. The divider shall extend from the flow spreader at the inlet for at least three-quarters of the swale length.
   c) **Maximum bottom width** is 16 feet, excluding the width of the divider.

   Note: Multiple swales may be placed side by side provided the flow to each swale is split at the inlet and spread separately for each swale. Adjacent swales may be separated with a vertical wall, but a low berm is preferred for easier maintenance and better landscape integration.
2. The **longitudinal slope** (along the direction of flow) shall be between 1 percent and 6 percent.
   a) If the longitudinal slope is less than 1.5 percent, **underdrains** must be provided (see next page and Figure 6.3.1.C, p. 6-53, for underdrain specifications).
   b) If the longitudinal slope is less than 1 percent, the swale must be designed according to the criteria presented in Section 6.3.2 (p. 6-55) for **wet biofiltration swales**.
   c) If the longitudinal slope exceeds 6 percent, **check dams** with vertical drops of 12 inches or less shall be provided to achieve a bottom slope of 6 percent or less between the drop sections.
3. The swale shall be **flat** in cross section (perpendicular to the flow direction) to promote even flow across the whole width of the swale.
4. The **minimum swale length** shall be 100 feet; no maximum length is set.
5. The **swale treatment area** (below the WQ design water depth) shall be trapezoidal in cross-section. If trapezoidal, **side slopes within the treatment area** should be 3H:1V or flatter whenever possible, but shall not steeper than 2H:1V.
6. **Side slope sections above the treatment area** may be steeper than 3H:1V, subject to the following provisions:
   a) If there is an interior side slope between 1H:1V and 2H:1V outside the treatment area, the slope shall be reinforced with **erosion control netting or matting** during construction.
   b) Any interior slope steeper than 1H:1V shall be constructed as a **rockery or structural retaining wall**[15] to prevent the swale slope from sloughing. To ensure that adequate sunlight reaches the swale bottom, **only one wall can be taller than 2 feet.** If possible, the higher wall should be on the northern or eastern side of the swale to maximize the amount of light reaching the swale bottom.

[14] Experience with biofiltration swales shows that when the width exceeds about 10 feet it is difficult to keep the water from forming low-flow channels. It is also difficult to construct the bottom level and without sloping to one side. Biofilters are best constructed by leveling the bottom after excavating, and after the soil is amended. A single-width pass with a front-end loader produces a better result than a multiple-width pass.

[15] Soil bioengineering techniques may be used as an alternative to a rockery or structural retaining wall.

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7. **Curved swales** are encouraged for aesthetic reasons, but curves must be gentle to prevent erosion and allow for vehicle access to remove sediment. Criteria for maintenance access road curves shall also be applied for swale curves (see Section 5.3.1.1 for design of access roads).

Water Depth and Base Flow

1. A swale that will be **frequently mowed**, as in commercial or landscaped areas, shall have a **design water depth** of no more than 2 inches (0.17 feet) under the water quality design flow conditions.
2. A swale that will **not be frequently mowed**, such as along roadsides or in rural areas, shall have a **design water depth** of no more than 4 inches (0.33 feet) under the water quality design flow conditions.
3. If a swale is located **downstream of a detention facility providing Level 2 or Level 3 flow control**, and it is located in till soils (according to the KCRTS soil group in Chapter 3), then the swale must be designed as a **wet biofiltration swale** (see Section 6.3.2, p. 6-55).
4. If a swale will receive **base flows** because of seeps and springs onsite, then either a low-flow drain shall be provided or a wet biofiltration swale shall be used. *Low-flow drains* are narrow surface drains filled with pea gravel that run lengthwise through the swale to bleed off base flows; they should not be confused with underdrains. In general, base flows less than 0.01 cfs per acre can be handled with a low-flow drain. If flows are likely to be in excess of this level, a wet biofiltration swale shall be used.
5. If a **low-flow drain** is used, it shall extend the entire length of the swale. The drain shall be a minimum of 6 inches deep, and its width shall be no greater than 5 percent of the calculated swale bottom width; the width of the drain shall be in addition to the required bottom width. If an anchored plate or concrete sump is used for flow spreading at the swale inlet, the plate or sump wall shall have a v-notch (maximum top width = 5% of swale width) or holes to allow preferential exit of low flows into the drain. See Figure 6.3.1.D (p. 6-54) for low-flow drain specifications and details.

Flow Velocity, Energy Dissipation, and Flow Spreading

1. The **maximum flow velocity** through the swale under the water quality design flow conditions shall not exceed 1.0 foot per second.
2. The **maximum flow velocity** through the swale under the peak 100-year flow conditions shall not exceed 3.0 feet per second.
3. A **flow spreader** shall be used at the inlet of a swale to dissipate energy and evenly spread runoff as sheet flow over the swale bottom. Flow spreaders are recommended but not required at mid-length. For details on various types of flow spreaders, see Section 6.2.6 (p. 6-33).
4. If **check dams** are used to reduce the longitudinal slope of the swale, a **flow spreader** shall be provided at the toe of each vertical drop. The spreader must span the width of the swale. An **energy dissipater** shall also be provided if flows leaving the spreader could be erosive.
5. If a swale **discharges flows to a slope** rather than to a piped system or confined channel, an **energy dissipater** shall be provided at the swale outlet. This requirement also applies to discharges from swale underdrains. The outlet energy dissipater may be a riprap pad sized according to the specifications described in Table 4.2.2.A for conveyance system outfalls.

Underdrains

If underdrains are required by Criterion 2 under "Swale Geometry" (p. 6-43), they must meet the following criteria:

1. Underdrains must be made of **PVC perforated pipe** (SDR 35), laid parallel to the swale bottom and backfilled and bedded as shown in Figure 6.3.1.C (p. 6-53).

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2. For facilities to be maintained by the County, the underdrain pipe must be 6 inches or greater in **diameter**. (Six inches is the smallest diameter pipe that can be cleaned without damage to the pipe.)
3. Six inches of clean **drain rock** ($^3/_8$-inch minus) must be above the top of the pipe.
4. The drain rock must be wrapped in **geotextile**. Geotextile requirements are summarized in Table 6.3.1.A below.
5. The underdrain **must infiltrate** into the subsurface **or drain freely** to an acceptable discharge point.

TABLE 6.3.1.A GEOTEXTILE MATERIAL MINIMUM REQUIREMENTS

Geotextile Property	Value	Test Method
Grab Tensile Strength, min in machine and x-direction	250 lbs/160 lbs min.	ASTM D4632
Grab Failure Strain, in machine and x-machine direction	<50%/>50%	ASTM D4632
Seam Breaking Strength (if seams are present)	220 lbs/140 lbs min.	ASTM D4632 and ASTM D4884 (adapted for grab test)
Puncture Resistance	80 lbs/50 lbs min.	ASTM D4833
Tear Strength, min. in machine and x-machine direction	80 lbs/50 lbs min.	ASTM D4533
Ultraviolet (UV) Radiation stability	50% strength min., after 500 hrs. in weather meter	ASTM D4355
AOS	.43 mm max. (#40 sieve)	ASTM D4751
Water Permitivity	.5 sec – 1 min.	ASTM D4491

Notes:

* Minimum values should be in the weaker principal direction. All numerical values represent minimum average roll value (i.e., test results from any sampled lot shall meet or exceed the minimum values in the table). Stated values are for noncritical and nonsevere applications.

AOS: Apparent Opening Size is the measure of the diameter of the pores on the geotextile.

Swale Divider

1. If a swale divider is used (such as when swale bottom widths are greater than 10 feet), the divider shall be constructed of a **firm material** that will resist weathering and not erode, such as treated lumber, concrete, plastic, or compacted soil seeded with grass. Selection of divider material shall take into consideration swale maintenance, especially mowing.
2. The divider shall have a **minimum height** of one inch higher than the water quality design water depth.
3. **Earthen berms** shall be no steeper than 2H:1V.
4. Materials other than earth (e.g. treated lumber, recycled plastic lumber, concrete, etc.) shall be embedded to a depth sufficient to be stable.

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Access

1. For swales to be maintained by King County, an **access road** shall be provided to the swale inlet and along one side of the swale according to the schedule shown in Table 6.3.1.B below. *Note: County streets and paved parking areas adjacent to the top of slope may be counted as access.*

TABLE 6.3.1.B REQUIREMENTS FOR BIOFILTRATION SWALE ACCESS ROAD	
Swale Bottom Area*: *L* x *w* (sf)	**Access Road Length**
200 - 1000	$^1/_2$ swale length L
1000 - 1600	$^2/_3$ swale length L
Over 1600	entire swale length L
* The swale area used for computing access road length may be the bottom area.	

2. In areas outside critical area buffers, **wheel strips** made of modular grid pavement may be built into the swale bottom for maintenance vehicle access instead of an access road. The subgrade for the strips must be engineered to support a vehicle weight of 16,000 pounds and installed according to the manufacturer's recommendations on firm native soil or structural fill, not on the amended topsoils. Each strip shall be 18 inches wide and spaced as shown in Figure 6.3.1.E (p. 6-54). The strip lattice should be filled or covered with native soil (no amendments required) and overseeded with grass. If a low-flow drain is also needed (see "Water Depth and Base Flow" on page 6-44), a portion of the wheel strip may be filled with pea gravel as appropriate to form the drain. Continuous vehicle access shall be provided to the wheel strips from the access road. If access to the wheel strips is over the flow-spreader, then a grate (or other DDES approved method) shall be placed over the flow-spreader for vehicle access. Wheel strips shall not be counted as treatment area; therefore, the swale bottom width must be increased accordingly.

Soil Amendment

1. Two inches (minimum) of **well-rotted compost** shall be tilled into the entire swale treatment area to amend the topsoil unless the soil already has an organic content of 1 percent or greater. This applies to both till soils as well as sandy soils. In very coarse soils (gravels or courser), **top soil** must be imported and amended to the required organic content.
   a) Compost must be tilled into the underlying native soil to a depth of 6 inches to prevent the compost from being washed out and to avoid creating a defined layer of different soil types that can prevent downward percolation of water.
   b) Compost shall not contain any sawdust, straw, green or under-composted organic matter, or toxic or otherwise harmful materials.
   c) Compost shall not contain unsterilized manure because it can leach fecal coliform bacteria into receiving waters.
2. **Soil or sod** with a clay content of greater than 10 percent should be avoided. If there is concern for contamination of the underlying groundwater, the swale bottom shall be lined with a treatment liner to prevent groundwater contamination. See Section 6.2.4 (p. 6-23) for details on treatment liner options.

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EXHIBIT F-554

DEVCO engineering inc.

Physical Address
245 NE Conifer Blvd.
Corvallis, OR 97330

www.devcoengineering.com

Mailing Address
P.O. BOX 1211
Corvallis, OR 97339

(541) 757-8991
Fax: (541) 757-9885

PROJECT:	PROJECT NO:	DESIGN:	DATE:
McFADDEN ANNEXATION	09-414	SH	05/2011

* TOTAL AREA = 85.43 Ac

* DEVELOPABLE AREA = 51.58 Ac

↳ TOTAL ROOF AREA = 433,135 SF = 9.94 Ac

* BASED UPON THE CURVE NUMBER FOR AN INDUSTRIAL AREA, THE APPROXIMATE IMPERVIOUS AREA IS 72%

DEVELOPABLE IMPERVIOUS AREA = 51.58 (0.72) = 37.14 Ac

* ASSUME POLLUTION GENERATING IMPERVIOUS SURFACE

PGIS = 37.14 Ac − 9.94 = 27.20 Ac

= 52.7% OF DEVELOPABLE AREA

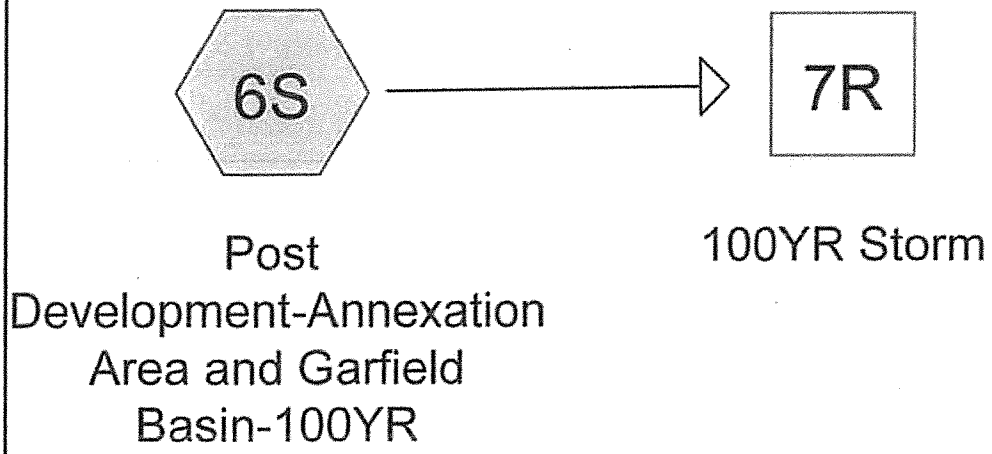
* APPLY TO TOTAL AREA

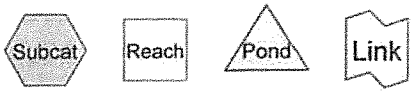
- APPROXIMATE POLLUTION GENERATING IMPERVIOUS SURFACE FOR TOTAL AREA = 85.43 Ac (0.527)

PGIS = 45.0 Ac

USE 45.0 Ac FOR PGIS

100-YR RUNOFF CALCULATION





Drainage Diagram for 09-414_Stormwater Calculations
Prepared by Steven C. P. Hattori, P.E., Devco Engineering, Inc., Printed 05/14/2011
HydroCAD® 9.10 s/n 03944 © 2009 HydroCAD Software Solutions LLC

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
264.600	88	Average Curve Number (6S) – [illegible]
59.288	88	Urban industrial, 72% imp, HSG B (6S)
10.337	91	Urban industrial, 72% imp, HSG C (6S)
15.805	93	Urban industrial, 72% imp, HSG D (6S)
350.030		**TOTAL AREA**

[illegible]

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
59.288	HSG B	6S
10.337	HSG C	6S
15.805	HSG D	6S
264.600	Other	6S
350.030		**TOTAL AREA**

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
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EXHIBIT F-558

Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment6S: Post Runoff Area=350.030 ac 17.57% Impervious Runoff Depth>3.30"
Flow Length=7,500' Tc=62.5 min CN=88 Runoff=206.51 cfs 96.334 af

Reach 7R: 100YR Storm Inflow=206.51 cfs 96.334 af
Outflow=206.51 cfs 96.334 af

Total Runoff Area = 350.030 ac Runoff Volume = 96.334 af Average Runoff Depth = 3.30"
82.43% Pervious = 288.520 ac 17.57% Impervious = 61.510 ac

Summary for Subcatchment 6S: Post Development-Annexation Area and Garfield Basin-100YR

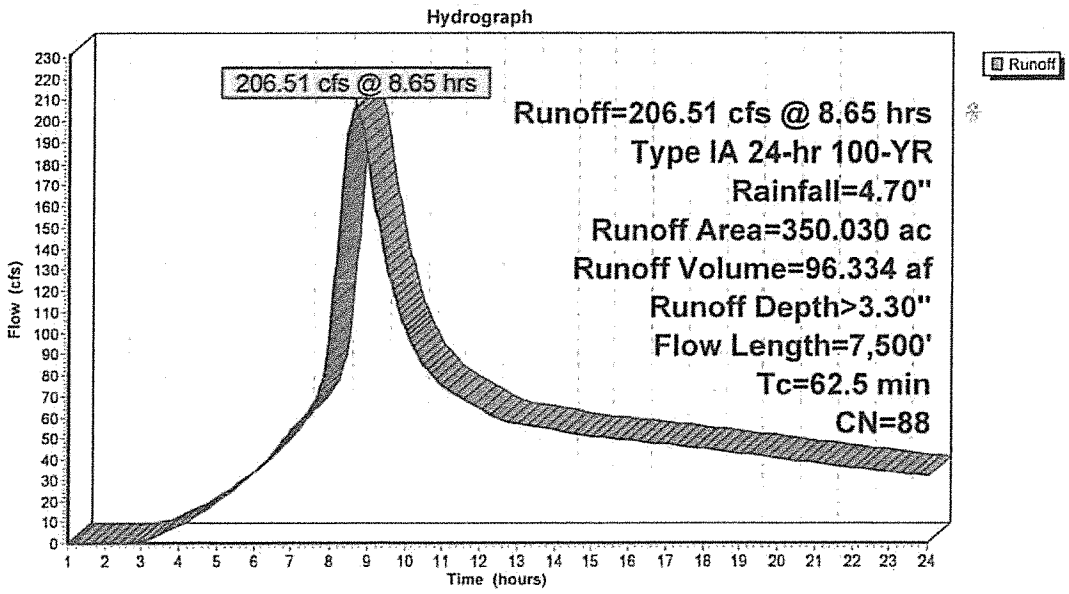
Runoff = 206.51 cfs @ 8.65 hrs, Volume= 96.334 af, Depth> 3.30"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 100-YR Rainfall=4.70"

	Area (ac)	CN	Description
	59.288	88	Urban industrial, 72% imp, HSG B
	15.805	93	Urban industrial, 72% imp, HSG D } ANNEXATION AREA
	10.337	91	Urban industrial, 72% imp, HSG C
*	264.600	88	Average Curve Number - PERMEABLE GARFIELD BASIN
	350.030	88	Weighted Average
	288.520		82.43% Pervious Area
	61.510		17.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
62.5	7,500		2.00		**Direct Entry, Minimum Pipe and Channel Flows**

Subcatchment 6S: Post Development-Annexation Area and Garfield Basin-100YR



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CITY COUNCIL STAFF REPORT
EXHIBIT F-560

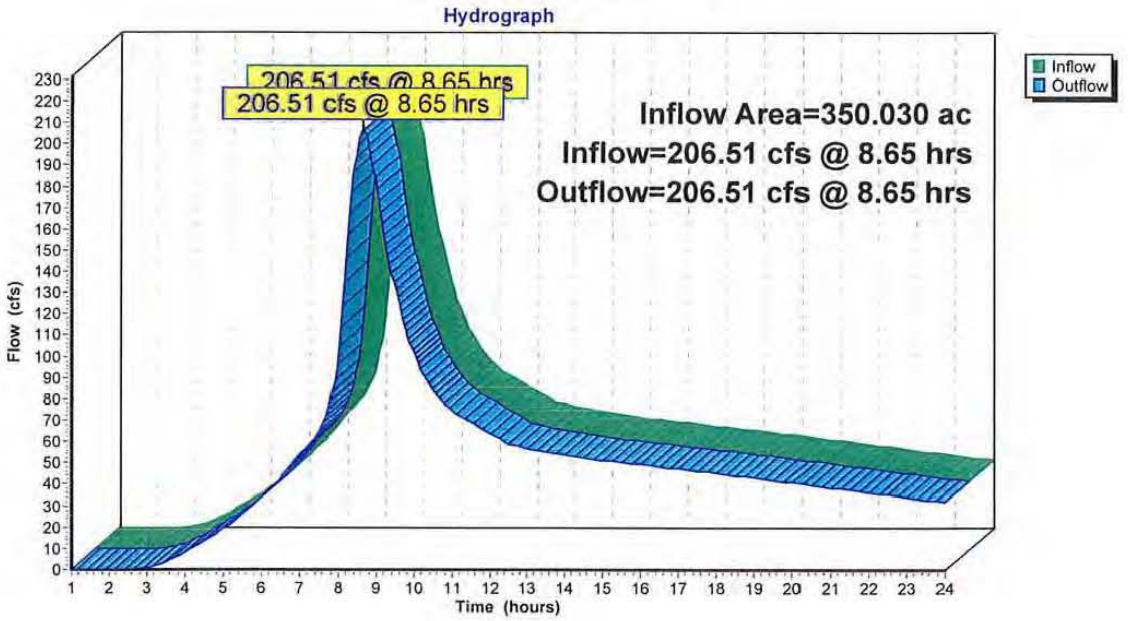
Summary for Reach 7R: 100YR Storm

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 350.030 ac, 17.57% Impervious, Inflow Depth > 3.30" for 100-YR event
Inflow = 206.51 cfs @ 8.65 hrs, Volume= 96.334 af
Outflow = 206.51 cfs @ 8.65 hrs, Volume= 96.334 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Reach 7R: 100YR Storm



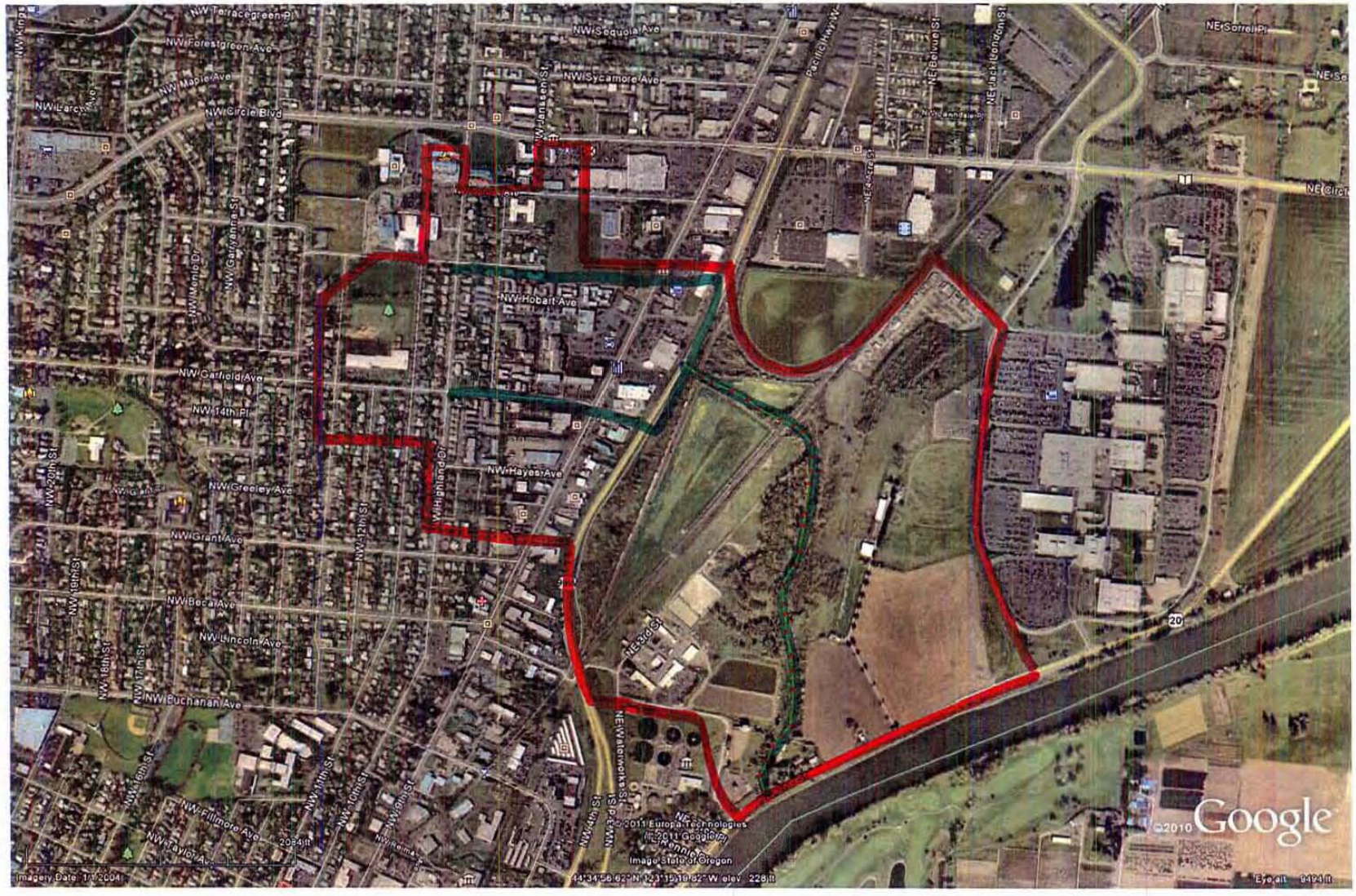


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EXHIBIT F-562

Soil Map—Benton County, Oregon
(McFadden Annexation)

Map Scale: 1:13,500 if printed on A size (8.5" x 11") sheet.

N

Meters: 0 150 300 600 900

Feet: 0 500 1,000 2,000 3,000

USDA Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

5/14/2011
Page 1 of 3

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-563

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features
- Gully
- Short Steep Slope
- Other

Political Features
- Cities

Water Features
- Oceans
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

MAP INFORMATION

Map Scale: 1:13,500 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 10N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Benton County, Oregon
Survey Area Data: Version 9, Feb 5, 2010

Date(s) aerial images were photographed: 7/18/2005; 8/4/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

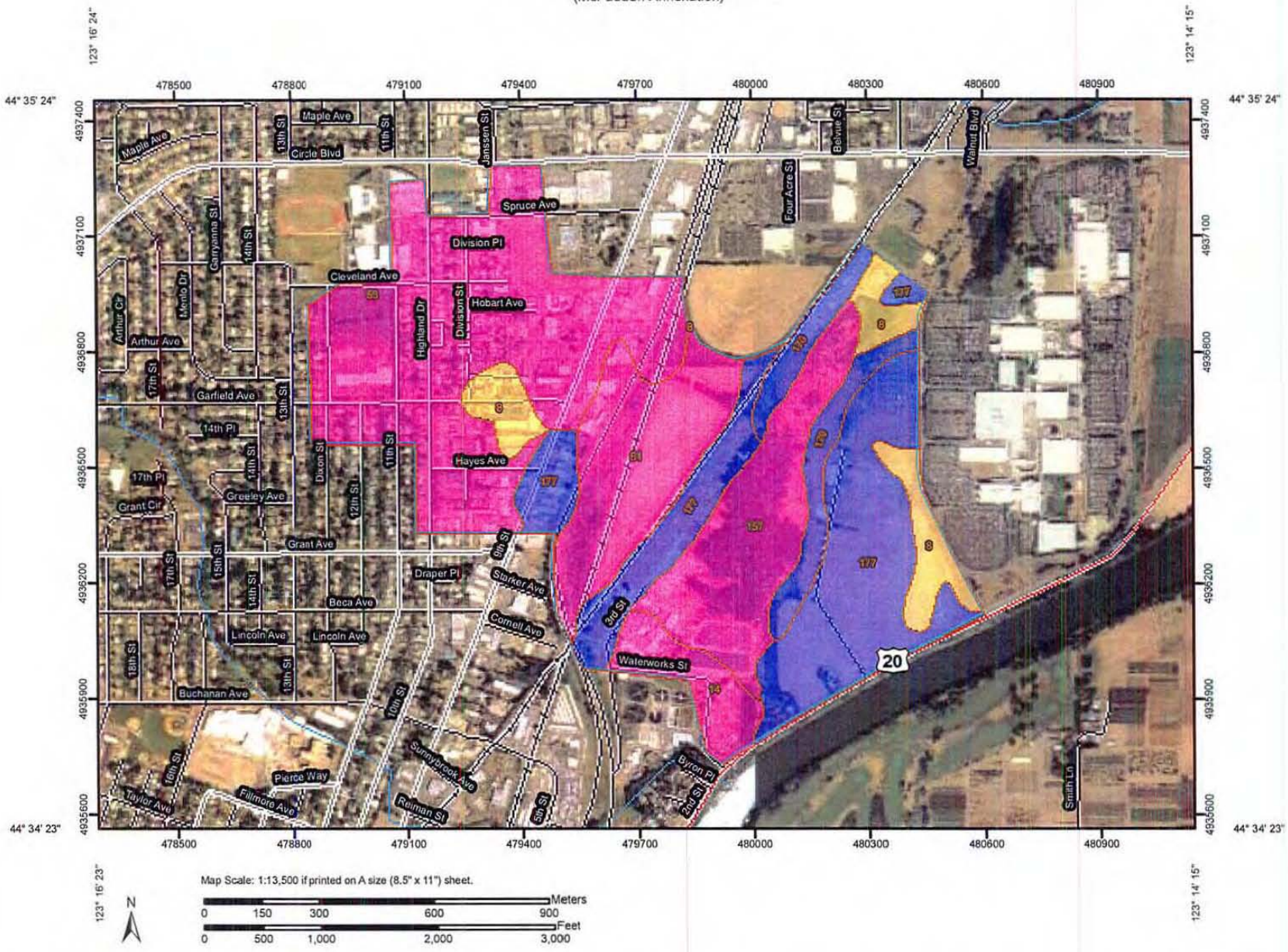
MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-564

Map Unit Legend

Benton County, Oregon (OR003)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
8	Amity silt loam, 0 to 3 percent slopes	23.4	6.5%
14	Bashaw clay, flooded, 0 to 3 percent slopes	15.3	4.3%
51	Concord silt loam, 0 to 2 percent slopes	44.5	12.4%
53	Dayton silt loam, 0 to 2 percent slopes	121.0	33.7%
157	Wapato silty clay loam, 0 to 3 percent slopes	46.3	12.9%
170	Willamette silt loam, 3 to 12 percent slopes	21.0	5.9%
177	Woodburn silt loam, 0 to 3 percent slopes	87.4	24.3%
Totals for Area of Interest		**358.9**	**100.0%**

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-565

Hydrologic Soil Group—Benton County, Oregon
(McFadden Annexation)



USDA Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

5/14/2011
Page 1 of 4

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Units

Soil Ratings

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Political Features

- Cities

Water Features

- Oceans
- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

MAP INFORMATION

Map Scale: 1:13,500 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 10N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Benton County, Oregon
Survey Area Data: Version 9, Feb 5, 2010

Date(s) aerial images were photographed: 7/18/2005; 8/4/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Benton County, Oregon				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
8	Amity silt loam, 0 to 3 percent slopes	C	23.4	6.5%
14	Bashaw clay, flooded, 0 to 3 percent slopes	D	15.3	4.3%
51	Concord silt loam, 0 to 2 percent slopes	D	44.5	12.4%
53	Dayton silt loam, 0 to 2 percent slopes	D	121.0	33.7%
157	Wapato silty clay loam, 0 to 3 percent slopes	D	46.3	12.9%
170	Willamette silt loam, 3 to 12 percent slopes	B	21.0	5.9%
177	Woodburn silt loam, 0 to 3 percent slopes	B	87.4	24.3%
Totals for Area of Interest			**358.9**	**100.0%**

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-568

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: *None Specified*

Tie-break Rule: Lower

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CHAPTER 10

WATERSHED PLANNING AND ANALYSIS: GARFIELD BASIN

10.1 INTRODUCTION

The Garfield watershed lies between the Dixon Creek watershed to the south and the Sequoia Creek watershed to the north. The topography of the watershed is flat with slopes of less than 3 percent. The watershed's soils are poorly drained silts, reflecting the area's origin as alluvial terraces formed by the Willamette River. The upper reaches of the watershed are almost completely developed and their high degree of imperviousness contributes to much of the flows through the relatively undeveloped reaches downstream of Highway 99. Most of the watershed also experiences a high groundwater table that reduces the volume and rates of stormwater infiltration.

The Garfield watershed contains less than 350 acres, making it one of the smallest watersheds in the Corvallis area. Currently, 70 percent of the watershed is zoned industrial. The City's comprehensive zoning indicates that, in the future, the zoned industrial area may decrease to 61 percent; however, the amount of impervious surfaces will remain constant due to an increase in commercial zoning.

Widespread road closures occurred in the Garfield watershed during the February 1996 flood event. Closures were reported in the upper reaches of the Garfield drainage system, along 9th Street, Garfield Avenue, and Cleveland Avenue.

10.2 WATERSHED FINDINGS

Information on watershed conditions was obtained by working with City staff to identify maintenance and operation problems, and by modeling the conveyance system for the existing and future build-out scenarios. Figure 10-1 identifies the layout of the Garfield watershed drainage system and some of the major observations made during the watershed study.

The drainage system in the lower reaches of the Garfield watershed consists mostly of open channels. The channels flow through City property that, for the most part, has a vegetative buffer between the channel and developed areas, as shown in Figure 10-2, Photo 1. Canopy coverage is generally good in the lower reaches, with large trees and thickets of willows bordering the channel. The channel is dry in the summer and consists mainly of packed earth, as shown in Figure 10-2, Photo 2. Little or no canopy exists from the railroad tracks to the upper reaches. Much of the vegetation along the channel in this upper reach is blackberry thicket, as shown in Figure 10-2, Photo 3. The channel bottom consists of bare earth; gravel and woody debris are absent from most of the channel as shown in Figure 10-2, Photo 4. The channel and streambanks provide little habitat value and show signs of eroding during storm flows.

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Table TM1-1. Watershed and Subwatershed Areas

Watershed name	Watershed, acres	Number of subwatersheds	Subwatershed minimum, acres	Subwatershed mean, acres	Subwatershed maximum, acres
Dixon Creek	2,712	96	2	28	250
Frazier Creek	2,254	12	39	188	424
Garfield Creek	346	12	5	29	151
Jackson Creek	1,798	9	109	200	316
Marys River	78	3	12	26	44
Oak Creek	8,308	30	21	277	2,352
Sequoia Creek	1,357	25	10	54	233
South Corvallis (Goodnight)	298	23	0.7	13	48
South Corvallis (Millrace)	349	6	19	44	84
Squaw Creek	2,363	31	12	76	468
Village Green Creek	380	9	7	42	77
Total	**20,243**	**256**			

3.2 Design Storm

The design storm utilized for this project was the rainfall pattern from December 24 to 29, 1998 (see Table A-1 in the Appendix). During this 5-day period, 5.15 inches of rain fell, 3.64 inches of which fell in the 24-hour period beginning at 1:00 p.m. on December 27. This 24-hour intensity is approximately equal to the 10-year event for Corvallis predicted by the Oregon Climate Service. (The 10-year event has a 10 percent chance of occurring in any given year or, in other words, is expected to occur on average once in every 10 years). The days before and after the critical 24 hours were included in the model runs to allow the model time to come to equilibrium. The entire December 24 to 29, 1998 storm distribution is graphed in TM1-3.

The rainfall distribution for the other storms modeled, the 2-, 5-, 25-, and 100-year storms, was obtained by multiplying the 10-year storm volume by the factors listed in Table TM1-2.

Table TM1-2. Design Storm Rainfall Multiplier

Return Frequency (years)	2	5	10	25	100
Multiplier	0.7	0.8	1.0	1.1	1.3

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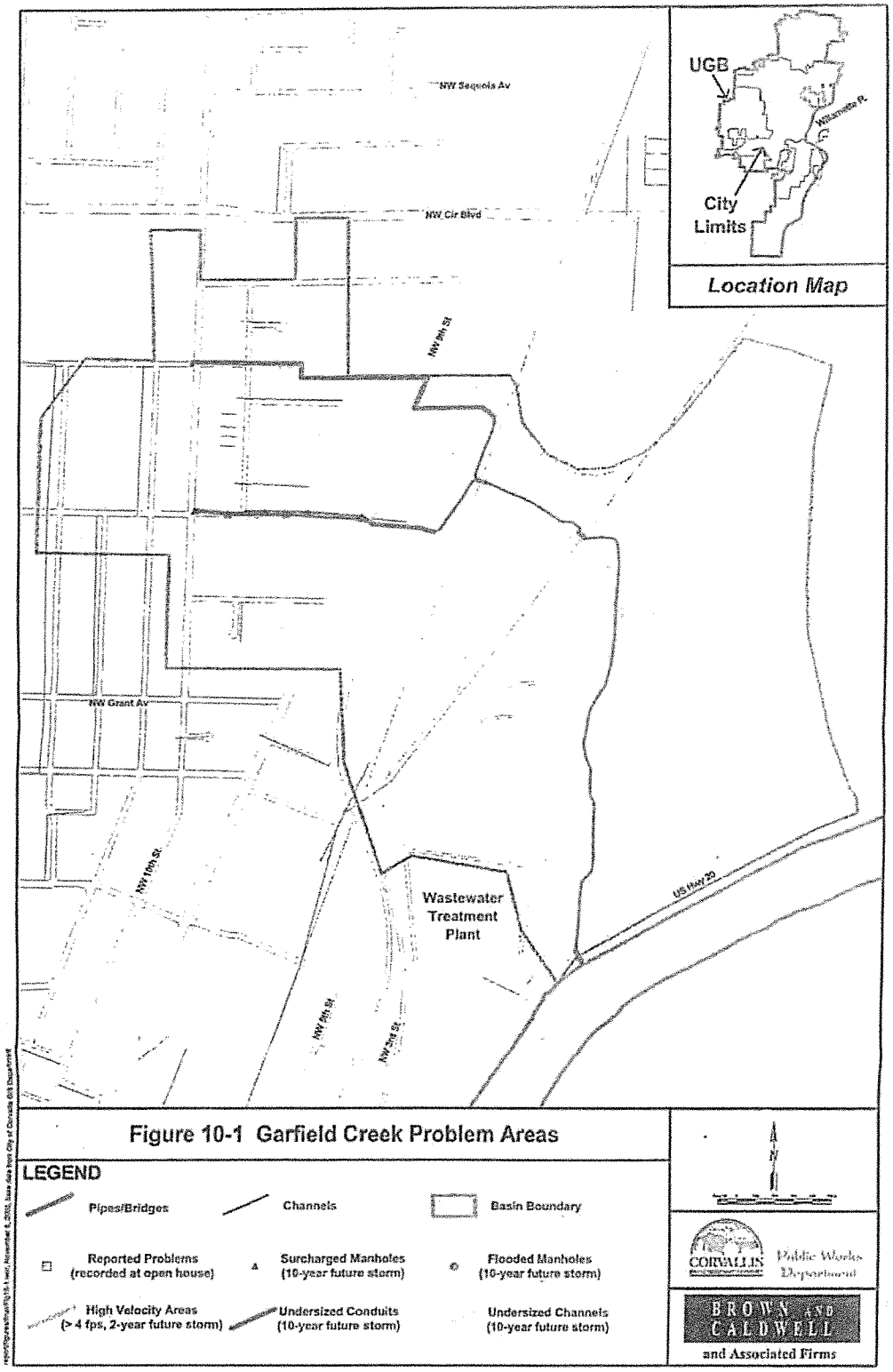


Figure 10-1 Garfield Creek Problem Areas

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-572

DEVCO engineering inc.

Physical Address
245 NE Conifer Blvd.
Corvallis, OR 97330

Mailing Address
P.O. BOX 1211
Corvallis, OR 97339

www.devcoengineering.com

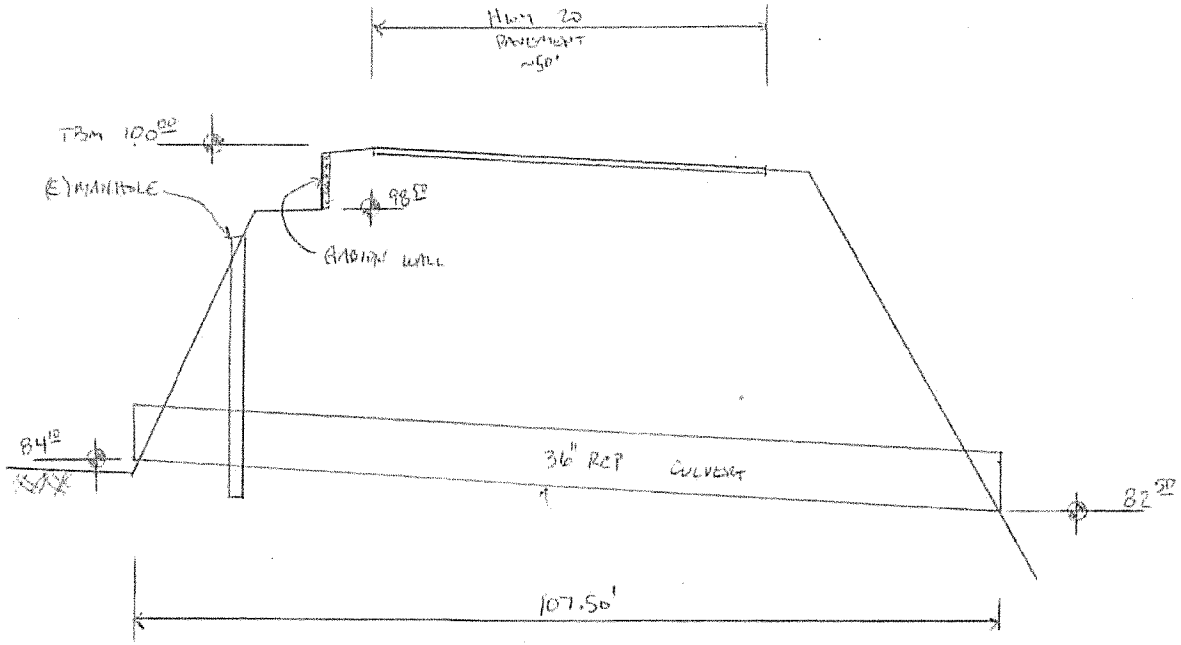
(541) 757-8991
Fax: (541) 757-9885

PROJECT: McFadden Annexation

PROJECT NO: 09-44W

DESIGN: SH

DATE: 03/2011



FIELD SKETCH OF 36" EXISTING CULVERT

NOT TO SCALE

* 36" CONCRETE WOULD NEED TO BE REPLACED WITH A 48" DIAMETER CULVERT TO CONVEY THE 100-YR STORM EVENT.

PAGE OF

Culvert Report

EXISTING 36" CULVERT

Hydraflow Express Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. Saturday, May 14 2011

Cir Culvert

Invert Elev Dn (ft)	= 82.50
Pipe Length (ft)	= 110.00
Slope (%)	= 1.45
Invert Elev Up (ft)	= 84.10
Rise (in)	= 36.0
Shape	= Cir
Span (in)	= 36.0
No. Barrels	= 1
n-Value	= 0.020
Inlet Edge	= 0
Coeff. K,M,c,Y,k	= 0.0018, 2.5, 0.03, 0.74, 0.2

Embankment

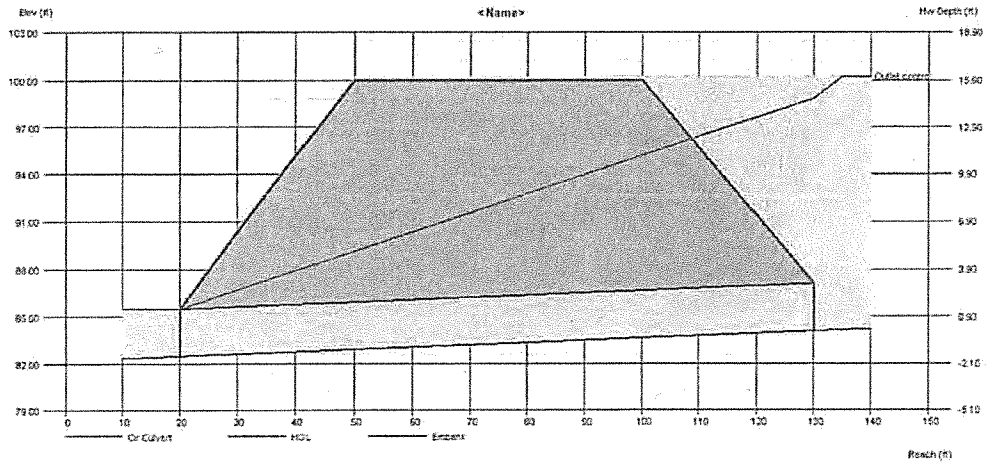
Top Elevation (ft)	= 100.00
Top Width (ft)	= 50.00
Crest Width (ft)	= 100.00

Calculations

Qmin (cfs)	= 0.00
Qmax (cfs)	= 210.00
Tailwater Elev (ft)	= 0

Highlighted

Qtotal (cfs)	= 210.00
Qpipe (cfs)	= 150.94
Qovertop (cfs)	= 59.06
Veloc Dn (ft/s)	= 21.36
Veloc Up (ft/s)	= 21.35
HGL Dn (ft)	= 85.50
HGL Up (ft)	= 98.84
Hw Elev (ft)	= 100.26
Hw/D (ft)	= 5.39
Flow Regime	= Outlet Control



* ASSUMES NO LOSSES IN PIPE.

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EXHIBIT F-574

Q			Veloc		Depth		HGL	
Total	Pipe	Over	Dn	Up	Dn	Up	Dn	Up
(cfs)	(cfs)	(cfs)	(ft/s)	(ft/s)	(in)	(in)	(ft)	(ft)
10.00	10.00	0.00	5.72	4.81	10.65	12.07	83.39	85.11
20.00	20.00	0.00	6.88	5.93	15.47	17.36	83.79	85.55
30.00	30.00	0.00	7.62	6.86	19.60	21.39	84.13	85.88
40.00	40.00	0.00	8.16	7.69	23.56	24.83	84.46	86.17
50.00	50.00	0.00	8.41	8.43	28.23	28.15	84.85	86.45
60.00	60.00	0.00	8.49	8.49	36.00	36.00	85.50	87.61
70.00	70.00	0.00	9.90	9.90	36.00	36.00	85.50	88.37
80.00	80.00	0.00	11.32	11.32	36.00	36.00	85.50	89.25
90.00	90.00	0.00	12.73	12.73	36.00	36.00	85.50	90.24
100.00	100.00	0.00	14.15	14.15	36.00	36.00	85.50	91.36
110.00	110.00	0.00	15.56	15.56	36.00	36.00	85.50	92.59
120.00	120.00	0.00	16.98	16.98	36.00	36.00	85.50	93.93
130.00	130.00	0.00	18.39	18.39	36.00	36.00	85.50	95.40
140.00	140.00	0.00	19.81	19.81	36.00	36.00	85.50	96.98
150.00	149.69	0.31	21.18	21.18	36.00	36.00	85.50	98.62
160.00	149.94	10.06	21.22	21.21	36.00	36.00	85.50	98.67

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-575

Q			Veloc		Depth		HGL	
Total	Pipe	Over	Dn	Up	Dn	Up	Dn	Up
(cfs)	(cfs)	(cfs)	(ft/s)	(ft/s)	(in)	(in)	(ft)	(ft)
170.00	150.24	19.76	21.26	21.25	36.00	36.00	85.50	98.72
180.00	150.71	29.29	21.33	21.32	36.00	36.00	85.50	98.80
190.00	150.94	39.06	21.36	21.35	36.00	36.00	85.50	98.84
200.00	150.78	49.22	21.34	21.33	36.00	36.00	85.50	98.81
210.00	150.94	59.06	21.36	21.35	36.00	36.00	85.50	98.84

HGL	
Hw	Hw/D
(ft)	
85.47	0.46
86.11	0.67
86.66	0.85
87.19	1.03
87.80	1.23
88.46	1.45
89.24	1.71
90.14	2.01
91.16	2.35
92.30	2.73
93.56	3.15
94.94	3.61
96.45	4.12
98.20	4.70
100.02	5.31
100.06	5.32

HGL	
Hw	Hw/D
(ft)	
100.12	5.34
100.21	5.37
100.26	5.39
100.23	5.38
100.26	5.39

Culvert Report

PROPOSED 48" CULVERT

Hydraflow Express Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc.

Saturday, May 14 2011

Cir Culvert

Invert Elev Dn (ft)	= 82.50
Pipe Length (ft)	= 110.00
Slope (%)	= 1.45
Invert Elev Up (ft)	= 84.10
Rise (in)	= 48.0
Shape	= Cir
Span (in)	= 48.0
No. Barrels	= 1
n-Value	= 0.020
Inlet Edge	= 0
Coeff. K,M,c,Y,k	= 0.0018, 2.5, 0.03, 0.74, 0.2

Embankment

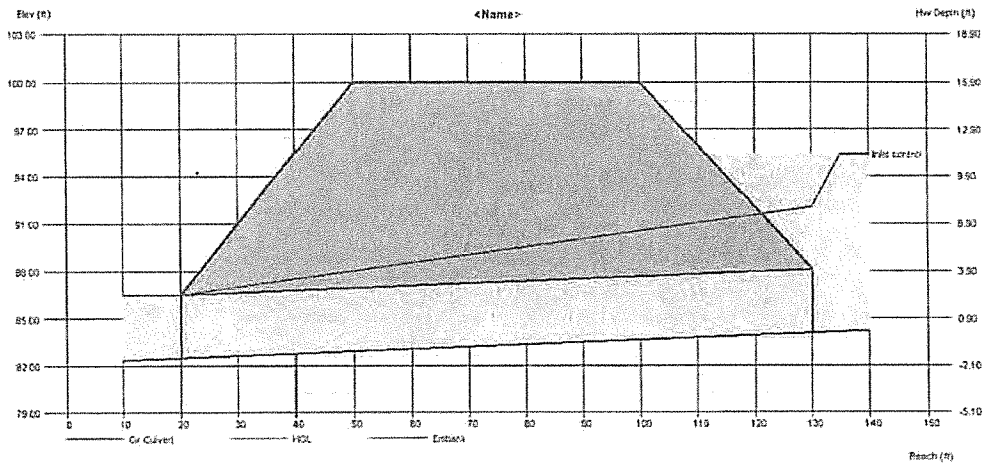
Top Elevation (ft)	= 100.00
Top Width (ft)	= 50.00
Crest Width (ft)	= 100.00

Calculations

Qmin (cfs)	= 0.00
Qmax (cfs)	= 210.00
Tailwater Elev (ft)	= 0

Highlighted

Qtotal (cfs)	= 210.00
Qpipe (cfs)	= 210.00
Qovertop (cfs)	= 0.00
Veloc Dn (ft/s)	= 16.71
Veloc Up (ft/s)	= 16.71
HGL Dn (ft)	= 86.50
HGL Up (ft)	= 92.07
Hw Elev (ft)	= 95.41
Hw/D (ft)	= 2.83
Flow Regime	= Inlet Control



* ASSUME NO LOSSES IN PIPE

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-579

Q			Veloc		Depth		HGL	
Total	Pipe	Over	Dn	Up	Dn	Up	Dn	Up
(cfs)	(cfs)	(cfs)	(ft/s)	(ft/s)	(in)	(in)	(ft)	(ft)
10.00	10.00	0.00	5.55	4.53	9.65	11.13	83.30	85.03
20.00	20.00	0.00	6.72	5.52	13.76	15.87	83.65	85.42
30.00	30.00	0.00	7.53	6.23	17.00	19.57	83.92	85.73
40.00	40.00	0.00	8.18	6.81	19.80	22.78	84.15	86.00
50.00	50.00	0.00	8.62	7.36	22.54	25.54	84.38	86.23
60.00	60.00	0.00	7.83	7.83	28.16	28.16	84.85	86.45
70.00	70.00	0.00	8.31	8.31	30.50	30.50	85.04	86.64
80.00	80.00	0.00	8.79	8.79	32.66	32.66	85.22	86.82
90.00	90.00	0.00	9.27	9.27	34.64	34.64	85.39	86.99
100.00	100.00	0.00	9.77	9.77	36.43	36.43	85.54	87.14
110.00	110.00	0.00	10.20	10.23	38.41	38.32	85.70	87.29
120.00	120.00	0.00	10.07	10.07	43.23	43.23	86.10	87.70
130.00	130.00	0.00	10.35	10.35	48.00	48.00	86.50	88.63
140.00	140.00	0.00	11.14	11.14	48.00	48.00	86.50	88.97
150.00	150.00	0.00	11.94	11.94	48.00	48.00	86.50	89.34
160.00	160.00	0.00	12.73	12.73	48.00	48.00	86.50	89.73

Q			Veloc		Depth		HGL	
Total	Pipe	Over	Dn	Up	Dn	Up	Dn	Up
(cfs)	(cfs)	(cfs)	(ft/s)	(ft/s)	(in)	(in)	(ft)	(ft)
170.00	170.00	0.00	13.53	13.53	48.00	48.00	86.50	90.15
180.00	180.00	0.00	14.33	14.32	48.00	48.00	86.50	90.59
190.00	190.00	0.00	15.12	15.12	48.00	48.00	86.50	91.06
200.00	200.00	0.00	15.92	15.92	48.00	48.00	86.50	91.55
210.00	210.00	0.00	16.71	16.71	48.00	48.00	86.50	92.07

HGL	
Hw	Hw/D
(ft)	
85.35	0.31
85.90	0.45
86.35	0.56
86.74	0.66
87.11	0.75
87.46	0.84
87.81	0.93
88.15	1.01
88.57	1.12
88.93	1.21
89.33	1.31
89.77	1.42
90.24	1.54
90.75	1.66
91.31	1.80
91.89	1.95

HGL	
Hw	Hw/D
(ft)	
92.52	2.11
93.19	2.27
93.89	2.45
94.63	2.63
95.41	2.83

DEVCO engineering inc.

REGISTERED PROFESSIONAL ENGINEER
56483PE
OREGON
JAN. 15, 2002
STEVEN C.P. HATTORI

EXPIRES: 6/30/11

Waterline and Stormwater
Calculations for

McFadden Annexation
For
McFadden

Devco Job #09-414
June 2011

Table of Contents

Subject	No. of Pages
• RevisedWaterline Calculations	8
• Stormwater Calculations and Information	8

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-585

Revised Waterline Calculations

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-586

DEVCO engineering inc.

Physical Address
245 NE Conifer Blvd.
Corvallis, OR 97330

Mailing Address
P.O. BOX 1211
Corvallis, OR 97339

www.devcoengineering.com

(541) 757-8991
Fax: (541) 757-9885

PROJECT: McFadden Annexation	PROJECT NO: M-11V	DESIGN: SH	DATE: 06/2011

Revised Waterline Calculation

* These waterline calculations are revised based upon City of Corvallis comments in memorandum to Jason Yaich from Ted Reese, PE on June 7, 2011.

* Maximum Water Demand = Maximum Peak Hour Demand + Fire Flow

* Per City of Corvallis Water Distribution System Facilities Plan, the fire flow requirement for industrial area for a parcel or undeveloped building is 4,500 gpm.

* Water Demand Calculations

  - Total Area = 85.43 Ac
  - Per City of Corvallis WDSFP, average industrial demand = 3750 gpad
  - Average industrial demand = 85.43 Ac (3,750 gpad)

    = 320,362.5 gal/day = 223 gpm
  - Peak Day Demand = 223 gpm (2.0) = 446 gpm
  - Peak Hour Demand = 223 gpm (4.6) = 1,026 gpm
  - Maximum Water Demand = 1,026 gpm + 4,500 gpm

    = 5,526 gpm ≈ use 5,530 gpm

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-587

DEVCO engineering inc.

Physical Address
245 NE Conifer Blvd.
Corvallis, OR 97330

Mailing Address
P.O. BOX 1211
Corvallis, OR 97339

www.devcoengineering.com

(541) 757-8991
Fax: (541) 757-9885

PROJECT: McFADDEN ANNEXATION	PROJECT NO: 09-414	DESIGN: SH	DATE: 06/2011

CONT WATERLINE CALCULATION

* PER CITY OF CORVALLIS WDSFP, A NEW 16" MAINLINE WILL BE REQUIRED TO CREATE A LOOP CONNECTION BETWEEN THE EXISTING 30" MAINLINE TO THE NORTH OF THE PROPOSED ANNEXATION PROPERTY AND THE 16" MAINLINE LOCATED TO THE SOUTH OF THE PROPERTY ADJACENT TO HIGHWAY 20.

→ VERIFY IF THE NEW 16" MAINLINE IS ADEQUATE TO SERVE THE PROPOSED ANNEXATION.

→ HYDRANT FLOW DATA WAS PROVIDED AND ATTACHED TO THESE CALCULATIONS. HYDRANT FLOW DATA INDICATE THERE IS INSUFFICIENT CAPACITY TO PROVIDE THE MAXIMUM WATER DEMANDS OF 5530 gpm.

HOWEVER, WATER SUPPLY SHOULD NOT BE AN ISSUE DUE TO LOOPING THE CONNECTION BETWEEN THE ABOVE STATED EXISTING 30" AND 16".

• WE CAN USE THE HYDRANT FLOW DATA THAT INDICATES THE 16" MAIN IN HWY 20 IS 65 psi. SINCE THERE IS NO SIGNIFICANT ELEVATION CHANGE, ON CAN ASSUME THE 30" IS SUPPLYING THE SAME STATIC PRESSURE.

STATIC PRESSURE = 65 psi.

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-588

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Physical Address
245 NE Conifer Blvd.
Corvallis, OR 97330

Mailing Address
P.O. BOX 1211
Corvallis, OR 97339

www.devcoengineering.com

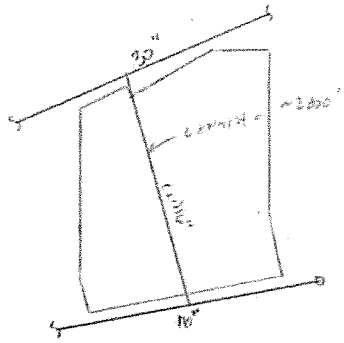
(541) 757-8991
Fax: (541) 757-9885

PROJECT: McFADDEN ANNEXATION	PROJECT NO: 09-414	DESIGN: SH	DATE: 06/2011

CONT WATERLINE CALCULATION

* AGAIN, AS WITH THE PREVIOUS CALCULATION, TO SIMPLIFY THE CALCULATION AND TO BE CONSERVATIVE:

1) ANALYSIS IS TO ASSUME WATER IS FED FROM A SINGLE DIRECTION, FROM THE 30".



* MAXIMUM WATER DEMAND = 5530 gpm

* REQUIRED: CALCULATE RESIDUAL PRESSURES TO SATISFY FIRE FLOW REQUIREMENT. RESIDUAL PRESSURES SHALL BE GREATER THAN 20 psi.

* SOLUTION:

$$H_{avail} = H_{static} - h_e - h_f$$

WHERE h_e = ELEVATION HEAD = 0

h_f = PIPE FRICTION LOSS (USE HAZEN-WILLIAMS EQN FOR HEADLOSS)

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-589

DEVCO engineering inc.

Physical Address
245 NE Conifer Blvd.
Corvallis, OR 97330

Mailing Address
P.O. BOX 1211
Corvallis, OR 97339

www.devcoengineering.com

(541) 757-8991
Fax: (541) 757-9885

PROJECT: McFADDEN ANNEXATION	PROJECT NO: 09-414	DESIGN: EH	DATE: 06/2011

CONT WATERLINE CALCULATION

* IGNORE MINOR LOSSES

HAZEN-WILLIAMS EQN

$$h_f = \frac{10.44 (L)(Q)^{1.85}}{(C)^{1.85} (d)^{4.8655}}$$

WHERE, L = LENGTH OF PIPE (ft)
Q = FLOW (gpm)
C = ROUGHNESS COEFFICIENT = 100 FOR DI
d = PIPE DIAMETER (in)
h_f = PIPE FRICTION LOSS (ft)

$H_{STATIC} = 65 psi (2.31 ft/psi) = 150.2'$

$H_{OUT} = H_{STATIC} - h_f$

$= 150.2' - \frac{10.44 (2800')(5530 gpm)^{1.85}}{(100)^{1.85} (16")^{4.8655}}$

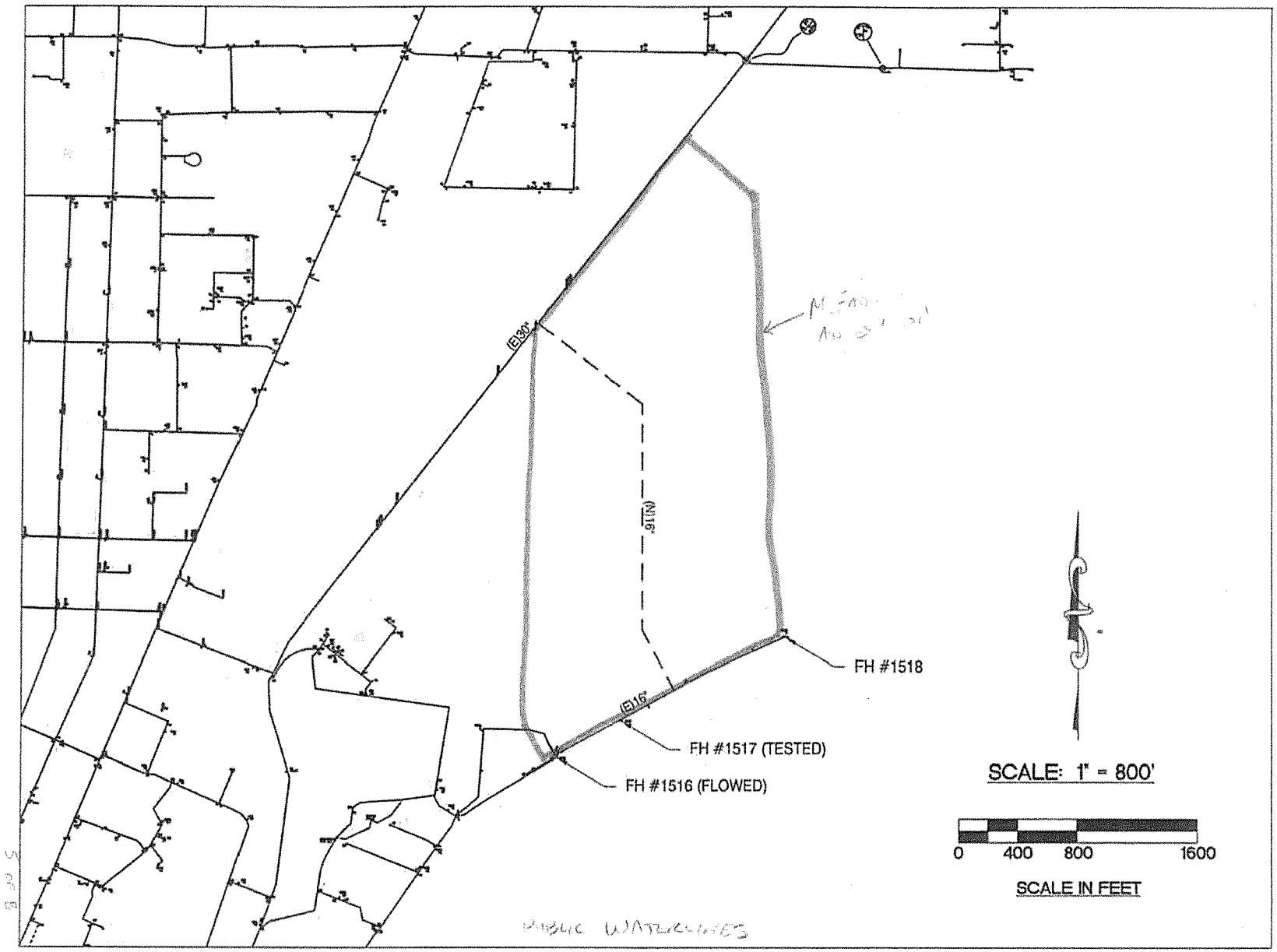
$= 150.2' - 67.8'$

$H_{OUT} = 82.4' = 35.7 psi > 20 psi$ GOOD!

∴ SUMMARY

- CONSTRUCT 16" WATERLINE BETWEEN THE EXISTING 8" AND 16". THE 16" WATERLINE SHOULD HAVE THE FLOW CAPACITY TO SERVE THE PROPOSED ANNEXATION.

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-590



MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-591

Hydrant Flow Test

Printed: 05/18/2011

		Shift	Station	Apparatus
Test Date: 05/16/2011				
Duration: 0.00		Officer In Charge:		
Primary Hydrant Tested:	01517	Static	Residual	Pressure Drop
Test Method:	Pitot	65	43	22
Results in GPM/LPM:	G			

Flow Meter Method 0.00

Base Cap Method **Hydrant Coefficient:** 0 **Diameter of Hydrant Port:** 0

Pitot Method

Hydrant	Pitot	Opening	Hydrant Coefficient	Outlet Coefficient	Discharge
01516	8.0	2.500	1.00	0.90	474.59
01516	8.0	2.500	1.00	0.90	474.59
01516	2.0	4.000	0.97	0.90	589.25
	0.0	0.000	0.00	0.70	0.00
				Total Discharge	1538.43

Total Flow: 1538 **Flow at 20 psi: 2264** **Flow at 10 psi: 2523**

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-592

Hydrant Flow Test Summary

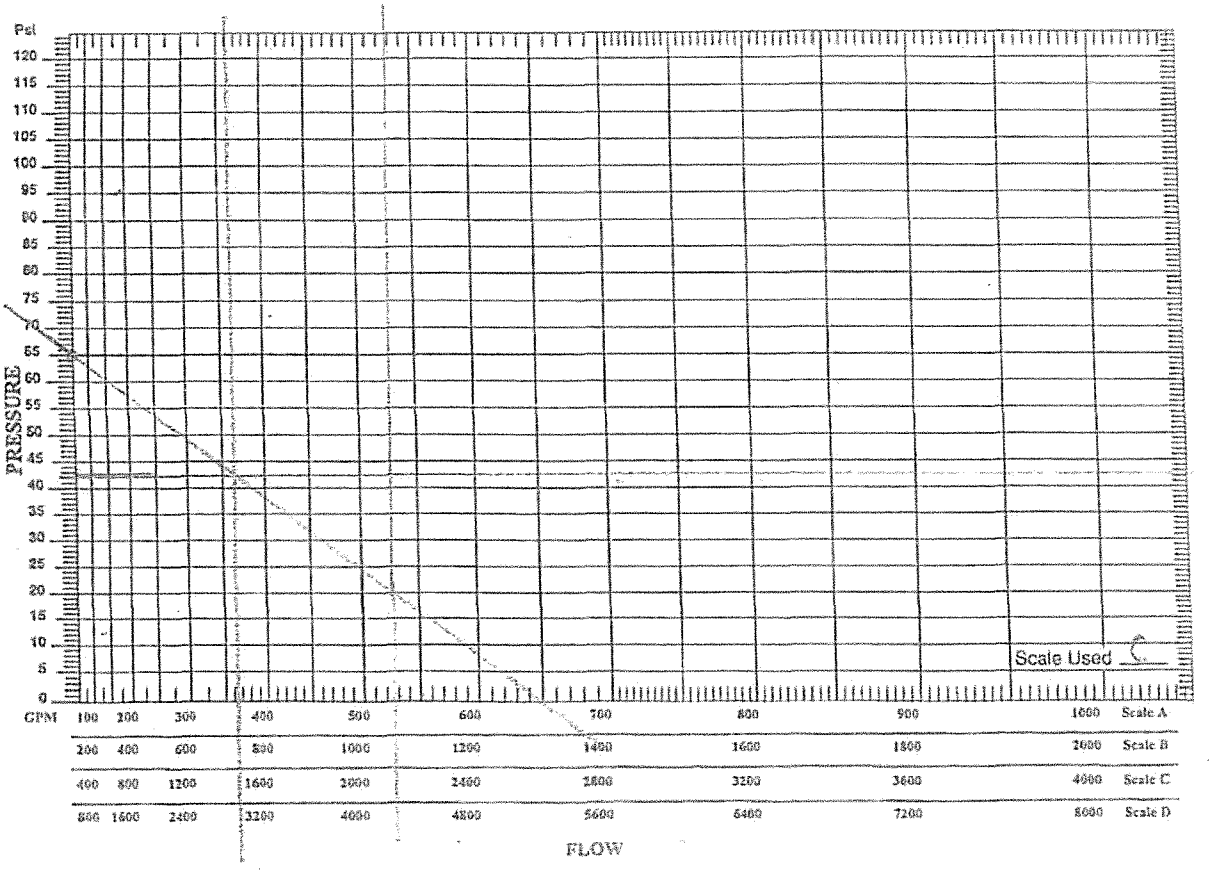
Conducted by K. Sundbaum, L. Sauermann Date 05/16/2011

Location - Street Address 1350 NE Hwy 20 Project

Test Pressure Hydrant # 1517 Static psi 65 Residual psi 43 Time 1405

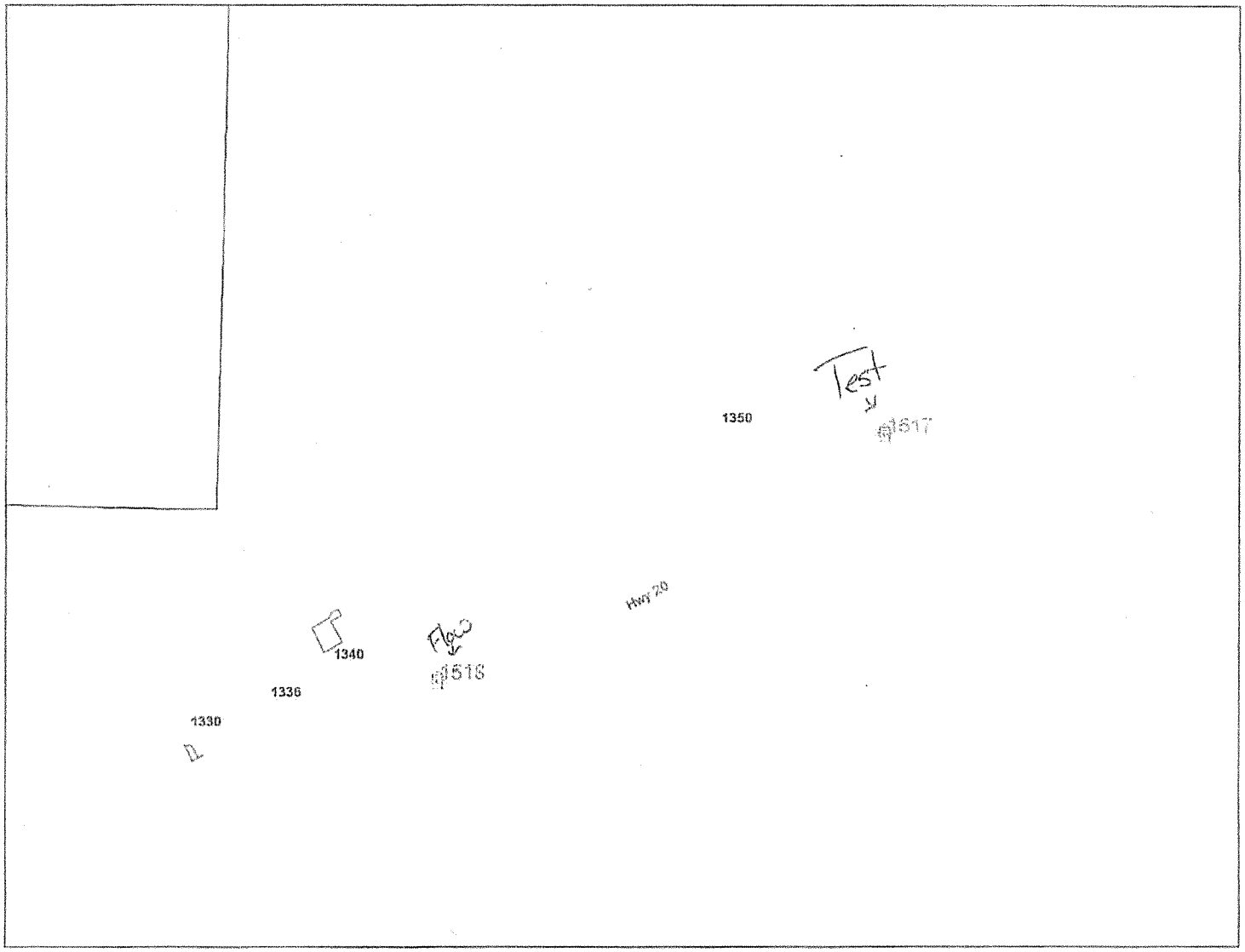
Flow Hydrant #	Outlet Diameter	Pitot psi.	Observed Flow	Hydrant Coef.	Total Observed Flow	Available gpm @ 20 psi
1. 1516	2½"	8	527.3	.9 : 4TH	→ 1455 gpm	2120 gpm
	2½"	8	527.3	.9 : 4TH		
	4"	2	675.0	.9(.83) : 5TH		
2.						
3.						

NOTES:



FORM # 125 4/99

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-593



MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-594

Stormwater Calculations and Information

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-595

DEVCO engineering inc.

Physical Address
245 NE Conifer Blvd.
Corvallis, OR 97330

Mailing Address
P.O. BOX 1211
Corvallis, OR 97339

www.devcoengineering.com

(541) 757-8991
Fax: (541) 757-9885

PROJECT: McFADDEN ANNEXATION	PROJECT NO:	DESIGN:	DATE:

* STORMWATER CALCULATIONS

THE ADDITIONAL INFORMATION REQUESTED BY THE CITY OF CORVALLIS REQUIRES DEVCO TO ASSEMBLE AN EXHIBIT OR SKETCH WHICH DEMONSTRATES THE 100-YR EVENT SURFACE WATER ELEVATION DOES NOT INUNDATE EXISTING STRUCTURES.

THE INFORMATION ON PAGE TWO IS FROM ACTUAL FIELD DATA WITH AN ASSIGNED BENCHMARK LOCATED AT THE EDGE OF PAVEMENT ADJACENT TO THE EXISTING 36" CULVERT AT THE INLET SIDE.

BASED UPON BELOW SHOW THE CORRELATION TO THE ATTACHED SKETCH.

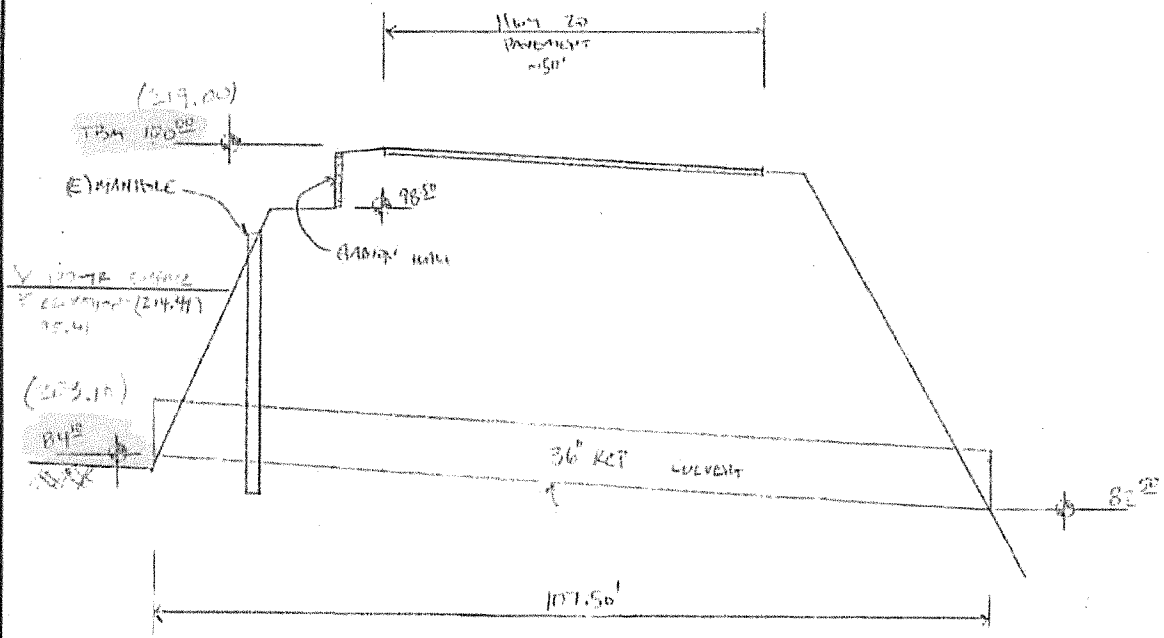
	ASSUMED BENCHMARK	CITY GIS INFO
EOP ELEV =	100.00	~219.0
INLET CULVERT IE =	84.10	~203.1
100-YR SURFACE ELEVATION =	95.41	~214.41

*SUMMARY: PER SKETCH SK-1, THE EXHIBIT DEMONSTRATES SAFE PASSAGE OF THE 100-YR EVENT.

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-596

DEVCO engineering inc.
Physical Address
245 NE Conifer Blvd.
Corvallis, OR 97330
www.devcoengineering.com
Mailing Address
P.O. BOX 1211
Corvallis, OR 97339
(541) 757-8991
Fax: (541) 757-9885

PROJECT: McFadden Annexation | PROJECT NO: 07-014 | DESIGN: SH | DATE: 07/2011



FIELD SKETCH OF 36" EXISTING CULVERT

NOT TO SCALE

* 36" CONCRETE WINGS NEED TO BE REPLACED WITH A 48" DIAMETER CULVERT TO CONVEY THE 100-YR STORM EVENT.

PAGE 2 OF 3

Culvert Report

PROPOSED 48" CULVERT

Hydraflow Express Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. Saturday, May 14 2011

Cir Culvert

Invert Elev Dn (ft)	= 82.50
Pipe Length (ft)	= 110.00
Slope (%)	= 1.45
Invert Elev Up (ft)	= 84.10
Rise (in)	= 48.0
Shape	= Cir
Span (in)	= 48.0
No. Barrels	= 1
n-Value	= 0.020
Inlet Edge	= 0
Coeff. K,M,c,Y,k	= 0.0018, 2.5, 0.03, 0.74, 0.2

Embankment

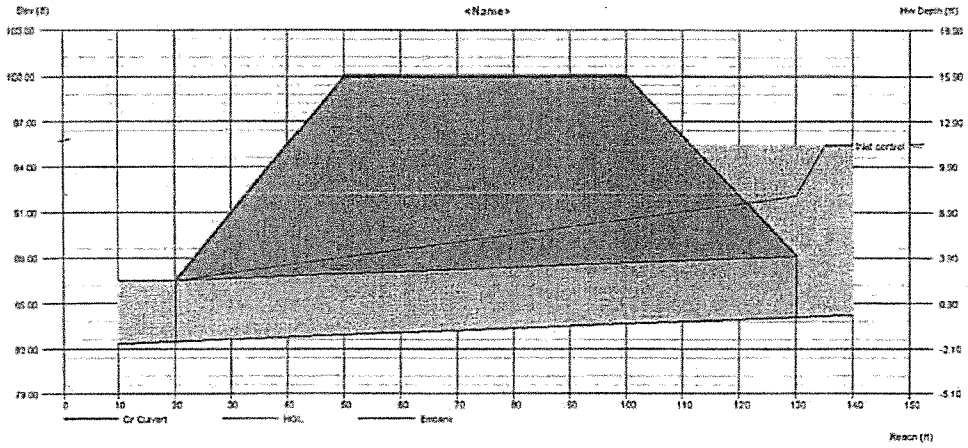
Top Elevation (ft)	= 100.00
Top Width (ft)	= 50.00
Crest Width (ft)	= 100.00

Calculations

Qmin (cfs)	= 0.00
Qmax (cfs)	= 210.00
Tailwater Elev (ft)	= 0

Highlighted

Qtotal (cfs)	= 210.00
Qpipe (cfs)	= 210.00
Qovertop (cfs)	= 0.00
Veloc Dn (ft/s)	= 16.71
Veloc Up (ft/s)	= 16.71
HGL Dn (ft)	= 86.50
HGL Up (ft)	= 92.07
Hw Elev (ft)	= 95.41 (214.41)
Hw/D (ft)	= 2.83
Flow Regime	= Inlet Control



* ASSUME NO LOSSES IN PIPE

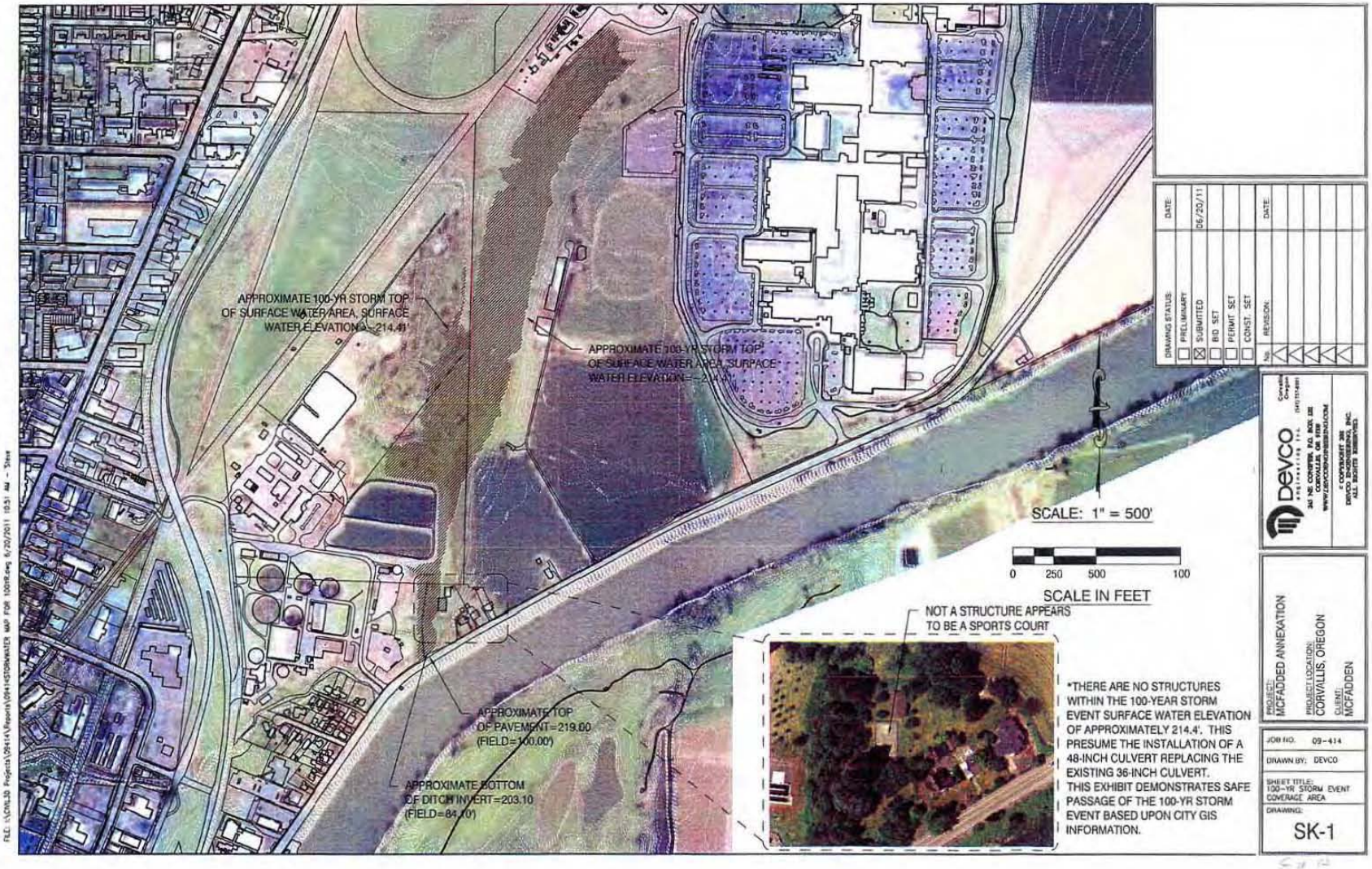
MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-598

Q			Veloc		Depth		HGL	
Total	Pipe	Over	Dn	Up	Dn	Up	Dn	Up
(cfs)	(cfs)	(cfs)	(ft/s)	(ft/s)	(in)	(in)	(ft)	(ft)
10.00	10.00	0.00	5.55	4.53	9.65	11.13	83.30	85.03
20.00	20.00	0.00	6.72	5.52	13.76	15.87	83.65	85.42
30.00	30.00	0.00	7.53	6.23	17.00	19.57	83.92	85.73
40.00	40.00	0.00	8.18	6.81	19.80	22.78	84.15	86.00
50.00	50.00	0.00	8.62	7.36	22.54	25.54	84.38	86.23
60.00	60.00	0.00	7.83	7.83	28.16	28.16	84.85	86.45
70.00	70.00	0.00	8.31	8.31	30.50	30.50	85.04	86.64
80.00	80.00	0.00	8.79	8.79	32.66	32.66	85.22	86.82
90.00	90.00	0.00	9.27	9.27	34.64	34.64	85.39	86.99
100.00	100.00	0.00	9.77	9.77	36.43	36.43	85.54	87.14
110.00	110.00	0.00	10.20	10.23	38.41	38.32	85.70	87.29
120.00	120.00	0.00	10.07	10.07	43.23	43.23	86.10	87.70
130.00	130.00	0.00	10.35	10.35	48.00	48.00	86.50	88.63
140.00	140.00	0.00	11.14	11.14	48.00	48.00	86.50	88.97
150.00	150.00	0.00	11.94	11.94	48.00	48.00	86.50	89.34
160.00	160.00	0.00	12.73	12.73	48.00	48.00	86.50	89.73

Q			Veloc		Depth		HGL	
Total	Pipe	Over	Dn	Up	Dn	Up	Dn	Up
(cfs)	(cfs)	(cfs)	(ft/s)	(ft/s)	(in)	(in)	(ft)	(ft)
170.00	170.00	0.00	13.53	13.53	48.00	48.00	86.50	90.15
180.00	180.00	0.00	14.33	14.32	48.00	48.00	86.50	90.59
190.00	190.00	0.00	15.12	15.12	48.00	48.00	86.50	91.06
200.00	200.00	0.00	15.92	15.92	48.00	48.00	86.50	91.55
210.00	210.00	0.00	16.71	16.71	48.00	48.00	86.50	92.07

HGL	
Hw	Hw/D
(ft)	
85.35	0.31
85.90	0.45
86.35	0.56
86.74	0.66
87.11	0.75
87.46	0.84
87.81	0.93
88.15	1.01
88.57	1.12
88.93	1.21
89.33	1.31
89.77	1.42
90.24	1.54
90.75	1.66
91.31	1.80
91.89	1.95

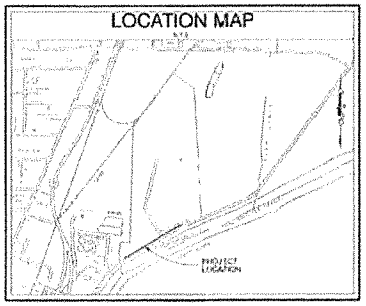
HGL	
Hw	Hw/D
(ft)	
92.52	2.11
93.19	2.27
93.89	2.45
94.63	2.63
95.41	2.83



MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-603

PUBLIC SIDEWALK IMPROVEMENTS FOR THE MCFADDEN PROPERTY CITY OF CORVALLIS - PIP11-XXXXX

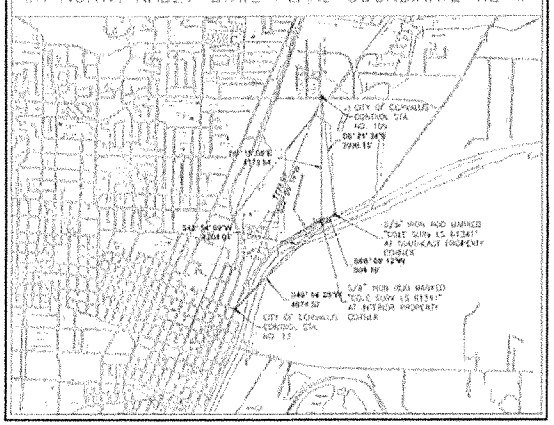
LOCATION MAP



GENERAL NOTES:

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT APPLICABLE CITY OR CORVALLIS STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS.
2. LOCATION AND PROTECTION OF EXISTING UTILITIES
   A. EXISTING UTILITIES LOCATED WITHIN THE PROJECT AREA ARE SHOWN AS ACCURATELY AND COMPLETELY AS POSSIBLE, HOWEVER, THE CONTRACTOR SHALL ERRIFY THAT THE RECORDS FROM WHICH THE EXISTING UTILITY DRAWINGS WERE PREPARED ARE NOT COMPLETE.
   B. VERIFY THE LOCATIONS OF ALL UTILITIES AND PROTECT THESE UTILITIES. ANY UTILITIES SHOWN ON THE DRAWINGS OR LOCATED IN THE FIELD THAT THE CONTRACTOR DAMAGES OR DAMAGES SHALL BE PROMPTLY REPAIRED TO NEW CONDITION. IF REQUIRED, INSTALL SUITABLE TEMPORARY SERVICE UNTIL REPAIR CAN BE COMPLETED. THE COST OF THE REPAIR OR TEMPORARY SERVICE SHALL BE BORNE BY THE CONTRACTOR.
   C. VERIFY THE DEPTH OF ALL UTILITIES EXPOSED. UNCONFIRMED UTILITIES SHALL NOT BE DISPLACED OR CUT UNTIL THE OWNER HAS APPROVED THE CUT.
   D. ATTENTION: OREGON LAW REQUIRES CONTRACTORS TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES SET FORTH IN OAR 952-001-0010 THROUGH 952-001-0090. CONTRACTORS MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER (503) 232-1987. THE TELEPHONE NUMBER FOR OREGON UTILITY NOTIFICATION CENTER IS (503) 232-1987. THE FAX NUMBER IS 1-(503) 332-2394.

OR NORTH NAD27 STATE PLANE COORDINATE TIE-IN



INDEX TO DRAWINGS

C3.00	COVERSHEET
C3.10	PUBLIC SIDEWALK IMPROVEMENTS PLAN - STA 10+29.21 TO STA 16+00
C3.21	PUBLIC SIDEWALK IMPROVEMENTS PLAN - STA 16+00 TO STA 22+00
C3.42	PUBLIC SIDEWALK IMPROVEMENTS PLAN - STA 22+00 TO STA 27+35.26
C4.00	DETAILS
STND	CITY OF CORVALLIS STANDARD DETAILS
L2.00	LANDSCAPE PLAN

PROJECT BENCHMARK:

THE PROJECT BENCHMARK IS A 5/8" IRON ROD WITH YELLOW PLASTIC CAP MARKED "EDGE SURV LS 61341" LOCATED AT THE SOUTHEAST CORNER OF THE PROPERTY. ELEVATION 225.31 FEET. THE ELEVATION WAS ESTABLISHED FROM CITY OF CORVALLIS BENCHMARK NO. 11, A 2" BRASS CAP IN THE SOUTH END OF THE CONCRETE SIDEWALK ON THE EAST SIDE OF THE HWY 99W OVERPASS. ELEVATION=255.070.

RECEIVED
OCT 21 2011
Community Development Planning Division

RECEIVED
OCT 28 2011
Development Engineering

LEGEND

(E)	EXISTING
(N)	NEW
EGAS	EXISTING GAS
EIRR	EXISTING IRRIGATION
EPWR	EXISTING POWER
ESSEW	EXISTING SANITARY SEWER
ESTM	EXISTING STEAM AND RETURN
ESTRM	EXISTING STORM DRAIN
ETCOM	EXISTING TELECOMMUNICATIONS
ECATV	EXISTING TV CABLE
EWATR	EXISTING WATER
GAS	NEW GAS
IRR	NEW IRRIGATION
PWR	NEW POWER
SSEW	NEW SANITARY SEWER
STRM	NEW STORM DRAIN
COMM	NEW TELECOMMUNICATIONS
CABL	NEW TV CABLE
WATR	NEW WATER
	EXISTING IMPROVEMENTS
	NEW IMPROVEMENTS
	FUTURE IMPROVEMENTS
	EXISTING PROPERTY LINE
	EXISTING SIGN PIPE OR ROD
	EXISTING EASEMENT
drainage	EXISTING RIGHT-OF-WAY
	EXISTING SIDEWALK
	EXISTING BUILDING OVERHANG
	CENTERLINE
	SAWCUT LINE
GLR	APPROXIMATE CLEARING LIMITS
	EXISTING DECIDUOUS TREE
	EXISTING EVERGREEN TREE
	EXISTING SHRUB
	FENCE
	DITCH FLOW LINE
	SANITARY SEWER MANHOLE
	STEAM AND RETURN MANHOLE
	STORM DRAIN MANHOLE
	TELECOMMUNICATIONS MANHOLE
	GAS VALVE
	WATER VALVE, AIR RELEASE VALVE
	WATER METER, GAS METER
	FIRE HYDRANT
	FIRE DEPARTMENT CONNECTION
	NOISE BOX
	IRRIGATION SPRINKLER HEAD
	CATCH BASIN
	CURB INLET
	CLEAN OUT
	RAIN DRAIN
	THRUST BLOCK
	STREET LIGHT, PARKING LOT LIGHT
	LANDSCAPE LIGHT
	UTILITY POLE
	UTILITY VAULT
	ELECTRICAL PEDESTAL
	TRANSFORMER
	CABLE PEDESTAL
	TELECOMMUNICATIONS PEDESTAL
	SIGN
	MAILBOX
	EXISTING CONTOURS
	NEW CONTOUR
	BENCH MARK
	EXISTING SPOT ELEVATION
XXX.XX	EXISTING TOP OF STRUCTURE OR CURB (TOG=TOP OF STRUCTURE)
XXX.XX	EXISTING FINISH ELEV (E=FLOW LINE)
XXX.XX	DESIGN TOP OF STRUCTURE OR CURB (TOG=TOP OF STRUCTURE)
XXX.XX	DESIGN FINISH (E=FLOW LINE)

DRAWING STATUS: PRELIMINARY / SUBMITTED / PERMIT SET / CONST. SET

No.	REVISION	DATE
1		
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DEVCO ENGINEERING INC.
Corvallis Oregon
541-757-8991
341 NE CONNECTER, P.O. BOX 223
CORVALLIS, OR 97339
WWW.DEVCOENGINEERING.COM

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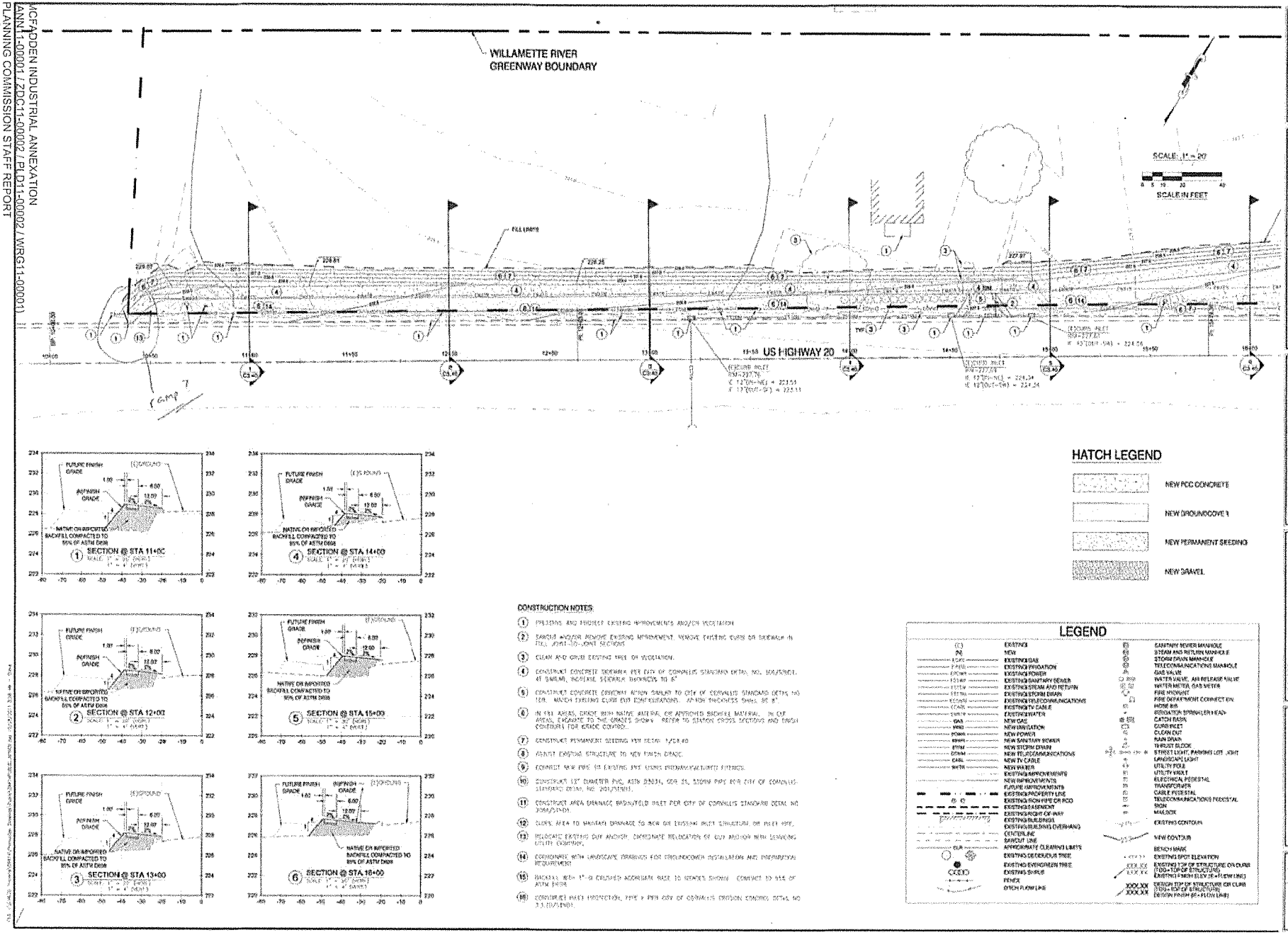
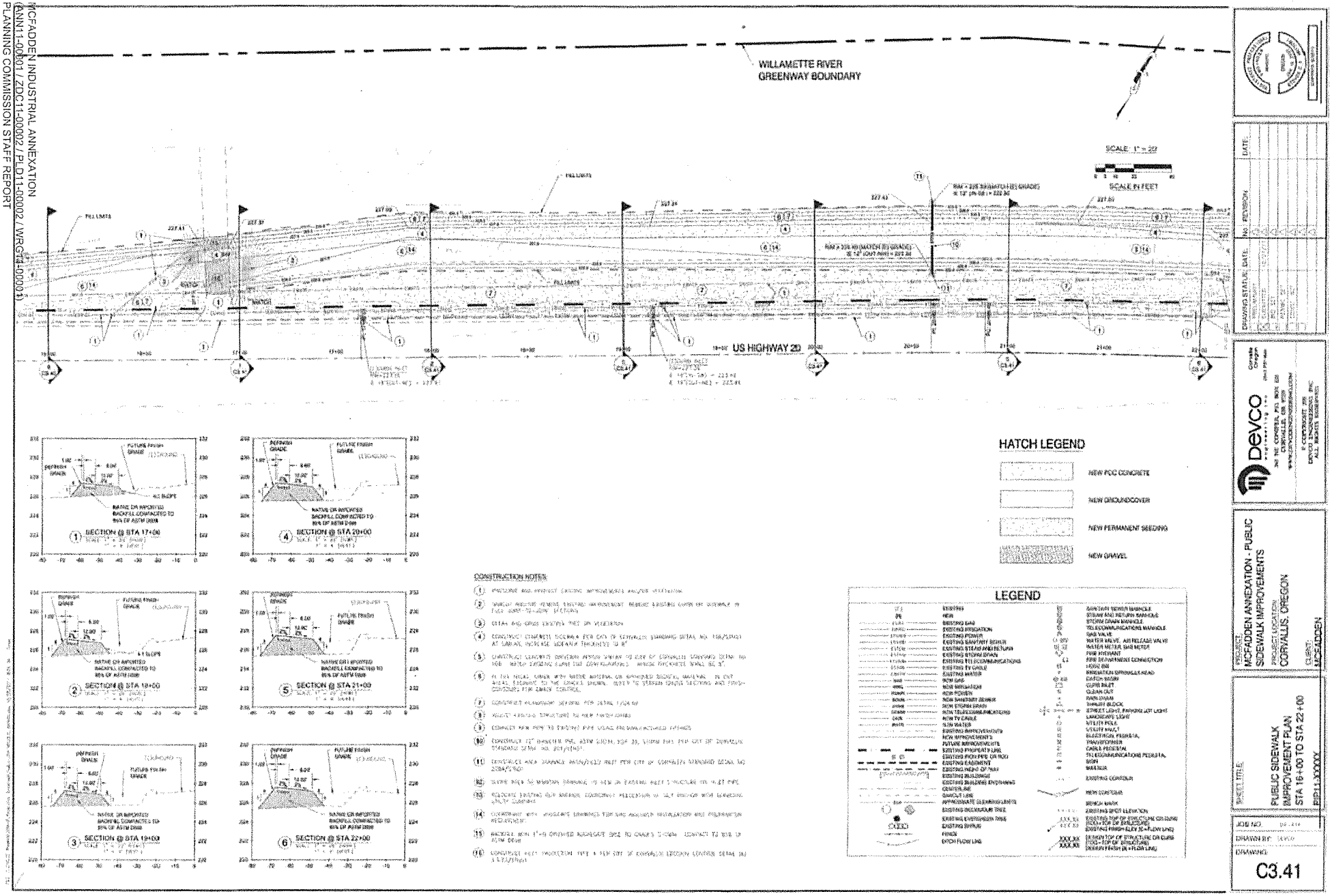
PROJECT: MCFADDEN ANNEXATION-PUBLIC SIDEWALK IMPROVEMENTS
PROJECT LOCATION: CORVALLIS, OREGON
CLIENT: MCFADDEN

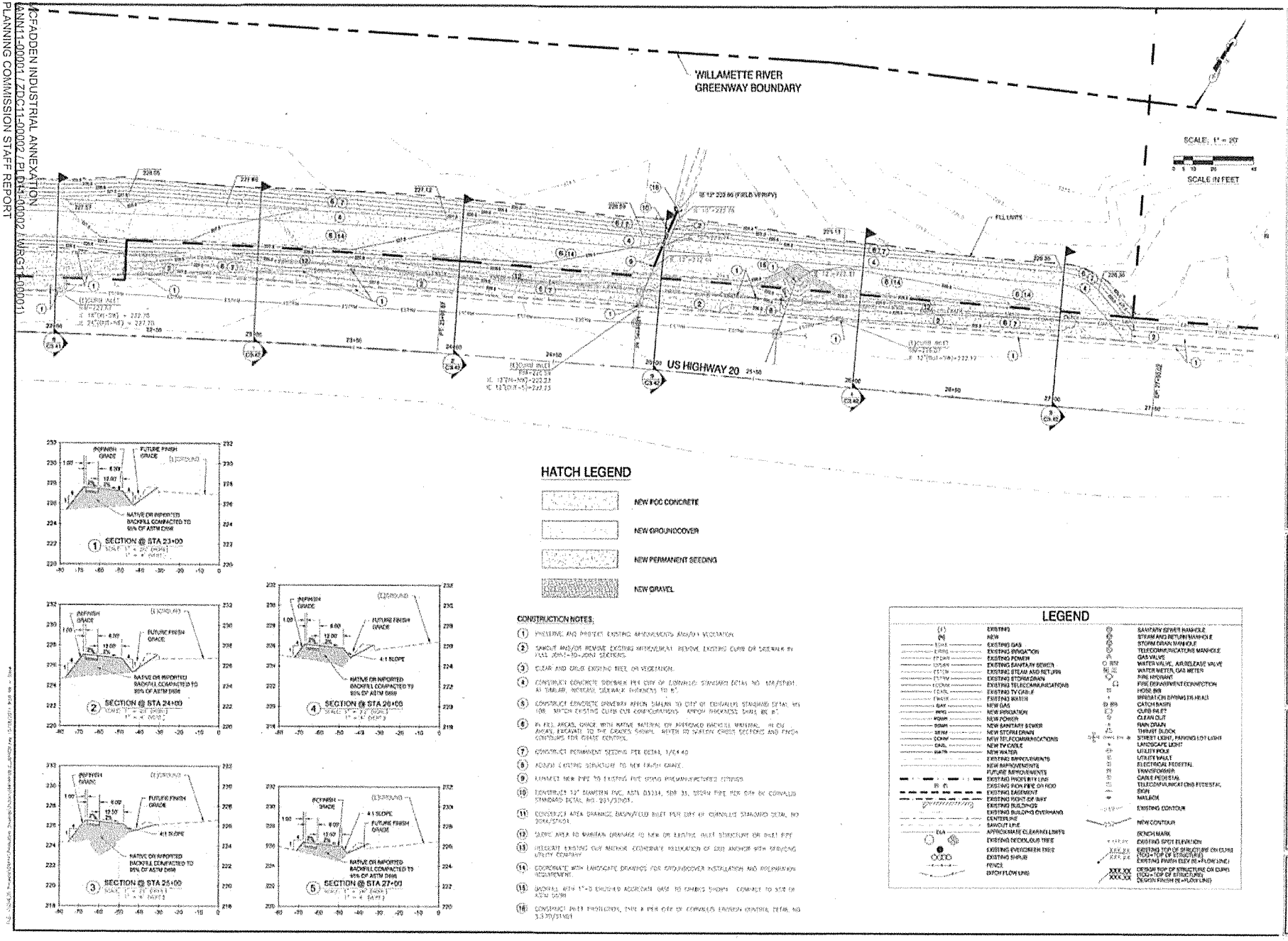
SHEET TITLE: COVERSHEET
PIP11-XXXXX

JOB NO. 09-411
DRAWN BY: JDG
DRAWING: C3.00



MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-606


WILLAMETTE RIVER
GREENWAY BOUNDARY
SCALE: 1" = 20'
SCALE IN FEET
US HIGHWAY 20
HATCH LEGEND
NEW PCC CONCRETE
NEW GROUNDCOVER
NEW PERMANENT SEEDING
NEW GRAVEL
SECTION @ STA 17+00
SECTION @ STA 18+00
SECTION @ STA 19+00
SECTION @ STA 20+00
SECTION @ STA 21+00
SECTION @ STA 22+00
CONSTRUCTION NOTES
LEGEND
devco
MCFADDEN ANNEXATION - PUBLIC SIDEWALK IMPROVEMENTS
CORVALLIS, OREGON
PUBLIC SIDEWALK IMPROVEMENT PLAN
STA 16+00 TO STA 22+00
C3.41



MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-608

Seed Fertilizer

All seed applied should be from specified lots and should be measured by Pure Live Seed (PLS) weight. Pure live seed refers to the portion of a seed lot that is live seed of the desired kind.

The seed lots should be tested and meet the minimum seed standards. Lots showing Oregon prohibited weeds are not approved. Seed must meet minimum viability standards. Oregon State University Extension Service keeps a listing of seed varieties that are certified to the CAU Extension Certified Seed Handbook. The seed mixing must be approved by the USU Seed Certification Board to be eligible for certification or meet the standards for certification.

- Temporary grass cover mixtures must be fully established by October 1st or when ground cover minimum will have to be implemented. In order to establish an 80% healthy stand of grass, all seeding applications must be completed prior to September 1st.
- Apply seeding when no further disturbances are planned
- Seed should be applied immediately after finished preparation while the soil is loose and moist.
- Apply as of before applying straw mulch
- Dry, loose, mowed-type straw mulch on seeds shall be applied at 4,000 lb/acre. Anchor straw by crimping in by hand or with equipment (mulcher, cover mulcher, etc.)
- Permanent or temporary irrigation shall be required especially in inherently low or dry months or on sloped sites. Where irrigation cannot should be scheduled to provide adequate moisture without causing runoff.

Site Preparation

- Mowing the mulched area to flood grade, remove all rocks and debris, and remove surface mechanisms larger than 2 inches
- Clean accumulated fence every from the mulched area
- For optimum seed up, conditional producers repair and maintain summer until land grades are established. Repair highwall area new grades.
- Straighten the soil by harrowing, raking, grooving or harrowing.
- Apply a neutralizer as needed to adjust pH to 6.0-7.5. Incorporate into mulch area with the soil.
- The mulches should be free bed and compact. The top 4-6 inches of soil should be loose, moist soil free of large clods and stones.
- If the mulches has been idle long enough for the soil to become compact, the top soil should be harrowed with a disk, spring tooth drag, spike tooth drag, or other equipment designed to condition the soil for seeding.
- Harrowing, raking or harrowing if soil is done horizontally across the face of the slope, or edges are along the slope contours.

Seeding

- Seed to soil contact is the key to good germination.
- Apply seed at the rates specified using cultivated seed operation, cyclone seeder, mechanical drill, or hydro seeder as the seed is applied uniformly on the site.
- Broadcast seed should be incorporated into the soil by raking or other harrowing and the lightly compacted to provide good seed soil contact.
- Apply mulch over the mulched areas
- To prevent seed from being washed away, mechanical installation of all mulched surface areas are not recommended.
- Exclude the use of seed applications when mulch seed seed is applied in a single application.
- Recommended common mulched grass seed mixture are as follows. Similar mixture designed to achieve mulch seed may be substituted with approval.

1. Seed Grass, not close height, low maintenance
   Seed Ratio Ryegrass, 85% by weight
   Creeping Red Fescue, 20% by weight
   Application rate: 100 pounds minimum per acre

Fertilizer

- Slow release fertilizers are more efficient and have fewer environmental impacts
- Annual lawn seeded may require soil tests to determine the exact type and quantity of fertilizer needed to prevent the over application of fertilizer. Use soil phosphorous fertilizer on disturbed areas within 50 feet of water bodies and wetlands
- The use of stockpiled topsoil or compost reduces the need for fertilizers and improves the overall soil quality.
- Applications rate per manufacturer's recommendation.

Mulch

- The straw mulch shall not be moldy, caked, damaged or of inferior hay quality.
- Can be applied on top of the seed or applied into the seed during hydro seeding
- The application rate of seed per acre should be increased if seed and mulch are applied in a single application.

Mulch Material	Quality Standards	Application Rate Per Acre	Depth of Material	Considerations
Straw	Air dried, free from noxious weeds and rotted materials	2 tons or 120 bales	4 inches max. uniform spread	Use where the mulching effects is to be maintained 3 months. When chopped straw is applied use a tackifier

Inspection & Maintenance

- Inspect areas for work in active sites, every every two weeks or monsoon rain, and within 24 hours following a 0.5-inch rain event.
- Newly seeded areas need to be inspected frequently to ensure the grass is growing.
- If the seeded area is damaged should be reseeded. Re-seed and mulch damaged areas.
- Spot seeding may be done on small areas to fill in bare spots where grass did not grow properly.
- If spot seeding is ineffective, use an alternate method such as sod or matting.
- Re-seed and protect with mulch any areas affected by erosion. If the erosion is caused by environmental runoff, the site overall problem and then re-seed and mulch the area.

1 PERMANENT SEEDING DETAIL
NTS

No.	REVISION:	DATE:
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DRAWING STATUS: DATE:
PRELIMINARY
APPROVAL
PERMIT
BIDDING
CONST. SET

DEVCO engineering inc.
Corvallis Oregon
541-757-1661
245 NE CONNECT, P.O. BOX 121
CORVALLIS, OREGON 97339
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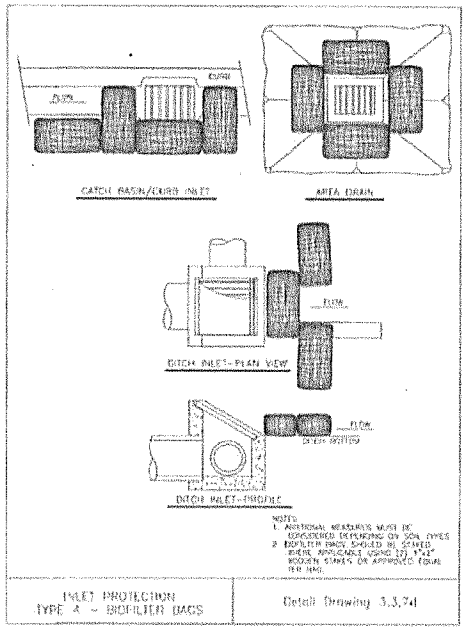
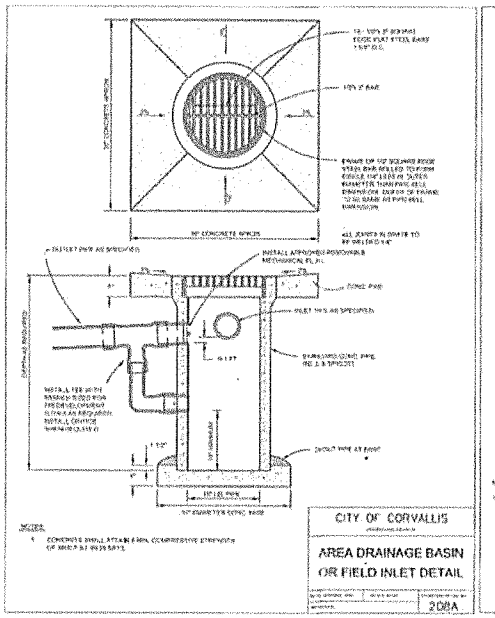
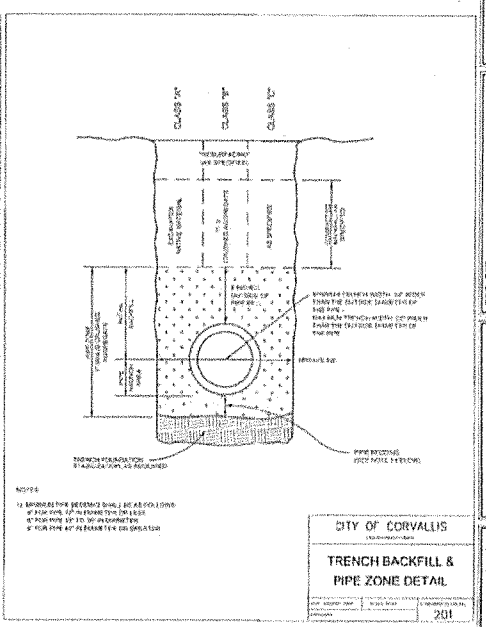
PROJECT:
MCFADDEN ANNEXATION - PUBLIC SIDEWALK IMPROVEMENTS
PROJECT LOCATION:
CORVALLIS, OREGON
CLIENT:
MCFADDEN

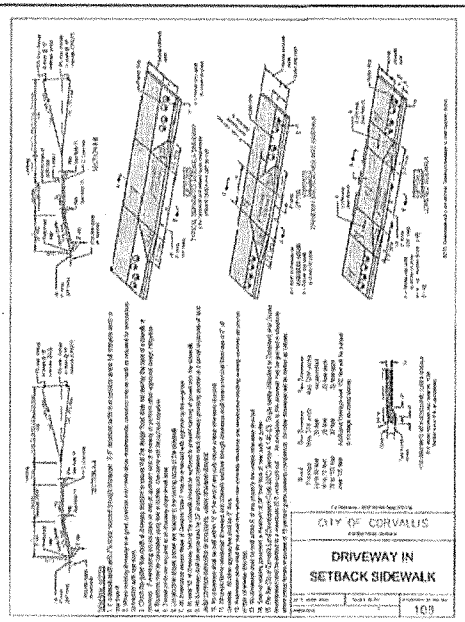
SHEET TITLE:
DETAILS
PIP11-XXXXX

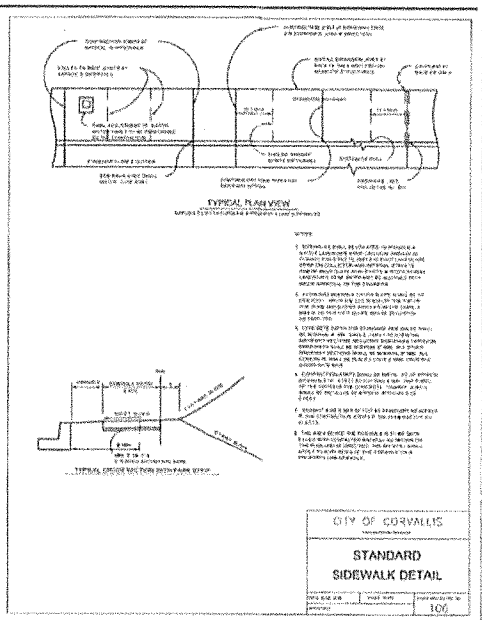
JOB NO: 09-414
DRAWN BY: HWG
DRAWING:
C4.40











DRAWING STATUS

	DATE
PRELIMINARY	
FOR REVIEW	10/27/11
FOR BID	
FOR CONST	
AS BUILT	

No	REVISION	DATE
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devco engineering inc.
Corvallis Oregon
541 758-5480
247 NW CHAPMAN, P.O. BOX 23
CORVALLIS, OR 97339
WWW.DEVCOENGINEERING.COM

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PROJECT:
MCFADDEN ANNEXATION - PUBLIC SIDEWALK IMPROVEMENTS

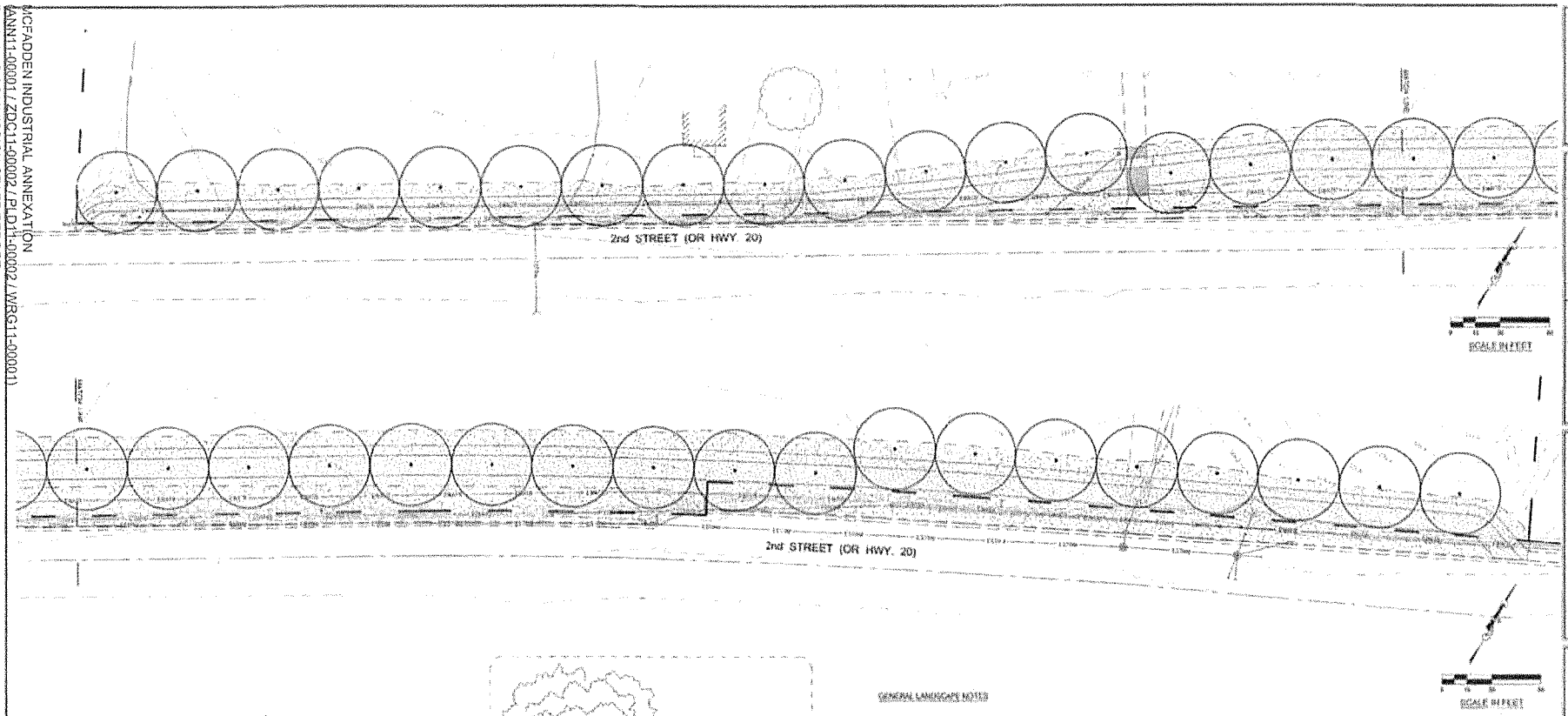
PROJECT LOCATION:
CORVALLIS, OREGON

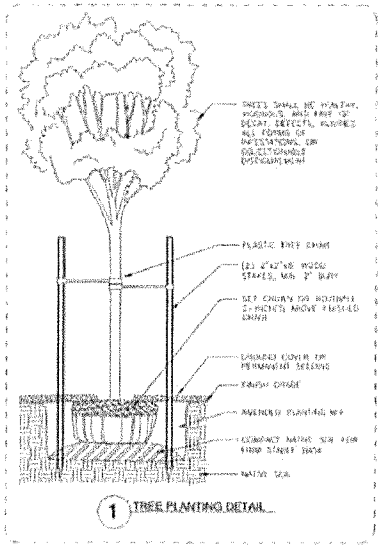
CLIENT:
MCFADDEN

SHEET TITLE:
CITY OF CORVALLIS STANDARD DETAILS

P/R11-XXXXX

JOB NO: 09-414
DRAWN BY: DCW/DB
DRAWING:
STND1





1 TREE PLANTING DETAIL

LANDSCAPE LEGEND

SYMBOL	PLANT	QUANTITY	SIZE	NOTES
	LARGE CANOPY TREE Acer saccharum Sugar Maple	34	2-1/2" Caliper	
	GROUND COVER Rubus calycinoides 'Emerald Carpet' Thimble Berry	As required	Min. 4" pots Max. 1 gal pots	Plant 4" sized pots at max. 18" o.c., in space Plant 1 gal. sized pots at max. 24" o.c., in space
	PERMANENT SEEDING See Public Sidewalk Improvement Plans			See Permanent Seeding Notes on Public Sidewalk Improvement Plans

GENERAL LANDSCAPE NOTES

1. ALL PLANTS AND PLANTING MATERIALS SHALL MEET OR EXCEED THE SPECIFICATIONS OF FEDERAL, STATE AND COUNTY LAWS REGULATING INSPECTION FOR PLANT DISEASE AND CONTROL.
2. PLANTS (INTERIOR AND CANOPY TREES) SHALL MEET OR EXCEED THE MINIMUM SIZES AND GRADES SPECIFIED IN AMERICAN STANDARDS FOR NURSERY STOCK, PUBLISHED BY AMERICAN ASSOCIATION OF NURSERYMEN. PROVIDE HEALTHY GROWN, WELL BRANCHED AND ROOTED, FULL FOLIAGED PLANTS IN CLEAN, FREE OF INSECTS, EGGS OR LARVAE, NOXIOUS WEEDS, DO NOT USE OVER GROWN PLANTS.
3. PLANTING AREAS TO BE FILLED WITH ON-SITE SOIL.
4. APPLY COMMERCIAL GRADE RELEASE FERTILIZER (OR APPROVED EQUAL) TO ALL PLANTING BEDS PER MANUFACTURER'S RECOMMENDATIONS AT TIME OF INSTALLATION.
5. MAINTAIN PLANTING AREA AS PER SPECIFICATIONS.
6. PLANTING BEDS WITH GROUND COVER SHALL RECEIVE A TOP COAT OF 3" FIR BARK MULCH.

GENERAL IRRIGATION NOTES

1. IRRIGATION SYSTEM TO BE DESIGN BUILD.
2. PLANT BEDS IRRIGATED WITH DRIP HOSES TO ENSURE 100% COVERAGE. MINOR ADJUSTMENT TO PLANT LOCATIONS MAY BE NECESSARY TO ENSURE PROPER COVERAGE.
3. UNLESS OTHERWISE NOTED, ALL IRRIGATION MAINLINES AND LATERAL LINES SHALL BE A 200 PSI, SCH 21 PVC TYPE.
4. SHARE IRRIGATION METERS WITH DISTRICT WHEN POSSIBLE.
5. INSTALL 1-#8 CHARGER GROUNDING AS PER SYSTEM AND 1-2" ELECTROMAGNETIC RATED PVC SENSORS AS PER SAME. PROVIDE UNION FITTED HOSE ON DRIPHEADS. EXTEND ENDS OF PVC PIPE OF 12 INCHES BEYOND EDGE OF ANY ASPHALTIC IMPROVEMENT.
6. CONTRACTOR TO STAKE MAIN LINES AND LATERAL LINES PRIOR TO SIDEWALK OR PLANTING AREAS.
7. INSTALL ALL MATERIALS AND EQUIPMENT IN STRICT ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS.
8. CALL FOR UTILITIES LOCATION PRIOR TO ANY EXCAVATION. LOCATE ALL ABOVE AND BELOW GROUND UTILITIES AND PROTECT THEM FROM DAMAGE. REQUIRED REPAIRS ON AS A RESULT OF CONSTRUCTION OF IRRIGATION SYSTEM.
9. INSTALL IRRIGATION SYSTEM TO MEET ALL APPLICABLE CODES AND INSPECTION AND OBTAIN ALL REQUIRED PERMITS PRIOR TO CONSTRUCTION.
10. USE THICK SCREEN, 12-INCH POP-UP SPRINKLER HEADERS FOR ALL AREAS.
11. CONNECTION TO WATER SOURCE. MAKE LOCATION ON WATER MASTER AND CONFIRM FLOW. MAKE ARRANGEMENTS FOR WATER SHUT-OFF IF NECESSARY. NOTIFY OWNER OF WATER SERVICE INTERRUPTION 24 HOURS PRIOR TO SHUT-OFF, IF NECESSARY.
12. VALVES TO BE BURIED UNDERNEATH WITH MINIMUM COVERAGE.

devco engineering inc.
Corvallis Oregon
(541) 757-8991
350 NW Conifer, PO Box 339
Corvallis, OR 97339
www.devcoengineering.com
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DRAWING STATUS	DATE
90% PRELIMINARY	10/27/11
100% PRELIMINARY	11/10/11
100% FINAL	12/14/11
CONSTRUCTION	12/28/11

NO.	REVISION	DATE
1		
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PROJECT
MCFADDEN ANNEXATION - PUBLIC SIDEWALK IMPROVEMENTS
PROJECT LOCATION
CORVALLIS, OREGON
CLIENT
MCFADDEN

SHEET TITLE
LANDSCAPE PLAN
PIP11-XXXXX

JOB NO. 09114
DRAWN BY: JEWS
DRAWING
L2.00

MCFADDEN INDUSTRIAL ANNEXATION (ANN11-00001)
CITY COUNCIL STAFF REPORT
EXHIBIT F-611

CORVALLIS
ENHANCING COMMUNITY LIVABILITY

MEMORANDUM

DATE: December 21, 2011

TO: Mayor and City Council

FROM: Jason Yaich, Associate Planner

SUBJECT: Correspondence with Councilor Raymond Related to the McFadden Industrial Annexation (ANN11-00001)

On December 19, 2011, Councilor Jeanne Raymond presented several questions to City staff regarding the McFadden Industrial Annexation request. Attached are staff responses to those questions.

The City Council should note that the Planning Commission has approved the associated Zone Change, Planned Development, and Willamette River Greenway applications, contingent upon Council placement of the annexation question on the May 2012 ballot and passage of the annexation measure in the May election. There are a number of conditions of approval associated with those applications. However, because those decisions by the Planning Commission have not been appealed, the sole application under consideration by the City Council is the request to place the annexation measure on the May 2012 ballot. Consequently, the information provided here should be considered in light of the applicable annexation criteria, with an understanding that the specific details of the Zone Change, Planned Development, and Willamette Greenway applications are not subject to a City Council decision.

Yaich, Jason

From: Yaich, Jason
Sent: Monday, December 19, 2011 3:24 PM
To: Ward 7
Subject: McFadden Industrial Annexation questions

Hello Councilor Raymond,

The following are responses to questions you provided to Kevin Young, after discussing the McFadden Industrial Annexation application with Kevin on December 19th at the Planning Division office.

1. **What is the building setback from the river?**
   A 120-ft. High Protection Riparian Corridor setback applies to this site. This 120-ft. setback is measured from the top of bank of the Willamette River. This setback is illustrated on the proposed Detailed Development Plan (page 13 of Exhibit D to the City Council staff report).There are two other development related setbacks that apply to the frontage / front yard of the McFadden property as well. The GI zone requires that all buildings be setback from the Highway 20 (arterial highway) right-of-way line a minimum of 50 feet (LDC Section 3.24.30.02.b.1). Additionally, a 100-ft. development setback applies to the southwest corner of the McFadden property because it abuts a residential property line at that location. The 100-ft. and 120-ft. setbacks are best illustrated on page 13 of Exhibit D, to the City Council staff report (Detailed Development Plan). The 50-ft. setback is not illustrated on that page. The 120-ft. Riparian Corridor setback is more restrictive than the 50-ft. arterial highway setback in this case because it extends further north into the site.

2. **What use types are precluded?**

   The GI zone permits the following uses, which the applicant is voluntarily proposing to not allow (see Condition #9, page 6 of Exhibit D to the City Council staff report):

   - kennels
   - scrap operations
   - explosive or fuel storage

3. **What is the difference between the County industrial zone versus the City General Industrial zone in terms of review process and permitted uses?**

   Uses permitted outright, and through the Conditional Development Permit process, are outlined in the City's GI zone, starting of page 143 of Exhibit F to the City Council staff report. Uses permitted outright, and through a Conditional Development Permit process in Benton County's Urban Industrial zone are listed on page 469 of Exhibit F to the City Council staff report.

4. **What is the proposed # of trips - trip cap?**

   The applicant is proposing to limit the trip generation in the following manner:

   AM peak hour trips: 719 trip ends (max)
   PM peak hour trips: 736 trip ends (max)
   weekday: 5,957 trip ends (max)

See Condition # 7 on page 5 of Exhibit D to the City Council staff report. Additionally, Condition # 6 on the same page of Exhibit D limits the maximum floor area ratio to no more than a total of 855,906 square feet for the entire development site. Both conditions work together so that "the floor area shall be the lesser of the FAR calculation (as calculated per Condition #6) or the floor area used in the trip end calculation methodology." Because of the tie between the two conditions, the actual trip generation cap outlined in Condition # 6 may fall below that specified in Condition # 7.

Please let me know if you have any additional questions.

Sincerely,

Jason Yaich
Associate Planner - City of Corvallis Planning Division

p: 541.766.6577
e: jason.yaich@ci.corvallis.or.us
w: http://www.ci.corvallis.or.us/cd

The City of Corvallis invites you to

Martin Luther King, Jr. Day Celebration

Speaker

Dr. Robert Thompson
Professor of Ethnic Studies and African American Studies
Speaking on the topic of Poverty

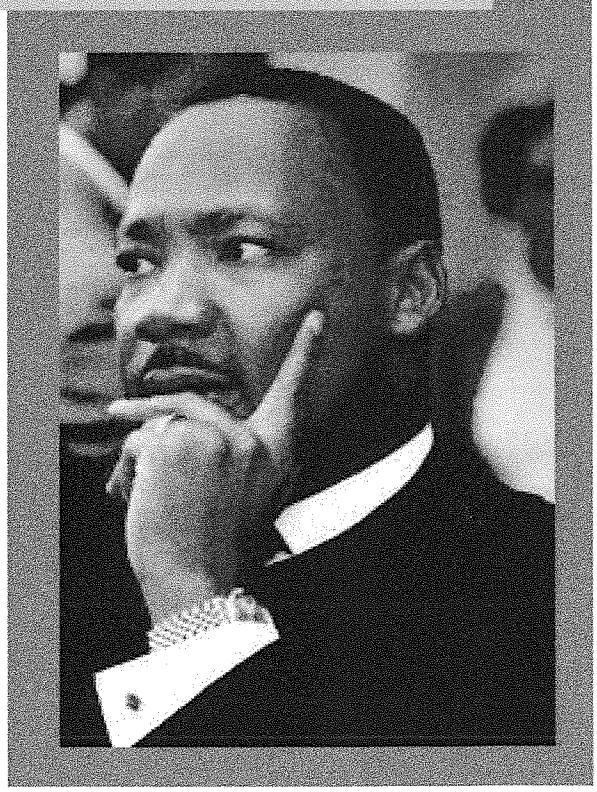
Choir Performances

Highland Gospel Choir
Lessie Williams, Choral Director

Linn-Benton Community College Chamber Choir
James Reddan, LBCC Director of Choral Activities

Recognition of Local Agencies

Community Outreach, Inc.
The Vina Moses Center
South Corvallis Food Bank
Corvallis Homeless Shelter Coalition



Wednesday, January 11, 2012
7:00 pm
Majestic Theater

No Admission Fee
Non-perishable food items are appreciated
Community Reception to Follow

CORVALLIS

Sponsored by the Commission for MLK, Jr.
City of Corvallis

An ASL interpreter can be provided with 48 hours' notice prior to event. Call 541-766-6902 or TTD/TTY Oregon Relay 711.

MEMORANDUM

DATE: January 3, 2012

TO: Mayor and Council

FROM: Ken Gibb, Community Development Director

RE: Proposed Redevelopment Project

Councilors and Staff have been receiving several questions and comments regarding a building permit application to develop multi-family housing at a site commonly known as Wilson Woods. The following will provide background and information about the status of the project relative to city permitting:

- The project site is located east of 29th Street, between Tyler and Polk Streets and is about 2.56 acres in size.

- About 1.76 acres of the site is zoned RS-20 (the City's highest density zone) and 0.8 acres RS-9U, a medium density zone

- The current zoning pattern (high and medium density mix) has been in place more than 30 years although specific development requirements have changed over time. Based on this zoning, at least 40 units are required to meet density minimums of the Code

- Higher density multifamily housing is a permitted use in these zones and there is no Planned Development designation on this site. Therefore, there are no requirements for public notice and/or a public hearing for development activity that meets all provisions of the Land Development Code

- The site is not located within a Historic District and is not listed in the local or national register of historic places. Therefore, the site is not regulated by local historic preservation codes

- A demolition permit was issued on December 28, 2011, for the purpose of demolishing the existing 40 units on the site. The permit was approved in accordance with Chapter 9 of the Corvallis Municipal Code. No public notice is required prior to issuance of a demolition permit

- Hazardous materials issues (such as asbestos removal) are typically regulated by Oregon DEQ. The City has no statutory authority to hold up permits based on these issues. Demolition permits, including that issued for the Wilson Woods site, include conditions that make the contractor aware of their legal obligations in terms of resolving hazardous materials issues.

- City staff are reviewing proposed plans for a project called the Tyler Street Townhouses, but a building permit has not yet been issued

- The plans propose 45-50 units with 107 parking spaces. These numbers are subject to revision during the plan review process in order to meet Land Development Code and Building Code requirements.

Past, current and future information about the status of this project is available through ***corvallispermits.com*** and by referencing BLD11-01194.

In developing this application, we've worked pretty closely with the adjacent residential and industrial neighbors. We've received valuable feedback & maintained good communication with these folks.

I'm going to briefly discuss a few key points, primarily relating to the "public need" decision criterion for the annexation.

The background section of article 8 of the City's Comprehensive Plan states: *"The challenge Corvallis faces is to continue diversifying its economic base while retaining the stability and quality of life that has marked its past." That statement was adopted by the City in 1998, and is certainly valid today. However, it's extremely difficult to diversify when there is not a sufficient inventory of General Industrial land to provide choices in the market."*

Economic Development professionals have provided analyses in our application, establishing that many traded-sector industries, identified as compatible with this community, require relatively large sites and that Corvallis is lacking in such sites.

Mike Williams, a State of Oregon Industrial Lands Specialist says, *"Corvallis has been repeatedly and routinely bypassed for scale projects over 20 acres due to a lack of ready to go, larger-parcel land inventory."*

Findings in Article 8 of the Comprehensive Plan, regarding industrial land, also recognize that, *"Many firms require areas of at least 30 to 50 acres."*

On November 15th, I spoke with Bob Warren, the State Business Development Officer for Benton, Lane and Linn counties. He gave me permission to quote him, and he further reinforced the findings in our application, stating: *"Large industrial sites are very important in a community's inventory, and quality large sites are incredibly hard to find. Corvallis has extremely limited choices in this land-use designation."*

Every vacant, GI site over 20 acres is located in the southwest quadrant of the city. All have been in the city limits for over 25 years.

Just to the south of these sites, lies the Airport Industrial Park, which is not in the city limits and is not a factor in the decision criterion. We recognize, however, that the City owns, operates and maintains this area. While the airport area is suitable for many uses, it does not provide the characteristics needed by certain employment sectors identified in the "Prosperity That Fits" Action Plan as desirable for and compatible with this community. It's also in virtually the same location as the vacant, South Corvallis General Industrial sites. Article 8 of the Comprehensive Plan calls for a "variety of locations" and "diversity of locations" of industrial land within the community. With 100% of the larger GI sites in one quadrant of the city, there is simply no locational diversity.

The McFadden parcel offers, not only geographic balance, but also markedly different characteristics. It would make Corvallis much more competitive in fostering the growth of existing businesses and in recruiting the traded-sector employers it hopes to attract.

The City's Land Development Information Report does not currently factor in wetlands as a development constraint. In *defining* development constraint, DLCD's Administrative Rules prominently cite wetlands: *(2) "Development Constraints" means factors that temporarily or permanently limit or prevent the use of land for economic development. Development constraints include, but are not limited to, wetlands..."*

The South Corvallis General Industrial sites are dominated by Locally Significant Wetlands.

In the Executive Summary of a current Industrial Lands Project report, Council of Governments staff state: *"The extent of wetlands in the Mid-Willamette Valley has been identified both locally and at the state level as an industrial development barrier. When wetlands are present on a vacant industrial site, it is usually necessary for the developer to obtain removal-fill permits from both the Oregon Department of State Lands and the US Army Corps of Engineers. This permitting process adds time, effort, expense and uncertainty to the development process."*

Employers, who may otherwise be interested in a parcel of land, are likely to be dissuaded when considering the delay, expense and uncertainty inherent in extensive wetlands.

There are also significant issues and constraints relative to provision of public services to these vacant GI sites, discussed both in our application and in the staff report.

Additionally, the quantity and quality of power in South Corvallis is sufficient for *some* businesses, but many require greater quantities of redundant electrical power, which <u>is</u> available at the subject site.

When all of these issues are coupled with predominant wetlands, it becomes questionable whether these properties are reasonably available as part of a five year inventory of General Industrial land.

Another constraint for certain types of employers is the presence of the Airport Approach Safety Zone, depicted by the gold line. The Southern General Industrial sites fall within the blue city limits line. Within this Airport Safety Zone, federal regulations prohibit places of public assembly, uses that may cause electrical interference with navigational or radio signals, anything that could cause impair visibility for pilots including glare, smoke and steam. They also prohibit uses which create bird strike hazards, such as water impoundments. This could be problematic for storm water detention, resulting in another potential development constraint.

The Airport Approach Safety Zone directly affects about 100 acres of these South Corvallis sites. In speaking with the City's consultant who is currently updating the Airport Master Plan, I understand that this area will be increased to comply with current federal regulations.

Total inventory in one geographic location; that is not easily or cost-effectively serviced; and has numerous physical and use constraints, does not equate to

reasonably developable land, such as one might expect in a "Five Year Inventory," nor does it equate to a sufficient inventory to provide choices in the market place.

In a letter included in our application, Michael Williams, wrote:
"Several things recommend and differentiate the (McFadden) site including large parcel size, availability of quality electrical service, proximity to HP campus and transportation connectivity."

Bob Warren, stated, *"This site has regional significance and offers unique advantages: size; proximity to HP, OSU and emerging businesses; transportation connectivity; and quality power."*

John Sechrest, who was the Corvallis Economic Development Director between 2006 and 2010 stated: *"The McFadden property provides a significant opportunity for Corvallis to diversify industrial property inventory..."*

"The current properties available have significant barriers to development and do not represent an adequate supply of property to ensure choices in the marketplace."

"Annexation of this property helps to ensure that Corvallis actually has buildable property, which addresses the five year supply of general industrial land."

There is vigorous competition to attract and retain the most desirable traded-sector employers. With all of its amenities and quality of life, Corvallis should be highly competitive for the types of employers it seeks to attract and retain, but it is *"repeatedly and routinely bypassed due to a lack of industrial land inventory."*

The Comprehensive Plan, adopted in 1998 references *"stable economic conditions."* While this City hasn't been hit as hard as some, even in Corvallis, the days when we can take economic stability for granted are gone.

Many people choose to live in Corvallis because of the outstanding quality of life that's a hallmark of this community. There are aspects of the City's overall livability that are inherent in its location in the Willamette Valley, but other livability factors depend upon family- wage jobs and a sufficient tax base to fund education, public amenities, facilities and services. Maintaining the quality of life cited in the comprehensive plan is possible when there's a healthy, stable economy.

We realize that the decision criteria, the livability indicators and benchmarks, are not weighted. When viewed on balance however, we believe there are substantial findings that the advantages of this proposal markedly outweigh any potential disadvantages.

Corvallis Chamber of Commerce

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Mobile Computing Solutions
T. Gerding Construction Co.

Date: January 3, 2012

To: Mayor Julie Manning and Corvallis City Council

From: Corvallis Chamber of Commerce Government Affairs Committee

My name is Marcy Eastham and I am the Executive Director of the Corvallis Chamber of Commerce. I am here tonight representing the Chamber's Government Affairs Committee, which is comprised of representatives of both small and large Corvallis area businesses. These Chamber members care about Corvallis and seek ways to support local business development and encourage job creation.

Tonight, we are lending our voice of support to move the proposed McFadden annexation to the citizens of Corvallis for approval. Our testimony to the Corvallis Planning Commission is in your packet this evening, and our position on this proposal remains as noted in the document submitted to the Commission.

We believe that the annexation of this property will give Corvallis opportunities to expand job creation, encourage clean industry options, and provide space for small businesses to move to the next level. Having that type of space available is an important tool for keeping business in our community, and keeping jobs local.

As we noted in our testimony to the Planning Commission, we support growth that is planned, thoughtful, and desirable. We hope the Council will recognize that this is an opportunity to take a step forward for the benefit of the citizens of our community and the future economic prosperity of our region.

Thank you for the opportunity to share our support for this proposal.

420 NW Second Street, Corvallis, Oregon 97330 | 541.757.1505 | corvallischamber.com

McFadden Annexation — City Council Testimony —1/2/12

My name is Curtis Wright. I reside at here in Corvallis.

I'm here to speak in favor of your approving an annexation vote for the McFadden property.

As most of you know, I served on the Prosperity That Fits Economic Development Plan Steering committee, and now serve on the City's Budget Commission. It didn't take being on either body very long to realize what profound challenges our city faces in achieving economic well-being and assuring adequate funding for city services.

We need more jobs, more better paying jobs in Corvallis. We need more tax revenue, especially if it comes from properties that don't draw heavily on city or school district services.

Annexing the McFadden property into our City is a sound and sensible step in the right direction toward helping to solve both of those problems.

The McFadden property has a location and available services that are more like what businesses are looking for than most of the industrial land elsewhere in Corvallis. It's more likely development will happen here faster, creating more jobs, sooner. And because this property isn't in any of the Enterprise Zones, new development here will generate new property taxes immediately.

Annexing the McFadden property can create these positive opportunities. That's good for Corvallis.

Annexing the McFadden property can also prevent negative possibilities. And that's even better for the citizens of Corvallis.

As I understand it, there are some significant natural resources on a portion of the property. While the County standards for protection and preservation are stringent, our City's are even stronger. With this property in the City, Mother Nature fares better than if we leave her out in the County.

you've heard

As I ~~understand it~~, the County's zoning would permit a ~~"vehicular parts procurement operation" here. I think that's government-speak for what most of would call an auto junkyard~~ junkyard here. Is that really the kind of development the citizens of Corvallis want next to the beautiful HP campus, across from the beautiful Willamette River, on a major highway into our beautiful downtown? Our City's zoning wouldn't permit it. With this property actually in the city, Beautiful Corvallis doesn't risk an eyesore on land most people already think is within city limits.

Creating positive opportunities. Preventing negative possibilities. It's what the citizens of Corvallis can do, if you give them a chance to vote on annexing the McFadden property. Please give the voters that chance. Thank you.