



City of Tigard

Tigard Business Meeting – Agenda

TIGARD CITY COUNCIL

MEETING DATE AND TIME: September 23, 2014 - 6:30 p.m. Study Session; 7:30 p.m. Business Meeting

MEETING LOCATION: City of Tigard - Town Hall - 13125 SW Hall Blvd., Tigard, OR 97223

PUBLIC NOTICE:

Anyone wishing to speak on an agenda item should sign on the appropriate sign-up sheet(s). If no sheet is available, ask to be recognized by the Mayor at the beginning of that agenda item. Citizen Communication items are asked to be two minutes or less. Longer matters can be set for a future Agenda by contacting either the Mayor or the City Manager.

Times noted are *estimated*; it is recommended that persons interested in testifying be present by 7:15 p.m. to sign in on the testimony sign-in sheet. *Business agenda items can be heard in any order after 7:30 p.m.*

Assistive Listening Devices are available for persons with impaired hearing and should be scheduled for Council meetings by noon on the Monday prior to the Council meeting. Please call 503-639-4171, ext. 2410 (voice) or 503-684-2772 (TDD - Telecommunications Devices for the Deaf).

Upon request, the City will also endeavor to arrange for the following services:

- Qualified sign language interpreters for persons with speech or hearing impairments; and
- Qualified bilingual interpreters.

Since these services must be scheduled with outside service providers, it is important to allow as much lead time as possible. Please notify the City of your need by 5:00 p.m. on the Thursday preceding the meeting by calling: 503-639-4171, ext. 2410 (voice) or 503-684-2772 (TDD - Telecommunications Devices for the Deaf).

SEE ATTACHED AGENDA

VIEW LIVE VIDEO STREAMING ONLINE:

<http://live.tigard-or.gov>

CABLE VIEWERS: The regular City Council meeting is shown live on Channel 28 at 7:30 p.m. The meeting will be rebroadcast at the following times on Channel 28:

Thursday 6:00 p.m. Sunday 11:00 a.m.

Friday 10:00 p.m. Monday 6:00 a.m.



TIGARD CITY COUNCIL

MEETING DATE AND TIME: September 23, 2014 - 6:30 p.m. Study Session; 7:30 p.m. Business Meeting

MEETING LOCATION: City of Tigard - Town Hall - 13125 SW Hall Blvd., Tigard, OR 97223

6:30 PM

- STUDY SESSION

1. DISCUSSION ON UPCOMING CONTRACTS **6:30 p.m. estimated time**

- EXECUTIVE SESSION: The Tigard City Council will go into Executive Session to discuss labor negotiations, and litigation or litigation likely to be filed, under ORS 192.660(2) (d) and (h). All discussions are confidential and those present may disclose nothing from the Session. Representatives of the news media are allowed to attend Executive Sessions, as provided by ORS 192.660(4), but must not disclose any information discussed. No Executive Session may be held for the purpose of taking any final action or making any final decision. Executive Sessions are closed to the public. **6:35 p.m. estimated time**

7:30 PM

2. BUSINESS MEETING

- A. Call to Order
- B. Roll Call
- C. Pledge of Allegiance
- D. Council Communications & Liaison Reports
- E. Call to Council and Staff for Non-Agenda Items

3. CITIZEN COMMUNICATION (Two Minutes or Less, Please)

- A. Citizen Communication – Sign Up Sheet
- B. Follow-up to Previous Citizen Communication

4. CONSENT AGENDA: (Tigard City Council) These items are considered routine and may be enacted in one motion without separate discussion. Anyone may request that an item be removed by motion for discussion and separate action. Motion to:

- A. APPROVE CITY COUNCIL MINUTES:
 - July 8, 2014
 - August 12, 2014
- B. ADOPT RIVER TERRACE STORMWATER MASTER PLAN
- C. AUTHORIZE THE CITY MANAGER TO SIGN A WASHINGTON COUNTY CONSOLIDATED COMMUNICATIONS AGENCY (WCCCA) INTERGOVERNMENTAL AGREEMENT (IGA) AMENDMENT

• Consent Agenda - Items Removed for Separate Discussion: Any items requested to be removed from the Consent Agenda for separate discussion will be considered immediately after the Council/ City Center Development Agency has voted on those items which do not need discussion.

- 5. CONSIDER A HERITAGE TREE NOMINATION **7:35 p.m. estimated time**
- 6. RECEIVE UPDATE ON RIVER TERRACE DRAFT FUNDING STRATEGY PLAN **7:45 p.m. estimated time**
- 7. CONSIDER AN ORDINANCE TAXING THE SALE OF MARIJUANA AND MARIJUANA-INFUSED ITEMS **8:45 p.m. estimated time**
- 8. APPOINT NORMA ALLEY AS DEPUTY RECORDER **9:05 p.m. estimated time**
- 9. COUNCIL LIAISON REPORTS **9:10 p.m. estimated time**
- 10. NON AGENDA ITEMS
- 11. EXECUTIVE SESSION: The Tigard City Council may go into Executive Session. If an Executive Session is called to order, the appropriate ORS citation will be announced identifying the applicable statute. All discussions are confidential and those present may disclose nothing from the Session. Representatives of the news media are allowed to attend Executive Sessions, as provided by ORS 192.660(4), but must not disclose any information discussed. No Executive Session may be held for the purpose of taking any final action or making any final decision. Executive Sessions are closed to the public.
- 12. ADJOURNMENT **9:15 p.m. estimated time**

AIS-1914

1.

Business Meeting

Meeting Date: 09/23/2014

Length (in minutes): 5 Minutes

Agenda Title: Discussion on Upcoming Contracts

Prepared For: Joseph Barrett

Submitted By: Joseph Barrett, Financial and Information Services

Item Type: Update, Discussion, Direct Staff **Meeting Type:** Local Contract Review Board

Public Hearing No

Newspaper Legal Ad Required?:

Public Hearing Publication

Date in Newspaper:

Information

ISSUE

Discussion of contracts coming before the Local Contract Review Board in coming weeks.

STAFF RECOMMENDATION / ACTION REQUEST

Staff is asking Council to provide direction and inform staff of any additional information they would like to have presented during the contract award for upcoming contracts The Local Contract Review Board will be presented with a contract award motion for this contract at their October 28th Business Meeting.

KEY FACTS AND INFORMATION SUMMARY

Automated Materials Handling System

The Tigard Public Library (Library) currently has the fourth highest circulation, in amount of materials, among Washington County Cooperative Library Service (WCCLS) member libraries. The Library currently circulates over 1,325,000 items annually and it is projected that circulation will increase in coming years. Roughly two-thirds of that number are first-time checkout and the remaining one-third are renewals. Library staff checks in approximately 2,860 items on an average day. This number includes items that arrive each day from the WCCLS courier and need to be checked in via a staff induction process. Roughly 60% of the Library's check-ins are returned by patrons inside the Library while the remaining are returned outside via book drops.

These circulation and return numbers have led the Library to look for efficient ways to best serve the patrons while efficiently handling the volume. An automated materials handling

(AMH) system will serve to achieve this efficiency. The AMH would allow staff or patron to induct materials into the system via inside location or book drop build into an outside location.

On July 2, 2014 the city issued a Request for Proposal (RFP) for an AMH system for the Library. The objective of the RFP was to solicit proposals from qualified and experienced firms to determine what system they would suggest, and the total cost of the recommended system. In order to insure the objective was met, the RFP was issued with three evaluation criteria (with overall weight):

- Firm Qualifications (40%);
- Project Understanding & Approach (30%); and
- Cost Structure (30%)

The city received proposal responses from four firms. The city reviewed these responses and felt additional information was required to make the best decision. The city issued a request for additional information on August 13th and received the information from all submitting proposers the next week. A selection team of five staff members reviewed this information along with the original submitting information and scored the proposals. The results of the selection teams review is as follows:

1. Lyngsoe Systems, Inc. - 435 points (average of 87)
2. 3M Library Systems - 380 points (average of 76)
3. Bibliotheca - 377 points (average of 75.4)
4. P.V. Supa, Inc. - 285 points (average of 57)

Based on the selection teams review and the firm meeting the requirements of the RFP, staff will be recommending the city award a contract for the Library's AMH project to Lyngsoe Systems, Inc. in the amount not to exceed \$325,000 at the Local Contract Review Board's (LCRB) October 28th business meeting. Staff is seeking the LCRB's direction on any additional information they would like to best make an award decision.

OTHER ALTERNATIVES

COUNCIL GOALS, POLICIES, APPROVED MASTER PLANS

DATES OF PREVIOUS COUNCIL CONSIDERATION

This is the first time this contract has been discussed with the Local Contract Review Board.

Fiscal Impact

Cost: \$325,000

Budgeted (yes or no): Partially

Where budgeted?: Library Administration

Additional Fiscal Notes:

The Adopted Budget for Fiscal Year 2015 includes \$300,000 in appropriations for buying AMH. The not to exceed bid of \$325,000 exceeds the budget by \$25,000. Should the contract be awarded, staff will request that Council appropriate the additional \$25,000 from General Fund Contingency at a future supplemental.

Attachments

No file(s) attached.

AIS-1924

4. A.

Business Meeting

Meeting Date: 09/23/2014

Length (in minutes): Consent Item

Agenda Title: Approve City Council Meeting Minutes

Submitted By: Carol Krager, City Management

Item Type: Motion Requested

Meeting Type: Consent
Agenda

Public Hearing:

Publication Date:

Information

ISSUE

Approve City Council meeting minutes.

STAFF RECOMMENDATION / ACTION REQUEST

Approve minutes as submitted.

KEY FACTS AND INFORMATION SUMMARY

Attached council minutes are submitted for City Council approval:

- July 8, 2014
- August 12, 2014

OTHER ALTERNATIVES

N/A

COUNCIL GOALS, POLICIES, APPROVED MASTER PLANS

N/A

DATES OF PREVIOUS COUNCIL CONSIDERATION

N/A

Attachments

July 8, 2014 Draft Minutes



City of Tigard
Tigard City Council Meeting Minutes
July 8, 2014



6:30 p.m. NO STUDY SESSION

1. BUSINESS MEETING – July 8, 2014

A. At 6:36 p.m. Mayor Cook called the City Council and Local Contract Review Board to order.

B. City Recorder Krager called the roll:

	Present	Absent
Council President Henderson	x	
Councilor Snider	x	
Councilor Woodard	x	
Mayor Cook	x	
Councilor Buehner	x	

C. Mayor Cook asked everyone to stand and join him in the Pledge of Allegiance.

D. Council Communications & Liaison Reports –

Councilor Buehner reported on the June 25 MPAC meeting where a vote was taken on the Regional Transportation Plan (RTP). She said this impacts all Metro area local transportation plans because they must coordinate with the RTP. Changes to the 2018 RTP will be major. Metro’s Charter requires going to the public for a vote every 15 years to allow them to do the transportation plan and it will be on the November ballot. She wanted the public to be aware that this ballot measure is not anything new and is just a formality.

E. Non-Agenda Items –

Councilor Woodard said an area of the Tigard Street Trail has become a dumping ground and he spotted an abandoned boat and television set left there. He requested that staff follow up on this.

TIGARD CITY COUNCIL MEETING MINUTES – July 8, 2014

2. CITIZEN COMMUNICATION

A. Follow up to Previous Citizen Communication –None

B. Tigard Area Chamber of Commerce –



Tigard Chamber CEO Debi Mollahan reported on chamber activities. She said there were many new businesses in Tigard and this Thursday the Chamber will host a member update of upcoming fiscal year activities. Opening soon are Homemasters, Direct Buy and the Bookkeeping Career Institute. She noted that from July 11-18, the intersection will be closed at Tigard and Main Streets for installation of the new intersection. July 18 is the Third Thursday event. The third annual Tigard Downtown Street Fair is scheduled for Saturday, August 16. In response to a question from Councilor Woodard, Ms. Mollahan said Street Fair banners will be placed at each end of Main Street, visible from Highway 99W.

C. Citizen Communication –



Pete Louw owns a business at 12370 SW Main in Tigard. He asked the city to make it a priority to keep existing businesses on Main Street as healthy as possible during the construction. He said business owners' needs are not being considered and gave examples. On June 11-12 he closed his business to make repairs and lost two days of business income. Had he known then about the upcoming intersection closure, he could have waited to do the repairs at the same time and not suffered such a loss. On June 24, he attended a meeting about the upcoming intersection closure. The next morning Main Street was closed from 99W and he asked why businesses owners were not warned about that the day before. He said he asked for detour maps for customers and only received one copy. He requested enough to hand out to customers. He asked that city staff and council notify businesses when traffic will be blocked. He said he does not attend the Tuesday morning meetings or receive email so these methods of communication do not work for him. He volunteered to help get the word out to others. He said he will forward some additional thoughts to council.

Terry Neddeau owns Tigard Liquor Store on 12490 SW Main Street, a 33-year old Tigard business. She said the impact of the Main Street construction caused great losses to her business because she gets customers mostly from foot traffic. She said her March 2014 revenue was down \$35,000 with losses continuing each month. The city planned this project for its own convenience and not for the benefit of the businesses. She said she felt the City of Tigard owes her compensation for her losses and suggested money for façade improvements instead be used to compensate businesses. She expressed anger and concern regarding the project planning, communication and lack of sympathy for business survival.

Nancy Taylor represented Hillars Emblem Shop, 12537 SW Main Street. She said the business is the first one next to the Fanno Creek bridge and has been behind the construction barricades since the beginning of the project. Customers think the business is gone. Construction flaggers tell people there is no access. She said the owner of the

TIGARD CITY COUNCIL MEETING MINUTES – July 8, 2014

business, Laura Moore, committed suicide due to personal problems and the added stress of not having parking for her business. Ms. Taylor said she is left to run the business for the owner's sons and had to lay off the crew because business is down 50 percent. She said she wants compensation, not for herself but for the owner's sons. She expressed frustration that her customers have to carry 50 pound boxes through long queue lines in front of her building. She commented that the city will have beautiful, empty buildings in the downtown but no businesses.

 Connie Bowen, co-owner of Max's Fanno Creek Brew Pub, 12562 SW Main Street read a letter written by her husband who could not attend the meeting. It has been added to the packet for this meeting. He expressed concerns that although the Downtown Tigard Association met with Engineering Manager McMillan and other city staff to decide on the style of parking, angle or parallel. After many meetings they agreed to the angle style of parking, with the deletion of a few parking spaces. But once construction began they could see there was virtually no on-street parking and the sidewalks were designed to be 12-foot wide. No meetings were held with downtown merchants regarding this huge change. Her husband suggested construction work be done at night but the city said it was too expensive. Every downtown business suffered losses. They did not envision that the decision to redo Main Street was just for the businesses, but for the benefit of the entire city. However, due to decisions made by the City of Tigard the downtown merchants are shouldering 100 percent of the burden. Other Tigard residents are not sharing any of the lost sales. None of this can be recovered. Who loses? The downtown merchants. Who wins? The City of Tigard Main Street infrastructure.

 Warren Reeser, 12386 SW Main Street, Tigard, is the owner of Café Allegro. He said previous speakers covered his list of topics but he wanted to make a few comments. His business is down \$20,000 in sales since the project began. He has laid people off and works 90-100 hours each week. He doubts he will still be in business at the end of the project. He said if businesses survive he could see how this project will be to their advantage but it will take several years to recover construction period losses.

 Haibin Wang, 12540 SW Main Street, Tigard, said he runs the new business on Main Street called Fish-Field. He was excited to start a business last September but construction work has affected it. He is finding it difficult to pay the rent and will need to request a delay again this month. He said he did not know how long his business will last but he will try to keep it going.

Steve and Barbara Jacobs signed up but did not speak.

-  **3. CONSENT AGENDA:** Mayor Cook announced the items on the consent agenda and said they are considered routine and may be enacted in one motion without separate discussion. Anyone may request that an item be removed by motion for discussion and separate action.

TIGARD CITY COUNCIL MEETING MINUTES – July 8, 2014

A Approve City Council Minutes for:

- May 13, 2014
- May 20, 2014
- June 17, 2014

B. CONSIDER APPROVING WORKERS' COMPENSATION INSURANCE FOR CITY VOLUNTEERS

RESOLUTION NO. 14-36 – A RESOLUTION EXTENDING CITY OF TIGARD'S WORKERS' COMPENSATION COVERAGE TO VOLUNTEERS OF THE CITY

Councilor Buehner moved to approve the Consent Agenda and Councilor Snider seconded the motion. All voted in approval.

	Yes	No
Council President Henderson	x	
Councilor Snider	x	
Councilor Woodard	x	
Mayor Cook	x	
Councilor Buehner	x	

Council President Henderson commented on the amount of volunteer hours completed last year. He said 40,000 hours is equivalent to 17.5 full-time staff positions. Councilor Buehner said Tigard has about the lowest tax rate for cities in the Metro area and could not make it without volunteers. Council President Henderson said the city's volunteers include CERT, police cadets, board and committee members, library, park landscaping, events, street cleanup, and others.

4. DISCUSSION ON INFRASTRUCTURE SYSTEM FINANCING FOR RIVER TERRACE AND CITYWIDE

 Councilor Buehner disclosed that she had clients in the River Terrace area but does not view this discussion as a conflict of interest because it is a general topic. Mayor Cook commented that this discussion includes the entire city, and is not confined to River Terrace.

Finance and Information Services Director LaFrance and Community Development Director Asher were present to update council on the infrastructure system financing project. Some planning is for River Terrace but it includes the entire city. This will come to council eight times during the next year and staff wants to make sure the approach and timeframes are appropriate.

TIGARD CITY COUNCIL MEETING MINUTES – July 8, 2014

Mr. LaFrance said there are three main things joining together at the same time – the River Terrace Community Plan, system master plan updates (including financing), and the Lake Oswego/Tigard Water Partnership. Tigard’s sewer system infrastructure current funding was set by Clean Water Services and pays only for operations, not capital improvements. The Budget Committee recommends the city seek a local funding source for sewer system needs.

Mr. LaFrance discussed important timeframes. Staff wants system development charges in place so development does not get delayed. The process will take almost a year and the goal is to have charges in place by next summer. With the LO/COTWP there is a need to go out for a second bond around February. Water rates and charges need to be addressed before the city goes to the bond agency and the public. A comprehensive study done years ago has been effective but there has been capacity added and this needs to be taken into consideration.

 Mayor Cook commented that the bond rates are currently low. He asked if Tigard could access federal WIFIA funding. Finance and Information Services Director LaFrance said he posed that question to the city’s financial advisor whose initial thoughts were that with the city’s positive bond rating it is unlikely there would be an advantage to using WIFIA funds.

 Councilor Buehner commented that when the 2010 rate study was done it was based on a conservative bond rating. She asked when staff plan to do the next rate study. Mr. LaFrance replied that it would be done in the next few months, bringing draft rates to council in November, with an eye towards December adoption. Councilor Buehner asked how a bond rating increase affects the rate study. Mr. LaFrance said the city received notice that its general obligation bond rating rose from AA to AA+. With the water bond Tigard got an AA- rating which was higher than expected. With the new bond there will be opportunities to pursue a higher rating. Councilor Buehner clarified for the general public that this means paying less interest and the rates the public will have to pay are significantly lower. Mr. LaFrance said the city would issue the bond in February or even March, if bridge financing is obtained.

 Finance Director LaFrance said timing is more urgent with the sewer fund because the city is living off of its fund balance now. He said staff is hoping to pair the sewer rates with water rates so the timing will be similar for council review. He said each staff infrastructure team has a lead and teams will come together for a cohesive project to present to council. He said staff will require professional assistance in obtaining the best information so an RFP was issued. Staff will schedule time in the August workshop and then a third meeting when they need council action. 90 days must be allowed for SDC changes and they need to be publicized in the building community for 60 days prior to a public hearing to adopt them. In response to a question from Councilor Buehner about the last time the city reviewed SDCs, Mr. LaFrance said the answer varied by system. Water SDCs were completed in 2010, but Parks SDCs were considered more recently.

 Councilor Woodard asked if River Terrace would be considered a tax specific district. City Manager Wine said that question would be part of what council deliberates: citywide vs. region-

TIGARD CITY COUNCIL MEETING MINUTES – July 8, 2014

specific. Councilor Woodard said he asked the question because of the magnitude of the development cost. Councilor Buehner said when the Water Master Plan was updated in 2010 it specified that all costs related to River Terrace would go to them alone and have no impact on the structure for the rest of the city. Mayor Cook commented there is a parks SDC and council can decide whether to have a separate SDC for River Terrace parks.

 Community Development Director Asher said he was pleased with the timeliness of this discussion. He said this is a citywide project but is especially critical for River Terrace because of the demand for new infrastructure and projects. The projects come with price tags and the city is not set up to finance much of this yet. He said staff realized the infrastructure financing process must begin now and staff wanted to give council a full, rather than piecemeal view of the plan.

 Council President Henderson asked if this would be added to the River Terrace Community Plan. City Manager Wine said it would be and the city wants this in place prior to the start of development in River Terrace. It may take six months until the plan is ready.

Councilor Woodard asked what the sewer surcharge would be. Finance and Information Systems Director LaFrance replied that everyone in the Clean Water Services area, with the exception of Hillsboro and Tigard, has enacted some local revenue for sewer systems. A surcharge could take several forms, such as a fixed fee per customer or a user charge, which might vary by customer type. A common example is a surcharge. He noted that Hillsboro is in the process of adding a sewer surcharge and commented that the City of Tigard held off on this as long as possible. He said hearings will be held in December of 2014 for water and sewer rate changes. Staff is not recommending that the water rate study involve a change in rate structure; they recommend maintaining the current structure but use updated costs. SDC hearings will be held in June.

Mr. LaFrance said the city will need to decide how a 5 percent fee would be allocated and shared with Clean Water Services. For transportation costs there is a TDT (Transportation Development Tax) and a River Terrace or citywide SDC would be considered.

 Councilor Snider complimented staff for beginning these important conversations now.

Council President Henderson asked if this project sheds any light on the Tigard Triangle. Community Development Director Asher said staff will know the needs in the Triangle (transportation and parks) at the end of this year and this will line up nicely with the schedule. He noted that the Triangle planning is behind where the city is with River Terrace planning. Council President Henderson recommended keeping a watchful eye on this.

5. APPOINT NEW MEMBERS AND ALTERNATES TO THE PARK AND RECREATION ADVISORY BOARD

TIGARD CITY COUNCIL MEETING MINUTES – July 8, 2014

Parks and Facilities Manager Martin said interviews were held and as a result, there are several members to be appointed to the PRAB. Troy Mears is beginning his second term and there are five new and two alternate members to be appointed tonight.



Mayor Cook said it was difficult to pick five out eight of these excellent candidates. He commended these citizens for being willing to step forward. Parks and Facilities Manager Martin said applicants Linda Shaw and Tim Pepper were involved with improvements at Bull Mountain Park and were in the audience tonight.

Councilor Snider moved for approval of Resolution No. 14-37 and Councilor Woodard seconded the motion. City Recorder Krager read the number and title of Resolution No. 14-37. Motion passed unanimously.

RESOLUTION NO. 14-37 - A RESOLUTION APPOINTING TROY MEARS, LINDA SHAW, SCOTT WINKELS, AND WAYNE GROSS AS MEMBERS, AND J. RANDALL BRENNER AND TIMOTHY PEPPER AS ALTERNATE MEMBERS OF THE PARK AND RECREATION ADVISORY BOARD (PRAB)

	Yes	No
Council President Henderson	x	
Councilor Snider	x	
Councilor Woodard	x	
Mayor Cook	x	
Councilor Buehner	x	

Mayor Cook called Linda Shaw and Tim Pepper forward and gave them a City of Tigard pin. He thanked them for volunteering.

6. CONSIDER A RESOLUTION DESIGNATING A VERTICAL HOUSING DEVELOPMENT ZONE

Economic Development Manager Purdy presented this item noting that the vertical housing development zone (VHDZ) has been discussed previously by Council and the City Center Development Agency. He said approval of this resolution authorizes sending a submittal to the state requesting this zoning and tax abatement. Councilor Snider asked if staff received input from any neighboring taxing jurisdictions. Mr. Purdy said TVF&R sent a letter of support and he and City Manager Wine met with representatives from the Tigard-Tualatin School District.



City Manager Wine said the TTSD superintendent and staff had questions about impacts and whether they would be forgoing tax revenue with the implementation of the zone. Mr. Purdy was able to illustrate for them that while there is a small amount of revenue from taxes foregone, the

TIGARD CITY COUNCIL MEETING MINUTES – July 8, 2014

development and improvements resulting from the development become a net gain for the district over time. City Manager Wine confirmed for Councilor Snider that although TTSD did not send a letter of support for the VHDZ, this was satisfactory to the district and staff did not expect any opposition.

Mayor Cook asked about parcel T-152 and said there may be a future request from the railroad for a zone change. He asked if it should be removed from the proposed area map. Economic Development Manager Purdy said two distinct areas are included in the VHDZ (one is in the Tigard Triangle and the other is the urban renewal district). He said the VHDZ would only be allowed in an area already zoned for multi-use housing.

Councilor Buehner read the number and title of Resolution No. 14-38 and moved for approval. Councilor Snider seconded her motion.

RESOLUTION NO. 14-38 - A RESOLUTION TO AUTHORIZE A REQUEST TO THE STATE OF OREGON FOR THE DESIGNATION OF A VERTICAL HOUSING DEVELOPMENT ZONE IN THE CITY OF TIGARD

Mayor Cook asked if there was any discussion. Councilor Woodard asked staff to outline for the viewing public the benefits of having both the tax increment financing and VHDZ. Community Development Director Asher said they provide incentives for development in areas where the rents do not justify construction and we need to find ways to subsidize those developments. Property taxes are considered as a construction cost and removing these from the pro forma helps incentivize building. Tax increment financing provides a flow of taxes in the urban renewal district for redirection towards development in the urban renewal area. He said these are different tools but both bring down the cost of development. Councilor Woodard commented that the future of the downtown looks bright. A vote was taken and the motion passed unanimously.

	Yes	No
Council President Henderson	x	
Councilor Snider	x	
Councilor Woodard	x	
Mayor Cook	x	
Councilor Buehner	x	

7. CONSIDER AMENDMENT TO TIGARD MUNICIPAL CODE 7.70 SECONDHAND DEALERS AND TRANSIENT MERCHANTS

Mayor Cook announced that the purpose of the public hearing is to consider an amendment to TMC Chapter 7.70 Secondhand Dealers and Transient Merchants.

- a. Mayor Cook opened the Public Hearing.

TIGARD CITY COUNCIL MEETING MINUTES – July 8, 2014

- b. Hearing Procedures – Mayor Cook said this is a legislative public hearing in which any person shall be given the opportunity to comment.
- c. Staff Report: Police Department Sergeant McDonald said council reviewed this proposed code change a few weeks ago and identified no issues. Mayor Cook thanked him for reaching out to the businesses and asking for feedback. Sgt. McDonald said the only new input received since the last time council heard about this was regarding acceptable identification, which is listed in the Definitions Section. One company was very supportive of passports being listed as acceptable identification but another was not. Sgt. McDonald explained to them that if he does not wish to accept passports as identification he can be more restrictive.
- d. Public Testimony – No one signed up to speak.
 - Proponents
 - Opponents
 - Response to testimony by staff.
- e. Staff Recommendation – Sergeant McDonald recommended that council approve these changes to the Tigard Municipal Code.
- f. Mayor Cook closed the public hearing.
- g. Council Discussion and Consideration of Ordinance No. 14-11

Councilor Woodard moved for adoption of Ordinance No. 14-11. Councilor Snider seconded the motion. City Recorder Krager read the number and title of the ordinance.

**ORDINANCE NO. 14-11- AN ORDINANCE AMENDING TIGARD MUNICIPAL CODE
CHAPTER 7.70 SECONDHAND DEALERS AND TRANSIENT MERCHANTS**

Mayor Cook asked City Recorder Krager to conduct a roll call vote. The motion passed unanimously.

	Yes	No
Council President Henderson	x	
Councilor Snider	x	
Councilor Woodard	x	
Mayor Cook	x	
Councilor Buehner	x	

TIGARD CITY COUNCIL MEETING MINUTES – July 8, 2014

8. LOCAL CONTRACT REVIEW BOARD – DISCUSSION ON UPCOMING CONTRACTS

 Public Contracts Manager Barrett introduced some contracts coming to council for consideration at the July 22 meeting. The first is for a right-of-way maintenance and water quality project contract. Staff sent requests to eight firms and received one proposal. Staff reached out to the other potential contractors and received various responses as to why they did not bid. Mayor Cook commented on the bid timing and suggested the city waited too late in the year to solicit RFPs. When asked why staff did not send out a request in January or February, Mr. Barrett replied that the current contract for right-of-way maintenance was just nearing expiration. Councilor Woodard asked for the linear footage covered in the contract. Interim Public Works Director Rager said he did not have that figure but said the contract covers a number of arterial and collector roads, including Gaarde Road and Durham Road. Councilor Woodard said he had no doubt the one bid received was good but would have liked to have seen more bids for comparison. In response to a question from Councilor Snider on the competitiveness of the prior year's bids, Mr. Barrett said there was only one bidder last year, the same firm, Cascadian, but the year before there were four or five. Interim Public Works Director Rager said the work is specialized and includes traffic control. Some companies choose not to do this type of work, just sticking to ground maintenance. Councilor Buehner commented that she has observed this contractor working on the city's rights of way and was impressed with their traffic control and maintenance work

The contract is a five-year contract for \$600,000, or \$120,000 per year. Council President Henderson asked what the funding source was and Mr. Rager said it is the street maintenance fee for the right-of-way maintenance and the storm water fund for the water quality areas.

Public Contracts Manager Barrett said the second contract is for the city hall re-skin project, made necessary because of issues with the integrity of stucco covering the buildings. The proposed project is in two phases with the permit center work beginning in August 2014 and the town hall work beginning in July of 2015. Work includes removal of stucco and installation of roofing material. Phase one includes removal and replacement of the entrance canopy.

 Mr. Barrett said four certified firms were prequalified for warranty purposes. One of the two bids was submitted by email and incomplete. There were three bid alternates: canopy, metal roofing, and painting the windows. The city is still under budget even if replacement is required rather than repair.

Mayor Cook noted this has been on the CIP project list for three years. He asked why we went out for bid now that it is their busy season. In reply Mr. Barrett said staff got information late from the design architect. Councilor Snider said he was less confident about the competitiveness of this bid situation because there isn't other competitive information. He asked what other alternatives there were. Mayor Cook said he did not like the fact that the project kept being pushed back but asked staff if there were any other companies around that can do this work. Councilor Woodard noted that it requires a certification. Mr. Barrett said staff did get this RFB into the hands of the four companies that can do this work. Councilor Buehner said she is concerned that the price will go up if staff waits to bid until later.

TIGARD CITY COUNCIL MEETING MINUTES – July 8, 2014

 Councilor Woodard asked what the damage might be if the city waited through the summer and did not address this now. Engineering Manager McMillan said they are looking at damage behind the walls that they want to reach. Areas of failure have been identified and these will be inspected. There is no way to know the quantity of compromised areas at this time. Councilor Woodard said there is also potentially mold where the moisture seeped in. Ms. McMillan said the city's Risk Department is concerned about testing for mold and keeping staff safe. She said there will be ongoing testing.

 Council President Henderson said he would have preferred to have contracted out this work during the recession. He advised it would be wise to change the landscaping, which is too close to the building. He suggested another consideration would be to investigate another siding product. Councilor Buehner said it is difficult to find alternatives to the EVAS product. Council President Henderson asked why the project was divided into two phases because mobilization is expensive. Engineering Manager McMillan said staff does not know what will be found in the first building. Damage may be more extensive than originally estimated. She said, however, the city has a recommendation for repair, and based on early testing, all of the walls do not need to be replaced. Council President Henderson remarked that it is a short-term answer to a long-term problem.

Mr. Barrett said staff will bring in options for council consideration on July 22, 2014. Councilor Snider recommended scheduling more time than usual for this type of contract discussion.

9. BRIEFING ON AN AGREEMENT WITH WASHINGTON COUNTY FOR TECHNOLOGICAL IMPROVEMENTS TO TRAFFIC SIGNALS ALONG DURHAM AND UPPER BOONES FERRY ROADS

Senior Transportation Project Engineer McCarthy showed a map of the project area and the many traffic signs, railroad crossings and school zones. He said there is a mix of trip generators for this area including high school students, events, Cook Park, offices and retail. This project ties this together so system components communicate to one another and are able to adapt to traffic events.

The city received \$1 million in federal funding operated through Metro's Transportation System Management and Operations Program. There are a number of firms that can do this work but staff recommends using Washington County because their staff has the expertise and has implemented several adaptive systems. The IGA will allow Washington County to manage the contracts. City involvement will be spelled out in the agreement to ensure Tigard is involved in decisions.

Councilor Snider said he lives in this part of town and experiences the inefficient traffic intersections several times a day. He asked if the signal at 72nd Avenue/Boones Ferry Road/Durham Road includes studying traffic coming from Tualatin. He said there are significant issues and wants all four directions examined.

City Manager Wine said this is the first pass by council for this agreement and it will be on the consent agenda for July 22 unless there is additional information requested by council.

TIGARD CITY COUNCIL MEETING MINUTES – July 8, 2014

Councilor Snider said the complexity of the train crossing exacerbates the traffic situation. Councilor Buehner asked about the long wait while the railroad gates stay down after trains pass. Project Engineer McCarthy said the railroad will be a part of this coordinated effort.

10. BRIEFING ON AN AGREEMENT WITH CWS AND BEAVERTON REGARDING THE CONSTRUCTION OF WATER AND SEWER LINES TO SERVE RIVER TERRACE

Engineering Manager McMillan and Assistant Finance Director Smith-Wagar presented this item on an IGA between Beaverton, Tigard and Clean Water Services to construct the water and sewer line extensions for River Terrace.

Engineering Manager McMillan said this contract work will extend the utility lines to existing services. It will connect Phase 1 which was completed while the county had the road torn up and serves South Cooper Mountain and River Terrace.

Assistant Finance Director Smith-Wagar said this IGA spells out costs. Tigard is responsible for 100 percent of the water portion. Beaverton has already connected. The city is responsible for 12.5 percent of the sewer portion, based on Tigard and Beaverton paying for 25 percent and Clean Water Services picking up the bulk of the cost. These costs are in the budget. She said each city will benefit equally. Councilor Snider said it is not fair because South Cooper Mountain is a larger area.

Councilor Buehner commented that when the roundabout on Barrows Road near Roshak was built, one side was too tight and noted that is right where the water lane is shown to go on the map. She said there has been talk about fixing this and she did not want the water line to be installed in a spot where it will have to be moved later for work done to the roundabout. City Engineer McMillan said the line is behind the curb.

Councilor Snider asked for research on the basis of the sewer allocation and City Manager Wine said staff can bring it to the meeting on July 22.

EXECUTIVE SESSION

At 8:53 p.m. Mayor Cook announced that the Tigard City Council was entering into an Executive Session to discuss pending litigation under ORS 192.660 (2) (h). Mayor Cook said the council will go back into regular session and then adjourn the meeting from the Red Rock Conference Room. Councilor Buehner left the meeting prior to the executive session. The Executive Session ended at 9:28 p.m.

11. COUNCIL LIAISON REPORTS - This was heard earlier in the meeting.
12. NON AGENDA ITEMS - City Manager Wine said Washington County is asking for a response from cities on their proposed vehicle registration fee. They want to know if cities are willing to take a stand on this and also what projects each city would do with their share of the money. She said a

TIGARD CITY COUNCIL MEETING MINUTES – July 8, 2014

project list is premature from staff's perspective but asked for council concerns and questions. Mayor Cook said it would generate almost \$800,000 for Tigard per year. Council President Henderson said his concern is that the Tigard community has stepped up for a long time with their street maintenance fee and he felt other communities have not so their needs may be greater.

Councilor Woodard asked about the percentage the cities would receive and Mayor Cook confirmed it is 60/40 – 60 for Washington County and 40 for cities, allocated by population. Councilor Woodard suggested the cities should receive a higher percentage. Mayor Cook agreed but said receipt of the 40 percent could help with the backlog. Councilor Snider agreed with Council President Henderson that this is similar to the street maintenance fee that Tigard residents pay and he also agreed with Mayor Cook that the city could use more money for road maintenance. Councilor Woodard asked if there would be a discussion on the street maintenance fee prior to the November election. Mayor Cook said council will know if the vehicle registration fee passed before a discussion is held on Tigard's street maintenance fee. Council President Henderson commented that this is a wonderful problem to have, considering the situation Portland is in with their roads.

Council President Henderson said this should be supported because the county roads are used to get to Tigard. Councilor Snider said he supported it. Councilor Woodard offered reserved support but mentioned he was concerned about the impact on taxpayers. City Manager Wine said summarized that there is council support but council wants more information on the need, allocation, and how this will benefit Tigard residents.

13. ADJOURNMENT

At 9:45 p.m. Councilor Snider moved for adjournment and the motion was seconded by Councilor Woodard. All voted in favor.

	Yes	No
Council President Henderson	✓	
Councilor Snider	✓	
Councilor Woodard	✓	
Mayor Cook	✓	
Councilor Buehner		(left the meeting at 8:54 p.m.)

City Recorder Carol A. Krager

Attest:

Mayor, City of Tigard

Date: _____

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TIGARD CITY COUNCIL MEETING MINUTES – July 8, 2014

facilities in the high-flow conveyance area. Additional text was also added to describe the circumstances under which the city might approve an alternate stormwater facility. The implementation timeline tables were deleted, as this information is more appropriately included in the River Terrace Funding Strategy.

This master plan includes a list of stormwater projects and planning level project costs, but it does not include a specific funding strategy. The River Terrace Funding Strategy is currently under development. It will be presented to Council on September 23 for preliminary review and comment, reviewed by the public during the month of October, and then finalized and presented for adoption with the River Terrace Community Plan later this year.

As a reminder, the city needs to adopt a Stormwater Master Plan for River Terrace in order to meet the requirements of Metro Functional Plan Title 11 for infrastructure planning. Adoption of this plan also contributes to the city's broader goal of completing the River Terrace community planning process.

OTHER ALTERNATIVES

Council could choose to not approve the resolution.

COUNCIL OR CCDA GOALS, POLICIES, MASTER PLANS

River Terrace Community Plan

DATES OF PREVIOUS CONSIDERATION

The project team presented Council with the River Terrace Stormwater Master Plan and preliminary stormwater funding strategies on July 22, 2014.

Council approved the contract for the River Terrace Community Plan (which includes funding strategies) on June 25, 2013.

Fiscal Impact

Cost: 20,630,000

Budgeted (yes or no): NO

Where Budgeted (department/program): N/A

Additional Fiscal Notes:

This plan will be part of the comprehensive funding strategy for River Terrace.

Attachments

River Terrace Stormwater Master Plan Resolution

River Terrace Stormwater Master Plan

CITY OF TIGARD, OREGON

RESOLUTION NO. 14-

A RESOLUTION TO ACCEPT THE RIVER TERRACE STORMWATER MASTER PLAN

WHEREAS, the City of Tigard annexed the River Terrace area west of Bull Mountain in 2011 and 2012; and

WHEREAS, the City of Tigard does not have an existing Stormwater Master Plan, and

WHEREAS, the City of Tigard has completed a Stormwater Master Plan specific to the River Terrace area, contributing to the city's broader goal of completing the River Terrace Community Plan and meeting state requirements for public facility planning, and

WHEREAS, stormwater public facility projects have been identified as part of the River Terrace Stormwater Master Plan, and

WHEREAS, a comprehensive funding strategy for all public facility projects in River Terrace will be developed as part of the River Terrace Community Plan. This strategy will include a list of projects to complete in the near term and their respective funding sources.

NOW, THEREFORE, BE IT RESOLVED by the Tigard City Council that:

SECTION 1: The City of Tigard River Terrace Stormwater Master Plan (Exhibit A) is hereby adopted.

SECTION 2: The projects identified in the River Terrace Stormwater Master Plan shall be included in the comprehensive funding strategy for all public facility projects in River Terrace.

SECTION 3: This resolution is effective immediately upon passage.

PASSED: This _____ day of _____ 2014.

Mayor - City of Tigard

ATTEST:

City Recorder - City of Tigard

River Terrace

Stormwater Master Plan

Otak Project No. 16851

Prepared for:
City of Tigard



September 5, 2014

Acknowledgements

RIVER TERRACE Stormwater Master Plan

Otak Project No. 16851

Prepared for:
City of Tigard

Prepared by:

Kevin Timmins, P.E.
Project Manager

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Stormwater Engineer

Otak, Inc.
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September 2014



Table of Contents

- Section 1—Introduction and Background 1**
 - Introduction..... 1
 - Goals and Objectives 2
 - Design Standards 3
 - Background Information 4
 - Existing Conditions and Key Findings..... 4
- Section 2—Stormwater Management Strategy 7**
 - Water Quality Strategies..... 7
 - Site Scale LIDA 8
 - Street Scale LIDA 8
 - Neighborhood Scale LIDA 9
 - Regional Stormwater Facilities 10
 - Water Quantity Strategies 11
 - Regional Detention 11
 - High-Flow Conveyance..... 12
- Section 3—Stormwater Concept Plan and Estimated Costs..... 13**
 - Strategy Area A 13
 - Strategy Area B..... 13
 - Strategy Area C..... 14
 - Estimated Costs 15
 - Implementation..... 17
 - Maintenance..... 22
- Section 4—Stormwater Calculations 23**
 - Impervious Area 23
 - Downstream Analysis 24
 - Regional Stormwater Facilities for Water Quality 25
 - Regional Stormwater Facilities for Water Quantity 26
 - High-Flow Conveyance 27

Table of Contents

Continued

Tables

Table 2.1:	Recommended Strategies for Different Areas of River Terrace.....	7
Table 2.2:	Examples of Site Scale LIDA.....	8
Table 2.3:	Examples of Street Scale LIDA.....	9
Table 2.4:	Examples of Neighborhood Scale LIDA.....	10
Table 2.5:	Examples of Multi-Functional Regional Stormwater Facilities.....	11
Table 3.1:	Stormwater Infrastructure Total Cost Summary.....	16
Table 4.1:	Summary of Impervious Area Reference Calculations.....	24
Table 4.2:	Impervious Percentage by Land Use	24
Table 4.3:	Summary of Water Quality Calculations for Regional Water Quality Facilities	25
Table 4.4:	25-yr Peak Flow (cfs) Discharges from Regional Detention Facilities	26
Table 4.5:	Summary of Regional Detention Facility Sizes.....	27
Table 4.6:	25-yr Peak Flows (cfs) at Site Discharge Locations to T7, T8, & T9.....	28

Figures

Figure 1:	Proposed Zoning (assumed for runoff calculations)
Figure 2:	Existing Drainage Basin Diagram
Figure 3:	Stormwater Management Strategy Areas
Figure 4A:	Stormwater Concept Plan Diagram (Strategy Area A)
Figure 4A1:	Stormwater Concept Plan Diagram (Strategy Area A: South)
Figure 4B:	Stormwater Concept Plan Diagram (Strategy Area B)
Figure 4C:	Stormwater Concept Plan Diagram (Strategy Area C)
Figure 5:	West Bull Mountain Soil Infiltration (GeoDesign, 2009)

Attachments

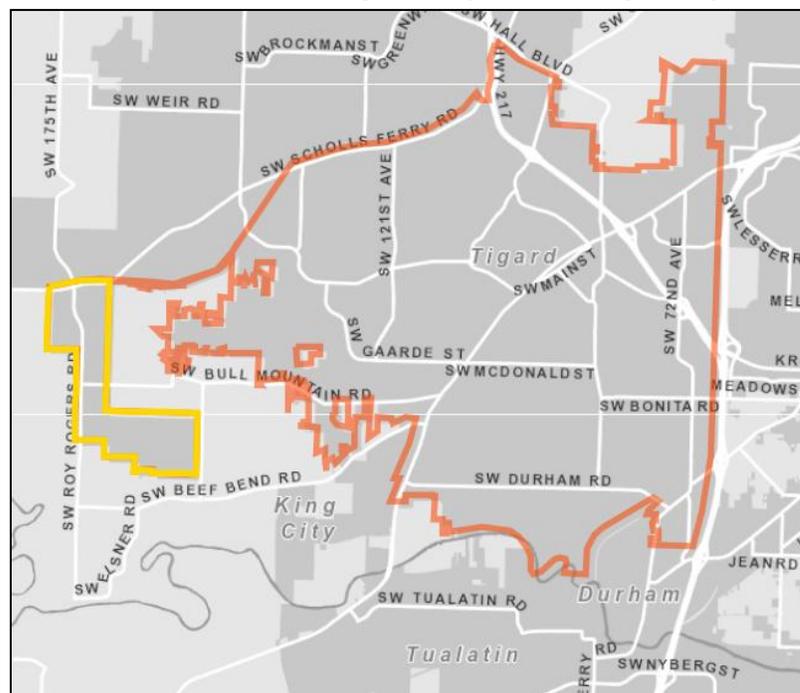
Attachment A:	Background Information
Attachment B:	Cost Estimate
Attachment C:	XP-SWMM Model Schematic and Input Data
Attachment D:	West Bull Mountain Hydrologic/Hydraulic Analysis Figures (HDR, 2008)
Attachment E:	Drawings from Roy Rogers Road Improvement Project

Section I—Introduction and Background

Introduction

The West Bull Mountain Concept Plan was completed by Washington County in October 2010. Subsequently, the City of Tigard annexed the area and renamed it River Terrace. The city is working to complete the required planning process to allow development to begin. Part of the planning process involves master planning of utilities, including stormwater management infrastructure. This master plan contributes to the city's broader goal of completing a River Terrace Community Plan.

River Terrace Study Area (outlined in yellow)



The River Terrace Stormwater Master Plan (SMP) includes and refines the strategies and best management practices previously developed in the West Bull Mountain Stormwater Infrastructure Plan (SWIP) in response to stakeholder input and discussions with the project design team.

The purpose of the River Terrace SMP is to:

- Describe the stormwater management strategy for River Terrace.
- Show how the strategy is to be applied during development of River Terrace.
- Provide a cost estimate for the regional (i.e. public) stormwater management infrastructure.
- Provide recommendations for implementation.
- Provide recommendations for maintenance.
- Document supporting calculations.

Section I—Introduction and Background Continued

The study area for the SMP is based on the River Terrace area annexed by the City of Tigard in 2011 and 2013. The assumptions about land use, road locations, and site layout used to perform supporting calculations for this document reflect the adopted land use and proposed zoning in place at the time the calculations were performed (May 2014). The proposed land use and zoning assumed in development of the River Terrace SMP is provided in the attached Figure 1.

Goals and Objectives

The following stormwater management goals were developed during the West Bull Mountain SWIP and were carried forward into the development of the River Terrace SMP.

- Restore/enhance vegetated corridors
- Protect water quality
- Preserve existing hydrology
- Promote safe and long-lasting stormwater facilities
- Balance the use of regional and on-site stormwater management
- Preserve existing mature vegetation
- Maximize use of multi-benefit facilities to create community amenities
- Promote partnership with other public service providers

The following stormwater management objectives support these goals and have been incorporated into the River Terrace SMP based upon the needs and characteristics of each drainage basin in the study area.

- Regional facilities should be developed wherever possible to minimize the total number of facilities needed in the area. Low Impact Development Approaches (LIDA) for water quality and existing wetland areas for water quantity should be proposed wherever practicable.
- Regional facilities should be dispersed to contribute to stream flow at multiple locations.
- Regional facilities should be well-defined and accessible to maintenance crews to ensure longevity.
- Regional facilities should be designed as community amenities that provide aesthetic, educational, and/or recreational benefits in addition to stormwater management.
- Open conveyance elements should be used to enhance “key” pedestrian routes along streets or stream corridors.
- Increased conveyance between the River Terrace study area and the Tualatin River should be utilized to minimize erosion and slope instability in steeper areas (e.g. high-flow bypass pipe and/or stream restoration).

Section I—Introduction and Background Continued

- LIDA (e.g. eco-roofs, flow-through planters, etc.) should be limited to flow-through type facilities unless geotechnical evaluations can demonstrate that infiltration is not expected to contribute to slope instability.
- Impervious area should be minimized wherever practicable to minimize stormwater runoff (e.g. clustered development, “skinny” streets, reduced parking, etc.).
- Regional water quantity/water quality facilities should be located along Roy Rogers Road, the proposed interior street parallel to Roy Rogers Road, or in/along existing drainages or wetlands whenever possible.

Design Standards

The stormwater infrastructure strategies recommended in this plan are based upon Clean Water Services (CWS) *Design and Construction Standards* and the CWS *Low Impact Development Approaches (LIDA) Handbook*. In addition, this plan reflects the City of Tigard’s intention to adopt new design standards for the River Terrace study area in collaboration with CWS. The need for these new standards is based upon the following:

- The city’s recent experiences dealing with channel stability problems elsewhere on Bull Mountain, and the presence of similar drainage channel conditions in the River Terrace study area.
- The city’s decision to develop a new continuous simulation model for the River Terrace study area.
- Anticipated changes to CWS’s *Design and Construction Standards* to address pending requirements under their National Pollutant Discharge Elimination System (NPDES) permit.
- The community’s desire to preserve and protect existing natural resources in the River Terrace and Bull Mountain area.

At a minimum, the new design standards will include the following:

- Requirement to minimize stormwater impacts caused by development through use of best practices for water quantity management, even when a downstream analysis shows that the downstream system has adequate conveyance capacity. A new continuous simulation model will be developed to aid in the implementation of a flow-duration based design standard for design of water quantity management facilities.
- Development of a minimum facility size standard for regional water quality and quantity (i.e. detention) facilities to allow flexibility in the implementation of this plan.
- Allowance for smaller regional facilities in locations not anticipated by this plan where it can be shown that development of the recommended regional facility is either not timely or feasible and the proposed facility meets the minimum facility size standard.

Section I—Introduction and Background

Continued

- Allowance for interim facilities where regional facilities are recommended in instances where it can be shown that development of a regional facility is not timely and the proposed interim facility meets the minimum facility size standard.
- Requirement to design regional stormwater management facilities as community amenities that provide aesthetic, educational, and/or recreational benefits.

Background Information

As part of this SMP, the project team reviewed seven key documents prepared for the River Terrace study area that provided background information about site conditions. A complete review of the data and relevant conclusions for each of the seven documents are provided in Attachment A of this SMP. These documents are as follows:

- 1) *West Bull Mountain Hydrologic and Hydraulic Analysis* (HDR Inc., March 2008)
- 2) *West Bull Mountain Natural Resources Inventory Technical Report* (Pacific Habitat Services, April 23, 2008.)
- 3) *Regional Landslide Hazard Mapping, West Bull Mountain Planning Area*, Washington County, Oregon (Draft DOGAMI, March 31, 2008) and *ADDENDUM to Regional Landslide Hazard Mapping, West Bull Mountain Planning Area*, Washington County, Oregon (DOGAMI, April 21, 2008).
- 4) *Report of Preliminary Geological Evaluation West Bull Mountain Planning Area* (GeoDesign, Inc., April 21, 2009)
- 5) *Roy Rogers Road Improvements S.W. Beef Bend/Elsner/Scholls-Sherwood Roads* (CH2MHill, November 1999)
- 6) *Roshak Pond Overview – West Bull Mountain Planning* (Washington County Department of Land Use and Transportation Planning Division, November 5, 2008)
- 7) *West Bull Mountain Stormwater Infrastructure Plan* (Otak, February 2010).

Existing Conditions and Key Findings

A basic understanding of existing conditions was useful in developing this SMP and as a starting point for future development of the River Terrace study area. Key findings regarding existing study area conditions are as follows:

- The River Terrace study area is drained by nine small drainage channels. Figure 2 shows the existing drainage basins. A small area at the north end drains towards Scholls Ferry Road.
- Culverts under Roy Rogers Road have capacity for existing flows.
- Culverts under Beef Bend Road for drainages T8 and T9 are under-capacity for existing flow rates. Conveyance improvements are needed to handle future flow rates from new development.

Section I—Introduction and Background Continued

- Fish passage requirements to modify existing culverts for fish passage will need to be evaluated at the time of design and implementation of improvements to Roy Rogers Road and Beef Bend Road.
- The natural resources identified were used as a constraint to define buildable lands during formation of the concept plan for West Bull Mountain and was carried forward into the River Terrace SMP. Several culvert barriers and enhancement opportunities were identified for consideration during development of River Terrace.
- The existing drainage channels in and downstream of the River Terrace study area are steep and have a high potential for channel erosion due to the fine sediment characteristics of the area and the velocity conditions that exist in these steep drainages.
- The infiltration potential is poor in the River Terrace study area. The results of geotechnical drilling and laboratory testing confirmed that the area is underlain by clayey residual soils derived from the underlying basalt bedrock.
- The effects of infiltration on slope stability for developed conditions are expected to be problematic given the steep terrain and proximity to shallow bedrock. Therefore, infiltration of stormwater is not recommended. LIDA facilities called for in this SMP shall be flow-through type facilities that are constructed with an under drain and do not rely on infiltration of stormwater.
- Site specific geologic and geotechnical conditions will be important to evaluate during the design and construction of stormwater management facilities in the River Terrace study area.

The Roshak irrigation pond, located in the northern part of the River Terrace study area along the T2 drainage, has a capacity of approximately 20 acre-feet.

- Pond levels are maintained seasonally by pumping groundwater. The berm that forms the pond is comprised of a layer of soft to medium stiff silt Missoula Flood deposits and a layer of soft to medium stiff clay and silt derived from the basaltic residual soil. The pond is not identified in the County's acknowledged 1983 Goal 5 Program; however, it is identified in the County's 2005 Tualatin Basin Goal 5 Program as Class I and II Riparian and Riparian Impact Area.
- The natural resource inventory for West Bull Mountain (Pacific Habitat Services, 2008) identifies the pond as a jurisdictional water body by the Oregon Department of State Lands (DSL) and/or Corps of Engineers and would, therefore, be treated by CWS as a water quality sensitive area requiring a vegetated corridor.
- The actual location of the vegetated corridor is determined when a development application is submitted, and depending on slope may be between 50 and 200 feet. Therefore, only a vegetated corridor proxy has been mapped around the perimeter of the pond at this time. The vegetated corridor proxy is an estimated location of the vegetated

Section I—Introduction and Background

Continued

corridor based upon the wetland inventory and the adjacent slopes (Pacific Habitat Services, 2008).

- Modifications to the pond, including its removal, are expected to require permits from Oregon DSL and/or Corps of Engineers.
- Change in water rights or use of the existing water rights associated with the pond would require coordination with Oregon Water Resources Department.

Section 2—Stormwater Management Strategy

Stormwater management infrastructure is needed to protect the water quality of downstream natural resource areas, the downstream receiving waters from increased rates of erosion caused by additional water quantity, and the built environment from flood damage during large storm events. The recommended Stormwater Management Strategy takes a comprehensive approach to incorporating stormwater management into the landscape of River Terrace. The SMP makes use of existing site topography, natural systems, and site design to efficiently and effectively manage stormwater quantity and quality.

There are three combinations of water quality and quantity management strategies applied to the River Terrace study area, as shown in the attached Figure 3 and summarized in Table 2.1. The water quality and water quantity tools that are recommended for each of the strategies are the focus of this section of the River Terrace SMP.

Table 2.1: Recommended Strategies for Different Areas of River Terrace		
Strategy Area	Water Quality	Water Quantity
A	Combined Regional Water Quality Treatment and Water Quantity Detention Facilities	
B	Street, Site, and Neighborhood Scale Low Impact Development Approaches	Regional Water Quantity Detention Facilities
C	Street, Site, and Neighborhood Scale Low Impact Development Approaches	Downstream Conveyance Improvements (High-Flow Bypass/Stream Restoration)

Water Quality Strategies

Best management practices (BMPs) are required to manage the transport of stormwater pollutants from River Terrace development to downstream receiving waters. Source control measures (i.e. proper management and disposal of household and animal waste) that reduce or eliminate the possibility of stormwater contact with pollutants are the most effective BMPs.

However, not all contact with pollutants can be eliminated with source control BMPs and other management practices to meet water quality requirements are needed. It is recommended that water quality treatment in River Terrace is managed using Low Impact Development Approaches (LIDA) at a variety of scales (i.e. site, street, and neighborhood) and multi-purpose regional stormwater facilities that offer community benefits in addition to stormwater management.

Section 2—Stormwater Management Strategy Continued

LIDA, as described in the *LIDA Handbook* (CWS, 2009), includes such things as infiltration planters, vegetated swales, and eco-roofs. LIDA facilities can be engineered to treat stormwater runoff and reduce stormwater volume from smaller, frequent rain events by encouraging retention within the facilities. It is recommended that the use of LIDA in River Terrace is limited to treating stormwater runoff and not retaining it due to poor soil infiltration and the potential for slope instability. All LIDA facilities should be sized per *CWS Design and Construction Standards* in combination with the *LIDA Handbook* (CWS, 2009) and designed to manage site runoff from all impervious surfaces generated by the water quality event.

Site Scale LIDA

Site scale refers to parcel by parcel LIDA on the buildable land shown in the River Terrace study area that is not planned for public right-of-way. Photographs of examples are shown in Table 2.2.

Table 2.2: Examples of Site Scale LIDA		
		
Eco-roof	Infiltration Basin	Flow-Through Planter

Site LIDA facilities should be designed as flow-through type facilities with an underdrain to minimize the occurrence of infiltration¹ and an overflow to direct larger storm flows to a safe location, such as an open space area, the street gutter, or some other engineered stormwater conveyance feature.

Street Scale LIDA

Streets are a major source of urban stormwater pollution. Street LIDA refers to facilities located within the public right-of-way designed to treat runoff from streets, sidewalks, and trails. Street LIDA facilities can be located in many different places, including but not limited to sidewalk furnishing zones, planter strips, or curb extensions. These facilities can be

¹ Infiltration potential is poor due to clayey soils. Infiltration is also potentially problematic for slope stability given the steep terrain and proximity to shallow bedrock.

Section 2—Stormwater Management Strategy Continued

located adjacent to the street with curb inlets that allow runoff to pass through the curb into the LIDA facility. Photographs of examples are shown in Table 2.3.

Table 2.3: Examples of Street Scale LIDA		
		
Planter Box	Curb Extension	Linear Swale

Public rights-of-way can also operate as a collection and conveyance system to transport stormwater from both streets and adjacent sites to a downstream destination. The conveyance facilities need to be capable of managing large storm events that exceed the capacity of LIDA facilities and route them to a safe location for discharge to the natural drainage system.

The conveyance system will be a combination of street gutters, pipes, culverts and open channels. The use of street gutters and open channel conveyances should be maximized.

Flow splitter manholes are recommended for portions of the River Terrace SMP, to maintain low flow contributions to the small natural streams near their headwaters and direct high flows to a bypass conveyance system, described later as part of the water quantity management strategy for River Terrace.

Neighborhood Scale LIDA

Neighborhood scale refers to LIDA applied to a collection of parcels and/or portions of right-of-way that cannot, or are not proposed to, be managed using Site or Street LIDA. Stormwater runoff in these situations is collected and routed to a LIDA facility down the block. This type of LIDA might occur at the end of a street, at a street corner, or adjacent to a neighborhood park. Photographs of examples are shown in Table 2.4.

Section 2—Stormwater Management Strategy Continued

Table 2.4: Examples of Neighborhood Scale LIDA		
		
Infiltration Basin	Vegetated Swale	Extended Detention Pond

Neighborhood LIDA facilities should be designed to make efficient use of the landscape, enhance site design, and be a neighborhood amenity (not an isolated eye-sore hidden in the corner) and have an overflow to direct larger storm flows to a safe location, such as an open space area, the street gutter, or some other engineered stormwater conveyance feature.

Regional Stormwater Facilities

Regional stormwater facilities collect runoff from large areas, often under different ownership, are located at a low point, and are the last line of defense before stormwater is discharged to a natural drainage system. Regional stormwater facilities reduce the overall number of facilities that need to be maintained and can be a large enough feature in the landscape that they can provide additional benefits beyond just stormwater management. Regional facilities can provide water quantity, water quality, or a combination of both. Regional facilities recommended for River Terrace provide water quantity, or they provide a combination of both water quantity and water quality.

Regional stormwater facilities use LIDA principles (i.e. bio-retention) applied at a larger scale. Regional stormwater facilities for water quality in River Terrace are required to be vegetated facilities and integrated with the area as a community amenity. Examples of community amenities that could be provided by a regional facility include aesthetics, education, recreation, and habitat. Stormwater facilities and open water can enhance parks and recreational areas. Some facilities are only needed during heavy and infrequent storm events, and can be designed to have other uses at other times (as seen in the basketball court photo below). The placement of regional stormwater facilities along Roy Rogers Road can also function as a buffer between traffic and River Terrace development, and as a transitional landscape along the urban/rural interface.

Section 2—Stormwater Management Strategy Continued

Photographs of examples of multi-functional regional facilities are shown in Table 2.5.

Table 2.5: Examples of Multi-Functional Regional Stormwater Facilities		
		
Mimic Natural System: Wetland	Passive recreation: Outdoor Seating	Active Recreation: Basketball Court

Water Quantity Strategies

A stormwater water quantity management strategy is required everywhere in River Terrace to mitigate for potential flooding and erosion impacts that would otherwise result from increases in stormwater runoff volume, rate, and duration due to development in River Terrace.

There are two water quantity strategies recommended in the River Terrace study area: regional stormwater detention and high-flow conveyance improvements extending downstream to the Tualatin River. The location for application of each strategy in River Terrace is described previously in Table 2.1 and on the attached Figure 3.

Regional Detention

Regional stormwater facilities for water quantity in River Terrace are required to be vegetated facilities and be integrated with the site as a community amenity, just like the regional facilities for water quality. Regional detention facilities shall be combined with the regional water quality facilities whenever possible. However, there are two locations where existing wetland areas are recommended to be modified to provide regional water quantity benefits, in which case water quality requirements have to be achieved before stormwater is discharged to these wetland areas.

Regional detention facilities will need to be sized per the design standards described in Section 1 of this plan once they are adopted by the city. However, these standards could be superseded by future changes to the CWS *Design and Construction Standards* that are more stringent than those described by this plan and subsequently adopted by the city.

Section 2—Stormwater Management Strategy Continued

High-Flow Conveyance

The southern part of the River Terrace study area is located on steep terrain, along small drainages with small drainage basins, and where regional water quantity (i.e. detention) facilities would be difficult to construct.² As a result, the water quantity strategy for the southern portion of the area includes the use of flow splitters at stream crossings to continue low flow discharges to the stream channels and a high-flow bypass conveyance system to safely convey the additional stormwater runoff down the south side of Bull Mountain and beneath Beef Bend Road. On the south side of Beef Bend Road, it is a short distance to a nearby Tualatin River meander bend. The high-flow conveyance system could either be in the form of a bypass pipe, stream restoration, or a combination of both. Any high-flow conveyance system utilizing a restored stream channel should be designed to handle and remain stable under future flow rates.

² Infiltration potential is poor due to clayey soils. Infiltration is also potentially problematic for slope stability given the steep terrain and proximity to shallow bedrock.

Section 3—Stormwater Concept Plan and Estimated Costs

A Stormwater Concept Plan was prepared for each of the three recommended stormwater strategy areas. The recommended stormwater strategy areas are described below, summarized in Table 2.1, and shown in the attached Figures 4A, 4A.1, 4B, and 4C. The Stormwater Concept Plan schematically represents the specific stormwater infrastructure needs for River Terrace. It also includes the recommended drainage basin boundaries and stormwater conveyance assumptions used in the calculation of stormwater flows and facility sizes. Calculations performed to estimate facility sizes are presented later in Section 4 of this plan. In general, the conveyance of stormwater runoff throughout the River Terrace study area is assumed to follow closely with the street, trail, and public right-of-way network.

Strategy Area A

- Water Quality = Regional Water Quality Treatment Facility
- Water Quantity = Regional Water Quantity Detention Facility

The Stormwater Concept Plan for Strategy Area A is shown in the attached Figures 4A and 4A.1. There are a total of 11 regional stormwater management facilities recommended to meet both water quality and quantity requirements for 253 acres (49%) of the River Terrace study area.

Stormwater in this area will be collected and conveyed in storm pipes that are typically located within the road network to the low points in their respective basins. These pipes will discharge to regional facilities located along Roy Rogers Road and existing local drainages.

Strategy Area A is recommended for one small area on the south side of the River Terrace study area, next to SW 150th Avenue, because it cannot be conveyed across the slope to connect to the high-flow conveyance system recommended for Strategy Area C.

Strategy Area B

- Water Quality = Street, Site, and Neighborhood Scale LIDA
- Water Quantity = Regional Water Quantity Detention Facility

The Stormwater Concept Plan for Strategy Area B is shown in the attached Figure 4B. LIDA facilities are recommended for water quality treatment in this area. LIDA facilities will be constructed and paid for by development as streets and neighborhoods are built. Two regional stormwater management facilities are recommended to meet water quantity requirements for 72 acres (14%) of the River Terrace study area. These two facilities are recommended within existing wetland areas and shall be designed to provide for enhancement and restoration of these areas.

Section 3—Stormwater Concept Plan and Estimated Costs

Continued

Strategy Area C

- Water Quality = Street, Site, and Neighborhood Scale LIDA
- Water Quantity = Downstream Conveyance Improvements
(High-Flow Bypass/Stream Restoration)

The Stormwater Concept Plan for Strategy Area C is shown in the attached Figure 4C. LIDA facilities are recommended for water quality treatment in this area. LIDA facilities will be constructed and paid for as streets and neighborhoods are built. No infiltration or detention facilities are recommended in this area. Water quantity requirements will be met through downstream conveyance improvements. Stormwater will be collected and conveyed in storm pipes that are typically located within the road network where it will be routed through two flow splitter manholes along the T8 and T9 drainages.

The flow splitters will be designed to allow low flows to continue into each drainage channel and to route high flows into a high-flow conveyance system to a single off-site improvement along the T8 drainage. A single off-site improvement is recommended in order to limit the amount of stormwater infrastructure outside the Urban Growth Boundary (UGB). Stormwater must receive treatment for water quality before reaching the flow splitters or entering the conveyance system.

The T8 high-flow conveyance system will bring stormwater down the hill and beneath Beef Bend Road. A high-flow bypass pipe is recommended from the T8 flow splitter to Beef Bend Road for the following reasons:

- the presence of steep terrain and erodable soils
- the ability of piping to handle the combined runoff from both drainage basins more safely than a restored stream at this location
- the proximity of future right-of-way adjacent to the T8 drainage channel that could readily accommodate piping, thus eliminating the need, expense, and challenge of acquiring additional land or easements for conveyance outside the UGB.

Once the bypass pipe is beneath Beef Bend Road, stream enhancement and restoration of the T8 drainage is recommended all the way to the Tualatin River to accommodate future stormwater runoff from River Terrace and the urban reserve area south of River Terrace. Alternatively, a high-flow bypass pipe could be constructed adjacent to the T8 drainage all the way to the Tualatin River.

These high-flow conveyance improvements are recommended to meet quantity requirements for 191 acres (37%) of the River Terrace study area. A conceptual design and alternatives analysis is needed for each conveyance proposal to determine the preferred alternative.

Section 3—Stormwater Concept Plan and Estimated Costs

Continued

While on-site detention was considered in this area, downstream conveyance improvements in the form of a pipe and/or stream restoration are recommended by this plan for the following reasons:

- Geologic conditions strongly suggest it is better to convey the water to the Tualatin River than hold it higher up on the mountain. Piped conveyance would provide the most direct route for water to the Tualatin River.
- Until such time as the UGB is expanded to the south, piped conveyance would allow farm land to remain in agricultural use.
- When considering land costs, piped and/or stream conveyance may be less expensive than on-site detention.

Estimated Costs

LIDA facilities applied at the site, street, and neighborhood scale are not illustrated on the Stormwater Concept Plans and are not included in the Stormwater Cost Estimate. It is expected that these water quality facilities will be constructed and paid for by development as individual sites are developed. An analysis of cost to implement LIDA facilities was performed for Clean Water Services (WRG, December 2008) and concluded that costs to implement LIDA are often site-specific, and may or may not result in lower construction costs when compared to the cost of a conventional design approach.

Costs associated with stormwater management for Arterial and Collector Streets are included in the transportation infrastructure cost estimate. Costs associated with stormwater management for Neighborhood Routes and Local Streets are assumed to be part of the costs to develop individual sites.

Costs for regional stormwater facilities were determined according to estimates for facility size (footprint and volume). Assumptions and calculations used to estimate facility sizes are presented later in Section 4 of this plan. The following assumptions were made about the size, geometry, and needs of the regional stormwater management facilities to derive planning level cost estimates.

- Regional stormwater facilities for detention and water quality were based upon meeting the detention standard. Excavation volume estimates assumed 5.5 feet of storage depth with 3H:1V side slopes plus an additional one foot for freeboard.
- Regional water quality facilities were assumed to fit within the space required for meeting the detention standard.
- Land area required to locate a regional facility was assumed to be 110 percent of the facility footprint to construct. This extra space is for extra land area needed to match surrounding grades and to provide for facility access.

Section 3—Stormwater Concept Plan and Estimated Costs

Continued

- Sizing of regional stormwater facilities for detention where combined with wetland enhancement was based upon an estimate to construct a similarly sized detention facility outside of a wetland area, but spread out over a larger footprint to minimize inundation depths (1.5 feet) that would be tolerable in a wetland enhancement design and shallower side slopes (5H:1V).
- Facilities sized to meet the new detention standard may result in a larger detention storage volume. Volumes calculated for the River Terrace SMP were increased by 25% to account for the potential increase.
Costs for inlet/outlet pipes, manholes, inlets, flow splitters, and flow control devices in the right-of-way were based on recent bid tabulations.

The total estimated cost for stormwater infrastructure for the River Terrace study area is summarized below in Table 3.1. A construction contingency was included in the cost estimates to account for uncertainties that are inherent in the planning stages for stormwater infrastructure. The contingency includes, but is not limited to variability in actual quantities, miscellaneous items such as fencing or signage, and unknown phasing for implementation.

The estimate for land acquisition costs assumes purchase of land or easements for regional stormwater facilities and for high-flow conveyance improvements. The high-flow bypass pipe recommended between River Terrace and Beef Bend Road is assumed to be located within a future right-of-way, the cost of which is included in the transportation infrastructure costs.

High-flow conveyance cost estimates are based upon a high-flow bypass pipe. An alternatives analysis is needed to determine the feasibility of stream restoration versus high-flow bypass pipe and should include a cost comparison.

Table 3.1: Stormwater Infrastructure Total Cost Summary	
Construction	\$9,910,000
Engineering/Permitting	\$5,160,000
Land Acquisition	\$5,560,000
Total	\$20,630,000

A detailed breakdown of the Stormwater Infrastructure Total Cost Summary is provided in Attachment B.

Section 3—Stormwater Concept Plan and Estimated Costs

Continued

Implementation

It is anticipated that implementation of this SMP will begin shortly after its adoption but will occur over time as development occurs. It is also anticipated that certain aspects of this SMP will be challenging to implement due to existing conditions, facility costs, and the regional approach to stormwater management recommended by this plan. Implementation challenges and strategies for the whole of River Terrace and each of the three Strategy Areas, to the degree that they can be anticipated and described, are included below.

Pursuant to the recommendations and intentions described in this SMP, implementation of this plan hinges on the city developing and adopting new stormwater design standards and a continuous simulation hydrologic modeling tool. New stormwater design standards for the River Terrace study area would amend the City of Tigard *Public Improvement Design Standards* and be applied during the city's development review process. These amendments are more fully described in Section 1 of this plan. The new continuous simulation hydrologic modeling tool would be made available to the development community and city review staff to ensure that the new flow duration based design standard was being met. Once developed, it would also be used to confirm or revise the sizes of the regional facilities recommended in this plan.

In addition to this SMP, the following documents will serve to guide the implementation of stormwater facilities in River Terrace: *CWS Low Impact Development Approaches Handbook*, *CWS Design and Construction Standards*, and *City of Tigard Public Improvement Design Standards*. Additionally, the *West Bull Mountain Natural Resources Inventory Technical Report* (Pacific Habitat Services, 2008) should be consulted for natural resource enhancement and restoration opportunities that could be implemented with the required stormwater facilities.

River Terrace

Existing Conditions

- **Geology:** River Terrace has some challenging site topography and potential geologic constraints, such as shallow bedrock and landslide hazards.
- **Soils:** River Terrace soils are poorly drained. The introduction of stormwater could contribute to an increased risk of landslides.

Challenges and Strategies

During the course of developing this plan, the development community expressed concerns about the recommended regional stormwater management approach based on their experiences in North Bethany. These concerns include:

Section 3—Stormwater Concept Plan and Estimated Costs

Continued

- **More coordination and cooperation:** Several regional facilities serve more than one property owner. If a property owner is ready to develop but does not have a regional facility located on their site and adjacent property owners are not ready to develop or are otherwise uncooperative, development can be delayed if the property owner ready to develop has to: (1) wait for an adjacent property owner or the city to build the facility, and/or (2) obtain permission from an adjacent property owner to cross their property to connect to the facility.
- **Prevailing wage:** Because regional facilities are publicly funded, they must be constructed using “prevailing wage rates.” As a result, publicly funded projects can be more expensive to build than privately funded projects.
- **Timing of and access to funds:** Regional facilities are expected to serve more than one development, yet they will be needed when the first development occurs. This means that someone needs to provide upfront funding, with the expectation that subsequent development would reimburse the original funder. However, subsequent development may not occur in a timely manner, and developer stakeholders reported that it is difficult for them to obtain funding from lenders for a facility that serves more than one development.
- **Size and location:** While regional facilities may require fewer acres overall, they require large, consolidated acres of land as compared to the traditional site-specific approach. This land is then unavailable for private development. With the traditional approach, stormwater facilities could be smaller and tucked away on otherwise unusable portions of a site.

The following existing conditions and strategies have been identified to address these and other concerns raised by stakeholders.

- **Less coordination and cooperation:** The River Terrace study area is topographically different from North Bethany. It is bisected by several small drainage channels and roads, resulting in the creation of numerous small drainage subbasins. North Bethany has only three drainage channels by comparison. This translates into potentially fewer coordination challenges because there are fewer parcels of land that drain to each of the recommended regional facilities. Moreover, of the 13 recommended regional facilities outside of the high flow conveyance area, 6 serve subbasins under the control of a single property owner.
- **Implementation flexibility (smaller facilities):** The city is committed to developing a minimum facility size standard as part of the package of new stormwater standards it intends to adopt for this area. The purpose of the minimum facility size standard is to provide facilities that will function without greater than typical maintenance and to allow for flexibility in the implementation of this plan. As long as a facility meets the minimum size standard and associated community amenity design guidelines, the city intends to

Section 3—Stormwater Concept Plan and Estimated Costs

Continued

allow multiple smaller facilities in lieu of any of the recommended regional facilities in this plan provided that:

- their location meets with city approval;
 - they meet the City Stormwater Design Standards; and,
 - they do not prevent or otherwise make it more difficult for properties owned by others to implement the recommended regional stormwater solution.
- **Implementation flexibility (interim facilities):** The city is open to the installation of interim facilities that do not meet the minimum facility size standard in instances where it can be shown that development of a regional facility is not timely or practical provided that:
 - its design and location meets with city approval;
 - appropriate provisions and safeguards are put in place so that it will be properly maintained over time;
 - downstream piping from the interim facility is designed and located such that a connection to the future regional facility is practicable.
 - it is designed to meet the City Stormwater Design Standards; and,
 - it does not prevent or otherwise make it more difficult for other development to implement the recommended regional stormwater solution.

In addition to constructing the interim facility, the property owner would be required to contribute its fair share toward the construction of the future regional facility. The interim facility would need to be removed once the regional facility was operational, which would free up the land upon which it was located for development.

- **Implementation flexibility (re-use facilities):** The city will consider allowing stormwater re-use facilities, e.g. cisterns, that capture and re-use stormwater on site provided that:
 - their design and location meets with city approval;
 - appropriate provisions and safeguards are put in place so that they will be properly maintained over time;
 - they meet the City Stormwater Design Standards and applicable building/plumbing codes; and,
 - they do not prevent or otherwise make it more difficult for other development to implement the recommended regional stormwater solution.

Stormwater re-use facilities could either be proposed as an interim or a permanent solution and, where approved as a permanent solution, could serve to reduce the size of the downstream regional facility.

- **Funding strategy:** The River Terrace Funding Strategy for stormwater is being developed with the goal of mitigating some of the funding challenges inherent in the regional stormwater management approach. Near term funding priorities will likely focus

Section 3—Stormwater Concept Plan and Estimated Costs

Continued

on those regional facilities that serve more than one property owner and that are in areas anticipated to develop in the near term.

- **Integrated design:** Through the city’s development review process, property owners will be encouraged to coordinate the design of the regional stormwater facilities with the design and construction of other required or needed improvements, such as roads, parks, and natural resource mitigation, in order to reduce overall costs.

Strategy Area A

Challenges and Strategies

Strategy Area A does not have any specific challenges or strategies beyond those described above for the whole of River Terrace.

Additional Studies/Actions Needed

The following additional studies and/or actions are needed to advance the implementation of stormwater infrastructure in Strategy Area A.

- City: A full package of new stormwater design standards and guidelines.
- City: A new continuous simulation hydrologic modeling tool.
- City: A life cycle cost comparison study that evaluates the cost of constructing and operating a few regional stormwater facilities versus many smaller facilities. This study will help the city develop a minimum facility size standard.
- City and/or Developer: Geotechnical analysis of specific site conditions by an engineer, including depth to bedrock to inform the grading plan and recommendations for design, such as whether a liner is needed to discourage infiltration. There is potential that some regional facilities located along Roy Rogers Road may need to be relocated to the west side of the road due to proximity to bedrock.

Strategy Area B

Challenges and Strategies

In addition to the challenges and strategies described above for the whole of River Terrace, the following challenges and strategies apply specifically to Strategy Area B.

- **Infiltration:** Pending further detailed study by a geologist or geotechnical engineer, it should be assumed that site conditions are not good for stormwater infiltration. LIDA facilities should be limited to flow-through types with an under drain and not rely upon stormwater infiltration.
- **Existing wetlands:** There are extra permitting challenges associated with stormwater detention facilities located within existing wetlands. However, wetland restoration for

Section 3—Stormwater Concept Plan and Estimated Costs

Continued

water quantity management enhances a natural resource and occupies property that would be otherwise undevelopable or very expensive to mitigate.

Additional Studies/Actions Needed

The following additional studies and/or actions are needed to advance the implementation of stormwater infrastructure in Strategy Area B.

- City: A full package of new stormwater design standards and guidelines.
- City: A new continuous simulation hydrologic modeling tool.
- City: A life cycle cost comparison study that evaluates the cost of constructing and operating a few regional stormwater facilities versus several smaller facilities. This study will help in the development of the city's minimum facility size standard.
- City and/or Developer: A conceptual design and alternatives analysis, including an improved cost estimate, that evaluates the advantages, disadvantages, and permitting challenges related to the implementation of regional detention facility T2_6 as a wetland enhancement and restoration effort. The *West Bull Mountain Natural Resources Inventory Technical Report* (Pacific Habitat Services, 2008) describes four opportunities along the T2 drainage, east of Roy Rogers Road, to restore and enhance the natural resources in this area.
- City and/or Developer: Geotechnical analysis of specific site conditions by an engineer, including depth to bedrock to inform the grading plan and recommendations for design, such as whether a liner is needed to discourage infiltration.

Strategy Area C

Challenges and Strategies

In addition to the challenges and strategies described above for the whole of River Terrace, the following challenges and strategies apply specifically to Strategy Area C.

- **Off-site improvements:** Downstream conveyance improvements that are located outside the Urban Growth Boundary (UGB) shall address land use regulations from the Washington County Community Development Code Sections 340-4.1 and 430-105.3 through 430-105.7; Oregon Revised Statute 215.275; and Oregon Administrative Rule 660-33.
- **Integrated design:** Design of high-flow conveyance improvements should be coordinated with the design and construction of other required or needed improvements, such as the proposed road connection to Beef Bend Road parallel to the T8 drainage in order to reduce overall costs and streamline the permitting process for improvements outside the UGB.

Section 3—Stormwater Concept Plan and Estimated Costs

Continued

- **Detention and/or discharge:** It may be possible on certain properties within the high-flow conveyance area to detain water in an existing wetland and/or discharge runoff directly into one of the existing drainage channels upstream of the high-flow conveyance system. Such proposals will be considered by the city provided that:
 - their design and location are approved by all applicable authorities;
 - they meet the City Stormwater Design Standards; and,
 - they do not prevent or otherwise make it more difficult for other development to implement the recommended regional stormwater solution.

Additional Studies/Actions Needed

The following additional studies and/or actions are needed to advance the implementation of stormwater infrastructure in Strategy Area C.

- City: A new continuous simulation hydrologic modeling tool.
- City: A conceptual design and alternatives analysis for the recommended high-flow conveyance system that evaluates the advantages, disadvantages, and permitting challenges of restoring and enhancing the T8 drainage versus installing a bypass pipe. A more detailed conceptual design and alternatives analysis will eventually be needed to support the land use process for construction of a public facility outside the UGB and for environmental permitting if work within a jurisdictional water or wetland is proposed.
- City and/or Developer: A geologic evaluation of all potential high-flow conveyance alignments that identifies specific conditions, such as depth of bedrock, that could affect the construction or construction costs of the high-flow conveyance system.
- City and/or Developer: Property owner outreach to acquire easements, land, and right-of-way for the recommended high-flow conveyance improvements.

Maintenance

The city will be responsible for inspecting and maintaining all regional, Neighborhood LIDA, and Street LIDA facilities. The city will also be responsible for inspecting and enforcing maintenance on all Site LIDA facilities. The city currently maintains neighborhood and street facilities throughout the city and will continue to refine its operation and maintenance procedures.

The maintenance of Site LIDA facilities will be the responsibility of the property owner or homeowner's association. The city should expand its existing stormwater education and enforcement program to include residential property owners to ensure that all affected property owners are notified of proper operation and maintenance procedures for LIDA facilities, especially when properties change ownership. The city could require that operation and maintenance procedures are recorded with the property title.

Section 4—Stormwater Calculations

There is a strong correlation between impervious area and stormwater runoff. The first step toward sizing water quality facilities and estimating site runoff is to estimate the amount of impervious area associated with the various types of development planned for the River Terrace study area. Actual imperviousness will vary throughout the River Terrace study area and will need to be recalculated as development occurs. Assumptions about impervious area used for this SMP are documented in this section.

Several calculations were made when developing this plan and the cost estimates.

Calculations include:

- Sizing of Regional Stormwater Facilities for Water Quality
- Sizing of Regional Stormwater Facilities for Water Quantity
- Use of High-Flow Bypass Conveyance Pipes

The engineering analysis and calculations completed for this stormwater management plan should be considered preliminary. Additional engineering analyses will be required during future detailed design phases of either public infrastructure or private development projects to verify the assumptions made in this planning level analysis.

Impervious Area

There are four types of residential land uses being mapped for the River Terrace study area: low-density, two levels of medium-density, and high-density with a small amount of neighborhood commercial. Non-residential development such as schools, a fire station, various parks, greenways, and other open space areas are likely to have a different impervious area than was assumed for this plan, and will result in a different runoff volume and rate than rates calculated during this analysis.

After expected densities were determined for the various development zones in the River Terrace study area, two sources were consulted to determine appropriate assumptions for percent impervious area relative to development densities. The multiple sources include:

- An impervious area study from Clackamas County.
- Measurements based on aerial photographs for recently completed Tigard and Bull Mountain neighborhoods in proximity to River Terrace study area.

Clackamas County Water and Environment Services (WES) published a study of impervious surfaces as part of the Damascus area Urban Growth Boundary (UGB) expansion. The WES study analyzed the impervious area percentages of a number of neighborhoods representative of current and future development in the Damascus area. Three of the neighborhoods studied are comparable to the 7 and 12 unit/acre figures assumed for River Terrace medium-density residential zones, with densities ranging from 9.6 to 14.8 units/acre.

Section 4—Stormwater Calculations Continued

These neighborhoods have a total average density of 10.9 units/acre and are 54 percent impervious. Only one neighborhood in the study had a comparable high-density residential zone, with a density of 25.5 units/acre and 62 percent impervious. Two neighborhoods in the study seem to correspond to the mixed-use designation, although with much lower residential density than identified for the River Terrace study area. These had an average density of 13.6 units/acre and 62 percent impervious area. Three areas were designated as schools, with an average of 31 percent impervious area. A summary of these findings are presented below in Table 4.1.

Reference Source	Description	Density (units/acre)	Impervious Area (%)
Clackamas County WES	Medium Density Residential	10.9	54
	High Density Residential	25.5	62
	Schools	N/A	31
	Mixed-Use	13.6	62

The complete list of proposed land uses in the River Terrace study area is shown in Table 4.2 alongside the impervious percentage assumed for stormwater calculations in this plan. The proposed land uses for River Terrace are mapped in the attached Figure 1.

Land Use	Impervious Percentage
Community Commercial District	70
Future Right-of-way	70
Existing Right-of-way	70
Low Density Residential (4.5 Dwelling Units/Acre)	45
Medium Density Residential (7 Dwelling Units/Acre)	50
Medium Density Residential (12 Dwelling Units/Acre)	55
High Density Residential (25 Dwelling Units/Acre)	65

Downstream Analysis

Stormwater from the River Terrace study area drains to eight small drainages. A small area at the north end of the site flows to (drainage basin T1) SW Scholls Ferry Road and east to SW Barrows Road. The rest of the site drains to one of the other seven small tributaries to the Tualatin River. Tributaries T6 and T7 are not expected to receive additional flows from the

Section 4—Stormwater Calculations Continued

River Terrace study area, and are therefore not included in the analysis for this plan.

The need for water quantity management in the West Bull Mountain SWIP was based upon a preliminary downstream analysis. Subsequently, the City of Tigard intends to adopt new water quantity standards for River Terrace. (See Section 1 for more detail.) New standards will require that stormwater facilities be designed to match post-development flow durations to mitigate downstream flooding and erosion from new development in the River Terrace study area.

Regional Stormwater Facilities for Water Quality

This SMP calls for the treatment of site runoff to be handled using a combination of regional water quality facilities, and LIDA. Site, Street, and Neighborhood LIDA will be sized as part of future public or private development projects. Regional stormwater facilities that are recommended to provide water quality treatment are assumed to fit within the footprint of the facilities sized to meet water quantity requirements. Water quality volume and flows were calculated for the regional facilities that will provide water quality treatment. The water quality volume and flow were calculated based upon current *Design and Construction Standards*. The current standards use impervious area draining to the facility. Impervious area requiring treatment was calculated for each of the subbasins based on land use assumptions within each drainage basin. The calculation of impervious area, water quality volume and water quality flow are reported below in Table 4.3.

Facility ID	Contributing Basin Area (acres)	Impervious Area (acres)	Water Quality Volume (cf)	Water Quality Flow (cfs)
WQSMB	10.41	6.45	8,426	0.59
WQ2_5ac	32.89	18.71	24,447	1.70
WQ2_5b	31.51	17.29	22,595	1.57
WQ2_7a	37.67	22.09	28,869	2.00
WQ2_7b	16.76	11.09	14,491	1.01
WQ3_2a	33.42	18.05	23,588	1.64
WQ3_2b	7.27	3.80	4,964	0.34
WQ4_4a	28.82	15.35	20,063	1.39
WQ4_4b	14.95	7.55	9,860	0.68
WQ5_6c	25.49	13.98	18,268	1.27
WQ10_3a	4.5	2.25	2,940	0.20

Section 4—Stormwater Calculations Continued

Regional Stormwater Facilities for Water Quantity

An XP-SWMM model was developed for the River Terrace study area to predict existing condition runoff rates. The model was then modified to simulate future flow rates due to build-out of the River Terrace study area based upon proposed land uses. Regional stormwater facility volumes were estimated for each of the recommended locations based upon current *CWS Design and Construction Standards* that require peak flow matching. The estimated facility designs were tested using the XP-SWMM model to demonstrate that the current standard was being satisfied. Application of the new design standard is assumed to require some additional storage volume in each facility. An additional 25 percent was assumed for cost estimating purposes. A new hydrologic modeling tool will be needed to perform continuous simulation calculations and complete the design of the regional water quantity facilities under the new standard. Table 4.4 summarizes 25-year peak flows for select discharge points (or nodes), under existing, developed without detention, and developed with detention conditions as predicted by the XP-SWMM model.

Table 4.4: 25-yr Peak Flow (cfs) Discharges from Regional Detention Facilities			
Facility ID	Existing	Future	Future W/Detention
WQSMB	5.7	10.1	5.6
WQ2_5ac	77.1	143.0	67.7
WQ2_5b	75.67	170.8	74.7
WQ2_7a	10.4	35.7	9.3
WQ2_7b	10.8	16.6	10.8
T2_6	50.5	75.2	49.1
WQ3_2a	44.1	49.0	44.0
WQ3_2b			
WQ4_4a	69.1	91.4	68.5
WQ4_4b			
T5_6b	7.9	26.7	7.0
WQ5_6c	32.8	37.0	24.0
WQ10_3a	33.8	39.3	33.3

A schematic of the XP-SWMM model along with supporting background information is provided in Attachment C.

Depending on implementation sequencing, the regional facility T2_6 should be designed to provide maximum stormwater storage. Storage above and beyond what is required of this SMP could be used to reduce the size of the regional stormwater facilities located downstream or to manage flow durations from offsite upstream areas that were previously

Section 4—Stormwater Calculations Continued

developed under past standards.

Table 4.5 summarizes contributing basin, peak inflow and outflow estimates, and peak storage and estimated required storage volumes for each regional detention facility.

Table 4.5: Summary of Regional Detention Facility Sizes					
Facility ID	Contributing Basin Area (acres)	Peak Inflow (cfs)	Peak Outflow (cfs)	Peak Storage Volume (cubic yards)	Peak Storage Volume w/ Correction for New Standard (cubic yards)
WQSMB	10.41	10.1	5.6	1,257	1,571
WQ2_5ac	32.89	39.1	5.0	7,928	9,910
WQ2_5b	31.51	29.3	8.4	4,190	5,238
WQ2_7a	37.67	35.8	9.3	4,508	5,635
WQ2_7b	16.76	16.6	10.8	918	1,148
T2_6	97.0	77.9	49.1	5,364	6,705
WQ3_2a	33.42	30.9	13.3	2,938	3,672
WQ3_2b	7.27	6.7	3.5	579	724
WQ4_4a	28.82	26.6	16.0	2,430	3,038
WQ4_4b	14.95	13.6	6.6	1,593	1,992
T5_6b	29.59	27.2	7.1	3,731	4,664
WQ5_6c	25.49	23.7	21.2	534	667
WQ10_3a	4.50	4.1	0.6	25876	

Recommended LIDA facilities are not expected to have a significant effect on detention sizes and were therefore not included in the model. The use of LIDA is only proposed upstream of two of the regional water quantity facilities. The effects of LIDA on these two facilities could be performed as part of the design phase to account for any reduction in the size of the regional stormwater facilities that might result.

High-Flow Conveyance

Regional water quantity for development in the portion of the River Terrace study area draining to the T7, T8, and T9 drainages are recommended to use downstream conveyance improvements to manage water quantity. The XP-SWMM model was used to predict existing and future stormwater runoff for these drainage basins and to estimate the size of the required high-flow conveyance pipes.

Section 4—Stormwater Calculations Continued

Figure 4C shows flow from T7 will be conveyed to T8. Figure 4C shows that flow-splitter devices will be necessary at T9 to divert high flows from their existing drainage course to the discharge point into T8. 2,100 feet of 36-inch storm sewer pipe is estimated to provide this bypass between T9 and T8. Approximately 3,800 feet of 48-inch storm sewer shall convey increased flows from T7, T8 and T9 to the Tualatin River.

The high flow bypass pipes were sized using the XP-SWMM model and the following set of assumptions:

- Flow from T7 was sent to T8.
- Flow splitter in T8 and T9 were assumed to engage during flows higher than the 2-year, 24-hour storm event at their respective reach locations.
- Bypass pipes sized to convey the future 25-year flows.

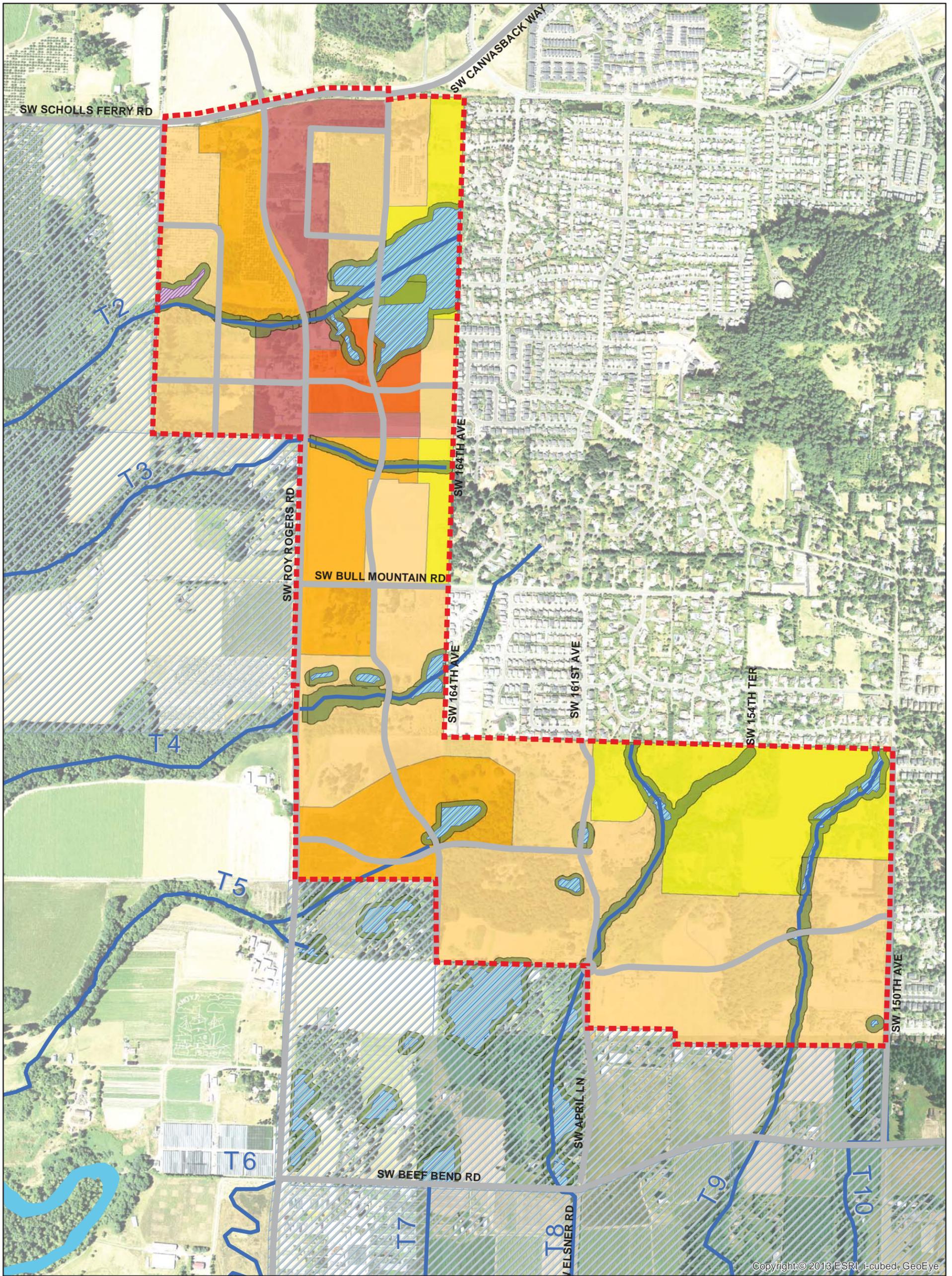
Table 4.6 summarizes the 25-year peak flow rates predicted by XP-SWMM under existing conditions and for future conditions in the drainage channels that drain the southern portions of the River Terrace study area. The Existing Conditions column in the table below is the calculated flow rate in the drainage channel where it leaves the River Terrace study area boundary. The Future Conditions column is the flow rate at the same location in the drainage channel after the upstream area is fully developed. The Future with Bypass Pipe column is the flow rate at the same location in the drainage channel after the upstream area is fully developed and after the high flows have been diverted to the bypass pipe. The Flows in Bypass Pipe column are the combined flows in the bypass pipe.

Table 4.6: 25-yr Peak Flows (cfs) at Site Discharge Locations to T7, T8, & T9				
Drainage Channel	Existing Conditions	Future Conditions	Future with Bypass Pipe	Flows in Bypass Pipe
T7	4.7	12.8	0	N/A
T8 (north)	91.6	158.9	83.0	118.4
T8 (south)	99.7	149.8	93.7	118.4
T9	28.5	65.0	28.4	37.0

Alternatively to piped conveyances, open channel conveyance improvements could be constructed. For example, restoration of the T8 drainage between Beef Bend Road and the Tualatin River could be designed in a manner that accommodates the increased flows from the River Terrace study area.

Figures





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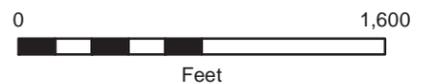
River Terrace Stormwater Master Plan

Figure 1: Proposed Zoning (Assumed for Runoff Calculations)

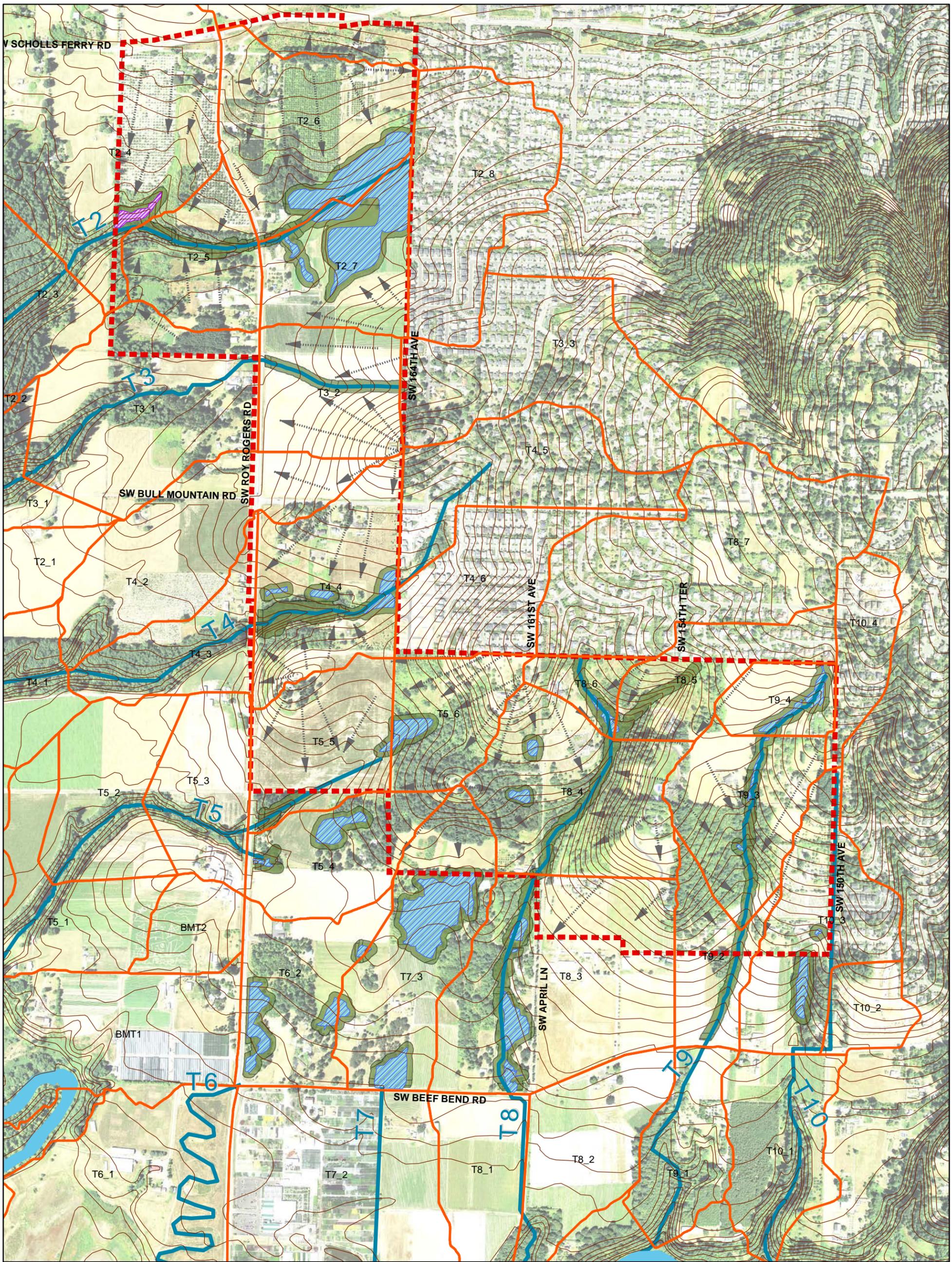


Legend

- | | |
|---------------------------|-----------------------------------|
| River Terrace Study Area | Urban Reserves |
| Existing or Future Street | Proposed Zoning |
| Sensitive Areas | Community Commercial District |
| Significant Wetlands | High Density Residential (R-25) |
| Inventoried Wetlands | Medium Density Residential (R-12) |
| Natural Resource Buffers | Medium Density Residential (R-7) |
| Existing Drainageway | Low Density Residential (R-4.5) |
| Tualatin River | |



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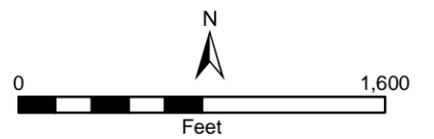


River Terrace Stormwater Master Plan

**Figure 2:
Existing Drainage
Basin Diagram**

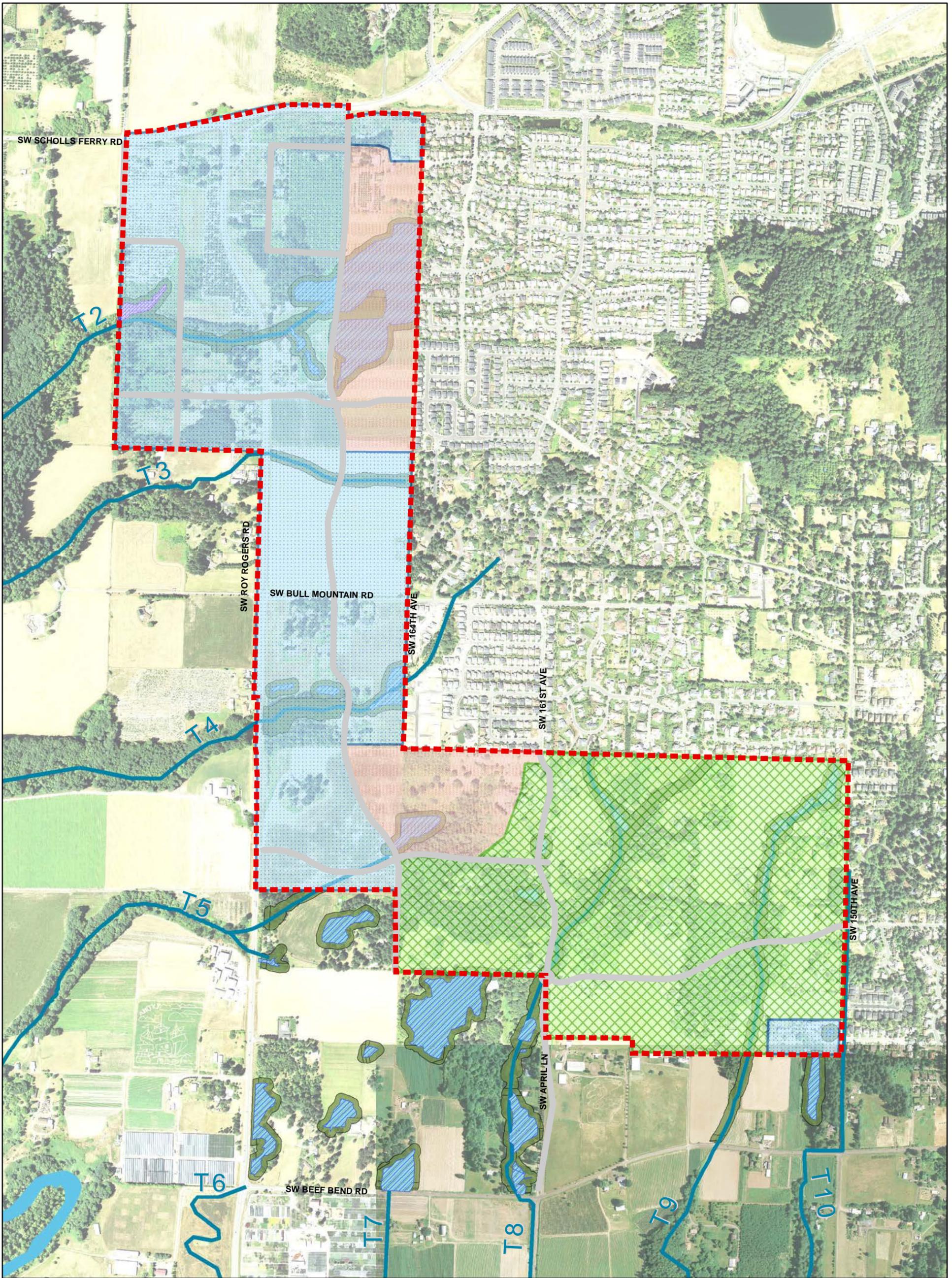
Legend

- River Terrace Study Area
- Existing Subbasin
- Overland Flow Direction
- 10 ft. Contour Line
- Sensitive Areas**
- Significant Wetlands
- Inventoried Wetlands
- Natural Resource Buffers
- Existing Drainageway
- Tualatin River



Data on this map is from Washington County and Metro's RLIS database. This information was developed at multiple scales and accuracies. No warranty is made with this map.

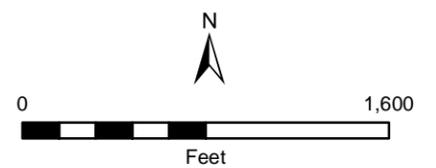




River Terrace Stormwater Master Plan

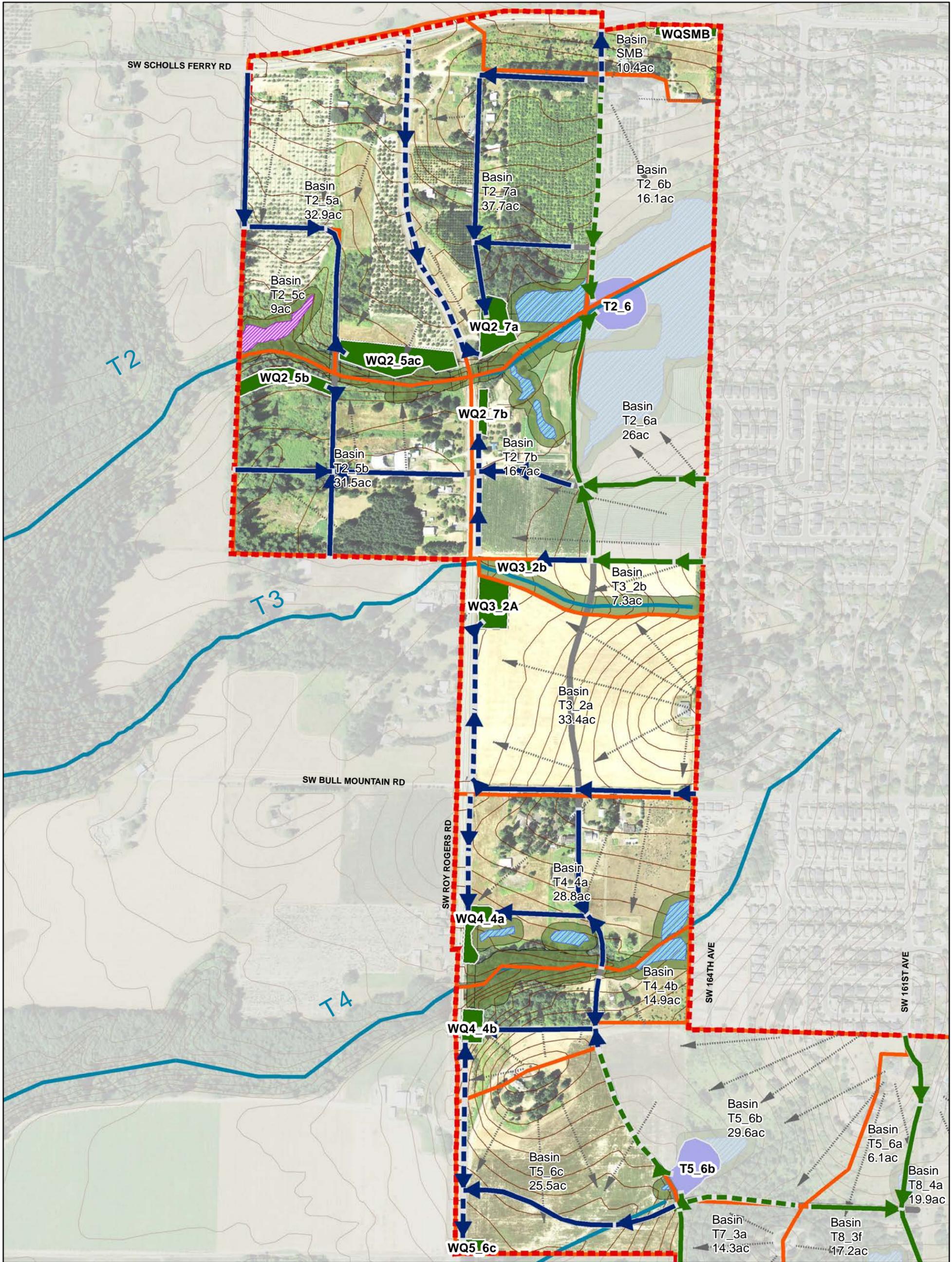
Figure 3:
Stormwater Management Strategy Areas

- | | |
|---------------------------|-----------------|
| Legend | |
| River Terrace Study Area | Strategy Area A |
| Existing or Future Street | Strategy Area B |
| Sensitive Areas | |
| Significant Wetlands | Strategy Area C |
| Inventoried Wetlands | |
| Natural Resource Buffers | |
| Existing Drainageway | |
| Tualatin River | |



Data on this map is from Washington County and Metro's RLIS database. This information was developed at multiple scales and accuracies. No warranty is made with this map.





River Terrace Stormwater Management Plan

Figure 4A:
Stormwater Concept Plan
Diagram (Strategy Area A)

Legend

- River Terrace Study Area
- Existing or Future Street
- Proposed Subbasins
- Overland Flow Direction
- 10 ft. Contour Line

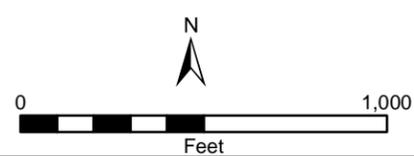
- Regional Stormwater Facility**
- Water Quality and Quantity
 - Water Quantity Only

Sensitive Areas

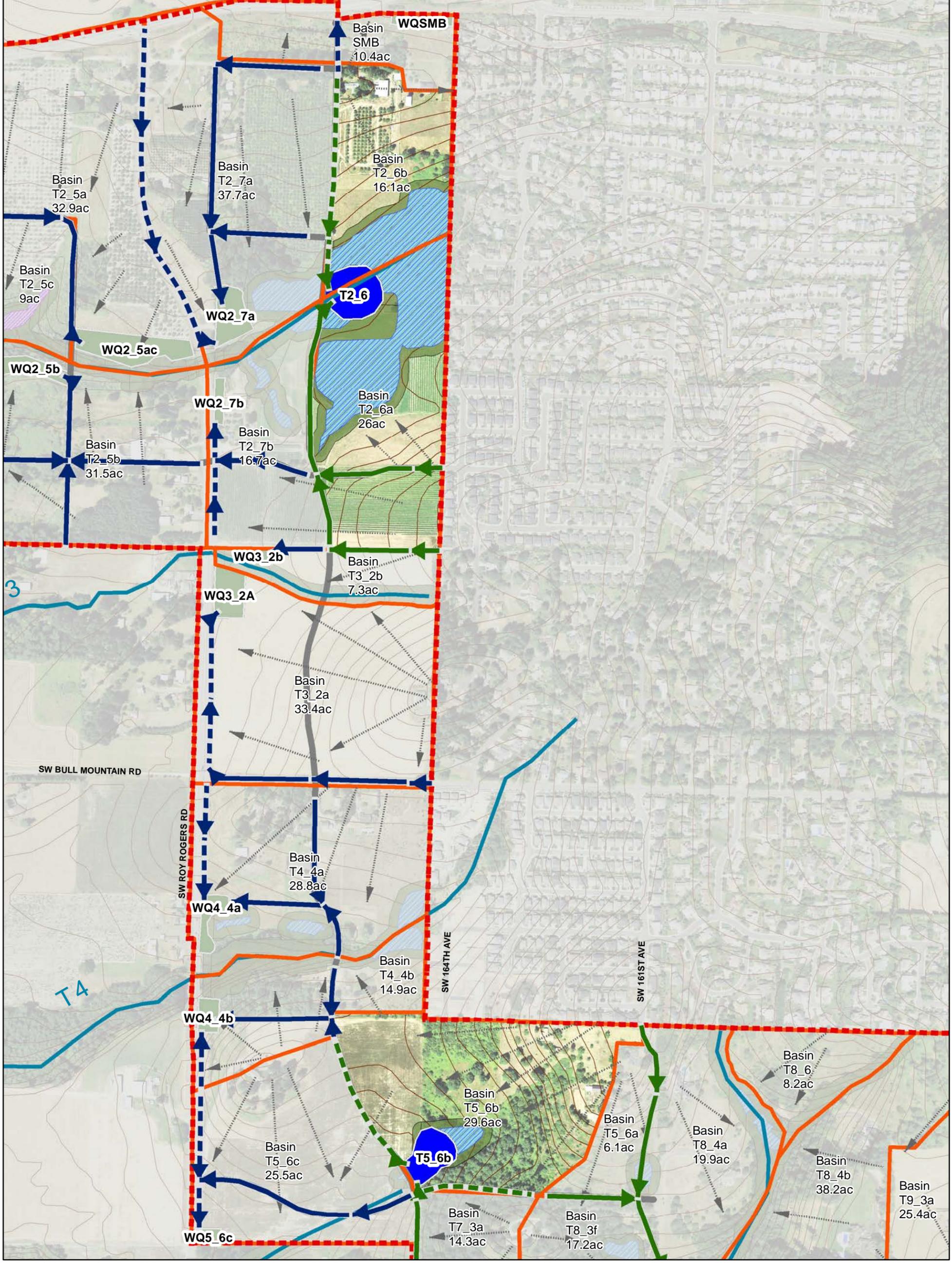
- Significant Wetlands
- Inventoried Wetlands
- Natural Resource Buffers
- Existing Drainageway

Stormwater Conveyance

- Pipes**
- With Street LIDA
 - No Street LIDA
- Swales/Ditches**
- With Street LIDA
 - No Street LIDA



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River Terrace Stormwater Management Plan

Figure 4B:
Stormwater Concept Plan
Diagram (Strategy Area B)

Legend

- River Terrace Study Area
- Existing or Future Street
- Proposed Subbasins
- Overland Flow Direction
- 10 ft. Contour Line

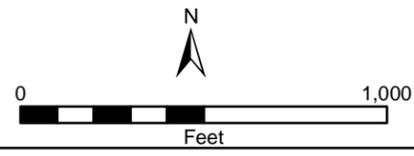
- Regional Stormwater Facility**
- Water Quality and Quantity
 - Water Quantity Only

Sensitive Areas

- Significant Wetlands
- Inventoried Wetlands
- Natural Resource Buffers
- Existing Drainageway

Stormwater Conveyance

- Pipes**
- With Street LIDA
 - No Street LIDA
- Swales/Ditches**
- With Street LIDA
 - No Street LIDA



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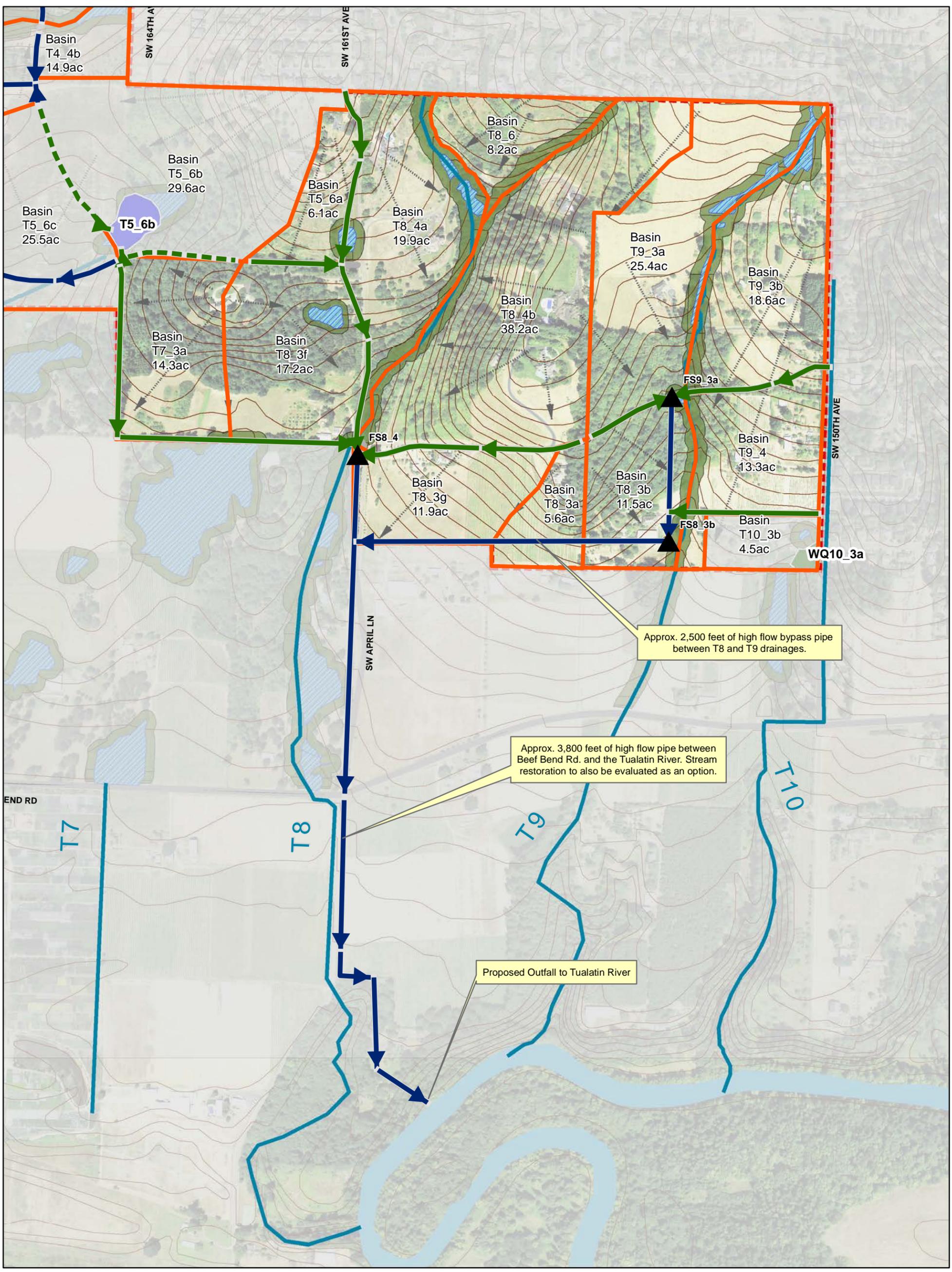


Figure 4C:
Stormwater Concept Plan
Diagram (Strategy Area C)

Legend

- River Terrace Study Area
- Proposed Subbasins
- Existing or Future Street
- Overland Flow Direction
- 10ft Contour Line

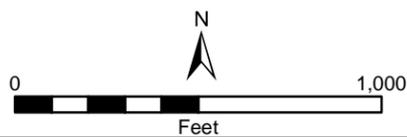
- Regional Stormwater Facility**
- Water Quality and Quantity
 - Water Quantity Only

Sensitive Areas

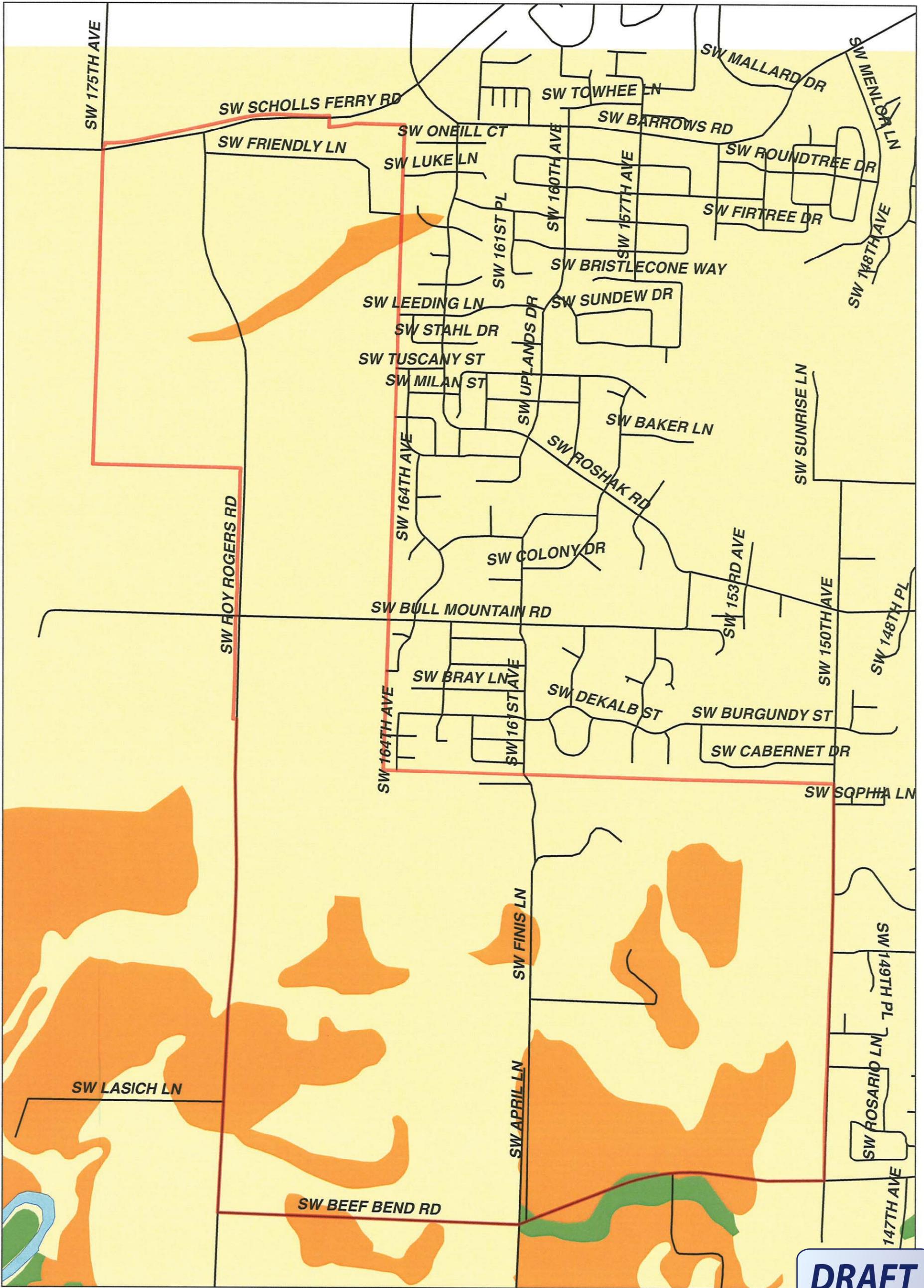
- Inventoried Wetlands
- Natural Resource Buffers
- Tualatin River
- Existing Drainageway

Stormwater Conveyance

- Pipes**
- with Street LIDA
 - no Street LIDA
- Swales/Ditches**
- with Street LIDA
- Flow Splitter Device



Data on this map is from Washington County and Metro's RLIS database. This information was developed at multiple scales and accuracies. No warranty is made with this map.



DRAFT

West Bull Mountain Planning Area

**FIGURE 5
SOIL INFILTRATION**

LEGEND

- West Bull Mountain Study Area
- Soil Infiltration**
- Good Potential
- Fair Potential
- Poor Potential
- Water



1 INCH EQUALS 800 FEET

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Printing Date: 4/17/2009

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Attachment A — Background Information



As part of this SMP, Otak reviewed multiple data sets and reports prepared for the River Terrace study area. Our review of the data and relevant conclusions are summarized for the following seven items.

DOCUMENT 1: *West Bull Mountain Hydrologic and Hydraulic Analysis* (HDR Inc., March 2008)

The purpose of this study was to describe existing hydrologic and hydraulic conditions for the basins within the West Bull Mountain Study Area. The scope of work included creation of existing conditions hydrologic model (HEC-HMS) and Hydraulic model (HEC-RAS) and an evaluation of the conveyance capacity of streams and culverts under existing flow conditions, as well as the general potential for erosion in the streams.

- 1) Capacity of existing culverts was evaluated. Figure 4-1 from the HDR report shows the location of culverts considered to be under-sized in terms of capacity.
- 2) Flooding is most prominent along reaches T2A, T8, and T9 with localized flooding at several other locations, as shown in Figure 4-2 from the same report.
- 3) The report shows that the culverts modeled within the study area violate hydraulic criteria for fish passage crossings. However, most of the streams are steep and should be expected to have high velocities. According to Washington County (correspondence with Rick Raetz, former Washington County), culverts beneath Roy Rogers Road that were constructed circa 2001 during the most recent road improvement project were designed for fish passage. See discussion under DOCUMENT 5 for Otak's review of construction drawings provided by Washington County for Roy Rogers Road. The need to modify existing culverts for fish passage will need to be evaluated at the time of design and implementation of improvements to Roy Rogers and compared against fish passage requirements in place at the time.
- 4) The potential for channel erosion may be significant due to the fine sediment characteristics of the area and the velocity conditions that exist in these steep drainages.
- 5) *Attachment D* of this River Terrace SMP provides copies of both Figure 4-1 & Figure 4-2 from the HDR report.

DOCUMENT 2: *West Bull Mountain Natural Resources Inventory Technical Report* (Pacific Habitat Services, April 23, 2008.) A natural resources inventory was completed for the 712 acre West Bull Mountain Planning Area and the Stream Resources Study Area consisting of approximately 27,500 linear feet of designated streams and stream corridors in West Bull Mountain. The scope of services included the following:

- 1) Stream and buffer assessment using the Tualatin Basin Rapid Stream Assessment Technique (RSAT) to evaluate creek and riparian conditions;

- 2) Wetlands assessment including mapping all wetlands within the study area, assessing approximate size, Cowardin and Hydrogeomorphic (HGM) classifications, and Oregon Freshwater Wetland Assessment Methodology (OFWAM) analysis;
- 3) Wildlife habitat assessment by on-site and windshield surveys to determine the approximate size and type of all habitat features and use of the Wildlife Habitat Assessment (WHA) technique; and
- 4) Identification of potential stream enhancement, wetland enhancement/mitigation, and aquatic species barrier/passage projection.
- 5) Inventory data was compiled and stored in a GIS database for easy mapping.

The natural resources identified were used as a constraint to define buildable lands during formation of the preliminary concept plans assumed for this SWIP. Several culvert barriers and enhancement opportunities were identified for consideration during development of West Bull Mountain. The findings of the Report were used to identify suitable context sensitive infrastructure placements.

DOCUMENT 3: *Regional Landslide Hazard Mapping, West Bull Mountain Planning Area*, Washington County, Oregon (DOGAMI, Draft-March 31, 2008) and *ADDENDUM to Regional Landslide Hazard Mapping, West Bull Mountain Planning Area*, Washington County, Oregon (DOGAMI, April 21, 2008). These reports indicate that:

- Forty-seven landslide deposits are located within the West Bull Mountain Planning Area (WBMPA) and 93 total landslide deposits within the approximately 13 square miles southwest quarter of the Beaverton quadrangle.
- Eighty-three of these were classified as shallow, nine as deep, and six as debris flow deposits.
- The average landslide area is approximately 20,000 square feet.
- The average depth of failure for the shallow-seated landslides is 8.5 feet. Two square miles of the 13 are classified as highly susceptible, 6.5 square miles as moderately susceptible, and 4.7 square miles as low susceptibility to shallow-seated landslides.
- The average depth of failure for the deep-seated landslides is 26 feet. 0.03 square miles are classified as highly susceptible, 2.5 square miles as moderately susceptible, and 10.5 square miles as low susceptibility to deep-seated landslides.

These results suggest site specific geologic and geotechnical conditions will be important to evaluate during the design and construction of stormwater management facilities in the River Terrace study area. In addition, an assessment of the effects of infiltration on slope stability for developed conditions will need to be performed. .

DOCUMENT 4: *The Report of Preliminary Geological Evaluation West Bull Mountain Planning Area* (GeoDesign, Inc., April 21, 2009) included the following discussion on soil properties and the use of Low Impact Stormwater Management.

The NRCS SSUGRO database provides a mean value of the saturated hydraulic conductivity for all of the soil series mapped in the planning area. Unfortunately, the saturated hydraulic conductivity cannot be used as a direct measure of the infiltration rate used in stormwater infiltration facility design. The saturated hydraulic conductivity is measured using a laboratory apparatus that allows only unidirectional flow. Field-measured infiltration rates used in facility design allow for lateral flow of the infiltrating water. Consequently, the saturated hydraulic conductivity typically underestimates the actual infiltration rates measured in the field. However, measurements of saturated hydraulic conductivity were available throughout the planning area and could be used to provide a relative comparison of infiltration potential for the purpose of this planning evaluation.

The soil properties (e.g., liquid limit, plasticity index, ratio of sand fraction to fines fraction, and saturated hydraulic conductivity) and interpretive characterizations (depths to the impervious layer and groundwater) were used to evaluate the relative potential of each soil series for utilization in low impact stormwater management. The relative rating methodology assigns a low, medium, or high potential for each soil series based on these characterizations. Saturated hydraulic conductivity published in SSUGRO was used as a proxy for the long-term infiltration rate, and the primary factor considered in assigning the soil infiltration potential. Soil series with a reported saturated hydraulic conductivity below 0.1 inch per hour was considered to have a poor infiltration potential. Rates ranging from 0.4 to 0.7 inch per hour were assigned a fair infiltration potential, and conductivities exceeding 1.0 inch per hour were assigned a good infiltration potential. No soil series in the study area reported saturated hydraulic conductivity that fell within the range of greater than 0.1 and less than 0.4, and greater than 0.7 and less than 1.0. For all good potential soil series, the depths to the restrictive layer and groundwater exceeded 6.6 feet. The depth to the restrictive layer exceeded 6.6 feet for the soil series rated as fair infiltration potential, but groundwater depths were less than 6.6 feet. The potential was decreased by one range (for example, a good infiltration potential becomes a fair infiltration potential) for soil series where the reported slope exceeds 12 percent. It is the geotech's opinion that the issues of constructability and directivity to the groundwater flow paths for infiltration ponds constructed on sloping ground justified downgrading the potential for these areas. A copy of the GeoDesign map of the Bull Mountain Planning Area showing areas having poor, fair, and good potential for infiltration determined using this methodology is provided in the attachments as Figure 5.

The City of Portland Stormwater Management Manual sets a minimum infiltration rate of 2-inches per hour for all surface infiltration facilities. A field-measured infiltration rate may be a factor of two or greater than the saturated hydraulic conductivity. Consequently, rates of 0.4 to 0.7 inch per hour and 1.0 inch per hour were used to delineate areas of fair and good infiltration potential for planning purposes.

Figure 5 shows that the infiltration potential is poor in most of the planning area except for the southern portion where there are areas having a fair infiltration potential. Areas of good infiltration potential are limited to one large area at the southern boundary of the planning area along SW Beef Bend Road. The results of geotechnical drilling and laboratory testing performed for this project confirmed that the areas having a poor infiltration potential are underlain by clayey residual soils derived from the underlying basalt bedrock and that the areas having fair to good infiltration potential are underlain by fine-grained Missoula Flood deposits. There was no explanation for the overall poor infiltration potential within the Missoula Flood deposits located in the northern portion of the planning area.

DOCUMENT 5: *Roy Rogers Road Improvements S.W. Beef Bend/Elsner/Scholls-Sherwood Roads* (CH2MHill, November 1999). The construction drawings for this project provide inventory and detailed information for the drainage structures under Roy Rogers Road that drain the River Terrace area towards the west. Relevant drawings from the plan set are included in *Attachment E* for future reference. A summary of the useful information provided on these drawings is as follows:

- Ditches are used to route storm runoff down embankment slopes to the stream crossings.
- Drainage T-2 crosses Roy Rogers Road under a bridge approximately 79 feet long and 43.3 feet wide. High water elevations shown on the detail sheets differ by 2.4 feet (0.75 meters). The greatest elevation shown is 236.3 feet (72.01 meters), and provides approximately 12.4 feet of clearance.
- Three 18-inch diameter culverts 250.3 feet in length with a slope of 0.26 percent are used to pass drainage T-3 under Roy Rogers Road.
- A 6'x6' concrete box-culvert 115.5 feet in length with a slope of 5.0 percent provides the crossing for drainage T-4. The box culvert is counter sunk two feet with concrete baffles to simulate a streambed for fish passage.
- Drainage T-5 crosses Roy Rogers Road in a 160 foot long 48-inch culvert with a 9.8 percent slope and a 156.5 foot long 24-inch culvert with an 8.8 percent slope.

DOCUMENT 6: *The Roshak Pond Overview – West Bull Mountain Planning* (Washington County Department of Land Use and Transportation Planning Division, November 5, 2008) memorandum summarizes the known information regarding the Roshak Pond. The pond was enlarged from a smaller spring fed pond and now stores water for irrigation. The pond has a capacity of approximately 20 acre-feet, which is the maximum allowed per the water right certificate. During the irrigation season when the pond level decreases, the Roshak family pumps water from a well into the pond. A soil boring located in the berm of the pond in March 2009 as a part of the previously mentioned geotechnical report consisted of a layer of soft to medium stiff silt Missoula Flood deposits and a layer of soft to medium stiff clay and silt derived from the basaltic residual soil. The ground water in the boring was found at a depth of 3 feet which corresponded approximately to the

water level in the pond.

The pond is not identified in the County's acknowledged 1983 Goal 5 Program; however, it is identified in the County's 2005 Tualatin Basin Goal 5 Program as Class I and II Riparian and Riparian Impact Area.

The natural resource inventory for West Bull Mountain (PHS, 2008) identifies the pond as a jurisdictional waterbody by the Oregon DSL and/or Corps of Engineers and would therefore, be treated by CWS as a water quality sensitive area requiring a vegetated corridor.

The actual location of the vegetated corridor is determined when a development application is submitted, and depending on slope may be between 50 and 200 feet. Therefore, only a *Vegetated Corridor Proxy* has been mapped around the perimeter of the pond at this time. The *Vegetated Corridor Proxy* is an estimated location of the *Vegetated Corridor* based upon the wetland inventory prepared for this project and the adjacent slopes.

Modifications to the pond are expected to require permits from Oregon DSL and/or Corps of Engineers.

Change in water rights or use of the existing water rights associated with the pond would require coordination with Oregon Water Resources Department.

DOCUMENT 7: The *West Bull Mountain Stormwater Infrastructure Plan* (Otak, February, 2010) describes the stormwater management needs for the River Terrace study area, and includes a portion of Urban Reserve Area 6D. The *West Bull Mountain Stormwater Infrastructure Plan* (WBM SWIP) also documents the guiding input from project stakeholders that were considered in developing the recommended stormwater management concept that will be carried forward into the River Terrace SMP.

The West Bull Mountain Stakeholder Working Group (SWG) put forth two Planning Goals relevant to the planning for West Bull Mountain stormwater management:

- Equitable and Feasible Infrastructure Financing – Creation of an urban infrastructure financing plan will begin early in the process in order to ensure infrastructure is provided and financed in an equitable and feasible manner.

- A Green Community – The West Bull Mountain Community Plan will endeavor to protect significant natural resources, preserve open spaces and habitat corridors, protect water quality by using a watershed approach, respect existing topography, and use sustainable planning practices to create a green community that is practical to develop.

The West Bull Mountain SWG drafted and approved Planning Principles to guide the Concept Plan. Four of the principles are relevant to stormwater management:

- #5. Infrastructure Finance Certainty and Equity – Financing plans for infrastructure (water, sanitary sewer, stormwater, transportation, and parks) should begin early in the planning process and should create certainty for all parties. It should be equitably distributed according to the benefits of urbanization, proportionality of use, and based on a public/private collaboration that explores creative financing tools.
- #8. Preserve/Protect Natural Resource Corridors and View Corridors – The community plan will endeavor to preserve and protect existing natural resource corridors and minimize impact on habitat connectivity as well as protect the scenic views and natural beauty of the area.
- #9. Parks and Open Spaces in the Community – The plan should consider a range of parks, from tot-lots and ball fields to natural areas and community gardens, distributed within West Bull Mountain’s neighborhoods. Conservation areas and open lands should be used to define and connect different neighborhoods, districts, and natural resource areas such as the Tualatin River National Wildlife Refuge.
- #15. Sustainability – Design and implementation strategies should allow the community to meet the needs of the present without sacrificing the ability of future generations to meet their own needs. The community plan should strive to achieve an ecological look and feel by integrating sustainable planning practices which may include Low Impact Development Applications.

The following list of stormwater management strategies were put forth and considered while developing the SWIP and are carried forward in this Plan.

- Restore/Enhance Vegetated Corridors
- Protect Water Quality
- Preserve Existing Hydrology
- Promote Safe & Long Lasting Stormwater Facilities
- Balance the use of Regional and On-site Stormwater Management
- Preserve Existing Mature Vegetation
- Maximize use of Multi-benefit facilities to create community amenities
- Promote Partnership with Other Public Service Providers

The following list of specific ideas and concepts were generated to accomplish the identified goals, principles, and stormwater strategies. They were considered part of the stormwater approach for West Bull Mountain and guided the stormwater management strategies applied throughout West Bull Mountain in the SWIP. The *Low Impact Development Approaches Handbook* and the *Design and Construction Standards* provide additional detail about each of the stormwater concepts considered.

- Open conveyance elements to enhance “key” pedestrian routes along streets or along stream corridors.
- Low Impact Development Approaches (e.g., eco-roofs, , flow-through planters, etc.). It is assumed that these would be limited to flow-through type facilities unless geotechnical evaluations can demonstrate that infiltration is not expected to contribute to slope instability.
- Minimize Impervious Area (e.g., clustered development, “skinny” streets, reduced parking, pervious pavement, etc.).
- Regional Detention/Water Quality facilities parallel to Roy Rogers and/or a new interior street that is also parallel to Roy Rogers.
- Re-use for irrigation.
- Increased conveyance between site and the Tualatin River (e.g., High flow by-pass pipe or stream restoration)

Two alternative stormwater management concepts were developed for the study area and compared using a set of qualitative criteria. The final strategy was a hybrid, which made use of portions of each alternative. One alternative made use of regional facilities and was more applicable in some of the drainage basins, while the other was a better solution in other drainage basins that could make use of LIDA. The final strategy applies the best of both alternatives to match the characteristics and needs of each drainage basin. The WBM SWIP document should be consulted for further details on the alternatives analysis.

Attachment B — Cost Estimate



RIVER TERRACE STORMWATER MASTER PLAN

Stormwater Management Infrastructure Cost Estimate (prepared in 2014)

ITEM DESCRIPTION	UNIT	UNIT PRICE	WATER QUALITY AND DETENTION POND											DETENTION POND		HIGH-FLOW CONVEYANCE			TOTALS
			WQSMB	WQ2_5AC	WQ2_5B	WQ2_7A	WQ2_7B	WQ3_2A	WQ3_2B	WQ4_4A	WQ4_4B	WQ5_6C	WQ10_3A	T2_6	T5_6b	T8(North)	T8(South)	T9	
MOBILIZATION		10%	\$30,745	\$109,713	\$60,197	\$85,105	\$29,324	\$53,609	\$37,778	\$39,578	\$29,565	\$30,097	\$22,449	\$95,483	\$83,776	\$98,150	\$109,608	\$75,938	\$991,114
TEMPORARY TRAFFIC CONTROL		2%	\$6,149	\$21,943	\$12,039	\$17,021	\$5,865	\$10,722	\$7,556	\$7,916	\$5,913	\$6,019	\$4,490	\$19,097	\$16,755	\$19,630	\$21,922	\$15,188	\$198,223
TEMPORARY EROSION CONTROL		2%	\$6,149	\$21,943	\$12,039	\$17,021	\$5,865	\$10,722	\$7,556	\$7,916	\$5,913	\$6,019	\$4,490	\$19,097	\$16,755	\$19,630	\$21,922	\$15,188	\$198,223
EXCAVATION & GRADING	CY	\$16	\$40,270	\$226,190	\$115,321	\$121,646	\$27,686	\$92,153	\$20,586	\$71,051	\$47,367	\$17,863	\$30,719	\$212,637	\$98,010	\$0	\$0	\$0	\$1,121,498
AMENDED SOIL	CY	\$20	\$8,753	\$59,693	\$29,847	\$31,863	\$6,453	\$15,528	\$2,783	\$17,343	\$10,204	\$3,146	\$5,647	\$0	\$0	\$0	\$0	\$0	\$191,261
LANDSCAPE PLANTING & ESTABLISHMENT IRRIGATION	AC	\$150,000	\$61,500	\$304,200	\$154,650	\$165,000	\$40,500	\$156,450	\$37,500	\$100,650	\$72,150	\$30,000	\$49,500	\$260,100	\$202,500	\$0	\$0	\$0	\$1,634,700
BIODEGRADABLE GEOTEXTILE	SY	\$4	\$7,938	\$39,262	\$19,960	\$21,296	\$5,227	\$20,192	\$4,840	\$12,991	\$9,312	\$3,872	\$6,389	\$33,570	\$26,136	\$0	\$0	\$0	\$210,985
RIP RAP OUTFALL PROTECTION	EA	\$1,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$4,000	\$2,000	\$0	\$1,000	\$0	\$29,000
PRE-TREATMENT DEVICE	EA	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$0	\$0	\$0	\$0	\$0	\$110,000
DITCH INLET	EA	\$2,500	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$2,500	\$2,500	\$0	\$0	\$0	\$60,000
MAINTENANCE ACCESS ROAD	SF	\$4	\$16,000	\$24,000	\$22,000	\$20,000	\$16,000	\$16,000	\$10,000	\$10,000	\$10,000	\$12,000	\$12,000	\$68,000	\$36,000	\$0	\$0	\$0	\$272,000
FLOW CONTROL MANHOLE	EA	\$10,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$0	\$0	\$0	\$260,000
CONCRETE MANHOLE	EA	\$7,000	\$7,000	\$0	\$0	\$7,000	\$7,000	\$0	\$21,000	\$0	\$0	\$0	\$0	\$0	\$0	\$35,000	\$35,000	\$28,000	\$140,000
FLOW SPLIT MANHOLE	EA	\$15,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,000	\$0	\$30,000	\$45,000
24 INCH STORM SEW PIPE, 10 FT	LF	\$100	\$0	\$0	\$0	\$38,000	\$0	\$0	\$104,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$142,000
30 INCH STORM SEW PIPE, 10 FT	LF	\$150	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$80,250	\$80,250
36 INCH STORM SEW PIPE, 20 FT	LF	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$240,000	\$240,000
48 INCH STORM SEW PIPE, 20 FT	LF	\$250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$445,000	\$512,500	\$0	\$957,500
CONCRETE BOX CULVERT 6x8' (COUNTERSUNK)	LF	\$1,400	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$140,000	\$0	\$0	\$0	\$140,000
TRENCH SURFACE RESTORATION	AC	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$122,590	\$141,185	\$99,575	\$363,349
OPEN CONVEYANCE	LF	\$50	\$15,000	\$0	\$0	\$93,700	\$44,650	\$0	\$0	\$0	\$0	\$85,500	\$0	\$0	\$0	\$0	\$0	\$0	\$238,850
CONSTRUCTION CONTINGENCY		30%	\$70,951	\$253,183	\$138,916	\$196,396	\$67,671	\$123,713	\$87,179	\$91,333	\$68,228	\$69,455	\$51,805	\$220,345	\$193,330	\$226,500	\$252,941	\$175,242	\$2,287,186
TOTAL CONSTRUCTION COSTS			\$307,455	\$1,097,125	\$601,969	\$851,047	\$293,241	\$536,090	\$377,777	\$395,777	\$295,653	\$300,972	\$224,487	\$954,828	\$837,762	\$981,499	\$1,096,076	\$759,380	\$9,911,139
IMPLEMENTATION PLANNING	1	LS	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$12,000	\$9,000	\$30,000	\$30,000	\$20,000	\$200,000
PRELIMINARY ENGINEERING		25%	\$76,864	\$274,281	\$150,492	\$212,762	\$73,310	\$134,022	\$94,444	\$98,944	\$73,913	\$75,243	\$56,122	\$238,707	\$209,441	\$245,375	\$274,019	\$189,845	\$2,477,785
PERMITTING		5%	\$15,373	\$54,856	\$30,098	\$42,552	\$14,662	\$26,804	\$18,889	\$19,789	\$14,783	\$15,049	\$11,224	\$47,741	\$41,888	\$49,075	\$54,804	\$37,969	\$495,557
CONSTRUCTION ADMINISTRATION		20%	\$61,491	\$219,425	\$120,394	\$170,209	\$58,648	\$107,218	\$75,555	\$79,155	\$59,131	\$60,194	\$44,897	\$190,966	\$167,552	\$196,300	\$219,215	\$151,876	\$1,982,228
SUBTOTAL, IMPLEMENTATION			\$470,182	\$1,654,688	\$911,954	\$1,285,571	\$448,862	\$813,135	\$575,666	\$602,665	\$452,479	\$460,458	\$345,730	\$1,444,242	\$1,265,643	\$1,502,249	\$1,674,114	\$1,159,070	\$15,066,708
LAND ACQUISITION	SF	\$9.00	\$160,736	\$795,057	\$404,193	\$431,244	\$105,851	\$408,898	\$98,010	\$263,059	\$188,571	\$78,408	\$129,373	\$679,797	\$529,254	\$0	\$0	\$0	\$4,272,452
EASEMENT ACQUISITION	SF	\$4.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$246,000	\$173,500	\$419,500
STAFFING COSTS	LS	1	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$35,000	\$35,000	\$35,000	\$755,000
APPRAISAL COSTS	LS	1	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$20,000	\$10,000	\$20,000	\$115,000
TOTAL			\$685,919	\$2,504,745	\$1,371,147	\$1,771,815	\$609,713	\$1,277,032	\$728,676	\$920,724	\$696,051	\$593,866	\$530,103	\$2,179,040	\$1,849,897	\$1,557,249	\$1,965,114	\$1,387,570	\$20,628,660

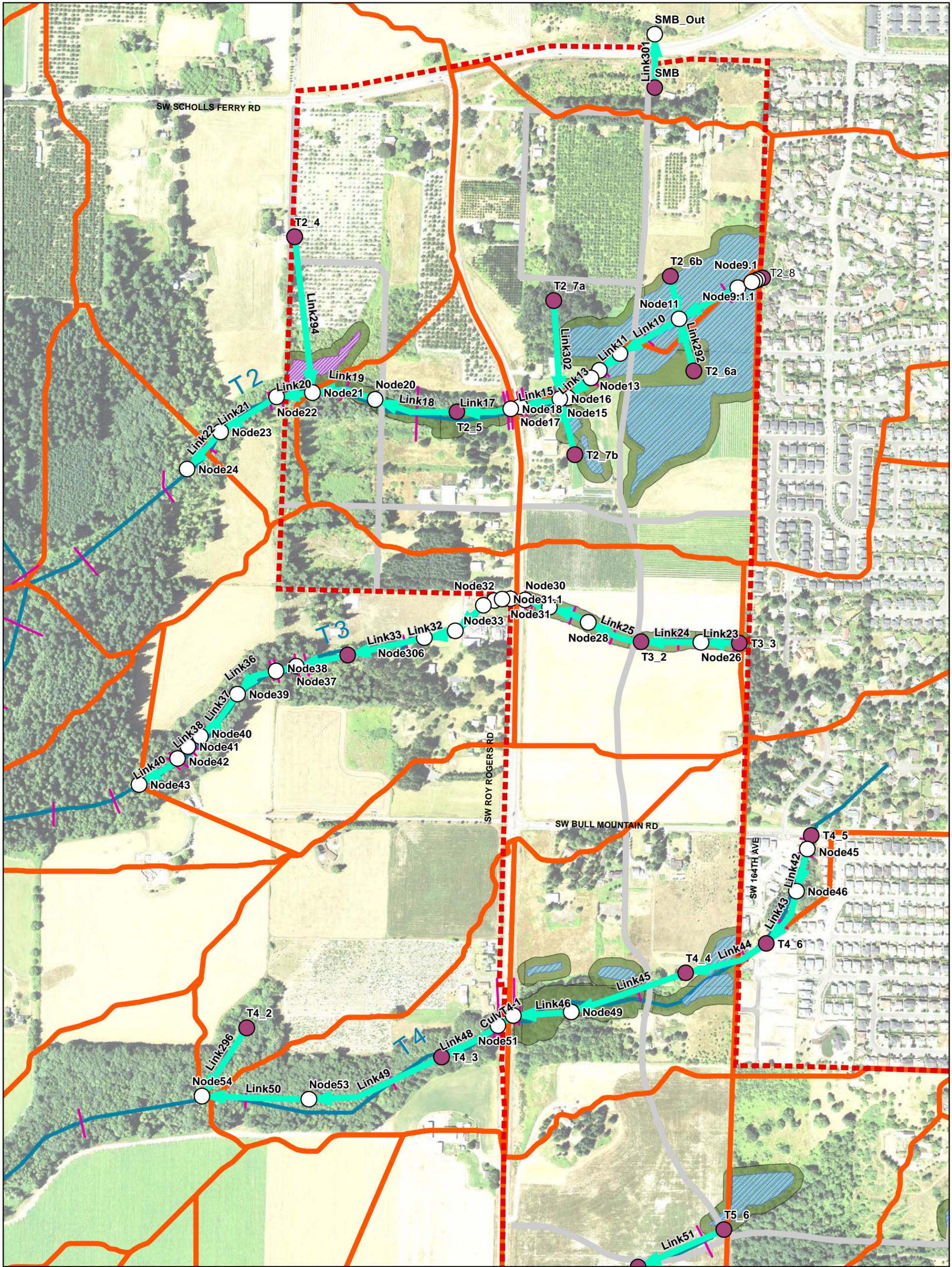
RIVER TERRACE STORMWATER MASTER PLAN

Stormwater Management Infrastructure Quantity Estimate

ITEM DESCRIPTION	UNIT	AMOUNT	WATER QUALITY AND DETENTION POND											DETENTION POND		HIGH-FLOW CONVEYANCE		
			WQSMB	WQ2_5AC	WQ2_5B	WQ2_7A	WQ2_7B	WQ3_2A	WQ3_2B	WQ4_4A	WQ4_4B	WQ5_6C	WQ10_3A	T2_6	T5_6b	T8 (North)	T8 (South)	T9
EXCAVATION & GRADING	CY	70,094	2517	14137	7208	7603	1730	5760	1287	4441	2960	1116	1920	13290	6126			
AMENDED SOIL	CY	9,563	438	2985	1492	1593	323	776	139	867	510	157	282					
LANDSCAPE PLANTING & ESTABLISHMENT IRRIGATION	AC	11	0.410	2.028	1.031	1.100	0.27	1.043	0.250	0.671	0.481	0.200	0.330	1.734	1.350			
BIODEGRADABLE GEOTEXTILE	SY	52,746	1984	9816	4990	5324	1307	5048	1210	3248	2328	968	1597	8393	6534			
RIP RAP OUTFALL PROTECTION	EA	29	2	2	2	2	2	2	2	2	2	2	2	4	2		1	
PRE-TREATMENT DEVICE	EA	11	1	1	1	1	1	1	1	1	1	1	1					
DITCH INLET	EA	24	2	2	2	2	2	2	2	2	2	2	2	1	1			
MAINTENANCE ACCESS ROAD	SF	68,000	4000	6000	5500	5000	4000	4000	2500	2500	2500	3000	3000	17000	9000			
FLOW CONTROL MANHOLE	EA	26	2	2	2	2	2	2	2	2	2	2	2	2	2			
CONCRETE MANHOLE - 60"	EA	20	1			1	1		3					0	0	5	5	4
FLOW SPLIT MANHOLE	EA	3														1		2
24 INCH STORM SEW PIPE, 20 FT	LF	1,420				380			1040									
30 INCH STORM SEW PIPE, 10 FT	LF	535																535
36 INCH STORM SEW PIPE, 20 FT	LF	1,200																1,200
48 INCH STORM SEW PIPE, 20 FT	LF	3,830														1,780	2,050	
CONCRETE BOX CULVERT 6'x8' (COUNTERSUNK)	LF	100													100			
TRENCH SURFACE RESTORATION	AC	3.6														1.2	1.4	1.0
OPEN CONVEYANCE	LF	4,777	300			1874	893					1,710						

Attachment C — XPSWMM Model Schematic

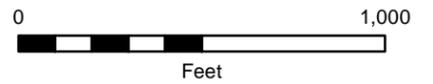




River Terrace Stormwater Master Plan
XPSWMM
Existing Schematic
T2, T3, T4, and SMB

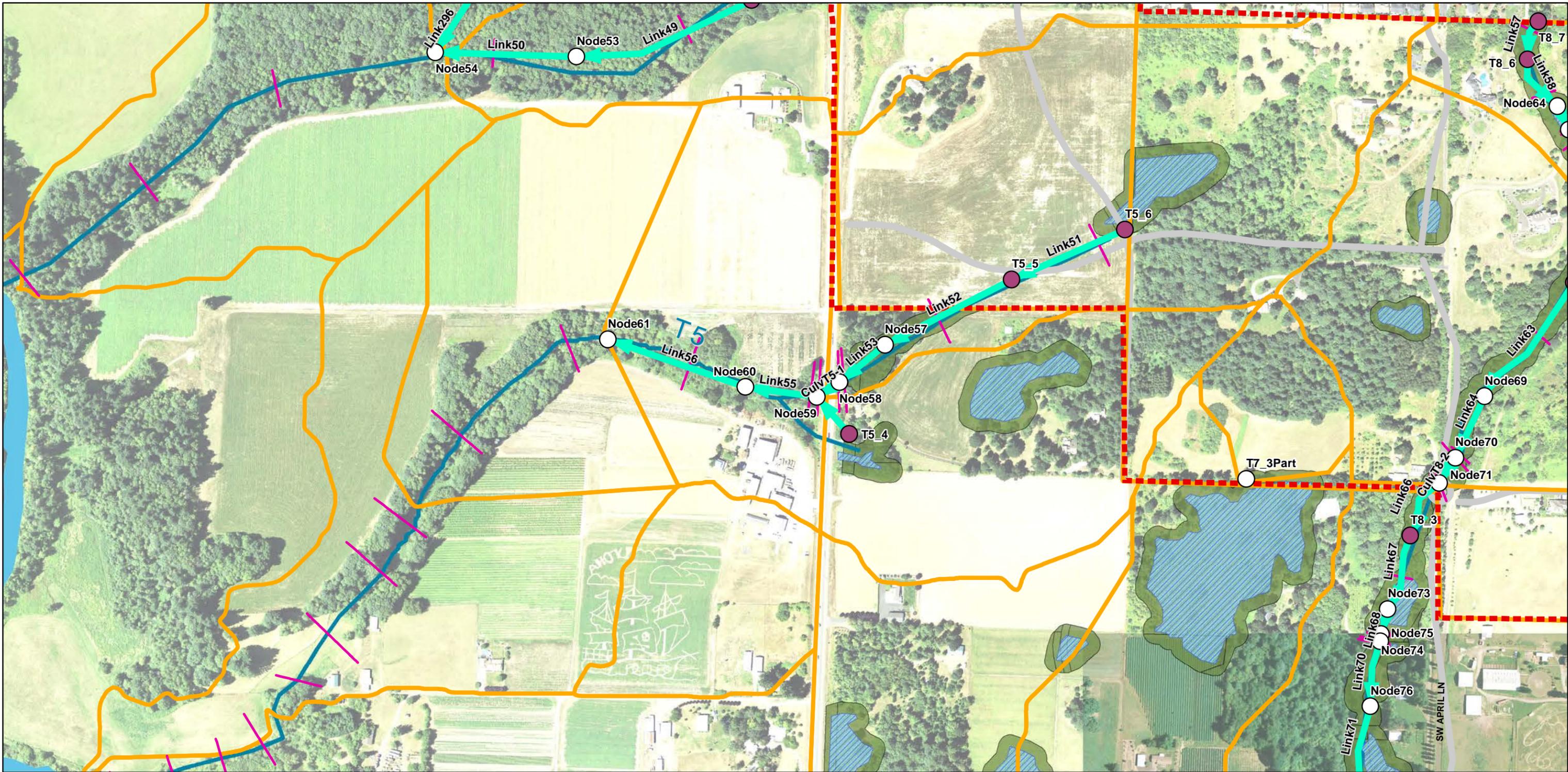
Legend

- XPSWMM Node
- XPSWMM Runoff Node
- XPSWMM Link
- River Terrace Study Area
- HEC RAS XS
- Existing Sub-Basin
- Street (Future)
- Sensitive Areas**
- Significant Wetlands
- Inventoried Wetlands
- Existing Drainageway
- Natural Resource Buffers



Data on this map is from Washington County and Metro's RLIS database. This information was developed at multiple scales and accuracies. No warranty is made with this map.





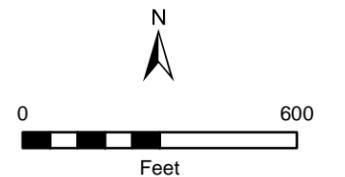
River Terrace Stormwater Master Plan

XPSWMM
Existing Schematic
T5

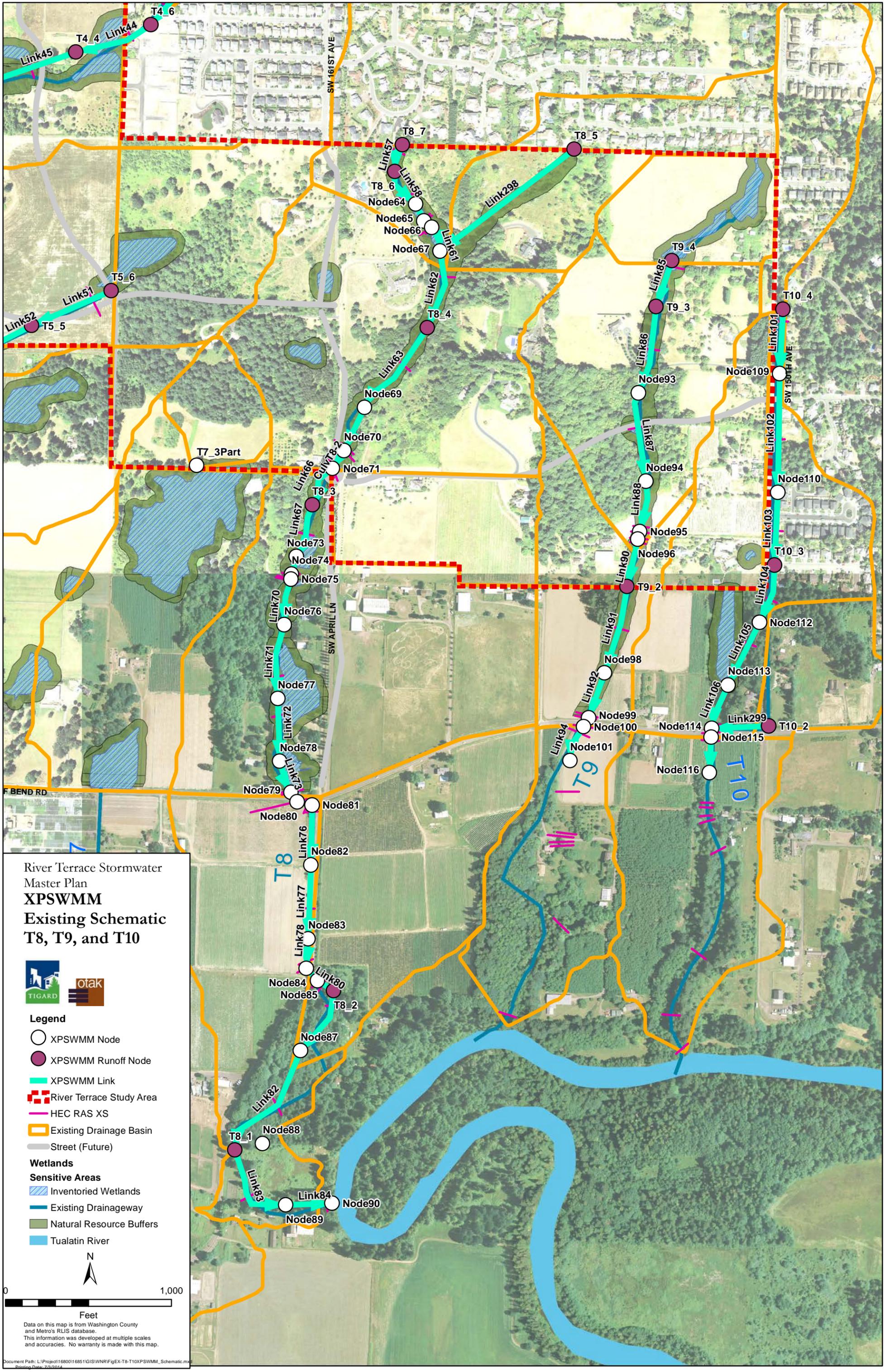


Legend

- XPSWMM Node
- XPSWMM Runoff Node
- XPSWMM Link
- River Terrace Study Area
- HEC RAS XS
- Existing Drainage Basin
- Street (Future)
- Wetlands**
- Inventoried Wetlands
- Sensitive Areas**
- Existing Drainageway
- Natural Resource Buffers
- Tualatin River



Data on this map is from Washington County and Metro's RLIS database. This information was developed at multiple scales and accuracies. No warranty is made with this map.



River Terrace Stormwater
Master Plan
XPSWMM
Existing Schematic
T8, T9, and T10



- Legend**
- XPSWMM Node
 - XPSWMM Runoff Node
 - XPSWMM Link
 - ▬ River Terrace Study Area
 - HEC RAS XS
 - ▬ Existing Drainage Basin
 - Street (Future)
- Wetlands**
- Sensitive Areas**
- ▨ Inventoried Wetlands
 - ▬ Existing Drainageway
 - ▨ Natural Resource Buffers
 - ▬ Tualatin River



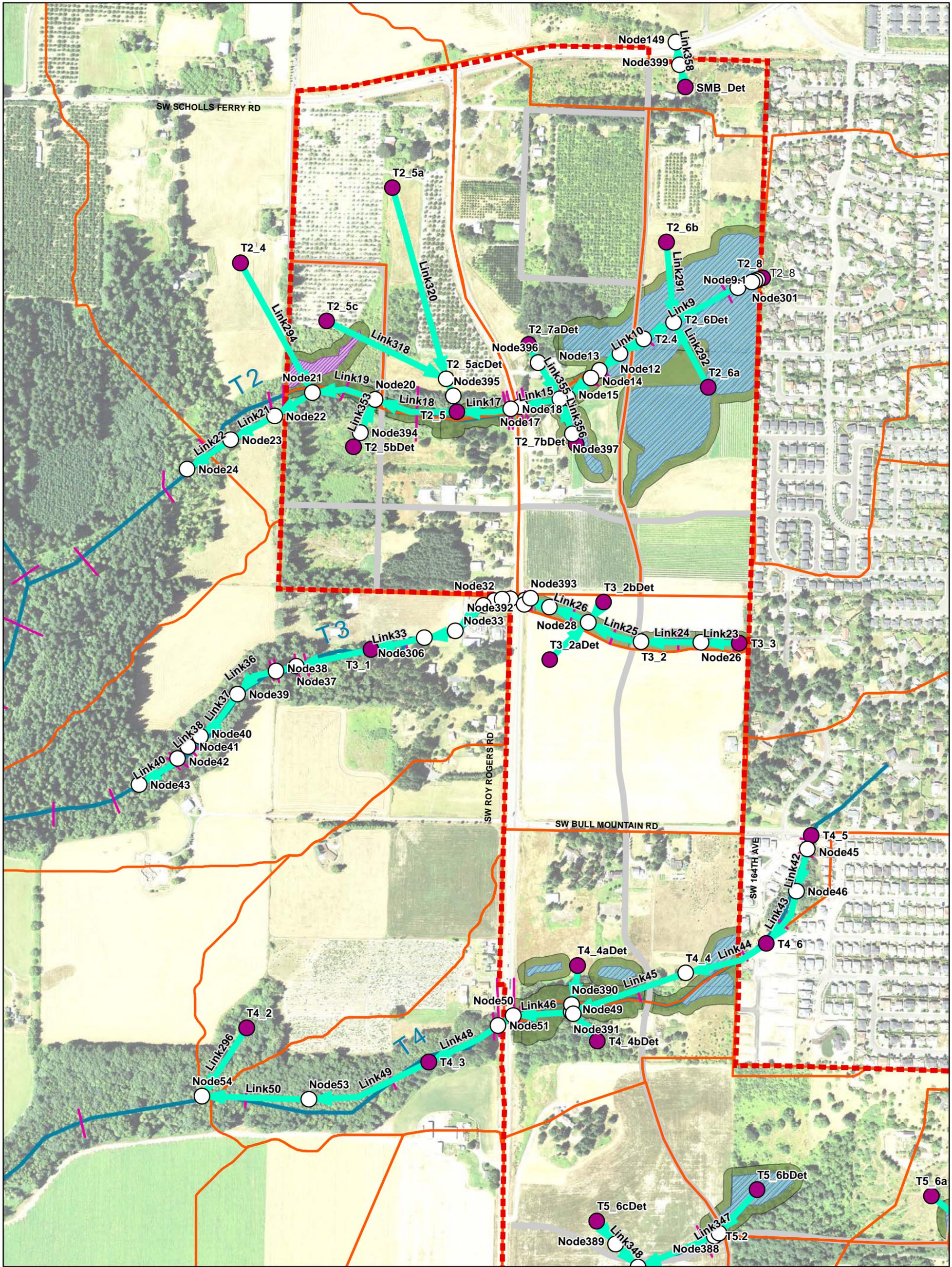
Data on this map is from Washington County and Metro's RLIS database. This information was developed at multiple scales and accuracies. No warranty is made with this map.

XPSWMM NODE INPUT: EXISTING CONDITIONS MODEL

Node Name	Area (ac)	Impervious %	Curve Number (CN)	Time of Concentration (min)
SMB	0.5	100	98	5
	10.62	0	83	16.5
T10_2	3.286	100	98	5
	9.491	0	91	20
T10_3	6.56	100	98	5
	37.792	0	81	20
T10_4	5.465	100	98	5
	12.937	0	83	20.4
T2_4	9.957	100	98	5
	108.014	0	78	27.2
T2_5	3.72	100	98	5
	26.136	0	74	20
T2_6a	3.08	100	98	5
	11.45	0	85	20
T2_6b	22.563	0	77	24.9
T2_7a	31.171	0	80	24.9
T2_7b	2.39	100	98	5
	17.38	0	84	20
T2_8	19.658	100	98	5
	35.099	0	84	20.4
T3_1	1.301	100	98	5
	88.417	0	76	26.3
T3_2	2.541	100	98	5
	30.757	0	82	20
T3_3	20.006	100	98	5
	45.502	0	83	20.4
T4_2	1.789	100	98	5
	51.93	0	80	25.2
T4_3	1.948	100	98	5
	25.531	0	73	18.4
T4_4	1.574	100	98	5
	45.7	0	78	20

(Cont.)

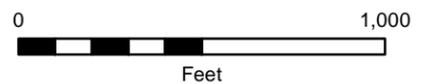
Node Name	Area (ac)	Impervious %	Curve Number (CN)	Time of Concentration (min)
T4_5	12.075	100	98	5
	31.407	0	82	20.4
T4_6	13.267	100	98	5
	24.966	0	83	20.4
T5_4	1.02	100	98	5
	30.56	0	78	25.6
T5_5	2.015	100	98	5
	42.964	0	87	20.6
T5_6	0.523	100	98	5
	25.892	0	76	20
T8_1	2.13	100	98	5
	37.464	0	86	25
T8_2	1.595	100	98	5
	35.661	0	85	25
T8_3	1.782	100	98	5
	78.482	0	83	38.8
T8_4	4.026	100	98	5
	51.429	0	78	20
T8_5	4.109	100	98	5
	23.879	0	74	20.4
T8_6	0.398	100	98	5
	9.185	0	70	20
T8_7	22.14	100	98	5
	62.463	0	83	20.4
T9_2	0.841	100	98	5
	21.473	0	82	20
T9_3	0.974	100	98	5
	36.632	0	76	10
T9_4	0.298	100	98	5
	14.161	0	83	20



River Terrace Stormwater Master Plan
XPSWMM
Proposed Schematic
T2, T3, T4, and SMB

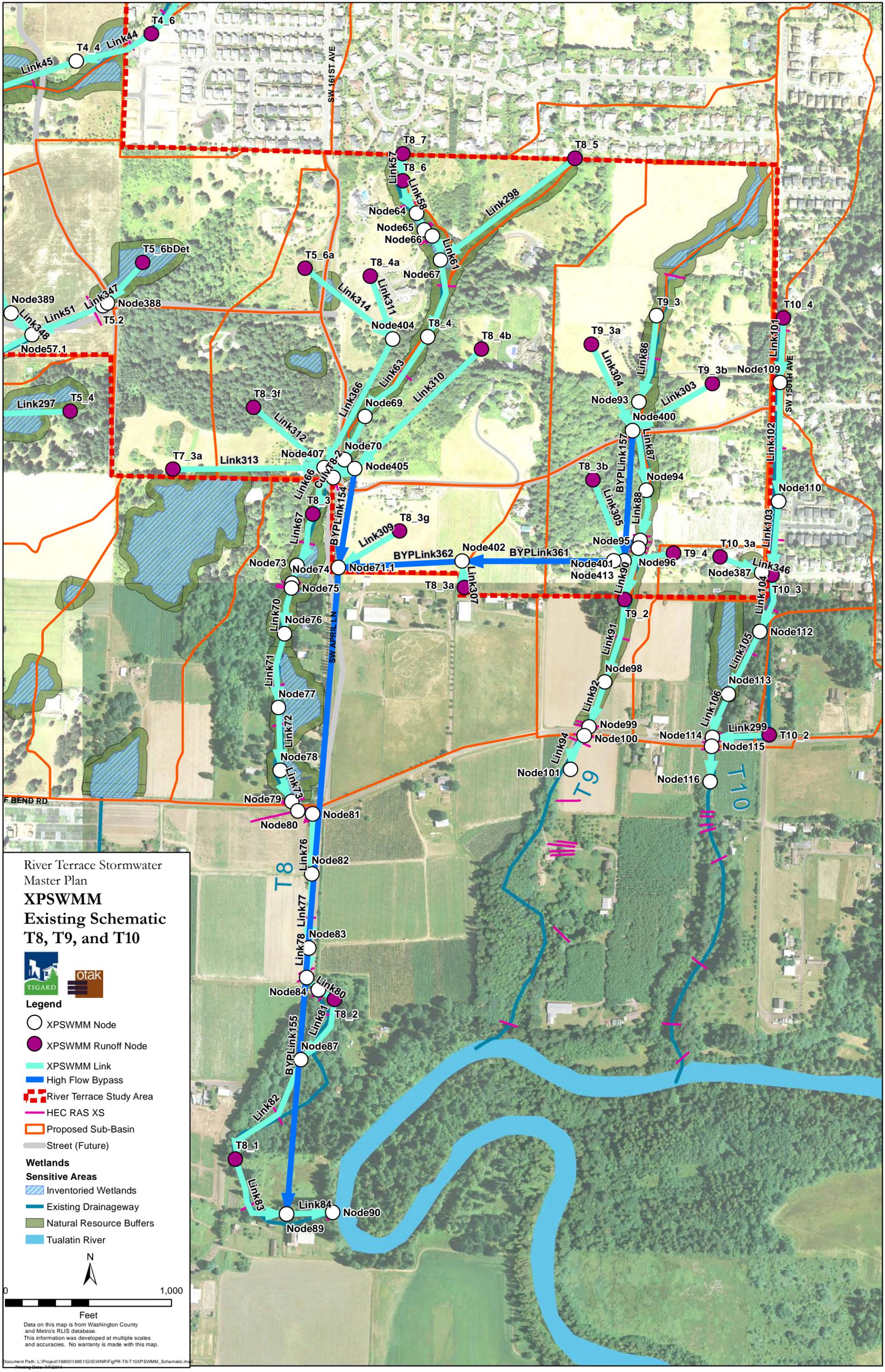
Legend

- XPSWMM Node
- XPSWMM Runoff Node
- XPSWMM Link
- ▤ River Terrace Study Area
- HEC RAS XS
- ▭ Proposed Sub-Basin
- Street (Future)
- Sensitive Areas**
- ▨ Significant Wetlands
- ▨ Inventoried Wetlands
- ▨ Existing Drainageway
- ▨ Natural Resource Buffers



Data on this map is from Washington County and Metro's RLIS database. This information was developed at multiple scales and accuracies. No warranty is made with this map.





River Terrace Stormwater Master Plan
XPSWMM
Existing Schematic
T8, T9, and T10



- Legend**
- XPSWMM Node
 - XPSWMM Runoff Node
 - XPSWMM Link
 - High Flow Bypass
 - ▤ River Terrace Study Area
 - HEC RAS XS
 - ▭ Proposed Sub-Basin
 - Street (Future)
- Wetlands**
- Sensitive Areas**
- ▨ Inventoried Wetlands
 - Existing Drainageway
 - ▨ Natural Resource Buffers
 - Tualatin River



Data on this map is from Washington County and Metro's RLIS database. This information was developed at multiple scales and accuracies. No warranty is made with this map.

XPSWMM NODE INPUT: PROPOSED CONDITIONS MODEL

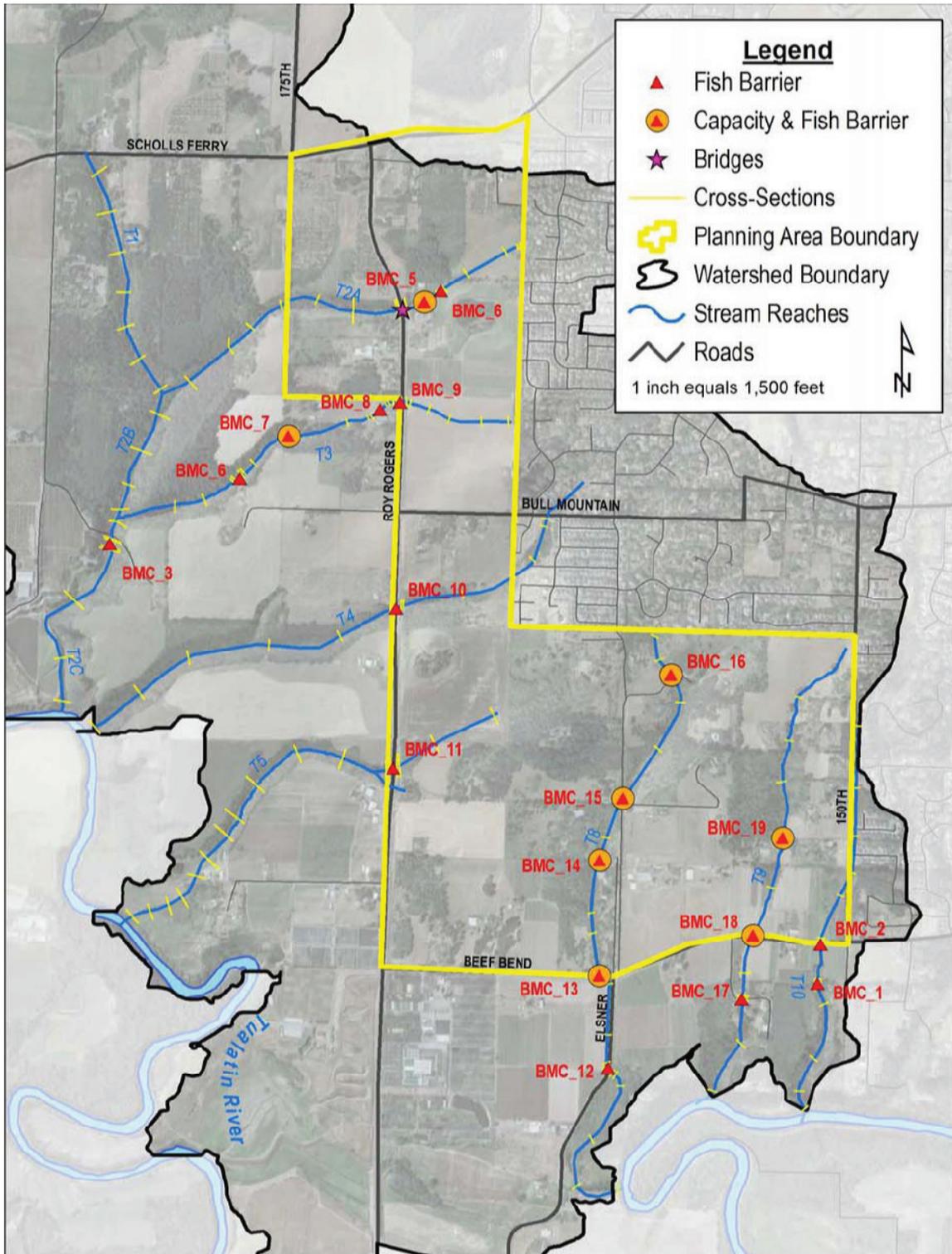
Node Name	Area (ac)	Impervious %	Curve Number (CN)	Time of Concentration (min)
SMB_Det	6.45	100	98	5
	3.96	0	85	10
T10_2	3.286	100	98	5
	9.491	0	91	20
T10_3	13.38	100	98	5
	16.75	0	81	20
T10_3a	3.35	100	98	5
	3.35	0	85	10
T10_4	5.465	100	98	5
	12.94	0	83	20.4
T2_4	7.119	100	98	5
	77.31	0	78	27.2
T2_5	0	0	98	5
T2_5a	18.71	100	98	5
	14.18	0	85	10
T2_5bDet	17.29	100	98	5
	14.22	0	85	10
T2_5c	4.5	100	98	5
	4.49	0	85	10
T2_6a	14.51	100	98	5
	11.58	0	85	10
T2_6b	7.58	100	98	5
	8.58	0	85	10
T2_7aDet	22.09	100	98	5
	15.58	0	85	10
T2_7bDet	11.09	100	98	5
	5.67	0	85	10
T2_8	19.66	100	98	5
	35.1	0	84	20.4
T3_1	1.16	100	98	5
	79.21	0	76	26.3
T3_2	0	0	98	5
T3_2aDet	18.05	100	98	5
	15.37	0	85	10
T3_2bDet	3.8	100	98	5
	3.47	0	85	10
T3_3	20.01	100	98	5
	45.5	0	83	20.4
T4_2	1.438	100	98	5
	41.74	0	80	25.2
T4_3	1.948	100	98	5
	25.53	0	73	18.4
T4_4	0	0	98	5
T4_4aDet	15.35	100	98	5
	13.47	0	85	10
T4_4bDet	7.55	100	98	5
	7.4	0	85	10
T4_5	12.08	100	98	5
	31.41	0	82	20.4

(Cont.)

Node Name	Area (ac)	Impervious %	Curve Number (CN)	Time of Concentration (min)
T4_6	13.267	100	98	5
	24.966	0	83	20.4
T5_4	0.874	100	98	5
	26.171	0	78	25.6
T5_5	0.166	100	87	5
	4.972	0	87	10
T5_6a	3.06	100	98	5
	3.06	0	85	10
T5_6bDet	15.57	100	98	5
	14.02	0	85	10
T5_6cDet	13.98	100	98	5
	11.51	0	85	10
T7_3a	7.2	100	98	5
	7.07	0	85	10
T8_1	2.13	100	98	5
	37.464	0	86	25
T8_2	1.595	100	98	5
	35.661	0	85	25
T8_3	1.4	100	98	5
	61.696	0	83	38.8
T8_3a	2.81	100	98	5
	2.8	0	85	10
T8_3b	5.74	100	98	5
	5.74	0	85	10
T8_3f	8.61	100	98	5
	8.55	0	85	10
T8_3g	5.95	100	98	5
	5.91	0	85	10
T8_4a	9.54	100	98	5
	10.33	0	85	10
T8_4b	18.13	100	98	5
	20.04	0	85	10
T8_5	1.861	100	98	5
	10.813	0	74	20.4
T8_6	3.69	100	98	5
	4.51	0	85	10
T8_7	22.14	100	98	5
	62.463	0	83	20.4
T9_2	0.453	100	98	5
	11.56	0	82	16.5
T9_3a	11.75	100	98	5
	13.61	0	85	10
T9_3b	8.88	100	98	5
	9.72	0	85	10
T9_4	5.56	100	98	5
	5.56	0	85	10

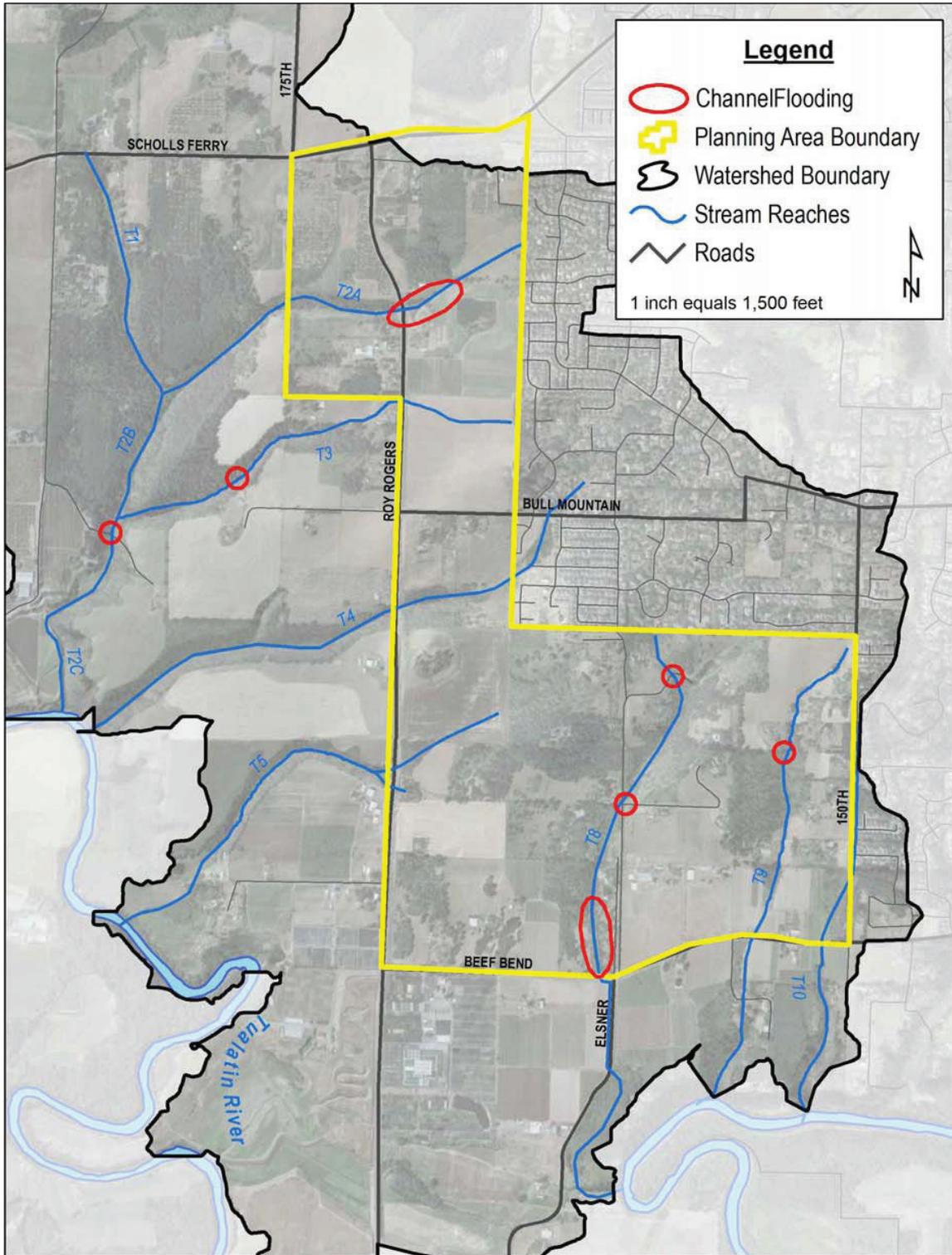
Attachment D — Figures from West Bull Mountain
Hydrologic and Hydraulic Analysis (HDR, 2008)





Summary of Problem Areas

FIGURE 4-1



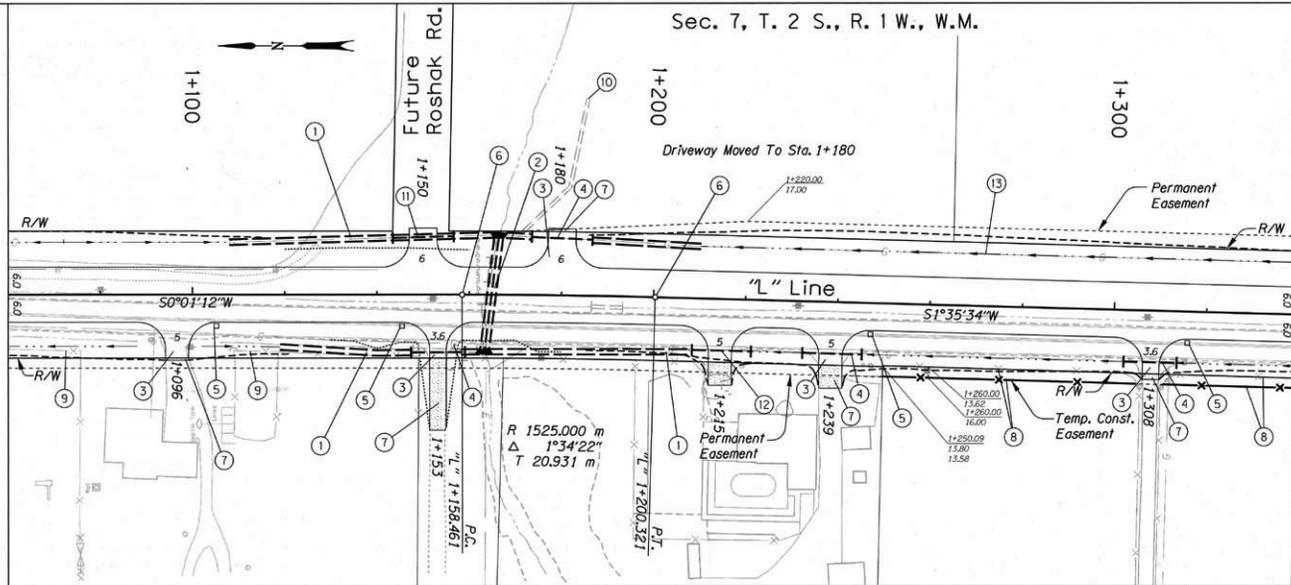
Flooding and Under Capacity Channels

FIGURE 4-2

Attachment E — Drawings from Roy Rogers Road
Improvement Project



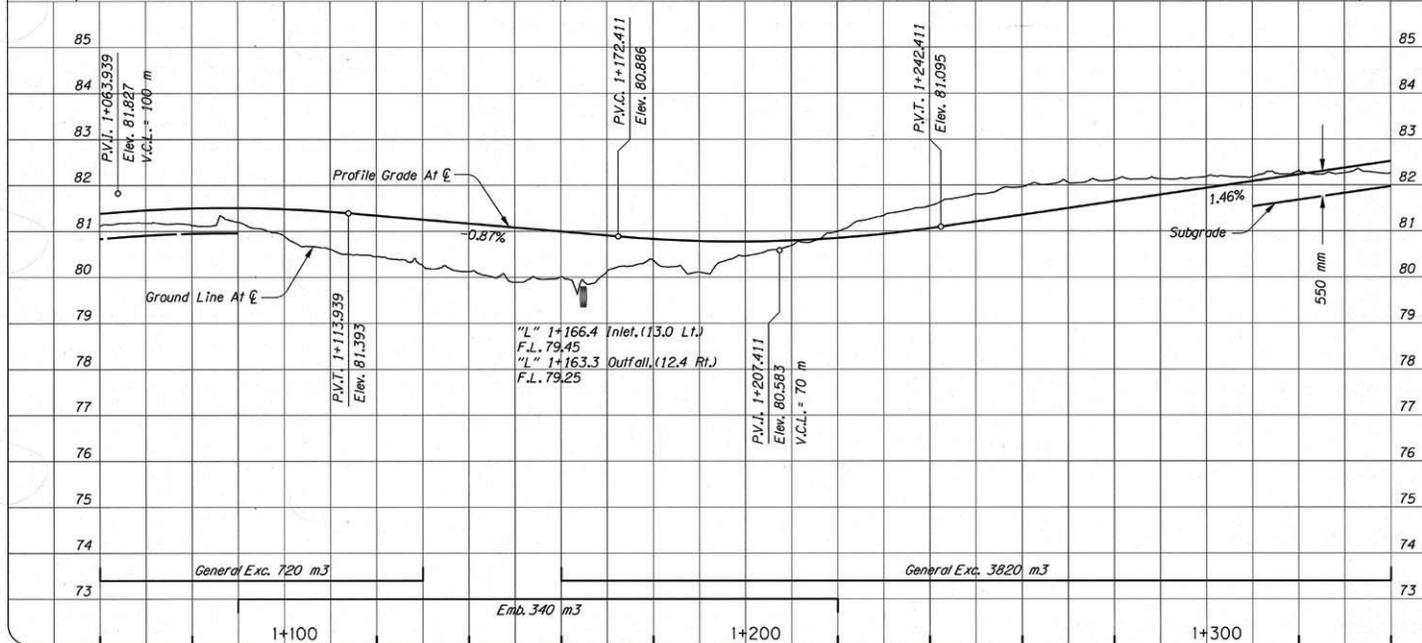
MATCH LINE STA "L" 1+060 SEE SHEET 5



MATCH LINE STA "L" 1+340 SEE SHEET 7

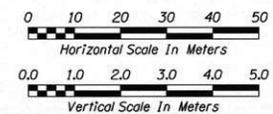
- ① Const. Swale Type B
- ② Sta. "L" 1+163.30 Rt. To 1+166.40 Lt.
Inst. 3-450 mm Culvert Pipe - 76.3 m
Const. Paved End Slope, Rt. & Lt. - 11.2 m²
(See ODOT Std. Drg. No. RD312, RD315)
- ③ Const. Asph. Appr. - 5
- ④ Inst. 300 mm Culvert Pipe - 49.3 m
- ⑤ Inst. Single Mail Box Support - 4
- ⑥ Sta. "L" 1+158.461 @
Sta. "L" 1+200.321 @
Inst. Monument Box
- ⑦ Const. Gravel Conn. - 5
- ⑧ Remove And Rebuild Extg. Rail Fence To
Easement Line - Approx 110 m
- ⑨ Remove Extg. Fence
- ⑩ 300 mm (6") PVC Drain Tile
- ⑪ F/E Added, Sta. "L" 1+150
300 mm Culvert Pipe Added - 13.2 m
- ⑫ D/W Added, Sta. "L" 1+215 Rt.
300 mm Culvert Pipe Added - 12.8 m
- ⑬ 300 mm (12") High Pressure Steel
NW Natural Gas Main, Located
Generally 10.8 m Lt. of @ Beneath Swale.

gpray



AS BUILT DRAWINGS
Revisions Drawn By R. Luke Date Jan 24, 2003

THESE AS BUILT DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO REPRESENT IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE AS BUILT DRAWINGS.



SHEET NO	6	
	DATE	BY
PROJECT NUMBER	2265	
	DATE	BY
NO.	REVISION	
	NO.	REVISION
THE CONTRACT DOCUMENTS DOCUMENT DATED 10/20/01 AS AMENDED, SHALL CONTROL IN ALL DISPUTES CONCERNING THE CONTRACT DOCUMENTS DRAWINGS AND SPECIFICATIONS. THE DATE OF THE LAST REVISION SHALL CONTROL.	DESIGNED	BY
	CHECKED	DATE

METRIC
WASHINGTON COUNTY
DEPARTMENT OF
LAND USE AND
TRANSPORTATION

CH2MHILL

**BEEF BEND/ELSNER/
SCHOLLS-SHERWOOD**

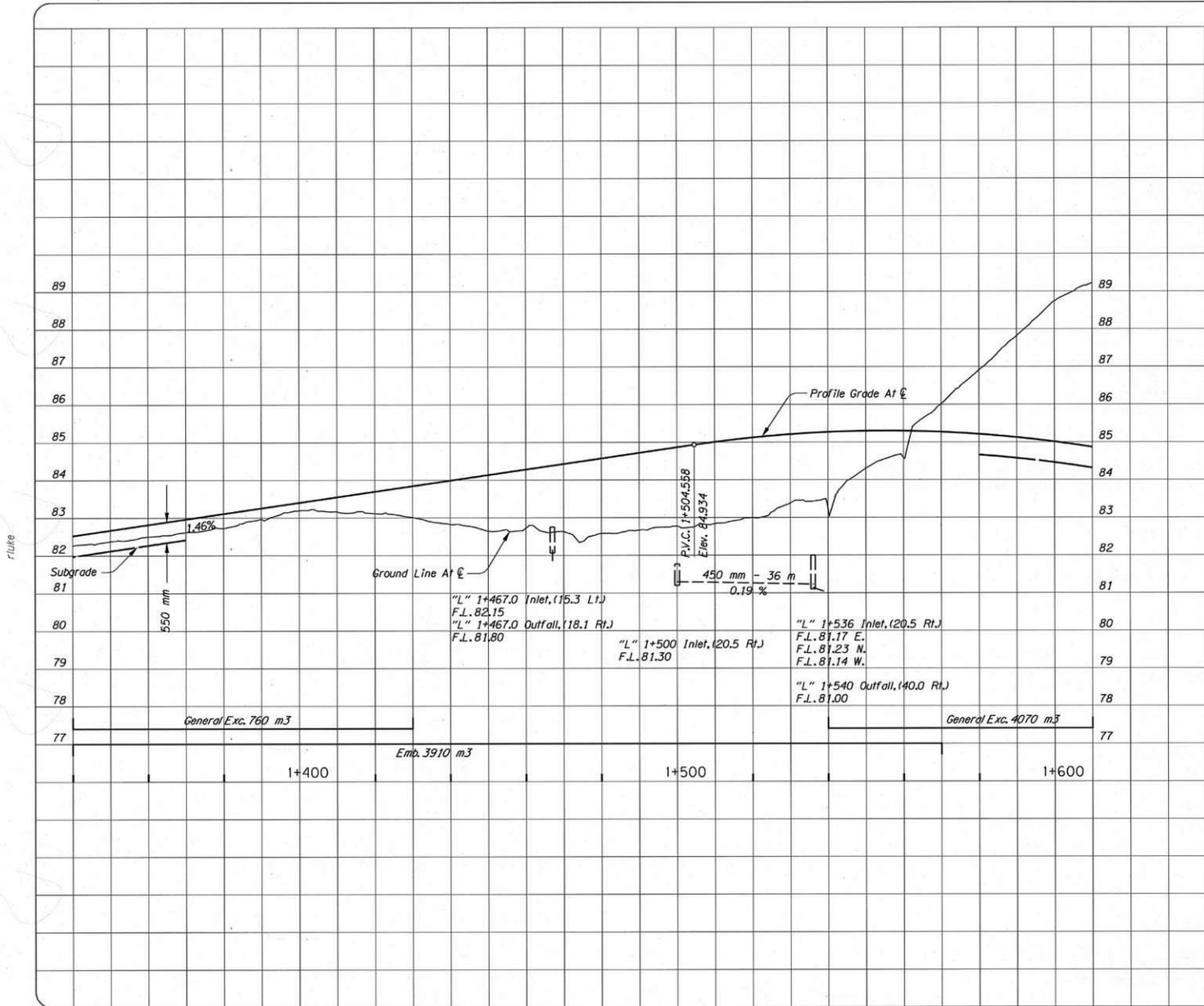
APP. BY	DATE	REVISION	NO.	PROJECT NUMBER
				2205
				DATE BY DESIGNED BY CHECKED BY
				11/28/02 RLS 11/28/02 RLS 11/28/02 RLS
THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND MAINTENANCE OF ALL UTILITIES AND STRUCTURES EXISTING ON THE PROJECT SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND MAINTENANCE OF ALL UTILITIES AND STRUCTURES EXISTING ON THE PROJECT SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND MAINTENANCE OF ALL UTILITIES AND STRUCTURES EXISTING ON THE PROJECT SITE.				
CH2M HILL				
METTRIC WASHINGTON COUNTY DEPARTMENT OF LAND USE AND TRANSPORTATION				
				
BEEF BEND/ELSNER/ SCHOLLS-SHERWOOD				
SHEET NO.				7A

- ① Not Used
- ② Inst. 300 mm Culvert Pipe - 38.6 m
- ③ Match At 26 m Rt.
- ④ Const. Asph. Appr. - 4
- ⑤ Const. Gravel Conn. - 2
- ⑥ Inst. 760 mm X 430 mm X 305 mm Precast Conc. Junction Box - 2 (See ODOT Std. Drg. No. TM407)
- ⑦ Inst. 560 mm X 305 mm X 305 mm Precast Conc. Junction Box - 2 (See ODOT Std. Drg. No. TM407)
- ⑧ Inst. Five (5) 53 mm Electrical Conduit
- ⑨ Inst. Five (5) 53 mm Electrical Conduit
- ⑩ Const. Swale Type B
- ⑪ Sta. "L" 1+467.0, 18.1 Rt.
Sta. "L" 1+467.0, 15.3 Lt.
Const. Type "D" Area Inlet, Modified
Grate F.L. Elev. 82.75
Inst. 450 mm Storm Sew. Pipe - 32.8 m
- ⑫ Sta. "L" 1+536.0, 20.5 Rt.
Const. Type "D" Area Inlet, Modified
Grate F.L. Elev. 82.00
Inst. 450 mm Storm Sew. Pipe - 80.0 m
Sta. "L" 1+500, 20.5 Rt.
Const. Type "D" Area Inlet, Modified
Grate F.L. Elev. 81.4
Grade To Provide Min 0.3 m Cover
- ⑬ Protect Gate And Key Pad
- ⑭ Inst. Single Mail Box Support - 2
- ⑮ Const. Asph. Conn. - 2
- ⑯ Remove Flasher System (See Special Provisions)
- ⑰ Sta. "L" 1+400,000 E
Sta. "L" 1+551,419 E
Inst. Monument Box
- ⑱ Preserve Trees As Directed By Engineer (Cedar And Ornamental Fruit) - 3
- ⑲ Remove Poplar Tree - 1 As Directed By Engineer
- ⑳ Remove And Rebuild Extg. Fence To Temp. Const. Easement Line - Approx. 110 m
- ㉑ Leave 7 Trees Removed In Slope Easement For Property Owners Use, As Directed by Engineer
- ㉒ Inst. Approx 30 m Type 2 Fence At Temp Const. Easement. Relocate Gate. Protect Trees Beyond Const. Limits
- ㉓ Const. Modified Type "C" Mountable Curb (For Details, See Sht. 2B)
- ㉔ Sta "L" 1+540, 40 Rt. 20.1 m
Inst. 450 mm Storm Sew. Pipe - 27.0 m
Const. Loose Riprap, Class 100, Mixture - 3 Mg
- ㉕ Sta. "L" 1+520, 10.8 m Lt.
Distance Left Of E Varies To The South.
12" High Pressure Steel
NW Natural Gas Main.

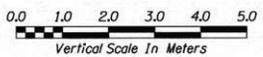
AS BUILT DRAWINGS

Revisions Drawn By R. Luke Date Apr 4, 2002

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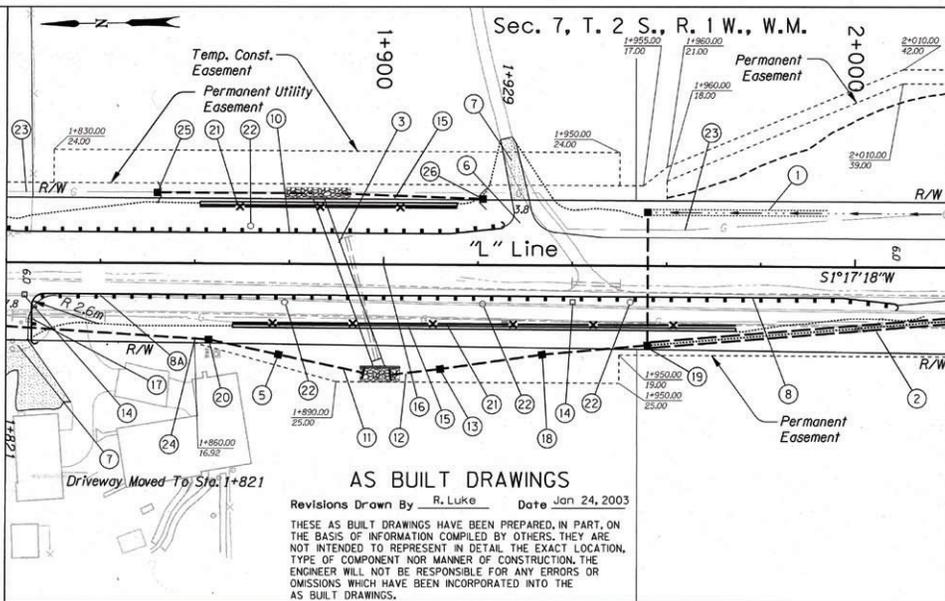


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SHEET NO 7B	BEEF BEND/ELSNER/ SCHOLLS-SHERWOOD	 METRIC WASHINGTON COUNTY DEPARTMENT OF LAND USE AND TRANSPORTATION	CH2MHILL	PROJECT NUMBER 2265	NO. REVISION 	DATE BY APP.
				CHECKED DATE DESIGNED DATE DRAWN DATE BY DATE 05-APR-2002	CHECKED DATE DESIGNED DATE DRAWN DATE BY DATE 05-APR-2002	

MATCH LINE STA "L" 1+820 SEE SHEET 8



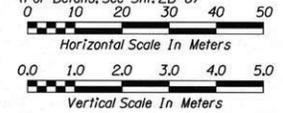
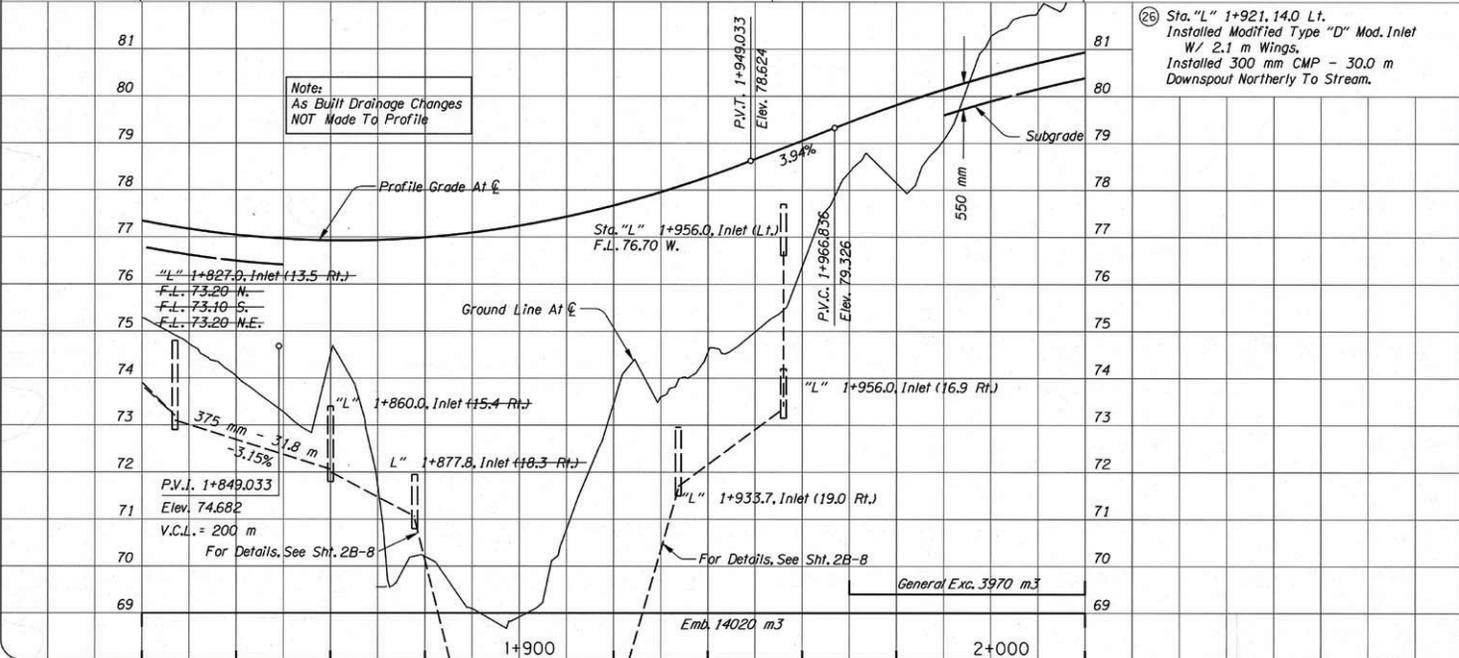
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 Revisions Drawn By R. Luke Date Jan 24, 2003
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MATCH LINE STA "L" 2+020 SEE SHEET 10

- 19) Sta. "L" 1+956.0, 16.9 Rt. Const. Type "D" Area Inlet Grate F.L. Elev. 74.50 Inst. 375 mm Storm Sewer Pipe - 28.3 m Sta. "L" 1+956.0, Lt. Const. Type "D" Area Inlet, Modified Grate F.L. Elev. 77.70 77.20 Storm Drain Lower Beneath High Pressure Gas Main.
- 20) Sta. "L" 1+862.0, 15.4 Rt. Const. Type "D" Area Inlet Grate F.L. Elev. 73.40 Inst. 375 mm Storm Sew. Pipe - 31.8 m (For Details, See Sht. 2B-8)
- 21) Const. Type CL - 6 Chain Link Fence Brown Vinyl Coat Fence All Posts And Appurtenance To Be Painted Brown After Galvanizing, Place Above Walls - 176 m (See ODOT Std. Drg. No. RD815)
- 22) Inst. Settlement Plates At Extg. Ground Elev. - 3 4 (For Details, See Sht. 2B-21)
- 23) 300 mm (12") High Pressure Steel NW Natural Gas Main.
- 24) Power Pole At Plan Inlet Location, Inlet Relocated 2 m To S.E.
- 25) Sta. "L" 1+852, 15.0 Lt. Installed Modified Type "D" Inlet W/ Wings. Installed 300 mm CMP - 35.8 m Downspout South To Stream.
- 26) Sta. "L" 1+921, 14.0 Lt. Installed Modified Type "D" Mod. Inlet W/ 2.1 m Wings. Installed 300 mm CMP - 30.0 m Downspout Northerly To Stream.

- 1) Const. Swale Type A
- 2) Const. Swale Type C
- 3) Sta. "L" 1+891.2 Const. 1800x1800 Box Culvert - 35.2 m (For Details, See Sht. B-25 Thru B-28)
- 4) Sta. "L" 1+812.0, 13.5 Rt. Const. Type "D" Area Inlet, Modified Grate F.L. Elev. 74.80 Inst. 375 mm Storm Sew. Pipe - 70.9 m Inlet Moved Northward
- 5) Sta. "L" 1+877.8, 13.5 Rt. Const. Type "D" Area Inlet, Grate F.L. Elev. 71.95 Inst. 375 mm Storm Sew. Pipe - 18.1 m (For Details, See Sht. 2B-8)
- 6) Const. Asp. Appr. - 2
- 7) Const. Gravel Conn. - 2
- 8) Sta. "L" 1+844 To Sta. "L" 2+009 Const. Guardrail - 171.1 m (Type 2A) Const. Guardrail Terminal, Flared - 1 W=1.22 m, E=0.6 m
- 8A) Const. Anchor (Type 1 Mod.)
- 9) Note Not Used
- 10) See Sht. B, Note 5 Const. Guardrail Terminal, Flared W=1.22 m, E=0.6 m
- 11) Sta. "L" 1+898.1, 23.6 Rt. Inst. 375 mm Storm Sew. Pipe - 22.5 m Inst. Pipe Slope Anchors - 4 (For Details, See Sht. 2B-8)
- 12) Sta. "L" 1+901.5, 23.5 Rt. Inst. 375 mm Storm Sew. Pipe - 10.8 m Inst. Pipe Slope Anchors - 2 (For Details, See Sht. 2B-8)
- 13) Sta. "L" 1+912.1, 22.2 Rt. Const. Type "D" Area Inlet, Grate F.L. Elev. 65.30 Inst. 375 mm Storm Sew. Pipe - 23.2 m Inst. Pipe Slope Anchors - 4 (For Details, See Sht. 2B-8)
- 14) Inst. Single Mailbox Support
- 15) Const. Retaining Wall (For Details, See Sht. B-29 Thru B-31)
- 16) Sta. "L" 1+900.000 0 Inst. Monument Box
- 17) Const. Guardrail - 7.62 m (Type 2A) Const. Anchor (Type 1 Modified) - 2 Const. Type B Endpiece - 1
- 18) Sta. "L" 1+933.7, 19.0 Rt. Const. Type "D" Area Inlet W/O Sump Grate F.L. Elev. 72.95 Inst. 375 mm Storm Sewer Pipe - 22.5 m (For Details, See Sht. 2B-8)

Note:
As Built Drainage Changes NOT Made To Profile



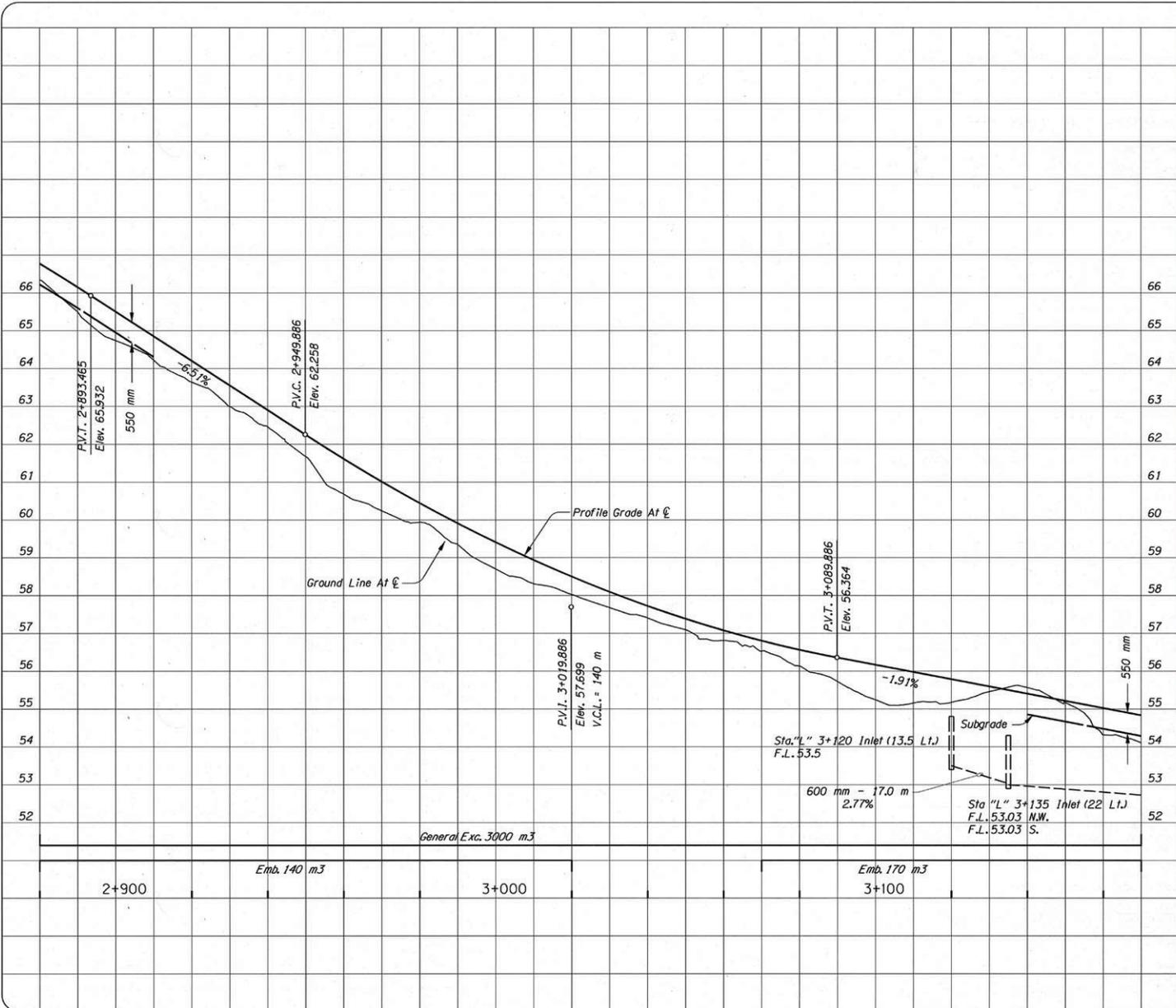
SHEET NO	9
PROJECT NUMBER	2265
NO.	
REVISION	
DATE BY	
APP.	

CH2M HILL

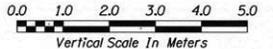
METRIC
WASHINGTON COUNTY
DEPARTMENT OF
LAND USE AND
TRANSPORTATION

**BEEF BEND/ELSNER/
SCHOLLS-SHERWOOD**

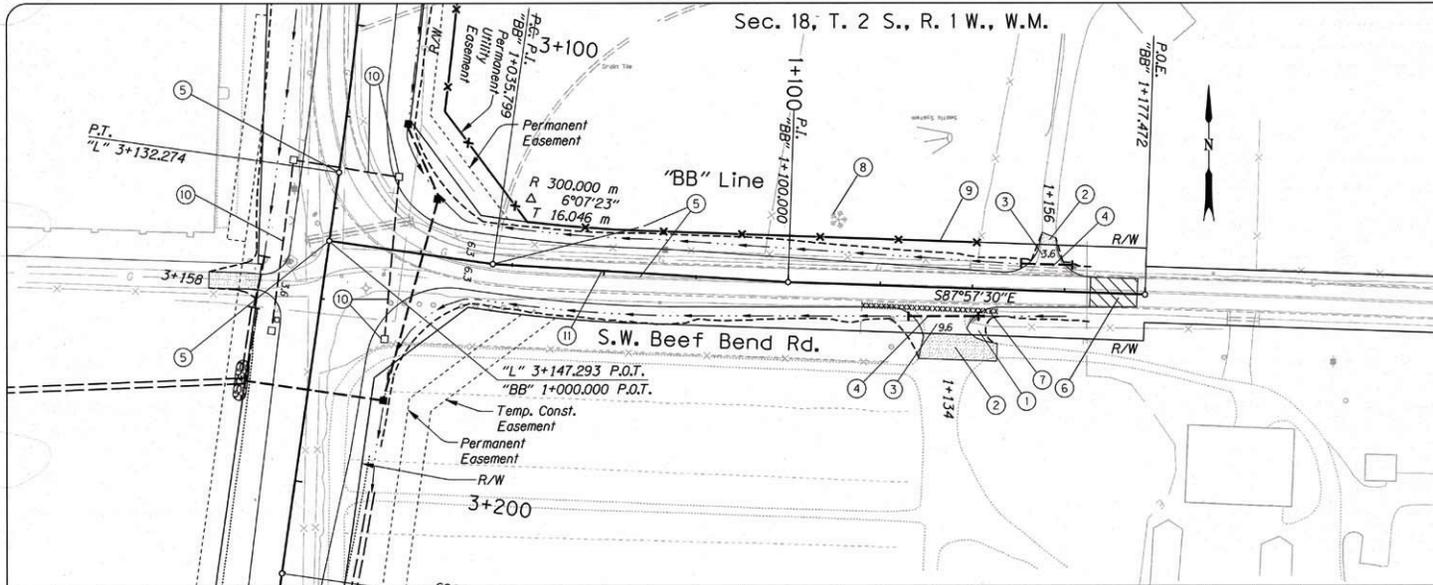
APR. BY DATE	REVISION NO.	PROJECT NUMBER	METRIC	SHEET NO.
		2265	WASHINGTON COUNTY DEPARTMENT OF LAND USE AND TRANSPORTATION	13A
		DESIGN BY: 462-0447-002 DATE: 04-04-02 DRAWN BY: 462-0447-002 CHECKED BY: 462-0447-002 DATE: 04-04-02 PROJECT: 2265 SHEET: 13A		
		THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE AND FEDERAL AGENCIES AND AGENCIES OF THE STATE OF WASHINGTON. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE AND FEDERAL AGENCIES AND AGENCIES OF THE STATE OF WASHINGTON.		
			BEEF BEND/ELSNER/ SCHOLLS-SHERWOOD	



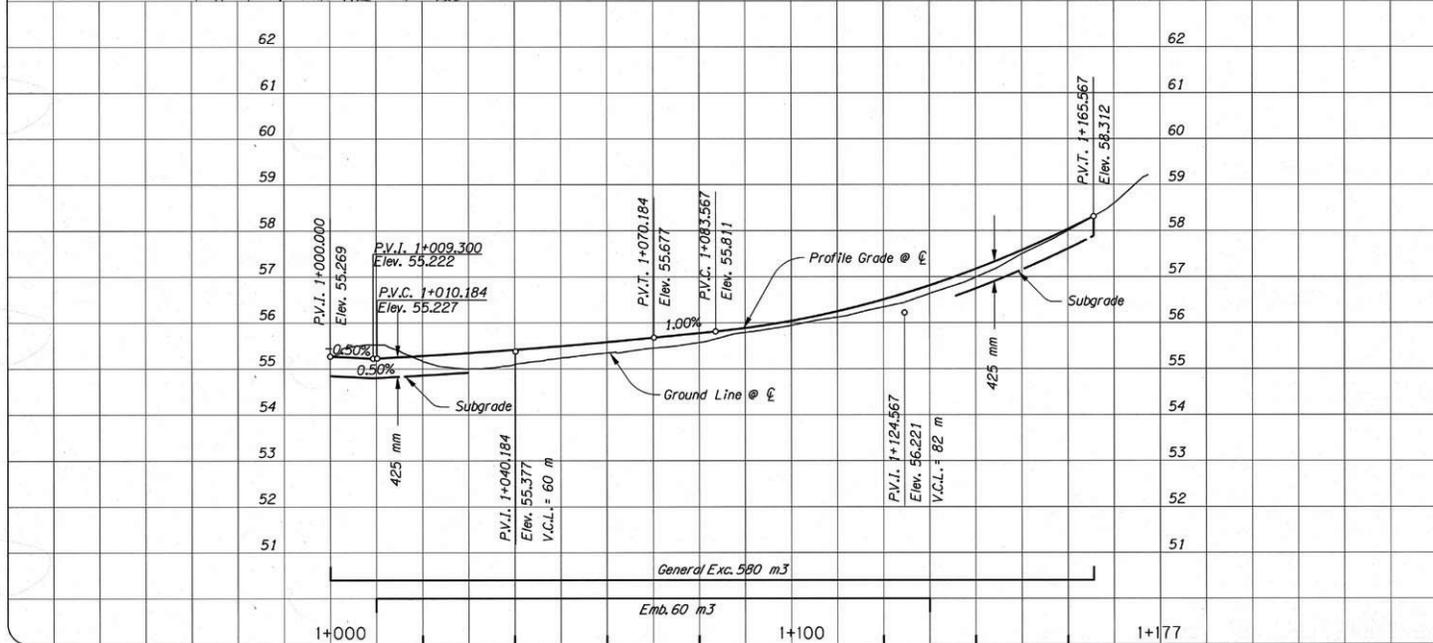
AS BUILT DRAWINGS
 Revisions Drawn By R. Luke Date Apr 4, 2002
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rluke

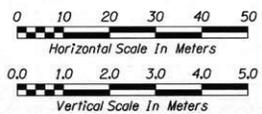


- ① Inst. Multiple Mailbox Support - 1
- ② Const. Gravel Conn. - 2
- ③ Const. Asph. Approach - 2
- ④ Inst. 375 mm Culvert Pipe - 24.6 m
- ⑤ Sta. "L" 3+132.274 @
Sta. "L" 3+147.293 @
Sta. "L" 3+152.954 Rt.
Sta. "BB" 1+035.799 @
Sta. "BB" 1+067.860 @
Inst. Monument Box
Redesigned W/ Angle Points
At Sta. "BB" 1+035.799 And
At Sta. "BB" 1+100.000.
- ⑥ Cold Plane
- ⑦ Remove Extg. Storm Sew. Pipe
- ⑧ Protect Tree
- ⑨ See Sht. 12, Note 8
- ⑩ See Sht. 13, Notes 6 - 9
- ⑪ Roadway Alignment Changed By
Surveyor At County Request To
Provide Room For Ditch Within
ROW On Southside. Engineer
Contact Surveyor For PI
Specifics. (New @ Angle Points
At Sta. "BB" 1+035.799 And
Sta. "BB" 1+100)



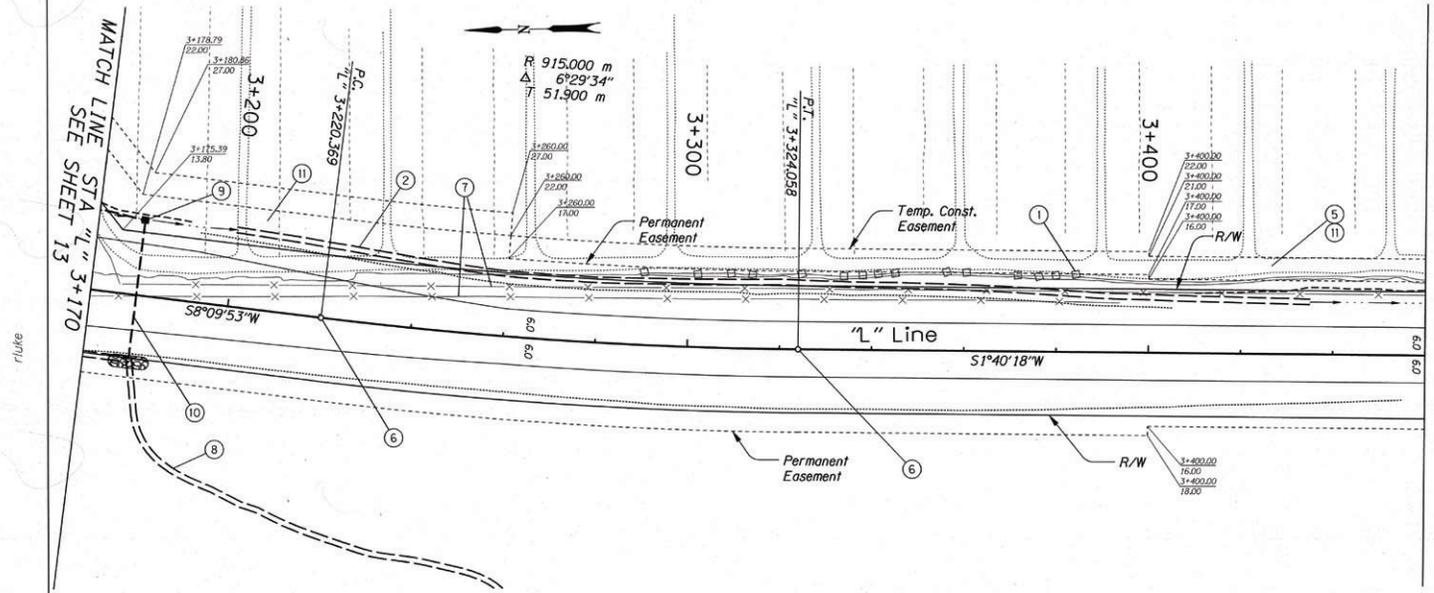
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PROJECT NUMBER 2265	DATE 20/26/16	BY DATE 15-JAN-2003	DRAWN BY BEL/IL/98	DESIGNED BY BEL/IL/98	CHECKED BY MAH/IL/98
THE CONTRACT DOCUMENTS AND DRAWINGS SHALL BE USED ONLY AS PART OF THE WORK. ANY CHANGES TO THE WORK SHALL BE MADE BY THE CONTRACT DOCUMENTS AND DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.					
CH2MHILL					
METRIC WASHINGTON COUNTY DEPARTMENT OF LAND USE AND TRANSPORTATION					
BEEF BEND/ELSNER/ SCHOLLS-SHERWOOD					
SHEET NO 13B					

Sec. 18, T. 2 S., R. 1 W., W.M.



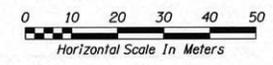
- ① Relocate Irrigation Mainline (By Others)
- ② Const. Swale Type B
- ③ Note Not Used
- ④ Note Not Used
- ⑤ Const. Access Rd. See Special Provisions Area Of Limited Use
- ⑥ Sta. "L" 3+220.369 C
Sta. "L" 3+324.058 C
Inst. Monument Box
- ⑦ Remove Fence
- ⑧ Riparian Swale (By Others)
- ⑨ Sta. "L" 3+180 16.5 LI
Const Type "D" Modified Inlet
Grate F.L. Elev. 53.5
Inst. 600 mm Storm Sew. Pipe - 45 m
- ⑩ Sta. "L" 3+180 13.7 RI
Inst. 600 mm Storm Sew. Pipe - 29.4 m
Const. Loose Riprap, Class 100,
Mixture - 5 Mg
- ⑪ Shared Access Road Constructed For Fisher Farms Per Specifications Along East Swale Crest.

MATCH LINE STA "L" 3+460 SEE SHEET 15

AS BUILT DRAWINGS

Revisions Drawn By R. Luke Date Apr 4, 2002

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SHEET NO	14	PROJECT NUMBER	2265	DATE BY APP.	
METRIC	WASHINGTON COUNTY	DESIGNED BY	R. LUKE	NO.	REVISION
DEPARTMENT OF	LAND USE AND	CHECKED BY	M. HILL	NO.	REVISION
TRANSPORTATION	TRANSPORTATION	DESIGNED	R. LUKE	NO.	REVISION
		DRAWN	R. LUKE	NO.	REVISION
BEEF BEND/ELSNER/ SCHOLLS-SHERWOOD		CHECKED	M. HILL	NO.	REVISION

4. Section 7 - Added the current 3% cap language (it had been in the former Appendix A) and is written here as it is written in WCCCA by-laws.

5. Section 10 and Appendix A - Update language to reflect the currently used "member fee" and eliminating the term "user."

6. Appendix A - Revision of the following language:

- a. Eliminate the former "black box" process and language in favor of the member fee sub-committee recommendations for new elements of a fee formula, outlined generally with the understanding there may be change in the future
- b. Encourages monitoring of the efficacy of costing ratios
- c. Member involvement in review of the formula by convening member fee sub-committees in the future
- d. Fee formula can be modified without reopening the IGA

7. In general, changes primarily address the member fee formula and the current function of TAC.

OTHER ALTERNATIVES

N/A

COUNCIL GOALS, POLICIES, APPROVED MASTER PLANS

N/A

DATES OF PREVIOUS COUNCIL CONSIDERATION

9/9/2014.

Fiscal Impact

Fiscal Information:

No fiscal impact is anticipated. Current Police Department budget includes the financial obligation to WCCCA.

Attachments

WCCCA IGA

AMENDMENT TO INTERGOVERNMENTAL AGREEMENT
WASHINGTON COUNTY CONSOLIDATED COMMUNICATIONS AGENCY

THIS AMENDMENT to the Washington County Consolidated Communications Agency Intergovernmental Agreement (herein "Intergovernmental Agreement") is made and entered into, pursuant to ORS 190.010 and by and among the Cities of Banks, Beaverton, Cornelius, Durham, Forest Grove (including Forest Grove Rural Fire Protection District), Gaston, Hillsboro, King City, North Plains, Sherwood, Tigard, and Tualatin; the Fire Districts of Tualatin Valley Fire & Rescue, Washington County Fire District #2, Cornelius Rural Fire, Gaston Rural Fire, Banks Fire Protection District #13; Forest Grove Rural Fire and Washington County (herein "participating jurisdictions").

WITNESSETH

WHEREAS the participating jurisdictions have previously entered into the Intergovernmental Agreement creating the Washington County Consolidated Communications Agency (herein "Agency" or "WCCCA") for purposes of establishing and operating a public safety emergency communications system inclusive of a 9-1-1 jurisdiction as contemplated by ORS 403.105 to 403.250 that provides a cooperative and coordinated 9-1-1 primary public safety answering point for police, fire and emergency medical services for the benefit of all participating jurisdictions; and

WHEREAS, from time to time, by amendment, the Intergovernmental Agreement has been modified to provide, among other things, expanded membership in the Agency; and

WHEREAS the participating jurisdictions now desire to further amend the Intergovernmental Agreement to provide, among other things, for a new fee formula for participating jurisdictions and updating the language of the Intergovernmental Agreement to appropriately reflect the current ORS references and participating jurisdictions;

NOW THEREFORE, the Intergovernmental Agreement is hereby amended, with said amendments incorporated into the text of the Intergovernmental Agreement and the entirety of the Intergovernmental Agreement, as amended, set forth below.

TERMS AND CONDITIONS

1. WASHINGTON COUNTY CONSOLIDATED COMMUNICATIONS AGENCY

The participating jurisdictions hereby create a 9-1-1 jurisdiction responsible for the provision of 9-1-1 service and public safety communications and agree that the Agency will be under ORS 190.003; and known as the WASHINGTON COUNTY CONSOLIDATED COMMUNICATIONS AGENCY.

2. POWERS AND AUTHORITY

The Agency is vested with all powers, rights and duties necessary for performing the functions of a 9-1-1 public safety answering point and initiating appropriate response pursuant to ORS 403.105 to 403.250, including, but not limited to contracting for such services, as approved through the normal chain of authority for the Agency.

3. GOVERNING BODY AND VOTING BOARD

- a. The Agency shall be governed by a Board of Commissioners (herein "Board"), whose membership shall consist of voting and non-voting members. One representative from each participating jurisdiction shall constitute the Board. Each participating jurisdiction shall appoint, at its pleasure, one primary representative and one alternative representative, who may attend and participate, as provided herein, in all Board meetings in the absence of the participating jurisdiction's primary representative. Representatives and alternates shall be an elected official or employee of their respective participating jurisdictions.
- b. Only the herein identified participating jurisdictions' Board members shall have the authority to move, second or vote on any Agency Board action. These participating jurisdiction representatives shall be known as the Agency Voting Board. The Agency Voting Board will consist of those representatives of participating jurisdictions, singly or in combination, that contribute one percent or more of the total user fees paid by all participating jurisdictions. Initially the Voting Board shall consist of representatives of the cities, of Beaverton, Hillsboro, Tigard, Tualatin, Forest Grove, Sherwood, and Cornelius; Washington County; and the Tualatin Valley Fire and Rescue. In addition the Voting Board shall include one representative selected by the City participating jurisdictions of King City, Durham, North Plains, Gaston, and Banks, and one representative selected by the participating Fire District participating jurisdictions of Cornelius Rural Fire Protection District, Banks Fire Protection District #13, Gaston Rural Fire Protection District, and Washington County Fire District #2.
- c. The Voting Board shall be responsible for
- Approval and adoption of the Agency Strategic Plan
 - Adoption of the Agency's annual budget and objectives
 - Approval of the "User Formula" for calculating fees to participating jurisdictions
 - Approval of all contracts in amounts as authorized by Agency administrative directive.

- d. All meetings of the Voting Board and CEO Board shall be held in accordance with Oregon Public Meeting Laws, ORS 192.610 to 192.690. A majority of the members of the Voting Board shall constitute a quorum for purpose of deliberation and decision of the Agency. All decisions of the Voting Board, unless otherwise provided herein, shall require a majority vote of those representatives in attendance and voting.
- e. The Voting Board, at the first meeting of every other calendar year, shall elect a Chair and Vice-Chair. The Chair shall be an elected official unless there is no elected official on the Voting Board willing to accept the position of Chair. If an elected official is unavailable or unwilling to serve, any member of the Voting Board may be elected Voting Board Chair. The term of the Chair and Vice-Chair shall be two years. The Chair, and in his/her absence the Vice-Chair, shall preside over all Voting Board meetings. The Communications Director, or designee, shall act as Clerk of the Board and be responsible for providing notices of meetings and keeping of minutes, as required by Oregon Public Meetings Laws.

4. CEO BOARD

- a. There is hereby established a Chief Executive Officer's Board (herein "CEO Board") consisting of five (5) Voting Board participating jurisdiction representatives. The CEO Board shall consist of the Chair of the Voting Board (who shall be the Chair of the CEO Board); the Chief Administrative Officers or their designees from the two largest participating jurisdictions (as determined by the participating jurisdiction's user fee contribution), and two Chief Administrative Officer members who shall be appointed at-large by the Voting Board from the remaining participating jurisdictions. In the event the CEO Chair also represents one of the two largest participating jurisdictions, then three at-large members of the CEO Board shall be appointed, by the Voting Board, from the remaining participating jurisdictions. The CEO Board shall elect a Vice-Chair at the first meeting of every other calendar year. The term of the Vice-Chair shall be two years. In no case shall any jurisdiction have more than 1 member on the CEO Board.
- b. The CEO Board shall, among other things:
 - Nominate and recommend contract employment terms and conditions for the Agency Director subject to Board ratification
 - Based upon the direction of the WCCCA Board of Commissioners, provide oversight and direction to the WCCCA Director regarding all Agency operations
 - Approve policies and strategies for Agency service levels and administrative directives
 - Approve salary levels for all Agency employees subject to Board ratification

- Recommend the Agency's annual budget to the Voting Board
- Review and make recommendations to the Voting Board regarding user fees as detailed in Appendix A
- Provide for an annual audit of the Agency's finances
- Approve all contracts in amounts as authorized by Agency administrative directive.
- Review all contracts over \$50,000 and make recommendations to the Voting Board
- Serve as final step of grievance procedure for unclassified employees
- Provide direction and advice to Director regarding labor negotiations and make recommendations to Board of Commissioners.
- Perform other duties and responsibilities that may be assigned by the Voting Board.

- c. A majority of the members of the CEO Board attending a duly held meeting shall constitute a quorum for the purpose of deliberation and decision. Each CEO Board member shall have one vote. Approval of at least three (3) CEO Board members is required for any action.

5. TECHNICAL ADVISORY COMMITTEE

There is hereby established a Technical Advisory Committee (herein "TAC"), consisting of one representative appointed from each member law and fire agency. Each agency may also appoint an alternate, who will have voting authority in the absence of their agency's primary representative. (Refer to section 3b for list of member jurisdictions that will provide user agency participation.) . . TAC representatives shall be employees of their respective agencies and possess the appropriate decision-making authority needed to participate in the TAC function.

- a. TAC shall 1) provide advice and counsel to the Board, CEO Board and Communications Director in matters of Agency operational priorities, policies and procedures; 2) review and recommend to the Communications Director for adoption by the Agency, Standard Operating Guidelines (herein "SOG"); 3) provide advice and counsel to the Communications Director in the development of the Agency's annual operating budget; and 4) review and make recommendations to the CEO Board and Voting Board regarding user fees as detailed in appendix A.

A majority of TAC members in attendance at a duly held meeting shall constitute a quorum for the purpose of deliberation and decision. Each agency representative on TAC shall have one vote. Any TAC Representative who provides the contracted response for a single or multiple jurisdictions shall have one vote. Any TAC Representative who has oversight responsibility of multiple user agencies shall have a vote for each of those agencies.

- b. All decisions of TAC shall require a majority vote of those representatives in attendance.
- c. TAC, at its first meeting of each calendar year, shall elect a Chair and Vice-Chair for one-year terms. TAC shall meet at least quarterly, and at a time and place designated by its members. Special meetings of TAC may be called by the Chair or any two (2) members upon at least seven (7) days prior written notice to all TAC members.

6. COMMUNICATIONS DIRECTOR

- a. The Board shall select and appoint a Communications Director, based upon administrative and technical competence.
- b. The Communications Director shall be the chief administrative officer of the Agency and be responsible for 1) Agency administration, personnel, purchasing and budget functions, in conformance with the policies and rules adopted by the Board; 2) dispatching, phone answering, recordkeeping, security and other Agency functions in conformance with the policies adopted by the Board; 3) hiring, training, discipline and/or discharge of all subordinate Agency personnel, subject to applicable Agency rules and policies; 4) attending and providing executive staffing of Board, CEO Board and TAC meetings; and 5) preparing and presenting to the Agency Budget Committee a proposed budget for the next fiscal year.

7. FUNDING

- a. The services of the Agency shall be funded from contributions from participating jurisdictions, including the relinquishment or assignment of each participating jurisdiction's 9-1-1 excise taxes. Distributions of the 9-1-1 excise tax will be made in accordance with ORS 403.240.
- b. Participating jurisdiction contributions shall be calculated in a manner known as the "Member Fee Formula" as described in Appendix A. Member Fee contributions shall be paid in four (4) equal installments and due no later than July 10, October 10, January 10, and April 10 of each year.
- c. Those consolidated Voting Board members from small city and small fire district Agency members, shall have their annual member fee contribution increases capped at no more than three percent (3%) each fiscal year. The affected Agency members are specifically identified in article 3b (Governing body and Voting Board) of this agreement. The portion of member fees not paid by consolidated Voting Board members as a result of section 3b is paid by non-consolidated Voting Board members on a proportionate-share basis of total user fees for Voting Board members whose votes are not consolidated.

8. INCREASING MEMBERSHIP

The Voting Board shall develop a method for allowing Agency membership for other units of local government. New participating jurisdictions shall be accepted as members of the Agency *only upon unanimous approval* of all Board members, via the normal chain of authority for the Agency. All participating jurisdictions shall be responsible for directly or indirectly providing an emergency service. Emergency services are police, fire or emergency medical services.

9. DURATION, WITHDRAWAL AND TERMINATION

This Agreement is perpetual and the Agency shall continue from year-to-year provided, however, 1) any participating jurisdiction may withdraw from the Agency upon providing written notice to the Chairman not later than June 30 of any year for withdrawal effective July 1 of the following calendar year; and 2) the Agency may be dissolved upon mutual agreement of all participating jurisdictions. A participating jurisdiction may withdraw from the Agency without written notice required herein, only if agreed to by all remaining participating jurisdictions

10. REMEDIES

If a participating jurisdiction withdraws from this Agency, but fails to provide necessary notice or to obtain mutual consent of all participating jurisdictions, the parties agree that the liquidated damages for such action shall be not less than the withdrawing party's share of the Agency's annual operation costs for the next fiscal year, as determined by the Agency's Member Fee Formula. In the event any party files litigation to enforce this Agreement, or any portion thereof, the prevailing party shall be entitled to reasonable attorney fees and costs, including any fees and costs incurred in an appeal, and as determined by the appropriate court.

11. AMENDMENTS

This Agreement may only be changed, modified, or amended upon three-fourths (3/4) vote of all participating jurisdictions.

12. EFFECTIVE DATE

This Agreement shall become effective when it has been authorized by resolution of a majority of the governing bodies of the participating jurisdictions identified herein. Notwithstanding paragraph 8, Increasing Membership, those participating jurisdictions that do not enter into this Agreement prior to its effective date, may become members of the Agency upon authorization by resolution of their governing bodies, provided such authorization is enacted prior to December 1, 1990. Any jurisdiction desiring to join the Agency after December 1, 1990, may do so subject to paragraph 8, Increasing Membership.

13. PRIOR AGREEMENTS

This Agreement, upon its effective date, supersedes the previous WCCCA Intergovernmental Agreement, however, any and all prior agreements of WCCCA and/or between the participating jurisdictions regarding cooperative and coordinated efforts to provide a 9-1-1 primary public safety answering point for police, fire and emergency medical services shall remain in full force and effect until modified, terminated and/or replaced by the participating jurisdictions. The WCCCA established pursuant to this Agreement shall maintain any and all rights and responsibilities of the previous WCCCA in regard to other persons or parties.

14. SEVERABILITY

The terms of this Agreement are severable and a determination by an appropriate body having jurisdiction over the subject matter of this Agreement that results on the invalidity of any part, shall not affect the remainder of the Agreement.

15. INTERPRETATION

The terms and conditions of this Agreement shall be liberally construed in accordance with the general purposes of this Agreement.

16. EXECUTION AND COUNTERPARTS

This Agreement may be executed in any number of counterparts, each of which will be deemed an original, and such counterparts together will constitute only one instrument. Any one counterpart will be sufficient for the purpose of proving the existence and terms of this Agreement, and no party will be required to produce an original or all of the counterparts in making such proof.

SUBSCRIBED TO AND ENTERED INTO by the appropriate officer (s) who is duly authorized by resolution to execute this Agreement on behalf of the governing body of the below-named unit of local government.

SIGNATURE LINES HERE

Dated this _____ day of _____, 2014

City of Banks

Legal Counsel
APPROVED AS TO FORM

Dated this _____ day of _____, 2014

Banks Fire Protection District #13

Legal Counsel
APPROVED AS TO FORM

Dated this _____ day of _____, 2014

City of Forest Grove

Legal Counsel
APPROVED AS TO FORM

Dated this _____ day of _____, 2014

Forest Grove Rural Fire Protection District

Legal Counsel
APPROVED AS TO FORM

Dated this _____ day of _____, 2014

City of Beaverton

Legal Counsel
APPROVED AS TO FORM

Dated this _____ day of _____, 2014

City of Cornelius

Legal Counsel
APPROVED AS TO FORM

Dated this _____ day of _____, 2014

Cornelius Rural Fire District

Legal Counsel
APPROVED AS TO FORM

Dated this _____ day of _____, 2014

City of Durham

Legal Counsel
APPROVED AS TO FORM

Dated this _____ day of _____, 2014

City of Gaston

Legal Counsel
APPROVED AS TO FORM

Dated this _____ day of _____, 2014

Gaston Rural Fire District

Legal Counsel
APPROVED AS TO FORM

Dated this _____ day of _____, 2014

City of Hillsboro

Legal Counsel
APPROVED AS TO FORM

Dated this _____ day of _____, 2014

City of King City

Legal Counsel
APPROVED AS TO FORM

Dated this _____ day of _____, 2014

City of North Plains

Legal Counsel
APPROVED AS TO FORM

Dated this _____ day of _____, 2014

City of Sherwood

Legal Counsel
APPROVED AS TO FORM

Dated this _____ day of _____, 2014

City of Tigard

Legal Counsel
APPROVED AS TO FORM

Dated this _____ day of _____, 2014

City of Tualatin

Legal Counsel
APPROVED AS TO FORM

Dated this _____ day of _____, 2014

Tualatin Valley Fire & Rescue

Legal Counsel
APPROVED AS TO FORM

Dated this _____ day of _____, 2014

Washington County Fire District #2

Legal Counsel
APPROVED AS TO FORM

Dated this _____ day of _____, 2014

Washington County

Legal Counsel
APPROVED AS TO FORM

APPENDIX A

COST ALLOCATION PLAN

Agency costs shall be allocated to the members based on factors and metrics such as, but not limited to, the ratio of population, public calls for service, and air time, as approved by the Board.

REVIEW

The Agency shall monitor the ratio of costing factors to determine if those ratios provide equitable costs to all members. At each annual Board Retreat, the Director (or designee) shall report on the efficacy of the costing ratios.

CHANGES TO THE COST ALLOCATION PLAN

The Director, TAC, CEO Board or Board may request a review of the costing ratios. . If a review is requested, the Agency Director may convene a member fee sub-committee. The recommendations of the sub-committee shall be presented to the TAC, CEO Board and Board of Commissioners. The Board of Commissioners may modify the costing ratios at such time as the Board establishes member fees for the upcoming fiscal year.

AIS-1848

5.

Business Meeting

Meeting Date: 09/23/2014

Length (in minutes): 10 Minutes

Agenda Title: Heritage Tree Nomination

Prepared For: Agnes Kowacz, Community Development

Submitted By: Carol Krager, City Management

Item Type: Motion Requested

Meeting Type: Council
Business
Meeting -
Main

Public Hearing: No

Publication Date:

Information

ISSUE

The City Council will vote on whether a Black Walnut Tree, located at 10525 SW Tigard Street, shall be designated as a Heritage Tree.

STAFF RECOMMENDATION / ACTION REQUEST

Staff and the Parks and Recreation Advisory Board (PRAB) find that the tree meets the criteria for Heritage Tree designation and recommends that the Council approve the Heritage Tree designation.

KEY FACTS AND INFORMATION SUMMARY

On May 1, 2012, the city received a Heritage Tree nomination application and supporting materials from Joel and DeAnn Vermillion for a black walnut tree (*Juglans nigra*) located on their property at 10525 SW Tigard Street in Tigard. As required by Chapter 9.08 of the Tigard Municipal Code, Todd Prager, the City's arborist at the time, visually inspected the tree and determined that the tree met the minimum requirements for Heritage Tree nomination.

On May 12, 2014, the Parks and Recreation Advisory Board (PRAB) found that the tree met the designation criteria in Section 9.08.030(3) of the code and recommended approval of the heritage tree nomination.

Council is now being asked to consider this nomination. According to the code, after considering this report, any testimony by interested persons, and the recommendation of the PRAB, the Council shall vote on the nomination. The vote shall be based on the approval criteria listed in Section 9.08.030(3) of the code.

OTHER ALTERNATIVES

The Council may deny the request for Heritage Tree status.

COUNCIL GOALS, POLICIES, APPROVED MASTER PLANS

N/A

DATES OF PREVIOUS COUNCIL CONSIDERATION

N/A

Fiscal Impact

Fiscal Information:

The heritage tree fund is budgeted annually as part of the Parks Division budget. According to Steve Martin, Parks and Facilities Manager, the City spends between \$1,000 to \$2,000 a year on heritage trees.

Attachments

Staff Memo

Exhibit A: Nomination Form

Exhibit B: Ground Level Photos

Exhibit C: Aerial Photo

Exhibit D: PRAB Minutes



City of Tigard Memorandum

To: Tigard City Council

From: Agnes Kowacz, Associate Planner

Re: Heritage Tree Nomination

Date: September 23, 2014

I. Introduction and Summary

On May 1, 2012, the city received a Heritage Tree nomination application and supporting materials from Joel and DeAnn Vermillion for a black walnut tree (*Juglans nigra*) located on their property at 10525 SW Tigard Street in Tigard (see Exhibit A). As required by Chapter 9.08 of the Tigard Municipal Code, Todd Prager, the City's arborist at the time, visually inspected the tree and determined that the tree complies with the requirements for Heritage Tree designation.

On May 12, 2014, the Parks and Recreation Advisory Board (PRAB) found that the tree met the criteria listed in Section 9.08.030(3) of the code and recommended approval of the heritage tree nomination.

Council is now being asked to consider this nomination. According to the code, after considering this report, any testimony by interested persons, and the recommendation of the PRAB, the Council shall vote on the nomination. The vote shall be based on the approval criteria listed in Section 9.08.030(3) of the code.

If the heritage tree nomination is approved the tree is eligible for the following incentives, subject to available city funding and approval:

1. Plaques which may be placed on or near the tree; and
2. Maintenance of heritage trees including, but not limited to:
 - a. Pruning,
 - b. Pest control,
 - c. Unwanted planted removal,
 - d. Fertilization,
 - e. Soil amendment, and
 - f. Cabling and bracing.

II. Analysis

The Heritage Tree approval criteria listed in Section 9.08.030(3) consists of two main components, which are addressed below:

“(A) The tree or stand of trees is of landmark importance due to age, size, species, horticultural quality or historic importance”

In Mr. Prager’s opinion, the black walnut tree rises to landmark importance due to its age and historic importance (see Exhibit B).

The nomination materials provided by the applicant document that the tree is over 75 years old. While black walnuts can live to be much older (up to 250 years¹), its age is significant for Tigard since many older trees were removed with development since the city’s incorporation in 1961. The current size of the tree is approximately 68 feet tall, 70 feet wide and 32 inches in trunk diameter, which is consistent with its documented age.

In addition to being of significant age, the nomination materials provided by the applicant document that the tree is of historic significance. The tree was grown from seed collected from the battlefields of Gettysburg through the “National Nut Tree Planting Project”: a partnership between the American Forestry Association and Boy Scouts of America to propagate nut trees from seeds collected from historic places.

The tree is also currently part of a historically significant site. The site was designated with a historic overlay by the city in 1986. The residence was built circa 1910 and is one of the few remaining examples of a bungalow farmhouse with its water tower still intact. The black walnut tree is situated between the residence and the water tower, and has become an important contributor to the history of the site (see Exhibit C).

The tree is clearly visible from Tigard Street, so it can be enjoyed by neighbors, the community and traveling members of the public.

“(B) The tree is not irreparably damaged, diseased, hazardous, or unsafe, or the applicant is willing to have the tree treated by an arborist and the treatment will alleviate the damage, disease or hazard.”

The tree is not damaged or diseased although it does have moderate branch dieback, and would benefit from pruning by an arborist. While it has multiple leaders, there are no signs of cracking or decay at the points of divergence that make it hazardous or unsafe at this time. These minor defects do not outweigh the landmark importance of the tree, and could be alleviated with pruning and periodic monitoring by the owner’s arborist in the future to determine if there are

¹ Virginia Tech College of Natural Resources. 2012. **Virginia Big Tree Program**. Accessed via the World Wide Web: <<http://www.cnr.vt.edu/4h/bigtree/TreeAge.htm>> on June 11, 2012.

any changes in condition. The city has funds available to assist the property owner with an initial pruning of the tree should the City Council vote to grant Heritage status.

III. Conclusion and Recommendation

The black walnut tree located at 10525 SW Tigard Street is of landmark importance due to its relatively old age, historical lineage and placement within a historical site. Staff and the PRAB find that the tree meets the criteria for Heritage Tree designation and recommends approval of Heritage Tree designation.

ATTACHMENTS:

EXHIBIT A: Heritage Tree Nomination Form and Supporting Documentation

EXHIBIT B: Ground Level Photos of the Black Walnut Tree

EXHIBIT C: Aerial Photo of the Black Walnut Tree and Site

EXHIBIT D: Parks and Recreation Advisory Board Meeting Minutes-May 12, 2014



City of Tigard

COMMUNITY DEVELOPMENT

Heritage Tree Nomination Form

(Please supply as much information as possible)

NEIGHBORHOOD: Area 3

Person nominating the tree:

Property Owner (if other than nominator):

Joel & DeAnn Vermillion

same

Name

Name

10525 SW Tigard St.

Address

Address

Tigard OR 97223

971 998 3451 or 3450

Phone (day)

(eve)

Phone (day)

(eve)

DeAnn Vermillion 4/11/12

Signature of Nominator

Date

Signature of Property Owner

Date

TREE DESCRIPTION

1) Location (street address): 10525 SW Tigard St. *(Tigard website says this is one of the oldest homes in Tigard in its original location)*

2) Private Property yes Public Property (park, parking strip, median, etc.) _____

3) Single Tree yes More than one (give number) _____

4) Species or variety (scientific and/or common name): Black Walnut

5) Historical Facts: seed sent in 1933 from the fields of Gettysburg. Part of the National Nut Tree project sponsored by the Boy Scouts of America.

6) Height (approx): 45-50 ft. Canopy Width (measure from one edge to opposite edge): 55'-60' ft. *transplanted to its current site in 1936*

Trunk Diameter (in inches) at 54 Inches Above Ground Level (D.B.H): APPROX 28" @ 65" of height BRANCHES BLOCK IT AT 54"

7) Approximate Age: 79 years

8) Condition: good

9) Noteworthy Features:

Beauty X Shade X Size X Kind X History X

10) Please include a photo and narrative explaining why you feel the criteria for Heritage Trees has been met:
Tigard Municipal Code Chapter 9.08.030(3)

No picture at this time. We can take one after it gets its leaves.

FROM
NATIONAL NUT TREE PLANTING PROJECT
 AMERICAN FORESTRY ASSOCIATION
 1727 K ST., N. W.
 WASHINGTON, D. C.

To: Ervin and Forrest Cowgill
 7238 N. Leonard St.,
 Portland, Ore.

PA.
 MAY 10 1938

SEE OTHER SIDE OF THIS TAG

SAVE THIS TAG

NUT SEEDS FROM GETTYSBURG

Do not leave in warm place. Plant in nursery row or 40 to 60 Feet apart, 1 to 3 inches deep in soil that has been spaded and crumbled.
 Hoe and water soil around seed. Keep out weeds.
 Protect from rodents and trampling by stakes or wire.

WANTED: NUTS FROM HISTORICAL GROUND NEAR YOUR HOME.
 Send them COLLECT to the NATIONAL NUT TREE PLANTING PROJECT, 1727 K St., N. W. WASHINGTON D. C. and they will be sent to BOY SCOUTS all over the nation.

Historic Black Walnut from the Field of Gettysburg

When driving along Tigard street, it's difficult not to notice the beautiful Black Walnut tree in the front yard of the historic Cowgill House. With it's large, strong branches adorned with moss and ferns, the tree provides a home for many animals, as well as shade and beauty for all to enjoy.

When my husband and I purchased the historic home last year, we were excited to receive a newspaper clipping about the tree, and the seed packet in which the Black Walnut seed was mailed way back in 1933. The American Forestry Association, along with the Boy Scouts of America, conducted a project to plant nut trees from historic grounds. The project was called the "National Nut Tree Planting Project". An article in the Gettysburg Times from November 1, 1933 records that the scouts set a record of gathering 90 bushels of walnuts on their Gettysburg outing. Not only did the boys collect the nuts and send them all over the United States, but they had the opportunity to spend time visiting and learning about the historical sites and monuments. It's fun to realize that this beautiful tree in our front yard is the result of a boy scout who gathered nuts one fall day in Pennsylvania and sent one of the seeds to the Cowgill family in Portland. According to the newspaper article from The Oregonian on January 20, 1984, the seed was first planted at Cowgill's home in Portland, but when the family moved to Tigard in 1936, they transplanted the young tree. They later placed a small plaque on the tree to mark its significance.

Black walnut tree roots reach field at Gettysburg

Exhibit A

By JANN MITCHELL
of The Oregonian staff

TIGARD — The old black walnut shakes arthritic fingers at the robins resting in its top.

The rough crotches that used to cradle tree-climbing children are empty now, the cushions of moss unworn. From one branch sprouts a fern, blowing in the winter wind.

At its feet, the fall fruit — still in its husks — rattles across the frozen ground.

Just an old tree, as lonely as the vacant house and the useless windmill framed by its branches.

But 59-year-old Forrest L. Cowgill knows better.

"It had significance — we always knew what it was," said Cowgill. He grew up in the house beneath the tree with the plaque declaring it a descendant of the famous field at Gettysburg, where Lincoln delivered his memorable address.

The Scholls resident sat in the chilly house on Tigard Street, vacant these three years since his mother died, and carefully unfolded the yellowing papers she had saved.

These are the tree's papers, complete with the seed envelope addressed to Cowgill and his older brother, the late Ervin R. Brother Paul N., who lives in Bellevue, Wash., was born later.

Mailed to their St. Johns home in May 1933, the seeds were ordered by the boys' parents, Hal E. and Francis S. Cowgill, from the National Nut Tree Planting Project.

With nuts collected from historic sites such as Mount Vernon, Arlington, Vicksburg and the Shenandoah Valley, the project included suggestions for appropriate planting ceremonies and suggested that recipients send nuts from their own yards for planting elsewhere.

The sponsors included the Boy Scouts of America, American Forestry Association, the U.S. Department of Agriculture and the American Walnut

Manufacturers Association.

"I know we planted some in St. Johns," the retired banker recalled. "It couldn't have grown enough to get seeds from it when we moved in 1936, so it was probably transplanted."

Cowgill can't remember when his dad attached the plaque, but he does recall climbing the tree with his brothers, playing in the barn lost in the 1962 Columbus Day storm and raising cattle for 4-H.

His father died a couple of weeks after the storm; his mother died in 1980. A "For Sale" sign tilts in front of the old four-bedroom home, and Cowgill says it will be sad to see the house — and the tree — go.

"Of course it's deteriorating," he said. "We didn't really want to sell it, but we can't afford to hang onto it, either."

When a new owner is found, Cowgill will turn over the plaque with the tree, as well as the papers.

"Mom really kept them. I went through her papers and thought I'd keep them too and give them to whoever buys the house. It doesn't seem very significant, but when somebody's kept them that long, I'd hate to throw them away," Cowgill said.

And the plaque, of course, "ought to stay with the tree."

Did his mother ever register the planting as the tree project suggested?

"Knowing Mom, it's likely she did. She was a fantastic mother, that's about all you can say."

Cowgill has taken a piece of home — and the pedigreed tree — to his Tuatlatin River property in Scholls, where five of the nuts have grown into fine new trees.

As Lincoln said at Gettysburg, there are things that "shall not perish from the earth."

From the place where North met South, a tree and its offspring live on in the West.

Oregonian Friday Jan 20, 1984

Black Walnut at 10525 SW Tigard



Black Walnut at 10525 SW Tigard



Historic Cowgill
Residence in
Background



Black Walnut at 10525 SW Tigard



Historic Cowgill
Water Tower in
Background

Black Walnut at 10525 SW Tigard



Black Walnut Tree at 10525 Tigard Street



Map printed at 02:24 PM on 11-Jun-12

DATA IS DERIVED FROM MULTIPLE SOURCES. THE CITY OF TIGARD MAKES NO WARRANTY, REPRESENTATION OR GUARANTEE AS TO THE CONTENT, ACCURACY, TIMELINESS OR COMPLETENESS OF ANY OF THE DATA PROVIDED HEREIN. THE CITY OF TIGARD SHALL ASSUME NO LIABILITY FOR ANY ERRORS, OMISSIONS, OR INACCURACIES IN THE INFORMATION PROVIDED REGARDLESS OF HOW CAUSED.



City of Tigard
13125 SW Hall Blvd
Tigard, OR 97223
503 639-4171
www.tigard-or.gov





City of Tigard

Park & Recreation Advisory Board (PRAB) Meeting Minutes

MEETING DATE: May 12, 2014 7 p.m.
MEETING LOCATION: Tigard Public Works Building, Auditorium, 8777 SW Burnham Street

The purpose of the Park and Recreation Advisory Board is to advise and advocate for park and recreation opportunities for a growing Tigard.

1. **Roll Call:** At 7 p.m. the meeting was called to order by Chairman Troy Mears.

Members: Present

Dave Brown	No
Claudia Ciobanu	Yes
Peggy Faber	Yes
Marshall Henry	Yes
Troy Mears	Yes
Holly Polivka	Yes

Note: There is one current vacancy on the board.

Other:

Barry Albertson	No	Tigard-Tualatin School District Liaison
Paul Drechsler	No	Alternate
Gary Romans	Yes	Alternate
Marland Henderson	Yes	Council Liaison

City of Tigard Staff Present:

Brian Rager	Interim Public Works Director
Steve Martin	Public Works Division Manager
Martin McKnight	Parks Supervisor
Marissa Grass	Associate Planner
Tom McGuire	Assistant Community Development Director
Susan Shanks	Senior Planner
Renee' Ferguson	PRAB Recorder

PARK & RECREATION ADVISORY BOARD MINUTES –May 12, 2014

Audience:

Neal Brown, Carine Arendes and Tim Pepper.

2. Approval of Minutes: April 14, 2014

Holly Polivka moved to approve the April 14, 2014, meeting minutes. Marshall Henry seconded the motion. The minutes were approved by a majority vote of the board members present with Claudia Ciobanu, Marshall Henry, Troy Mears and Holly Polivka voting yes. Peggy Faber abstained.

3. Comments from the Audience

Neal Brown, 13853 SW Boxelder St., spoke to the board about his desire for the city and YMCA to collaborate on the development of a recreation center in Tigard.

Carine Arendes, 9524 SW North Dakota St., a member of City Center Advisory Committee (CCAC), said the first Downtown Art Walk will be June 2 through June 22, 2014.

Tim Pepper, 14550 SW 120th Pl., a representative of the Friends of East Bull Mountain Park, reported on volunteer group's efforts in trail building and removal of non-native plants.

4. Memorial Wall

Richard Shavey spoke to the board about his desire for the city to build a memorial honoring military personnel. He suggested the memorial be sited along the newly leased property for the Tigard Street Trail.

Troy Mears commented due to the property being leased from the railroad, placing a permanent structure would not be allowed.

Brian Rager replied the lease is for 99 years and at the railroad's request, the city would have 180 days to remove any structures placed on the property.

5. Heritage Tree Proposal

Associate Planner Marissa Grass asked the board to consider giving special designation to two trees under the city's Heritage and Significant Tree programs. She provided a handout that is on file in the PRAB record. Some of the highlights include:

- A black walnut tree is located on SW Tigard Street and is approximately 75 years old.
- A European birch tree is located on SW O'Mara Street and is approximately 77 years old.
- The birch tree is listed on the City of Tigard Nuisance Species List because of its ability to spread into natural areas and out-compete native species.

Claudia Ciobanu moved to recommend the black walnut tree on SW Tigard Street to be listed as a Heritage Tree. Holly Polivka seconded the motion. The recommendation was approved by a unanimous vote of the board members present with Claudia Ciobanu, Marshall Henry, Troy Mears, Peggy Faber and Holly Polivka voting yes.

The board decided to not give special designation to the European birch tree.

6. River Terrace Parks Plan Review

Assistant Community Development Director Tom McGuire and Senior Planner Susan Shanks spoke to the board and provided a handout for the future development of River Terrace; this handout is on file in the PRAB record. Some of the highlights include:

- 19.25 acres of land is recommended for community parks.
- 9.62 acres of land is recommended for neighborhood parks.
- 8.02 acres of land is recommended for linear parks.
- 3.01 miles are proposed for trails.
- 65 acres are under natural resource protection.

Holly Polivka asked why the plan will include several neighborhood and community parks for the planned population of the area.

Tom McGuire replied that River Terrace is an undeveloped area and will accommodate multiple park locations.

Susan Shanks asked the board for comments on the city's plan of removing the Roy Rogers Greenway Trail and keeping the River Terrace trail, formally known as the 300 Foot Trail.

Marshall Henry expressed his desire for walking trails to be included in the River Terrace planning.

Troy Mears asked if the current proposal would separate the trail along Roy Rogers Road.

Mr. McGuire responded two trails were proposed in a large greenway along both sides of Roy Rogers Road and one trail will remain in a smaller corridor.

Ms. Shanks said the council will be updated on the progress of River Terrace at its June 17, 2014, city council meeting.

7. Park Updates

Martin McKnight provided the following updates:

- Construction of community gardens at Jack Park has been completed.
- Invasive plants are being removed at the Steve Street property.

- Basketball court improvements at Jack Park and Cook Park are being reviewed.
- Due to an increase of vandalism at Woodard Park, a security camera has been installed.

8. Westside Trail Planning

Steve Martin provided handouts and spoke to the board on the Westside Trail planning; these handouts are on file in the PRAB record. Some of the highlights include:

- The trail will connect areas of Tigard, unincorporated Bull Mountain and King City.
- Due to the steep terrain, a section going over Bull Mountain will not be rated as an American with Disabilities Act trail section.

Marshall Henry moved to approve the concept plan to include the Westside Trail through River Terrace. Peggy Faber seconded the motion. The motion was approved by a unanimous vote of the board members present with Claudia Ciobanu, Marshall Henry, Troy Mears, Peggy Faber and Holly Polivka voting yes.

Holly Polivka moved to approve the recommendation for the PRAB to review the trails in the future. Claudia Ciobanu seconded the motion. The motion was approved by a unanimous vote of the board members present with Claudia Ciobanu, Marshall Henry, Troy Mears, Peggy Faber and Holly Polivka voting yes.

9. Non-Agenda Items

Steve Martin asked the board to move next month's PRAB meeting location to Town Hall.

The board agreed to move its next meeting to Town Hall.

Mr. Martin updated the board that executive session training will be held during a future meeting.

Mr. Martin updated the board on the progress of the recreation program consultant. The consultant will be researching options in Tigard.

8. Executive Session

No executive session was held.

11. Adjourn

At 8:40 p.m., the PRAB adjourned.

Next Meeting

- June 9, 2014 – Tigard Town Hall, 13125 SW Hall Blvd..

_____/s/ René Ferguson_____
René Ferguson, PRAB Recorder

Attest:

_____/s/ Troy Mears_____
Chairman Troy Mears

Date: June 9, 2014

AIS-1674

6.

Business Meeting

Meeting Date: 09/23/2014

Length (in minutes): 60 Minutes

Agenda Title: River Terrace Draft Funding Strategy Plan

Prepared For: Debbie Smith-Wagar, Financial and Information Services

Submitted By: Debbie Smith-Wagar
Financial and Information Services

Item Type: Update, Discussion, Direct Staff

Meeting Type: Council
Business
Meeting -
Main

Public Hearing: No

Publication Date:

Information

ISSUE

Update Council on the progress of the River Terrace Funding Strategy

STAFF RECOMMENDATION / ACTION REQUEST

Staff will present the draft funding strategy for River Terrace. Staff is seeking input from Council.

KEY FACTS AND INFORMATION SUMMARY

All of the needed infrastructure improvements in River Terrace for water, sewer, transportation, parks and stormwater have been identified in their respective master plans and provided to Council at previous briefings. The project lists and cost estimates from these master plans were then used to develop preliminary funding information on each infrastructure system, which was also shared with Council at previous briefings.

The draft River Terrace Funding Strategy, which is attached to this AIS and the focus of this briefing, consolidates all of that information into one comprehensive strategy that considers the funding impact of all the systems together. Key components of the strategy are as follows:

- It includes a funding recommendation for each infrastructure system.
- It identifies at least one and sometimes several viable funding packages for each system and then scores them using evaluation criteria to demonstrate, for example, how equitable or financially sustainable a particular funding package is relative to another funding package.
- It identifies which projects are likely to be needed in the near-term (0 – 6 years) and long-term (7 - ? years). The near term project list was developed by staff through a series of workshops using available information about each system and future development patterns.

This list and the assumptions upon which it was based was then vetted by developers and other service providers. See the attached document entitled Key Infrastructure Information by System for more information.

The purpose of this briefing is to:

- Provide background on the development of the strategy
- Walk Council through the key recommendations in the attached report
- Seek feedback from Council on the financing strategies in the report
- Discuss next steps

If there are no significant changes requested, Council will be asked on December 16, 2014 to approve a resolution adopting a final River Terrace Funding Strategy. That resolution will not be binding, but will be a tool to guide how needed projects will be funded over time and provide a workplan for staff bring implementation issues forward for Council consideration, where it is needed.

OTHER ALTERNATIVES

Council can choose not to provide direction on the River Terrace Funding Strategy.

Council can instruct staff and consultants to make significant changes to the River Terrace Funding Strategy. This will likely require an additional Council meeting prior to approval of the resolution.

COUNCIL GOALS, POLICIES, APPROVED MASTER PLANS

Successfully complete River Terrace Community Plan
Growth and Annexation

DATES OF PREVIOUS COUNCIL CONSIDERATION

The project team presented Council with the stormwater master plan and funding strategies on July 22, 2014.

The project team presented Council with the parks and transportation master plan addenda and funding strategies on June 17, 2014.

Council approved the sewer master plan addendum on June 10, 2014 and the water master plan addendum on June 24, 2014.

The project team presented Council with the water and sewer master plan addenda and funding strategies on May 20, 2014.

The project team updated Council on the project on January 21, 2014.

Council approved the contract for the River Terrace Community Plan (which includes the funding strategies) on June 25, 2013.

Attachments

River Terrace Financing Strategy Report
Key Infrastructure Information by System



City of Tigard
River Terrace



TIGARD RIVER TERRACE FUNDING STRATEGY

DRAFT REPORT

September, 2014

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This entire report is made of readily recyclable materials, including the bronze wire binding and the front and back cover, which are made from post-consumer recycled plastic bottles.

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This project was made possible through funding provided by the City of Tigard, a Metro Construction Excise Tax grant, and Washington County. The findings and conclusions of this report were formulated by the consultant team using input from City staff, River Terrace Stakeholder Workgroup and Technical Advisory Committee members, and the Tigard City Council. We sincerely appreciate the time and energy devoted by all that participated in the: River Terrace Community Plan; River Terrace public facility master plans for water, sewer, parks, stormwater and transportation; and the River Terrace Funding Strategy.

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS	1
Tigard City Council	1
Tigard City Staff	1
River Terrace Stakeholder Working Group (SWG)	2
River Terrace Technical Advisory Committee (TAC)	2
FCS GROUP Consultants	3
I. INTRODUCTION	1
II. METHODOLOGY	2
A. process and approach	2
B. Funding Sources	3
B.1 System Development Charges	3
B.2 Supplemental Transportation System Development Charges	4
B.3 Transportation Development Tax (TDT); Washington County	4
B.4 Local Improvement District (LID)	4
B.5 Reimbursement District	4
B.6 Utility Rates	5
B.7 Urban Renewal District	5
B.7.a URD Requirements	5
B.7.b Maximum Indebtedness Requirements	5
B.7.c Revenue Sharing Possibilities	5
B.7.d Concurrence Waivers	6
B.8 Special Taxing Districts	6
B.9 Bonds	6
B.9.a General Obligation Bonds	6
B.9.b Revenue Bonds	6
B.9.c Full Faith and Credit Obligations (FFCOs)	7
B.10 Loans and Grants	7
B.10.a Bank and State Loans	7
B.11.b Grants and Low-Interest Financing	7
B.11 General Fund	7
B.12 Developer Dedications	8

C.	Funding Source Evaluation criteria	8
C.1	Equity	8
C.2	Reliability of Funds	8
C.3	Facilitates Development	8
C.4	Ease of Implementation	9
C.5	Ability to Address Near-Term Costs	9
C.6	Ability to Address Long-Term Costs	9
C.7	Total Evaluation Score	9
D.	Development absorption forecast	9
III.	FUNDING STRATEGY	11
A.	Water	11
A.1	Overall Findings	11
A.2	Public Facility Costs	11
A.3	Funding Scenarios	12
A.4	Evaluation	12
A.5	Analysis of Preferred Funding Scenario	13
B.	Sanitary sewer	13
B.1	Overall Findings	13
B.2	Public Facility Costs	14
B.3	Funding Scenario	14
B.4	Evaluation	15
B.5	Analysis of Preferred Funding Scenario	15
C.	Parks	16
C.1	Overall Findings	16
C.2	Public Facility Costs	16
C.3	Funding Scenarios	16
C.4	Evaluation	17
C.5	Analysis of Preferred Funding Scenario	17
D.	Stormwater	18
D.1	Overall Findings	18
D.2	Public Facility Costs	18
D.3	Funding Scenarios	19
D.3	Evaluation	19
D.4	Analysis of Preferred Funding Scenario	20
E.	Transportation	21
E.1	Overall Findings	21
E.2	Public Facility Costs	21
E.3	Funding Scenarios	23

E.4	Evaluation	23
E.5	Analysis of Preferred Funding Scenarios	24
IV.	POLICY CONSIDERATIONS	26
A.	General Considerations	26
B.	Water System	26
C.	Sanitary Sewer System	27
D.	Parks and Trails System	27
E.	Stormwater System	27
F.	Transportation System	27
V.	APPENDIX	29
	10-year forecast of selected city funds	29
	Water Utility Fund	30
	Water CIP Fund	31
	Water SDC Fund	32
	Water Utility Fund Assumptions	33
	Sanitary Sewer Fund	34
	Sanitary Sewer Fund Assumptions	35
	Sanitary Sewer Fund Assumptions	36
	Parks Funds	37
	Parks SDC Fund and Assumptions	38
	Stormwater Funds	39
	Stormwater Fund Assumptions	40
	Transportation Funds	41
	Transportation Funds	42
	Transportation Fund Assumptions	43

I. INTRODUCTION

The City of Tigard (population 49,135) is currently the 12th largest city in Oregon (third largest in Washington County). In 2002, the Metro Council approved a 500+ acre urban growth boundary (UGB) expansion and authorized conceptual planning for the area now named River Terrace (RT) along with adjacent rural lands. The West Bull Mountain Concept Plan was developed from about 2005 to 2010 by Washington County in partnership with Metro. In 2011, the Metro Council voted to add the 49-acre “Roy Rogers West” area into the UGB.

In 2012, the City of Tigard (“City”) annexed these areas and initiated the River Terrace Community Plan to implement the West Bull Mountain Concept Plan. At build-out, the River Terrace area will be zoned to accommodate up to 2,587 dwellings, a commercial center of 40,000 gross square feet, and at least one new public school. As part of the Community Plan, the City has responsibility for:

- ◆ Establishing land-use designations, regulations and design standards
- ◆ Applying natural resource protections and abiding by the environmental standards of Clean Water Services, Washington County, Metro, state government, and federal government. These include new standards for stormwater quantity and quality.
- ◆ Ensuring that the City’s master plans and regulatory maps are updated to address River Terrace infrastructure requirements including:
 - Parks, recreation and trails
 - Storm/surface water quality
 - Water
 - Sanitary sewer
 - Transportation
- ◆ Preparing a River Terrace funding strategy to comply with Metro Title 11 Functional Plan that requires areas added to the UGB to include “provision(s) for financing of local and state public facilities and services.”

The City of Tigard selected FCS GROUP in 2013 (as subcontractor to Otak, Inc.) to prepare the River Terrace funding strategy. This effort included coordinating with City staff, SWG and TAC members, and the Tigard City Council to evaluate and select a preferred funding strategy for the required public facilities. This report is a plan for funding major capital facilities in the River Terrace Community Plan area over defined periods of six years (near-term) and build-out (long-term).

II. METHODOLOGY

We used a collaborative approach to identify and evaluate funding sources for the major capital facility improvements required to serve future development within River Terrace. As the long-term “owner” of public facilities (including local roads, water reservoirs, pump stations, local transmission lines for water and sewer, parks, trails and stormwater facilities), the City must consider how to fund capital costs (includes design, permitting, land and facility construction) and operating/maintenance (O&M) costs in all areas of the City. While this Funding Strategy is primarily focused on funding for capital improvements, FCS GROUP also worked with City finance staff to prepare 10-year forecasts for related O&M costs, and included the findings in the recommendations (see **Appendix A**).

A. PROCESS AND APPROACH

The process used to develop this Funding Strategy involved consultants, City staff, regional and state “service providers”, and private property owners and developers. The City formed a Stakeholder Working Group (SWG), a Technical Advisory Committee (TAC), conducted open public community meetings, and held on-line forums to obtain feedback on interim findings for the funding strategy and public facility master plan updates.

As part of this process, FCS GROUP initially prepared a series of Technical Memoranda to discuss and identify funding options related to key facilities and issues of importance. These Memoranda were provided in November and December 2013 and are available on the River Terrace website (<http://www.riverterracetigard.com>):

- ◆ Funding Considerations for River Terrace in Comparison with North Bethany
- ◆ Parks, Trails, and Open Space Funding Options for River Terrace
- ◆ Stormwater Funding Options for River Terrace
- ◆ Transportation Funding Options for River Terrace
- ◆ Wastewater Funding Options for River Terrace
- ◆ Water Funding Options for River Terrace

In addition to these technical documents, City staff prepared informational documents regarding funding strategy policy options to inform the community about how various groups (i.e., existing City residents, future residents in River Terrace, developers and property owners in River Terrace) could help pay for essential public infrastructure.

In the spring and summer of 2014 FCS GROUP, City staff, and other consultant team members presented draft public facility master plan amendments and preliminary funding strategies to the Tigard City Council during work sessions open to the public. Input received at these meetings and subsequent meetings with the TAC and SWG was used to finalize the master plan amendments for adoption by the Tigard City Council and to provide feedback regarding the assumptions contained in the funding strategy.

Underlying the alternatives and recommendations in this report is the assumption that the City desires and intends to develop River Terrace in the manner that it has planned. This report is not a cost-benefit analysis, and it provides no evaluation of the City's plan to develop River Terrace.

B. FUNDING SOURCES

There is a hierarchy of public facilities needed to serve new developing areas. Local infrastructure facilities such as: neighborhood streets, sidewalks, water and sewer line connections to the trunk system, and storm drainage systems may be required as a condition of development approval (per development agreements); or included as part of adopted system development charges (SDCs) that must be paid by developers in lieu of constructing a facility.

Development agreements between developers and local service providers are often used to advance or expedite the financing for specific public facility improvements. In addition to specifying the capital projects to be constructed, development agreements help clarify project delivery timelines, funding responsibilities, and developer investment reimbursement levels.

If the required public facilities are included as a "qualified public improvement" per ORS 223.309, then the local government must have an ordinance or resolution that establishes or modifies an improvement fee to provide credit against such fee for the construction of a qualified public improvement.

Capital improvements to major public facilities are often constructed by local governments or utility service providers through some form of debt financing or "pay-as-you-go" fund allocations for capital projects that are included in the City's Capital Improvement Plan (CIP).

When capital improvements are funded or financed by the local jurisdiction(s), service provider(s) or through development agreement(s), the funding options that are used in Washington County include:

- ◆ Local System Development Charges (SDC)
- ◆ Washington County Transportation Development Tax (TDT)
- ◆ Local Improvement Districts (LID)
- ◆ Reimbursement District
- ◆ Utility Rates
- ◆ Urban Renewal Program (Tax Increment Financing)
- ◆ Special Taxing Districts
- ◆ Bonds
- ◆ Loans and Grants
- ◆ General Funds (with a mix of funding sources)
- ◆ Developer Dedications

A summary of these local funding techniques is provided below.

B.1 System Development Charges

ORS 223.297 – 223.314 provides "a uniform framework for the imposition of system development charges by governmental units" and establishes "that the charges may be used only for capital improvements." An SDC can be formulated to include one or both of the following components: (1) a reimbursement fee, intended to recover an equitable share of the cost of facilities already constructed or under construction and (2) an improvement fee, intended to recover a fair share of future, planned,

capital improvements needed to increase the capacity of the system. SDCs may include an improvement fee for new facilities and a reimbursement fee associated with capital improvements already constructed. SDCs cannot be used for operation or routine maintenance. ORS 223.299 defines “capital improvements” as facilities or assets used for:

- ◆ Water supply, treatment and distribution;
- ◆ Waste water collection, transmission, treatment and disposal;
- ◆ Drainage and flood control;
- ◆ Transportation; and
- ◆ Parks and recreation.

The City already collects SDCs for sanitary sewer, stormwater and parks facilities and is updating these SDCs. The City is also considering a new local SDC for transportation.

B.2 Supplemental Transportation System Development Charges

Tigard is in process of considering a local Transportation SDC for transportation facilities (including streets, transit facilities, pedestrian and bicycle facilities) that would be separate from the existing Washington County TDT. The local Transportation SDC would represent an impact fee on new development and could be considered citywide or within defined sub-districts within the City.

B.3 Transportation Development Tax (TDT); Washington County

Approved by Washington County voters on November 4, 2008 (Measure No. 34-164), the TDT replaced the previous tax, known as the Traffic Impact Fee. The TDT went into effect on July 1, 2009 and is levied countywide in all cities.

Since River Terrace is located within Washington County, the city may explore the use of Washington County Transportation Development Tax (TDT) revenues for roadway improvements that add capacity, such as improvements to Roy Rodgers Road, Bull Mountain Road, and other eligible collector and arterial facilities.

B.4 Local Improvement District (LID)

Cities in Oregon have the statutory authority to establish local improvement districts and levy special assessments on the benefited property to pay for improvements. These are payable in annual installments for up to 30 years. LIDs are generally used for capital improvement projects that benefit numerous large tenants and/or private property owners.

The primary advantage of LIDs from the city’s perspective is the ability to attain a consistent level of revenue generation early in the development process. Financial intermediaries such as banks now view LIDs as a more reliable funding source than others (such as SDCs) and are more apt to provide loans based on future LID revenue streams. However, the financing terms for “raw land” LIDs have become far more stringent since the 2007 financial crisis and are now far less favorable than financing terms given to municipal bond issues or state infrastructure loans.

B.5 Reimbursement District

Similar to LIDs, cities can negotiate public/private advance financing arrangements with developers, where a developer agrees to front capital improvements/investment within a designated zone of benefit. The developer is then partially reimbursed as new land use development approvals are granted within the reimbursement district over a period that usually extends 10-15 years. While

reimbursement districts have been successfully utilized in Tigard in the past, there is no guarantee that future revenues will be steady and reliable as with the LID or property tax assessments.

B.6 Utility Rates

Utility rates are a common way to raise local revenues to pay for required infrastructure facilities and operations. However, they require approval and adoption by the City or service district and must meet state and local regulations. Utility fees are paid for by customers within the service area, and typically are included in monthly or bi-monthly utility bills for streets, water, sewer, stormwater, and parks. Tigard currently charges utility fees for water, sewer, transportation, and stormwater costs.

B.7 Urban Renewal District

Tigard currently has a downtown urban renewal district in place, and there may be an opportunity for to utilize funding from the creation of a new River Terrace Urban Renewal District (URD). In many cases, URD funds are combined with other local funding sources (e.g. SDCs) to leverage non-local grants or loans.

B.7.a URD Requirements

The requirements for preparing an urban renewal plan and establishing an URD are contained in ORS 457. In general, the most pertinent elements of the legal requirements of ORS 457 include:

- ◆ Does the area within the proposed boundary contain blighting conditions as defined in ORS 457? (this includes “inadequate streets and other rights of way, open space and utilities” among other factors that seem to exist in River Terrace)
- ◆ Does the area (along with other URDs in the city) constitute less than 25% of the city’s acreage and assessed valuation level? (this seems to be the case when considering River Terrace and the current Downtown URD areas)
- ◆ Do the proposed urban renewal plan and project activities address and help treat blighting conditions?
- ◆ Are the proposed project activities eligible as urban renewal activities?
- ◆ Have renewal project costs and revenues been estimated?

B.7.b Maximum Indebtedness Requirements

After the passage of House Bill 3056 (passed by the Oregon Legislature in 2009), urban renewal agencies have new limits on the amounts of maximum indebtedness (MI) in an urban renewal plan adopted after January 1, 2010.

- ◆ If the total “frozen tax base” is \$50 million or less (as is the case in River Terrace), the total MI may not exceed \$50 million.

B.7.c Revenue Sharing Possibilities

There are also new possibilities for revenue sharing with overlapping districts for plans adopted or substantially amended to increase MI after January 1, 2010.

- ◆ Revenue sharing among overlapping tax districts begins in the later of the 11th year after the initial plan was adopted, or when TIF collections equal or exceed 10% of the initial MI.
- ◆ For any year when TIF collections equal or exceed 10% of the initial MI, but are less than 12.5% of the initial MI, the urban renewal agency receives the 10%, plus 25% of the tax increment

between 10% and 12.5%. Overlapping tax districts receive 75% of the tax increment between 10% and 12.5%.

- ◆ For any year when TIF collections equal or exceed 12.5% of the initial MI, the UR agency receives the 12.5% tax increment, and any tax increment collections greater than 12.5% are distributed to overlapping taxing districts.

B.7.d Concurrence Waivers

Variations in the MI requirements and the revenues sharing provisions can occur if the municipality obtains the written concurrence of the overlapping tax districts that impose at least 75% of the taxes imposed under the permanent rate limits in the URD.

In light of these and other URD provisions, the city of Tigard may consider the creation of a new district. Revenue generation potential from urban renewal tax increment collections within a district that coincides with River Terrace is further analyzed in the next section.

B.8 Special Taxing Districts

Special districts with taxing authority may be formed by voters within the district for specific purposes, such as providing sanitary service, water improvements, or surface water control.² For example, a Water Control District (ORS Chapter 553) may be formed to construct, improve, operate, and maintain surface water control works that improve public health, welfare, and safety as well as enhance pollution control and increase water quality. The district would have a separate board of directors and may levy taxes, fees, and assessments. If the district levies a property tax, the tax rate is limited to a portion of the real market value of all taxable property in the district.

B.9 Bonds

Cities may finance public facilities using several types of debt known as bonds or certificates of participation.

B.9.a General Obligation Bonds

In Oregon, general obligation (G.O.) bonds must be approved by voters. G.O. bonds provide their own debt service in the form of a property tax levy that is exempt from the Measure 5 (compression) limits. G.O. bonds offer slightly lower interest rates than revenue bonds, being backed by the City's tax base. From the investor's perspective, tax backed debt is more secure. These bonds also carry no additional coverage requirement, allowing the City to collect revenues necessary to meet annual debt service with no additional financial consequences. G.O. bonds can be politically unpalatable if the municipality's constituency doesn't support the project purpose.

B.9.b Revenue Bonds

Revenue Bonds are, by definition, backed by the revenue of a utility or enterprise fund, or some other dedicated revenue source. Because the payment stream is less secured than tax backed bonds, revenue bonds carry higher interest rates than G.O. bonds. This differential, however, may be minimal.

² Special districts in Oregon may be formed by local governments without a vote if the district foregoes the ability to levy a property tax.

Revenue bonds are perhaps the most common source of funding for construction of major public facility or utility projects. To issue revenue bonds the City must commit to certain security conditions related to repayment, specifically reserve and coverage requirements for annual rate revenues. These conditions are included in the bond resolution to be adopted by the City and essentially impose certain conservative financial practices on the City as a way of making the bonds more secure.

Revenue bond coverage is a contractual requirement binding a utility to demonstrate that annual revenues exceed expenses by a multiple of the debt service payment. This factor is usually at least 1.25 and is higher for agencies with unrated bonds or low bond ratings. Revenue bond coverage requirements can result higher utility rates than would otherwise be necessary to meet the cash needs of the utility.

B.9.c Full Faith and Credit Obligations (FFCOs)

This last type is a hybrid of the first two. Like revenue bonds, FFCOs require no vote, and they trigger no property tax levy. Like general obligation bonds, FFCO's do not figure into debt coverage ratio calculations for municipalities that have outstanding revenue bonds. Like G.O. bonds, which are issued against the taxing authority of the City, these bonds may be repaid by other dedicated revenues. This arrangement takes advantage of the more favorable terms, while still requiring system users to repay the debt. The General Fund would ultimately remain responsible for debt repayment should rate revenues prove insufficient. Debt limits for public borrowing through the use of FFCOs and G.O. Bonds is described in ORS chapter 287.A.

B.10 Loans and Grants

Federal and state grant programs, once readily available for financial assistance, were mostly eliminated or replaced by low-cost loan programs. Remaining grant programs are generally limited in application, lightly funded, and heavily subscribed. Nonetheless, the economic benefit of grants and low-interest loans can make the effort of applying worthwhile.

B.10.a Bank and State Loans

The city may utilize private bank loans or state loans to make strategic capital facility upgrades. State loan funds available from Business Oregon currently include the Special Public Works Fund and the Oregon Bond Bank. Special Public Works funds are available on a competitive basis to public jurisdictions and can fund projects up to \$3 million in size, but require well-secured loan guarantees from the applicants. Oregon Bond Bank or Oregon Infrastructure Finance Authority loan funds may be available if the project is well secured and other funding alternatives are not available.

B.11.b Grants and Low-Interest Financing

Grants offer some potential for the capital improvement projects and initiatives that the city is considering. The city may be able to leverage non-local dollars using dedicated local funding. There are several regional, state and federal grant and loan programs that may be available for transportation, water, sewer, and stormwater improvements. Please refer to Metro and Business Oregon contacts for current grant and loan funding opportunities.

B.11 General Fund

The General Fund includes revenues (primarily property tax revenues and franchise fee revenues) the city receives that are not associated with "enterprise funds" and can be used to fund activities or projects associated with local governance. As part of the annual budgeting process, Tigard City Council has the discretion to allocate a portion of General Funds to enterprise activities or other

dedicated purposes. Since General Funds are relied upon to fund essential city administrative expenses services (including police and fire protection), they do not represent a very reliable funding source for funding public infrastructure. However, General Funds can serve as an important credit mechanism for issuing bonds, as noted above.

B.12 Developer Dedications

Jurisdictions can require developers to dedicate right-of-way or public improvements (such as trail easements or street improvements) as a condition of future development approval if those public facilities are identified in an adopted subarea development plan, transportation system plan or public facility plan, and the value of the real estate and improvements is commensurate with the level of impact generated by the proposed development. In cases where dedicated public facilities are eligible for SDC or TDT credits, the developer may be entitled to an amount of credit based on the amount of the improvement charge and the value of the land and/or capital facility provided based on the credit terms/methods adopted per local ordinance.

C. FUNDING SOURCE EVALUATION CRITERIA

An evaluation of funding options for each public facility type was conducted to ascertain the relative potential for implementing the potential funding measures identified above. FCS GROUP worked with City staff to identify potential “bundles” of funding based on the status quo (existing practice within the City of Tigard) and scenarios that would entail new funding sources.

C.1 Equity

Equity has been defined herein as the equitable distribution of cost/risk among four categories: existing city residents, new residents within River Terrace, River Terrace developers/property owners, and the City’s General Fund. A score for each funding source has been assigned to each category ranging from low cost/risk (1) to high cost/risk (5). The overall equity score for each funding scenario was determined based upon the relative standard deviation from “uniform equity” (which represents a case where each group shares costs/risks equally). A relatively low equity score depicts a large standard deviation, and a relatively high score depicts a small standard deviation from uniform equity.

C.2 Reliability of Funds

Reliability of funds is an important consideration, especially if debt is used to advance funding for improvements. Funding sources, such as SDCs, Reimbursement Districts, and General Fund allocations do not generate revenue in a predictable manner, and have poor reliability. In comparison, G.O. Bonds, special districts, and LIDs tend to be far more reliable and less risky to the agency that takes on debt.

C.3 Facilitates Development

Adequate public facilities must be provided (and funded) before major private development can occur in River Terrace. The ability for the public or private sector to fund necessary infrastructure to accommodate new private development is an important consideration and should be viewed from each of their perspective. If there is an over reliance on private developers/property owners within River Terrace to fund all necessary public infrastructure, the development costs per unit of net development (housing units or commercial floor area) may drive up costs to a level that exceeds supportable market prices (e.g. lot or home sales prices). On the other hand, if new public facilities are to be funded primarily using SDCs or General Funds, then it is likely that the City would not

invest in these facilities until adequate capital reserves are established which could take many years. A score of 1 (low) to 5 (high) is assigned to each funding scenario, based on the relative potential it would have to facility development within the near-term (next six years).

C.4 Ease of Implementation

Ease of Implementation refers to the process that is required to adopt or implement the funding sources identified within each funding scenario. Some funding sources, such as utility rates and SDCs do not require public votes to enact and therefore are relatively easier to implement (these are not without inherent political or market risks) than funding sources that require a public vote or legal formation steps (such as Urban Renewal Districts, Local Improvement Districts, Reimbursement Districts, and Special Taxing Districts). A score of 1 (low) to 5 (high) is assigned to each funding scenario, based on the relative ease of implementation to enact the relevant funding options.

C.5 Ability to Address Near-Term Costs

Using the adopted facility master plans and CIP, City staff was able to identify a preliminary list of facility improvements necessary to get development underway in River Terrace. Each improvement entails additional capital costs that are to be incurred by the City, or other major service provider (e.g., CWS, Washington County, etc.), or developer. A score of 1 (low) to 5 (high) is assigned to each funding scenario, based on the anticipated level of funds it would generate in comparison to the expected near-term capital cost requirements.

C.6 Ability to Address Long-Term Costs

The adopted public facility plans for River Terrace were used to identify specific facility improvements necessary serve River Terrace (and the surrounding area) at build-out. Each improvement entails additional capital costs that are to be incurred by the City, or other major service provider (e.g., CWS, Washington County, etc.), or developer. A score of 1 (low) to 5 (high) is assigned to each funding scenario, based on the anticipated level of funds it would generate in comparison to the expected long-term capital cost requirements.

C.7 Total Evaluation Score

A total score is computed for each funding scenario using the overall equity score, and the scores assigned for the ability to: facilitate development; implement the funding scenario; address near-term cost; and address long-term cost. The total score was also used to rank or prioritize funding scenarios.

D. DEVELOPMENT ABSORPTION FORECAST

City staff and consultants worked with SWG/TAC members to estimate available public facility infrastructure capacity and the timing of near-term improvements and developments within River Terrace. The development absorption forecast takes into account land uses planned as part of the adopted River Terrace Community Plan. To keep the funding revenue forecasts conservative, it is assumed that the fees generated will occur approximately one year after development approvals are granted by the City. It is also assumed that the amount of total net new development realized in River Terrace will be 10% less than the zoned capacity and no commercial or school development is counted in the City's revenue forecast. The near-term and long-term development absorption assumptions are provided in **Exhibit 1**.

Exhibit 1: River Terrace Development Absorption Forecast (Dwelling Units)

Absorption Scenario	Near Term*	Long Term	Total	Years Until Build-out
Low	440	1,888	2,328	24
Medium	540	1,788	2,328	20
High	640	1,688	2,328	18

* Near term is assumed to extend from FYE 2015 to FYE 2021 . FYE = fiscal year ending.

Note: this assumes 10% under-build factor.

Excludes: 40,000 sq. commercial and school developments.

III. FUNDING STRATEGY

FCS GROUP relied upon the River Terrace master plan amendments and the current adopted Tigard five-year Capital Improvement Program to identify specific improvements and their associated capital costs for public facilities related to River Terrace. This section highlights the overall findings, public facility capital costs, near-term project assumptions, funding scenario evaluation, and preliminary preferred scenarios for each infrastructure type if River Terrace develops as planned. Funding revenue forecasts are based on medium absorption forecast depicted in the preceding table.

A. WATER

A.1 Overall Findings

The service provider for water in River Terrace is the City of Tigard.

The City of Tigard's Water Fund is being programmed to make major investments per the Lake Oswego-Tigard Water Partnership. Prior and planned rate increases should adequately address local revenue requirements and enable the city to proactively construct capital projects that benefit existing and future customers, including those in River Terrace. Development Agreements could be utilized to allow private (developer) construction of water lines (eligible for SDC credits).

There are three zones in River Terrace with different water pressures in the water system: a 410 zone, a 550 zone, and a 713 zone. Adequate water capacity is currently available to serve future River Terrace development within the 410 and 713 zones. However, there is a city-wide need for additional water storage capacity in the 550 zone. City staff estimates that only 72 additional homes can be built in River Terrace within the 550 zone before the new 3.0 million gallon per day (gpd) Cach Reservoir is constructed.

A.2 Public Facility Costs

Near-term water facility improvements include capacity-related facilities in the 410 and 500 zones. The 410 zone will require two transmission mains and a water pressure reducing valve (PRV), the only upgrade required in the near term. The new Cach Reservoir and a new pump station and transmission main is planned in the near-term to serve city-wide needs within the 550 zone. See **Exhibit 2** for details.

Exhibit 2: Water Infrastructure Needs

Facilities by Pressure Zone	Capital Cost	Near Term	Potential Funding Source Notes
410 Zone:			
18-inch Transmission Mains	\$1,398,500	<input type="checkbox"/>	Funding primarily through water rates and SDCs (credit eligible)
20-inch Transmission Mains	\$6,080,000	<input type="checkbox"/>	Funding primarily through water rates and SDCs (credit eligible)
550 Zone to 410 Zone PRV	\$200,000	<input checked="" type="checkbox"/>	Funding primarily through water rates and SDCs
713 Zone:			
None	-		
550 Zone:			
16-inch Transmission Mains through River Terrace	\$2,800,000	<input type="checkbox"/>	Funding primarily through water rates and SDCs (credit eligible)
3.0 mgd Cach Reservoir	\$5,400,000	<input checked="" type="checkbox"/>	Funding primarily through water rates and SDCs
16-inch Transmission from Reservoir to 550B	\$595,000	<input checked="" type="checkbox"/>	Funding primarily through water rates and SDCs
1,400 gpm (firm capacity) Pump Station	\$1,100,000	<input checked="" type="checkbox"/>	Funding primarily through water rates and SDCs
Total Cost	\$17,573,500		
Source: River Terrace Water System Master Plan Addendum June 2014, compiled by FCS Group			

A.3 Funding Scenarios

There is one funding scenario for water infrastructure which is generally consistent with the existing funding sources utilized by the City of Tigard. This includes utility fees, citywide SDCs, and developer dedications of local transmission lines (**Exhibit 3**).

Exhibit 3: Water Funding Scenario

Scenario		
Funding Source	A (status quo)	Notes
Utility Fee (existing)	<input checked="" type="checkbox"/>	Existing city-wide water rates may be increased to address costs
SDC (City wide)	<input checked="" type="checkbox"/>	Existing city-wide water SDCs should be sufficient to address costs
Developer	<input checked="" type="checkbox"/>	Developers to provide/construct local water system connections
Preliminary Ranking	1	

A.4 Evaluation

Overall, the water funding scenario received a total score of 24 points (out of a possible 30 points). The scenario has good marks for equity, reliability, ability to facilitate development, and can be implemented without the need to establish new sources (**Exhibit 4**).

Exhibit 4: Water Funding Evaluation Criteria

Evaluation of Cost Burdens and Implementation Criteria	
Equity (1: lower cost burden - 5: higher cost burden)	A (status quo)
General Fund Cost Burden	
Citywide Resident Cost Burden	
Citizens in Subdistrict Cost Burden	
Developer/Property Owner Cost Burden	
Evaluation Criteria (1: worst - 5: best)	
Equity (Standard Deviation of cost burden)*	
Reliability of Funds	
Facilitates Development	
Ease of Implementation	
Ability to Address Near-Term Costs	
Ability to Address Long-Term Costs	
Total Score (sum of Evaluation Criteria)	24

* denotes relative variance from "uniform" equity (whereas developers, city, future residents and existing residents would split costs equally)

A.5 Analysis of Preferred Funding Scenario

Total water system infrastructure costs, excluding local connections to main transmission lines, are estimated at \$17.6 million. Estimated near-term costs for water infrastructure total \$7,295,000 (FYE 2014 dollars), most of which will be paid for using rate revenues from the water fund. The rest of the near term and long term funding will be paid through SDC and water rate revenue (see **Exhibit 5**). Developers will be responsible for constructing local connections, the cost of which is not listed.

Exhibit 5: Water Funding Strategy, Scenario A

Scenario A			
Funding Mechanism	Near Term Funding	Long Term Funding	Notes
Utility Fees (Water Fund)	\$5,295,000		Reflects portion of Water Fund Balance by FYE 2021
SDC (City wide, Water SDC Fund)	\$2,000,000	\$10,278,500	Existing SDCs (after inflation adjustment), \$7,930 per SFD
Total Revenue	\$7,295,000	\$10,278,500	
Total Cost	\$7,295,000	\$10,278,500	

B. SANITARY SEWER

B1. Overall Findings

Clean Water Services (CWS) is the sanitary sewer service provider for the River Terrace area and the City has responsibility for maintaining gravity lines below 12 inches in diameter.

The City's Sanitary Sewer Fund is financially challenged regardless of River Terrace and a local city-wide sewer surcharge is recommended. Most areas within River Terrace will require new pump stations before development can occur unless CWS allows for interim facilities for sewer. The North Pump station is scheduled for construction in summer 2015 and completion in January 2016. The South Pump station is scheduled for construction in summer 2018 and completion in January 2019.

The City will need to coordinate with CWS to ensure that planned pump stations and force mains serving River Terrace are constructed in a timely manner. The city's limited financial resources may

be focused on coordination with CWS and review of developer engineering designs of gravity main lines. Development Agreements can be utilized to allow private (developer) construction of gravity lines (eligible for SDC credits).

B2. Public Facility Costs

Sewer infrastructure upgrades for River Terrace are estimated to cost just under \$12 million. Facilities in the North River Terrace area include a new pump station, a force main, a Scholls Ferry trunk pipe extension, and upsizing the Barrows Road trunk line. South River Terrace facilities include a force main, a pump stations, and a pipe upsizing on Beef Bend Road. See **Exhibit 6** for details.

Exhibit 6: Sewer Infrastructure Costs

North River Terrace Facilities	Capital Cost	Near Term	Potential Funding Lead	Potential Funding Source Notes
RTN Force Main	\$650,000	<input checked="" type="checkbox"/>	CWS	CWS Sewer Fund
RTN Pump Station	\$5,666,400	<input checked="" type="checkbox"/>	CWS	CWS Sewer Fund
Scholls Ferry Trunk Extension, Phase 1 (city share)	\$942,000	<input checked="" type="checkbox"/>	Tigard	Tigard Sewer Fund
Barrows Rd. Trunk Upsizing (city share)	\$276,300	<input checked="" type="checkbox"/>	Tigard	Tigard Sewer Fund
Total Cost (north)	\$7,534,700			

South River Terrace Facilities	Capital Cost	Near Term	Potential Funding Lead	Potential Funding Source Notes
RTS Force Main	\$2,461,900	<input checked="" type="checkbox"/>	CWS	CWS Sewer Fund
RTS Pump Station	\$1,352,000	<input checked="" type="checkbox"/>	CWS	CWS Sewer Fund
Beef Bend Rd. 8" line upsizing to 10" (city share)	\$494,000	<input type="checkbox"/>	Tigard	Tigard Sewer Fund
Total Cost (south)	\$4,307,900			
Grand Total Cost	\$11,842,600			

Source: River Terrace Sanitary Sewer System Master Plan Addendum, June 2014; Tigard Capital Improvement Program; compiled by FCS Group

B.3 Funding Scenario

The preferred funding scenario for sanitary sewer infrastructure is generally consistent with the existing funding sources utilized by the City of Tigard and CWS. This includes CWS capital funds, SDCs, and developer dedications of local gravity feeds (**Exhibit 7**). As mentioned above, this City is also in the process of enacting a new local sewer rate surcharge that is needed with or without River Terrace development.

Exhibit 7: Sewer Funding Scenario

Potential Funding Options	Scenario	
Funding Source	A	Notes
Utility Fees (Citywide surcharge)	<input checked="" type="checkbox"/>	New local surcharge needed with or without River Terrace
SDC (Citywide)	<input checked="" type="checkbox"/>	Existing sewer SDCs
CWS (Capital Fund)	<input checked="" type="checkbox"/>	CWS funds
Developer	<input checked="" type="checkbox"/>	Developers to provide/construct local system connections
Preliminary Ranking	1	

B.4 Evaluation

The preferred funding scenario received a total score of 23 (out of a possible 30 points). The preferred scenario for sanitary sewer funding received a relatively favorable equity score and is expected to facilitate development and not entail overly complicated new funding sources, other than the planned citywide sewer rate surcharge (**Exhibit 8**).

Exhibit 8: Sewer Funding Evaluation Criteria

Evaluation of Cost Burdens and Implementation Criteria	Scenario
Equity (1: lower cost burden - 5: higher cost burden)	
A	
General Fund Cost Burden	
Citywide Resident Cost Burden	
Citizens in Subdistrict Cost Burden	
Developer/Property Owner Cost Burden	
Evaluation Criteria (1: worst - 5: best)	
Cost Equity	
Reliability of Funds	
Facilitates Development	
Ease of Implementation	
Ability to Address Near-Term Costs	
Ability to Address Long-Term Costs	
Average Rating	
Total Score (sum of Evaluation Criteria)	23
* denotes relative variance from "uniform" equity (whereas developers, city, future residents and existing residents would split costs equally)	

B.5 Analysis of Preferred Funding Scenario

Most of the sewer infrastructure required to serve River Terrace requires major near-term investments (primarily by CWS). In addition to funding provided by CWS, the planned new citywide sewer utility fee surcharge is expected to generate about \$1 million in long-term funding, based on a fixed monthly rate. Local sewer SDCs are expected to generate an additional \$610,000 in near-term funding (see **Exhibit 9**). Developers will be responsible for constructing local gravity feeds into sewer mainlines, the cost of which is not listed.

Exhibit 9: Sewer Funding Strategy, Scenario A

Analysis of Preliminary Preferred Funding Scenario	Scenario A		
	Near Term Funding	Long Term Funding	Total
Funding Mechanism			
CWS (capital fund, from utility rates)	\$ 10,130,300		\$ 10,130,300
Utility Fee (City surcharge)	609,150	494,000	1,103,150
SDC (City wide)	609,150		609,150
Developer			
Total Revenue	\$ 11,348,600	\$ 494,000	\$ 11,842,600
Total Cost	\$ 11,348,600	\$ 494,000	\$ 11,842,600

C. PARKS

C.1 Overall Findings

The City of Tigard is the parks service provider for River Terrace.

City of Tigard residents voted to support a Parks G.O. Bond in recent years, but the existing parks capital funds are mostly committed. The City must now rely upon SDC funds, user fees, General Funds and grants to pay for its parks.

In addition to updating the citywide parks SDC, it is recommended that the City consider ways to enhance parks operating revenues using a citywide parks utility fee, and consider a future G.O. Bond to help bridge parks funding gaps. Development Agreements could also be utilized to allow private developers to construct neighborhood parks or dedicate land or easements for future parks and trails (eligible for SDC credits and reimbursement).

C.2 Public Facility Costs

The total cost for parks and trails in River Terrace is over \$27 million. Community and neighborhood parks are expected to make up the vast majority of the costs, while trails and linear parks cost \$4.9 million combined (see **Exhibit 10**).

Exhibit 10: Parks Infrastructure Costs

Facility	Capital Cost	Potential Funding Sources
Community parks	\$15,893,943	Parks SDCs, General Fund, grants, and voter approved GO bonds
Neighborhood parks	\$6,726,525	Parks SDCs, General Fund, grants
Linear parks	\$3,355,950	Parks SDCs, General Fund, grants
Trails	\$1,454,097	Parks SDCs, General Fund, grants, and voter approved GO bonds
Total Costs	\$27,430,515	
Source: Tigard Park System Master Plan Addendum, Table 5.		
* Near-term investment primarily includes land acquisition.		

Land acquisition is a near term funding priority because the City does not have a mechanism for exacting park land aside from the voluntary planned development process. Early land acquisition is likely critical to ensure land availability for park use in the future.

C.3 Funding Scenarios

Three funding scenarios have been evaluated for funding parks in River Terrace. All involve the City General Fund, SDC revenues, grants, and developer dedications that would be eligible for SDC credits (see **Exhibit 11**).

Exhibit 11: Parks Funding Scenarios

Funding Scenario				
Funding Source	A (status quo)	B	C	Notes
City General Fund	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	City currently allocates General Funds to parks
Utility Fee (new)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Scenario B requires new monthly parks utility fee
SDC (City wide)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Existing citywide Parks SDCs to be updated
Urban Renewal District	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Urban Renewal District may be formed with voter approval
GO Bond	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	GO Bonds may be issued with voter approval
Grants	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Grants from state or Metro may be available
Developer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Developers can receive SDC credits for constructing eligible public facility improvements.
Preliminary Ranking	3	1	2	

C.4 Evaluation

The rankings for the three scenarios indicate that scenario B has the highest score and is the preferred funding scenario. While scenario B is difficult to implement because it relies on a future G.O. Bond, it would generate reliable future revenues that could be used to construct attractive parks and recreation amenities that would help facilitate development.

Scenario A does not have very reliable funding sources since the City would have to leverage far more grant funding. Scenario C has a very high equity score, but the funding sources are not as reliable as scenario B since the assessed value in an Urban Renewal District may not rise as projected (see **Exhibit 12**).

Exhibit 12: Parks Evaluation Criteria

Evaluation of Cost Burdens and Implementation Criteria	Funding Scenario		
	A (status quo)	B	C
Equity (1: lower cost burden - 5: higher cost burden)			
General Fund Cost Burden			
Citywide Resident Cost Burden			
Citizens in Subdistrict Cost Burden			
Developer/Property Owner Cost Burden			
Evaluation Criteria (1: worst - 5: best)			
Cost Equity *			
Reliability of Funds			
Facilitates Development			
Ease of Implementation			
Ability to Address Near-Term Costs			
Ability to Address Long-Term Costs			
Total Score (sum of Evaluation Criteria)	11	19	17

* denotes relative variance from "uniform" equity (whereas developers, city, future residents and existing residents would split costs equally)

C.5 Analysis of Preferred Funding Scenario

Parks and trails in River Terrace are estimated to cost approximately \$27.4 million, as indicated in **Exhibit 13**. For the preferred parks funding scenario (Scenario B), it is estimated that the City would fund approximately \$2.25 million in near-term land acquisition for parks in River Terrace. This assumes \$250,000 in General Funds and about \$2 million in parks SDC funds.

The long term funding requirements of \$25.2 million can be funded through the parks SDC, a potential new G.O. Bond, a potential new citywide parks utility fee, and grants from such entities as Metro, the State, and non-profit foundations (such as the Meyer Memorial Trust). The potential new G.O. Bond would require voter approval. It could be part of a larger citywide parks and trails construction program. It is estimated that for every \$10 million in bonds, the levy amount would equate to \$0.15 per \$1,000 in assessed valuation (AV), which would cost the average homeowner about \$47 per year.

Exhibit 13: Parks Funding Strategy, Scenario B

Scenario B				
Funding Mechanism	Near Term Funding	Long Term Funding	Total	Notes
City General Fund	\$250,000		\$250,000	Includes portion of unallocated existing parks GO bond
SDC (City wide)	\$2,000,000	\$12,000,000	\$14,000,000	Based on current Parks SDC
Utility Fee (new city wide)		\$3,000,000	\$3,000,000	new monthly parks utility fee of +/- \$1.00 per month assumed
G.O. Bond		\$10,000,000	\$10,000,000	Assumes Voter Approved \$10 M bond*
Grants		\$180,515	\$180,515	Grants (Metro, State, Foundations, etc.)
Total Revenue	\$2,250,000	\$25,180,515	\$27,430,515	
Total Cost	\$2,250,000	\$25,180,515	\$27,430,515	

* assumes voter-approved levy of \$0.15 per \$1,000 AV; results in average cost to \$311,100 median home of \$47/year.

D. STORMWATER

D.1 Overall Findings

The City of Tigard is focused on ensuring that development is environmentally sustainable through low impact stormwater design standards and construction of new stormwater water quality and quantify facilities. Recent federal water quality regulations mandate local investments in stormwater facilities and maintenance activities. While planned rate increases by CWS will increase Stormwater Funds for the City, additional local funding sources should be considered to finance, construct, and maintain stormwater facilities in River Terrace.

Stormwater systems within River Terrace are expected to be primarily funded by developers and maintained by the City of Tigard. The City may also consider dedicating funds to form stormwater facility reimbursement districts, which could function as a bank used to advance funding for regional facilities, with payments provided to the City (by developers, buildings or homeowners) after development occurs. Development Agreements could be utilized to allow private developer construction of regional (drainage basin) facilities, with similar reimbursement payback provisions.

D.2 Public Facility Costs

Total permitting, land and capital cost for stormwater facility improvements and planning/modeling work is estimated at \$22 million.³ Near-term stormwater infrastructure requirements include stormwater modeling of high-flow conveyance alternatives analysis and new design standards for River Terrace. Future stormwater system improvements include 11 water quality/detention ponds, 2 detention ponds, and potentially 2 high-flow conveyance facilities (**Exhibit 14**).

³ Note, these draft cost estimates were prepared by Otak, Inc. as part of the draft Tigard River Terrace Stormwater Master Plan (August 2014). These costs are considered to be on the high-end of what may be realized if developers construct stormwater facilities on-site and avoid public contracting and related prevailing wage requirements.

Exhibit 14: Stormwater Infrastructure Costs

Facility Needs	Capital Cost	Near Term	Potential Funding Lead	Potential Funding Source Notes
Modeling Analysis	\$50,000	<input checked="" type="checkbox"/>	City	City Stormwater Fund
River Terrace Stormwater Design Standards	\$150,000	<input checked="" type="checkbox"/>	City	City Stormwater Fund
Water Quality and Detention Ponds (11)	\$12,349,000	<input type="checkbox"/>	Developers	Developers and reimbursement districts
Detention Ponds (2)	\$4,265,000	<input type="checkbox"/>	Developers	Developers and SWQQ reimbursement districts
High Flow Conveyance Facilities (3)	\$5,238,000	<input type="checkbox"/>	Developers	Developers and SWQQ reimbursement districts
Total Cost	\$22,052,000			
Source: River Terrace Stormwater Master Plan, July 2014 Attachment B; and city staff input.				

D.3 Funding Scenarios

Four scenarios are considered for funding the stormwater infrastructure systems to serve River Terrace. All scenarios include some level of General Fund commitment, utility fees, citywide SDCs, and developer on-site improvements to address stormwater discharge. Scenario A reflects current practices used by the City. Scenario B includes relies upon reimbursement districts or LIDs within River Terrace. Scenario C includes the formation of a new stormwater taxing district and reimbursement districts within River Terrace. Scenario D includes a new River Terrace district utility fee and reimbursement districts in River Terrace (see **Exhibit 15** for details).

Exhibit 15: Stormwater Funding Scenarios

Funding Scenario					
Funding Source	A (status quo)	B	C	D	Notes
City General Fund	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	City to allocate portion of General Fund to stormwater needs
Utility Fee (existing citywide fee)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Existing Citywide fee may be increased
Utility Fee (new RT subdistrict fee)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	New RT subdistrict fee is needed under Scenario B
SDC (existing citywide)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Existing Citywide SDC may be increased
Special Taxing District (New RT subdistrict)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	RT voters may establish special district for their needs
Reimbursement Districts or LIDs (new)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	City or Developers may advance financing and recoup investment using LID or Reimbursement Districts
Developer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Developers to construct facilities to handle runoff from new development
Preliminary Ranking	4	3	2	1	

D.3 Evaluation

As indicated in **Exhibit 16**, Scenario D received the highest total score of 19 points (out of a possible 30 points). Scenario D received the highest equity score and, while it will be difficult to implement (because of the administrative cost to create and manage reimbursement districts or LIDs), it would result in fairly reliable funding that could help facilitate development.

Scenario C was the second place funding scenario since it would be harder to implement because of the public vote requirement (from affected voters in River Terrace). It would entail administrative costs associated with managing LIDs or reimbursement districts. While Scenario A is the easiest to implement, it would be completely dependent upon the private development community to construct both on and off-site stormwater infrastructure, which would likely delay development for many

years. Scenario B, which would rely upon formation of several reimbursement districts or LIDs would be very complicated and expensive for the city to administer, and would not likely generate enough near-term funding to facilitate development in River Terrace.

Exhibit 16: Stormwater Evaluation Criteria

Evaluation of Cost Burdens and Implementation Criteria		Funding Scenario			
Equity (1: lower cost burden - 5: higher cost burden)	A (status quo)	B	C	D	
General Fund Cost Burden					
Citywide Resident Cost Burden					
Citizens in Subdistrict Cost Burden					
Developer/Property Owner Cost Burden					
Evaluation Criteria (1: worst - 5: best)					
Equity (Standard Deviation of cost burden)					
Reliability of Funds					
Facilitates Development					
Ease of Implementation					
Ability to Address Near-Term Costs					
Ability to Address Long-Term Costs					
Average Rating					
Total Score (sum of Evaluation Criteria)		12	14	17	19
* denotes relative variance from "uniform" equity (whereas developers, city, future residents and existing residents would split costs equally)					

D.4 Analysis of Preferred Funding Scenario

Stormwater system improvements within River Terrace are estimated to cost \$22 million. For the preferred stormwater funding scenario (Scenario D), the City would pay for stormwater modeling of the high-flow conveyance options and prepare stormwater design standards in the near-term using available stormwater funds. Most of the funding for stormwater facilities will need to come from developer construction of on-site facilities required to address the stormwater runoff attributed to their planned developments.

To help facilitate development to the extent possible, it is recommended that the City work with affected property owners and developers to implement a new subdistrict stormwater utility fee (equates to +/- \$12/household per month) and dedicate some General Funds to form nearly \$9.8 million in funding new reimbursement districts in River Terrace. New reimbursement districts could fund approximately \$1.5 million in near-term facilities and could be used (with an equal upfront match made by developers) in development agreements to facilitate projects involving multiple property owners (see **Exhibit 17**).

Exhibit 17: Stormwater Funding Analysis, Scenario D

Scenario D						
Funding Mechanism	Near Term City Funding	Long Term City Funding	Total City Funding	Developer Funding (Timing Uncertain)	Total	Notes
General Fund	\$250,000	\$832,500	\$1,082,500		\$1,082,500	Assumes \$250,000 every 6 years
Utility Fee (city wide)	\$250,000	\$832,500	\$1,082,500		\$1,082,500	Existing stormwater rate (adjusted for inflation)
SDC (City wide)	\$200,000		\$200,000		\$200,000	Existing SDC
Utility Fee (RT subdistrict)	\$750,000	\$5,750,000	\$6,500,000		\$6,500,000	Assumes \$12/month rate surcharge to RT households
Reimbursement Districts	\$500,000	\$1,665,000	\$2,165,000		\$2,165,000	City contributes funds or "credit" to reimbursement districts
Developers	*	*		\$11,022,000	\$11,022,000	Developer to provide on-site stormwater facilities
Total Revenue	\$1,950,000	\$9,080,000	\$11,030,000	\$11,022,000	\$22,052,000	
Total Cost	\$1,950,000	\$9,080,000	\$11,030,000	\$11,022,000	\$22,052,000	
Reimbursement District Funding	\$1,500,000	\$8,247,500	\$9,747,500			

Note: potential stormwater reimbursement district contributions shown in bold italics.
* development costs would incur as development proceeds over the buildout of River Terrace.

E. TRANSPORTATION

E.1 Overall Findings

Transportation infrastructure for River Terrace is required for new vehicle, pedestrian, and bicycle facilities. Traditionally, Tigard has worked in partnership with ODOT (responsible for upgrades to state facilities) and Washington County (responsible for county facilities). Tigard is responsible for upgrades to local routes, which include neighborhood routes and collector roads. Typically, developer construction/dedications are required for new neighborhood routes, and a mix of local funding sources are used to fund new collector routes and capacity expansion.

The City of Tigard's existing transportation funds are generally committed and not available for investing in new transportation improvements in River Terrace over the next five years. Tigard is in the process of considering a new local city-wide and/or sub-district transportation SDC (TSDC) to supplement the funds it receives from the Washington County TDT. The City will need to work closely with Washington County to design/construct intersection connections with Scholls Ferry Road and Roy Rogers Road. In addition to developer funding of neighborhood routes, Development Agreements could be utilized to allow private developers to advance financing for road segments and intersection improvements (may be eligible for SDC credits and reimbursement).

E.2 Public Facility Costs

Transportation infrastructure needs and costs are significant and often contingent on when and where new development occurs. As indicated in **Exhibit 18**, total transportation capital costs (for collector and arterial improvements and selected local neighborhood roads and trails) are estimated at \$139.1 million. The near term needs tentatively include: the first phase of River Terrace Boulevard; a traffic signal at Roy Rogers Road/Bull Mountain road intersection; and a traffic signal at the Scholls Ferry

Road/River Terrace Boulevard intersection.⁴ The long term needs include all other road extensions, intersection improvements, and selected multi-use trails.

Exhibit 18: Transportation Infrastructure Costs

Facility	Capital Cost	Near Term	Potential Funding Lead	Potential Funding Source Notes	
Project ID 2	Extend Lorenzo Ln. from West UGB to Roy Rodgers Rd.	\$ 2,500,000	<input type="checkbox"/>	City of Tigard	Local TSDC, street fund and LID
Project ID 3	Extend Lorenzo Ln. from Roshak Rd. to Roy Rodgers Rd.	\$ 3,500,000	<input type="checkbox"/>	City of Tigard	Local TSDC, street fund and LID
Project ID 5	3 lane N-S collector from Scholls Ferry to Lorenzo Ln. extension	\$ 14,250,000			
	Near Term	\$9,262,500	<input checked="" type="checkbox"/>	City of Tigard	Local TSDC, TDT, street fund and LID
	Long Term	\$4,987,500	<input type="checkbox"/>	City of Tigard	Local TSDC, TDT, street fund and LID
Project ID 6	3 lane N-S collector from Lorenzo Ln. extension to Bull Mountain	\$ 11,000,000	<input type="checkbox"/>	City of Tigard	Local TSDC, street fund and LID
Project ID 7	3 lane N-S collector from Bull Mountain Rd. to the south UGB	\$ 18,750,000	<input type="checkbox"/>	City of Tigard	Local TSDC, street fund and LID
Project ID 8	2 lane E-W collector between Roy Rodgers Rd. and N-S collector	\$ 2,500,000	<input type="checkbox"/>	City of Tigard	Local TSDC, street fund and LID
Project ID 11	Extend 161st Ave. from Woodhue St. extension to Beef Bend Rd.	\$ 3,500,000	<input type="checkbox"/>	Developers	Project is outside City and UGB.
Project ID NA	River Terrace Trail from Roy Rodgers Rd. to 150th Ave.	\$ 3,600,000	<input type="checkbox"/>	City of Tigard	Local TSDC, street fund, Metro/State grants and/or GO bond
Project ID 13	Roy Rogers Road / E-W collector traffic signal	\$ 1,000,000	<input type="checkbox"/>	WA County, C	County street fund (TDT) and City TSDC
Project ID 14	Roy Rogers Road / Bull Mountain Rd traffic signal	\$ 1,000,000	<input checked="" type="checkbox"/>	WA County, C	County street fund (TDT) and City TSDC
Project ID 15	Roy Rogers Road / Lorenzo Ln. extension traffic signal	\$ 1,000,000	<input type="checkbox"/>	WA County, C	County street fund (TDT) and City TSDC
Project ID 16	Scholls Ferry Road / N-S collector traffic signal	\$ 1,000,000	<input checked="" type="checkbox"/>	WA County, C	County street fund (TDT) and City TSDC
Project ID 18	Bull Mountain Rd. / N-S collector intersection or roundabout	\$ 1,500,000	<input checked="" type="checkbox"/>	WA County, C	County street fund (TDT) and City TSDC
Project ID 19	E-W collector / N-S collector intersection or roundabout	\$ 2,000,000	<input type="checkbox"/>	City of Tigard	Local TSDC, street fund and LID
Project ID 20	Woodhue St. / 161st Ave. extension intersection or	\$ 2,000,000	<input type="checkbox"/>	City of Tigard	Local TSDC, street fund and LID
Project ID 21	Improve Bull Mountain Rd. from Roy Rodgers Rd. to Roshak Rd.	\$ 4,000,000	<input type="checkbox"/>	WA County	County street fund (TDT)
Project ID 22	Widen Roy Rogers Rd. to 5 Ln. from N of Scholls Ferry Rd. to S. of	\$ 35,000,000	<input type="checkbox"/>	WA County	County street fund (TDT)
Project ID 23	Improve 150th Ave. from Bull Mountain Rd. to Beef Bend Rd.	\$ 4,000,000	<input type="checkbox"/>	WA County	County street fund (TDT)
Project ID NA	Improvements where new streets meet existing streets	\$ 500,000	<input type="checkbox"/>	City/Developers	Local TSDC, street fund
Project ID NA	Improvements where new streets meet existing streets	\$ 500,000	<input checked="" type="checkbox"/>	City	Street fund
Project ID NA	Improvements where new streets meet existing streets	\$ 1,500,000	<input type="checkbox"/>	City	Street fund
Project ID 24	improvements (additional turn lanes)	\$ 10,000,000	<input type="checkbox"/>	ODOT/County /City	TDT, local TSDC, street fund, and ODOT STIP
Project ID 25	intersection improvements (NB left turn lane)	\$ 5,000,000	<input type="checkbox"/>	ODOT/County /City	TDT, City TSDC/street fund, and ODOT STIP
Project ID 26	improvements (additional turn lanes)	\$ 10,000,000	<input type="checkbox"/>	ODOT/County /City	TDT, City TSDC/street fund, and ODOT STIP
Total Cost		\$ 139,600,000			

⁴ It should be noted that the timing of signalized intersections on Washington County facilities and local cost sharing funding responsibilities are unknown at this time and will depend upon subsequent county signal warrant analysis and full funding agreements.

While River Terrace has many transportation infrastructure needs, the larger region has far more needs and very limited funding. The City needs to negotiate a cost sharing scenario with the County for the planned improvements, especially those impacting County facilities such as Roy Rogers Road, Scholls Ferry Road, and Bull Mountain Road. Additionally, existing Bull Mountain residents have indicated to Tigard City staff that they desire a signal installed at Scholls Ferry Road before development occurs in the Tigard’s River Terrace or in Beaverton’s South Cooper Mountain plan districts.

E.3 Funding Scenarios

Four scenarios have been evaluated for funding the transportation infrastructure in River Terrace, as shown **Exhibit 19**. Each scenario includes some allocation of the city’s street fund (which utilizes local and state fuel tax), the Washington County TDT, and developer dedications (for neighborhood streets). Scenario B adds citywide and subdistrict SDCs to the mix of funding sources. Scenario C includes a citywide SDC and a new River Terrace Urban Renewal District. Scenario D includes a citywide SDC, subdistrict SDC, LIDs, and G.O. Bonds, and does not include a urban renewal district

Exhibit 19: Transportation Funding Scenarios

Funding Source	Funding Scenario				Notes
	A (status quo)	B	C	D	
City Street Fund (existing)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	City may allocate local or state gas tax proceeds
SDC (new City wide)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	City may establish new SDC on new development citywide
SDC (new Subdistrict)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	City may establish new SDC on new development in RT subdistrict
TDT (existing)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Existing TDT is charged to new development
LIDs (new)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	LIDs may provide important "gap" funding; requires 51%+ property owner approval
Urban Renewal District (new)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	City voters may establish new URD in RT subdistrict
G.O. Bond (new)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Citywide voters may establish GO bonds for selected transportation improvements
Developer*	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Developers to provide neighborhood transportation facilities and can receive TDT/SDC credits for constructing eligible public facilities
Preliminary Ranking	4	3	1	2	

*Developers to provide neighborhood transportation facilities and can receive TDT/SDC credits for constructing eligible public facility improvements.

E.4 Evaluation

Scenario C received the highest average rating because of high marks for equity, facilitating development, reliability of funds, and ability to address near-term and long-term costs. Scenario C, however, is not very easy to implement because it requires favorable citywide vote for the formation of a new urban renewal district (URD) and significant staff time required to form the URD.

Scenario D placed second in the evaluation, but since it relies on SDCs and LIDs and G.O. Bonds it too is very complex and difficult to implement, and may result in high cost burdens to developers and future home buyers that could delay development for many years.

Scenarios A and B are not likely to generate adequate long-term funding to implement the planned transportation facilities (see **Exhibit 20**).

Exhibit 20: Transportation Funding Evaluation

Equity (1: lower cost burden - 5: higher cost burden)	Funding Scenario			
	A (status quo)	B	C	D
General Fund Cost Burden				
Citywide Resident Cost Burden				
Citizens in Subdistrict Cost Burden				
Developer/Property Owner Cost Burden				
Evaluation Criteria (1: worst - 5: best)				
Equity (Standard Deviation of cost burden)				
Reliability of Funds				
Facilitates Development				
Ease of Implementation				
Ability to Address Near-Term Costs				
Ability to Address Long-Term Costs				
Average Rating				
Total Score (sum of Evaluation Criteria)		12	15	19
* denotes relative variance from "uniform" equity (whereas developers, city, future residents and existing residents would split costs equally)				

E.5 Analysis of Preferred Funding Scenarios

The River Terrace Funding Strategy includes two potential scenarios: Scenario C and Scenario D. Both scenarios assume that \$139.6 million is required for the collector/arterial transportation facilities and selected multi-use pathways that serve River Terrace.

In Scenario C, it is assumed that the City provides approximately \$1 million each year in street funds to projects in River Terrace. Additionally, it is assumed that a new local citywide TSDC generates \$6,000 in dedicated revenue per dwelling unit in River Terrace, and 100% of the TDT revenue collected in River Terrace stays in River Terrace. It is also assumed that a new urban renewal district is formed with a planned 20-year sunset date. Cost sharing among developers, Washington County and ODOT would result in additional funding for selected facilities listed above. Please see **Exhibit 21** for details.

Exhibit 21: Transportation Funding Strategy, Scenario C

Funding Mechanism	Scenario C			Notes
	Near Term Funding	Long Term Funding	Total	
Street Fund	\$4,262,500	\$20,595,386	\$24,857,886	Assumes avg. of +/- \$1M per year
SDC (City wide)	\$3,000,000	\$10,969,800	\$13,969,800	Assumes \$6,000 per avg. dwelling unit (dedicated to RT subdistrict)
TDT	\$3,000,000	\$11,722,314	\$14,722,314	Assumes \$6,323 per avg. dwelling unit (dedicated to RT subdistrict)
Urban Renewal District	\$3,000,000	\$34,000,000	\$37,000,000	Assumes 20 year sunset
Developers		\$4,000,000	\$4,000,000	Includes project 11 and some local street connections
WA County cost share)		\$38,800,000	\$38,800,000	80% of costs for projects: 13-18, 21-23; road fund, MSTIP sources
ODOT/Metro (cost share)		\$6,250,000	\$6,250,000	25% of costs for projects: 24, 25, 26; STIP sources
Total Revenue	\$13,262,500	\$126,337,500	\$139,600,000	
Total Cost	\$13,262,500	\$126,337,500	\$139,600,000	

Scenario D also assumes that the City provides approximately \$1 million/year in street funds to projects in River Terrace. Additionally, it is assumed that a new local citywide TSDC generates \$6,000 in dedicated revenue per dwelling unit in River Terrace, a new River Terrace district TSDC generates an additional \$7,946 per average dwelling unit, and 100% of the TDT revenue collected in River Terrace stays in River Terrace. Cost sharing among developers, Washington County and ODOT would result in additional funding for selected facilities listed above. It is assumed that new LIDs are used as the source of gap financing for collector facilities in River Terrace (estimated to fund \$13,500,000). See **Exhibit 22** for details.

Exhibit 22: Transportation Funding Strategy, Scenario D

Scenario D				
Funding Mechanism	Near Term Funding	Long Term Funding	Total	Notes
Street Fund	\$4,262,500	\$20,595,386	\$24,857,886	Assumes avg. of +/- \$1M per year
SDC (City wide)	\$3,000,000	\$10,969,800	\$13,969,800	Assumes \$6,000 per avg. dwelling unit (dedicated to RT subdistrict)
TDT (existing)	\$3,000,000	\$11,722,314	\$14,722,314	Assumes \$6,323 per avg. dwelling unit (dedicated to RT subdistrict)
SDC (RT Subdistrict)	\$1,500,000	\$17,000,000	\$18,500,000	Assumes \$7,946 per avg. dwelling unit (dedicated to RT subdistrict)
LIDs (RT Subdistrict)	\$1,500,000	\$12,000,000	\$13,500,000	Gap funding source (dedicated to RT subdistrict)
Developer		\$4,000,000	\$4,000,000	Includes project 11 and misc. local street connections
Local Tax Levy (citywide)		\$5,000,000	\$5,000,000	Assumes Voter Approved \$5 M bond*
WA County (cost share)		\$38,800,000	\$38,800,000	80% of costs for projects: 13-18, 21-23; road fund, MSTIP sources
ODOT/Metro (cost share)		\$6,250,000	\$6,250,000	25% of costs for projects: 24, 25, 26; STIP sources
Total Revenue	\$13,262,500	\$126,337,500	\$139,600,000	
Total Cost	\$13,262,500	\$126,337,500	\$139,600,000	

* assumes voter-approved levy of \$0.076 per \$1,000 AV; results in average cost to \$311,100 median home of \$24/year.

IV. POLICY CONSIDERATIONS

The River Terrace funding strategy includes a plan for funding required public facilities using existing and new funding sources as well as partnerships with service providers and developers. The funding strategy recognizes the limitations of current financial resources that are available to the City and other service providers, and provides a plan for funding infrastructure required to support planned development.

A. GENERAL CONSIDERATIONS

- ◆ It is recommended that local City policies be adopted to clarify the relationship between the provision and funding of public facilities and when new development can be permitted in River Terrace (and possibly elsewhere in the City). This may entail adoption of an adequate public facilities ordinance that addresses the process for determining when and how public facilities are considered reasonably funded so that development can be permitted in River Terrace.
- ◆ Ongoing inter-jurisdiction coordination will also be required among the City, Washington County, ODOT, CWS, and other agencies to ensure that cost sharing agreements are consistent with each agencies expectations.
- ◆ The City may desire to extend its Capital Improvement Program from five years to six years to provide additional time for River Terrace SDCs and fund balances to accumulate to ensure that adequate funds are in place to complete the highest priority projects.
- ◆ The City should update its SDCs for water, sewer, stormwater, transportation and parks by FYE 2014 to take into account these recommendations. As part of this update, the City may also consider updating its SDC policies regarding how revenues are to be allocated to River Terrace and other citywide needs. The City's SDC credit policies should also be updated to clarify how SDC credits are calculated and applied to eligible public facilities.

The findings and recommendations contained in this Financial Strategy also include the following issues and considerations for each public facility type.

B. WATER SYSTEM

- ◆ Existing funding sources and planned rate increases should be adequate for addressing water system requirements needed citywide and for River Terrace.
- ◆ Adequate water capacity is currently available to serve future River Terrace development within the 410 and 713 zones. However, there is a city-wide need for additional water storage capacity in the 550 zone. City staff estimates that only 72 additional homes can be built in River Terrace within the 550 zone before the new 3.0 million gallon per day (gpd) Cach Reservoir is constructed.
- ◆ The City may consider other interim water system improvements that could be provided, such as pressure reducing valves from the 713 zone to serve the 550 zone, to increase the amount of development that can occur in the 550 zone, in advance of the new Cach Reservoir.

C. SANITARY SEWER SYSTEM

- ◆ Existing funding sources, planned rate increases by CWS, and a new sanitary sewer surcharge by the City of Tigard should be adequate for addressing sanitary sewer requirements needed citywide and for River Terrace.
- ◆ The City will need to coordinate closely with CWS and interested developers to ensure that planned sewer pump stations in River Terrace north and south areas advance to construction in the near term.

D. PARKS AND TRAILS SYSTEM

- ◆ City funding for parks and trails is generally limited to parks SDC revenues and General Fund allocations, which can vary widely each year.
- ◆ The City's parks SDC is in process of being updated to take into account planned facility improvements needed in River Terrace, as well as recent investments made by the City.
- ◆ The City should consider new funding resources (such as a citywide parks utility fee) to make parks funding more independent from the General Fund and help accumulate reserves for parks improvements citywide and in River Terrace.
- ◆ Public support for a future citywide parks and trails G.O. bond should also be considered after the current G.O. bond for parks sunsets.

E. STORMWATER SYSTEM

- ◆ City funding for stormwater facilities and maintenance activities is very limited and inadequate for addressing future River Terrace or citywide needs.
- ◆ The high-flow conveyance facilities require additional alternatives analysis, special permitting, and land or easement acquisition because of the unique nature of this condition and the fact that there are downstream impacts outside the City and Urban Growth Boundary. This could be problematic since the City may not be able to acquire land or fund regional facilities needed at the pace of development.
- ◆ The City is in process of considering increases in local stormwater SDCs to take into account planned facility improvements citywide and in River Terrace.
- ◆ The City should consider new funding resources (such as a River Terrace stormwater district and district utility fee) and public-private partnerships to generate a funds for advance financing regional water quality and quantify improvements, detention ponds, and high-flow conveyance facilities in River Terrace.
- ◆ The City may utilize full faith and credit obligations for advance financing of reimbursement districts to pay for 1-2 regional facilities every 6 years in River Terrace.

F. TRANSPORTATION SYSTEM

- ◆ The City's existing transportation funds are generally committed and not available for investing in new transportation improvements in River Terrace over the next five years.
- ◆ Tigard is in the process of considering a new local city-wide and/or sub-district TSDC to supplement the funds it receives from the Washington County TDT.

- ◆ The City will need to work closely with Washington County to design/construct intersection connections with Scholls Ferry Road and Roy Rogers Road.
- ◆ The City will need to work with Washington County and ODOT to discuss potential cost sharing responsibilities for County and State facilities.
- ◆ In addition to developer funding of neighborhood routes, Development Agreements could be utilized to allow private (developer) to advance financing for road segments and intersection improvements (may be eligible for SDC credits and reimbursement).
- ◆ The City should evaluate the potential for forming a new urban renewal district in River Terrace and gauge public interest in doing so.
- ◆ The City should also work with its citizens to consider new projects that could be included as part of a future citywide G.O. bond for transportation.

The policy considerations are considered to serve as a starting point in how the City can ensure that necessary public facilities are funded as River Terrace development occurs. The actual timing of public facility investments will depend on many factors. While the City has control over local utility rates, local SDCs, the City cannot predict development market timing or the future cost of financing (i.e., interest rates). It should be recognized that for any Funding Strategy to be successful, the City will need to continue to follow sound public financing principles that should not waiver in spite of changing market conditions.

V. APPENDIX

10-year forecast of selected city funds

Water Utility Fund



	6/30/2015	6/30/2016	6/30/2017	6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022	6/30/2023	6/30/2024
City of Tigard Water Utility	Budget	Projected								
Water Fund										
Resources:										
Beginning fund balance	\$ 12,520,630	\$ 6,104,977	\$ 4,944,428	\$ 4,788,614	\$ 4,832,714	\$ 4,921,639	\$ 5,019,045	\$ 5,113,576	\$ 5,201,114	\$ 5,288,088
Revenue:										
43126 Developer overhead	9,663	7,440	7,440	7,440	7,440	7,440	7,440	7,440	7,440	7,440
43128 Fire service reimbursement	1,470	-	-	-	-	-	-	-	-	-
43130 Miscellaneous fees and charges	3,267	793	793	793	793	793	793	793	793	793
43301 SDC reimbursement	-	-	-	-	-	-	-	-	-	-
45100 Utility sales	18,057,552	18,645,801	18,989,939	19,358,488	19,752,088	20,151,966	20,528,654	20,872,712	21,220,821	21,523,867
45101 Other utility sales	4,456	4,456	4,456	4,456	4,456	4,456	4,456	4,456	4,456	4,456
45102 Leaks/misreads credits	(22,984)	(21,988)	(22,053)	(22,123)	(22,198)	(22,273)	(22,345)	(22,410)	(22,476)	(22,533)
45104 Meter sales	27,762	35,805	70,373	81,586	93,499	96,959	100,547	104,269	108,129	112,133
45105 Fire hydrant flow testing service	6,006	6,006	6,006	6,006	6,006	6,006	6,006	6,006	6,006	6,006
45150 Late penalties/charges	121,136	125,185	125,561	125,963	126,392	126,829	127,240	127,616	127,995	128,326
45151 Returned check fees	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290	1,290
45199 Bad debt	(20,544)	(24,933)	(25,281)	(25,654)	(26,052)	(26,457)	(26,838)	(27,186)	(27,538)	(27,844)
45319 Miscellaneous fees and charges	372	372	372	372	372	372	372	372	372	372
45320 Rental income	33,234	33,234	33,234	33,234	33,234	33,234	33,234	33,234	33,234	33,234
47000 Interest earnings	67,611	32,967	26,700	25,859	26,097	26,577	27,103	27,613	28,086	28,556
48000 Other revenue	-	-	-	-	-	-	-	-	-	-
48001 Recovered expenditures	10,825	-	-	-	-	-	-	-	-	-
49100 Transfer in from General Fund	27,460	27,460	27,460	27,460	27,460	27,460	27,460	27,460	27,460	27,460
49500 Transfer in from Sanitary Sewer Fund	13,413	13,413	13,413	13,413	13,413	13,413	13,413	13,413	13,413	13,413
49510 Transfer in from Stormwater Fund	17,878	17,878	17,878	17,878	17,878	17,878	17,878	17,878	17,878	17,878
Total revenue	18,359,867	18,905,178	19,277,579	19,656,460	20,062,168	20,465,943	20,846,704	21,194,956	21,547,360	21,854,846
Total resources	\$ 30,880,497	\$ 25,010,154	\$ 24,222,008	\$ 24,445,074	\$ 24,894,882	\$ 25,387,582	\$ 25,865,748	\$ 26,308,533	\$ 26,748,473	\$ 27,142,934
Requirements:										
Expenditures:										
Personnel services:										
Salaries	\$ 893,506	\$ 935,614	\$ 979,707	\$ 1,025,877	\$ 1,074,224	\$ 1,124,849	\$ 1,177,859	\$ 1,233,368	\$ 1,291,493	\$ 1,352,357
Benefits	437,142	458,999	481,949	506,047	531,349	557,916	585,812	615,103	645,858	678,151
Total personnel services	1,330,648	1,394,613	1,461,656	1,531,924	1,605,573	1,682,765	1,763,671	1,848,471	1,937,351	2,030,508
Materials and services:										
Supplies	3,869,952	4,005,400	2,005,400	2,075,589	2,148,235	2,223,423	2,301,243	2,381,786	2,465,149	2,551,429
Franchise fee	508,000	672,961	685,382	698,684	712,889	727,322	740,917	753,335	765,899	776,836
Other service	1,120,611	1,159,832	1,200,427	1,242,441	1,285,927	1,330,934	1,377,517	1,425,730	1,475,631	1,527,278
Total materials and services	5,498,563	5,838,194	3,891,209	4,016,714	4,147,051	4,281,679	4,419,677	4,560,851	4,706,678	4,855,543
Capital outlay	3,300	3,416	3,535	3,659	3,787	3,919	4,057	4,199	4,345	4,498
Transfers out and indirect cost allocations	1,543,771	1,611,269	1,681,719	1,755,249	1,831,994	1,912,094	1,995,697	2,082,955	2,174,028	2,269,083
Non-program expenditures										
Transfers out to Water CIP Fund	7,639,391	2,467,150	1,671,982	1,408,009	1,308,561	1,396,004	1,463,089	1,488,918	1,502,845	1,464,662
Transfers out to Water Debt Service Fund	8,490,141	8,469,584	10,429,485	10,590,152	10,756,216	10,758,020	10,757,320	10,758,120	10,755,320	10,756,145
Transfers out to other funds	269,707	281,499	293,807	306,654	320,061	334,055	348,661	363,906	379,817	396,424
Total non-program expenditures	16,399,239	11,218,234	12,395,275	12,304,814	12,384,838	12,488,080	12,569,070	12,610,943	12,637,982	12,617,230
Total expenditures	24,775,521	20,065,726	19,433,394	19,612,360	19,973,242	20,368,538	20,752,172	21,107,419	21,460,385	21,776,862
Ending fund balance	6,104,977	4,944,428	4,788,614	4,832,714	4,921,639	5,019,045	5,113,576	5,201,114	5,288,088	5,366,072
Total requirements	\$ 30,880,497	\$ 25,010,154	\$ 24,222,008	\$ 24,445,074	\$ 24,894,882	\$ 25,387,582	\$ 25,865,748	\$ 26,308,533	\$ 26,748,473	\$ 27,142,934
Days of expenditures in ending fund balance	90	90	90	90	90	90	90	90	90	90

Water CIP Fund



	6/30/2015	6/30/2016	6/30/2017	6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022	6/30/2023	6/30/2024
City of Tigard Water Utility	Budget	Projected								
Water CIP Fund										
Resources:										
Beginning fund balance	\$ 43,726,812	\$ 17,974,151	\$ (31,102)	\$ (38,230)	\$ (25,709)	\$ 5,980	\$ 1,134,916	\$ 2,325,353	\$ 3,535,859	\$ 4,754,107
Revenue:										
43300 System development charges	-	-	-	-	-	-	-	-	-	-
44800 Federal grants	-	-	-	-	-	-	-	-	-	-
47000 Interest earnings	236,125	97,060	(168)	(206)	(139)	32	6,129	12,557	19,094	25,672
48001 Recovered expenditures	5,265	-	-	-	-	-	-	-	-	-
49001 Debt proceeds	46,894,542	-	1,425,529	1,952,010	1,967,930	0	0	0	0	0
49100 Transfer in from General Fund	-	-	-	-	-	-	-	-	-	-
49425 Transfer in from Parks SDC Fund	-	-	-	-	-	-	-	-	-	-
49500 Transfer in from Sanitary Sewer Fund	-	-	-	-	-	-	-	-	-	-
49530 Transfer in from Water Fund	888,104	2,467,150	1,671,982	1,408,009	1,308,561	1,396,004	1,463,089	1,488,918	1,502,845	1,464,662
49531 Transfer in from Water SDC Fund	345,000	-	-	-	-	-	-	-	-	-
Total revenue	48,369,036	2,564,211	3,097,343	3,359,813	3,276,351	1,396,037	1,469,217	1,501,475	1,521,939	1,490,334
Total resources	\$ 92,095,848	\$ 20,538,362	\$ 3,066,241	\$ 3,321,582	\$ 3,250,642	\$ 1,402,017	\$ 2,604,133	\$ 3,826,828	\$ 5,057,798	\$ 6,244,441
Requirements:										
Expenditures:										
Capital outlay	\$ 73,906,047	\$ 20,344,385	\$ 2,869,551	\$ 3,102,100	\$ 2,988,750	\$ -	\$ -	\$ -	\$ -	\$ -
Debt service	-	-	-	-	-	-	-	-	-	-
Transfers out	215,650	225,079	234,920	245,191	255,912	267,101	278,780	290,969	303,691	316,969
Other	-	-	-	-	-	-	-	-	-	-
Total expenditures	74,121,697	20,569,464	3,104,471	3,347,291	3,244,662	267,101	278,780	290,969	303,691	316,969
Ending fund balance	17,974,151	(31,102)	(38,230)	(25,709)	5,980	1,134,916	2,325,353	3,535,859	4,754,107	5,927,472
Total requirements	\$ 92,095,848	\$ 20,538,362	\$ 3,066,241	\$ 3,321,582	\$ 3,250,642	\$ 1,402,017	\$ 2,604,133	\$ 3,826,828	\$ 5,057,798	\$ 6,244,441
Days of expenditures in ending fund balance	89	(1)	(4)	(3)	1	1,552	3,047	4,438	5,718	6,830
Water Debt Service Fund										
Resources:										
Beginning fund balance	\$ 6,766,983	\$ 10,573,816	\$ 10,573,816	\$ 10,691,767	\$ 10,854,820	\$ 11,020,765	\$ 11,020,765	\$ 11,020,765	\$ 11,020,765	\$ 11,020,765
Revenue:										
47000 Interest earnings	36,542	57,099	57,099	57,736	58,616	59,512	59,512	59,512	59,512	59,512
49001 Debt proceeds	3,806,833	-	117,951	163,053	165,945	0	0	0	0	0
49530 Transfer in from Water Fund	8,490,141	8,469,584	10,429,485	10,590,152	10,756,216	10,758,020	10,757,320	10,758,120	10,755,320	10,756,145
Total revenue	12,333,515	8,526,683	10,604,535	10,810,941	10,980,776	10,817,532	10,816,832	10,817,632	10,814,832	10,815,657
Total resources	\$ 19,100,498	\$ 19,100,498	\$ 21,178,351	\$ 21,502,708	\$ 21,835,597	\$ 21,838,297	\$ 21,837,597	\$ 21,838,397	\$ 21,835,597	\$ 21,836,422
Requirements:										
Debt service										
Existing debt service	\$ 4,719,850	\$ 4,719,850	\$ 6,561,800	\$ 6,560,050	\$ 6,561,050	\$ 6,563,750	\$ 6,563,050	\$ 6,563,850	\$ 6,561,050	\$ 6,561,875
New debt service	3,806,833	3,806,833	3,924,784	4,087,837	4,253,782	4,253,782	4,253,782	4,253,782	4,253,782	4,253,782
Total debt service	8,526,683	8,526,683	10,486,584	10,647,887	10,814,832	10,817,532	10,816,832	10,817,632	10,814,832	10,815,657
Ending fund balance	10,573,816	10,573,816	10,691,767	10,854,820	11,020,765	11,020,765	11,020,765	11,020,765	11,020,765	11,020,765
Total requirements	\$ 19,100,498	\$ 19,100,498	\$ 21,178,351	\$ 21,502,708	\$ 21,835,597	\$ 21,838,297	\$ 21,837,597	\$ 21,838,397	\$ 21,835,597	\$ 21,836,422
Days of expenditures in ending fund balance	453	453	372	372	372	372	372	372	372	372

Water SDC Fund



	6/30/2015	6/30/2016	6/30/2017	6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022	6/30/2023	6/30/2024
City of Tigard Water Utility	Budget	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
Water SDC Fund										
Resources:										
Beginning fund balance	\$ 2,860,840	\$ 4,149,831	\$ 5,066,575	\$ 6,851,719	\$ 8,926,597	\$ 11,310,247	\$ 13,793,190	\$ 16,379,172	\$ 19,072,081	\$ 21,875,947
Revenue:										
43300 System development charges SDCi	693,446	894,335	1,757,785	2,037,879	2,335,446	2,421,867	2,511,499	2,604,461	2,700,877	2,800,877
43301 SDC reimbursement SDCr	925,359	-	-	-	-	-	-	-	-	-
47000 Interest earnings	15,449	22,409	27,360	36,999	48,204	61,075	74,483	88,448	102,989	118,130
Total revenue	1,634,254	916,744	1,785,145	2,074,878	2,383,650	2,482,943	2,585,982	2,692,909	2,803,867	2,919,007
Total resources	\$ 4,495,094	\$ 5,066,575	\$ 6,851,719	\$ 8,926,597	\$ 11,310,247	\$ 13,793,190	\$ 16,379,172	\$ 19,072,081	\$ 21,875,947	\$ 24,794,954
Requirements:										
Transfers out										
Transfers out to Water CIP Fund	\$ 345,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfers out to other funds	263	-	-	-	-	-	-	-	-	-
Total transfers out	345,263	-	-	-	-	-	-	-	-	-
Ending fund balance	4,149,831	5,066,575	6,851,719	8,926,597	11,310,247	13,793,190	16,379,172	19,072,081	21,875,947	24,794,954
Total requirements	\$ 4,840,357	\$ 5,066,575	\$ 6,851,719	\$ 8,926,597	\$ 11,310,247	\$ 13,793,190	\$ 16,379,172	\$ 19,072,081	\$ 21,875,947	\$ 24,794,954
Revenue Assumptions										
Interest rate	0.54%	0.54%	0.54%	0.54%	0.54%	0.54%	0.54%	0.54%	0.54%	0.54%
Customer accounts:										
Customer accounts in existing service area	19,875	19,964	20,054	20,144	20,235	20,326	20,417	20,509	20,601	20,694
Customer accounts in new service area	-	0	80	180	300	420	540	660	780	900
Total customer accounts	19,875	19,964	20,134	20,324	20,535	20,746	20,957	21,169	21,381	21,594
New customers	2,924	89	170	190	211	211	211	212	212	213
Customer account growth in existing service area	-	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%
Total customer account growth	17.25%	0.45%	0.85%	0.94%	1.04%	1.03%	1.02%	1.01%	1.00%	0.99%
Rate revenue per account, first half of fiscal year	\$ 499	\$ 521	\$ 526	\$ 531	\$ 536	\$ 542	\$ 547	\$ 551	\$ 554	\$ 558
Rate revenue per account, second half of fiscal year	\$ 409	\$ 413	\$ 417	\$ 421	\$ 426	\$ 430	\$ 433	\$ 435	\$ 438	\$ 439
Annual rate adjustment on January 1	4.28%	0.99%	0.99%	0.99%	0.99%	0.99%	0.66%	0.66%	0.66%	0.14%
Share of revenue in first half of fiscal year	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%	56.00%
Franchise fee as percentage of total rate revenue	2.81%	3.61%	3.61%	3.61%	3.61%	3.61%	3.61%	3.61%	3.61%	3.61%
SDC revenue per new account	\$ 9,662	\$ 10,000	\$ 10,350	\$ 10,712	\$ 11,087	\$ 11,475	\$ 11,877	\$ 12,292	\$ 12,723	\$ 13,168

Water Utility Fund Assumptions



	6/30/2015	6/30/2016	6/30/2017	6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022	6/30/2023	6/30/2024
City of Tigard Water Utility	Budget	Projected								
Cost Assumptions										
Full-time equivalent (FTE) positions	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00
Salaries per FTE	\$ 68,731	\$ 71,970	\$ 75,362	\$ 78,914	\$ 82,633	\$ 86,527	\$ 90,605	\$ 94,874	\$ 99,346	\$ 104,027
Growth in salaries per FTE	10.52%	4.71%	4.71%	4.71%	4.71%	4.71%	4.71%	4.71%	4.71%	4.71%
Benefits per FTE	\$ 33,626	\$ 35,308	\$ 37,073	\$ 38,927	\$ 40,873	\$ 42,917	\$ 45,062	\$ 47,316	\$ 49,681	\$ 52,165
Growth in benefits per FTE	4.47%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Annual escalation of materials and services	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Annual escalation of capital outlay	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Annual escalation of transfers	6.84%	4.37%	4.37%	4.37%	4.37%	4.37%	4.37%	4.37%	4.37%	4.37%
Capital projects										
Projects for River Terrace:										
Pressure Reducing Valve Design	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pressure Reducing Valve Construction	-	-	-	-	-	-	-	-	-	-
20-inch transmission mains in 410 zone (Design)	-	-	-	-	-	-	-	-	-	-
20-inch transmission mains in 410 zone (Construction)	-	-	-	-	-	-	-	-	-	-
16-inch transmission mains in 550 zone (Design)	-	-	-	-	-	-	-	-	-	-
16-inch transmission mains in 550 zone (Construction)	-	-	-	-	-	-	-	-	-	-
3.0 MG Cach Reservoir Design	-	-	-	1,050,000	-	-	-	-	-	-
3.0 MG Cach Reservoir Construction	-	-	-	-	-	-	-	-	-	-
16-inch transmission from reservoir to 550B	-	-	-	-	-	-	-	-	-	-
1,400 gpm (firm capacity) pump station	-	-	-	-	-	-	-	-	-	-
Total projects for River Terrace	-	-	-	1,050,000	-	-	-	-	-	-
Projects for existing service area	73,906,047	20,344,385	2,869,551	2,052,100	2,988,750	-	-	-	-	-
Total capital projects	\$ 73,906,047	\$ 20,344,385	\$ 2,869,551	\$ 3,102,100	\$ 2,988,750	\$ -	\$ -	\$ -	\$ -	\$ -
Debt										
Issuance cost percentage	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Interest rate	4.00%	4.10%	4.20%	4.30%	4.40%	4.50%	4.50%	4.50%	4.50%	4.50%
Term	20	20	20	20	20	20	20	20	20	20
Principal:										
Proceeds	\$ 46,894,542	\$ -	\$ 1,425,529	\$ 1,952,010	\$ 1,967,930	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Issuance costs	1,034,722	-	31,500	43,165	43,548	0	0	0	0	0
Debt reserve	3,806,833	-	117,951	163,053	165,945	0	0	0	0	0
Total principal	\$ 51,736,097	\$ -	\$ 1,574,980	\$ 2,158,228	\$ 2,177,423	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Debt service coverage ratio (minimum 1.15)	1.17	1.18	1.17	1.16	1.15	1.16	1.17	1.17	1.18	1.17

Sanitary Sewer Fund



	6/30/2015	6/30/2016	6/30/2017	6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022	6/30/2023	6/30/2024
City of Tigard Sanitary Sewer Utility	Estimate	Projected								
Sanitary Sewer Fund										
Resources:										
Beginning fund balance	\$ 1,449,654	\$ 1,320,471	\$ 6,837	\$ 601,969	\$ 671,891	\$ 913,444	\$ 2,200,096	\$ 3,506,954	\$ 4,833,058	\$ 6,177,370
Revenue:										
43120 Sewer connection fees	74,506	16,738	34,359	40,030	46,057	47,757	49,519	51,347	53,243	55,208
43130 Miscellaneous fees/charges	256,314	256,314	256,314	256,314	256,314	256,314	256,314	256,314	256,314	256,314
45100 Utility sales	2,926,727	2,995,967	2,869,395	2,955,650	3,046,976	3,140,298	3,235,663	3,333,115	3,432,703	3,534,478
45199 Bad debt	(50,500)	(50,500)	(50,500)	(50,500)	(50,500)	(50,500)	(50,500)	(50,500)	(50,500)	(50,500)
45319 Miscellaneous fees and charges	-	-	-	-	-	-	-	-	-	-
47000 Interest earnings	7,828	7,131	37	3,251	3,628	4,933	11,881	18,938	26,099	33,358
48001 Recovered expenditures	141,674	119,422	103,766	108,562	107,991	100,655	101,303	101,977	102,676	103,402
49200 Transfer in from Gas Tax Fund	45,400	-	-	-	-	-	-	-	-	-
49421 Transfer in from Parks Bond Fund	21,800	-	-	-	-	-	-	-	-	-
49425 Transfer in from Parks SDC Fund	375,450	-	-	-	-	-	-	-	-	-
49510 Transfer in from Stormwater Fund	272,400	-	-	-	-	-	-	-	-	-
49511 Transfer in from Water Quality/Quantity Fund	439,200	-	-	-	-	-	-	-	-	-
49532 Transfer in from Water CIP Fund	215,650	-	-	-	-	-	-	-	-	-
Proceeds from new debt	-	-	-	-	-	-	-	-	-	-
Total revenue	4,726,449	3,345,071	3,213,370	3,313,307	3,410,465	3,499,456	3,604,179	3,711,190	3,820,534	3,932,259
Total resources	\$ 6,176,103	\$ 4,665,542	\$ 3,220,207	\$ 3,915,275	\$ 4,082,357	\$ 4,412,900	\$ 5,804,275	\$ 7,218,143	\$ 8,653,592	\$ 10,109,630
Requirements:										
Expenditures:										
Personnel services:										
Salaries	\$ 381,237	\$ 374,171	\$ 390,800	\$ 408,584	\$ 427,599	\$ 447,456	\$ 468,191	\$ 489,841	\$ 512,445	\$ 536,045
Benefits	165,637	183,817	192,006	200,766	210,132	219,914	230,129	240,797	251,936	263,566
Total personnel services	546,874	557,988	582,806	609,349	637,731	667,370	698,320	730,638	764,381	799,611
Materials and services:										
Supplies	35,907	37,164	38,465	39,811	41,204	42,646	44,139	45,684	47,283	48,938
Service	614,361	635,864	658,119	681,153	704,994	729,668	755,207	781,639	808,996	837,311
Total materials and services	650,268	673,028	696,584	720,964	746,198	772,315	799,346	827,323	856,279	886,249
Capital outlay	36,500	37,778	39,100	40,468	41,885	43,351	44,868	46,438	48,064	49,746
Debt service:										
Existing debt service	-	-	-	-	-	-	-	-	-	-
New debt service	-	-	-	-	-	-	-	-	-	-
Total debt service	-	-	-	-	-	-	-	-	-	-
Transfers out and indirect cost allocations	598,130	619,176	640,963	663,516	686,864	711,032	736,052	761,951	788,762	816,516
Non-program expenditures										
Loan to CCDA	-	-	-	-	-	-	-	-	-	-
Transfers out	79,849	18,736	18,736	18,736	18,736	18,736	18,736	18,736	18,736	18,736
Capital projects	2,944,011	2,752,000	640,050	1,190,350	1,037,500	-	-	-	-	-
Total non-program expenditures	3,023,860	2,770,736	658,786	1,209,086	1,056,236	18,736	18,736	18,736	18,736	18,736
Total expenditures	4,855,632	4,658,705	2,618,239	3,243,384	3,168,913	2,212,804	2,297,321	2,385,086	2,476,221	2,570,858
Ending fund balance	1,320,471	6,837	601,969	671,891	913,444	2,200,096	3,506,954	4,833,058	6,177,370	7,538,772
Total requirements	\$ 6,176,103	\$ 4,665,542	\$ 3,220,207	\$ 3,915,275	\$ 4,082,357	\$ 4,412,900	\$ 5,804,275	\$ 7,218,143	\$ 8,653,592	\$ 10,109,630
Days of expenditures in ending fund balance	99	1	84	76	105	363	558	740	911	1,071

Sanitary Sewer Fund Assumptions



	6/30/2015	6/30/2016	6/30/2017	6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022	6/30/2023	6/30/2024
City of Tigard Sanitary Sewer Utility	Estimate	Projected								
Revenue Assumptions										
Interest rate	0.54%	0.54%	0.54%	0.54%	0.54%	0.54%	0.54%	0.54%	0.54%	0.54%
Customer accounts:										
Customer accounts in existing service area	18,162	18,244	18,326	18,409	18,492	18,575	18,658	18,742	18,827	18,911
Customer accounts in new service area		0	80	180	300	420	540	660	780	900
Total customer accounts	18,162	18,244	18,406	18,589	18,792	18,995	19,198	19,402	19,607	19,811
New customers	81	82	162	182	203	203	204	204	204	205
Customer account growth in existing service area	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%
Total customer account growth	0.45%	0.45%	0.89%	0.99%	1.09%	1.08%	1.07%	1.06%	1.05%	1.04%
Franchise fee as percentage of total rate revenue	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Rates:										
Total CWS fixed monthly rate per EDU	\$ 25.85	\$ 26.62	\$ 27.42	\$ 28.24	\$ 29.09	\$ 29.96	\$ 30.85	\$ 31.77	\$ 32.73	\$ 33.70
Total CWS volumetric monthly rate per CCF	\$ 1.44	\$ 1.48	\$ 1.52	\$ 1.56	\$ 1.60	\$ 1.64	\$ 1.68	\$ 1.72	\$ 1.76	\$ 1.80
City portion of CWS fixed monthly rate per EDU	\$ 4.25	\$ 4.38	\$ 4.51	\$ 4.65	\$ 4.78	\$ 4.93	\$ 5.08	\$ 5.23	\$ 5.38	\$ 5.54
City portion of CWS volumetric monthly rate per CCF	\$ 0.28	\$ 0.29	\$ 0.30	\$ 0.31	\$ 0.32	\$ 0.33	\$ 0.34	\$ 0.35	\$ 0.36	\$ 0.37
City surcharge on fixed monthly rate	\$ 6.50	\$ 6.50	\$ 5.50	\$ 5.50	\$ 5.50	\$ 5.50	\$ 5.50	\$ 5.50	\$ 5.50	\$ 5.50
City surcharge on volumetric monthly rate	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
City portion of CWS system development charge per EDU	\$ 197.87	\$ 204.80	\$ 211.96	\$ 219.38	\$ 227.06	\$ 235.01	\$ 243.23	\$ 251.75	\$ 260.56	\$ 269.68
Rate revenue:										
CWS portion	\$ 9,929,435	\$ 10,250,723	\$ 10,625,647	\$ 11,022,085	\$ 11,441,259	\$ 11,871,933	\$ 12,314,426	\$ 12,769,068	\$ 13,236,201	\$ 13,716,180
City franchise fee	676,640	697,194	710,265	735,670	762,539	790,117	818,426	847,483	877,311	907,929
City utility revenue	2,926,727	2,995,967	2,869,395	2,955,650	3,046,976	3,140,298	3,235,663	3,333,115	3,432,703	3,534,478
Total rate revenue	\$ 13,532,803	\$ 13,943,885	\$ 14,205,308	\$ 14,713,405	\$ 15,250,774	\$ 15,802,349	\$ 16,368,514	\$ 16,949,666	\$ 17,546,215	\$ 18,158,587
Consumption										
Average annual consumption per account in CCF	248	248	248	248	248	248	248	248	248	248
Growth in average annual consumption per account	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Cost Assumptions										
Miles of sanitary sewer system	166.9	167.7	169.1	170.8	172.7	174.5	176.4	178.3	180.2	182.1
Full-time equivalent (FTE) positions	5.50	5.52	5.57	5.63	5.69	5.75	5.81	5.88	5.94	6.00
Salaries per FTE	\$ 65,421	\$ 67,726	\$ 70,113	\$ 72,584	\$ 75,142	\$ 77,791	\$ 80,532	\$ 83,370	\$ 86,309	\$ 89,351
Growth in salaries per FTE	3.52%	3.52%	3.52%	3.52%	3.52%	3.52%	3.52%	3.52%	3.52%	3.52%
Benefits per FTE	\$ 32,135	\$ 33,271	\$ 34,448	\$ 35,666	\$ 36,927	\$ 38,232	\$ 39,584	\$ 40,983	\$ 42,432	\$ 43,933
Growth in benefits per FTE	3.54%	3.54%	3.54%	3.54%	3.54%	3.54%	3.54%	3.54%	3.54%	3.54%
Annual escalation of materials and services	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Annual escalation of capital outlay	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Annual escalation of transfers	3.52%	3.52%	3.52%	3.52%	3.52%	3.52%	3.52%	3.52%	3.52%	3.52%

Sanitary Sewer Fund Assumptions



City of Tigard Sanitary Sewer Utility	6/30/2015	6/30/2016	6/30/2017	6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022	6/30/2023	6/30/2024
Capital projects	Estimate	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
Projects for River Terrace:										
North Gravity Segment 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
North Gravity Segment 2	-	-	-	-	-	-	-	-	-	-
North Gravity Segment 3	-	-	-	-	-	-	-	-	-	-
North Gravity Segment 4	-	-	-	-	-	-	-	-	-	-
South Gravity Segment 1	-	-	-	-	-	-	-	-	-	-
South Gravity Segment 2	-	-	-	-	-	-	-	-	-	-
South Gravity Segment 3	-	-	-	-	-	-	-	-	-	-
South Gravity Segment 4	-	-	-	-	-	-	-	-	-	-
South Gravity Segment 5	-	-	-	-	-	-	-	-	-	-
South Gravity Segment 6	-	-	-	-	-	-	-	-	-	-
South Gravity Segment 7	-	-	-	-	-	-	-	-	-	-
South Gravity Segment 8A	-	-	-	-	-	-	-	-	-	-
South Gravity Segment 9A	-	-	-	-	-	-	-	-	-	-
Total projects for River Terrace	-	-	-	-	-	-	-	-	-	-
Projects for existing service area	2,912,500	2,752,000	640,050	1,190,350	1,037,500	-	-	-	-	-
Total capital projects	\$ 2,912,500	\$ 2,752,000	\$ 640,050	\$ 1,190,350	\$ 1,037,500	\$ -	\$ -	\$ -	\$ -	\$ -
Debt										
Issuance cost percentage	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Interest rate	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Term	20	20	20	20	20	20	20	20	20	20
Principal:										
Proceeds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Issuance costs	-	-	-	-	-	-	-	-	-	-
Debt reserve	-	-	-	-	-	-	-	-	-	-
Total principal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Parks Funds



City of Tigard Parks Funding	6/30/2015	6/30/2016	6/30/2017	6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022	6/30/2023	6/30/2024	6/30/2025
Special Revenue Fund - Parks Bond	Budget	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
Resources:											
Beginning fund balance	\$ 2,344,697	\$ 351,574	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Revenue:											
47000 Interest earnings	4,020	1,898	-	-	-	-	-	-	-	-	-
48001 Recovered expenditures	-	-	-	-	-	-	-	-	-	-	-
Total revenue	4,020	1,898	-	-	-	-	-	-	-	-	-
Total resources	\$ 2,348,717	\$ 353,472	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Requirements:											
Expenditures (transfers out)	\$ 1,997,143	\$ 353,472	-	-	-	-	-	-	-	-	-
Ending fund balance	351,574	-	-	-	-	-	-	-	-	-	-
Total requirements	\$ 351,574	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Improvement Fund - Parks Capital											
Resources:											
Beginning fund balance	\$ 174,509	\$ 163,149	\$ 316,117	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Revenue:											
44501 Intergovernmental Revenue	41,506	-	-	-	-	-	-	-	-	-	-
47000 Interest earnings	3,015	881	1,707	-	-	-	-	-	-	-	-
48001 Revoered Expenditures	-	-	-	-	-	-	-	-	-	-	-
Transfers in											
49100 Transfer in from General Fund	-	-	-	-	-	-	-	-	-	-	-
49200 Transfer in from Gas Tax Fund	-	-	-	-	-	-	-	-	-	-	-
49260 Transfer in from Tree Replacement Fund	250,000	-	-	-	-	-	-	-	-	-	-
49421 Transfer in from Parks Bond Fund	1,975,343	353,472	-	-	-	-	-	-	-	-	-
49425 Transfer in from Parks SDC Fund	750,606	1,308,945	723,997	749,073	775,017	801,859	829,632	858,366	888,096	918,855	950,679
49500 Transfer in from Sanitary Sewer Fund	32,500	-	-	-	-	-	-	-	-	-	-
49510 Transfer in from Stormwater Fund	10,000	-	-	-	-	-	-	-	-	-	-
49530 Transfer in from Water Fund	24,500	-	-	-	-	-	-	-	-	-	-
Total transfers in	3,042,949	1,662,417	723,997	749,073	775,017	801,859	829,632	858,366	888,096	918,855	950,679
Total resources	\$ 3,261,979	\$ 1,826,447	\$ 1,041,821	\$ 749,073	\$ 775,017	\$ 801,859	\$ 829,632	\$ 858,366	\$ 888,096	\$ 918,855	\$ 950,679
Requirements:											
Expenditures:											
Work in progress	\$ 3,042,949	\$ 1,510,330	\$ 1,041,821	\$ 749,073	\$ 775,017	\$ 801,859	\$ 829,632	\$ 858,366	\$ 888,096	\$ 918,855	\$ 950,679
Total Transfers Out	55,881	-	-	-	-	-	-	-	-	-	-
Total expenditures	3,098,830	1,510,330	1,041,821	749,073	775,017	801,859	829,632	858,366	888,096	918,855	950,679
Ending fund balance	163,149	316,117	-	-	-	-	-	-	-	-	-
Total requirements	\$ 3,261,979	\$ 1,826,447	\$ 1,041,821	\$ 749,073	\$ 775,017	\$ 801,859	\$ 829,632	\$ 858,366	\$ 888,096	\$ 918,855	\$ 950,679
Days of expenditures in ending fund balance	19	76	0	0	0	0	0	0	0	0	0

Parks SDC Fund and Assumptions



	6/30/2015	6/30/2016	6/30/2017	6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022	6/30/2023	6/30/2024	6/30/2025
City of Tigard Parks Funding	Budget	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
Parks SDC Fund											
Resources:											
Beginning fund balance	\$ 1,049,011	\$ 605,912	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Revenue:											
43300 Parks SDCs	676,336	699,761	723,997	749,073	775,017	801,859	829,632	858,366	888,096	918,855	950,679
47000 Interest Earnings	19,782	3,272	-	-	-	-	-	-	-	-	-
Total revenue	696,118	703,033	723,997	749,073	775,017	801,859	829,632	858,366	888,096	918,855	950,679
Total resources	\$ 1,745,129	\$ 1,308,945	\$ 723,997	\$ 749,073	\$ 775,017	\$ 801,859	\$ 829,632	\$ 858,366	\$ 888,096	\$ 918,855	\$ 950,679
Requirements:											
Expenditures:											
Debt service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Work in progress	12,000	-	-	-	-	-	-	-	-	-	-
Total transfers out	1,127,217	1,308,945	723,997	749,073	775,017	801,859	829,632	858,366	888,096	918,855	950,679
Total expenditures	1,139,217	1,308,945	723,997	749,073	775,017	801,859	829,632	858,366	888,096	918,855	950,679
Ending fund balance	605,912	-	-	-	-	-	-	-	-	-	-
Total requirements	\$ 1,745,129	\$ 1,308,945	\$ 723,997	\$ 749,073	\$ 775,017	\$ 801,859	\$ 829,632	\$ 858,366	\$ 888,096	\$ 918,855	\$ 950,679
Days of expenditures in ending fund balance	194	0	0	0	0	0	0	0	0	0	0
Revenue Assumptions											
Interest rate		0.54%	0.54%	0.54%	0.54%	0.54%	0.54%	0.54%	0.54%	0.54%	0.54%
Customer accounts:											
EDUs in existing service area	23,402	23,507	23,613	23,719	23,826	23,933	24,041	24,149	24,258	24,367	24,476
EDUs in new service area											
Total EDUs	23,402	23,507	23,613	23,719	23,826	23,933	24,041	24,149	24,258	24,367	24,476
New EDUs	105	105	106	106	107	107	108	108	109	109	110
Customer account growth in existing service area	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%
Total customer account growth		0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%
Parks System Development Charge											
SDC per EDU	\$ 6,451	\$ 6,645	\$ 6,844	\$ 7,050	\$ 7,261	\$ 7,479	\$ 7,703	\$ 7,934	\$ 8,172	\$ 8,418	\$ 8,670
Annual increase in SDC per EDU	7.58%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Capital projects											
Existing capital improvement plan	\$ 1,510,330	\$ 3,967,000	\$ 2,544,628	\$ 810,000	\$ 801,859	\$ 829,632	\$ 858,366	\$ 888,096	\$ 918,855	\$ 950,679	\$ -
Parks projects in River Terrace	-	(2,925,179)	(1,795,555)	(34,983)	-	-	-	-	-	-	-

Stormwater Funds



	6/30/2015	6/30/2016	6/30/2017	6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022	6/30/2023	6/30/2024	6/30/2025
City of Tigard Stormwater Utility	Budget	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
Stormwater Fund											
Resources:											
Beginning fund balance	\$ 3,078,705	\$ 3,875,260	\$ 3,616,044	\$ 3,964,139	\$ 4,551,452	\$ 5,389,013	\$ 6,366,481	\$ 7,485,343	\$ 8,747,042	\$ 10,152,971	\$ 11,704,474
Revenue:											
Local SDCi		1,032,755	1,514,382	1,622,089	1,736,746	1,738,936	1,741,134	1,743,339	1,745,552	1,747,772	1,750,000
45100 Utility sales	2,170,387	2,341,647	2,520,331	2,702,866	2,889,548	3,078,904	3,270,946	3,465,682	3,663,125	3,863,284	4,066,169
45103 Tigard SWM Surcharge	863,904	810,751	816,320	822,385	828,946	835,524	842,118	848,729	855,357	862,002	868,664
45199 Bad debt	-	-	-	-	-	-	-	-	-	-	-
47000 Interest earnings	7,936	20,926	19,527	21,406	24,578	29,101	34,379	40,421	47,234	54,826	63,204
47100 Gain or loss on investments	-	-	-	-	-	-	-	-	-	-	-
48001 Recovered expenditures	3,069	-	-	-	-	-	-	-	-	-	-
Total revenue	3,045,296	4,206,079	4,870,560	5,168,746	5,479,818	5,682,465	5,888,576	6,098,171	6,311,268	6,527,884	6,748,037
Total resources	\$ 6,124,001	\$ 8,081,339	\$ 8,486,604	\$ 9,132,885	\$ 10,031,269	\$ 11,071,477	\$ 12,255,057	\$ 13,583,515	\$ 15,058,310	\$ 16,680,855	\$ 18,452,511
Requirements:											
Expenditures:											
Personnel services:											
Salaries	\$ 393,762	\$ 407,201	\$ 421,098	\$ 435,469	\$ 450,331	\$ 465,701	\$ 481,594	\$ 498,031	\$ 515,028	\$ 532,605	\$ 550,782
Benefits	202,865	204,166	205,476	206,793	208,120	209,454	210,798	212,150	213,510	214,880	216,258
Total personnel services	596,627	611,367	626,573	642,263	658,451	675,155	692,392	710,180	728,538	747,485	767,040
Materials and services:											
Supplies	33,245	34,409	35,613	36,859	38,149	39,485	40,867	42,297	43,777	45,310	46,895
Service	488,165	505,251	522,935	541,237	560,181	579,787	600,079	621,082	642,820	665,319	688,605
Total materials and services	521,410	539,659	558,547	578,097	598,330	619,272	640,946	663,379	686,597	710,628	735,500
Capital outlay	9,100	9,419	9,748	10,089	10,442	10,808	11,186	11,578	11,983	12,402	12,836
Transfers out and indirect cost allocations	431,775	443,977	456,524	469,425	482,691	496,332	510,359	524,782	539,612	554,862	570,542
Healthy Streams program											
Non-program expenditures											
Transfers out	350,956	360,874	371,072	381,559	392,342	403,430	414,831	426,554	438,608	451,004	463,749
Capital projects	338,873	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
Total non-program expenditures	689,829	2,860,874	2,871,072	2,881,559	2,892,342	2,903,430	2,914,831	2,926,554	2,938,608	2,951,004	2,963,749
Total expenditures	2,248,741	4,465,296	4,522,465	4,581,433	4,642,257	4,704,997	4,769,714	4,836,473	4,905,339	4,976,381	5,049,668
Ending fund balance	3,875,260	3,616,044	3,964,139	4,551,452	5,389,013	6,366,481	7,485,343	8,747,042	10,152,971	11,704,474	13,402,843
Total requirements	\$ 6,124,001	\$ 8,081,339	\$ 8,486,604	\$ 9,132,885	\$ 10,031,269	\$ 11,071,477	\$ 12,255,057	\$ 13,583,515	\$ 15,058,310	\$ 16,680,855	\$ 18,452,511
Days of expenditures in ending fund balance	629	296	320	363	424	494	573	661	756	859	969
Water Quality/Quantity Fund											
Resources:											
Beginning fund balance	\$ 1,202,483	\$ 788,098	\$ 802,110	\$ 821,400	\$ 842,128	\$ 864,301	\$ 886,638	\$ 909,140	\$ 931,809	\$ 954,646	\$ 977,651
Revenue:											
43122 FIL Water Quantity	9,240	9,282	14,230	15,498	16,767	16,810	16,852	16,895	16,938	16,981	17,024
43123 FIL Water Quality	473	475	728	793	858	860	863	865	867	869	871
47000 Interest earnings	15,102	4,256	4,331	4,436	4,547	4,667	4,788	4,909	5,032	5,155	5,279
Total revenue	24,815	14,012	19,290	20,727	22,173	22,337	22,503	22,669	22,837	23,005	23,175
Total resources	\$ 1,227,298	\$ 802,110	\$ 821,400	\$ 842,128	\$ 864,301	\$ 886,638	\$ 909,140	\$ 931,809	\$ 954,646	\$ 977,651	\$ 1,000,826
Requirements:											
Expenditures											
Ending fund balance	788,098	802,110	821,400	842,128	864,301	886,638	909,140	931,809	954,646	977,651	1,000,826
Total requirements	\$ 788,098	\$ 802,110	\$ 821,400	\$ 842,128	\$ 864,301	\$ 886,638	\$ 909,140	\$ 931,809	\$ 954,646	\$ 977,651	\$ 1,000,826
Days of expenditures in ending fund balance	655										

Stormwater Fund Assumptions

	6/30/2015	6/30/2016	6/30/2017	6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022	6/30/2023	6/30/2024	6/30/2025
City of Tigard Stormwater Utility	Budget	Projected									
Revenue Assumptions											
Interest rate	0.26%	0.54%	0.54%	0.54%	0.54%	0.54%	0.54%	0.54%	0.54%	0.54%	0.54%
Equivalent service units:											
ESUs in existing service area	33,630	33,781	33,933	34,086	34,239	34,393	34,548	34,704	34,860	35,017	35,174
ESUs in River Terrace		0	80	180	300	420	540	660	780	900	1,020
Total ESUs	33,630	33,781	34,013	34,266	34,539	34,813	35,088	35,364	35,640	35,917	36,194
New ESUs	151	151	232	253	273	274	275	276	277	277	278
Customer account growth in existing service area	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%
Total customer account growth	0.45%	0.45%	0.69%	0.74%	0.80%	0.79%	0.79%	0.79%	0.78%	0.78%	0.77%
Franchise fee as percentage of total rate revenue	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Rates:											
Total CWS fixed monthly rate per EDU	\$ 6.75	\$ 7.25	\$ 7.75	\$ 8.25	\$ 8.75	\$ 9.25	\$ 9.75	\$ 10.25	\$ 10.75	\$ 11.25	\$ 11.75
River Terrace surcharge on fixed monthly rate		\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00
Existing service area surcharge on fixed monthly rate	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00
Cost Assumptions											
Full-time equivalent (FTE) positions	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
Salaries per FTE	\$ 60,579	\$ 62,646	\$ 64,784	\$ 66,995	\$ 69,282	\$ 71,646	\$ 74,091	\$ 76,620	\$ 79,235	\$ 81,939	\$ 84,736
Growth in salaries per FTE	18.85%	3.41%	3.41%	3.41%	3.41%	3.41%	3.41%	3.41%	3.41%	3.41%	3.41%
Benefits per FTE	\$ 31,210	\$ 31,410	\$ 31,612	\$ 31,814	\$ 32,018	\$ 32,224	\$ 32,430	\$ 32,638	\$ 32,848	\$ 33,058	\$ 33,270
Growth in benefits per FTE	7.87%	0.64%	0.64%	0.64%	0.64%	0.64%	0.64%	0.64%	0.64%	0.64%	0.64%
Annual escalation of materials and services	10.74%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Annual escalation of capital outlay	-76.08%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Annual escalation of transfers		2.83%	2.83%	2.83%	2.83%	2.83%	2.83%	2.83%	2.83%	2.83%	2.83%
Capital projects											
Project expenditures											
Projects for River Terrace, growth-related	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
Projects for River Terrace, not growth-related											
Projects for existing service area, growth related	750,000	750,000	750,000	750,000	750,000	750,000	750,000	750,000	750,000	750,000	750,000
Projects for existing service area, not growth related	750,000	750,000	750,000	750,000	750,000	750,000	750,000	750,000	750,000	750,000	750,000
Total project expenditures	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000	\$ 2,500,000
SDCi cost basis											
River Terrace	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
Rest of city	750,000	750,000	750,000	750,000	750,000	750,000	750,000	750,000	750,000	750,000	750,000
Total SDCi cost basis	\$ 1,750,000	\$ 1,750,000	\$ 1,750,000	\$ 1,750,000	\$ 1,750,000	\$ 1,750,000	\$ 1,750,000	\$ 1,750,000	\$ 1,750,000	\$ 1,750,000	\$ 1,750,000
Growth in ESUs											
River Terrace	0	80	100	120	120	120	120	120	120	120	120
Rest of city	151	152	153	153	154	155	155	156	156	157	158
Total growth in ESUs	151	232	253	273	274	275	275	276	277	277	278
Calculated SDCi											
Area-specific in River Terrace	\$ 9,803.92	\$ 8,824	\$ 8,511	\$ 8,333	\$ 8,333	\$ 8,333	\$ 8,333	\$ 8,333	\$ 8,333	\$ 8,333	\$ 8,333
Area-specific in rest of city	\$ 4,856	\$ 4,846	\$ 4,835	\$ 4,824	\$ 4,813	\$ 4,802	\$ 4,792	\$ 4,781	\$ 4,770	\$ 4,760	\$ 4,750
Uniform	\$ 6,824	\$ 6,527	\$ 6,419	\$ 6,353	\$ 6,345	\$ 6,337	\$ 6,329	\$ 6,321	\$ 6,313	\$ 6,305	\$ 6,297
SDCi revenue											
Area-specific SDCi revenue											
River Terrace	\$ -	\$ 705,882	\$ 851,064	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
Rest of city	734,938	736,601	738,267	739,936	741,607	743,280	744,956	746,635	748,316	750,000	751,681
Total area-specific SDCi revenue	\$ 734,938	\$ 1,442,483	\$ 1,589,331	\$ 1,739,936	\$ 1,741,607	\$ 1,743,280	\$ 1,744,956	\$ 1,746,635	\$ 1,748,316	\$ 1,750,000	\$ 1,751,681
Uniform SDCi revenue	\$ 1,032,755	\$ 1,514,382	\$ 1,622,089	\$ 1,736,746	\$ 1,738,936	\$ 1,741,134	\$ 1,743,339	\$ 1,745,552	\$ 1,747,772	\$ 1,750,000	\$ 1,752,222
ESUs in River Terrace											
Baseline	0	0	0	0	0	0	0	0	0	0	0
Low	0	60	140	240	340	440	540	640	740	840	940
Medium	0	80	180	300	420	540	660	780	900	1,020	1,140
High	0	100	220	360	500	640	780	920	1,060	1,200	1,340
Type of Local SDC											
None	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Area-specific	\$ 734,938	\$ 1,442,483	\$ 1,589,331	\$ 1,739,936	\$ 1,741,607	\$ 1,743,280	\$ 1,744,956	\$ 1,746,635	\$ 1,748,316	\$ 1,750,000	\$ 1,751,681
Uniform	\$ 1,032,755	\$ 1,514,382	\$ 1,622,089	\$ 1,736,746	\$ 1,738,936	\$ 1,741,134	\$ 1,743,339	\$ 1,745,552	\$ 1,747,772	\$ 1,750,000	\$ 1,752,222

Transportation Funds



	6/30/2015	6/30/2016	6/30/2017	6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022	6/30/2023	6/30/2024	6/30/2025
City of Tigard Transportation Funding	Budget	Projected									
City Gas Tax Fund											
Resources:											
Beginning fund balance	\$ 1,014,922	\$ 772,190	\$ 1,235,733	\$ 705,957	\$ (323,927)	\$ 145,481	\$ 620,852	\$ 1,395,844	\$ 2,175,068	\$ 2,958,547	\$ 3,746,304
Revenue:											
44200 Gas tax	739,620	739,667	739,715	739,762	739,809	739,857	739,904	739,951	739,999	740,046	740,094
44801 State grants	314	-	-	-	-	-	-	-	-	-	-
47000 Interest earnings	34,584	4,170	6,673	3,812	(1,749)	786	3,353	7,538	11,745	15,976	20,230
48001 Recovered expenditures	31,735	31,735	31,735	31,735	31,735	31,735	31,735	31,735	31,735	31,735	31,735
Total revenue	806,253	775,572	778,123	775,309	769,795	772,377	774,992	779,224	783,479	787,757	792,059
Total resources	\$ 1,821,175	\$ 1,547,762	\$ 2,013,856	\$ 1,481,266	\$ 445,868	\$ 917,858	\$ 1,395,844	\$ 2,175,068	\$ 2,958,547	\$ 3,746,304	\$ 4,538,363
Requirements:											
Expenditures:											
Program expenditures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-program expenditures											
Debt service	315,860	312,029	307,899	305,193	300,387	297,006	-	-	-	-	-
Work in progress	-	-	1,000,000	1,500,000	-	-	-	-	-	-	-
Transfers out to Transportation CIP Fund	733,125	-	-	-	-	-	-	-	-	-	-
Other transfers out	-	-	-	-	-	-	-	-	-	-	-
Total non-program expenditures	1,048,985	312,029	1,307,899	1,805,193	300,387	297,006	-	-	-	-	-
Total expenditures	1,048,985	312,029	1,307,899	1,805,193	300,387	297,006	-	-	-	-	-
Ending fund balance	772,190	1,235,733	705,957	(323,927)	145,481	620,852	1,395,844	2,175,068	2,958,547	3,746,304	4,538,363
Total requirements	\$ 1,821,175	\$ 1,547,762	\$ 2,013,856	\$ 1,481,266	\$ 445,868	\$ 917,858	\$ 1,395,844	\$ 2,175,068	\$ 2,958,547	\$ 3,746,304	\$ 4,538,363
Gas Tax Fund											
Resources:											
Beginning fund balance	\$ 460,463	\$ 287,648	\$ 733,087	\$ 684,117	\$ 425,706	\$ 229,049	\$ 659,321	\$ 1,639,156	\$ 2,606,227	\$ 3,558,979	\$ 4,495,776
Revenue:											
43119 Street lighting fees	225	156	108	75	52	36	25	17	12	8	6
43125 Fee-in-lieu bicycle striping	-	-	-	-	-	-	-	-	-	-	-
44200 Gas tax	2,809,993	2,873,368	2,938,172	3,004,437	3,072,197	3,141,486	3,212,337	3,284,785	3,358,868	3,434,622	3,512,084
44201 Other gas tax	180,450	178,864	177,291	175,733	174,188	172,656	171,139	169,634	168,143	166,665	165,199
44501 Intergovernmental revenue	-	-	-	-	-	-	-	-	-	-	-
45319 Miscellaneous fees and charges	-	-	-	-	-	-	-	-	-	-	-
47000 Interest earnings	55,732	1,553	3,959	3,694	2,299	1,237	3,560	8,851	14,074	19,218	24,277
48001 Recovered expenditures	61,345	62,370	63,413	64,473	65,550	66,646	67,760	68,893	70,044	71,215	72,405
49001 Debt proceeds	-	-	-	-	-	-	-	-	-	-	-
49412 Transfer in from Street Maintenance Fund	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Total revenue	3,207,745	3,216,311	3,282,942	3,348,412	3,414,286	3,482,061	3,554,820	3,632,181	3,711,141	3,791,728	3,873,971
Total resources	\$ 3,668,208	\$ 3,503,958	\$ 4,016,029	\$ 4,032,529	\$ 3,839,992	\$ 3,711,110	\$ 4,214,141	\$ 5,271,337	\$ 6,317,368	\$ 7,350,707	\$ 8,369,747
Requirements:											
Expenditures:											
Program expenditures	\$ 2,094,752	\$ 2,168,068	\$ 2,243,951	\$ 2,322,489	\$ 2,403,776	\$ 2,487,908	\$ 2,574,985	\$ 2,665,109	\$ 2,758,388	\$ 2,854,932	\$ 2,954,854
Non-program expenditures											
Debt service, existing	599,676	592,403	584,561	579,424	570,300	563,881	-	-	-	-	-
Debt service, new	-	-	-	-	-	-	-	-	-	-	-
Work in progress	-	10,400	503,400	704,910	636,866	-	-	-	-	-	-
Transfers out to Transportation CIP Fund	613,388	-	-	-	-	-	-	-	-	-	-
Other transfers out	72,745	-	-	-	-	-	-	-	-	-	-
Total non-program expenditures	1,285,809	602,803	1,087,961	1,284,334	1,207,166	563,881	-	-	-	-	-
Total expenditures	3,380,561	2,770,872	3,331,912	3,606,823	3,610,942	3,051,789	2,574,985	2,665,109	2,758,388	2,854,932	2,954,854
Ending fund balance	287,648	733,087	684,117	425,706	229,049	659,321	1,639,156	2,606,227	3,558,979	4,495,776	5,414,893
Total requirements	\$ 3,668,208	\$ 3,503,958	\$ 4,016,029	\$ 4,032,529	\$ 3,839,992	\$ 3,711,110	\$ 4,214,141	\$ 5,271,337	\$ 6,317,368	\$ 7,350,707	\$ 8,369,747
Days of expenditures in ending fund balance	31	97	75	43	23	79	233	357	471	575	669

Transportation Funds



	6/30/2015	6/30/2016	6/30/2017	6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022	6/30/2023	6/30/2024	6/30/2025
City of Tigard Transportation Funding	Budget	Projected	Projected	Projected							
Street Maintenance Fee Fund											
Resources:											
Beginning fund balance	\$ 1,298,606	\$ 1,193,753	\$ 1,164,894	\$ 1,153,092	\$ 1,163,962	\$ 1,208,479	\$ 1,287,952	\$ 1,404,622	\$ 1,560,758	\$ 1,758,643	\$ 2,000,557
Revenue:											
43130 Miscellaneous fees and charges	2,004,673	2,152,878	2,270,738	2,396,655	2,531,215	2,673,230	2,823,108	2,981,281	3,148,202	3,324,351	3,510,232
45199 Bad debt	(5,050)	(9,204)	(11,519)	(13,992)	(16,635)	(19,425)	(22,368)	(25,475)	(28,754)	(32,213)	(35,864)
45319 Miscellaneous fees and charges	-	-	-	-	-	-	-	-	-	-	-
47000 Interest earnings	2,043	6,446	6,290	6,227	6,285	6,526	6,955	7,585	8,428	9,497	10,803
48001 Recovered expenditures	1,286	-	-	-	-	-	-	-	-	-	-
Total revenue	2,002,952	2,150,120	2,265,510	2,388,890	2,520,866	2,660,331	2,807,695	2,963,391	3,127,876	3,301,634	3,485,171
Total resources	\$ 3,301,558	\$ 3,343,873	\$ 3,430,403	\$ 3,541,982	\$ 3,684,828	\$ 3,868,811	\$ 4,095,647	\$ 4,368,013	\$ 4,688,635	\$ 5,060,277	\$ 5,485,727
Requirements:											
Expenditures:											
Program expenditures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-program expenditures											
Debt service	-	-	-	-	-	-	-	-	-	-	-
Work in progress	1,900,000	1,950,000	2,025,000	2,100,000	2,170,000	2,243,294	2,319,064	2,397,394	2,478,368	2,562,078	2,648,616
Total transfers out	207,805	228,979	252,311	278,020	306,349	337,564	371,960	409,861	451,624	497,642	548,349
Total non-program expenditures	2,107,805	2,178,979	2,277,311	2,378,020	2,476,349	2,580,859	2,691,025	2,807,254	2,929,992	3,059,720	3,196,964
Total expenditures	2,107,805	2,178,979	2,277,311	2,378,020	2,476,349	2,580,859	2,691,025	2,807,254	2,929,992	3,059,720	3,196,964
Ending fund balance	1,193,753	1,164,894	1,153,092	1,163,962	1,208,479	1,287,952	1,404,622	1,560,758	1,758,643	2,000,557	2,288,763
Total requirements	\$ 3,301,558	\$ 3,343,873	\$ 3,430,403	\$ 3,541,982	\$ 3,684,828	\$ 3,868,811	\$ 4,095,647	\$ 4,368,013	\$ 4,688,635	\$ 5,060,277	\$ 5,485,727
Days of expenditures in ending fund balance	207	195	185	179	178	182	191	203	219	239	261
Transportation Development Tax Fund											
Resources:											
Beginning fund balance	\$ 1,234,890	\$ 1,010,045	\$ 1,275,684	\$ 948,709	\$ 1,499,532	\$ 3,177,310	\$ 4,867,341	\$ 6,569,706	\$ 8,284,486	\$ 10,011,763	\$ 11,751,619
Revenue:											
43320 TDT fees	557,000	700,185	1,343,336	1,506,501	1,669,680	1,672,874	1,676,081	1,679,304	1,682,541	1,685,792	1,689,058
47000 Interest earnings	11,279	5,454	6,889	5,123	8,097	17,157	26,284	35,476	44,736	54,064	63,459
Total revenue	568,279	705,639	1,350,224	1,511,624	1,677,777	1,690,031	1,702,365	1,714,780	1,727,277	1,739,856	1,752,517
Total resources	\$ 1,803,169	\$ 1,715,684	\$ 2,625,909	\$ 2,460,332	\$ 3,177,310	\$ 4,867,341	\$ 6,569,706	\$ 8,284,486	\$ 10,011,763	\$ 11,751,619	\$ 13,504,136
Requirements:											
Expenditures:											
Program expenditures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-program expenditures											
Debt service	-	-	-	-	-	-	-	-	-	-	-
Work in progress	12,000	440,000	1,677,200	960,800	-	-	-	-	-	-	-
Transfers out to Transportation CIP Fund	780,927	-	-	-	-	-	-	-	-	-	-
Other transfers out	197	-	-	-	-	-	-	-	-	-	-
Total non-program expenditures	793,124	440,000	1,677,200	960,800	-	-	-	-	-	-	-
Total expenditures	793,124	440,000	1,677,200	960,800	-	-	-	-	-	-	-
Ending fund balance	1,010,045	1,275,684	948,709	1,499,532	3,177,310	4,867,341	6,569,706	8,284,486	10,011,763	11,751,619	13,504,136
Total requirements	\$ 1,803,169	\$ 1,715,684	\$ 2,625,909	\$ 2,460,332	\$ 3,177,310	\$ 4,867,341	\$ 6,569,706	\$ 8,284,486	\$ 10,011,763	\$ 11,751,619	\$ 13,504,136

Transportation Fund Assumptions



City of Tigard Transportation Funding	6/30/2015	6/30/2016	6/30/2017	6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022	6/30/2023	6/30/2024	6/30/2025
Transportation CIP Fund	Budget	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
Resources:											
Beginning fund balance	\$ 72,568	\$ 30,262	\$ (369,738)	\$ (369,738)	\$ (3,419,738)	\$ (3,419,738)	\$ (3,419,738)	\$ (3,419,738)	\$ (3,419,738)	\$ (3,419,738)	\$ (3,419,738)
Revenue:											
44800 Federal grants	-	-	-	-	-	-	-	-	-	-	-
44802 Grants, other	200,000	-	-	-	-	-	-	-	-	-	-
49200 Transfer in from Gas Tax Fund	613,388	-	-	-	-	-	-	-	-	-	-
49205 Transfer in from City Gas Tax Fund	733,125	-	-	-	-	-	-	-	-	-	-
49405 Transfer in from TDI Fund	780,927	-	-	-	-	-	-	-	-	-	-
49410 Transfer in from Traffic Impact Fee Fund	355,923	-	-	-	-	-	-	-	-	-	-
49411 Transfer in from Underground Utility Fund	204,882	-	-	-	-	-	-	-	-	-	-
49500 Transfer in from Sanitary Sewer Fund	15,200	-	-	-	-	-	-	-	-	-	-
49510 Transfer in from Stormwater Fund	15,200	-	-	-	-	-	-	-	-	-	-
49530 Transfer in from Water Fund	91,738	-	-	-	-	-	-	-	-	-	-
Total revenue	3,010,443	-	-	-	-	-	-	-	-	-	-
Total resources	\$ 3,083,011	\$ 30,262	\$ (369,738)	\$ (369,738)	\$ (3,419,738)	\$ (3,419,738)	\$ (3,419,738)	\$ (3,419,738)	\$ (3,419,738)	\$ (3,419,738)	\$ (3,419,738)
Requirements:											
Expenditures:											
Program expenditures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Non-program expenditures	-	-	-	-	-	-	-	-	-	-	-
Debt service	-	-	-	-	-	-	-	-	-	-	-
Work in progress	3,008,136	400,000	-	3,050,000	-	-	-	-	-	-	-
Total transfers out	44,613	-	-	-	-	-	-	-	-	-	-
Total non-program expenditures	3,052,749	400,000	-	3,050,000	-	-	-	-	-	-	-
Total expenditures	3,052,749	400,000	-	3,050,000	-	-	-	-	-	-	-
Ending fund balance	30,262	(369,738)	(369,738)	(3,419,738)	(3,419,738)	(3,419,738)	(3,419,738)	(3,419,738)	(3,419,738)	(3,419,738)	(3,419,738)
Total requirements	\$ 3,083,011	\$ 30,262	\$ (369,738)	\$ (369,738)	\$ (3,419,738)	\$ (3,419,738)	\$ (3,419,738)	\$ (3,419,738)	\$ (3,419,738)	\$ (3,419,738)	\$ (3,419,738)
Days of expenditures in ending fund balance	4	(338)	#DIV/0!	(410)	#DIV/0!						
Revenue Assumptions											
Interest rate		0.54%	0.54%	0.54%	0.54%	0.54%	0.54%	0.54%	0.54%	0.54%	0.54%
Customer accounts:											
EDUs in existing service area											
Residential	19,450	19,537	19,625	19,713	19,802	19,891	19,981	20,071	20,161	20,252	20,343
Commercial and industrial	9,113	9,113	9,113	9,113	9,113	9,113	9,113	9,113	9,113	9,113	9,113
Total EDUs in existing service area	28,563	28,651	28,738	28,827	28,915	29,005	29,094	29,184	29,274	29,365	29,456
EDUs in new service area	0	80	180	300	400	540	660	780	900	1,020	
Total EDUs	28,563	28,731	28,918	29,127	29,315	29,545	29,834	30,064	30,274	30,485	30,676
New EDUs	84	88	168	188	209	209	210	210	210	211	211
Residential account growth in existing service area	0.43%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%	0.45%
Non-residential account growth in existing service area	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total customer account growth	0.29%	0.31%	0.59%	0.65%	0.72%	0.72%	0.71%	0.71%	0.70%	0.70%	0.70%
Street maintenance fee:											
Monthly fee per EDU, July through December	\$ 5.83	\$ 6.11	\$ 6.41	\$ 6.72	\$ 7.05	\$ 7.39	\$ 7.75	\$ 8.13	\$ 8.52	\$ 8.94	\$ 9.37
Monthly fee per EDU, January through June	\$ 6.11	\$ 6.41	\$ 6.72	\$ 7.05	\$ 7.39	\$ 7.75	\$ 8.13	\$ 8.52	\$ 8.94	\$ 9.37	\$ 9.83
Average monthly fee per EDU	\$ 5.97	\$ 6.26	\$ 6.57	\$ 6.89	\$ 7.22	\$ 7.57	\$ 7.94	\$ 8.32	\$ 8.73	\$ 9.15	\$ 9.60
Annual rate increase	4.86%	4.86%	4.86%	4.86%	4.86%	4.86%	4.86%	4.86%	4.86%	4.86%	4.86%
Transportation development tax (TDI):											
TDI per EDU	\$ 6.645	\$ 8.000	\$ 8.000	\$ 8.000	\$ 8.000	\$ 8.000	\$ 8.000	\$ 8.000	\$ 8.000	\$ 8.000	\$ 8.000
Annual increase in TDI per EDU	0.00%	20.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Capital projects											
Capacity for project spending by fund:											
City Gas Tax Fund	\$ -	\$ -	\$ 1,000,000	\$ 1,500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Gas Tax Fund	-	10,400	503,400	704,910	636,866	-	-	-	-	-	-
Street Maintenance Fee Fund	1,900,000	1,950,000	2,025,000	2,100,000	2,170,000	2,243,294	2,319,064	2,397,394	2,478,368	2,562,078	2,648,616
Transportation Development Tax Fund	12,000	440,000	1,677,200	960,800	-	-	-	-	-	-	-
Transportation CIP Fund	3,008,136	400,000	-	3,050,000	-	-	-	-	-	-	-
Total capacity for project spending by fund	\$ 4,920,136	\$ 2,800,400	\$ 5,205,600	\$ 8,315,710	\$ 2,806,866	\$ 2,243,294	\$ 2,319,064	\$ 2,397,394	\$ 2,478,368	\$ 2,562,078	\$ 2,648,616
Debt											
Issuance cost percentage		2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Interest rate		4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Term		20	20	20	20	20	20	20	20	20	20
Principal:											
Proceeds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Issuance costs	-	-	-	-	-	-	-	-	-	-	-
Debt reserve	-	-	-	-	-	-	-	-	-	-	-
Total principal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

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Key Infrastructure Information by System

River Terrace Funding Strategy Council Briefing | September 23, 2014

Sewer | Service Provider = CWS

- North pump station scheduled for construction Summer 2015 & completion January 2016.
South pump station scheduled for construction Summer 2018 & completion January 2019.
- Most areas need a pump station to develop. CWS has indicated they will not allow temporary or interim facilities.

Transportation | Service Provider = City & County

- The River Terrace transportation system intersects with and utilizes the regional network. Regional transportation needs are large and funding is limited. Need to negotiate a reasonable cost share scenario with the County for the proposed signals and work with the County and adjoining cities to prioritize the widening of Roy Rogers Road.
- Existing Bull Mountain residents want the Scholls Ferry Rd signal installed with development instead of waiting for it to meet volume warrants later. If we wait and/or if the County does not allow us to use system warrants, this signal and the other three signals on Roy Rogers Rd may never meet volume warrants.
- River Terrace Blvd is a unique street that will require a coordinated and concerted effort to fund and implement.

Water | Service Provider = City

- Only 72 additional homes can be built in the 550-Zone until the new reservoir is online unless it can be determined that there is extra capacity in the 710-Zone. [This also includes new infill homes in the 550-Zone within the existing service area and 410-Zone development in River Terrace served via a pressure reducing valve (PRV) connection.]

Stormwater | Service Provider = City

- High-flow conveyance area requires additional alternatives analysis, special permitting, and land or easement acquisition.
- City may not be able to acquire land and/or fund regional facilities at the rate that development needs them. However, of the 13 regional facilities outside of the high-flow conveyance area, 6 serve sub-basins under the control of a single property owner. Also, flexible siting and size standards should generally help with the implementation of the regional facility approach.
- City needs to develop and adopt new model and standards to implement the master plan.

Parks | Service Provider = City

- City does not have a mechanism for exacting park land except through the voluntary Planned Development process. Early land acquisition may be critical to ensure availability of land for future park and/or trail use.

AIS-1885

7.

Business Meeting

Meeting Date: 09/23/2014

Length (in minutes): 20 Minutes

Agenda Title: Consider an Ordinance Taxing the Sale of Marijuana and Marijuana-Infused Items

Prepared For: Toby LaFrance, Financial and Information Services

Submitted By: Toby LaFrance, Financial and Information Services

Item Type: Ordinance
Public Hearing - Legislative

Meeting Type: Council
Business Meeting - Main

Public Hearing: Yes

Publication Date:

Information

ISSUE

Consider an ordinance taxing the sale of marijuana and marijuana-infused items.

STAFF RECOMMENDATION / ACTION REQUEST

Staff requests Council act on the proposed ordinance.

KEY FACTS AND INFORMATION SUMMARY

SUMMARY

Oregon cities currently have the authority to tax the sale of marijuana and marijuana-infused products. If the City Council desires to impose a tax on marijuana, it would need to be heard and adopted by the City Council by its last meeting in September, prior to the timing of marijuana legalization initiative before state voters on the November ballot. At the September 9, 2014 meeting, Council directed staff to bring an ordinance forward for consideration.

BACKGROUND AND POLICY IMPLICATIONS

Oregon voters legalized medical marijuana via initiative petition in 1999, after which medical marijuana dispensaries began operation. Dispensaries essentially serve as intermediaries between marijuana growers and medical marijuana patients. While these dispensaries were legal, they were unregulated and the source of controversy in many communities. The 2013 Oregon Legislature passed HB 3460, which created a regulatory and licensing regimen for medical marijuana dispensaries. To date, there are 198 approved and 115 provisionally approved dispensaries in Oregon. Tigard has limited siting dispensaries by city ordinance, to be reconsidered before May, 2015.

In addition, Oregon Ballot Measure 91 was proposed by citizen initiative that would legalize

the sale of recreational marijuana in Oregon. The measure asks voters whether or not to enact a state law "legalizing the recreational use of marijuana, based on regulation and taxation to be determined by the Oregon Liquor Control Commission." The measure will appear on the November, 2014 ballot and is similar to a measure approved by Washington voters in 2012.

The ordinance presented for Council consideration is a gross receipts tax on the sale of marijuana, medical marijuana and marijuana-infused products. The tax is levied on the seller, who is responsible for maintaining records.

There is nothing in current Oregon law that prohibits the City from taxing marijuana, but it should be noted that the marijuana initiative most likely to be considered by the voters in November contains the following language:

SECTION 42. State has exclusive right to tax marijuana. No county or city of this state shall impose any fee or tax, including occupation taxes, privilege taxes and inspection fees, in connection with the purchase, sale, production, processing, transportation, and delivery of marijuana items.

Because this language does not specifically repeal a local marijuana tax in effect at the time of the measure's passage, and because this language can be interpreted to read "No county or city of this state shall [after the effective date of this measure] impose any fee or tax..." it can be argued that this language would not pre-empt this taxation ordinance if it is adopted by the Council. Alternatively, the language can be read as "No county or city of this state shall [be allowed at any time to] impose any fee or tax..." As such, absent adjudication in a state court, there is no guarantee that a local tax imposed prior to passage of this initiative would survive beyond the effective date of the initiative, unless this language is modified by the Legislature.

At the September 9 discussion, direction was given to staff to research options in addition to the proposed sales tax which would capture revenue in situations where a grower was in Tigard, but the sale was outside the City.

OTHER ALTERNATIVES

The city could choose not to tax marijuana or marijuana-infused products. It could also elect to structure the tax differently, with associated legal and other risks.

COUNCIL GOALS, POLICIES, APPROVED MASTER PLANS

DATES OF PREVIOUS COUNCIL CONSIDERATION

This is the second consideration of a tax on marijuana since first discussion on September 9, 2014. The City Council received an update on the options for development code amendments regarding siting medical marijuana dispensaries on July 22, 2014.

Fiscal Impact

Fiscal Information:

At this time, the fiscal impacts of this ordinance are unknown. Even if the Council proceeds to consider the ordinance, it will be difficult to estimate the local fiscal impacts of taxation since the statewide measure has not been considered by voters, and Tigard's consideration of regulating dispensaries is unlikely to be known until 2015 or later.

Attachments

Proposed Ordinance

CITY OF TIGARD, OREGON
TIGARD CITY COUNCIL
ORDINANCE NO. 14-__

AN ORDINANCE ESTABLISHING A TAX ON THE SALE OF MARIJUANA AND
MARIJUANA-INFUSED PRODUCTS IN THE CITY OF TIGARD

WHEREAS, Tigard is an Oregon home-rule municipal corporation having the authority and power under the terms of its Charter to exercise all the powers and authority that the constitution, statutes, and common law of the United States and this State expressly or impliedly grant or allow as fully as though each such powers were specifically enumerated therein; and

WHEREAS, except as otherwise provided, all powers of the City shall be vested in the Council; and

WHEREAS, the City Council wishes to exercise that power to tax the sale or transfer of marijuana and marijuana-infused products within the City.

NOW, THEREFORE, THE CITY OF TIGARD ORDAINS AS FOLLOWS:

SECTION 1. Tigard Municipal Code is amended by adding a new Chapter 3.70 Marijuana Tax, to read as follows:

Chapter 3.70 MARIJUANA TAX

- 3.70.010 Purpose
- 3.70.015 Definitions
- 3.70.020 Tax Imposed
- 3.70.025 Amount and Payment, Deductions
- 3.70.030 Seller Responsible for Payment of Tax
- 3.70.035 Penalties and Interest
- 3.70.040 Failure to Report and Remit Tax – Determination of Tax by Director
- 3.70.045 Appeal
- 3.70.050 Refunds
- 3.70.055 Actions to Collect
- 3.70.060 Violation
- 3.70.065 Confidentiality
- 3.70.070 Audit of Books, Records, or Persons
- 3.70.075 Forms and Regulations

- 3.70.010 Purpose

For the purposes of this chapter, every person who sells marijuana, medical marijuana, or marijuana-infused products in the City of Tigard is exercising a taxable privilege. The purpose of this chapter is to impose a tax upon the retail sale of marijuana, medical marijuana, and marijuana-infused products.

3.70.015 Definitions

As used in this ordinance, unless the context requires otherwise:

1. "Director" means the Director of Finance for the City of Tigard or his/her designee.
2. "Gross Sales" means the total amount received in money, credits, property or other consideration from sales of marijuana, medical marijuana and marijuana-infused products that is subject to the tax imposed by this chapter.
3. "Marijuana" means all parts of the plant of the Cannabis family Moraceae, whether growing or not; the resin extracted from any part of the plant; and every compound, manufacture, salt, derivative, mixture, or preparation of the plant or its resin, as may be defined by Oregon Revised Statutes as they currently exist or may from time to time be amended. It does not include the mature stalks of the plant, fiber produced from the stalks, oil or cake made from the seeds of the plant, any other compound, manufacture, salt, derivative, mixture, or preparation of the mature stalks (except the resin extracted there from), fiber, oil, or cake, or the sterilized seed of the plant which is incapable of germination.
4. "Oregon Medical Marijuana Program" means the office within the Oregon Health authority that administers the provisions of ORS 475.300 through 475.346, the Oregon Medical Marijuana Act, and all policies and procedures pertaining thereto.
5. "Person" means natural person, joint venture, joint stock company, partnership, association, club, company, corporation, business, trust, organization, or any group or combination acting as a unit, including the United States of America, the State of Oregon and any political subdivision thereof, or the manager, lessee, agent, servant, officer or employee of any of them.
6. "Purchase or Sale" means the acquisition or furnishing for consideration by any person of marijuana or marijuana-infused product within the City.
7. "Registry identification cardholder" means a person who has been diagnosed by an attending physician with a debilitating medical condition and for whom the use of medical marijuana may mitigate the symptoms or effects of the person's debilitating medical condition, and who has been issued a registry identification card by the Oregon Health Authority.
8. "Retail sale" means the transfer of goods or services in exchange for any valuable consideration.
9. "Seller" means any person who is required to be licensed or registered or has been licensed or registered by the State of Oregon to provide marijuana or marijuana-infused products to purchasers for money, credit, property or other consideration.
10. "Tax" means either the tax payable by the seller or the aggregate amount of taxes due from a seller during the period for which the seller is required to report collections under this chapter.

11. "Taxpayer" means any person obligated to account to the Director of Finance for taxes collected or to be collected, or from whom a tax is due, under the terms of this chapter.

3.70.020 Tax Imposed

A tax is hereby levied and shall be paid by every seller exercising the taxable privilege of selling marijuana and marijuana-infused products as defined in this chapter. The Director is authorized to exercise all supervisory and administrative powers with regard to the enforcement, collection, and administration of the marijuana tax.

3.70.025 Amount and Payment, Deductions

1. In addition to any fees or taxes otherwise provided for by law, every seller engaged in the sale of marijuana and marijuana-infused products shall pay a tax as follows:
 - a. Five percent (5%) of the gross sale amount paid to the seller by a registry identification cardholder.
 - b. Ten percent (10%) of the gross sale amount paid to the seller of marijuana and marijuana-infused products by persons who are not registry identification cardholders purchasing marijuana under the Oregon Medical Marijuana Program.
2. In addition to any fees or taxes otherwise provided for by law, person who is required to be licensed or registered or has been licensed or registered by the State of Oregon to provide marijuana or marijuana-infused products and who is engaged in and carrying on the business of operating an establishment where marijuana or marijuana-infused products are consumed or used on the person's premises shall pay an annual privilege tax of \$500.
3. The following deductions shall be allowed against sales received by the seller providing marijuana or marijuana-infused products:
 - a. Refunds of sales actually returned to any purchaser;
 - b. Any adjustments in sales which amount to a refund to a purchaser, providing such adjustment pertains to the actual sale of marijuana or marijuana-infused products and does not include any adjustments for other services furnished by a seller.

3.70.030 Seller Responsible for Payment of Tax

1. Every seller will obtain a business license from the City of Tigard pursuant to TMC 5.04. The seller will indicate on the business license application whether the seller is licensed by or registered with the State of Oregon to provide marijuana or marijuana-infused products to purchasers for money, credit, property or other consideration.
2. Every seller shall, on or before the last day of the month following the end of each calendar quarter (in the months of April, July, October and January) make a return to the Director, on forms provided by the City, specifying the total sales subject to this chapter and the amount of tax collected under this chapter. The seller may request or the City may establish shorter

reporting periods for any seller if the seller or City deems it necessary in order to ensure collection of the tax and the City may require further information in the return relevant to payment of the tax. A return shall not be considered filed until it is actually received by the Director.

3. At the time the return is filed, the full amount of the tax collected shall be remitted to the City.
4. Payments shall be applied in the order of the oldest liability first, with the payment credited first toward any accrued penalty, then to interest, then to the underlying tax until the payment is exhausted. Crediting of a payment toward a specific reporting period will be first applied against any accrued penalty, then to interest, then to the underlying tax. If the Director, in his or her sole discretion, determines that an alternative order of payment application would be in the best interest of the City in a particular tax or factual situation, the Director may order such a change. The Director may establish shorter reporting periods for any seller if the Director deems it necessary in order to ensure collection of the tax. The Director also may require additional information in the return relevant to payment of the liability. When a shorter return period is required, penalties and interest shall be computed according to the shorter return period. Returns and payments are due immediately upon cessation of business for any reason. All taxes collected by sellers pursuant to this chapter shall be held in trust for the account of the City until payment is made to the City. A separate trust bank account is not required in order to comply with this provision.
5. Every seller must keep and preserve, in an accounting format established by the Director, records of all sales made by the dispensary and such other books or accounts as may be required by the Director for a period of three (3) years or until all taxes associated with the sales have been paid, whichever is longer. The City shall have the right to inspect all such records at all reasonable times.

3.70.035 Penalties and Interest

1. Any seller who fails to remit any portion of any tax imposed by this chapter within the time required shall pay a penalty of ten percent (10%) of the amount of the tax, in addition to the amount of the tax.
2. If the City determines that the nonpayment of any remittance due under this chapter is due to fraud, a penalty of twenty-five percent (25%) of the amount of the tax shall be added thereto in addition to the penalties stated in subparagraphs 1 and 2 of this section.
3. In addition to the penalties imposed, any seller who fails to remit any tax imposed by this chapter shall pay interest at the rate of one percent (1%) per month or fraction thereof on the amount of the tax, exclusive of penalties, from the date on which the remittance first became delinquent until paid.
4. Every penalty imposed, and such interest as accrues under the provisions of this section, shall become a part of the tax required to be paid.
5. All sums collected pursuant to the penalty provisions in this section shall be distributed to the City of Tigard General Fund to offset the costs of auditing and enforcement of this tax.

3.70.040 Failure to Report and Remit Tax – Determination of Tax by Director

If any seller should fail to make, within the time provided in this chapter, any report of the tax required by this chapter, the Director shall proceed in such manner as deemed best to obtain facts and information on which to base the estimate of tax due. As soon as the Director shall procure such facts and information as is able to be obtained, upon which to base the assessment of any tax imposed by this chapter and payable by any seller, the Director shall proceed to determine and assess against such seller the tax, interest and penalties provided for by this chapter. In case such determination is made, the Director shall give a notice of the amount so assessed by having it served personally or by depositing it in the United States mail, postage prepaid, addressed to the seller so assessed at the last known place of address. Such seller may make an appeal of such determination as provided in section 3.70.045. If no appeal is filed, the Director's determination is final and the amount thereby is immediately due and payable.

3.70.045 Appeal

Any seller aggrieved by any decision of the Director with respect to the amount of such tax, interest and penalties, if any, may appeal pursuant to the Appeals to Civil Infractions Hearings Officer in Chapter 1.17 of this code, except that the appeal shall be filed within 30 (thirty) days of the serving or mailing of the determination of tax due. The hearings officer shall hear and consider any records and evidence presented bearing upon the Director's determination of amount due, and make findings affirming, reversing or modifying the determination. The findings of the hearings officer shall be final and conclusive, and shall be served upon the appellant in the manner prescribed in Chapter 1.17. Any amount found to be due shall be immediately due and payable upon the service of notice.

3.70.050 Refunds

1. Whenever the amount of any tax, interest or penalty has been overpaid or paid more than once, or has been erroneously collected or received by the City under this chapter, it may be refunded as provided in subparagraph 2 of this section, provided a claim in writing, stating under penalty of perjury the specific grounds upon which the claim is founded, is filed with the Director within one year of the date of payment. The claim shall be on forms furnished by the City.
2. The Director shall have twenty (20) calendar days from the date of receipt of a claim to review the claim and make a determination in writing as to the validity of the claim. The Director shall notify the claimant in writing of the Director's determination. Such notice shall be mailed to the address provided by claimant on the claim form. In the event a claim is determined by the Director to be a valid claim, in a manner prescribed by the Director a seller may claim a refund, or take as credit against taxes collected and remitted, the amount overpaid, paid more than once or erroneously collected or received. The seller shall notify Director of claimant's choice no later than fifteen (15) days following the date Director mailed the determination. In the event claimant has not notified the Director of claimant's choice within the fifteen (15) day period and the seller is still in business, a credit will be granted against the tax liability for the next reporting period. If the seller is no longer in business, a refund check will be mailed to claimant at the address provided in the claim form.
3. Any credit for erroneous overpayment of tax made by a seller taken on a subsequent return or any claim for refund of tax erroneously overpaid filed by a seller must be so taken or filed within three (3) years after the date on which the overpayment was made to the City.

4. No refund shall be paid under the provisions of this section unless the claimant established the right by written records showing entitlement to such refund and the Director acknowledged the validity of the claim.

3.70.055 Actions to Collect

Any tax required to be paid by any seller under the provisions of this chapter shall be deemed a debt owed by the seller to the City. Any such tax collected by a seller which has not been paid to the City shall be deemed a debt owed by the seller to the City. Any person owing money to the City under the provisions of this chapter shall be liable to an action brought in the name of the City of Tigard for the recovery of such amount. In lieu of filing an action for the recovery, the City of Tigard, when taxes due are more than 30 (thirty) days delinquent, can submit any outstanding tax to a collection agency. So long as the City of Tigard has complied with the provisions set forth in ORS 697.105, in the event the City turns over a delinquent tax account to a collection agency, it may add to the amount owing an amount equal to the collection agency fees, not to exceed the greater of fifty dollars (\$50.00) or fifty percent (50%) of the outstanding tax, penalties and interest owing.

3.70.060 Violation

1. Violation of this chapter shall constitute a Class 1 civil infraction which shall be processed according to the procedures established in Chapter 1.16 of this code, Civil Infractions. It is a violation of this chapter for any seller or other person to:
 - a. Fail or refuse to comply as required herein;
 - b. Fail or refuse to furnish any return required to be made;
 - c. Fail or refuse to permit inspection of records;
 - d. Fail or refuse to furnish a supplemental return or other data required by the City;
 - e. Render a false or fraudulent return or claim; or
 - f. Fail, refuse or neglect to remit the tax to the city by the due date.
2. Filing a false or fraudulent return shall be considered a Class B misdemeanor, subject to Chapter 7.28.020 of this code, Unsworn Falsification. The remedies provided by this section are not exclusive and shall not prevent the City from exercising any other remedy available under the law, nor shall the provisions of this ordinance prohibit or restrict the City or other appropriate prosecutor from pursuing criminal charges under state law or City ordinance.

3.70.065 Confidentiality

Except as otherwise required by law, it shall be unlawful for the City, any officer, employee or agent to divulge, release or make known in any manner any financial information submitted or disclosed to the City under the terms of this chapter. Nothing in this section shall prohibit:

1. The disclosure of the names and addresses of any person who is operating a licensed establishment from which marijuana or marijuana-infused products are sold or provided;
or

2. The disclosure of general statistics in a form which would not reveal an individual seller's financial information; or
3. Presentation of evidence to the court, or other tribunal having jurisdiction in the prosecution of any criminal or civil claim by the City or an appeal from the City for amount due the City under this chapter; or
4. The disclosure of information when such disclosure of conditionally exempt information is ordered under public records law procedures; or
5. The disclosure of records related to a business' failure to report and remit the tax when the report or tax is in arrears for over six (6) months or the tax exceeds five thousand dollars (\$5,000). The City Council expressly finds and determines that the public interest in disclosure of such records clearly outweighs the interest in confidentiality under ORS 192.501(5).

3.70.070 Audit of Books, Records, or Persons

1. The City, for the purpose of determining the correctness of any tax return, or for the purpose of an estimate of taxes due, may examine or may cause to be examined by an agent or representative designated by the City for that purpose, any books, papers, records, or memoranda, including copies of seller's state and federal income tax return, bearing upon the matter of the seller's tax return. All books, invoices, accounts and other records shall be made available within the City limits and be open at any time during regular business hours for examination by the Director or an authorized agent of the Director.
2. If the examinations or investigations disclose that any reports of sellers filed with the Director pursuant to the requirements herein have shown incorrectly the amount of tax accruing, the Director may make such changes in subsequent reports and payments, or make such refunds, as may be necessary to correct the errors disclosed by its examinations or investigations.
3. The seller shall reimburse the City for reasonable costs of the examination or investigation if the action disclosed that the seller paid 95 percent or less of the tax owing for the period of the examination or investigation. In the event that such examination or investigation results in an assessment by and an additional payment due to the City, such additional payment shall be subject to interest at the rate of 1 percent per month, or the portion thereof, from the date the original tax payment was due.
4. If any taxpayer refuses to voluntarily furnish any of the foregoing information when requested, the City may immediately seek a subpoena from the Tigard Municipal Court to require that the taxpayer or a representative of the taxpayer attend a hearing or produce any such books, accounts and records for examination.
5. Every seller shall keep a record in such form as may be prescribed by the City of all sales of marijuana and marijuana-infused products. The records shall at all times during the business hours of the day be subject to inspection by the City or authorized officers or agents of the Director.

6. Every seller shall maintain and keep, for a period of three (3) years, or until all taxes associated with the sales have been paid, whichever is longer, all records of marijuana and marijuana-infused products sold.

3.70.075 Forms and Regulations

The Director is hereby authorized to prescribe forms and promulgate rules and regulations to aid in the making of returns, the ascertainment, assessment and collection of said marijuana tax and in particular and without limiting the general language of this chapter, to provide for:

1. A form of report on sales and purchases to be supplied to all vendors;
2. The records which sellers providing marijuana and marijuana-infused products are to keep concerning the tax imposed by this chapter.

SECTION 2. Severability. The sections, subsections, paragraphs and clauses of this ordinance are severable. The invalidity of one section, subsection, paragraph, or clause shall not affect the validity of the remaining sections, subsections, paragraphs and clauses.

SECTION 3. Savings. Notwithstanding any amendment/repeal, the City ordinances in existence at the time any criminal or civil enforcement actions were commenced, shall remain valid and in full force and effect for purposes of all cases filed or commenced during the times said ordinance(s) or portions thereof were operative. This section simply clarifies the existing situation that nothing in this Ordinance affects the validity of prosecutions commenced and continued under the laws in effect at the time the matters were originally filed.

SECTION 4. This ordinance shall be effective 30 days after its passage by the Council, signature by the Mayor, and posting by the City Recorder.

PASSED: By _____ vote of all Council members present after being read by number and title only this _____ day of September, 2014.

Carol A. Krager, City Recorder

APPROVED: Approved by Tigard City Council this _____ day of September, 2014.

John L. Cook, Mayor

Approved as to form:

City Attorney

Ordinance No. _____

AIS-1923

8.

Business Meeting

Meeting Date: 09/23/2014

Length (in minutes): 5 Minutes

Agenda Title: APPOINT NORMA ALLEY AS DEPUTY RECORDER

Submitted By: Carol Krager, City Management

Item Type: Resolution

Meeting Type: Council
Business
Meeting -
Main

Public Hearing: No

Publication Date:

Information

ISSUE

Should Norma Alley be appointed as Deputy City Recorder?

STAFF RECOMMENDATION / ACTION REQUEST

In order to assure continuity of the job functions and services provided by the office of the City Recorder, Deputy Recorders are appointed to serve in the absence or unavailability of the City Recorder. Carol Krager was promoted from the position of Deputy Recorder to City Recorder after Cathy Wheatley retired. Ms. Alley will be scheduled to attend and take minutes periodically at council and City Center Development Agency meetings. In addition, she will assist with council packet preparation, meeting follow-up and local election support. She will also provide backup for the Records Management Specialist and assist in court as bailiff.

KEY FACTS AND INFORMATION SUMMARY

OTHER ALTERNATIVES

COUNCIL GOALS, POLICIES, APPROVED MASTER PLANS

DATES OF PREVIOUS COUNCIL CONSIDERATION

n/a

Fiscal Impact

Fiscal Information:

This position is budgeted full-time and supports the City Recorder and Records functions.

Attachments

Resolution

CITY OF TIGARD
TIGARD CITY COUNCIL
RESOLUTION NO 14-____

A RESOLUTION OF THE TIGARD CITY COUNCIL APPOINTING NORMA ALLEY AS
DEPUTY CITY RECORDER

WHEREAS, the office of the City Recorder is held by Carol Krager; and

WHEREAS, it is necessary from time to time for the City Recorder to be absent from City Hall; and

WHEREAS, it would be beneficial during such times when the City Recorder is absent to have individuals appointed as Deputy Recorder to assure continuity of service to the public, Mayor, City Council and staff; and

WHEREAS, Norma Alley has been hired to provide support in the City Recorder Office,

NOW THEREFORE, BE IT RESOLVED by the Tigard City Council that:

SECTION 1: Norma Alley is named as Deputy City Recorder. By virtue of this office, she is empowered by the City Council to act as City Recorder at any time in the absence or unavailability of the City Recorder.

SECTION 2: This resolution is effective immediately upon passage.

PASSED: This _____ day of September, 2014.

Mayor, City of Tigard

ATTEST:

City Recorder, City of Tigard

RESOLUTION NO. 14-____