



Appendix H. Infrastructure Funding Plan



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Memorandum

Date 3 June 2015
To Chris Neamtzu, City of Wilsonville
From Brian Vanneman, Leland Consulting Group
CC Joe Dills, Angelo Planning Group
Subject **Frog Pond Area Plan: Infrastructure Funding Strategy**
Project 5462 Frog Pond

INTRODUCTION AND EXECUTIVE SUMMARY

The Frog Pond Area Plan, led by the City of Wilsonville, will establish a vision for the 500-acre Frog Pond area and define expectations for the type of community it will be in the future. This memorandum is a part of the Frog Pond Area Plan and summarizes Leland Consulting Group's (LCG) infrastructure funding analysis and proposed strategy, which has been developed in collaboration with City of Wilsonville Community Development, Public Works, and Economic Development staff, and the Angelo Planning Group (APG) team. The types of infrastructure evaluated in this memorandum are transportation, sanitary sewer, water, stormwater, and parks.

Key findings and recommendations of this funding strategy include:

- **Funding strategies vary depending on the category and scale of infrastructure.** *“Local”* infrastructure will be paid for by developers, *“framework”* infrastructure such as Frog Pond arterial roads will be shared between developers and the City when oversizing is involved, and *“major off-site”* infrastructure will be built and paid for by the City through the Capital Improvement Projects (CIP) program. Descriptions of these three infrastructure categories and who pays for what infrastructure begins on page 4.
- **There are more than 40 different infrastructure projects proposed for the 500-acre Frog Pond Area.** The costs of these facilities have been estimated by DKS Associates (DKS), Murray, Smith & Associates, Inc. (MSA), and the City. Each of these facilities falls into one of the three categories listed above. A complete list of the infrastructure facilities and the recommended funding strategy for each begins on page 10.
- **This funding strategy defines two “reimbursement areas”—one for the West (“RA-W”) and East and South (“RA-E”) Neighborhoods—along with several infrastructure funding strategies that could be used in these areas.** In each reimbursement area, a number of framework infrastructure projects will benefit properties throughout the area. Therefore, the costs of these projects should be equitably distributed among multiple property owners, since there is currently no major, well-capitalized master developer capable of undertaking major infrastructure improvements within Frog Pond. For example, upgrades to Boeckman and Stafford Roads, and two new Neighborhood Parks, will benefit the entire West Neighborhood (and the City as a whole), and their cost cannot be carried by any single property owner.
- **The primary tools by which framework projects in the RA are likely to be funded are developer-initiated reimbursement districts, local improvement districts (LID), and city-initiated reimbursement districts.** These options can also be mixed and matched—both reimbursement districts and LIDs could be implemented to fund different projects in RA-W and –E. Both reimbursement districts and LIDs are tools whereby infrastructure is built upfront by a developer or the City, and the developer is then reimbursed for cost via fees or assessments from property

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owners over time. A description of framework infrastructure and potential funding strategies begins on page 5.

- **The total cost of framework projects proposed to be paid for through reimbursement districts or LIDs is estimated to be \$10.6 and \$11.0 million respectively in the RA-W and RA-E, so these projects will therefore be a significant funding obligation for the developer or City.** However, these investments will be phased; while the RA-W improvements could be needed within the next few years, the RA-E may not be needed for some time.
- **Development in the Frog Pond area will generate significant SDC revenues, ranging from \$46.8 to \$55.4 million depending on which land use option is selected.** Several different variations of CIP-related revenues and costs are evaluated beginning on page 14. In this context, “revenues” are Systems Development Charges (SDCs, fees paid by developers when applying for building permits) and “costs” are infrastructure paid for by the CIP fund. (Costs associated with reimbursement districts or LIDs are not considered in this calculation since they will be financed and reimbursed separately.) If projected revenues from all three Frog Pond neighborhoods (West, East, and South) are taken into account, SDC revenues should exceed allocated CIP costs. If only the West Neighborhood is considered, then there is a funding gap for transportation, of \$1 million for Option D and \$1.95 million for Option E, due to CIP contributions to the Boeckman Road Bridge, and Boeckman and Stafford Road Urban Upgrade projects. There is a small sanitary sewer surplus (just under \$160,000 for Option E). Water, Stormwater, and Parks SDCs show a surplus.
- **The proposed reimbursement areas will likely pass on most of the framework infrastructure costs to the developers and homebuilders who invest in Frog Pond via a cost allocation (fee or assessment) for each unit of housing.** Because different costs will be passed on to the West and East/South Neighborhoods, and there are different land use options (D and E), this per-unit cost allocation can vary. In the West Neighborhood, this reimbursement district fee is likely to be between \$14,100 (Option D) and \$17,000 (Option E), for the East and South Neighborhoods, it is likely to be between (\$7,500 and \$9,100), since more homes and commercial development are planned East of Stafford Road, but comparatively less infrastructure costs. This calculation is shown on page 18. It should be noted that there are different approaches (i.e., per acre) to calculating proportionate shares for reimbursement districts. For purposes of this memo, a per-door cost has been used.

TYPES OF INFRASTRUCTURE

This memorandum proposes a funding strategy for the following five types of infrastructure: transportation, sanitary sewer, water, stormwater, and parks. These are the types of infrastructure that are essential to new residential communities, and the City will play some role in the provision of this infrastructure. Collectively, this infrastructure includes arterial and collector roads, sanitary sewer pipes and pump stations, water pipes and reservoirs, stormwater detention ponds and detention basins, and trails and parks. Other types of infrastructure—particularly utilities such as power and cable—will be needed for Frog Pond, but are not paid for in whole or part by the City of Wilsonville and are therefore not considered here.

Infrastructure cost estimates for Frog Pond were completed by DKS Associates (transportation), Murray, Smith & Associates, Inc. (sanitary sewer, water, and stormwater), and the City of Wilsonville (parks). The City of Wilsonville’s Engineering Division provided actual costs (engineering estimates or contractor bids) for more than 20 completed residential subdivision projects that were built in the city between 2005 and 2014. The primary sources for the cost estimates used here are listed below. Additional supplementary sources used can be found in the Appendices.

- *Frog Pond Area Plan – Future Transportation Analysis*, September 24, 2014, DKS Associates, and subsequent refinements to cost estimates (received May 27, 2015).
- *Frog Pond Area Plan – Concept Plan Infrastructure Analysis*, Murray, Smith & Associates, Inc., March 18, 2015.

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Figures 1 and 2 below are representative images from the analysis prepared by DKS and MSA that show the location and types of infrastructure planned for Frog Pond. They are intended to be illustrative rather than a complete catalog of infrastructure. Figure 1 shows transportation infrastructure such as streets and trails. Figure 2 shows the sanitary sewer, water, and stormwater infrastructure proposed for the Frog Pond West Neighborhood (as red, blue, and green lines, respectively).

This memorandum does not contain detailed descriptions or specifications about the infrastructure to be funded. For example, DKS' recommendation is that the Advance Road Urban Upgrade project would upgrade "the existing road to a 3-lane cross section with sidewalks and bike lanes, which would be similar for either a Collector or Minor Arterial..." For such detailed descriptions of Frog Pond infrastructure, please consult the work prepared by DKS, MSA, and Angelo Planning Group (APG).

Figure 1. Auto, Bicycle and Pedestrian Transportation Infrastructure Diagram (DKS)

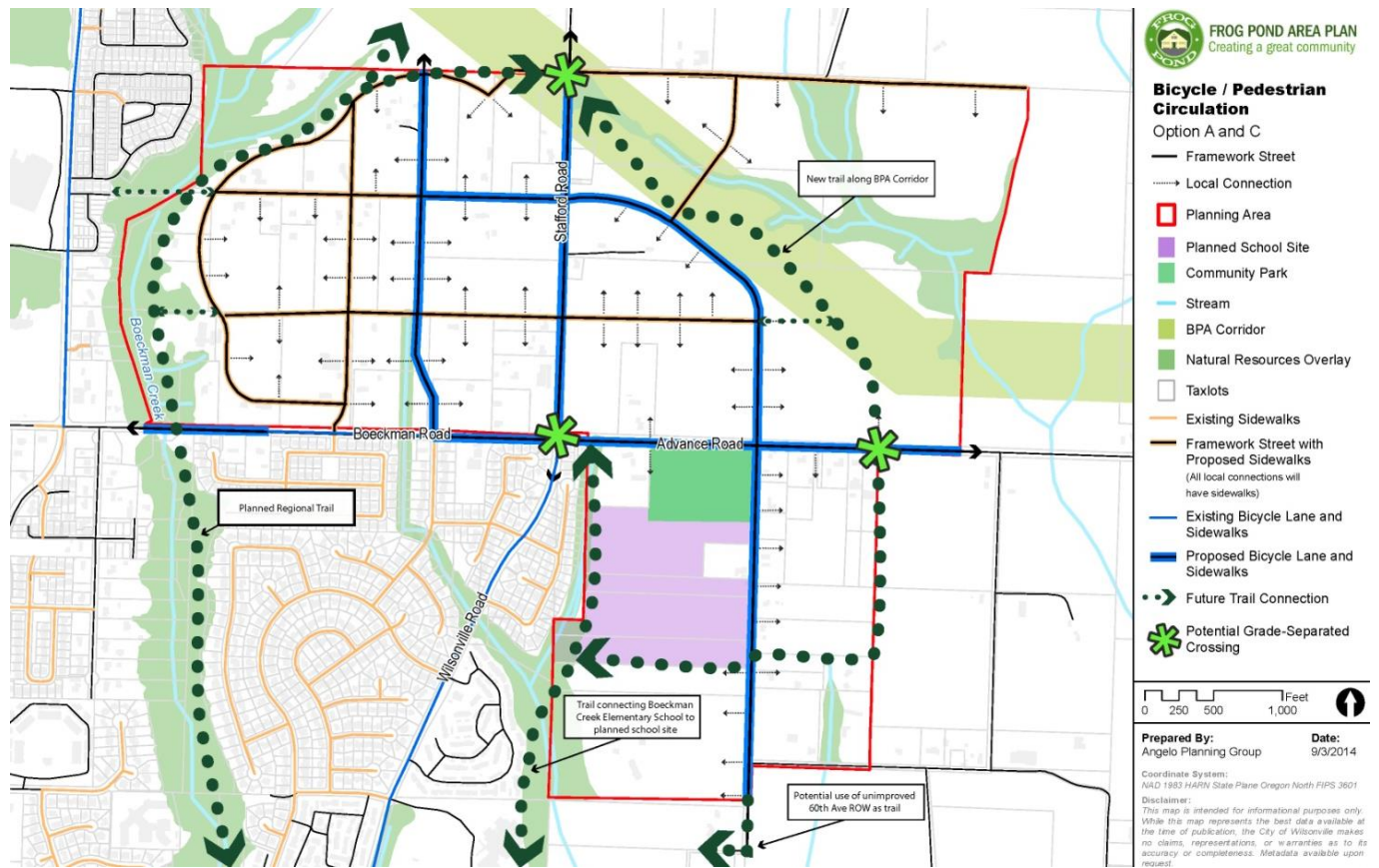
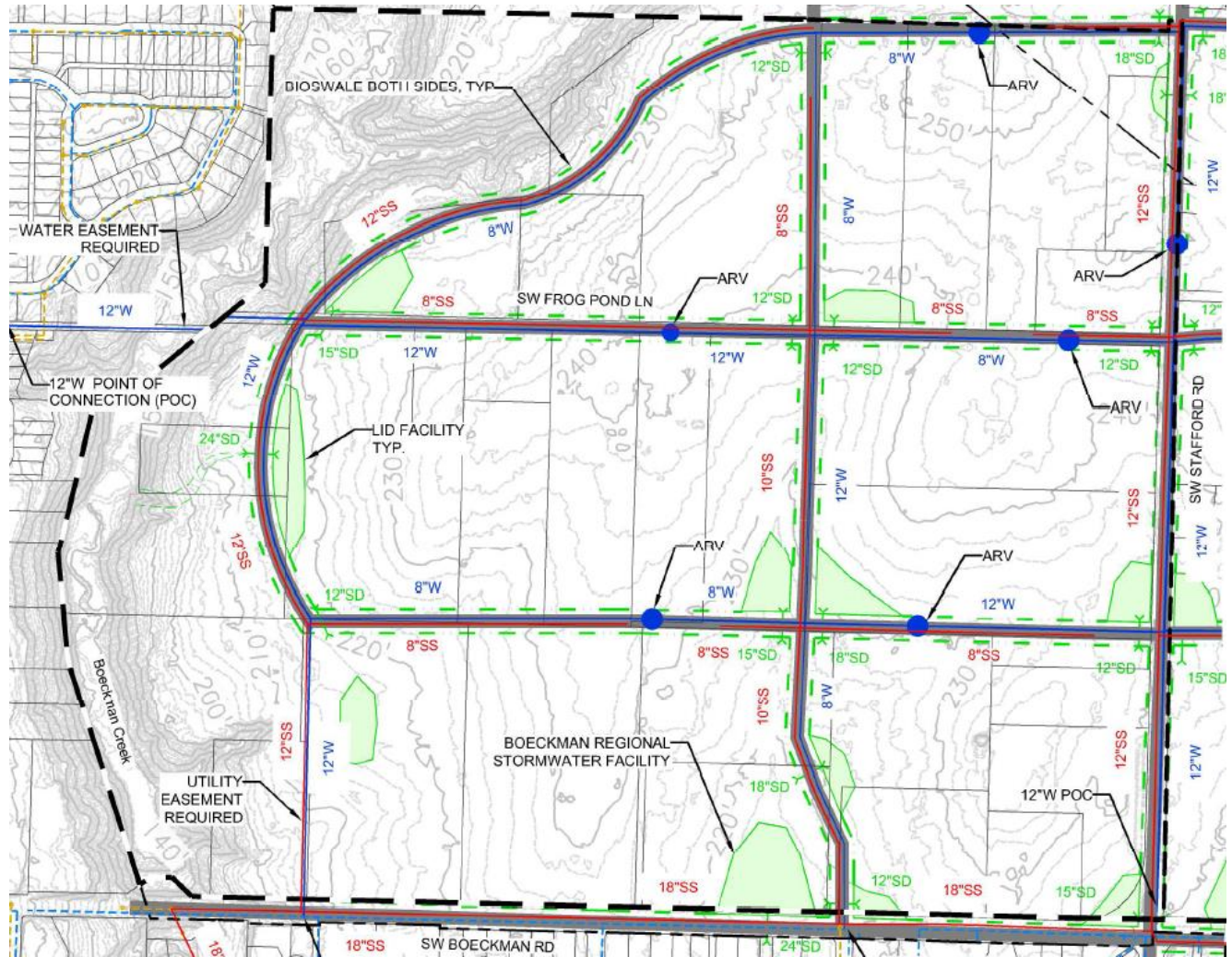


Figure 2. Frog Pond Composite Utility Plan – West Neighborhood (MSA)



INFRASTRUCTURE CATEGORIES AND FUNDING APPROACHES

There are three different categories or scales of infrastructure, which are listed below. It is important to distinguish between each of these infrastructure categories because different approaches to and sources of funding (e.g., City or developer) are typically used for each of the different categories. This funding strategy also recommends different approaches for each of these infrastructure categories.

- “Local” or “on-site” infrastructure;
- “Major off-site” infrastructure; and
- “Framework” or “major framework” infrastructure.

Local or On-Site Infrastructure

- “Local” or “on-site” infrastructure is located on or adjacent to a development property and largely serves the development (residential or commercial) that is on the site. This infrastructure may be of any type—transportation, sanitary sewer, water, stormwater, or parks.

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- The City's policy is that this infrastructure is built and largely paid for by developers. The City may participate via SDC credits for oversized components (explained in the Framework Infrastructure section below).
- An example of local infrastructure is a local street 8-inch water line or sewer line that will serve a development site.
- The costs of the most local level of on-site infrastructure (with no oversized component) are not considered in this funding strategy since these are the responsibility of individual developers. These developer costs, are however, considered separately, in the Land Development Financial Analysis memorandum.
- This funding strategy recommends that developers continue to pay for local infrastructure up front, while receiving SDC credits for oversized components, in keeping with the City's policies.

Major Off-Site Infrastructure

- Major off-site infrastructure is infrastructure that is located outside of the 500-acre Frog Pond concept plan boundary.
- Examples include the West Side (water) Reservoir, Boeckman Trunk Sewer Line, Memorial Park Pump Station (MPPS), Boeckman Road Bridge, and Stafford Road—65th Ave Intersection Improvements.
- One reason this infrastructure is different from framework infrastructure is that a greater share of its capacity is needed to serve other parts of the City. Put another way, these are projects of citywide importance. For example, MSA has estimated that 25 percent of the capacity of the West Side Reservoir is needed for Frog Pond; the other 75 percent is needed to support growth in other parts of the City.
- For this reason, major off-site infrastructure is built and paid for by the City of Wilsonville through the CIP. SDCs are the primary source of funding for CIP facilities intended to provide capacity for growth; additional funding may come from utility rate funds, general fund reserves, transfers from other government agencies, and urban renewal funds (within urban renewal areas).
- Information on the City's capital projects program can be found at:
<http://www.ci.wilsonville.or.us/DocumentCenter/View/7317>

Framework Infrastructure

- "Framework" or "major framework" infrastructure is larger than local infrastructure, serves many properties within Frog Pond, and is located within or adjacent to the Frog Pond boundary.
- Examples include upgrades to Boeckman and Stafford Roads, which will serve all of the homes planned for Frog Pond, as well as (to some degree) residents and businesses elsewhere in the City. Another example is the "oversized" water line in Stafford Road.
- In terms of scale and location, framework infrastructure is between local and major off-site infrastructure. However, there are likely to be more policy and logistical choices associated with framework than local or major off-site infrastructure.
- There is a developer and City share of most framework infrastructure, meaning that some part of the costs is paid for by both parties. This is in recognition that this larger infrastructure serves both the immediately surrounding development, as well as current and future residents and businesses. The developer share is the minimum size of the facility that is required by the City to serve the proposed development. For roads, the minimum required size is 24 feet from face of curb, or 48 feet if developers control both sides of the road. For sewer and water pipes, the minimum required pipe size

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is 8 inches. The size of the facility beyond this minimum required size is the “oversize” amount, which is the City’s responsibility.

- These facilities may be built and paid for by developers, or by the City. If developers build the facility, they typically pay directly for the entire facility; the City contributes its (oversize) share via SDC credits, which developers can count against the SDC fees they owe at the time of building permit issuance. Several additional framework infrastructure funding strategies are described in the section below.
- This funding strategy recommends that the City consider taking an assertive and creative approach to coordinate the building of framework infrastructure and consider the tools described below, such as developer- and City-initiated reimbursement districts, and local improvement districts (LIDs). This is in part because there is at present no master developer at Frog Pond, and thus no known, well-capitalized party capable of financing major framework infrastructure.

FRAMEWORK INFRASTRUCTURE FUNDING STRATEGIES

While the appropriate funding strategy for local and major off-site improvements is relatively straightforward (developer and CIP funding, respectively), funding for framework infrastructure requires more careful consideration for several reasons:

- Framework infrastructure costs are significant—greater than local infrastructure—and must be paid for early in the development process, while the revenues that offset those costs (such as fees, lot or home sales) come later and may take place over many years, inferring that a financing mechanism or other approach is needed.
- The infrastructure will benefit multiple properties. The costs and benefits of infrastructure are not necessarily evenly divided among parties. For example, a 2.5-acre neighborhood park could theoretically be sited on a 5-acre property. While the land and construction cost for this park would typically fall to the developer, property owners and future residents throughout the West Neighborhood will benefit from the park. Thus, the cost would be concentrated and the benefit widespread. A mechanism that can distribute the costs among multiple parties is therefore needed.
- At this time, the City cannot rely on a “master developer” who would fund major projects as part of developing a significant part of Frog Pond West. As stated above, there is as yet no master developer or major land owners in the Frog Pond Area and thus no known, well-capitalized party capable of financing such major framework infrastructure. Currently, property is divided amongst many land owners. There are 26 property owners in the West Neighborhood, and the average property size is 5 acres. The largest ownership is 25 acres and the smallest is 0.9 acres.
- City action that helps to implement framework infrastructure will show momentum and public commitment to moving Frog Pond forward in a phased and logical manner. Cities often use their ability to invest in infrastructure to strategically advance the development of employment, residential, and mixed use areas.
- Without a larger funding strategy, small early developers in Frog Pond could struggle to make the infrastructure improvements necessary to develop their sites.

Reimbursement Areas

Given this context for framework infrastructure, an important component of this funding strategy is two “reimbursement areas”—one that encompasses infrastructure related to the West Neighborhood (RA-W), and one that encompasses infrastructure related to the East and South Neighborhoods (RA-E).

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These reimbursement areas could incorporate some or all of the following specific funding tools, several of which are described in greater detail below:

- Reimbursement districts (RD), either developer or city initiated. Within each reimbursement *area* (West and East), numerous individual reimbursement *districts* could exist.
- LID, either developer or city initiated; or Advance Finance Districts (AFD), a variation on LID.
- Supplemental SDC.
- Expansion of the types of facilities that are considered SDC creditable by the City.
- Direct CIP investments.

The basic principles behind RD, LID, and supplemental SDCs are relatively similar: infrastructure is built and paid for in advance, and fees paid by property owners or developers over time serve to pay the principal, interest, and administrative costs associated with funding the original infrastructure.

There are approximately \$10.6 million of major framework project costs within the RA-W, associated with the projects listed below. A detailed list of all projects, and the portion that RA-W would pay, is included in Tables 1 through 3, which begin on page 11.

- Two Neighborhood Parks in the West Neighborhood;
- Boeckman Road Urban Upgrade, including associated sewer and water lines in the right of way;
- Stafford Road Urban Upgrade, including associated sewer and water lines in the right of way; and
- Boeckman/Stafford Traffic Signal.

There are approximately \$11.0 million of major framework project costs within the RA-E, as shown in Tables 1 through 3.

Improvements and funding mechanisms for the RA-W are likely to be needed before RA-E. Improvements and funding mechanisms for RA-W could be initiated following the adoption of the Frog Pond Area Plan and subsequent West Neighborhood Master Plan (Phase 2 of this project). The RA-E would only be initiated when the East and South Neighborhoods are brought into the Urban Growth Boundary and ready for development, which could be many years.

Reimbursement Districts

A reimbursement district is an area within which one party (a developer or the City) builds infrastructure that benefits multiple property owners. The other benefiting property owners pay a reimbursement fee—a pro rata share of the infrastructure costs (determined on a per-unit, lineal foot, or per-acre basis)—to the original developer or City, typically at the time when property owners seek public works permits for development. A single reimbursement district could cover all of the infrastructure in RA-W, or there could be numerous districts to cover different pieces of road, park, sewer, and water infrastructure. Reimbursement district fees are in addition to SDCs.

The City has used reimbursement districts in the past, for example, the City formed the Coffee Lake Drive Sewer Improvements Reimbursement District in 2012. The City's Reimbursement District policies are set forth in section 3.116 of the City Code.

LCG recommends that the following approaches and mechanisms be included in reimbursement districts, which should help to mitigate the costs and risk to the City:

- Developers should be encouraged to form and provide funding for reimbursement district improvements.
- RA-W improvements can be phased. For example, Boeckman Road might be improved before Stafford Road, which would enable developers or the City to stagger or phase its investments and take on smaller amounts of debt at any one time.

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- Include an inflationary factor in the calculation of the reimbursement fee, which can help cover the developers or the City's interest carrying costs over time.
- Be prepared to extend the "sunset" time period for the reimbursement district, so that developers or the City can recapture all costs. The sunset time period is pre-set at ten years currently, and can be extended by the City Council for "good cause."

In a developer-initiated reimbursement district, a developer pays directly for the entire facility; the City contributes its (oversize) share via Systems Development Charge (SDC) credits, which developers can count against the SDC fees they owe at the time of building permit issuance.

In a city-initiated reimbursement district, the City would build and pay for the entire facility upfront. The developer (non-oversized) portion would then be charged back to developers via a reimbursement district.

In either case, the upfront capital that pays for reimbursement district improvements must be advanced by developers (from private sources) or the City (from the CIP fund, general fund, or other source), without a secure form of repayment. Therefore, there is financial risk to the party that initiates the district and developers may avoid initiating large-scale reimbursement districts. If development is slower than expected, the developer or City will have to carry the cost of debt service payments for a longer period of time. Fee revenue will also be lower if the amount of development is less than expected (for example, if a property owner is permitted to build 100 homes but only chooses to build 50). However, this particular issue could be addressed by different methodologies, including calculating costs on a per acre basis.

Local Improvement Districts

An LID is similar to a reimbursement district in that the cost of infrastructure that benefits multiple property owners is divided among those property owners in an equitable manner, and paid by an assessment. Like reimbursement districts, LIDs may be initiated by property owners or the City. One or more LIDs could be used in RA-W and RA-E, in conjunction with or in place of reimbursement districts.

LIDs differ from reimbursement districts in the following important ways:

- Typically, a majority (50% plus one) of property owners (weighted by the amount of area they own) must sign a petition in support of initiating the district. (The establishment of a reimbursement district is a discretionary decision made by the city council.) Naturally, this requires the support of property owners, and outreach and discussion among property owners may require considerable time.
- Assessments may be paid in a lump sum or financed over time at the property owner's discretion. Assessments are due upon allocation of costs. As noted above, fees are typically due later in a reimbursement district, when property owners seek public works permits.
- The LID creates a lien against each individual's property until all assessments are paid in full. This is seen as a negative by lenders, whose strong preference is that there be no other claims on the property on which they are making a loan, and often by property owners. This is a positive since the lien creates a secure income stream against which the City can issue bond debt. Whether an LID is initiated by property owners or the City, LID debt is always issued by a government agency, and thus takes advantage of low interest rates.

Thus, LIDs are a financing mechanism that can create capital for construction. By contrast, the capital for a reimbursement district must be advanced by the City (from the City's various infrastructure-related funds and may or may not include issuance of City debt) or developers (from private sources).

Additional details regarding LIDs can be found in Oregon Revised Statutes (ORS) Chapter 223: Local Improvements and Works.

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Other Approaches to Framework Infrastructure

In addition to the reimbursement district and LID funding tools described above, the following tools help with the funding of framework infrastructure in the two reimbursement areas:

- *Supplemental SDC.* The City could establish an additional, supplemental SDC specific to Frog Pond. Functionally, this would be similar to a reimbursement district that covered all of the major framework costs associated with the entire RA-W or RA-E—a new fee would be put in place to help pay for these costs.
- *Expansion of the types of facilities that are considered SDC creditable by the City.* For example, certain park improvements could be considered SDC creditable, which would provide an extra incentive for developers to make those improvements. Such an approach was taken in Villebois, where certain park improvements were creditable. This could reduce SDC receipts which would be used to help fund CIP projects elsewhere.
- *Direct CIP investments.* As described elsewhere, the City could potentially fund additional projects or portions of projects, such as the Boeckman or Stafford Road upgrades, through the CIP. An analysis of each infrastructure component may be appropriate to determine if doing so would require deferring or reprioritizing other projects already on the list.

OTHER FUNDING SOURCES

In a small number of cases, there are additional funding sources that are expected to supplement those described above. These additional funding sources are:

- **West Linn - Wilsonville School District.** Two schools will be built within Frog Pond, and the school district is anticipated to pay for some infrastructure needed to serve these schools, such as improvements to Advance Road, Boeckman-Stafford traffic signal, South Neighborhood Collector roads, 12" water main extension, and a pump station and force main. It is important to note that what infrastructure the District will build is subject to the school project's plans and phasing, and the City's review of impacts—all of which are in the pre-application stages. All citations of costs and revenues related to the schools are preliminary and subject to change.
- **Clackamas County.** The County has identified the Stafford Road—65th Avenue Improvements in the agency's transportation system plan. While this project is not likely to be built in the short or medium term (before 10 years), it is included in the list of relevant (off-site) projects in this strategy, and this strategy assumes that the County will take a major role in funding and building the project, with some participation from the City. The cost estimate used in this plan was developed by the County.
- **Urban Renewal.** No City of Wilsonville urban renewal funding for Frog Pond has been assumed as a part of this funding strategy. Conversations with City staff indicate that the City's urban renewal task force has identified investments elsewhere in the City that are likely to be higher priorities.
- **Grants and investments by other government agencies.** Grants are a potential funding source. However, no specific grants have yet been identified that the planning team believes will provide significant infrastructure funding for Frog Pond. Metro's Metropolitan Transportation Improvement Program (MTIP) is one such grant program, which guides how a range of federal and local transportation funds are invested in the region. MTIP funds could be used for major projects associated with Frog Pond, such as the Boeckman Road Bridge, but the collective judgment of City staff and the planning team is that it will be difficult to secure such funds since demand for MTIP funds typically outstrips availability. Nonetheless, it may be worthwhile for project stakeholders to continue to pursue grants and investments by other government agencies.

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LIST OF FROG POND INFRASTRUCTURE PROJECTS

Tables 1 through 3 below contain a list of all the infrastructure projects associated with Frog Pond. Projects are grouped by type—transportation, sanitary sewer, water, stormwater, and parks—and then by category—local, framework, and major off-sites.

The “Funding Approach and Notes” column describes LCG’s recommended approach to funding each project, which has been developed in collaboration with the City’s Community Development and Public Works staff and APG team. Much of the information in this column is a recap of the Infrastructure Categories section above. An important premise is that the funding strategy for area within the UGB (the West Neighborhood, Schools, and community park) must stand on its own. The timing of development of the urban reserve areas is too uncertain to rely on for funding of projects that are needed for development of the area within the UGB.

The “Estimates” column shows who produced the cost estimate; in some cases, two cost estimates were completed. The costs columns show what entity or fund is expected to pay for the project.

Total estimated developer costs for RA-W and RA-E are highlighted in yellow at the bottom of Table 3.

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Table 1. Frog Pond Infrastructure Cost Summary - Transportation

Project Category and Name		Who Builds?	Timing Facility Built with:	Funding Approach and Notes	Estimates by		Total Cost Est	City Costs			Developer Costs			Other Costs		City Cost Attributable to FP	
					Est 1	Est 2		CIP or Other Fund	SDC Credits	Collectors Locals	RA West (RA-W)	RA East (RA-E)	Amount	Source			
Transportation																	
Local	West Neighborhood Collectors	Developer	West	Developers build and receive SDC credits for oversize (generally, roadway > 24' or 48', and bike lanes).	DKS	City	\$9,510,000		\$1,585,000	\$7,925,000						\$0	
	East Neighborhood Collectors	Developer	East		DKS	City	\$8,160,000		\$1,360,000	\$6,800,000						\$0	
	South Neighborhood Collectors	Developer	South	As above; school also pays for proportionate share.	DKS	City	\$3,900,000		\$450,000	\$2,650,000			\$800,000	School D.		\$0	
	Local roads	Developer	Varies	Developers build. No city costs, so costs are not included here.		City	-									-	
Framework	Boeckman Road Urban Upgrade UU-02 (Part 1)	City	West	City builds. South side is city responsibility, north side is developers responsibility and is charged to RDW.	DKS		\$3,700,000	\$1,850,000			\$1,850,000					\$1,850,000	
	Boeckman/Stafford Traffic Signal UU-02 (Part 2)	City	West	City builds, charges proportionate shares to RDW, RDE, and school district; city pays for remainder of project via CIP. This could be a gateway treatment than a roundabout.	DKS		\$500,000				\$70,000	\$305,000	\$125,000	School D.		\$0	
	Stafford Road Urban Upgrade UU-06 Phase 1	City	West	City builds with West Neighborhood; places reimbursement district on RDW, City (CIP) pays for 14' of 38'.	DKS		\$3,000,000	\$1,000,000			\$2,000,000					\$1,000,000	
	Advance Road Urban Upgrade UU-P1 Phase 1A and 1B	City	School	Phase 1A and 1B is the facilities on the south side of Advance that are west of 60th. City builds, school district pays pro rata share.	DKS		\$1,087,500	\$543,750					\$543,750	School D.		\$0	
	Stafford Road Urban Upgrade UU-06 Phase 2	City	East	City builds with East Neighborhood, places reimbursement district on RDE, developers pays for all additional roadway.	DKS	City	\$2,000,000					\$2,000,000				\$0	
	Potential Single-Lane Roundabout or Gateway Treatment on Stafford Road	City	East	Project is only built when E neighborhood develops. City builds, charges proportionate share to RDE. This could be more of a gateway treatment than a roundabout.	DKS		\$600,000	\$600,000									\$0
	Advance Road Urban Upgrade UU-P1 Phase 2	City	East	Phase 2 is the facilities on the north side of Advance, and all facilities (north and south) east of 60th. City builds, pays for portion outside of FP (south side), charges developer costs to RDE.	DKS		\$3,262,500	\$543,750				\$2,718,750					\$0
Major Off Site	Boeckman Road Bridge Improvements UU-01	City	TBD	City builds via CIP. This project is of citywide importance and addresses safety issues.	OBEC		\$12,200,000	\$12,200,000								\$4,270,000	
	Stafford Rd./65th Ave Improvements SI-03	County	TBD	Future project; not directly associated with FP. 10% attributable to FP.	County		\$5,500,000	\$1,000,000		\$0			\$4,500,000	County		\$100,000	
Subtotal							\$53,420,000	\$17,737,500	\$3,395,000	\$17,375,000	\$3,920,000	\$5,023,750	\$5,968,750			\$8,907,500	

Source for all subsequent tables and figures: Leland Consulting Group, based on cost estimates provided by DKS, MSA, and City of Wilsonville.

All figures and funding strategies are preliminary and subject to change.

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Table 2. Frog Pond Infrastructure Cost Summary – Sanitary Sewer and Water

Project Category and Name		Who Builds?	Timing Facility Built with:	Funding Approach and Notes	Estimates by		Total Cost Est	City Costs		Developer Costs			Other Costs		City Cost Attributable to FP
					Est 1	Est 2		CIP or Other Fund	SDC Credits	Collectors Locals	RA West (RA-W)	RA East (RA-E)	Amount	Source	
Sanitary Sewer															\$0
Local	Major Sanitary Lines: West	Developer	West	Developers build, receive SDC credits for oversized components (>8")	MSA	City	\$1,370,000		\$80,000	\$1,290,000					\$0
	Major Sanitary Lines: East	Developer	East		MSA	City	\$630,000		\$40,000	\$590,000					\$0
	Major Sanitary Lines: South	Developer	South		MSA	City	\$660,000		\$35,000	\$625,000					\$0
	Local SS (8" and smaller)	Developer	Varies	Developers build. No city costs, so costs are not included here.	MSA	City	-								-
Framework	Boeckman Road SS	City	West	City builds as part of road rebuild, charges developer (non-oversize) portion to RDW.	MSA		\$680,000	\$120,000			\$560,000				\$120,000
	Stafford Road SS	City	West	City builds with Stafford Road Phase 1, charges developer (non-oversize) costs to RDW and RDE. Rough proportionality of 1/3 demand in West, and 2/3 in East assumed here.	MSA		\$640,000	\$50,000			\$196,667	\$393,333			\$50,000
	Advance Road SS	City	School	City builds, charges developer (non-oversize) portion to RDE. This project only extends to 60th Ave; SS to the east is not oversized.	MSA		\$780,000	\$40,000				\$740,000			\$40,000
	Pump station and force main	School	School	School builds, serves school properties.	MSA		\$1,290,000						\$1,290,000	School D.	\$0
Major Off Site	Boeckman Trunk Sewer	City	East	Major off site project, paid by City via CIP. 52% attributable to FP. Likely does not need to be built for the West Neighborhood, Schools, and Parks alone; can be built with East and South Neighborhoods.	MSA		\$8,000,000	\$8,000,000		\$0					\$4,160,000
	Memorial Park Pump Station	City	West	Major off site project, paid by City via CIP. 48% attributable to FP; however project is not growth related per se; it is in the flood plain and should be upgraded. Does not need to be in place until 40% of West Neighborhood and School is in place.	MSA		\$5,200,000	\$5,200,000		\$0					\$2,496,000
	Subtotal						\$19,250,000	\$13,410,000	\$155,000	\$2,505,000	\$756,667	\$1,133,333	\$1,290,000		\$6,866,000
Water															\$0
Local	Major Water Lines: West	Developer	West	Developers build, receive SDC credits for oversized components (>8" pipe size).	MSA	City	\$2,580,000		\$460,000	\$2,120,000					\$0
	Major Water Lines: East		East		MSA	City	\$2,580,000		\$470,000	\$2,110,000					\$0
	Major Water Lines: South		South		MSA	City	\$1,860,000		\$330,000	\$1,530,000					\$0
	Local Water (8" and smaller)	Developer	Varies	Developers build. No city costs, so not included here.	MSA	City	\$0								\$0
Framework	Boeckman Road W	City	NA	NA. Water line in Boeckman already exists.	MSA		\$0								\$0
	Stafford Road W	City	West	Same as Stafford SS. City builds with Stafford Road Phase 1, charges developer (non-oversize) costs to RDW and RDE. Rough proportionality of 1/3 demand in West, and 2/3 in East assumed here.	MSA		\$1,080,000	\$200,000			\$293,333	\$586,667			\$200,000
	Advance Road W	Shared	School	City builds, charges developer (non-oversize) portion to RDE.	MSA		\$890,000	\$160,000				\$730,000			\$160,000
Major Off Site	West Side Reservoir	City	West	Major off site project, paid by City via CIP. 25% attributable to FP.	MSA		\$5,800,000	\$5,800,000							\$1,450,000
	Subtotal						\$14,790,000	\$6,160,000	\$1,260,000	\$5,760,000	\$293,333	\$1,316,667	\$0		\$1,810,000

Source for all subsequent tables and figures: Leland Consulting Group, based on cost estimates provided by DKS, MSA, and City of Wilsonville. All figures and funding strategies are preliminary and subject to change.

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Table 3. Frog Pond Infrastructure Cost Summary – Stormwater and Parks

Project Category and Name	Who Builds?	Timing Facility Built with:	Funding Approach and Notes	Estimates by		Total Cost Est	City Costs			Developer Costs			Other Costs		City Cost Attributable to FP
				Est. 1	Est. 2		CIP or Other Fund	SDC Credits	Collectors Locals	RA West (RA-W)	RA East (RA-E)	Amount	Source		
Stormwater															\$0
Local	Local storm detention, on development sites.	Developer	Varies	Developers build. No city costs, so not included here.	MSA	City	\$0			\$0					\$0
Major	Boeckman Road regional stormwater facility	NA	NA	Included in DKS' roadway cost estimates	MSA	DKS	\$0								\$0
Framework	Stafford Road regional stormwater facility	NA	NA	"	MSA	DKS	\$0								\$0
	Subtotal						\$0	\$0	\$0	\$0	\$0	\$0	\$0		\$0
Parks															\$0
Local	Frog Pond Neighborhood Park, P16, West	City	West	City acquires land, pays for construction, charges cost to RDW. Cost estimates include land and construction costs.	City		\$3,375,900				\$3,375,900				\$0
	Frog Pond Neighborhood Park, P17, West	City	West	As above. Linear park with fewer built amenities, adjacent or connected to the Boeckman Creek Trail.	City		\$2,286,900				\$2,286,900				\$0
	Frog Pond East Neighborhood Park	City	East	As above, city charges cost to RDE.	City		\$3,375,900				\$3,375,900				\$0
	Boeckman Creek Trail, RT-01A	City	West	Developer builds, receives City share (2/3) from either SDC credits (assumed here) or CIP.	DKS		\$850,000		\$570,000	\$280,000					\$0
	South Neighborhood Trail	City	East		DKS		\$700,000		\$460,000	\$240,000					\$0
	BPA Easement Trail	City	East	City builds since trail is in BPA right of way, charges developer portion (1/3) to RDE.	DKS		\$670,000	\$450,000				\$220,000			\$450,000
	LT-P5 New School Site Trail	City	School	School builds and pays for this trail.	DKS		\$700,000						\$700,000	School D.	\$0
Framework	Advance Rd. School Community Park, P18	City	West	Major project, paid via City CIP. 25% attributable to FP.	City		\$5,410,000	\$5,410,000							\$1,352,500
	Subtotal						\$17,368,700	\$5,860,000	\$1,030,000	\$520,000	\$5,662,800	\$3,595,900	\$700,000		\$1,802,500
Total Costs							\$104,828,700	\$43,167,500	\$5,840,000	\$26,160,000	\$10,632,800	\$11,069,650	\$7,958,750		\$19,386,000

Source for all subsequent tables and figures: Leland Consulting Group, based on cost estimates provided by DKS, MSA, and City of Wilsonville.

All figures and funding strategies are preliminary and subject to change.

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CIP COSTS AND REVENUES

This section compares estimates of the System Development Charge (SDC) revenues that would be generated by development in Frog Pond, with the Capital Improvement Projects (CIP) costs associated with Frog Pond, in order to estimate a funding surplus or gap for the City.

Since the primary revenue source for Capital Improvements Projects is SDCs—paid when building permits are obtained—these estimates depend in part on the land use density option selected. The estimates also depend on whether we consider the entire Frog Pond Area, or just the West Neighborhood. Note that in cases where current SDCs do not meet CIP needs, SDCs can be increased, or supplemental SDCs or reimbursement fees can be assigned to particular areas.

Table 4 below shows the two most recent land use options prepared by Angelo Planning Group, Options D and E. Option D is the working draft Concept Plan that was shared at the recent Open House. Option E is a lower density option that has been prepared for Planning Commission review. The primary difference in the two options, from an infrastructure funding point of view, is the amount of single family housing—Option D has approximately 21 percent more dwelling units, and therefore, significantly more SDC revenue.

Table 4. Land Use Options D and E

	D	E	
Frog Pond - All Neighborhoods			
Single Family (units)	2,078	1,716	dus
Multifamily (units)	-	-	dus
Commercial Area (sf)	69,150	69,150	SF
Elementary School (sf)	67,000	67,000	SF
Middle School (sf)	92,500	92,500	SF
Community Parks	10.0	10.0	acres
Neighborhood Parks	7.5	7.5	acres
West Neighborhood	754	625	dus
South and East Neighborhoods	1,324	1,091	dus

Source: Angelo Planning Group, Leland Consulting Group

Table 5 shows the current SDC fees paid by one single family home in Wilsonville, as well as the SDC revenues projected for Frog Pond under both land use options. Total SDC revenues are \$56.0 and \$47.3 million for Options D and E respectively.

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Table 5. SDC Revenues - Options D and E

Plan and Area	Transp.	Sewer	Water	Storm	Parks	Total
Single Family Home	\$7,381	\$4,647	\$5,300	\$1,458	\$5,150	\$23,936
Option D						
West Neighborhood	\$5,568,594	\$3,503,838	\$4,079,178	\$1,129,280	\$3,883,100	\$18,163,990
East & South Neighborhoods	\$13,766,649	\$6,701,320	\$7,542,193	\$2,357,992	\$6,910,522	\$37,278,676
Total	\$19,335,243	\$10,205,158	\$11,621,371	\$3,487,272	\$10,793,622	\$55,442,665
Option E						
West Neighborhood	\$4,616,445	\$2,904,375	\$3,395,478	\$941,198	\$3,218,750	\$15,076,246
East & South Neighborhoods	\$12,046,876	\$5,618,569	\$6,307,293	\$2,018,278	\$5,710,572	\$31,701,588
Total	\$16,663,321	\$8,522,944	\$9,702,771	\$2,959,476	\$8,929,322	\$46,777,833

Source: City of Wilsonville, Leland Consulting Group

Note that not all SDC revenue comes from single family home development. About 10 percent of the total revenue comes from other types of development, including commercial and schools.

Tables 6 through 9 below compare SDC revenue (from Table 5) to the City's CIP costs (see "City Cost Attributable to FP" column at far right of infrastructure cost summary tables).

Note that not all City costs are considered to be attributable to Frog Pond. Rather, a percentage of the demand for *major off site* projects has been allocated to Frog Pond; notes are shown in the Funding Approach and Notes column of the infrastructure cost summary tables. For example, as mentioned above, only 25 percent of the West Side Reservoir is estimated to be attributable to new demand from Frog Pond, and thus, only 25 percent of the cost has been attributed to Frog Pond. Other examples include: 52 percent of the flow managed by the Boeckman Trunk Sewer, and 48 percent of the flow managed by the Memorial Park Pump Station, is attributable to Frog Pond, per MSA's analysis. The City has estimated that 35 percent of the PM peak hour traffic on the Boeckman Road Bridge is attributable to Frog Pond.

100 percent of the City's CIP costs associated with Framework and local infrastructure is considered to be attributable to Frog Pond, since this infrastructure likely would not be built if the area were not developed.

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Tables 6 and 7 show that, when the entire Frog Pond area (all three neighborhoods) is taken into account, there is a funding surplus in each of the infrastructure types. Note that this funding surplus will be directed to the CIP, and thereby to other projects of citywide importance from which Frog Pond residents and businesses will benefit.

Table 6. Revenues and Costs – Option D, All Neighborhoods

	Transportation	Sewer	Water	Stormwater	Parks	Total
Sources						
SDCs Generated within FP Area	\$19,335,243	\$10,205,158	\$11,621,371	\$3,487,272	\$10,793,622	\$55,442,665
- SDCs credited to developers	\$3,395,000	\$155,000	\$1,260,000	\$0	\$1,030,000	\$5,840,000
Net Sources	\$15,940,243	\$10,050,158	\$10,361,371	\$3,487,272	\$9,763,622	\$49,602,665
Uses (CIP Costs Attributable to Frog Pond)	\$8,907,500	\$6,866,000	\$1,810,000	\$0	\$1,802,500	\$19,386,000
Funding Surplus or (Gap)	\$7,032,743	\$3,184,158	\$8,551,371	\$3,487,272	\$7,961,122	\$30,216,665

Source: City of Wilsonville, Leland Consulting Group

Table 7. Revenues and Costs – Option E, All Neighborhoods

	Transportation	Sewer	Water	Stormwater	Parks	Total
Sources						
SDCs Generated within FP Area	\$16,663,321	\$8,522,944	\$9,702,771	\$2,959,476	\$8,929,322	\$46,777,833
- SDCs credited to developers	\$3,395,000	\$155,000	\$1,260,000	\$0	\$1,030,000	\$5,840,000
Net Sources	\$13,268,321	\$8,367,944	\$8,442,771	\$2,959,476	\$7,899,322	\$40,937,833
Uses (CIP Costs Attributable to Frog Pond)	\$8,907,500	\$6,866,000	\$1,810,000	\$0	\$1,802,500	\$19,386,000
Funding Surplus or (Gap)	\$4,360,821	\$1,501,944	\$6,632,771	\$2,959,476	\$6,096,822	\$21,551,833

Source: City of Wilsonville, Leland Consulting Group

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Tables 8 and 9 show that, when just the West Neighborhood is considered, there is a funding surplus in most of the infrastructure types. The exception is transportation, in which there is a \$1 million gap for Option D, and a \$1.95 million gap for Option E due to CIP contributions to the Boeckman Road Bridge, and Boeckman and Stafford Road Urban Upgrade projects (\$4.95 million in Frog Pond West attributable costs). There are funding surpluses, sometimes slight, in the other infrastructure categories.

The sanitary sewer infrastructure surplus is very small—just under \$160,000 for Option E. This is because the Memorial Park Pump Station and framework sewer lines in Boeckman and Stafford Roads (\$2.66 million in Frog Pond West attributable costs) would need to be built along with the West Neighborhood.

Table 8. Revenues and Costs – Option D, West Neighborhood

	Transportation	Sewer	Water	Stormwater	Parks	Total
Sources						
SDCs Generated within FP Area	\$5,568,594	\$3,503,838	\$4,079,178	\$1,129,280	\$3,883,100	\$18,163,990
- SDCs credited to developers	\$1,585,000	\$80,000	\$460,000	\$0	\$570,000	\$2,695,000
Net Sources	\$3,983,594	\$3,423,838	\$3,619,178	\$1,129,280	\$3,313,100	\$15,468,990
Uses (CIP Costs Attributable to Frog Pond)	\$4,985,000	\$2,666,000	\$1,650,000	\$0	\$1,352,500	\$10,653,500
Funding Surplus or (Gap)	(\$1,001,406)	\$757,838	\$1,969,178	\$1,129,280	\$1,960,600	\$4,815,490

Table 9. Revenues and Costs – Option E, West Neighborhood

	Transportation	Sewer	Water	Stormwater	Parks	Total
Sources						
SDCs Generated within FP Area	\$4,616,445	\$2,904,375	\$3,395,478	\$941,198	\$3,218,750	\$15,076,246
- SDCs credited to developers	\$1,585,000	\$80,000	\$460,000	\$0	\$570,000	\$2,695,000
Net Sources	\$3,031,445	\$2,824,375	\$2,935,478	\$941,198	\$2,648,750	\$12,381,246
Uses (CIP Costs Attributable to Frog Pond)	\$4,985,000	\$2,666,000	\$1,650,000	\$0	\$1,352,500	\$10,653,500
Funding Surplus or (Gap)	(\$1,953,555)	\$158,375	\$1,285,478	\$941,198	\$1,296,250	\$1,727,746

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REIMBURSEMENT DISTRICT COST ALLOCATION

An important issue for developers considering building in Frog Pond is the allocated cost of the reimbursement districts that they will need to pay in addition to SDCs and the other costs associated with land development. Developers must pay for infrastructure costs somehow, and developers' likely responses to higher-than-typical infrastructure costs will be to try to negotiate a lower cost for land, pass higher costs on through a higher home sale price (if possible), or look for other places where they can find buildable residential land. The impact of infrastructure costs on development feasibility is further explored in the Frog Pond Land Development Financial Analysis memorandum.

Table 10 shows the total cost of projects proposed to be paid for by RA-W and RA-E, and the "residential allocation." These figures come from the last row in Table 3. For RA-W, all costs paid for by the district are allocated to residential development. In RA-E, some costs (about 10 percent) are paid by commercial development, schools, and parks. The cost per unit is significantly higher in the West than East, since a smaller residential cost allocation is divided among many more units.

The reimbursement district cost per dwelling unit varies depending on the land use option. Because there are more housing units in Option D, the cost of all infrastructure projects is divided among more units, and the "cost allocation per unit" is lower. This allocation is the approximate reimbursement fee that a developer would have to pay for each housing unit.

Table 10. Reimbursement District Costs

	RA West	RA East
Cost of Projects Paid for by RD	\$10,632,800	\$11,069,650
- Commercial and School Allocation	\$0	\$1,138,789
= Residential Allocation	\$10,632,800	\$9,930,861
Option D		
Dwelling Units	754	1,324
RD Cost Allocation per Unit	\$14,102	\$7,501
Option E		
Dwelling Units	625	1,091
RD Cost Allocation per Unit	\$17,012	\$9,103

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APPENDICES AND INFORMATION SOURCES

The following source documents were used in the preparation of this memorandum and are cited throughout when appropriate:

- Frog Pond Area Plan web site: <http://www.ci.wilsonville.or.us/628/Frog-Pond-Area-Plan>
- City of Wilsonville Capital Improvement Projects program, <http://www.ci.wilsonville.or.us/150/Capital-Projects>
- City of Wilsonville City Code, Section 3.116 Reimbursement for Extensions of Streets, Water, Storm Drainage and Sewer Lines or Other Utility Services. <http://www.ci.wilsonville.or.us/DocumentCenter/View/34>
- Adopted Budget, FY 2013-14, Capital Improvement Projects (CIP) section, pages 165 – 218.
- *Transportation Infrastructure – Street Credits/Reimbursements*, Steve R. Adams, P.E., Development Engineering Manager, City of Wilsonville, September 5, 2014.
- *Frog Pond Area Plan – Concept Plan Infrastructure Analysis*, Murray, Smith & Associates, Inc., March 18, 2015.
- *Wilsonville Transportation System Plan (TSP)*, adopted June 17, 2013.
- *Wilsonville Parks & Recreation Master Plan*, adopted September 17, 2007.
- *Market Analysis*, Frog Pond Area Plan, Leland Consulting Group, August 2014.
- Land use plans, Angelo Planning Group.
- Discussions with City staff and Frog Pond consultant team members regarding required infrastructure and associated costs.