Public Review Draft Report

The Economics of Land Use

Panhandle Planned Unit Development Public Facilities Finance Plan

Prepared for:

City of Sacramento

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EXHIBIT E-1

PANHANDLE FINANCE PLAN

Table of Contents

List of Tables

List of Maps

1. INTRODUCTION AND SUMMARY

This Public Facilities Finance Plan (Finance Plan or PFFP) establishes the strategy to finance the Backbone Infrastructure and Public Facilities (as defined herein) required to serve the proposed land uses in the Panhandle Planned Unit Development (PUD) project (Project). The Project consists of approximately 589 acres of primarily vacant land located north of Del Paso Road, south of Elkhorn Boulevard, west of Sorento Road/East Levee Road, and east of the developed neighborhoods known as Natomas Park and Regency Park. The Project is in the North Natomas Community Plan Area (NNCP), which was adopted by the City of Sacramento (City) in 1994. As part of the adoption of the NNCP, a North Natomas Financing Plan (NNFP) was prepared to identify the costs and funding sources required for development of the NNCP. Because of its delayed timing of development, the Project was excluded from the boundaries of the NNFP, although it was considered for eventual annexation.

Project Background and Land Use

A prior application for the Project was submitted in 2006; however, because of the economic downturn and the U.S. Army Corps of Engineers' actions to decertify the levee system protecting the Natomas Basin, the Project did not proceed at that time. Project Applicants have submitted revised plans for development of the Panhandle PUD. This Finance Plan updates and replaces the 2007 Panhandle Planned Unit Development Public Facilities Finance Plan (2007 Finance Plan), based on revised land use plans, updated technical studies, and refined City/Applicant objectives.

The Project area is located entirely within the City's Sphere of Influence (SOI). As shown on **Table 1-1**, the Project as proposed contains 1,662 suburban neighborhood low-density residential units, including 340 estate units with an average density of 4.5 units per acre, 869 traditional units with an average density of 6 units per acre, and 453 village units with an average density of 7.5 units per acre. The Project area also includes public facilities such as parks, an elementary school site, a high school/middle school site, open space, a detention basin, and roadways.

Purpose of the Finance Plan

The Finance Plan identifies all backbone infrastructure improvements, public facilities, and associated administrative costs needed to serve the proposed land uses. Because of the delayed timing of development of the Project, a significant portion of the NNFP infrastructure and public facilities already have been constructed. Therefore, instead of annexing into the NNFP, this Finance Plan proposes a separate set of funding mechanisms that will work in conjunction with the NNFP funding strategy.

Table 1-1
Panhandle Finance Plan
Land Use Summary

Land Use	Units per Acre	Gross Acres	Net Acres [1]	Dwelling Units
Residential - Suburban Neighborhood Low Density (SNLD)				
Estates (E)	4.5	88.0	75.7	340
Traditional (T)	5.9	162.2	147.7	869
Village (V)	7.5	66.4	60.5	453
Subtotal Residential SNLD		**316.6**	**283.9**	**1,662**
Other Land Uses				
Elementary School	-	11.7	10.0	-
Middle School/High School	-	65.5	60.4	-
Park - Quimby	-	18.0	15.5	-
Ninos Parkway [2]	-	36.0	32.6	-
Detention Basin - Open Space	-	13.6	13.4	-
Planned Development (non-participant)	-	123.0	119.0	-
Major Roads	-	5.0	5.0	-
Collector and Residential Streets [1]	-	0.0	49.6	-
Subtotal Other Land Uses	-	**272.8**	**305.5**	-
Total Land Uses		**589.4**	**589.4**	**1,662**

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Source: MacKay & Somps.

[1] Net acres reflect exclusion of collector and residential streets, accounted for in a separate line item.
[2] Includes the 12' Powerline Trail within the WAPA Corridor (Ninos Parkway).

2

The Finance Plan, which will be adopted by the City, ensures the infrastructure and public facilities necessary to serve the Project are constructed and describes the costs and financing mechanisms that will be used to construct these improvements in a timely manner. The Finance Plan is designed to achieve the following goals:

- Identify ways to finance construction of public infrastructure and facilities through public and private financing.
- Use existing City, Sacramento Area Sewer District (SASD), Sacramento Regional County Sanitation District (Regional San), and Special District fee programs to the extent possible.
- Establish Project-specific fees to fund all or a portion of major backbone infrastructure and other public facilities not included in existing fee programs.
- Make maximum use of "pay as you go" mechanisms.
- Make appropriate use of municipal debt-financing mechanisms.
- Build in flexibility to respond to market conditions.
- Provide developer funding for appropriate facilities.

Summary

Overview of Financing Strategy

Buildout of the Project will require construction of roadway, sewer, water, drainage, and a variety of other public facilities. Cost estimates for required backbone infrastructure and other public facilities have been derived from a combination of available engineering data provided by MacKay & Somps Engineers, as well as by using data from the City, Economic & Planning Systems, Inc. (EPS), and other sources (see **Appendix B** for detailed cost estimates).

Table 1-2 summarizes the total cost of backbone infrastructure and other public facilities required to serve the Project. At buildout, backbone and other public facilities are estimated to cost approximately $63.9 million (2018$). This figure does not include the costs of in-tract and other subdivision-specific improvements, which is anticipated to be financed privately. The detailed tables that describe each of these infrastructure items are included in the cost estimates prepared by MacKay & Somps in November 2017 (see **Appendix B** of this report).

Table 1-3 shows the financing sources used to fund backbone infrastructure and other public facilities for the Project. As shown, the major infrastructure required for development to proceed in the Project is anticipated to be funded through a combination of public and private financing. Fees (i.e., City, Sacramento County [County], Other Agencies, or Plan Area fees) will be used to fund required facilities when possible. The City and Other Agencies serving the Project have established development impact fee programs to fund a portion of the road, sewer, water, park, and schools facilities. For most of the backbone infrastructure, the developer will construct the facilities and may be reimbursed through Mello-Roos Community Facilities District (CFD) bond proceeds and receive appropriate fee credits.

Table 1-2
Panhandle Finance Plan
Backbone Infrastructure and Public Facilities Cost Summary (2018$)

Item	Amount
Backbone Infrastructure	
Roadways	
On-Site Roadways	$12,053,000
Off-Site Roadways	$468,000
Subtotal Roadways	**$12,521,000**
Sanitary Sewer	$1,034,000
Storm Drainage [1]	$13,055,000
Potable Water	$2,694,000
Subtotal Backbone Infrastructure	**$29,304,000**
Public Facilities	
Neighborhood and Community Parks - Quimby [2]	$5,617,560
Trails [3]	$1,425,100
Ninos Parkway (Landscaping) [4]	$4,297,500
Regional Park Land Acquisition [5]	$3,628,146
Transit [5]	$889,170
Fire Facilities [5]	$902,466
Community Center [5]	$3,456,960
Library [5]	$1,416,024
Schools [2]	$12,915,150
Subtotal Public Facilities	**$34,548,076**
Total Backbone Infrastructure and Public Facilities Cost	**$63,852,076**

cost sum

Source: MacKay & Somps (November 29, 2017); City of Sacramento.

[1] Includes land acquisition.
[2] Assumes cost is equal to fee revenue generated by Panhandle PUD development. See Table C-1 for detail.
[3] Includes the cost for the 12' Powerline (WAPA Corridor) Class I Bike Trail with decomposed granite shoulders within Ninos Parkway and Sotnip trail. Excludes the landscape area adjacent to the 12' trail and any remaining open space and landscaping within the WAPA Corridor.
[4] Includes the Ninos Parkway 20' landscape area adjacent to the 12' Powerline Trail in the WAPA Corridor as well as remaining open space and landscaping within the WAPA Corridor (including areas adjacent to parks). Excludes the cost of the 12' Powerline Class I Bike Trail within the WAPA Corridor.
[5] Panhandle cost obligation calculated assuming applicable North Natomas development impact fees apply to Panhandle development.

Table 1-3
Panhandle Finance Plan
Estimated Project Requirements and Funding at Buildout (2018$)

Item	Estimated Improvement Costs	Eligible for Land Secured Financing	Estimated Project Requirements and Funding: Developer Funding via Construction and Fee Payments: Plan Area-Based Funding: Panhandle Special Financing District Program [1]	City Fees: Park Impact Fees	City Fees: Transportation Development Impact Fee (TDIF) [2]	City Fees: Water	Other Fee Programs: SASD	Other Fee Programs: School Mitigation Fees	Subtotal Plan Area and Fee Payments	Other Funding Sources: Offsite Future Reimb.	Other Funding Sources: Regional, State, and Federal/ Other [3]	Other Funding Sources: Private Developer Funding	Total
Backbone Infrastructure													
Roadways													
On-Site Roadways	$12,053,000	X	$12,053,000	-	-	-	-	-	$12,053,000	-	-	-	$12,053,000
Off-Site Roadways	$468,000	X	$354,000	-	-	-	-	-	$354,000	$114,000 [8]	-	-	$468,000
Subtotal Roadways	**$12,521,000**		**$12,407,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$12,407,000**	**$114,000**	**$0**	**$0**	**$12,521,000**
Sanitary Sewer	$1,034,000	X	$276,000	-	-	-	$758,000	-	$1,034,000	-	-	-	$1,034,000
Storm Drainage	$13,055,000	X	$13,055,000	-	-	-	-	-	$13,055,000	- [9]	-	-	$13,055,000
Potable Water	$2,694,000	X	$0	-	-	$2,694,000	-	-	$2,694,000	-	-	-	$2,694,000
Subtotal Backbone Infrastructure	**$29,304,000**		**$25,738,000**	**$0**	**$0**	**$2,694,000**	**$758,000**	**$0**	**$29,190,000**	**$114,000**	**$0**	**$0**	**$29,304,000**
Public Facilities													
Neighborhood and Community Parks - Quimby [4]	$5,617,560	X	$0	$5,617,560	-	-	-	-	$5,617,560	-	-	-	$5,617,560
Trails [5]	$1,425,100	X	$825,100	-	-	-	-	-	$825,100	$600,000 [10]	-	$0	$1,425,100
Ninos Parkway (Landscaping) [6]	$4,297,500	X	$0	-	-	-	-	-	$0	-	-	$4,297,500	$4,297,500
Regional Park Land Acquisition [4] [7]	$3,628,146	X	$3,628,146	-	-	-	-	-	$3,628,146	-	-	-	$3,628,146
Transit [4] [7]	$889,170	X	$889,170	-	-	-	-	-	$889,170	-	-	-	$889,170
Fire Facilities [4] [7]	$902,466	X	$902,466	-	-	-	-	-	$902,466	-	-	-	$902,466
Community Center [4] [7]	$3,456,960	X	$3,456,960	-	-	-	-	-	$3,456,960	-	-	-	$3,456,960
Library [4] [7]	$1,416,024	X	$1,416,024	-	-	-	-	-	$1,416,024	-	-	-	$1,416,024
Schools [4]	$12,915,150		$0	-	-	-	-	$12,915,150	$12,915,150	-	-	-	$12,915,150
Subtotal Public Facilities	**$34,548,076**		**$11,117,866**	**$5,617,560**	**$0**	**$0**	**$0**	**$12,915,150**	**$29,650,576**	**$600,000**	**$0**	**$4,297,500**	**$34,548,076**
Total Backbone Infrastructure and Public Facilities Cost	**$63,852,076**		**$36,855,866**	**$5,617,560**	**$0**	**$2,694,000**	**$758,000**	**$12,915,150**	**$58,840,576**	**$714,000**	**$0**	**$4,297,500**	**$63,852,076**

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Source: MacKay & Somps (November 29, 2017); City of Sacramento; EPS.

[1] Special Financing District may be private developer capital, Mello-Roos Community Facilities District, Plan Area Fee Program, Benefit Assessment District, or other infrastructure charge.
[2] The Project will be eligible for TDIF credits against the TDIF alternative modes set-aside for the Project's trails bikeway network.
[3] "Other" funding may include grant or other sources of revenue such as capital campaigns by user groups.
[4] Assumes cost is equal to fee revenue generated by Panhandle PUD development. See Table C-1 for detail.
[5] Includes the cost for the 12' Powerline (WAPA Corridor) Class I Bike Trail with decomposed granite shoulders within Ninos Parkway and Sotnip trail. Excludes the landscape area adjacent to the 12' trail and any remaining open space and landscaping within the WAPA Corridor. The cost for the WAPA Corridor Trail and Panhandle's share of the Sotnip Trail will be funded through the Panhandle Special Financing District Program. The remainder of the Sotnip Trail will be funded by other benefitting properties.
[6] Includes the Ninos Parkway 20' landscape area adjacent to the 12' Powerline Trail in the WAPA Corridor as well as remaining open space and landscaping within the WAPA Corridor (including areas adjacent to parks). Excludes the cost of the 12' Powerline Class I bike trail within the WAPA Corridor. The cost will be funded privately as each property owner has a relatively equal share of the trail and landscape cost and will construct their own portion of the parkway.
[7] Panhandle cost obligation calculated assuming applicable North Natomas development impact fees apply to Panhandle development.
[8] To the extent that development of the Krumenacher Ranch property proceeds, that property will reimburse Panhandle PUD constructing entities (or other funding parties) for the portion of the costs for off-site roadway improvements that benefit the site.
[9] As shown on Table 3-4, to the extent that the Krumenacher Ranch property proceeds, the property will reimburse the Project approximately $316,000 for drainage land acquistion if it utilizes the basin. The offsite reimbursement for drainage is currently excluded from this table because it is uncertain if Krumenacher Ranch will proceed and if Krumenacher Ranch does proceed, it is uncertain how the drainage system will be configured. In the event that Krumenacher Ranch does proceed and utilize the Panhandle detention basin, the City will require them pay their proportionate share of the land acquisition cost.
[10] Panhandle's share of the Sotnip Trail will be funded through the Panhandle Special Financing District Program. The remainder of the Sotnip Trail will be funded by other benefitting properties.

The Panhandle Public Facilities Fee (Panhandle Impact Fee Program, Panhandle Fee Program, or Panhandle Impact Fee) may be used to fund the remaining backbone costs and other public facilities serving the Project not funded through existing financing mechanisms. If such a fee program is not used, the cost of any public facilities not funded through existing fees or through bond financing may be paid for by the Project developer(s) through a private cost-sharing agreement or other funding approaches.

Because the Project borders the area comprising the NNCP, several public facilities, such as transit, fire, library, community center, etc., whose costs have been included already in the NNFP, will benefit the residents and employees of the Project. Therefore, development in the Project will pay special Plan Area fees based on the NNFP for these facilities.

Bond financing likely will be needed to help fund those items required during the early years of development in the Project, as well as at other strategic times when development impact fees or other proposed public funding is not able to fund in a timely fashion the necessary facilities required for new development. Debt financing, however, will be limited to prudent levels and shall be consistent with State of California (State) and City guidelines.

School facilities will be funded through school mitigation fees and possibly through other funding sources, including the State School Building Program or local general obligation (GO) bonds.

It is expected that costs will change over time. As described in **Chapter 8**, if costs or land uses change significantly in either direction, or if other funding becomes available, the Panhandle Fee Program will need to be updated accordingly. **Chapter 8** also describes the annual fee inflation adjustment methodology for the Panhandle Fee Program.

Financing Strategy Implementation

The strategy of the Finance Plan is to do as follows:

- Fully fund or construct all backbone infrastructure and other public facilities needed to serve the entire Project.
- Use, when available, existing City and other agency fee programs to fund backbone infrastructure and other public facilities.
- Create the Panhandle Impact Fee Program for facilities not funded through other public financing mechanisms or private funding sources.
- Identify future beneficiaries of Panhandle infrastructure and establish appropriate funding mechanisms.
- Phase backbone infrastructure and other public facility improvements to ensure they are constructed when necessary for new development and when funds are available to construct such public improvements.

- Permit the use of land-secured bond debt financing programs to provide up-front financing for necessary backbone infrastructure and other public facilities when other funding sources are unavailable to provide sufficient funds concurrent with development demands.
- Ensure financing mechanisms are flexible to accommodate different combinations of infrastructure timing and funding requirements.

Following the City's approval of the Finance Plan, the City will administer implementation of the Finance Plan, which is anticipated to include the following actions:

- When appropriate, update relevant existing fee programs (such as the Transportation Development Impact Fee (TDIF), Parks Improvement Fee (PIF) or citywide water development fee) to include Project land uses, facilities, or revenue contributions.
- Implement the Panhandle Impact Fee Program.
- Form Mello-Roos CFD for infrastructure.
- Form Mello-Roos CFD for streetscapes, park and open space, and utilities maintenance and other services.
- Annex to the North Natomas Transportation Management Association (TMA) or other TMA.

The Finance Plan will need to be updated periodically to account for changes in land use, infrastructure project or cost information, or funding sources. Changes in the Finance Plan should be re-evaluated within the context of the overall financing strategy to ensure required funding is available when needed.

Organization of the Report

In addition to this introduction and summary chapter, the Finance Plan contains the following information:

- **Chapter 2** summarizes the proposed land uses.
- **Chapter 3** identifies the backbone infrastructure and other public facility costs.
- **Chapter 4** identifies the infrastructure financing strategy and likely funding sources.
- **Chapter 5** described the Panhandle Impact Fee Program.
- **Chapter 6** evaluates the financial feasibility of the Finance Plan.
- **Chapter 7** identifies the services and ongoing operation and maintenance cost funding sources.
- **Chapter 8** outlines implementation of the Finance Plan.

2. LAND USE

Land Use Assumptions

The 589.4-acre Project is located at the eastern edge of the NNCP, generally bounded by Elkhorn Boulevard to the north, Del Paso Road to the south, Sorento Road/East Levee Road to the east, and the developed neighborhoods of Natomas Park and Regency Park to the west.

Comprising several properties owned by separate parties and entities, which are anticipated to develop as multiple individual subdivisions, the Project site is located on primarily vacant land in the unincorporated County, within the City's SOI. High-voltage power lines run in a north-south direction along the eastern part of the property, within a 250-foot powerline easement known as the Western Area Power Administration (WAPA) corridor, within which the plan calls for an open space/trail facility called Ninos Parkway. The Project area is designated Planned Development (PD) under the adopted City 2035 General Plan.

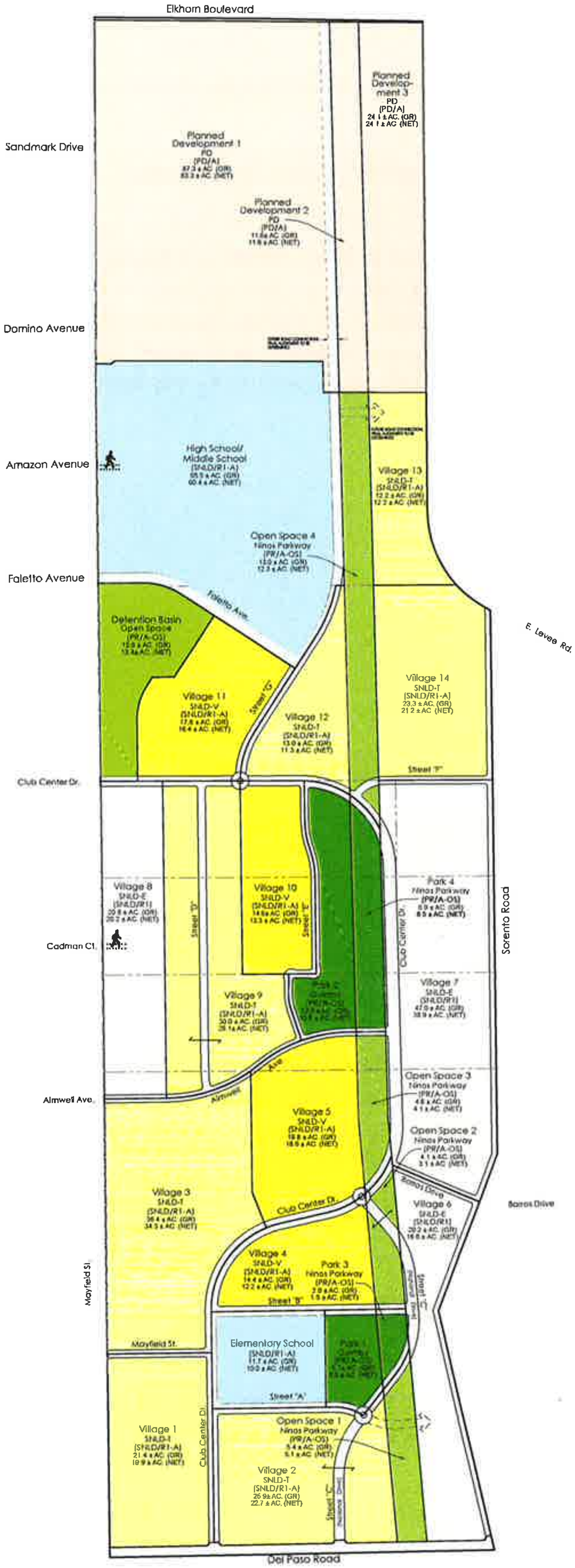
Current entitlements propose annexation of the Project area into the City, associated General Plan amendments, rezoning, and establishment of the Panhandle PUD. In total, the land-use program allows for 1,662 suburban neighborhood low-density single-family residential units on 316.6 gross acres.[1] An additional 123.0 gross acres located immediately south of Elkhorn Boulevard (Krumenacher Ranch) are designated as planned development but are controlled by a nonparticipating property owner, and land use entitlements are not being proposed for that area. As such, Krumenacher Ranch is not included in the proposed Panhandle PUD, but is included in the Project area and annexation application. The remaining 150.0 gross acres are reserved for public facilities such as parks, an elementary school site, a high school/middle school site, open space, a detention basin, and roadways.

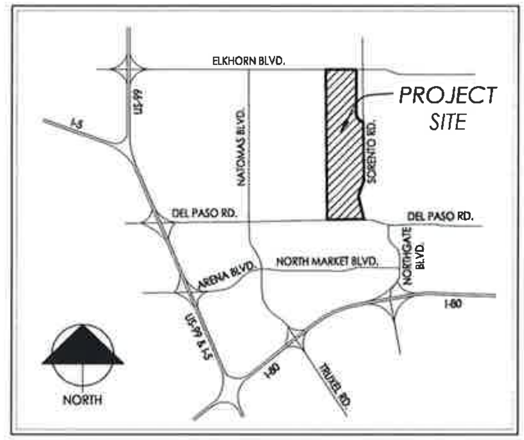
Map 2-1 shows the regional location of the Project. **Map 2-2** shows the land use diagram of the Project, which is summarized in **Table 1-1** in **Chapter 1**. The Project is planned to develop as entirely low- and medium-density residential units featuring several unit types and densities.

[1] Gross developable acreage is the total area identified on the PUD diagram for each land use. The net acreage used in this analysis excludes minor roadway and other public right-of-ways inside each subdivision, which will be dedicated as the subdivisions are created.

Map 2-1
Panhandle Project Vicinity

Map 2-2
Panhandle PUD Schematic Plan





Parkland Dedication Summary Table

PANHANDLE Planned Unit Development Plan

land use	unit type	net acres	avg. net density	dwelling units	% of total residential units	Quimby formula	parkland dedication
SNLD-E	SF						
SNLD-T	SF						
SNLD-V	SF						
				1,662			22.43

park requirement

22.43 22.43

LAND USE SUMMARY					
PUD Land Use*	General Plan	Zoning	Acres (G)	Acres (N)	Units
SNLD-E	SNLD (3-8 du/ac)	R-1	88.0±	75.7±	340±
SNLD-T	SNLD (3-8 du/ac)	R1-A	162.2±	148.4±	869±
SNLD-V	SNLD (3-8 du/ac)	R1-A	66.4±	60.5±	453±
Elementary School	SNLD (3-8 du/ac)	R1-A	11.7±	10.0±	
High School / Middle School	SNLD (3-8 du/ac)	R1-A	65.5±	60.4±	
Park - Quimby	PR	A-OS	18.0±	15.5±	
Park - Ninos Parkway	PR	A-OS	8.9±	8.0±	
Open Space - Ninos Parkway	PR	A-OS	27.1±	24.6±	
Detention Basin - Open Space	PR	A-OS	13.6±	13.4±	
Planned Development	PD	A	123.0±	119.0±	
Major Roads (Del Paso Rd & Elkhorn Blvd)	varies	varies	5.0±	5.0±	
Collector and Residential Streets	varies	varies	0.0±	48.9±	
		TOTALS	589.4±	589.4±	1,662± DU

*SNLD = Suburban Neighborhood Low Density (Detached Single-Family Residential)
-E = Estate (4.5 du/ac average net density)
-T = Traditional (6.0 du/ac average net density)
-V = Village (7.5 du/ac average net density)

= Pedestrian Connection Only

NORTH

0 200 400 800
SCALE: 1"=400'

PUD SCHEMATIC PLAN

PANHANDLE

City of Sacramento

January 30, 2018

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Page 203 of 2367

3. INFRASTRUCTURE FACILITY COSTS

Buildout of the Project will require construction of roadway, sewer, water, and drainage infrastructure, as well as a variety of other public facilities.

The infrastructure and public facility requirements summarized in this chapter are based on the infrastructure master plans for the Panhandle PUD, the mitigation measures set forth in the Panhandle PUD Draft EIR, and the NNFP improvements benefitting Panhandle development. The Finance Plan identifies those infrastructure and public facility requirements that benefit the Panhandle PUD and are needed to satisfy EIR mitigation requirements, including the following improvements:

- On- and Off-Site Roadways
- Sanitary Sewer
- Storm Drainage
- Potable Water
- Neighborhood and Community Parks
- Trails
- Ninos Parkway
- Regional Park Land Acquisition
- Transit
- Fire Facilities
- Community Center
- Library
- School Facilities

This chapter discusses all of the required infrastructure and public facilities and provides the estimated costs (in 2018$) associated with each category. Cost estimates for the required backbone infrastructure and public facilities were developed by MacKay & Somps, EPS, and the City.

Table 1-2 in **Chapter 1** summarizes the estimated costs (in 2018$) of backbone infrastructure and other public facilities required for the Project. At buildout, backbone infrastructure and other public facility costs will total approximately $63.9 million (in 2018$). As discussed earlier in this report, a variety of financing sources will be used to fund required backbone infrastructure and other public facilities. Detailed cost estimates for each infrastructure and public facility category are contained in **Appendix B** of this report.

Definitions of Backbone Infrastructure and Public Facilities

The term backbone infrastructure often is used to describe all publicly owned facilities. This Finance Plan will use the following definitions to more precisely define these terms:

- **Backbone Infrastructure:** This term includes most of the essential public service-based items that are underground or on the surface. It includes roads, water, sewer, drainage, recycled water, levees, erosion control, and dry utilities. Backbone infrastructure is sized to serve numerous individual development projects in the Project and in some cases serves the broader region's development areas.

- **Public Facilities:** This term includes parks, schools, libraries, fire stations and equipment, police facilities and equipment, public buildings, and open space. This group of items provides amenities to the Project (park facilities and libraries) or houses employees providing services to the area (police, fire, public administration).

- **Facilities:** This term is used in the Finance Plan to generically include a combination of Backbone Infrastructure and Public Facilities, when a precise breakdown is not required.

- **Subdivision improvements** include in-tract improvements (roads, sewer, water, drainage, recycled water, erosion control, and dry utilities) that are in or adjacent to individual subdivision projects. These improvements are funded privately, and the costs of these improvements are not estimated in the Finance Plan.

- **Roadway Frontage improvements** include outside travel lanes, bike lanes, curb, gutter, sidewalks, sound wall, and landscape corridors bordering a subdivision. Generally, the center lanes and medians of a multilane roadway are considered backbone infrastructure, while roadway frontage provides access to the adjacent development and is considered a subdivision improvement. However, in certain cases a roadway fronting public property may be included as a backbone infrastructure cost to the extent that it is adjacent to public uses or traversing a public right-of-way that benefits multiple individual subdivision projects.

Infrastructure Phasing

Some backbone infrastructure and public facilities will need to be installed at the outset of development of the Project, before any homes are constructed. Any remaining infrastructure items are to be built before certain timing triggers, which will be determined by the City and identified in the Development Agreement (DA).

Infrastructure Facilities, Facility Costs, and Phasing

Roadways

Project development will generate vehicular trips in and outside of the Project, which result in the need for additional roadway capacity to maintain adequate levels of service. The proposed roadway system comprises major arterials, collectors, and residential streets that work together to provide convenient and safe access to all areas in the Project and adequate off-site access to proposed development in the Project.

Roadway center lanes and medians for multilane facilities generally are considered backbone infrastructure and therefore are included in the Finance Plan. Construction of roadway frontage (outside travel lanes, bike lanes, curb, gutter, sidewalk, sound walls, and landscape corridors) generally is considered the obligation of adjacent development. However, where a roadway abuts or traverses a public facility or right-of-way (e.g., WAPA Corridor or detention basin),

those frontage facilities are providing access to or through that facility and offer planwide benefits. Roadway frontage adjacent to public facilities and rights-of-way that is not otherwise funded or reimbursed via other mechanisms therefore is included in the Finance Plan. Roadway frontage adjacent to schools and parks is excluded because construction of frontage facilities will be considered as part of the acquisition cost for those facilities.

As depicted in **Map 3-1**, on-site roadways included in the Finance Plan include the following facilities:

- Del Paso Road—median and travel lane on south side; frontage improvements along north side.
- Street G—eastern portion adjacent to the WAPA corridor.
- Faletto Avenue—southern portion adjacent to the detention basin.
- Club Central Drive—northern portion adjacent to the detention basin.
- Street F—full section through the WAPA corridor.
- Club Center Drive—full section through the WAPA corridor.
- Club Center Drive—western portion adjacent to the WAPA corridor, excluding portion of WAPA corridor adjacent to Park 2.
- Street C—Full section in the WAPA corridor, excluding the frontage adjacent to Park 1.
- Sorento Road—frontage improvements and fencing along Sorento Road along west side.

In addition, costs associated with traffic signals on major facilities, as well as traffic circles on Club Center and National Drives, are included in the Finance Plan. Entry monumentations at National Drive and Del Paso Road and at Club Center Drive and Del Paso Road are also included in the Finance Plan.

Off-site roadway requirements include contributions to Elkhorn Boulevard from State Route 99 to the eastern limit of the Project. The City provided estimates of the Project's fair share contribution to four specified Elkhorn Boulevard segments. The Project would contribute to the first segment of Elkhorn Boulevard from State Route 99 to East Commerce Way to accommodate the additional traffic coming off the freeway onto Elkhorn Boulevard. The Project would contribute to the next three segments of Elkhorn Boulevard: East Commerce Way to Natomas Boulevard, Natomas Boulevard to the city limit, and the city limit to the eastern limit of the Project.

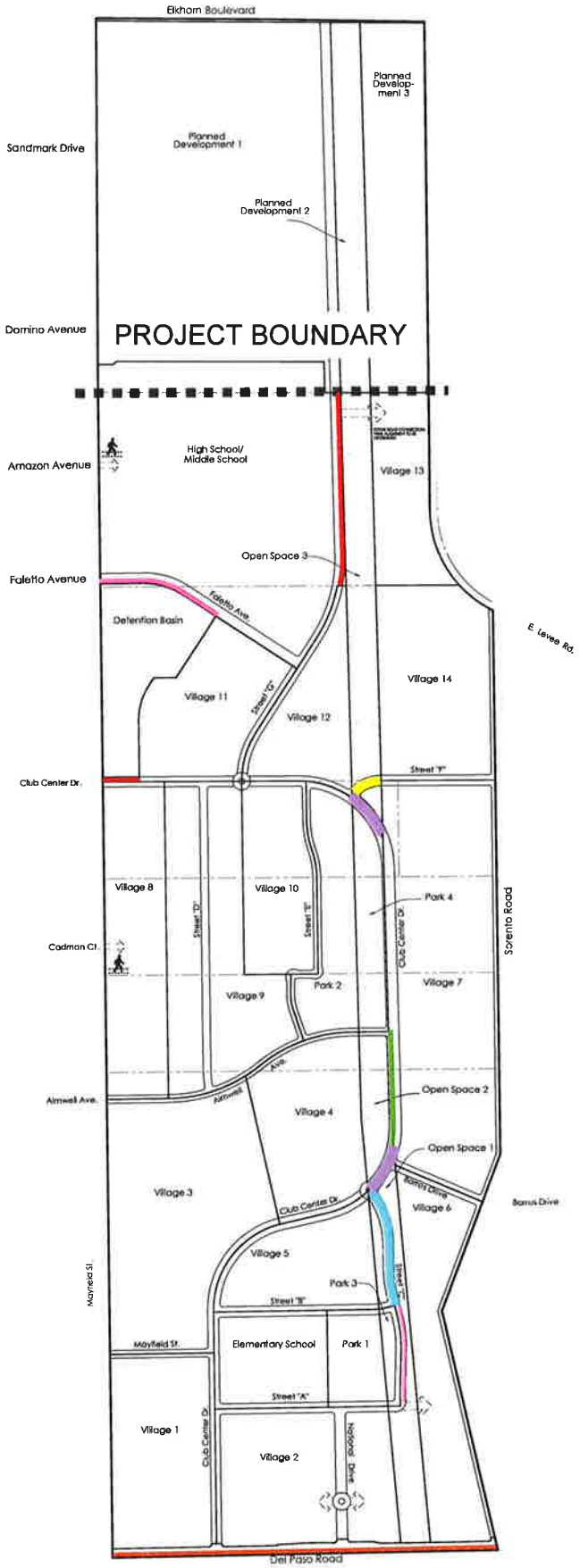
MacKay & Somps provided on-site roadway improvement cost estimates for major roadways and roadway frontage facilities described above. The City provided the roadway improvement cost estimate for off-site roadway facilities based on the Panhandle PUD's anticipated contribution to Elkhorn Boulevard trips, based on traffic analysis prepared by DKS Associates.

As shown on **Table 3-1**, the total estimated on-site roadway costs are approximately $12.5 million, while off-site contributions total approximately $468,000.

DRAFT

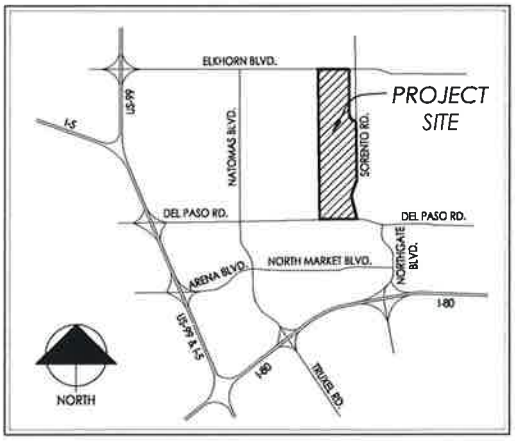
ROADWAY SEGMENTS

MAP 3-1



LEGEND

- A-1.1
- A-1.2
- A-1.3
- A-1.4
- A-1.5
- A-1.6
- A-1.7



NORTH

0 200 400 800

SCALE: 1"=400'

PANHANDLE

City of Sacramento *April 18, 2017*

MACKAY & SOMPS ENGINEERS PLANNERS SURVEYORS

Table 3-1
Panhandle Finance Plan
Estimated Backbone Roadway Facilities Costs - Rounded (2018$)

Roadway

Item	Amount
On-Site Roadway Costs [1]	
Roadway Segments	
Del Paso Median and Travel Lane (South Side)	$1,337,900
Del Paso Frontage Improvements (North Side)	$1,084,000
Sorento Road Horse Fence (West Side)	$184,000
Sorento Road Frontage Improvements (West Side)	$630,000
Street "C"/Faletto Avenue	$1,093,400
Street "C"	$1,049,600
Club Center Drive - Full (Segment 4 and 6)	$1,149,800
Club Center Drive - Half (Segment 5)	$690,000
Street "F"	$297,300
Club Center Drive/Street "G"	$1,084,400
Subtotal Roadway Segments (Rounded)	**$8,600,000**
Entry Monumentation	
National Drive at Del Paso Road	$74,750
Club Center Drive at Del Paso Road	$74,750
Subtotal Entry Monumentation (Rounded)	**$150,000**
Traffic Signals	
Del Paso Road/National Drive	$500,800
Del Paso Road/Club Center Drive	$690,700
Del Paso Road/Sorento Road	$690,700
Subtotal Traffic Signals (Rounded)	**$1,882,000**
Traffic Circles	
Traffic Circle - Club Center/Street "C"	$473,600
Traffic Circle - Club Center/Street "G"	$473,600
Traffic Circle - National Drive	$473,600
Subtotal Traffic Circles (Rounded)	**$1,421,000**
Total On-Site Roadway Costs (Rounded)	**$12,053,000**
Off-Site Roadway Cost (Elkhorn Boulevard)	
Elkhorn Blvd. Segment - State Route 99 to East Commerce	$24,000
Elkhorn Blvd. Segment - East Commerce Way to Natomas Blvd.	$242,000
Elkhorn Blvd. Segment - Natomas Blvd. to City Limit East	$125,000
Elkhorn Blvd. Segment - City Limit East to Panhandle Limit East	$77,000
Total Off-Site Roadway Cost (Rounded)	**$468,000**
Total Roadway Costs (Rounded)	**$12,521,000**

roads

Source: MacKay & Somps (August 24, 2017 and November 29, 2017); City of Sacramento.

[1] Includes engineering and contingency.

Sanitary Sewer

SASD will serve the Project with sanitary sewer collection and treatment. The Finance Plan includes backbone sanitary sewer improvements needed to convey sanitary sewer flows to the Upper Northwest Interceptor. Existing off-site collector and trunk sewer pipelines stubbed to the Project's western boundary are sufficient to accommodate sanitary sewer flows generated by the Project, and therefore no off-site improvements will be required to accommodate Panhandle development. On-site backbone sewer improvements consist of trunk lines sized 15 inches and greater, as well as associated manholes sized 48 inches and greater.

Sanitary sewer improvement cost estimates total approximately $1.0 million, as shown on **Table 3-2**. Sanitary sewer improvement costs are based on the assumption of construction concurrent with road improvements; cost estimates therefore exclude pavement removal and replacement, roadway, and erosion control–related items.

This Finance Plan is based on the assumption the Project is eligible for SASD reimbursements for credits for sanitary sewer trunk improvements.

Drainage

Backbone storm drain infrastructure serving the Project is designed to meet City design criteria. In addition, because the Project is located in the Natomas Basin, the storm drainage system is designed to modify peak flows such that they do not exceed Reclamation District 1000 post-development runoff criteria.

Stormwater flows generated in the Project generally will drain from east to west to a proposed detention basin and then will be pumped to existing trunk line facilities located in Club Center Drive. The detention basin is designed to accommodate the Project's flood control and stormwater quality treatment requirements.

The backbone storm drain system includes a network of backbone storm drain lines, expansion of an existing detention basin owned by Twin Rivers Joint Unified School District, and associated outfall structures and pumps. The Finance Plan also includes acquisition of approximately 6.7 acres of land needed to expand the existing detention basin. MacKay & Somps provided drainage system improvement cost estimates, which total approximately $13.1 million, as shown on **Table 3-3**.

Based on the City drainage system design criteria and state regulatory requirements, the Project's drainage system must be constructed to accommodate existing condition flows from the Krumenacher Ranch project. In the event the Krumenacher Ranch project develops at a later date, additional improvements may be required to accommodate additional flows generated by that development activity. These improvements may be effected independent of the Panhandle drainage system or via expansion of and upgrades to Panhandle drainage facilities. The Krumenacher Ranch property will be responsible for drainage system improvements needed to accommodate that site's developed condition, including any upgrades to the Panhandle drainage system (e.g., expansion of the detention basin).

Table 3-2
Panhandle Finance Plan
Estimated Sanitary Sewer Costs - Rounded (2018$)

Sewer

Item	Amount	SASD Credits/ Reimbursements	Net Amount
		[2]	
Sanitary Sewer Costs			
Trunk Sanitary Sewer [1] [2]			
15" Trunk Sewer Line	$153,600	($114,726)	$38,874
18" Trunk Sewer Line	$286,200	($227,497)	$58,703
21" Trunk Sewer Line	$118,800	($97,603)	$21,197
48" Trunk Sewer Manhole	$104,000	($49,725)	$54,275
60" Trunk Sewer Manhole	$28,500	($17,667)	$10,833
Subtotal Trunk Sanitary Sewer (Rounded)	**$691,000**	**($507,000)**	**$184,000**
15% Contingency	$104,000	($76,000)	$28,000
Subtotal with Contingency	**$795,000**	**($583,000)**	**$212,000**
30% Engineering and Management	$239,000	($175,000)	$64,000
Total Trunk Sanitary Sewer	**$1,034,000**	**($758,000)**	**$276,000**
Total Sanitary Sewer Costs (Rounded)	**$1,034,000**	**($758,000)**	**$276,000**

sewer

Source: MacKay & Somps (November 29, 2017).

[1] Trunk sewer assumes construction concurrent with road improvements, excludes pavement removal and replacement, roadway and erosion control related items.
[2] Eligible for SASD reimbursements/credits for trunk sanitary sewer facilities. Reimbursement/credit amount based on MacKay & Somps preliminary estimate.

Table 3-3
Panhandle Finance Plan
Estimated Storm Drainage Costs - Rounded (2018$)

Drainage

Item	Amount
Storm Drainage Costs [1]	
Storm Drain System [2]	
24" Storm Drain	$132,600
27" Storm Drain	$67,900
30" Storm Drain	$35,300
42" Storm Drain	$75,100
48" Storm Drain	$217,000
60" Storm Drain	$230,000
66" Storm Drain	$189,800
72" Storm Drain	$1,595,800
78" Storm Drain	$3,080,000
78" Storm Drain Outfall	$60,000
Subtotal Storm Drain System (Rounded)	**$5,684,000**
15% Contingency	$853,000
Subtotal with Contingency	**$6,536,500**
30% Engineering and Management	$1,961,000
Total Storm Drain System (Rounded) [3]	**$8,498,000**
Detention Basin	
Detention Pond - Excavation	$444,500
Detention Pond - Finish Grading	$44,400
Pump Station Outlet Structure	$15,000
Pump Station Inlet Structure	$20,000
Pump Station	$500,000
Weir Erosion Protection - Rip Rap 1' Deep	$19,100
Detention Pond - Maintenance Path	$59,400
Metal Access Gate	$5,000
12 Concrete Access Ramp	$22,100
6" Concrete Spillway	$28,800
Geotextiles	$88,800
Rip Rap/Cobble Rock Protection at Outfall Structure	$1,800
Hydroseed/Landscaping	$32,800
Detention Pond - Fencing	$33,000
Detention Pond - Fencing: Tubular Steel (Housing)	$28,900
Detention Pond - Landscaping (25% coverage & trees)	$584,300
Subtotal Detention Basin (Rounded)	**$1,928,000**
15% Contingency	$289,000
Subtotal with Contingency	**$2,216,900**
30% Engineering and Management	$665,000
Total Detention Basin (Rounded) [4]	**$2,882,000**
Subtotal Storm Drainage Costs	**11,380,000**
Land Acquisition (6.7 acres) [5]	**$1,675,000**
Total Storm Drainage Costs (Rounded)	**$13,055,000**

drain

Source: MacKay & Somps (November 29, 2017).

[1] Not eligible for reimbursements from the City of Sacramento or any other public agency fee program.
[2] Storm drain assumes construction concurrent with road improvements, and excludes pavement removal and replacement.
[3] Storm drain system includes the components listed above because each segment of pipe is required for a complete functioning system.
[4] The school has already acquired the land and excavated their portion of the basin (6.9 acres). Dirtwork and above quantities are based on basin expansion and completion.
[5] Based on $250,000 per acre from MacKay & Somps.

To the extent Krumenacher Ranch development uses the Panhandle detention basin, expanding drainage capacity within its planned footprint, Krumenacher Ranch should fund their fair share of land acquisition costs associated with the detention basin facility. Should Krumenacher Ranch development proceed and use the Panhandle detention basin facility, the City will condition that project to reimburse Panhandle property owners, based on the calculations presented in **Table 3-4** and subject to inflation adjustments. In addition, to the extent that Krumenacher Ranch ties into or otherwise uses Panhandle drainage facilities, the City may consider updates to this Finance Plan to reflect revised cost participation and allocation with consideration to the Krumenacher property.

Regional Drainage Improvements

This Finance Plan assumes the Project will fulfill its obligation to regional drainage improvements through the payment of Sacramento Area Flood Control Agency (SAFCA) and Reclamation District 100 fees and assessments.

Water

The City will provide water service to the Project upon its connection to the existing water supply and distribution network. Existing water distribution facilities near the Project include facilities located along Faletto Avenue, Club Center Drive, Aimwell Avenue, Mayfield Street, and Del Paso Road. The City determines placement of new water distribution facilities as development plans are formulated. Provision of water service to the Project land uses will require the construction of onsite water transmission and distribution facilities. No offsite improvements will be required to provide water service to the Project.

Transmission mains used to convey large volumes of water from the treatment plants to selected points throughout the distribution system are generally considered backbone infrastructure while distribution facilities are typically considered subdivision infrastructure. This Finance Plan therefore includes the onsite 18-inch and 24-inch transmission lines that will connect to City facilities for the delivery of water to Project land uses.

Transmission line improvement costs are based on assumed construction concurrent with road improvements; the cost estimate therefore excludes pavement removal and replacement and utility conflict resolution. MacKay & Somps provided water improvement cost estimates, which total approximately $2.7 million, as shown on **Table 3-5**. The Finance Plan is based on the assumption that these costs will be eligible for credits and/or reimbursements from the City's water development impact fee program, up to the full cost of the improvements.

Community and Neighborhood Parks

The Project is required to provide a total of 15.7 acres of community and neighborhood park facilities, based on the City's current Quimby ordinance obligations, as shown on **Table 3-6**. The Project is meeting this demand by providing two park facilities, for a total of approximately 15.6 acres. The total park acres provided will be refined as individual final maps are processed.

Preliminary cost estimates for development of the parks facilities are based on the park impact fee revenue generated by the Project. Shown in **Table 3-7**, the total cost for all park facilities is estimated at $5.6 million.

Table 3-4
Panhandle Finance Plan
Krumenacher Ranch Drainage Cost - Offsite Future Reimbursement [1]

Item	Formula	Amount
Total Acres [1]	*a*	648.4
Krumenacher Ranch Acres [1]	*b*	122.3
Krumenacher Ranch as a Percent of Total	*c = b / a*	19%
Project Land Acquisition Cost	*d*	$1,675,000
Krumenacher Ranch Drainage Cost		
Land Acquisition	*e = d * c*	$316,000
Total Krumenacher Ranch Drainage Cost		**$316,000**

offsite

Source: MacKay & Somps.

[1] In the event that Krumenacher Ranch proceeds and uses the Panhandle detention basin, the City will seek reimbursement from Krumenacher Ranch to pay for their fair share of the land acquisition cost for the detention basin.
[2] Acreage from the Drainage System Modeling Report for Natomas Panhandle (September 23, 2016), prepared by MacKay & Somps.

Table 3-5
Panhandle Finance Plan
Estimated Potable Water Costs - Rounded (2018$)

Water

Item	Amount	Credits [2]	Net Amount
Water Costs			
Transmission Main [1]			
18" Water Transmission Main	$128,000	-	$128,000
24" Water Transmission Main	$1,674,000	-	$1,674,000
Subtotal Water Transmission Main (Rounded)	**$1,802,000**	-	**$1,802,000**
15% Contingency	$270,000	-	$270,000
Subtotal with Contingency	**$2,072,000**	-	**$2,072,000**
30% Engineering and Management	$622,000	-	$622,000
Total Water Transmission Main (Rounded)	**$2,694,000**	-	**$2,694,000**
Total Water Costs (Rounded)	**$2,694,000**	**($2,694,000)**	**$0**

water

Source: MacKay & Somps (November 29, 2017).

[1] Transmission main construction costs assume construction concurrent with road improvements. Excludes pavement removal and replacement and utility conflict resolution.
[2] Water credits will be applied against the City of Sacramento 1" water meter fee paid at building permit by Panhandle development up to the credit amount shown.

Table 3-6
Panhandle Finance Plan
Quimby Park Requirement

Land Use	Quimby Factor [1]	Units	Acres [2]
Acres Required			
Estates (E)	0.0095	340	3.21
Traditional (T)	0.0095	869	8.21
Village (V)	0.0095	453	4.28
Total Acres Required		**1,662**	**15.71**
Net Acres Provided (Excluding Ninos Parkway) [3]			**15.59**
Difference			**(0.12)**

quimby

Source: City of Sacramento.

[1] Based on the Quimby factor for low density residential from the Panhandle Annexation and Planned Unit Development Project Environmental Impact Report prepared by Ascent Environmental, Inc. (June 2017).
[2] May differ from land use plan or MacKay & Somps because of rounding.
[3] Net acres provided are from MacKay & Somps and do not match Table 1-1 due to rounding.

Table 3-7
Panhandle Finance Plan
Estimated Other Public Facilities Costs (2018$)

Item	Total	Residential		
		Estates (E)	Traditional (T)	Village (V)
Units	1,662	340	869	453
Public Facilities Cost per Unit				
Neighborhood and Community Parks [1]		$3,380	$3,380	$3,380
Regional Park Land Acquisition [2]		$2,183	$2,183	$2,183
Transit [2]		$535	$535	$535
Fire Facilities [2]		$543	$543	$543
Community Center [2]		$2,080	$2,080	$2,080
Library [2]		$852	$852	$852
Schools [1]		$8,700	$7,830	$6,960
Total Public Facilities Cost				
Neighborhood and Community Parks [1]	$5,617,560	$1,149,200	$2,937,220	$1,531,140
Regional Park Land Acquisition [2]	$3,628,146	$742,220	$1,897,027	$988,899
Transit [2]	$889,170	$181,900	$464,915	$242,355
Fire Facilities [2]	$902,466	$184,620	$471,867	$245,979
Community Center [2]	$3,456,960	$707,200	$1,807,520	$942,240
Library [2]	$1,416,024	$289,680	$740,388	$385,956
Schools [1]	$12,915,150	$2,958,000	$6,804,270	$3,152,880

pf costs

Source: City of Sacramento; EPS.

[1] Assumes cost is equal to fee revenue generated by Panhandle PUD development.
[2] Calculated based on North Natomas development impact fees, current as of February 2018.

Regional Park Facilities

In addition to the Quimby parks, the Project will contribute to the development of regional park facilities located in the NNCP Area. The Project will contribute an equivalent payment to that of development projects in the NNFP for the acquisition of the North Natomas regional park. These payments will help fund regional park development costs, including payment of the Natomas Basin Habitat Conservation Plan fees associated with the regional park.

Open Space and Trails

The Finance Plan includes the cost of Ninos Parkway landscaping, construction of the Powerline Trail facility, and Panhandle's contribution to the Sotnip Trail, which are discussed in more detail below.

Ninos Parkway

Ninos Parkway is a 20.1-acre open space parkway located in the WAPA corridor that traverses the length of the Project. Ninos Parkway is envisioned as an integrated system of open spaces, recreational facilities, community gardens, and parks connected by a Class 1 bicycle and pedestrian trail—the Powerline Trail (also known as the WAPA Corridor Trail).

Landscaping costs for Ninos Parkway include the 20-foot landscape area adjacent to the Powerline Trail and open space in the WAPA corridor, as well as approximately 8 acres of neighborhood park space located in the WAPA corridor. The park space in Ninos Parkway is not included in the Quimby calculation and is not eligible for PIF funding because of WAPA easement constraints. Ninos Parkway costs are estimated by MacKay & Somps and the City. The total cost of Ninos Parkway is estimated to be $4.3 million, as shown on **Table 3-8**. Note that this estimate excludes the cost of the Powerline Trail facility, which is discussed in the next section.

Trails

The Project includes two separate Class 1 bike trails: the Powerline Trail and the Sotnip Trail. The Powerline Trail is a 12-foot paved trail with a 2-foot decomposed granite shoulders and 10-foot landscape corridors that extends the entire north-south length of the Project in Ninos Parkway. As shown on **Table 3-8**, the estimated cost of the Powerline trail is approximately $525,000.

The Finance Plan also includes the Project's share of construction costs for the Sotnip Trail facility, a 1,200-foot-long 12-foot Class 1 trail between Sorento Road and Kenmar Road, needed to provide bicycle and pedestrian connectivity to the City's existing trail network. The total cost of the Sotnip Trail is $900,000. Panhandle's contribution is $300,000; the remaining $600,000 will be funded by other benefitting properties or other funding sources. The Project's share of the Sotnip Trail is funded by the Panhandle Fee Program. According to the Project conditions of approval, the $300,000 contribution for the Sotnip Trail will be paid on a per-unit basis by the first 50 percent of permits. This Finance Plan allocates the total cost on a planwide basis to equalize costs across all benefitting Panhandle land uses.

As estimated by MacKay & Somps and the City, the total cost of trails is estimated to be $1.4 million, as shown on **Table 3-8**.

Table 3-8
Panhandle Finance Plan
Estimated Ninos Parkway/Trails Costs - Rounded (2018$)

Item	Ninos Parkway/ Trails
	Amount
Ninos Parkway [1]	
20' Landscape Area Adjacent to 12' Trail	$1,602,700
Open Space in WAPA Corridor	$134,400
Park Space in WAPA Corridor - Landscape/Turf	$695,500
Park Space in WAPA Corridor - Minimal Landscape/Natural	$1,864,900
Total Ninos Parkway	**$4,297,500**
Trails	
Powerline (WAPA Corridor) Class I Bike Trail [1] [2]	$525,100
Sotnip Trail [3]	$900,000
Subtotal Trails	**$1,425,100**
Total Ninos Parkway/Trails	**$5,722,600**

trails

Source: MacKay & Somps; City of Sacramento.

[1] Includes contingency and engineering.
[2] Includes 12' Powerline Trail with decomposed granite shoulders within the WAPA Corridor.
[3] Assumes a 1,200-foot-long trail between Sorento Road and Kenmar Road. The total cost of the Sotnip Trail is $900,000. Panhandle's contribution is $300,000 with the remaining $600,000 being funded by other benefitting properties.

TDIF Credits

The City of Sacramento TDIF includes funding for improvements accommodating alternative transportation modes, including the bicycle and pedestrian network. Because the Powerline Trail and Sotnip Trail are part of the City's bicycle and pedestrian networks, construction and financial participation in funding these facilities are credible against the alternative modes potion of the TDIF program. Through construction of the Powerline Trail and Sotnip Trail funding contribution, Panhandle development will fulfill their obligations to fund improvements accommodating alternative transportation modes. As a result, Panhandle development will be eligible for a credit against the Citywide TDIF, in the full amount of the alternative modes component of the fee.

The Powerline Trail and Sotnip Trail construction cost and funding contribution, which will be approximately $825,100, will be funded by Panhandle, with a portion of the construction cost being offset by the TDIF credit. As shown on **Table A-7** in **Appendix A**, the maximum TDIF credits generated by Panhandle development for the alternative modes component of the TDIF is approximately $619,800. **Table A-8** shows the resulting TDIF rates by land use category.

Transit Facilities

The Project will contribute to the funding of transit facilities based on the same methodology and costs as were used in the NNFP and Nexus Study. The Project's cost responsibility for transit facilities is estimated based on the costs used in the NNFP and Nexus Study. The fee amount associated with transit facilities are estimated at approximately $889,000, as shown in **Table 3-7**.

Fire Facilities

The Project will contribute to the funding of fire facilities based on the same methodology and costs as were used in the NNFP and Nexus Study. The Project's cost responsibility for fire facilities is estimated based on the costs used in the NNFP and Nexus Study. The fee amount associated with fire facilities are estimated at approximately $902,000, as shown in **Table 3-7**.

Community Center Facilities

The Project will be required to share in the funding of community center facilities at the same rate as development in the NNFP and Nexus Study. The cost is estimated based on the costs used in the NNFP and Nexus Study. The fee amount associated with Community Center facilities for the Project is estimated at $3.5 million, as shown in **Table 3-7**.

Library Facilities

The Project will contribute to the funding of library facilities based on the same methodology and costs as were used in the NNFP and Nexus Study. The Project's cost responsibility for library facilities is estimated based on the costs used in the NNFP and Nexus Study. The fee amount associated with library facilities is estimated at approximately $1.4 million, as shown in **Table 3-8**.

Schools

The Project is located in the Twin Rivers Unified School District (TRUSD) and Robla School District (RSD), and students in the Project are anticipated to ultimately attend the proposed elementary school and middle school/high school that will be constructed in the Project. Payment of the existing Senate Bill 50 Level 1 school impact fee fulfills the Project's obligation for school facility construction.

Table 3-7 shows the estimated cost for schools is approximately $12.9 million, which is based on the assumption the cost is equal to fee revenue generated by the Project.

4. INFRASTRUCTURE FINANCING STRATEGY AND FUNDING SOURCES

This chapter outlines the Project's financing strategy and describes how a combination of funding sources will be used to fund the backbone infrastructure and other public facilities required to serve the Project.

Financing Strategy and Funding Sources Overview

The backbone infrastructure and public facilities required to serve development at the Project will be funded using a combination of public and private funding sources. Specific requirements for developer construction of backbone infrastructure and public facilities will be defined in tentative map conditions and DA requirements.

Initially, developers will construct and privately finance the construction costs for most of the backbone infrastructure (roads, sewer, water, drainage) needed at the outset of development. Developers also are anticipated to construct and privately finance the construction cost of parks, open space, and trail facilities. In addition, the financing strategy includes formation of one or more land-secured bond financing districts (e.g., Mello-Roos CFD or Assessment District), which may fund a portion of the total backbone infrastructure and other public facility costs needed at the outset of development.

For these developer-constructed improvements, the developers also will receive credits or reimbursements from the appropriate existing or new fee programs (including the Panhandle Impact Fee Program discussed in this chapter) depending on credit/reimbursement eligibility and policy requirements of the appropriate agency.

For most of the remaining Public Facilities, the Project's developers will pay applicable existing and new development impact fees. The Panhandle Impact Fee Program will fund Panhandle public facility obligations such as transit, regional park land acquisition, open space corridor/trails, fire, community centers, and library.

Detailed Sources of Funding

The following sections detail the currently available sources identified to fund Project Facilities:

- Existing City and Other Agency Fee Programs.
- Panhandle Impact Fee Program.
- Other Funding Sources.

Table 1-3 (on page 5) shows the proposed funding source for each public facility at buildout. Under this funding strategy, approximately $22.0 million will be funded through existing development impact fees, approximately $36.9 million will be funded by the proposed Panhandle Impact Fee, and approximately $5.0 million will be funded from other funding sources.

Existing City and Other Agency Fee Programs

Specific building projects will be subject to all applicable City and other agency development impact fees in place at the time of acceptance of the building permit application. Revenues generated by certain specific fee programs will be available to directly fund backbone infrastructure and public facilities identified in this Finance Plan. Fee program revenues generated by the following fee programs may be available to partially or fully fund Facilities required for Project development and therefore are included in the Finance Plan and estimated in **Table C-1** in **Appendix C**:

- Citywide Park Impact Fee.
- Citywide Water System Development Fee.
- SASD Development Impact Fee.
- TRUSD and RSD School Mitigation Fee.

The sections below offer additional detail regarding fee programs that may provide partial or full funding for backbone infrastructure and public facilities.

Citywide PIF

In February 2017, the City adopted an update to the citywide PIF. All new residential and nonresidential development in the City is subject to the PIF, which funds park improvements in the Community Plan Area in which a project is located. In addition, the updated PIF includes a new fee component that funds citywide park facilities (e.g., regional parks, community centers, aquatic centers, etc.). This Finance Plan is based on the assumption Panhandle development will fulfill all Quimby park improvement obligations through payment of the PIF.

Citywide Water System Development Fee

The City charges a citywide fee on all new connections to the water system to fund water treatment and transmission facilities to provide water to customers in the City. Water development fees are estimated to fund the $2.7 million in backbone water infrastructure costs, which may take the form of impact fee credits or reimbursements.

SASD Impact Fee

SASD levies a development impact fee to fund sewer capacity, infrastructure, and associated costs. Approximately $758,000 of backbone sewer infrastructure is anticipated to be funded by SASD impact fees, which may take the form of impact fee credits and reimbursements for developer-constructed infrastructure.

School District Impact Fees

State law allows school districts to impose fees on new residential and nonresidential development. Level I fees are capped by law, and that cap amount is split between elementary and high school districts. If school districts meet certain criteria, they may impose Level II fees on residential development. Level II fees are not capped but follow a strict formula set forth in the law. The Project pays the current Level 1 fees for TRUSD and RSD, which will satisfy Panhandle's funding obligation for school facilities.

Other Existing Development Impact Fee Programs and Charges

The Project will be subject to other City, County, and Other Agency development impact fee programs that are not anticipated to fund Project-related backbone infrastructure and public facilities. These fees are identified in **Table C-1** in **Appendix C**.

Proposed Panhandle Impact Fee Program

Detailed further in **Chapter 5**, the proposed Panhandle Impact Fee will fund those backbone infrastructure and public facilities costs that are not funded by existing fee programs or other funding sources identified in the section to follow. Facilities included in the Panhandle Impact Fee include those facilities with planwide benefits (i.e., serve multiple individual subdivisions), the costs of which should be distributed amongst Panhandle land uses and ownership interests.

The Panhandle Impact Fee Program will be a City-implemented, plan area-specific development impact fee program applicable only to new Panhandle development. Potential infrastructure and public facilities to be funded by this fee are roadway, sewer, drainage, water, regional park land acquisition, open space corridor/trails, transit, fire, community center, and library.

Integration with the NNFP

One of the central purposes of the Panhandle Impact Fee Program is to maintain equity and fairness between the Project development and development in the rest of the NNCP area through financial participation in common benefitting public improvements. Because the Project public facility obligation will be financed via a mechanism separate from the NNFP, certain policies that apply in the NNFP also should apply to the Panhandle PFFP. Panhandle PUD will therefore pay the same rate as the NNCP area for regional park land acquisition, transit, fire, community center, and library. This rate will be adjusted periodically in concert with updates to the NNFP.

Panhandle Impact Fee Program revenue retained by the City for public facilities such as regional park land acquisition, transit, fire, community center, and library will be used by the City for the construction of North Natomas public facilities included in the NNFP or for reimbursement to North Natomas developers if the City has collected adequate revenue to construct the public facilities in the NNFP.

Other Funding Sources

Other funding sources anticipated to fund a portion of required backbone infrastructure and public facilities include reimbursement from adjacent development and private developer funding.

Other Development Projects

The Project will participate in funding of facilities whose benefit is shared by other neighboring development projects. Specifically, certain off-site roadway contributions ultimately will benefit the Krumenacher property to the north of the Panhandle PUD. **Table 1-3** in **Chapter 1** shows the off-site future reimbursements anticipated for construction or funding of infrastructure benefitting future development on this site.

Furthermore, the Sotnip Trail benefits other development projects. Panhandle's cost contribution is $300,000 with the remaining $600,000 being funded by other benefitting properties.

Drainage Improvements

As discussed at length in **Chapter 3**, it is unclear at this time if Krumenacher Ranch will develop, and if they do develop, it is unclear how their drainage system will be configured. As shown on **Table 3-4** in **Chapter 3**, to the extent development of the Krumenacher Ranch property proceeds and uses the Panhandle detention basin, that property should reimburse the Panhandle PUD for the portion of the detention basin land acquisition costs that benefit the property. The City may consider future updates to the Panhandle Impact Fee Program should Krumenacher Ranch tie into the Panhandle drainage system.

Private Developer Funding

Certain facilities will be the responsibility of individual project developers to fund. Specifically, Ninos Parkway landscaping may be funded by a combination of private developer cash, equity, or private debt financing. The developers also will have sole responsibility for funding and constructing in-tract infrastructure and most frontage improvements.

Land-Secured Financing

This Finance Plan includes the potential use of land-secured financing for a portion of Backbone Infrastructure and Public Facilities costs. Although this Finance Plan identifies sources of funding for all the included Backbone Infrastructure and Public Facilities, major Facility oversizing and substantial up-front capital outlays may be required for certain projects. Land-secured financing, in the form of either a Mello-Roos CFD or an Assessment District, may be used to provide debt financing for some of these oversized Facilities:

- **Mello-Roos CFD.** The Mello-Roos Community Facilities Act of 1982 enables public agencies to form CFDs and levy a special tax on property owners in those CFDs. These special taxes may be used to pay debt service on CFD bonds or to finance public improvements directly on a pay-as-you-go (PAYGO) basis.
- **Assessment Districts.** California statutes give local governments the authority to levy several special assessments for specific public improvements such as streets, storm drains, sewers, streetlights, curbs, gutters, and sidewalks. The agency creates a special Assessment District that defines both the area to benefit from the improvements and the properties that will pay for the improvements.

A CFD is the most likely form of land-secured financing to be used to mitigate up-front costs of construction or acquisition of backbone infrastructure and public facilities in the Project, and it is anticipated that Project developers may elect to form a CFD on all or a portion of the Project.

The proceeds from a CFD bond sale can be used for direct funding of improvements, to acquire facilities constructed by the developer, to reimburse developers for advance-funding improvements, or to pay certain development fees. The annual special tax can be used toward bond debt service or to build or reimburse for infrastructure as needed. The proceeds of the Mello-Roos special tax can be used for direct funding of facilities or to service bond debt.

Tables 4-1 and **4-2** show a preliminary estimate of Mello-Roos CFD bonding capacity of the Project, based on assumptions regarding tax rates, reserve fund requirements, and interest rates. Based on current assumptions, the Project is estimated to have capacity to bond for approximately $32.9 million, of which $26.9 million is available to fund Project infrastructure costs. Actual tax rates and related bond capacity will be established at the time of formation of the CFD. **Table 4-3** shows an overall estimated value to lien ratio of 20:1 at buildout.

Phasing and the Financing Strategy

Phasing of public facility construction is an important component of the overall financing strategy. The ability to sequence public facilities will depend on the type of facility and the pace of new development. When possible, construction of public facilities will be sequenced over time as needed to serve new development. The sequencing of public facility costs will help ensure that adequate monies are available from the various financing sources to fund the public facility improvements.

Completion of backbone infrastructure and other public facilities will be phased to serve logical increments of development, based on the demand for such facilities as the Project builds out. The timing and amount of development in each increment will depend on many factors, such as market demand. In the normal course of the development approval process, the City will condition the Project's tentative map(s) with backbone infrastructure and other public facility requirements.

The Finance Plan is designed to be flexible enough to accommodate faster or slower growth of Project development in response to the market for housing and nonresidential development.

The developers of the Project will be responsible for advance funding and constructing all of the backbone infrastructure and public facilities needed to serve the Project, unless the City and Project proponents agree otherwise to City construction of specific improvements. Subject to the City's fee credit and reimbursement policies, some or all of this private funding will be reimbursed to the landowners/developers over time as the City is able to issue public debt through the CFD, issue credits due for landowner/developer proportionate share of fees, and collect fees from other developers that will provide reimbursements. The time frame for reimbursement is unknown and could be a considerable period of time depending on market conditions and the actual absorption of the development projects. There is no guarantee the initial developers will be fully reimbursed for the costs to oversize facilities for later development projects.

Table 4-1
Panhandle Finance Plan
Estimated Bond Sizing (2018$)

Item	Assumptions	Estimated Bond Sizing
Maximum Special Taxes Available for Debt Service		
Estimated Annual Maximum Special Taxes		**$2,493,000**
Less Estimated Administration Costs	4.00%	($100,000)
Less Delinquency Coverage	10.00%	($249,000)
Adjustment for Rounding		$6,000
Estimated Gross Debt Service (Rounded)		**$2,150,000**
Bond Proceeds and Bond Size		
Total Bond Size		**$27,364,000**
Adjustment for Rounding		$36,000
Total Bond Size (Rounded)		$27,400,000
Increase for Annual Escalation [1]		$5,480,000
Total Bond Size (Rounded)		**$32,880,000**
Estimated Bond Proceeds		
Rounded Bond Size		**$32,880,000**
Less Capitalized Interest	12 months	($2,219,000)
Less Bond Reserve Fund	1-yr. debt service	($2,150,000)
Less Issuance Cost	5.00%	($1,644,000)
Estimated Bond Proceeds		**$26,867,000**
Assumptions [2]		
Interest Rate	6.75%	
Term	30 years	
Annual Escalation	2%	

est bond

Source: EPS.

[1] Assumes special taxes are escalated 2.0% annually for 30 years, which increases total bond size by approximately 20%.
[2] Estimated bond sizing based on conservative assumptions. The interest rate will be determined at the time of the bond sale. This analysis is based on an assumed bond term of 30 years.

Table 4-2
Panhandle Finance Plan
Estimated Bond Proceeds (2018$)

Item	Units	Prelim. Max. Special Tax Rate	Maximum Special Tax Amount	Maximum Special Tax % of Total	Bond Size [1] Amount	Bond Size [1] Per Unit/Acre	Bond Proceeds Amount	Bond Proceeds Per Unit
Formula	*A*	*B*	*C = A *B*	*D = C / Total Max Tax*	*E= D x total bond*	*F = E / A*	*G = D x bond proceeds*	*H = G / A*
Residential Land Uses		*per unit*				*per unit*		*per unit*
Estates (E)	340	$1,500	$510,000	20.46%	$6,726,354	$19,783	$5,496,258	$16,165
Traditional (T)	869	$1,500	$1,303,500	52.29%	$17,191,769	$19,783	$14,047,788	$16,165
Village (V)	453	$1,500	$679,500	27.26%	$8,961,877	$19,783	$7,322,955	$16,165
Subtotal Residential Land Uses	**1,662**		**$2,493,000**	**100.00%**	**$32,880,000**		**$26,867,000**	
Total			**$2,493,000**	**100.00%**	**$32,880,000**		**$26,867,000**	

proceeds

Source: EPS.

[1] Assumes special taxes are escalated 2.0% annually for 30 years, which increases total Bond Size by approximately 20%.

Table 4-3
Panhandle Finance Plan
Project Buildout Value-to-Lien Ratio (2018$)

Item	Amount
Estimated Project Buildout Value	$661,975,000
Estimated Bond Size	$32,880,000
Estimated Buildout Value-to-Lien Ratio	20:1

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5. PANHANDLE IMPACT FEE PROGRAM

This Finance Plan proposes adoption of a new plan area fee program (i.e., Panhandle Impact Fee Program) to fund Project backbone infrastructure and public facilities. The proposed Panhandle Impact Fee Program is designed to fund construction of Backbone Infrastructure improvements and Public Facilities necessary to accommodate new residents generated by Plan Area development after taking into consideration a variety of other funding sources for the improvements.

Panhandle Impact Fee Program

The proposed Panhandle Impact Fee Program will be required to fund the cost of Backbone Infrastructure and Public Facilities that are needed in the Project to accommodate planned development but that are not funded by existing fee programs or other sources of revenue. Backbone Infrastructure and Public Facilities to be included in the proposed Panhandle Impact Fee Program include the following improvements:

- Roadways
- Sanitary Sewer
- Storm Drainage
- Drainage Land Acquisition
- Sotnip Trail (Panhandle cost contribution)
- Powerline Corridor Class I Bike Trail (WAPA Corridor)
- Regional Park Land Acquisition
- Transit
- Fire Facilities
- Community Center
- Library

Panhandle Impact Fee Program Cost Allocation

To ensure developed land uses will fund their pro-rata share of Backbone Infrastructure and Public Facilities, the cost of such improvements is allocated across all land uses, based on the relative need for the improvements generated by each land use as measured by equivalent dwelling unit (EDU) factors and/or other measure of benefit such as developable acres.

The purpose of allocating certain improvement costs among the various land uses is to provide an equitable method of funding required infrastructure. The key to apportioning the cost of improvements to different land uses is the assumption that the demands placed on Backbone Infrastructure improvements are related to land use type and that such demands can be stated in relative terms for all particular land uses. It is by relating demand for facilities to land use types that a reasonable nexus, or relationship, can be established to apportion each land use's "fair share" costs.

An EDU is a common use factor that enables the allocation of improvement costs among residential and nonresidential land uses. An EDU is defined as the amount of facility use for each land use relative to a single-family unit.

Table 5-1 shows a summary of the total cost and the basis on which costs are allocated for each type of Facility to be included in the proposed Panhandle Fee Program. These cost allocation factors calculate the relative need by land use for each facility type based on a measurement of demand generated. For example, roadway improvements are allocated on an EDU basis based on the relative vehicle trips generated per residential unit.

Cost Allocation Methodology

The methodology for allocating costs needed to accommodate new land uses is summarized below:

1. Determine the total cost of new backbone infrastructure required to serve the new residents in the Plan Area.
2. Determine the net cost of infrastructure to be funded by the Panhandle Impact Fee Program after accounting for other financing sources, such as citywide sources, State and federal sources, development impact fees, and other plan areas.
3. Determine the amount of development in the Plan Area that will need to be served by new backbone infrastructure.
4. For each infrastructure improvement needed to accommodate new Panhandle development:
    a. Determine the appropriate cost allocation factor by which to allocate to different land uses the cost of the infrastructure needed to serve new development.
    b. Apply the appropriate cost allocation factor to each land use type to determine the allocation of costs to each land use category.
    c. Divide the total cost allocated to each land use zoning category by the number of dwelling units for residential land uses to determine the cost per dwelling unit.
5. Add an administration component to fund the administration, oversight, implementation, and updates to the Panhandle Fee Program.

Appendix A shows how the Facilities costs were allocated to each new land use using EDU factors as described above.

Additional administrative costs associated with completing and periodically updating the proposed Panhandle Impact Fee Program is equal to 3 percent of the Panhandle Impact Fee for each benefiting land use category.

Table 5-1 shows the preliminary cost allocations, on a per-unit basis, for Backbone Infrastructure and Public Facilities improvements.

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Table 5-1
Panhandle Finance Plan
Panhandle Special Financing District Program Fee (2018$)

Item	Reference	Total Fee Revenue	Residential		
			Estates (E)	Traditional (T)	Village (V)
Units		1,662	340	869	453
Backbone Infrastructure			*per unit*	*per unit*	*per unit*
Roadways	Table A-1	$12,407,000	$7,465	$7,465	$7,465
Sanitary Sewer	Table A-2	$276,000	$166	$166	$166
Storm Drainage	Table A-3	$11,380,000	$8,925	$6,813	$5,353
Drainage Land Acquisition	Table A-4	$1,675,000	$1,314	$1,003	$788
Subtotal Backbone Infrastructure		**$25,738,000**	**$17,869**	**$15,447**	**$13,773**
Public Facilities					
Sotnip Trail [1]	Table A-5	$300,000	$181	$181	$181
Powerline (WAPA Corridor) Class I Bike Trail	Table A-6	$525,100	$316	$316	$316
Regional Park Land Acquisition	[2]	$3,628,146	$2,183	$2,183	$2,183
Transit	[2]	$889,170	$535	$535	$535
Fire Facilities	[2]	$902,466	$543	$543	$543
Community Center	[2]	$3,456,960	$2,080	$2,080	$2,080
Library	[2]	$1,416,024	$852	$852	$852
Subtotal Public Facilities		**$11,117,866**	**$6,689**	**$6,689**	**$6,689**
Total		**$36,855,866**	**$24,559**	**$22,136**	**$20,462**
Administration (3%)		**$1,105,676**	**$737**	**$664**	**$614**
Total with Administration		**$37,961,542**	**$25,296**	**$22,800**	**$21,076**

sfd

Source: City of Sacramento; MacKay and Somps; EPS.

[1] According to the Project conditions of approval, the $300,000 contribution for the Sotnip Trail will be paid on a per-unit basis by the first 50 percent of permits. This Finance Plan allocates the total cost on a planwide basis to equalize costs across all benefitting Panhandle land uses.
[2] Calculated based on North Natomas development impact fees.

Panhandle Impact Fee Program Implementation

The cost allocation methodology described above will provide the basis for establishing the Panhandle Impact Fee Program. Updated nexus studies will finalize the cost allocation formulas and provide the necessary findings to update the fee program. Both the Finance Plan and the nexus studies will be updated periodically as more updated costs, funding, and land use data are available. Owners of developing parcels will be required to fund their share of facility costs through the fee program or through alternative funding sources.

6. FEASIBILITY OF THE FINANCE PLAN

This chapter reviews issues associated to the compatibility of the Finance Plan with the NNFP and the overall financial feasibility of the Finance Plan. The financial feasibility is addressed by reviewing a total infrastructure burden analysis, as well as bond issuance guidelines, to ensure the financing districts will meet the required financial tests.

Comparison Analysis with NNFP

Although the Project originally was envisioned by the City to annex into the NNFP, the City determined, because of delayed timing of development of the Project and because a major portion of development in North Natomas already has occurred, it would be prudent from a financing standpoint to keep the two development areas separate. Instead of annexation of the Project into the NNFP, the Finance Plan proposes funding mechanisms that work in conjunction with the NNFP funding strategy.

Shared benefits from infrastructure and public facilities, however, should be funded in an equitable fashion. In other words, the Project should pay its fair share for items funded by the NNFP that benefit both projects.

For most public facilities, including, transit, fire, community center, and library, the Project will pay a public facilities fee equal to that of development in the NNFP. This revenue will be used for construction of facilities that benefit both areas.

For parks facilities, development at the Project will be required to pay a regional park land acquisition fee at the same rate as charged in North Natomas. Because the land for the regional park has been acquired, this fee revenue is anticipated to be used to pay for development of the regional park. In addition, development in the Project will construct its own park facilities, which include two parks.

Table 6-1 shows the total estimated cost of major infrastructure and public facilities at the Project as compared to that of development in the NNFP. As shown on **Table 6-1**, excluding the costs for drainage improvements, the Project developers would pay approximately $14,300 per low-density single-family unit, while developers in the NNFP pay $10,800 per comparable unit. The Panhandle Impact Fee includes costs for drainage and drainage land acquisition, while the North Natomas drainage facilities are funded through a CFD. Therefore, the drainage component of the Panhandle Impact Fee was excluded for comparison purposes.

Description of Static Feasibility Analyses

This analysis includes the following static methods for evaluating the financial feasibility of the proposed Project:

- Total Infrastructure Cost Burden of Major Infrastructure.
- Total Taxes and Assessments as a Percentage of Sales Price.

Table 6-1
Panhandle Finance Plan
Panhandle/North Natomas Comparison Public Facilities/Fees

Facility Type	Low-Density Residential	
	Panhandle (Traditional Unit)	North Natomas
PFF-Funded Facilities [1]		
Roadway, Signals, Bridges & Freeway [2]	$7,465	$1,947
Freeway and Roadway Landscaping	-	$2,454
Subtotal Roadway/Freeway	**$7,465**	**$4,401**
Sewer	$166	-
Drainage [3]	$7,816	-
Water	-	-
Fire Facilities	$543	$543
Library Facilities	$852	$852
Police Facilities	-	-
Community Center	$2,080	$2,080
Transit	$535	$535
Bikeways, Trails, and Shuttles	$496	$211
Subtotal PFF	**$19,953**	**$8,622**
Regional Parks	$2,183	$2,183
Total	**$22,136**	**$10,805**
Total Excluding Drainage	**$14,321**	**$10,805**

fee comp

[1] Planning/Studies costs were excluded from this analysis.
[2] The cost estimates for Panhandle's roadway includes some landscaping adjacent to a roadway corridor.
[3] Includes the Panhandle cost for drainage and drainage land acquisition for the Traditional residential unit land use category. North Natomas drainage facilities are funded through a CFD.

Each of these methods is based on a static financial feasibility evaluation. To be considered financially feasible, the Project should meet each of the static feasibility tests.

It is important to note that these feasibility metrics, described in further detail below, should be considered initial diagnostics, offering a general indicator of whether or not a project is likely to meet financial feasibility criteria or whether measures should be taken to improve viability, either through a reduction in cost burdens, identification of other funding sources, or other approaches. None of the indicators, by themselves, should be considered absolute determinations regarding Project feasibility.

Total Infrastructure Cost Burden

It is common for developers of major development projects to advance fund and carry infrastructure costs for some time frame. The impact of the land developer's cost burden depends on several factors, including the time frame for the reimbursements and the extent to which full reimbursement is received, either through public funding programs or through adjustments in land sales prices.

The purpose of the total infrastructure cost burden of backbone infrastructure feasibility test is to assess the financial feasibility of the Project, given all current and proposed fees and the additional burden of Project-specific infrastructure costs. As such, this feasibility test assesses the additional fee burden on residential dwelling units associated with the proposed infrastructure improvements.

The total infrastructure cost burden of major infrastructure feasibility test provides a performance indicator of a project's feasibility For each residential land use the total cost burden per dwelling unit is calculated as a percent of the finished sales price. Project feasibility is evaluated based on the following general guidelines or benchmarks:

- Burdens below 15 percent generally are considered financially feasible.
- Burdens between 15 and 20 percent may be feasible depending on the specific circumstances of the project.
- Burdens above 20 percent suggest a project may not be financially feasible unless other components of the project pro forma are particularly advantageous to the developer, thus allowing the project to bear unusually high infrastructure costs.[2]

These static feasibility benchmarks are based on EPS's experience conducting financial feasibility analyses for numerous projects throughout the Sacramento Region and Central Valley over the last 3 decades. This feasibility diagnostic is merely a tool that can be used—along with other tools—as a general measure of financial feasibility. This measure should not automatically be taken to mean that if one land use type exceeds the threshold, the project definitely is infeasible.

[2] Such other components may include extraordinarily low land basis (e.g., land has been in the family for a long time, land acquired during severe real estate market downturn, etc.), development phasing (e.g., fast early absorption ahead of a major infrastructure cost such as a new water treatment plant), or low or no environmental mitigation requirements (e.g., through avoidance or on-site preservation).

In certain circumstances, there are ways in which a development project can mitigate against a high cost burden. In addition, the infrastructure costs will be fine-tuned and possibly reduced as engineering studies are completed closer to actual construction.

As shown in **Table 6-2**, the total cost of infrastructure and public facilities accounts for between approximately 18.4 percent and 19.4 percent of the estimated sales price of residential units in the Project. Infrastructure cost burdens of this magnitude are at the upper range of feasibility targets, but may be feasible depending of the specific project circumstances. This diagnostic indicates that other factors such as the magnitude of advance funding requirements, reimbursement timeframes, and development absorption would factor into Project feasibility.

The infrastructure cost burden could change for several reasons, including a re-allocation of costs among land uses and cost reductions resulting from fine-tuning the estimates as engineering studies are completed and the Project becomes closer to implementation. The cost burden estimates will be further refined as the Project is implemented.

Taxes and Assessments Feasibility Analysis

The measurement of Total Taxes and Assessments as a Percentage of Sales Price often is referred to as the "two-percent test." This metric is yet another measure of the financial feasibility of a project evaluated by land developers, builders, and municipal governments. The Total Taxes and Assessments as a Percentage of Sales Price is a general rule for the feasibility of proposed annual special taxes and assessments. In general, if the sum of property taxes, other ad valorem taxes, and all annual special taxes and assessments is less than 2 percent of the average finished home sales price, then the burden of annual taxes and assessments is considered financially feasible. In the Sacramento Region, jurisdictions and developers typically target total taxes and assessments at levels no greater than approximately 1.6 percent to 1.8 percent of the finished home sales price.

Table 6-3 shows the estimated taxes and assessments as a percentage of home sales prices for three different proposed Project land uses. The total annual amount includes the following taxes and assessments:

- Property taxes.
- Other general ad valorem taxes (e.g., school/other GO bonds).
- Services taxes and assessments.
- Infrastructure CFD taxes (proposed in this Finance Plan).

Development in Panhandle is subject to participation in several special districts for services and ongoing maintenance with proposed and established rates as specified in **Table 6-3**. When combined with the potential implementation of an infrastructure special tax of $1,500 per unit, which is commensurate with other projects in the region, total special taxes and assessments for Panhandle would be at the higher end of the feasibility range, ranging from 1.77 percent to 1.84 percent. While the Project special tax and assessment burden generally remains within feasible ranges after the addition of the Project Infrastructure CFD, capacity for additional CFD special taxes is limited. The special taxes and assessments may affect the Project's competitiveness relative to other similar positioned projects.

FINANCE PLAN
COST ESTIMATE

Panhandle

FOR

The Hodgson Company

within the

City of Sacramento, California

November 29, 2017

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS
1552 Eureka Road, Suite 100, Roseville, CA 95661 (916) 773-1189

APPENDIX B:

MacKay & Somps Cost Estimates

A-E

Summary of Total Costs

SECTION	PROJECT NAME	TOTAL COST
A	Roadway Segments, Signals, and Traffic Circles	$ 10,005,000
B	Sanitary Sewer	$ 1,034,000
C	Storm Drain	$ 12,720,000
D	Potable Water	$ 2,694,000
E	Trails	$ 4,823,000
	Total	**$ 31,276,000**

A-1
Roadway Index
Summary of Total Costs

SHEET	PROJECT NAME	TOTAL COST
A-1.1	Del Paso Frontage	$ 1,337,900
A-1.2	Street "C"/Faletto Avenue	$ 1,093,400
A-1.3	Street "C"	$ 1,049,600
A-1.4	Club Center Drive	$ 1,149,800
A-1.5	Club Center Drive	$ 690,000
A-1.6	Street "F"	$ 297,300
A-1.7	Club Center Drive/Street "G"	$ 1,084,400
	Roadway Segments Total	**$ 6,702,000**

SHEET	PROJECT NAME	TOTAL COST
A-2.1	Del Paso Road/National Drive	$ 500,800
A-2.2	Del Paso Road/Club Center Drive	$ 690,700
A-2.3	Del Paso Road/Sorento Road	$ 690,700
	Signalization Total	**$ 1,882,000**

SHEET	PROJECT NAME	TOTAL COST
A-3.1	Traffic Circle - Club Center/Street "C"	$ 473,600
A-3.2	Traffic Circle - Club Center/Street "G"	$ 473,600
A-3.3	Traffic Circle - National Drive	$ 473,600
	Traffic Circles Total	**$ 1,421,000**

* Totals rounded

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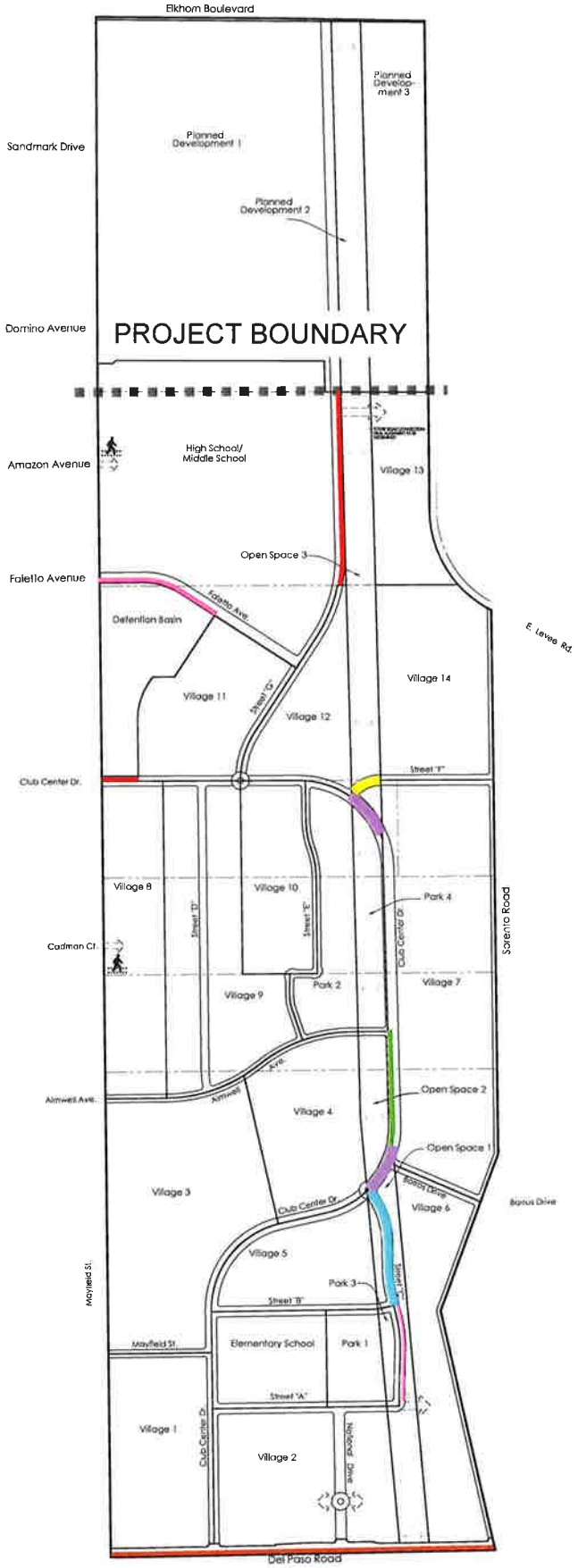
ROADWAY SEGMENTS



LEGEND

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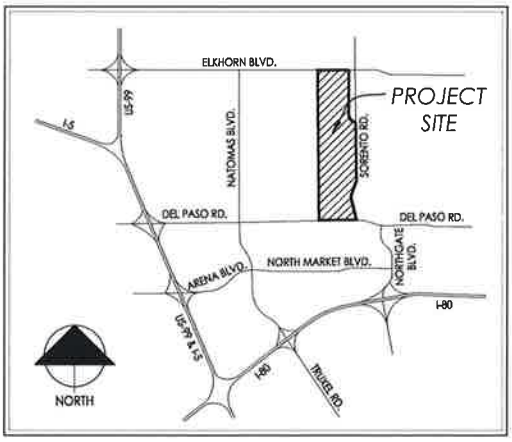
- A-1.2
- A-1.3
- A-1.4
- A-1.5
- A-1.6
- A-1.7



PANHANDLE

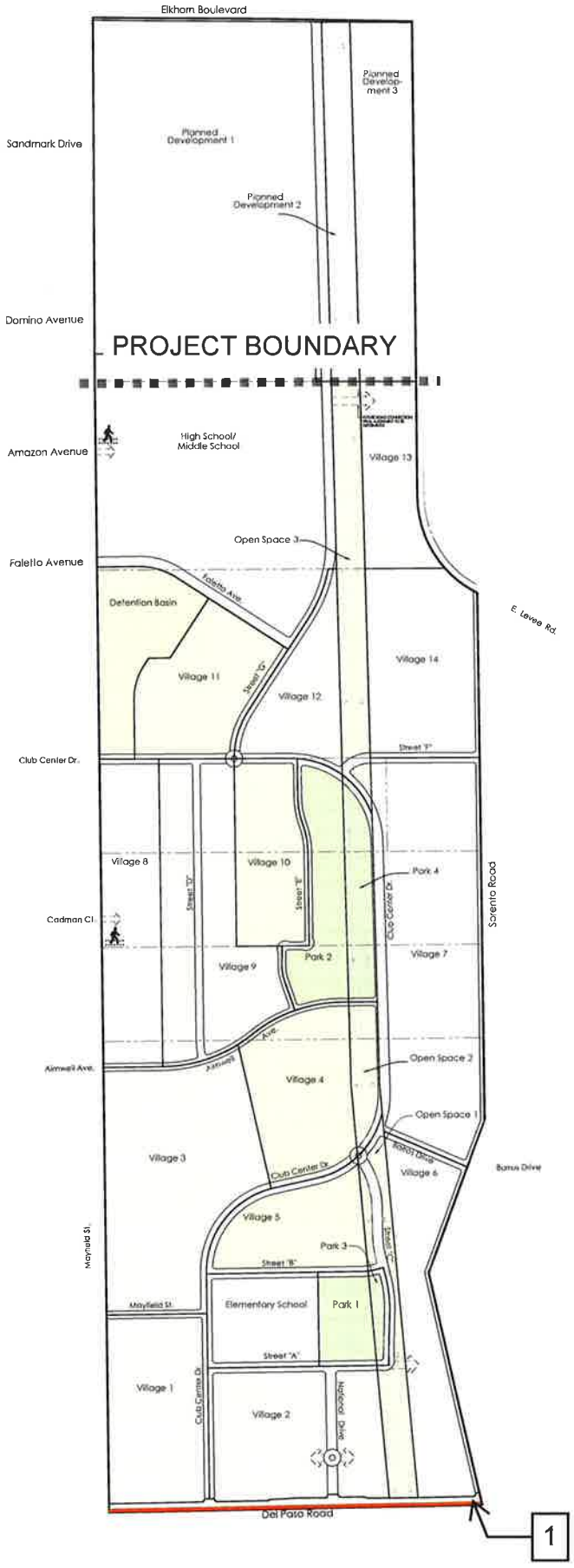
City of Sacramento *April 18, 2017*

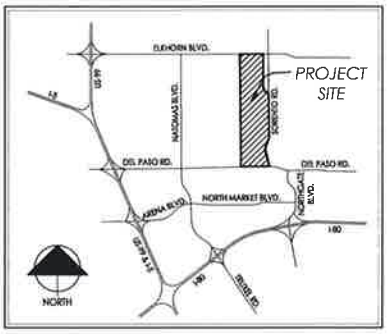
MacKAY & SOMPS ENGINEERS PLANNERS SURVEYORS

ROADWAY SEGMENTS

SEGMENT	DESCRIPTION	SECTION		QUANTITY	UNIT	UNIT PRICE	COST (Rounded)
1	Del Paso Road	A-1.1	PARTIAL	2610	L.F.	$ 513	$ 1,337,900
2	National Drive	A-1.2	HALF	690	L.F.	$ 701	$ 483,600
3	National Drive	A-1.3	FULL	760	L.F.	$ 1,381	$ 1,049,600
4	Club Center Drive	A-1.4	FULL	290	L.F.	$ 1,769	$ 513,000
5	Club Center Drive	A-1.5	HALF	780	L.F.	$ 885	$ 690,000
6	Club Center Drive	A-1.4	FULL	360	L.F.	$ 1,769	$ 636,800
7	Street 'F'	A-1.6	FULL	240	L.F.	$ 1,239	$ 297,300
8	Club Center Drive	A-1.7	HALF	250	L.F.	$ 775	$ 193,600
9	Faletto Avenue	A-1.2	HALF	870	L.F.	$ 701	$ 609,800
10	Street 'G'	A-1.7	HALF	1150	L.F.	$ 775	$ 890,800
		SUBTOTAL					$ 6,702,400
		TOTAL ROADWAY SEGMENTS ESTIMATED COST					***$ 6,702,000***

Note: Engineering and Contingency with section costs
Totals rounded





LAND USE SUMMARY

PUD Land Use*	General Plan	Zoning	Acres (G)	Acres (N)	Units
SNLD-E	SNLD (3-8 du/ac)	R-1	111.5±	101.2±	455±
SNLD-T	SNLD (3-8 du/ac)	R1-A	140.2±	127.8±	766±
SNLD-C	SNLD (3-8 du/ac)	R1-A	65.2±	59.3±	444±
Elementary School	SNLD (3-8 du/ac)	R1-A	11.8±	10.0±	
High School / Middle School	SNLD (3-8 du/ac)	R1-A	65.5±	60.4±	
Park - Quimby	PR	A-OS	17.9±	15.5±	
Park - Natas Parkway	PR	A-OS	8.5±	7.0±	
Open Space - Natas Parkway	PR	A-OS	27.5±	23.3±	
Detention Basin - Open Space	PR	A-OS	13.6±	13.4±	
Planned Development (Commercial Property)	PD	A	123.0±	119.0±	
Major Roads (Del Paso Rd & Elkhorn Blvd)	varies	varies	4.7±	4.7±	
Collector and Residential Streets	varies	varies	0.0±	47.8±	
		TOTALS	589.4±	589.4±	1,665± DU

*SNLD = Suburban Neighborhood Low Density (Detached Single-Family Residential)
-E = Estate (4.5 du/ac average net density)
-T = Traditional (6.0 du/ac average net density)
-C = Compact (7.5 du/ac average net density)
= Pedestrian Connection Only

- Open Space Corridor
- Detention Basin
- Park
- School
- SNLD-E
- SNLD-T
- SNLD-C

NORTH

0 200 400 800
SCALE:1"=400'

PANHANDLE

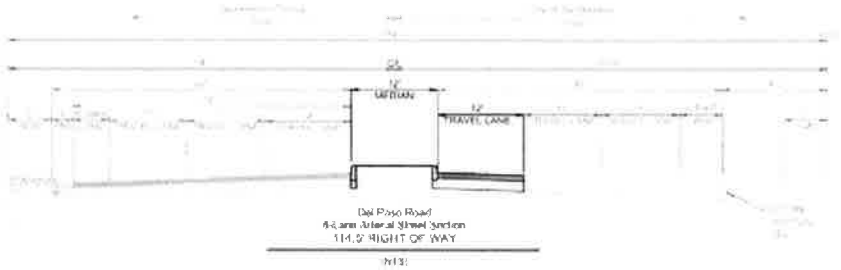
City of Sacramento

April 18, 2017

MACKAY & SOMPS ENGINEERS PLANNERS SURVEYORS

1		Date:	5/12/2017
A-1.1		Job #	27141.000
Panhandle Finance Plan - Roadway		By:	LJ
PARTIAL HALF STREET SECTIONS			
Roadway Cross Section index			
Preliminary Per Foot Cost Estimate			

Typical Cross Section:



	ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	COST
1	**Earthwork**				
	ROADWAY EXCAVATION	CY	$ 18.00	2.07	$ 37.26
	EROSION CONTROL	LF	$ 11.00	0.5	$ 5.50
	TOTAL FOR ITEM 1 EARTHWORK				**$ 42.76**
2	**DRAINAGE**				
	DRAINAGE	LF	$ 30.00	0	$ -
	TOTAL FOR ITEM 2 DRAINAGE				**$ -**
3	**PAVEMENT**				
*	ASPHALT CONCRETE (6" AC)	SF	$ 3.90	12	$ 46.80
*	AGGREGATE BASE W/ LIME TREATMENT (16" AB)	SF	$ 4.00	13	$ 52.00
	SIDEWALK (6" PCC/6"AB)	SF	$ 6.00	0	$ -
	CURB & GUTTER	LF	$ 22.00	0	$ -
	TYPE 14A MEDIAN CURB	LF	$ 20.00	2	$ 40.00
	TOTAL OR ITEM 3 PAVEMENT				**$ 138.80**
4	**MISCELLANEOUS**				
**	STREET LIGHTS / ELECTROLIERS (NON-DECORATIVE)	LF	$ 42.00	0	$ -
	JOINT TRENCH	LF	$ 150.00	0	$ -
	MEDIAN LANDSCAPING	SF	$ 6.00	11	$ 66.00
	LANDSCAPING BUFFER	SF	$ 8.00	0	$ -
	LANDSCAPE CORRIDOR/PUE	SF	$ 5.00	0	$ -
	TOTAL FOR ITEM 4 MISCELLANEOUS				**$ 66.00**
5	**MINOR ITEMS**				
	MINOR ITEMS	%	30.0%		$ 74.27
	TOTAL FOR ITEM 5 MINOR ITEMS				**$ 74.27**

	ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	COST
6	**CONTINGENCY**				
				SUBTOTAL CONSTRUCTION COST	$ 321.83
	CONTINGENCY	%	15.0%		$ 48.27
				TOTAL CONSTRUCTION COST	**$ 370.10**
7	**ENGINEERING & MANAGEMENT**				
	ENGINEERING STUDIES	%	3.0%	$ 370.10	$ 11.10
	ENVIROMENTAL DOCUMENT	%	1.5%	$ 370.10	$ 5.55
	DESIGN ENGINEERING	%	12.0%	$ 370.10	$ 44.41
	DESIGN SERVICES DURING CONSTRUCTION	%	1.5%	$ 370.10	$ 5.55
	CONSTRUCTION STAKING	%	2.5%	$ 370.10	$ 9.25
	CONSTRUCTION MANAGEMENT	%	13.0%	$ 370.10	$ 48.11
	TOTAL FOR ITEM 7 ENGINEERING & MANAGEMENT				**$ 123.98**
	(THE ABOVE EXCLUDES LAND AND RIGHT OF WAY & MAJOR STRUCTURES WORK)				
8	**UTILITIES**				
	UTILITIES RELOCATION	%	2.0%	$ 370.10	$ 7.40
	TOTAL FOR ITEM 8 UTILITIES				**$ 7.40**
9	ENVIROMENTAL MITIGATION				
	ENVIROMENTAL MITIGATION	%	3.0%	$ 370.10	$ 11.10
	TOTAL FOR ITEM 9 ENVIROMENTAL MITIGATION				**$ 11.10**

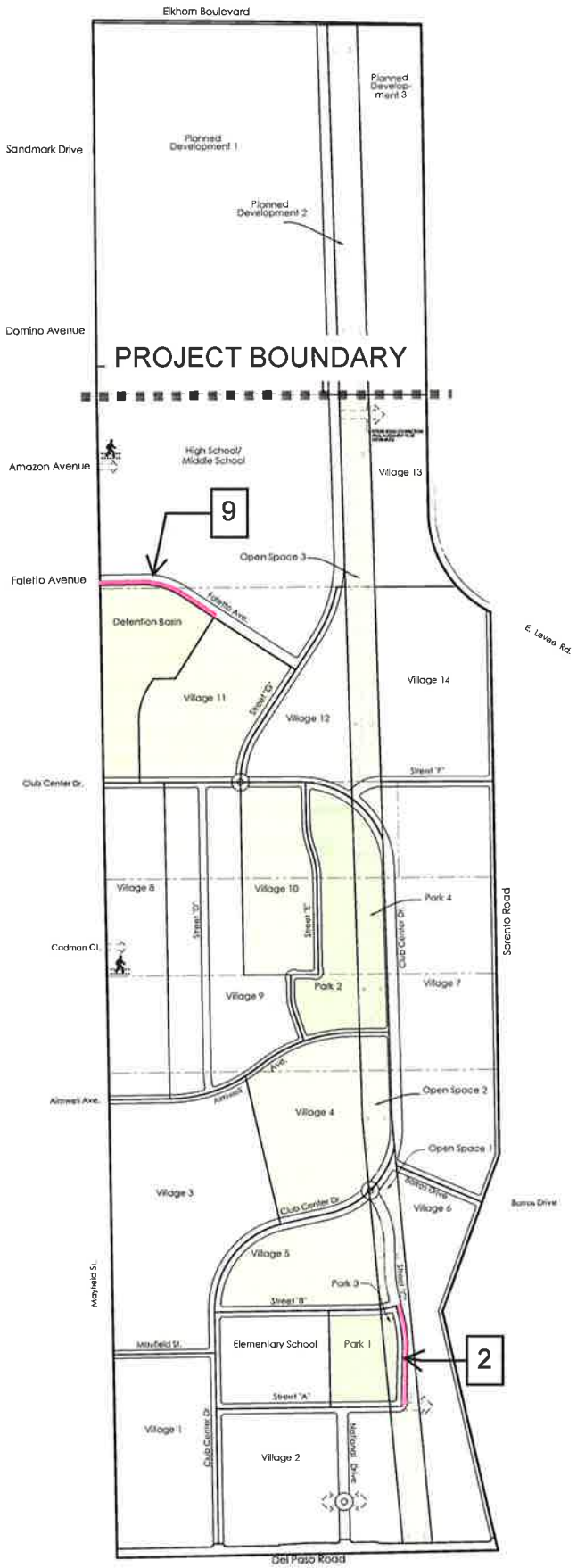
GRAND TOTAL $ 513

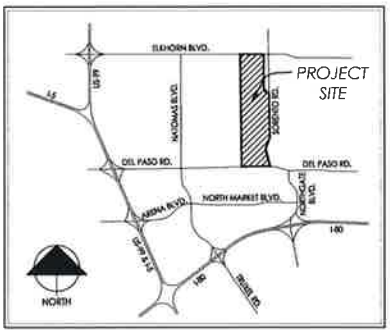
* Varies based on street section

** Varies based on street section. Type A light is assumed.

DRAFT

A-1.2





LAND USE SUMMARY

PUD Land Use*	General Plan	Zoning	Acres (G)	Acres (N)	Units
SNLD-E	SNLD (3-8 du/ac)	R-1	111.5±	101.2±	455±
SNLD-T	SNLD (3-8 du/ac)	R1-A	140.2±	127.8±	766±
SNLD-C	SNLD (3-8 du/ac)	R1-A	65.2±	59.3±	444±
Elementary School	SNLD (3-8 du/ac)	R1-A	11.8±	10.0±	
High School / Middle School	SNLD (3-8 du/ac)	R1-A	65.5±	60.4±	
Park - Quimby	PR	A-OS	17.9±	15.6±	
Park - Ninos Parkway	PR	A-OS	8.5±	7.0±	
Open Space - Ninos Parkway	PR	A-OS	27.5±	23.3±	
Detention Basin - Open Space	PR	A-OS	13.6±	13.4±	
Planned Development	PD	A	123.0±	119.0±	
Major Roads (Del Paso Rd & Elkhorn Blvd)	varies	varies	4.7±	4.7±	
Collector and Residential Streets	varies	varies	0.0±	47.8±	
		TOTALS	589.4±	589.4±	1,665± DU

*SNLD = Suburban Neighborhood Low Density (Detached Single-Family Residential)
E = Estate (4.5 du/ac average net density)
T = Traditional (6.0 du/ac average net density)
C = Compact (7.5 du/ac average net density)

= Pedestrian Connection Only

- Open Space Corridor
- Detention Basin
- Park
- School
- SNLD-E
- SNLD-T
- SNLD-C

NORTH

0 200 400 800

SCALE: 1"=400'

PANHANDLE

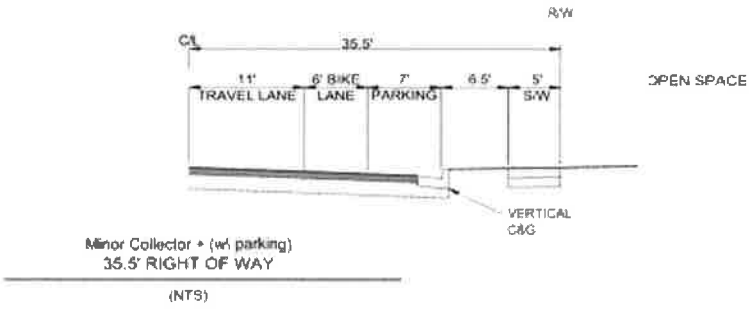
City of Sacramento

April 18, 2017

MacKAY & SOMPS ENGINEERS PLANNERS SURVEYORS

2		Date:	5/12/2017
A-1.2		Job #	27141.000
Panhandle Finance Plan - Roadway		By:	LJ
HALF STREET SECTION			
Roadway Cross Section index			
Preliminary Per Foot Cost Estimate			

Typical Cross Section:



Minor Collector + (w\ parking)
35.5' RIGHT OF WAY

(NTS)

	ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	COST
1	**Earthwork**				
	ROADWAY EXCAVATION	CY	$ 18.00	1.56	$ 28.08
	EROSION CONTROL	LF	$ 11.00	0.5	$ 5.50
	TOTAL FOR ITEM 1 EARTHWORK				**$ 33.58**
2	**DRAINAGE**				
	DRAINAGE	LF	$ 30.00	0.5	$ 15.00
	TOTAL FOR ITEM 2 DRAINAGE				**$ 15.00**
3	**PAVEMENT**				
*	ASPHALT CONCRETE (4" AC)	SF	$ 2.60	21.5	$ 55.90
*	AGGREGATE BASE W/ LIME TREATMENT (8" AB)	SF	$ 2.00	24.5	$ 49.00
	SIDEWALK (6" PCC/6"AB)	SF	$ 6.00	5	$ 30.00
	CURB & GUTTER	LF	$ 22.00	1	$ 22.00
	TYPE 14A MEDIAN CURB	LF	$ 20.00	0	$ -
	TOTAL OR ITEM 3 PAVEMENT				**$ 156.90**
4	**MISCELLANEOUS**				
**	STREET LIGHTS / ELECTROLIERS (NON-DECORATIVE)	LF	$ 30.00	0.5	$ 15.00
	JOINT TRENCH	LF	$ 150.00	0.5	$ 75.00
	MEDIAN LANDSCAPING	SF	$ 6.00	0	$ -
	LANDSCAPING BUFFER	SF	$ 8.00	6	$ 48.00
	LANDSCAPE CORRIDOR/PUE	SF	$ 5.00	0	$ -
	TOTAL FOR ITEM 4 MISCELLANEOUS				**$ 138.00**
5	**MINOR ITEMS**				
	MINOR ITEMS	%	30.0%		$ 103.04
	TOTAL FOR ITEM 5 MINOR ITEMS				**$ 103.04**

	ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	COST
6	**CONTINGENCY**				
				SUBTOTAL CONSTRUCTION COST	$ 446.52
	CONTINGENCY	%	15.0%		$ 66.98
				TOTAL CONSTRUCTION COST	**$ 513.50**
7	**ENGINEERING & MANAGEMENT**				
	ENGINEERING STUDIES	%	3.0%	$ 513.50	$ 15.41
	ENVIROMENTAL DOCUMENT	%	1.5%	$ 513.50	$ 7.70
	DESIGN ENGINEERING	%	12.0%	$ 513.50	$ 61.62
	DESIGN SERVICES DURING CONSTRUCTION	%	1.5%	$ 513.50	$ 7.70
	CONSTRUCTION STAKING	%	2.5%	$ 513.50	$ 12.84
	CONSTRUCTION MANAGEMENT	%	13.0%	$ 513.50	$ 66.76
	TOTAL FOR ITEM 7 ENGINEERING & MANAGEMENT				**$ 172.02**
	(THE ABOVE EXCLUDES LAND AND RIGHT OF WAY & MAJOR STRUCTURES WORK)				
8	**UTILITIES**				
	UTILITIES RELOCATION	%	0.0%	$ 513.50	$ -
	TOTAL FOR ITEM 8 UTILITIES				**$ -**
9	ENVIROMENTAL MITIGATION				
	ENVIROMENTAL MITIGATION	%	3.0%	$ 513.50	$ 15.41
	TOTAL FOR ITEM 9 ENVIROMENTAL MITIGATION				**$ 15.41**

GRAND TOTAL $ 701

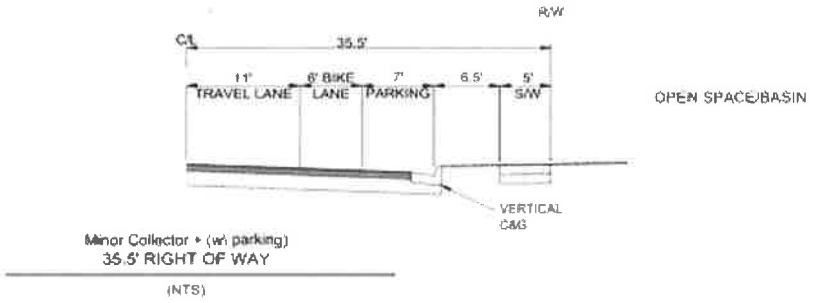
* Varies based on street section

** Based on 950 LF of street section. Type A light is assumed.

9
A-1.2
Panhandle Finance Plan - Roadway
HALF STREET SECTION
Roadway Cross Section index
Preliminary Per Foot Cost Estimate

Date: 5/12/2017
Job # 27141.000
By: LJ

Typical Cross Section:



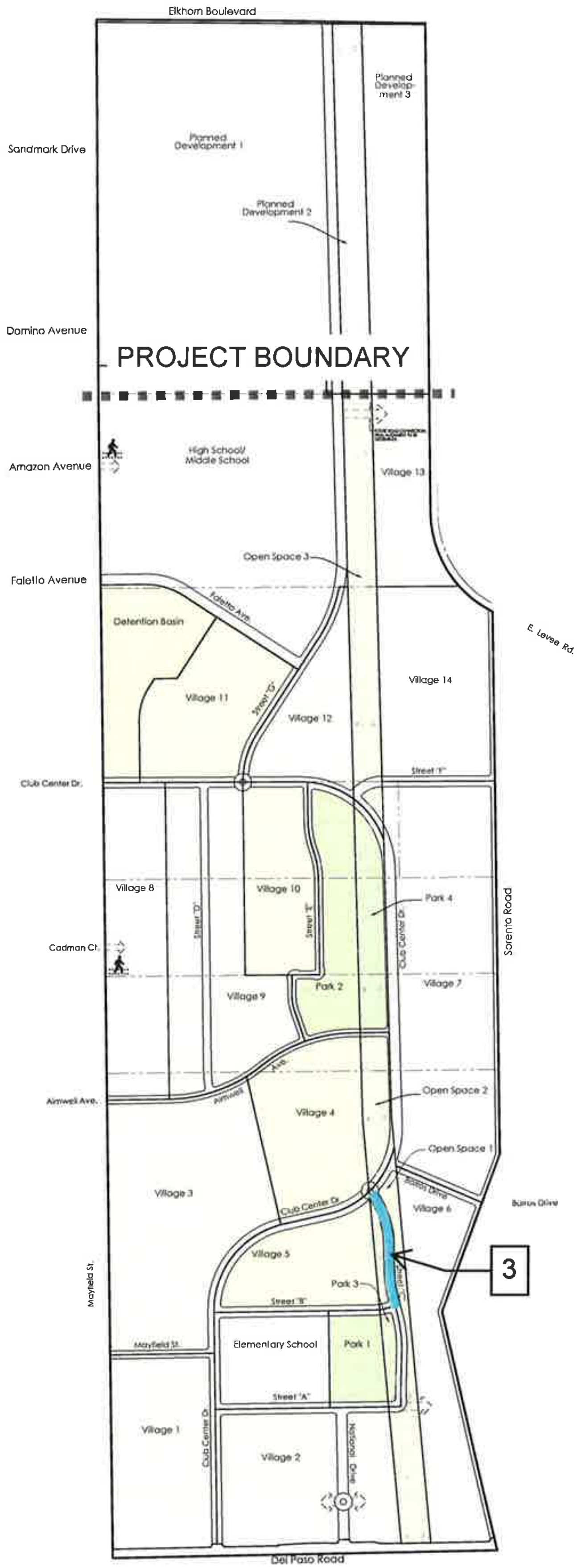
	ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	COST
1	**Earthwork**				
	ROADWAY EXCAVATION	CY	$ 18.00	1.56	$ 28.08
	EROSION CONTROL	LF	$ 11.00	0.5	$ 5.50
	TOTAL FOR ITEM 1 EARTHWORK				**$ 33.58**
2	**DRAINAGE**				
	DRAINAGE	LF	$ 30.00	0.5	$ 15.00
	TOTAL FOR ITEM 2 DRAINAGE				**$ 15.00**
3	**PAVEMENT**				
*	ASPHALT CONCRETE (4" AC)	SF	$ 2.60	21.5	$ 55.90
*	AGGREGATE BASE W/ LIME TREATMENT (8" AB)	SF	$ 2.00	24.5	$ 49.00
	SIDEWALK (6" PCC/6"AB)	SF	$ 6.00	5	$ 30.00
	CURB & GUTTER	LF	$ 22.00	1	$ 22.00
	TYPE 14A MEDIAN CURB	LF	$ 20.00	0	$ -
	TOTAL OR ITEM 3 PAVEMENT				**$ 156.90**
4	**MISCELLANEOUS**				
**	STREET LIGHTS / ELECTROLIERS (NON-DECORATIVE)	LF	$ 30.00	0.5	$ 15.00
	JOINT TRENCH	LF	$ 150.00	0.5	$ 75.00
	MEDIAN LANDSCAPING	SF	$ 6.00	0	$ -
	LANDSCAPING BUFFER	SF	$ 8.00	6	$ 48.00
	LANDSCAPE CORRIDOR/PUE	SF	$ 5.00	0	$ -
	TOTAL FOR ITEM 4 MISCELLANEOUS				**$ 138.00**
5	**MINOR ITEMS**				
	MINOR ITEMS	%	30.0%		$ 103.04
	TOTAL FOR ITEM 5 MINOR ITEMS				**$ 103.04**

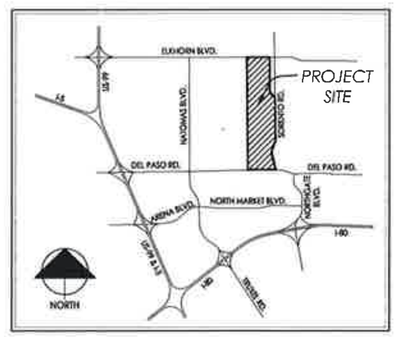
	ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	COST
6	**CONTINGENCY**				
				SUBTOTAL CONSTRUCTION COST	$ 446.52
	CONTINGENCY	%	15.0%		$ 66.98
				TOTAL CONSTRUCTION COST	**$ 513.50**
7	**ENGINEERING & MANAGEMENT**				
	ENGINEERING STUDIES	%	3.0%	$ 513.50	$ 15.41
	ENVIROMENTAL DOCUMENT	%	1.5%	$ 513.50	$ 7.70
	DESIGN ENGINEERING	%	12.0%	$ 513.50	$ 61.62
	DESIGN SERVICES DURING CONSTRUCTION	%	1.5%	$ 513.50	$ 7.70
	CONSTRUCTION STAKING	%	2.5%	$ 513.50	$ 12.84
	CONSTRUCTION MANAGEMENT	%	13.0%	$ 513.50	$ 66.76
	TOTAL FOR ITEM 7 ENGINEERING & MANAGEMENT				**$ 172.02**
	(THE ABOVE EXCLUDES LAND AND RIGHT OF WAY & MAJOR STRUCTURES WORK)				
8	**UTILITIES**				
	UTILITIES RELOCATION	%	0.0%	$ 513.50	$ -
	TOTAL FOR ITEM 8 UTILITIES				**$ -**
9	ENVIROMENTAL MITIGATION				
	ENVIROMENTAL MITIGATION	%	3.0%	$ 513.50	$ 15.41
	TOTAL FOR ITEM 9 ENVIROMENTAL MITIGATION				**$ 15.41**

GRAND TOTAL $ 701

* Varies based on street section

** Based on 950 LF of street section. Type A light is assumed.





LAND USE SUMMARY

PUD Land Use*	General Plan	Zoning	Acres (G)	Acres (N)	Units
SNLD-E	SNLD (3-8 du/ac)	R-1	111.5±	101.2±	455±
SNLD-T	SNLD (3-8 du/ac)	R1-A	140.2±	127.8±	766±
SNLD-C	SNLD (3-8 du/ac)	R1-A	65.2±	59.3±	444±
Elementary School	SNLD (3-8 du/ac)	R1-A	11.8±	10.0±	
High School / Middle School	SNLD (3-8 du/ac)	R1-A	65.5±	60.4±	
Park - Quimby	PR	A-OS	17.9±	15.5±	
Park - Ninos Parkway	PR	A-OS	8.5±	7.0±	
Open Space - Ninos Parkway	PR	A-OS	27.5±	23.3±	
Detention Basin - Open Space	PR	A-OS	13.6±	13.4±	
Planned Development (Krumenacher Property)	PD	A	123.0±	119.0±	
Major Roads (Del Paso Rd & Elkhorn Blvd)	varies	varies	4.7±	4.7±	
Collector and Residential Streets	varies	varies	0.0±	47.8±	
		TOTALS	589.4±	589.4±	1,665± DU

*SNLD = Suburban Neighborhood Low Density (Detached Single-Family Residential)
-E = Estate (4.5 du/ac average net density)
-T = Traditional (6.0 du/ac average net density)
-C = Compact (7.5 du/ac average net density)

= Pedestrian Connection Only

- Open Space Corridor
- Detention Basin
- Park
- School
- SNLD-E
- SNLD-T
- SNLD-C

NORTH

0 200 400 800
SCALE: 1"=400'

PANHANDLE

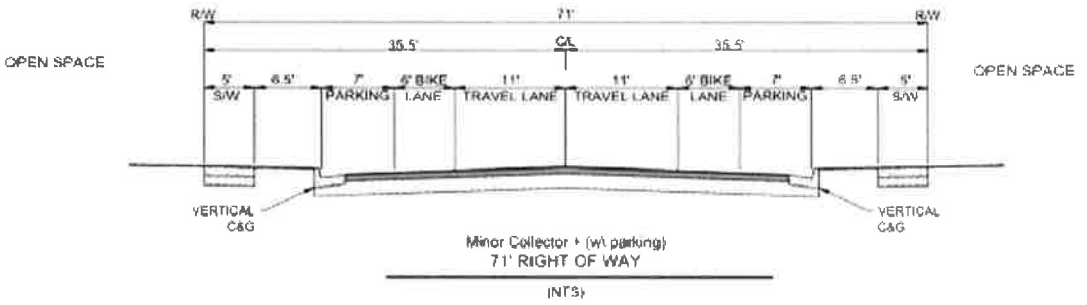
City of Sacramento

April 18, 2017

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS

3		Date:	5/12/2017
A-1.3		Job #	27141.000
Panhandle Finance Plan - Roadway		By:	LJ
FULL STREET SECTION			
Roadway Cross Section index			
Preliminary Per Foot Cost Estimate			

Typical Cross Section:



	ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	COST
1	**Earthwork**				
	ROADWAY EXCAVATION	CY	$ 18.00	3.11	$ 55.98
	EROSION CONTROL	LF	$ 11.00	1	$ 11.00
	TOTAL FOR ITEM 1 EARTHWORK				**$ 66.98**
2	**DRAINAGE**				
	DRAINAGE	LF	$ 30.00	1	$ 30.00
	TOTAL FOR ITEM 2 DRAINAGE				**$ 30.00**
3	**PAVEMENT**				
*	ASPHALT CONCRETE (4" AC)	SF	$ 2.60	43	$ 111.80
*	AGGREGATE BASE W/ LIME TREATMENT (8" AB)	SF	$ 2.00	44	$ 88.00
	SIDEWALK (6" PCC/6"AB)	SF	$ 6.00	10	$ 60.00
	CURB & GUTTER	LF	$ 22.00	2	$ 44.00
	TYPE 14A MEDIAN CURB	LF	$ 20.00	0	$ -
	TOTAL OR ITEM 3 PAVEMENT				**$ 303.80**
4	**MISCELLANEOUS**				
**	STREET LIGHTS / ELECTROLIERS (NON-DECORATIVE)	LF	$ 30.00	1	$ 30.00
	JOINT TRENCH	LF	$ 150.00	1	$ 150.00
	MEDIAN LANDSCAPING	SF	$ 6.00	0	$ -
	LANDSCAPING BUFFER	SF	$ 8.00	12	$ 96.00
	LANDSCAPE CORRIDOR/PUE	SF	$ 5.00	0	$ -
	TOTAL FOR ITEM 4 MISCELLANEOUS				**$ 276.00**
5	**MINOR ITEMS**				
	MINOR ITEMS	%	30.0%		$ 203.03
	TOTAL FOR ITEM 5 MINOR ITEMS				**$ 203.03**

	ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	COST
6	**CONTINGENCY**				
				SUBTOTAL CONSTRUCTION COST	$ 879.81
	CONTINGENCY	%	15.0%		$ 131.97
				TOTAL CONSTRUCTION COST	**$ 1,011.79**
7	**ENGINEERING & MANAGEMENT**				
	ENGINEERING STUDIES	%	3.0%	$ 1,011.79	$ 30.35
	ENVIROMENTAL DOCUMENT	%	1.5%	$ 1,011.79	$ 15.18
	DESIGN ENGINEERING	%	12.0%	$ 1,011.79	$ 121.41
	DESIGN SERVICES DURING CONSTRUCTION	%	1.5%	$ 1,011.79	$ 15.18
	CONSTRUCTION STAKING	%	2.5%	$ 1,011.79	$ 25.29
	CONSTRUCTION MANAGEMENT	%	13.0%	$ 1,011.79	$ 131.53
	TOTAL FOR ITEM 7 ENGINEERING & MANAGEMENT				**$ 338.95**
	(THE ABOVE EXCLUDES LAND AND RIGHT OF WAY & MAJOR STRUCTURES WORK)				
8	**UTILITIES**				
	UTILITIES RELOCATION	%	0.0%	$ 1,011.79	$ -
	TOTAL FOR ITEM 8 UTILITIES				**$ -**
9	ENVIROMENTAL MITIGATION				
	ENVIROMENTAL MITIGATION	%	3.0%	$ 1,011.79	$ 30.35
	TOTAL FOR ITEM 9 ENVIROMENTAL MITIGATION				**$ 30.35**

GRAND TOTAL $ 1,381

* Varies based on street section

** Based on 950 LF of street section. Type A light is assumed.

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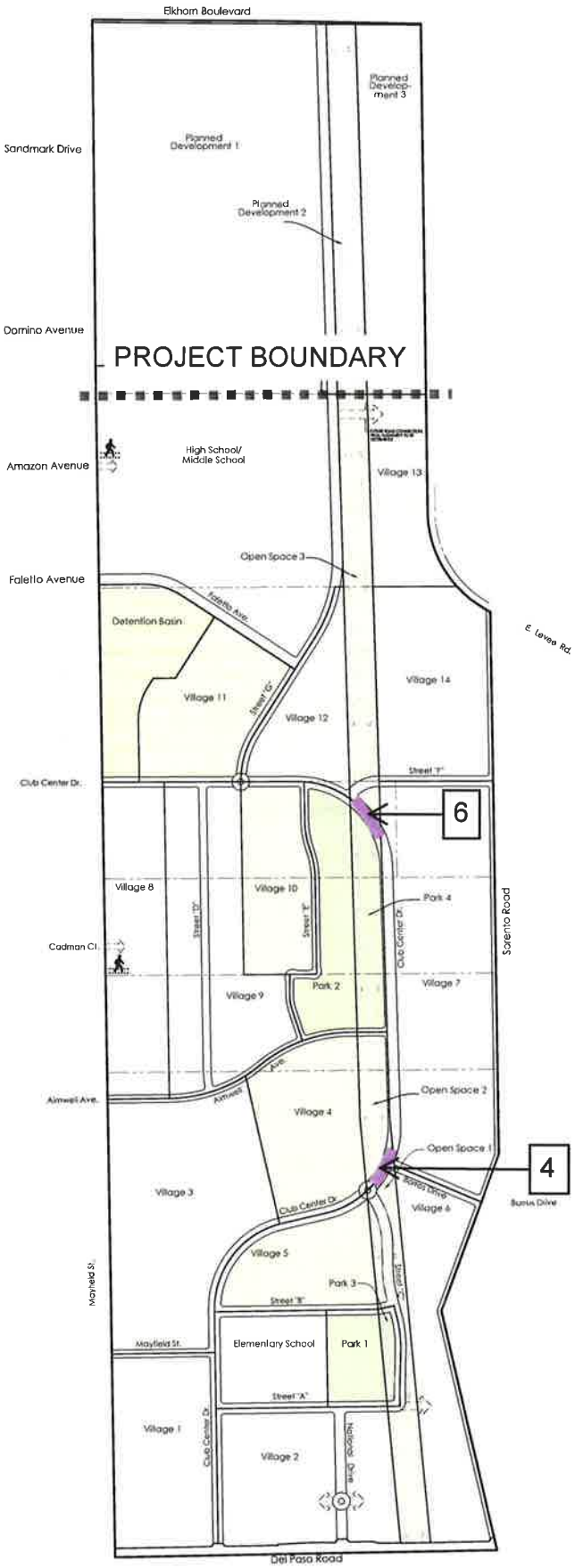
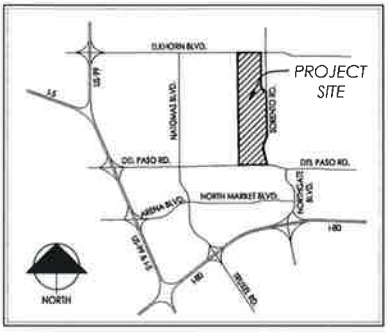
A-1.4





LAND USE SUMMARY

PUD Land Use*	General Plan	Zoning	Acres (G)	Acres (N)	Units
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Open Space - Ninos Parkway	PR	A-OS	27.5±	23.3±	
Detention Basin - Open Space	PR	A-OS	13.6±	13.4±	
Planned Development [illegible]	PD	A	123.0±	119.0±	
Major Roads (Del Paso Rd & Elkhorn Blvd)	varies	varies	47±	47±	
Collector and Residential Streets	varies	varies	0.0±	47.8±	
		TOTALS	589.4±	589.4±	1,665± DU

*SNLD = Suburban Neighborhood Low Density (Detached Single-Family Residential)
-E = Estate (4.5 du/ac average net density)
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= Pedestrian Connection Only

- Open Space Corridor
- Detention Basin
- Park
- School
- SNLD-E
- SNLD-T
- SNLD-C

NORTH

0 200 400 800

SCALE: 1"=400'

PANHANDLE

City of Sacramento

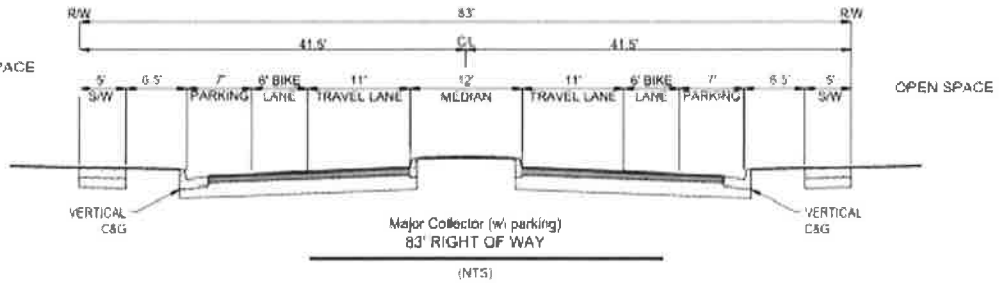
April 18, 2017

MacKAY & SOMPS ENGINEERS PLANNERS SURVEYORS

4
A-1.4
Panhandle Finance Plan - Roadway
FULL STREET SECTIONS
Roadway Cross Section index
Preliminary Per Foot Cost Estimate

Date: 5/12/2017
Job # 27141.000
By: LJ

Typical Cross Section:



	ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	COST
1	**Earthwork**				
	ROADWAY EXCAVATION	CY	$ 18.00	4.17	$ 75.06
	EROSION CONTROL	LF	$ 11.00	1	$ 11.00
	TOTAL FOR ITEM 1 EARTHWORK				**$ 86.06**
2	**DRAINAGE**				
	DRAINAGE	LF	$ 30.00	1	$ 30.00
	TOTAL FOR ITEM 2 DRAINAGE				**$ 30.00**
3	**PAVEMENT**				
*	ASPHALT CONCRETE (5" AC)	SF	$ 3.25	43	$ 139.75
*	AGGREGATE BASE W/ LIME TREATMENT (10" AB)	SF	$ 2.50	50	$ 125.00
	SIDEWALK (6" PCC/6"AB)	SF	$ 6.00	10	$ 60.00
	CURB & GUTTER	LF	$ 22.00	2	$ 44.00
	TYPE 14A MEDIAN CURB	LF	$ 20.00	2	$ 40.00
	TOTAL OR ITEM 3 PAVEMENT				**$ 408.75**
4	**MISCELLANEOUS**				
**	STREET LIGHTS / ELECTROLIERS (NON-DECORATIVE)	LF	$ 30.00	1	$ 30.00
	JOINT TRENCH	LF	$ 150.00	1	$ 150.00
	MEDIAN LANDSCAPING	SF	$ 6.00	11	$ 66.00
	LANDSCAPING BUFFER	SF	$ 8.00	12	$ 96.00
	LANDSCAPE CORRIDOR/PUE	SF	$ 5.00	0	$ -
	TOTAL FOR ITEM 4 MISCELLANEOUS				**$ 342.00**
5	**MINOR ITEMS**				
	MINOR ITEMS	%	30.0%		$ 260.04
	TOTAL FOR ITEM 5 MINOR ITEMS				**$ 260.04**

	ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	COST
6	**CONTINGENCY**				
				SUBTOTAL CONSTRUCTION COST	$ 1,126.85
	CONTINGENCY	%	15.0%		$ 169.03
				TOTAL CONSTRUCTION COST	**$ 1,295.88**
7	**ENGINEERING & MANAGEMENT**				
	ENGINEERING STUDIES	%	3.0%	$ 1,295.88	$ 38.88
	ENVIROMENTAL DOCUMENT	%	1.5%	$ 1,295.88	$ 19.44
	DESIGN ENGINEERING	%	12.0%	$ 1,295.88	$ 155.51
	DESIGN SERVICES DURING CONSTRUCTION	%	1.5%	$ 1,295.88	$ 19.44
	CONSTRUCTION STAKING	%	2.5%	$ 1,295.88	$ 32.40
	CONSTRUCTION MANAGEMENT	%	13.0%	$ 1,295.88	$ 168.46
	TOTAL FOR ITEM 7 ENGINEERING & MANAGEMENT				**$ 434.12**
	(THE ABOVE EXCLUDES LAND AND RIGHT OF WAY & MAJOR STRUCTURES WORK)				
8	**UTILITIES**				
	UTILITIES RELOCATION	%	0.0%	$ 1,295.88	$ -
	TOTAL FOR ITEM 8 UTILITIES				**$ -**
9	ENVIROMENTAL MITIGATION				
	ENVIROMENTAL MITIGATION	%	3.0%	$ 1,295.88	$ 38.88
	TOTAL FOR ITEM 9 ENVIROMENTAL MITIGATION				**$ 38.88**

GRAND TOTAL $ 1,769

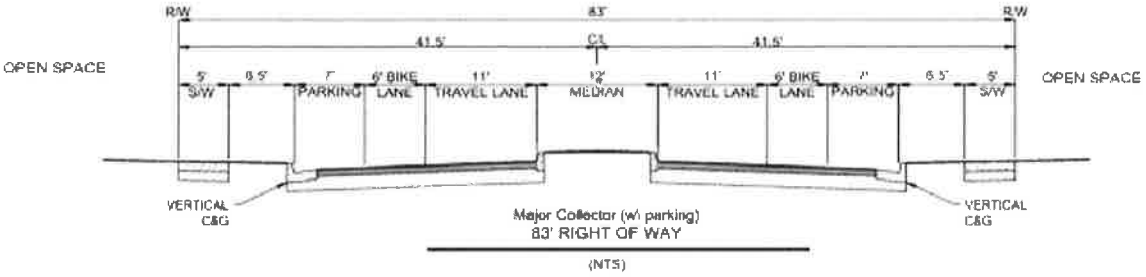
* Varies based on street section

** Based on 950 LF of street section. Type A light is assumed.

6
A-1.4
Panhandle Finance Plan - Roadway
FULL STREET SECTIONS
Roadway Cross Section index
Preliminary Per Foot Cost Estimate

Date: 5/12/2017
Job # 27141.000
By: LJ

Typical Cross Section:



	ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	COST
1	**Earthwork**				
	ROADWAY EXCAVATION	CY	$ 18.00	4.17	$ 75.06
	EROSION CONTROL	LF	$ 11.00	1	$ 11.00
	TOTAL FOR ITEM 1 EARTHWORK				**$ 86.06**
2	**DRAINAGE**				
	DRAINAGE	LF	$ 30.00	1	$ 30.00
	TOTAL FOR ITEM 2 DRAINAGE				**$ 30.00**
3	**PAVEMENT**				
*	ASPHALT CONCRETE (5" AC)	SF	$ 3.25	43	$ 139.75
*	AGGREGATE BASE W/ LIME TREATMENT (10" AB)	SF	$ 2.50	50	$ 125.00
	SIDEWALK (6" PCC/6"AB)	SF	$ 6.00	10	$ 60.00
	CURB & GUTTER	LF	$ 22.00	2	$ 44.00
	TYPE 14A MEDIAN CURB	LF	$ 20.00	2	$ 40.00
	TOTAL OR ITEM 3 PAVEMENT				**$ 408.75**
4	**MISCELLANEOUS**				
**	STREET LIGHTS / ELECTROLIERS (NON-DECORATIVE)	LF	$ 30.00	1	$ 30.00
	JOINT TRENCH	LF	$ 150.00	1	$ 150.00
	MEDIAN LANDSCAPING	SF	$ 6.00	11	$ 66.00
	LANDSCAPING BUFFER	SF	$ 8.00	12	$ 96.00
	LANDSCAPE CORRIDOR/PUE	SF	$ 5.00	0	$ -
	TOTAL FOR ITEM 4 MISCELLANEOUS				**$ 342.00**
5	**MINOR ITEMS**				
	MINOR ITEMS	%	30.0%		$ 260.04
	TOTAL FOR ITEM 5 MINOR ITEMS				**$ 260.04**

	ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	COST
6	**CONTINGENCY**				
				SUBTOTAL CONSTRUCTION COST	$ 1,126.85
	CONTINGENCY	%	15.0%		$ 169.03
				TOTAL CONSTRUCTION COST	**$ 1,295.88**
7	**ENGINEERING & MANAGEMENT**				
	ENGINEERING STUDIES	%	3.0%	$ 1,295.88	$ 38.88
	ENVIROMENTAL DOCUMENT	%	1.5%	$ 1,295.88	$ 19.44
	DESIGN ENGINEERING	%	12.0%	$ 1,295.88	$ 155.51
	DESIGN SERVICES DURING CONSTRUCTION	%	1.5%	$ 1,295.88	$ 19.44
	CONSTRUCTION STAKING	%	2.5%	$ 1,295.88	$ 32.40
	CONSTRUCTION MANAGEMENT	%	13.0%	$ 1,295.88	$ 168.46
	TOTAL FOR ITEM 7 ENGINEERING & MANAGEMENT				**$ 434.12**
	(THE ABOVE EXCLUDES LAND AND RIGHT OF WAY & MAJOR STRUCTURES WORK)				
8	**UTILITIES**				
	UTILITIES RELOCATION	%	0.0%	$ 1,295.88	$ -
	TOTAL FOR ITEM 8 UTILITIES				**$ -**
9	ENVIROMENTAL MITIGATION				
	ENVIROMENTAL MITIGATION	%	3.0%	$ 1,295.88	$ 38.88
	TOTAL FOR ITEM 9 ENVIROMENTAL MITIGATION				**$ 38.88**

GRAND TOTAL $ 1,769

* Varies based on street section

** Based on 950 LF of street section. Type A light is assumed.

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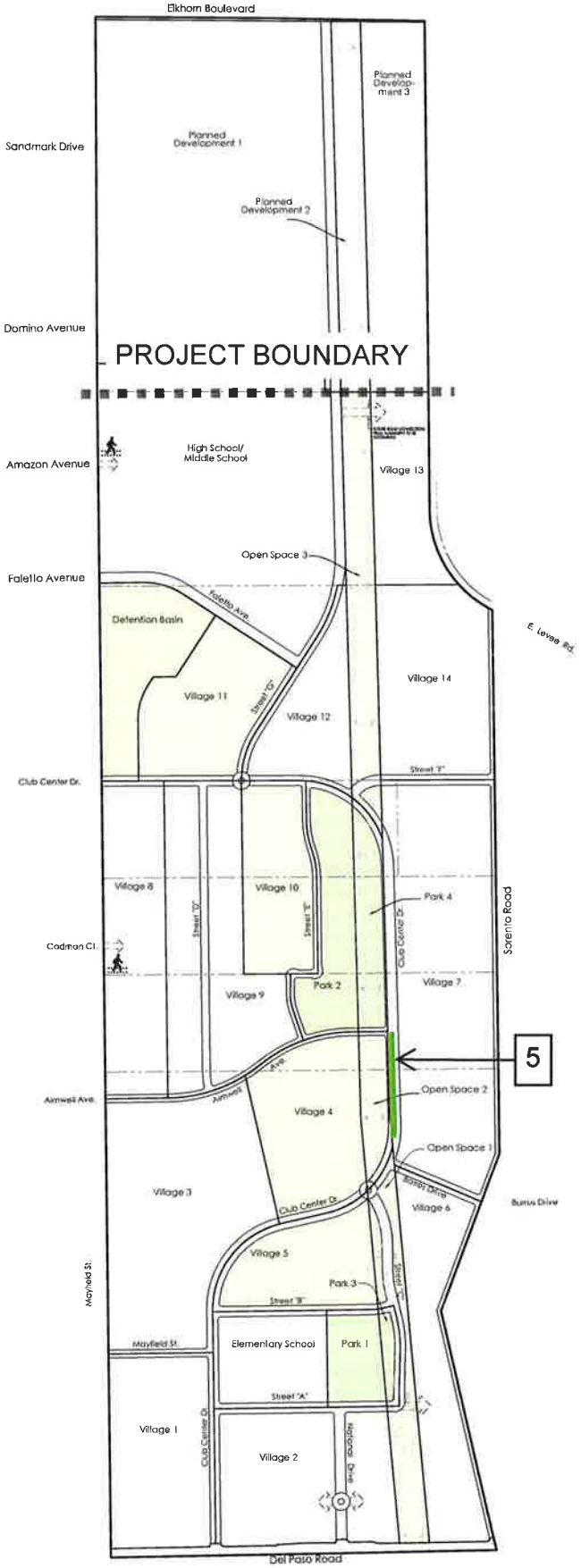
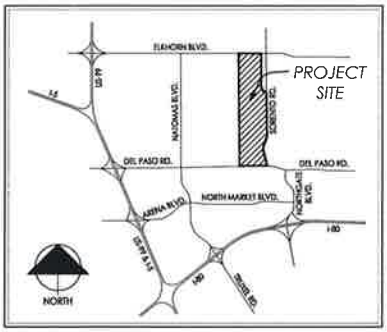
A-1.5





LAND USE SUMMARY

PUD Land Use*	General Plan	Zoning	Acres (G)	Acres (N)	Units
SNLD-E	SNLD (3-8 du/ac)	R-1	111.5±	101.2±	455±
SNLD-T	SNLD (3-8 du/ac)	R1-A	140.2±	127.8±	766±
SNLD-C	SNLD (3-8 du/ac)	R1-A	65.2±	59.3±	444±
Elementary School	SNLD (3-8 du/ac)	R1-A	11.8±	10.0±	
High School / Middle School	SNLD (3-8 du/ac)	R1-A	65.5±	60.4±	
Park - Quimby	PR	A-OS	17.9±	15.5±	
Park - Ninos Parkway	PR	A-OS	8.5±	7.0±	
Open Space - Ninos Parkway	PR	A-OS	27.5±	23.3±	
Detention Basin - Open Space	PR	A-OS	13.6±	13.4±	
Planned Development (Non-Panhandle Property)	PD	A	123.0±	119.0±	
Major Roads (Del Paso Rd & Elkhorn Blvd)	varies	varies	4.7±	4.7±	
Collector and Residential Streets	varies	varies	0.0±	47.8±	
		TOTALS	589.4±	589.4±	1,665± DU

*SNLD = Suburban Neighborhood Low Density (Detached Single-Family Residential)
-E = Estate (4.5 du/ac average net density)
-T = Traditional (6.0 du/ac average net density)
-C = Compact (7.5 du/ac average net density)

= Pedestrian Connection Only

- Open Space Corridor
- Detention Basin
- Park
- School
- SNLD-E
- SNLD-T
- SNLD-C

NORTH

0 200 400 800

SCALE: 1"=400'

PANHANDLE

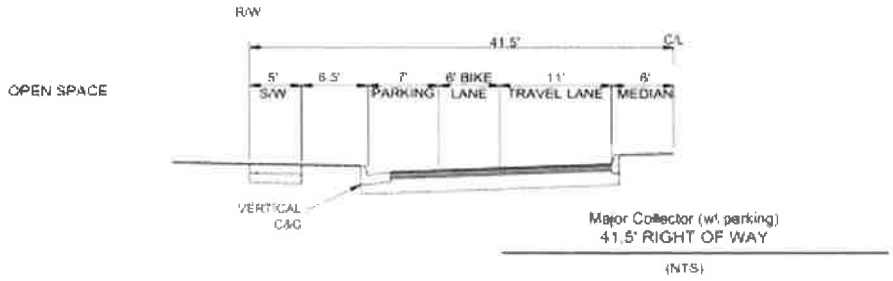
City of Sacramento

April 18, 2017

MACKAY & SOMPS ENGINEERS PLANNERS SURVEYORS

5		Date:	5/12/2017
A-1.5		Job #	27141.000
Panhandle Finance Plan - Roadway		By:	LJ
HALF STREET SECTIONS			
Roadway Cross Section index			
Preliminary Per Foot Cost Estimate			

Typical Cross Section:



	ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	COST
1	**Earthwork**				
	ROADWAY EXCAVATION	CY	$ 18.00	2.09	$ 37.62
	EROSION CONTROL	LF	$ 11.00	0.5	$ 5.50
	TOTAL FOR ITEM 1 EARTHWORK				**$ 43.12**
2	**DRAINAGE**				
	DRAINAGE	LF	$ 30.00	0.5	$ 15.00
	TOTAL FOR ITEM 2 DRAINAGE				**$ 15.00**
3	**PAVEMENT**				
*	ASPHALT CONCRETE (5" AC)	SF	$ 3.25	21.5	$ 69.88
*	AGGREGATE BASE W/ LIME TREATMENT (10" AB)	SF	$ 2.50	25	$ 62.50
	SIDEWALK (6" PCC/6"AB)	SF	$ 6.00	5	$ 30.00
	CURB & GUTTER	LF	$ 22.00	1	$ 22.00
	TYPE 14A MEDIAN CURB	LF	$ 20.00	1	$ 20.00
	TOTAL OR ITEM 3 PAVEMENT				**$ 204.38**
4	**MISCELLANEOUS**				
**	STREET LIGHTS / ELECTROLIERS (NON-DECORATIVE)	LF	$ 30.00	0.5	$ 15.00
	JOINT TRENCH	LF	$ 150.00	0.5	$ 75.00
	MEDIAN LANDSCAPING	SF	$ 6.00	5.5	$ 33.00
	LANDSCAPING BUFFER	SF	$ 8.00	6	$ 48.00
	LANDSCAPE CORRIDOR/PUE	SF	$ 5.00	0	$ -
	TOTAL FOR ITEM 4 MISCELLANEOUS				**$ 171.00**
5	**MINOR ITEMS**				
	MINOR ITEMS	%	30.0%		$ 130.05
	TOTAL FOR ITEM 5 MINOR ITEMS				**$ 130.05**

	ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	COST
6	**CONTINGENCY**				
				SUBTOTAL CONSTRUCTION COST	$ 563.54
	CONTINGENCY	%	15.0%		$ 84.53
				TOTAL CONSTRUCTION COST	**$ 648.08**
7	**ENGINEERING & MANAGEMENT**				
	ENGINEERING STUDIES	%	3.0%	$ 648.08	$ 19.44
	ENVIROMENTAL DOCUMENT	%	1.5%	$ 648.08	$ 9.72
	DESIGN ENGINEERING	%	12.0%	$ 648.08	$ 77.77
	DESIGN SERVICES DURING CONSTRUCTION	%	1.5%	$ 648.08	$ 9.72
	CONSTRUCTION STAKING	%	2.5%	$ 648.08	$ 16.20
	CONSTRUCTION MANAGEMENT	%	13.0%	$ 648.08	$ 84.25
	TOTAL FOR ITEM 7 ENGINEERING & MANAGEMENT				**$ 217.11**
	(THE ABOVE EXCLUDES LAND AND RIGHT OF WAY & MAJOR STRUCTURES WORK)				
8	**UTILITIES**				
	UTILITIES RELOCATION	%	0.0%	$ 648.08	$ -
	TOTAL FOR ITEM 8 UTILITIES				**$ -**
9	ENVIROMENTAL MITIGATION				
	ENVIROMENTAL MITIGATION	%	3.0%	$ 648.08	$ 19.44
	TOTAL FOR ITEM 9 ENVIROMENTAL MITIGATION				**$ 19.44**

GRAND TOTAL $ 885

* Varies based on street section

** Based on 950 LF of street section. Type A light is assumed.

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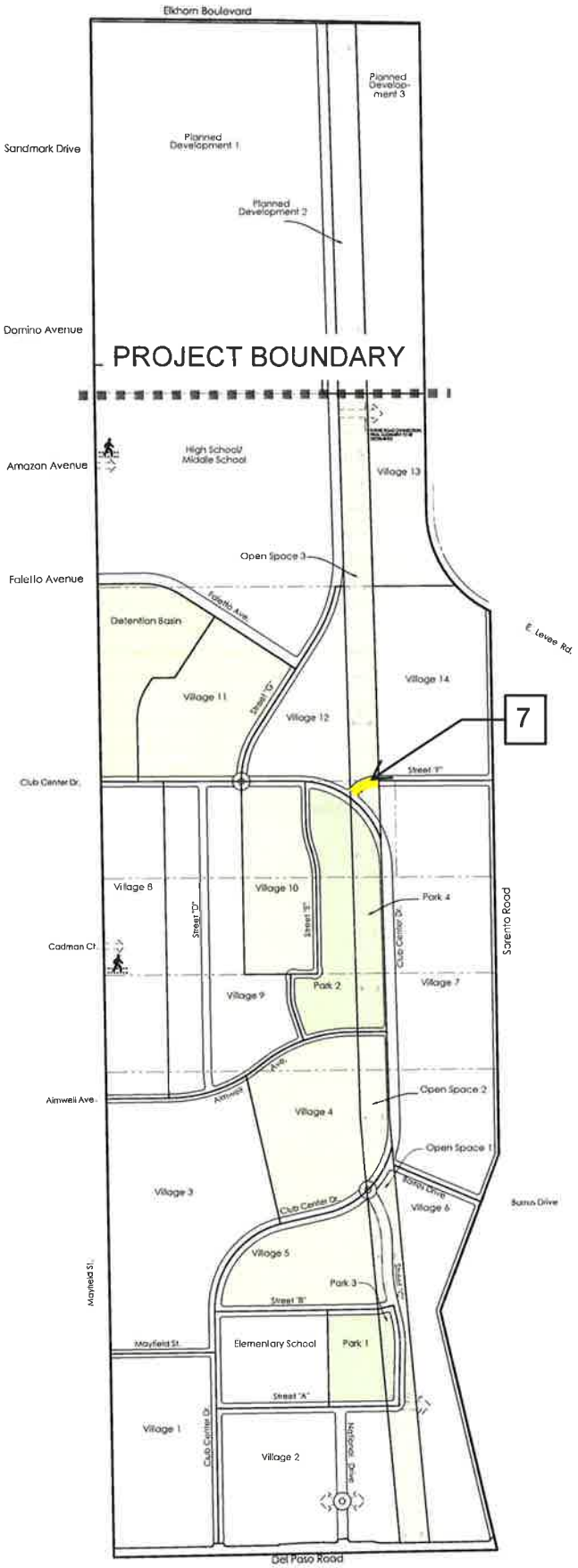
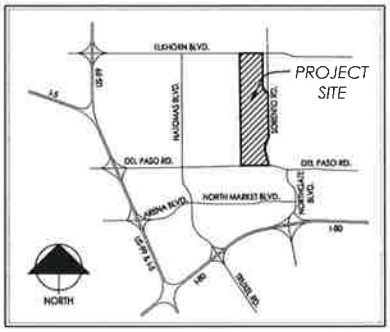
A-1.6





LAND USE SUMMARY

PUD Land Use*	General Plan	Zoning	Acres (G)	Acres (N)	Units
SNLD-E	SNLD (3-8 du/ac)	R-1	111.5±	101.2±	455±
SNLD-T	SNLD (3-8 du/ac)	R1-A	140.2±	127.8±	766±
SNLD-C	SNLD (3-8 du/ac)	R1-A	65.2±	59.3±	444±
Elementary School	SNLD (3-8 du/ac)	R1-A	11.8±	10.0±	
High School / Middle School	SNLD (3-8 du/ac)	R1-A	65.5±	60.4±	
Park - Quimby	PR	A-OS	17.9±	15.5±	
Park - Ninos Parkway	PR	A-OS	8.5±	7.0±	
Open Space - Ninos Parkway	PR	A-OS	27.5±	23.3±	
Detention Basin - Open Space	PR	A-OS	13.6±	13.4±	
Planned Development (Northwestern Property)	PD	A	123.0±	119.0±	
Major Roads (Del Paso Rd & Elkhorn Blvd)	varies	varies	4.7±	4.7±	
Collector and Residential Streets	varies	varies	0.0±	47.8±	
		TOTALS	589.4±	589.4±	1,665± DU

*SNLD = Suburban Neighborhood Low Density (Detached Single-Family Residential)
-E = Estate (4.5 du/ac average net density)
-T = Traditional (6.0 du/ac average net density)
-C = Compact (7.5 du/ac average net density)
= Pedestrian Connection Only

- Open Space Corridor
- Detention Basin
- Park
- School
- SNLD-E
- SNLD-T
- SNLD-C

NORTH

0 200 400 800

SCALE: 1"=400'

PANHANDLE

City of Sacramento

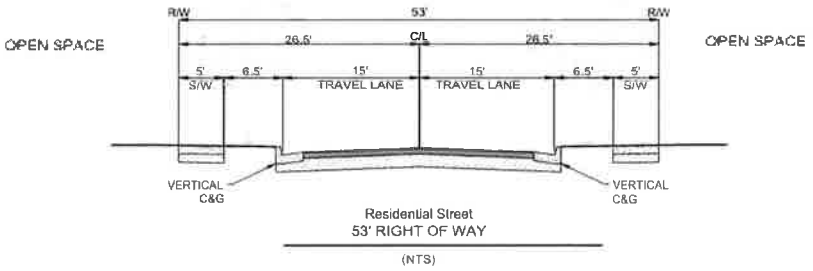
April 18, 2017

MACKAY & SOMPS ENGINEERS PLANNERS SURVEYORS

7
A-1.6
Panhandle Finance Plan - Roadway
FULL STREET SECTIONS
Roadway Cross Section index
Preliminary Per Foot Cost Estimate

Date: 5/12/2017
Job # 27141.000
By: LJ

Typical Cross Section:



	ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	COST
1	**Earthwork**				
	ROADWAY EXCAVATION	CY	$ 18.00	1.52	$ 27.36
	EROSION CONTROL	LF	$ 11.00	1	$ 11.00
	TOTAL FOR ITEM 1 EARTHWORK				**$ 38.36**
2	**DRAINAGE**				
	DRAINAGE	LF	$ 30.00	1	$ 30.00
	TOTAL FOR ITEM 2 DRAINAGE				**$ 30.00**
3	**PAVEMENT**				
*	ASPHALT CONCRETE (4" AC)	SF	$ 3.25	25	$ 81.25
*	AGGREGATE BASE W/ LIME TREATMENT (6" AB)	SF	$ 2.50	31	$ 77.50
	SIDEWALK (6" PCC/6"AB)	SF	$ 6.00	10	$ 60.00
	CURB & GUTTER	LF	$ 22.00	2	$ 44.00
	TYPE 14A MEDIAN CURB	LF	$ 20.00	0	$ -
	TOTAL OR ITEM 3 PAVEMENT				**$ 262.75**
4	**MISCELLANEOUS**				
**	STREET LIGHTS / ELECTROLIERS (NON-DECORATIVE)	LF	$ 30.00	1	$ 30.00
	JOINT TRENCH	LF	$ 150.00	1	$ 150.00
	MEDIAN LANDSCAPING	SF	$ 6.00	0	$ -
	LANDSCAPING BUFFER	SF	$ 8.00	12	$ 96.00
	LANDSCAPE CORRIDOR/PUE	SF	$ 5.00	0	$ -
	TOTAL FOR ITEM 4 MISCELLANEOUS				**$ 276.00**
5	**MINOR ITEMS**				
	MINOR ITEMS	%	30.0%		$ 182.13
	TOTAL FOR ITEM 5 MINOR ITEMS				**$ 182.13**

	ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	COST
6	**CONTINGENCY**				
				SUBTOTAL CONSTRUCTION COST	$ 789.24
	CONTINGENCY	%	15.0%		$ 118.39
				TOTAL CONSTRUCTION COST	**$ 907.63**
7	**ENGINEERING & MANAGEMENT**				
	ENGINEERING STUDIES	%	3.0%	$ 907.63	$ 27.23
	ENVIROMENTAL DOCUMENT	%	1.5%	$ 907.63	$ 13.61
	DESIGN ENGINEERING	%	12.0%	$ 907.63	$ 108.92
	DESIGN SERVICES DURING CONSTRUCTION	%	1.5%	$ 907.63	$ 13.61
	CONSTRUCTION STAKING	%	2.5%	$ 907.63	$ 22.69
	CONSTRUCTION MANAGEMENT	%	13.0%	$ 907.63	$ 117.99
	TOTAL FOR ITEM 7 ENGINEERING & MANAGEMENT				**$ 304.06**
	(THE ABOVE EXCLUDES LAND AND RIGHT OF WAY & MAJOR STRUCTURES WORK)				
8	**UTILITIES**				
	UTILITIES RELOCATION	%	0.0%	$ 907.63	$ -
	TOTAL FOR ITEM 8 UTILITIES				**$ -**
9	ENVIROMENTAL MITIGATION				
	ENVIROMENTAL MITIGATION	%	3.0%	$ 907.63	$ 27.23
	TOTAL FOR ITEM 9 ENVIROMENTAL MITIGATION				**$ 27.23**

GRAND TOTAL $ 1,239

* Varies based on street section

** Based on 950 LF of street section. Type A light is assumed.

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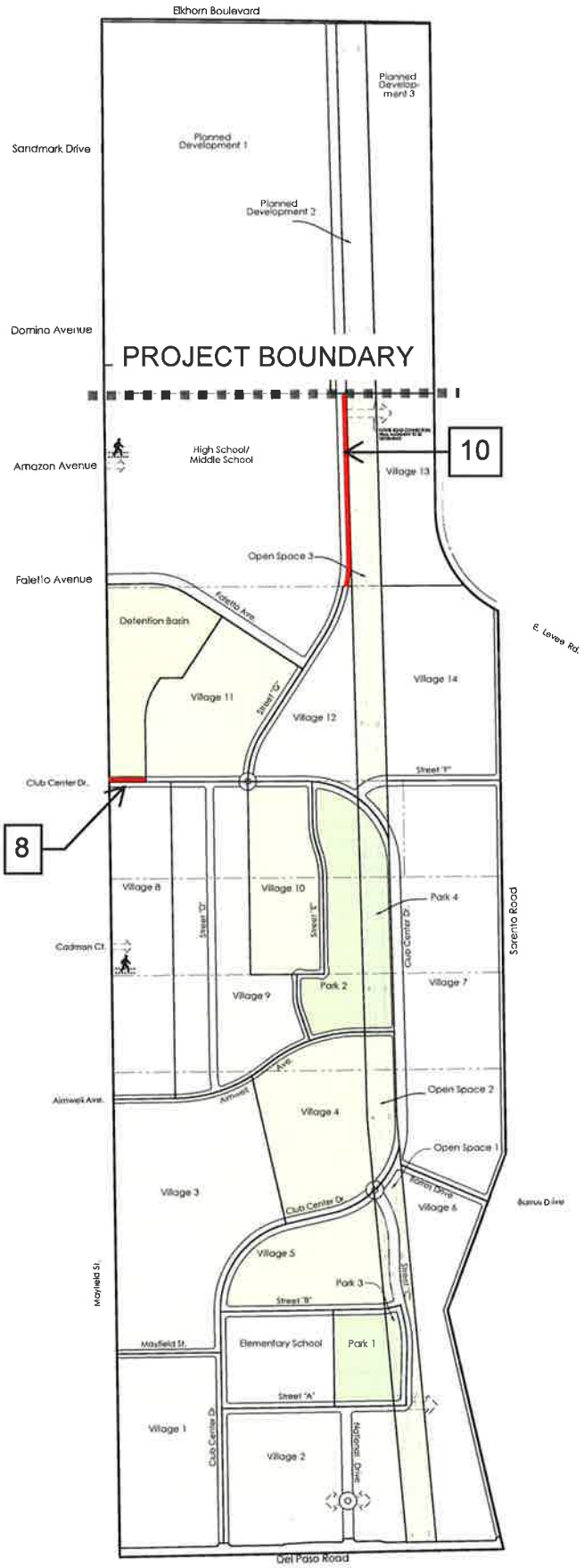
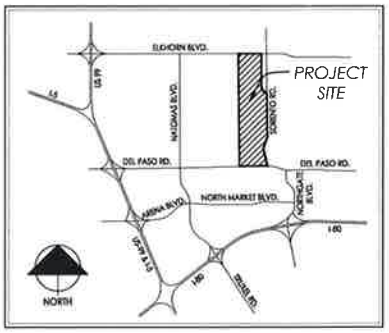
A-1.7





LAND USE SUMMARY

PUD Land Use*	General Plan	Zoning	Acres (G)	Acres (N)	Units
SNLD-E	SNLD (3-8 du/ac)	R-1	111.5±	101.2±	455±
SNLD-T	SNLD (3-8 du/ac)	R1-A	140.2±	127.8±	766±
SNLD-C	SNLD (3-8 du/ac)	R1-A	65.2±	59.3±	444±
Elementary School	SNLD (3-8 du/ac)	R1-A	11.8±	10.0±	
High School / Middle School	SNLD (3-8 du/ac)	R1-A	65.5±	60.4±	
Park - Quimby	PR	A-OS	17.9±	15.5±	
Park - Ninos Parkway	PR	A-OS	6.5±	7.0±	
Open Space - Ninos Parkway	PR	A-OS	27.5±	23.3±	
Detention Basin - Open Space	PR	A-OS	13.6±	13.4±	
Planned Development (Non-residential Property)	PD	A	123.0±	119.0±	
Major Roads (Del Paso Rd & Elkhorn Blvd)	varies	varies	4.7±	4.7±	
Collector and Residential Streets	varies	varies	0.0±	47.8±	
		TOTALS	589.4±	589.4±	1,665± DU

*SNLD = Suburban Neighborhood Low Density (Detached Single-Family Residential)
-E = Estate (4.5 du/ac average net density)
-T = Traditional (6.0 du/ac average net density)
-C = Compact (7.5 du/ac average net density)
= Pedestrian Connection Only

- Open Space Corridor
- Detention Basin
- Park
- School
- SNLD-E
- SNLD-T
- SNLD-C

NORTH

0 200 400 800

SCALE:1"=400'

PANHANDLE

City of Sacramento

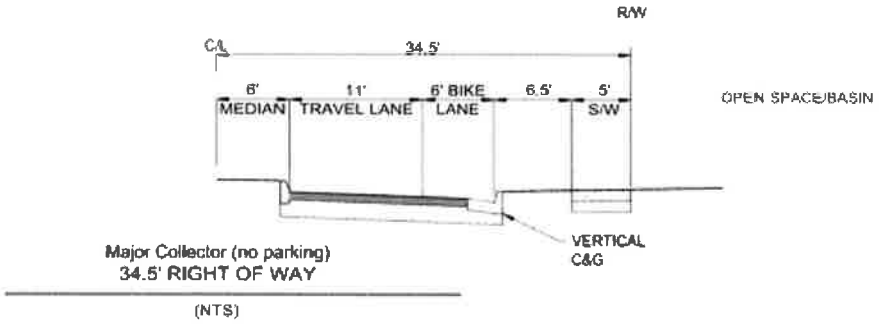
April 18, 2017

MACKAY & SOMPS ENGINEERS PLANNERS SURVEYORS

8
A-1.7
Panhandle Finance Plan - Roadway
HALF STREET SECTIONS
Roadway Cross Section index
Preliminary Per Foot Cost Estimate

Date: 5/12/2017
Job # 27141.000
By: LJ

Typical Cross Section:



	ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	COST
1	**Earthwork**				
	ROADWAY EXCAVATION	CY	$ 18.00	1.33	$ 23.94
	EROSION CONTROL	LF	$ 11.00	0.5	$ 5.50
	TOTAL FOR ITEM 1 EARTHWORK				**$ 29.44**
2	**DRAINAGE**				
	DRAINAGE	LF	$ 30.00	0.5	$ 15.00
	TOTAL FOR ITEM 2 DRAINAGE				**$ 15.00**
3	**PAVEMENT**				
*	ASPHALT CONCRETE (5" AC)	SF	$ 3.25	14.5	$ 47.13
*	AGGREGATE BASE W/ LIME TREATMENT (10" AB)	SF	$ 2.50	18	$ 45.00
	SIDEWALK (6" PCC/6"AB)	SF	$ 6.00	5	$ 30.00
	CURB & GUTTER	LF	$ 22.00	1	$ 22.00
	TYPE 14A MEDIAN CURB	LF	$ 20.00	1	$ 20.00
	TOTAL OR ITEM 3 PAVEMENT				**$ 164.13**
4	**MISCELLANEOUS**				
**	STREET LIGHTS / ELECTROLIERS (NON-DECORATIVE)	LF	$ 30.00	0.5	$ 15.00
	JOINT TRENCH	LF	$ 150.00	0.5	$ 75.00
	MEDIAN LANDSCAPING	SF	$ 6.00	5.5	$ 33.00
	LANDSCAPING BUFFER	SF	$ 8.00	6	$ 48.00
	LANDSCAPE CORRIDOR/PUE	SF	$ 5.00	0	$ -
	TOTAL FOR ITEM 4 MISCELLANEOUS				**$ 171.00**
5	**MINOR ITEMS**				
	MINOR ITEMS	%	30.0%		$ 113.87
	TOTAL FOR ITEM 5 MINOR ITEMS				**$ 113.87**

	ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	COST
6	**CONTINGENCY**				
				SUBTOTAL CONSTRUCTION COST	$ 493.43
	CONTINGENCY	%	15.0%		$ 74.02
				TOTAL CONSTRUCTION COST	**$ 567.45**
7	**ENGINEERING & MANAGEMENT**				
	ENGINEERING STUDIES	%	3.0%	$ 567.45	$ 17.02
	ENVIROMENTAL DOCUMENT	%	1.5%	$ 567.45	$ 8.51
	DESIGN ENGINEERING	%	12.0%	$ 567.45	$ 68.09
	DESIGN SERVICES DURING CONSTRUCTION	%	1.5%	$ 567.45	$ 8.51
	CONSTRUCTION STAKING	%	2.5%	$ 567.45	$ 14.19
	CONSTRUCTION MANAGEMENT	%	13.0%	$ 567.45	$ 73.77
	TOTAL FOR ITEM 7 ENGINEERING & MANAGEMENT				**$ 190.10**
	(THE ABOVE EXCLUDES LAND AND RIGHT OF WAY & MAJOR STRUCTURES WORK)				
8	**UTILITIES**				
	UTILITIES RELOCATION	%	0.0%	$ 567.45	$ -
	TOTAL FOR ITEM 8 UTILITIES				**$ -**
9	ENVIROMENTAL MITIGATION				
	ENVIROMENTAL MITIGATION	%	3.0%	$ 567.45	$ 17.02
	TOTAL FOR ITEM 9 ENVIROMENTAL MITIGATION				**$ 17.02**

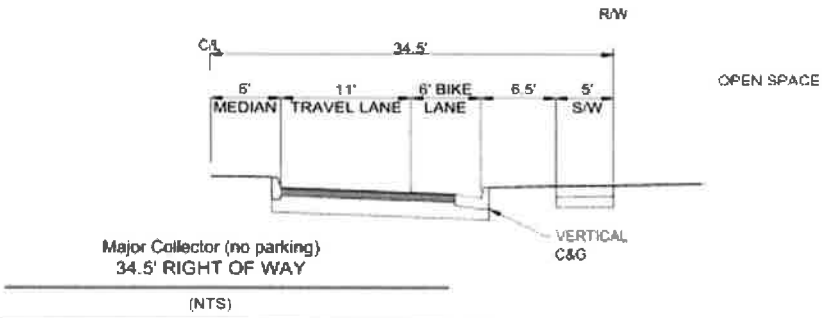
GRAND TOTAL $ 775

* Varies based on street section

** Based on 950 LF of street section. Type A light is assumed.

10		Date:	5/12/2017
A-1.7		Job #	27141.000
Panhandle Finance Plan - Roadway		By:	LJ
HALF STREET SECTIONS			
Roadway Cross Section index			
Preliminary Per Foot Cost Estimate			

Typical Cross Section:



	ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	COST
1	**Earthwork**				
	ROADWAY EXCAVATION	CY	$ 18.00	1.33	$ 23.94
	EROSION CONTROL	LF	$ 11.00	0.5	$ 5.50
	TOTAL FOR ITEM 1 EARTHWORK				**$ 29.44**
2	**DRAINAGE**				
	DRAINAGE	LF	$ 30.00	0.5	$ 15.00
	TOTAL FOR ITEM 2 DRAINAGE				**$ 15.00**
3	**PAVEMENT**				
*	ASPHALT CONCRETE (5" AC)	SF	$ 3.25	14.5	$ 47.13
*	AGGREGATE BASE W/ LIME TREATMENT (10" AB)	SF	$ 2.50	18	$ 45.00
	SIDEWALK (6" PCC/6"AB)	SF	$ 6.00	5	$ 30.00
	CURB & GUTTER	LF	$ 22.00	1	$ 22.00
	TYPE 14A MEDIAN CURB	LF	$ 20.00	1	$ 20.00
	TOTAL OR ITEM 3 PAVEMENT				**$ 164.13**
4	**MISCELLANEOUS**				
**	STREET LIGHTS / ELECTROLIERS (NON-DECORATIVE)	LF	$ 30.00	0.5	$ 15.00
	JOINT TRENCH	LF	$ 150.00	0.5	$ 75.00
	MEDIAN LANDSCAPING	SF	$ 6.00	5.5	$ 33.00
	LANDSCAPING BUFFER	SF	$ 8.00	6	$ 48.00
	LANDSCAPE CORRIDOR/PUE	SF	$ 5.00	0	$ -
	TOTAL FOR ITEM 4 MISCELLANEOUS				**$ 171.00**
5	**MINOR ITEMS**				
	MINOR ITEMS	%	30.0%		$ 113.87
	TOTAL FOR ITEM 5 MINOR ITEMS				**$ 113.87**

	ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	COST
6	**CONTINGENCY**				
				SUBTOTAL CONSTRUCTION COST	$ 493.43
	CONTINGENCY	%	15.0%		$ 74.02
				TOTAL CONSTRUCTION COST	**$ 567.45**
7	**ENGINEERING & MANAGEMENT**				
	ENGINEERING STUDIES	%	3.0%	$ 567.45	$ 17.02
	ENVIROMENTAL DOCUMENT	%	1.5%	$ 567.45	$ 8.51
	DESIGN ENGINEERING	%	12.0%	$ 567.45	$ 68.09
	DESIGN SERVICES DURING CONSTRUCTION	%	1.5%	$ 567.45	$ 8.51
	CONSTRUCTION STAKING	%	2.5%	$ 567.45	$ 14.19
	CONSTRUCTION MANAGEMENT	%	13.0%	$ 567.45	$ 73.77
	TOTAL FOR ITEM 7 ENGINEERING & MANAGEMENT				**$ 190.10**
	(THE ABOVE EXCLUDES LAND AND RIGHT OF WAY & MAJOR STRUCTURES WORK)				
8	**UTILITIES**				
	UTILITIES RELOCATION	%	0.0%	$ 567.45	$ -
	TOTAL FOR ITEM 8 UTILITIES				**$ -**
9	ENVIROMENTAL MITIGATION				
	ENVIROMENTAL MITIGATION	%	3.0%	$ 567.45	$ 17.02
	TOTAL FOR ITEM 9 ENVIROMENTAL MITIGATION				**$ 17.02**

GRAND TOTAL $ 775

* Varies based on street section

** Based on 950 LF of street section. Type A light is assumed.

A-2
Traffic Signals
Summary of Total Costs

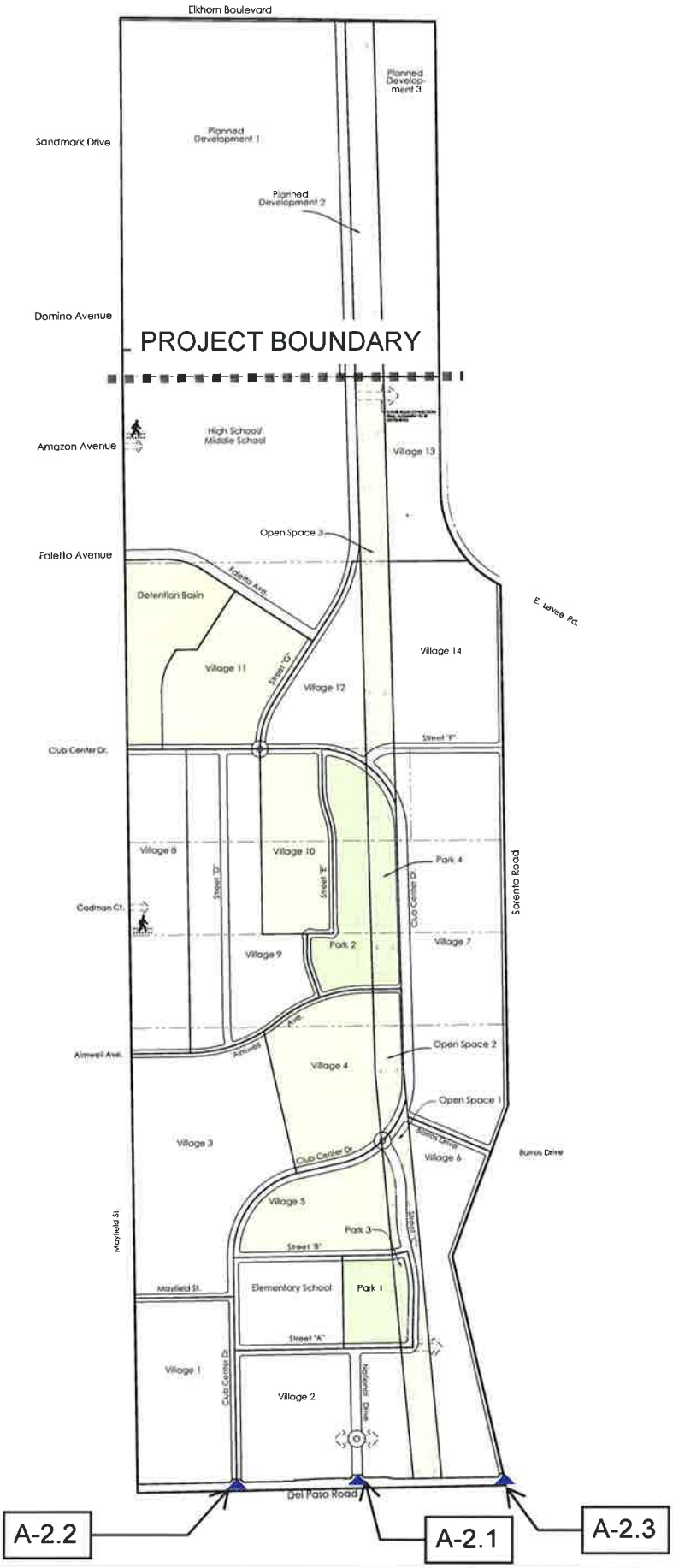
SHEET	PROJECT NAME	TOTAL COST (rounded)
A-2.1	Del Paso Road/National Drive	$ 500,800
A-2.2	Del Paso Road/Club Center Drive	$ 690,700
A-2.3	Del Paso Road/Sorento Road	$ 690,700
	Traffic Signals Total	**$ 1,882,000**

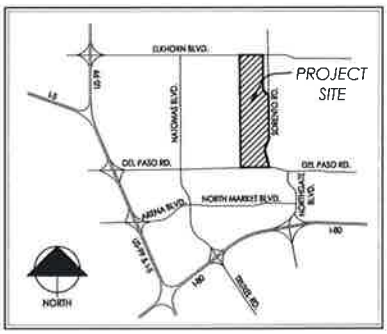
NOTES:

1. The amount is only the cost for the signalization. Roadway widening and improvements will happen with Del Paso Road, National Drive, Club Center Drive Improvements

DRAFT

TRAFFIC SIGNALS





LAND USE SUMMARY

PUD Land Use*	General Plan	Zoning	Acres (G)	Acres (N)	Units
SNLD-E	SNLD (3-8 du/ac)	R-1	111.5±	101.2±	455±
SNLD-T	SNLD (3-8 du/ac)	R1-A	140.2±	127.8±	766±
SNLD-C	SNLD (3-8 du/ac)	R1-A	65.2±	59.3±	444±
Elementary School	SNLD (3-8 du/ac)	R1-A	11.8±	10.0±	
High School / Middle School	SNLD (3-8 du/ac)	R1-A	65.8±	60.4±	
Park - Quimby	PR	A-OS	17.9±	15.5±	
Park - Ninos Parkway	PR	A-OS	8.5±	7.0±	
Open Space - Ninos Parkway	PR	A-OS	27.5±	23.3±	
Detention Basin - Open Space	PR	A-OS	13.6±	13.4±	
Planned Development (Sonnenschein Property)	PD	A	123.0±	119.0±	
Major Roads (Del Paso Rd & Elkhorn Blvd)	varies	varies	4.7±	4.7±	
Collector and Residential Streets	varies	varies	0.0±	47.8±	
		TOTALS:	589.4±	589.4±	1,665± DU

*SNLD = Suburban Neighborhood Low Density (Detached Single-Family Residential)
-E = Estate (4.5 du/ac average net density)
-T = Traditional (6.0 du/ac average net density)
-C = Compact (7.5 du/ac average net density)
= Pedestrian Connection Only

- Open Space Corridor
- Detention Basin
- Park
- School
- SNLD-E
- SNLD-T
- SNLD-C

NORTH

0 200 400 800
SCALE: 1"=400'

PANHANDLE

City of Sacramento

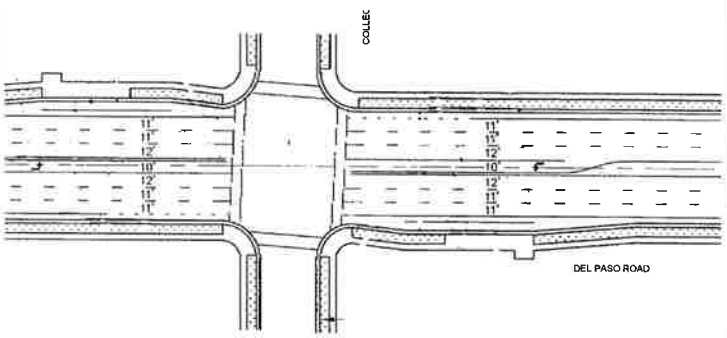
April 18, 2017

MACKAY & SOMPS ENGINEERS PLANNERS SURVEYORS

Date: 5/12/2017
Job # 27141.000
By: LJ

A-2.1
Panhandle Finance Plan - Roadway

Roadway Cross Section index
Preliminary Cost Estimate



	ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	COST
1	**SIGNALIZATION**				
	6 x 6 x 2 x 2				
	Signal	LS	$ 250,000.00	1	$ 250,000.00
	F&I Poles (sizes vary)			included	included
	F&I - Pedestrian Heads,			included	included
	F&I - Pedestrian Push button w/ audible signal			included	included
	F&I - Signal Heads			included	included
	F&I - Detector Loops (vehicle and bike)			included	included
	F&I - New Pull Boxes			included	included
	F&I Conduit			included	included
	F&I Wiring			included	included
	F&I - 'Street Lights 165 Watt			included	included
	Service Point			included	included
	F&I - Mast-Arm-Mounted Illuminated Street Name Signs			included	included
	F&I - Emergency Vehicle Pre-Emptions System			included	included
	Concrete Flatwork Controller Pad			included	included
	Start-up, Test			included	included
	Intersection signal exists as interim condition. Some modifications and additions would be required to complete fully functioning ultimate condition intersection. Amount for upgrade included in above pricing.				
	TOTAL FOR ITEM 1 SIGNALIZATION				**$ 250,000.00**
2	**MINOR ITEMS**				
	MINOR ITEMS	%	30.0%		$ 75,000.00
	TOTAL FOR ITEM 2 MINOR ITEMS				**$ 75,000.00**

	ITEM DESCRIPTION	UNIT	PRICE	QUANTITY	COST
3	**CONTINGENCY**				
				SUBTOTAL CONSTRUCTION COST	$ 325,000.00
	CONTINGENCY	%	15.0%		$ 48,750.00
				TOTAL CONSTRUCTION COST	**$ 373,750.00**
4	**ENGINEERING & MANAGEMENT**				
	ENGINEERING STUDIES	%	3.0%	$ 373,750.00	$ 11,212.50
	ENVIROMENTAL DOCUMENT	%	0.0%	$ 373,750.00	$ -
	DESIGN ENGINEERING	%	12.0%	$ 373,750.00	$ 44,850.00
	DESIGN SERVICES DURING CONSTRUCTION	%	1.5%	$ 373,750.00	$ 5,606.25
	CONSTRUCTION STAKING	%	2.5%	$ 373,750.00	$ 9,343.75
	CONSTRUCTION MANAGEMENT	%	13.0%	$ 373,750.00	$ 48,587.50
	TOTAL FOR ITEM 4 ENGINEERING & MANAGEMENT				**$ 119,600.00**
	(THE ABOVE EXCLUDES LAND AND RIGHT OF WAY & MAJOR STRUCTURES WORK)				
5	**UTILITIES**				
	UTILITIES RELOCATION	%	2%	$ 373,750.00	$ 7,475.00
	TOTAL FOR ITEM 5 UTILITIES				**$ 7,475.00**
6	ENVIROMENTAL MITIGATION				
	ENVIROMENTAL MITIGATION	%	0.0%	$ 373,750.00	$ -
	TOTAL FOR ITEM 6 ENVIROMENTAL MITIGATION				**$ -**

GRAND TOTAL $ 500,825