701.A78.5

REFUNDING REPORT
FOR
ST. ROSE SEWER SPECIAL REFUNDING AREA
SR-0007

CITY OF HENDERSON

Prepared for:
City of Henderson
Department of Utility Services
240 Water Street
Henderson, Nevada 89015

April 29, 2008

Prepared by:
G.C. Wallace, Inc.
1555 S. Rainbow Boulevard
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EXECUTIVE SUMMARY

In order to provide sanitary sewer service to development in the Anthem and Inspirada Master Planned Communities, a new sanitary sewer is required in St. Rose Parkway, generally from Executive Airport Road to the City of Henderson's Satellite Water Reclamation Facility (SWRF), near the intersection of St. Rose Parkway and Paseo Verde (APN 177-24-803-007). Please refer to Figure 1 for the alignment of the St. Rose Sewer. This sanitary sewer facility was oversized at the direction of the City of Henderson (the City) to accommodate future development south of St. Rose Parkway. The St. Rose Sewer will be designed and constructed by Pulte Homes, Inc. and South Edge, LLC (Developers).

The Developers wish to enter into a special refunding agreement with the City of Henderson, in order to receive repayment of a portion of the cost of the Project from special refunding fees to be collected by the City from other customers.

This report shall define the boundaries of the proposed Special Refunding Area, generally between the Interstate 15 and Pecos Road, of the proposed sewer for use by surrounding developments and the associated cost per Equivalent Residential Unit (ERU) in accordance the City of Henderson Municipal Code and Service Rules.

Costs for sewer service are broken down by segment of sewer pipeline. Cost allocations are based on ERU's, as has been the City's practice.

The cost to provide sanitary sewer service to **Sub-Area A is $32.63 per ERU**.
The cost to provide sanitary sewer service to **Sub-Area B is $72.96 per ERU**.
The cost to provide sanitary sewer service to **Sub-Area C is $157.16 per ERU**.
The cost to provide sanitary sewer service to **Sub-Area D is $157.93 per ERU**.

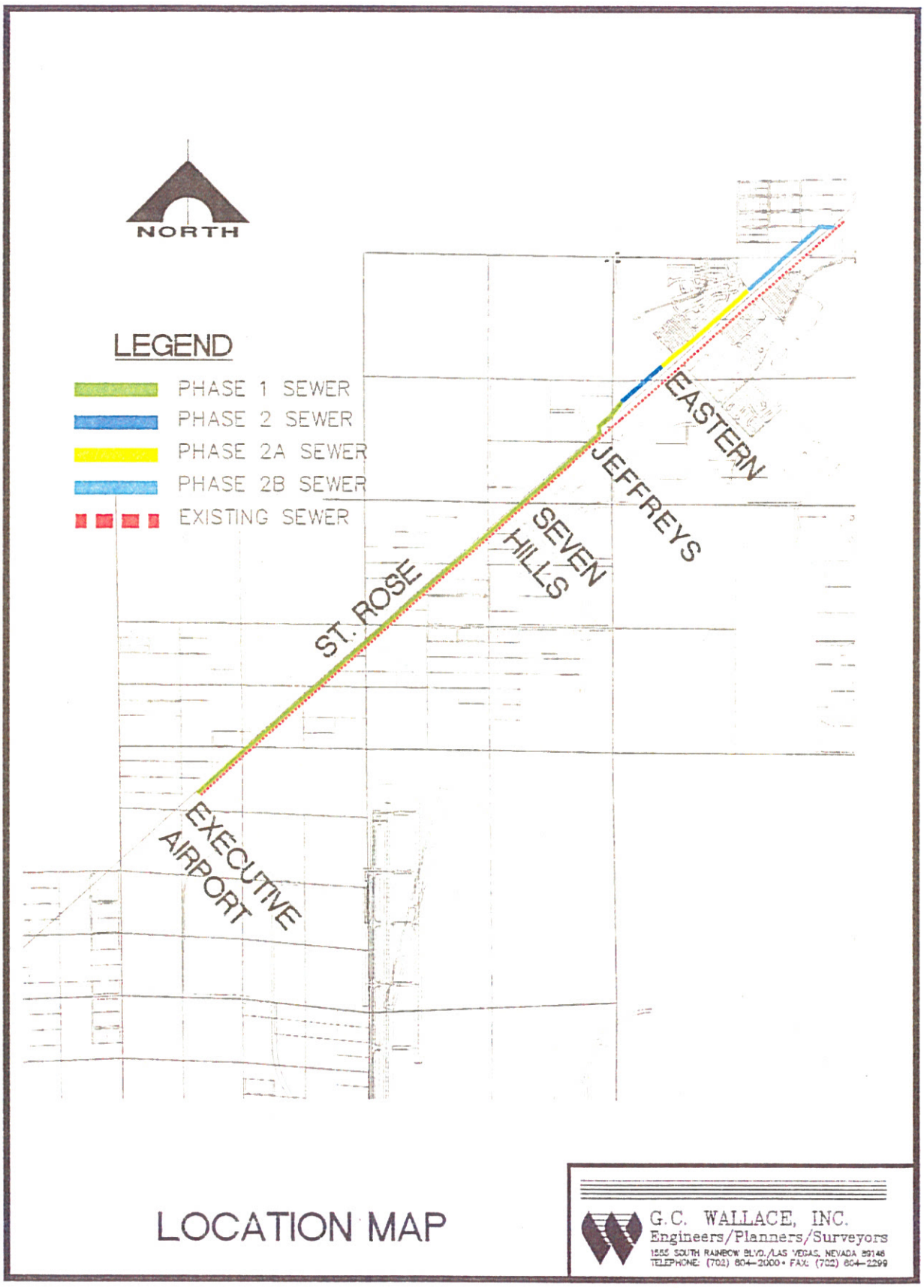
BACKGROUND

A program was developed by the City of Henderson (City) that provides for distribution of the cost of backbone infrastructure to those landowners that benefit from the sanitary sewer system through a Special Refunding Agreement. It is based on the successful water and sewer main extensions refunding program used for small water and sewer extensions constructed by individual homeowners/small developers. City Ordinance No. 1440 added a new section to Title 13 of the Henderson Municipal Code to further expand the refunding concept to include major backbone systems. An update to the Henderson Municipal Code has since repealed and replaced the original Title 13 with Title 14 in accordance with City of Henderson Ordinance No. 2536.

The Municipal Code requires that each Special Refunding Agreement is based on a Refunding Report (Report) completed in accordance with the Utility Services Department's Service Rules and adopted by the City Council. The Report shall define the boundaries of the proposed special refunding areas; the type, extent and general route of the backbone infrastructure to be constructed; and the method for calculation of the actual refunding fees to be collected and refunded to the Developers who advance the construction costs generally based on the prorated capacity of the installed facilities.

This Report will establish the general methodology with which to equitably allocate the refunding costs for oversizing the sanitary sewer infrastructure for the Special Refunding Area known as "St. Rose Sewer Special Refunding Area". Following City Council approval of the Report and after completion of the final audit report, a Special Refunding Agreement will be drafted between the City and Developers for the projects identified in the Report. The agreement will then identify the final cost of the work to be included in the Special Refunding Area.

The Special Refunding Area is not an assessment district. It is a process that provides for construction cost refunding when developers/landowners and/or the City build infrastructure at a size and capacity well in excess of their needs. The developer/City that constructs the oversized facilities will be eligible for refunding subsequent to City acceptance of the constructed facilities.



LOCATION MAP

G.C. WALLACE, INC.
Engineers/Planners/Surveyors
1555 SOUTH RAINBOW BLVD./LAS VEGAS, NEVADA 89146
TELEPHONE: (702) 804-2000 • FAX: (702) 804-2299

GENERAL CONCEPT

This report outlines procedures, which will allow the Developers who fronted the costs of building the sanitary sewer backbone infrastructure needed to serve areas outside of Anthem and Inspirada by oversizing the sewer system infrastructure to be reimbursed, and sets in motion the mechanism to equitably estimate and distribute oversizing costs. The method used must be fair and equitable to share in the cost of the infrastructure based on the proportionate benefit of that improvement.

Refunding will be based on the following concepts:

1. The costs of designing and constructing oversized sewer infrastructure necessary to serve the Special Refunding Area will be equally allocated per ERU based on segment capacity.
2. Potential users will be determined by the location of parcels within the Sub-Area of the designated Special Refunding Area in relation to likely connection points (Nodes) or currently approved plans.
3. Costs are allocated by ERU capacity of each pipe segment between nodes and are additive for Sub-Areas using successive downstream segments.
4. Funds collected from these users are refunded to the Developers that constructed the facility in accordance with Henderson Municipal Code.

BACKBONE SEWER INFRASTRUCTURE

PROJECT DESCRIPTION

In order to provide sanitary sewer service to the developments in the Anthem and Inspirada Master Planned Communities, a new sanitary sewer is required in St. Rose Parkway, generally from Executive Airport Road to the City of Henderson's Satellite Water Reclamation Facility (SWRF), at the intersection of St. Rose Parkway and Pecos Road. Please refer to Figure 1 for the project alignment. This sanitary sewer facility was oversized at the direction of the City to accommodate future development south of St. Rose Parkway. The St. Rose Sewer (hereinafter, Project) will be designed and constructed by Pulte Homes, Inc. and South Edge, LLC (Developers).

The Project is comprised of four (4) separate components:

- St. Rose Sewer Phase I (St. Rose Parkway from Executive Airport to 1400 LF west of Eastern Ave) KIVA# 2005870166
- St. Rose Parkway Sanitary Sewer Phase 2 (St. Rose Parkway from 1400 LF west of Eastern Ave to approximately 218 LF west of Eastern Ave) KIVA# 2005870161
- St. Rose Parkway Sanitary Sewer Phase 2A (Connects to Phase 2 and continues in St. Rose Parkway to approximately 2286 LF east of Eastern Ave) KIVA# 2005870099
- St. Rose Parkway Sanitary Sewer Phase 2B (Connects to Phase 2A and continues downstream to the SWRF site at Paseo Verde and St. Rose Pkwy) KIVA# 20058700160

The Project begins as a 36-inch and 42-inch pipe at Executive Airport Road and changes to a 48-inch pipe in St. Rose Parkway near Jeffreys Street. It continues as a 48-inch pipe to the end of the Project. The total length of sewer is 18,584 lineal feet.

In addition to the mainline sewer, the project also includes the following:

Item	Location	Purpose
36-inch Stub	In St. Rose Pkwy at Executive Airport Road	Connection point for upstream St. Rose Sewer connection
27-inch Stub	In Executive Airport Road	Connection point for Volunteer Sewer
21-inch Sewer	Manhole 21, west of Jeffreys Street	Connection of existing 21-inch sewer to new 42-inch sewer
30-inch Bypass	In Eastern at St. Rose Parkway	Flow Routing into the new 48-inch interceptor
30-inch Bypass	In St. Rose Parkway at SWRF	Flow Routing into the existing 27-inch sewer

A more specific description of the projects comprising the St. Rose Sewer can be referenced in the *Predesign Report for the St. Rose Parkway Sewer* by G. C. Wallace, Inc., Stanley Consultants, and VTN Nevada, dated June 2005.

All projects will be reviewed and approved by the City prior to construction.

SPECIAL REFUNDING AREA

The St. Rose Sewer Special Refunding Area (Area) is comprised of residential and commercial land that is developed, under development, and vacant located generally south of St. Rose Parkway between I-15 and Pecos Road. The *St. Rose Parkway Sewer Predesign Report*, dated June 2005, which was referenced during the design of the Project, designated the area. Refer to Exhibit 1 for delineation of the Area. Exhibit I shows all areas that contribute flows to the Project and depicts the location that each Sub-Area enters the Project. Sub-Areas A, B, C, and D will proportionately contribute to the cost of the Project along St. Rose. These contribution areas are important in that refunding costs will be calculated in relation to the applicable node location on the Project:

- Sub-area A is approximately 3,888 acres; flows from this Sub-Area enter the system at Node 2.
- Sub-Area B is approximately 1,925 acres; flows from this Sub-Area enter the Project at Node 3.
- Sub-Area C is approximately 7,199 acres; flows from this Sub-Area enter the Project at Node 4.
- Sub-Area D is approximately 6,694 acres; flows from this Sub-Area enter the system at Node 5.

A portion of the designated Area was originally included in the Southwest Henderson Engineer's Report, December 21, 1999; However to simplify refunding assessments, any undeveloped area that were originally included in the Southwest Henderson Engineer's Report will now be governed by this Report.

PROJECT NODES AND SEGMENTS

Special Refunding fees will be based on segment capacity as expressed in ERU's. In order to calculate the available ERU's along the alignment of the Project, the Project is divided into Segments that occur between Nodes. Refer to Exhibit I for Node and Segment locations. The developments that occur in the designated Sub-Areas will contribute to the cost of all segments downstream of the designated connection Node.

The Project has four (4) major Nodes along its alignment:

- The most upstream connection point, Node 5, is located in the intersection of St. Rose Parkway and Executive Airport Road. The flows are contributions from Sub-Area D.
- Node 4 is located in the intersection of St. Rose Parkway and Executive Airport Road, east of Node 5. The flows are contributions from Sub-area C, which flows to Node 4 from:
    - The 36-inch stub in St. Rose that will service the future West Henderson developments.
    - The existing 21-inch sewer in Executive Airport currently serving most of the Anthem West Basin and the Henderson Executive Airport.
    - And the 27-inch stub that will service Inspirada, Sage Mountain and portions of various commercial developments.
- Node 3 is located at St. Rose Sewer Phase I Manhole 22 approximately 380 LF west of Jeffreys Street. Sub-Area B, comprised mostly of St. Rose Parkway commercial frontage development, future airport development, and the existing Seven Hills Community, will flow into Node 3 and continue downstream to the SWRF.

- Node 2 is located at the St. Rose Parkway Sanitary Sewer Phase 2A Manhole 3A. It is the connection point of Sub-Area A, whose flows are directed across St. Rose Parkway in a 30-inch pipeline to Manhole 3A. Area A is comprised of Anthem's East basin, St. Rose Parkway frontage developments, the St. Rose Hospital and existing and future development along Eastern Avenue.
- Node 1 is located at the intersection of St. Rose Parkway and Paseo Verde. This is the location where the Project will ultimately connect into the SWRF, but has a temporary connection back into the existing sewer until the SWRF is completed.

The Project Segments integral to serving the Area are as follows:

- Segment D (Nodes 5 to 4) is approximately 71 lineal feet of 36-inch diameter pipe in St. Rose Parkway at Executive Airport Drive (Station 138+00 to 138+71 on the Drawings for St. Rose Sewer-Phase 1 by G.C. Wallace, Inc.).
- Segment C (Nodes 4 to 3) is approximately 29 lineal feet of 21-inch diameter pipe, 63 lineal feet of 27-inch diameter pipe, and 10,700 lineal feet of 42-inch diameter pipe in St. Rose Parkway between Executive Airport Drive and a point approximately 330 feet northeast of Seven Hills Drive (Station 138+71 to 245+47 on the Drawings for St. Rose Sewer-Phase 1 by G.C. Wallace, Inc.) Improvements also include a 12-foot wide utility access road.
- Segment B (Nodes 3 to 2) is approximately 789 lineal feet of 42-inch diameter pipe and approximately 3,177 lineal feet of 48-inch diameter pipe in St. Rose Parkway between a point approximately 330 feet northeast of Seven Hills Drive and a point approximately 813 feet northeast of Eastern Avenue (Stations 245+47 to 526+36 on the Drawings for St. Rose Sewer-Phase 1 by G.C. Wallace, Inc., and Stations 8+60 to 20+50.35 on the Drawings for St. Rose Sewer-Phase 2 by VTN Nevada, and Station 20+50.35 to 30+88.10 on the Drawings for St. Rose Sewer-Phase 2A by VTN Nevada). Improvements also include a 12-foot wide utility access road.
- Segment A (Nodes 2 to 1) is approximately 3098 lineal feet of 48-inch diameter pipe and 683 lineal feet of 30-inch diameter pipe in St. Rose Parkway between a point 813 feet northeast of Eastern Avenue and a point approximately 3,911 feet northeast of Eastern Avenue (Station 30+88.10 to 45+84.75 on the Drawings for St. Rose Sewer-Phase 2A by VTN Nevada, and Station 45+84.75 to 61+86.01 on the Drawings for St. Rose Sewer-Phase 2B by VTN Nevada). Improvements also include a 12-foot wide utility access road.

METHOD OF CALCULATION

Costs per Equivalent Residential Unit (ERU) per Sub-Area are calculated based on pipeline segment capacity. The capacity of each individual segment of the Project was analyzed based on the minimum capacity within the segment. The capacity of the constraining pipe in each segment was calculated, using Manning's equation, based on the following factors:

- Design slope,
- Pipe diameter,
- Manning's n= 0.013,
- Flow depth to pipe diameter ratio of 0.75

The calculated segment capacity reflects the peak flow that the pipe can accommodate. This peak flow capacity is then converted to an average flow by dividing by the ASCE Peaking Factor, which is defined as:

$$\text{ASCE Peaking Factor} = [(\text{Avg Flow in MGD})^{-0.0956}] \times 2.6186$$

Once the average flow is determined, it is further divided by 250 gallons per day to determine the available ERU's per segment, as provided in the Service Rules.

Final costs are determined for the Project, as defined in Title 14 and include the following items:

1. Construction Cost (including administration and safety and traffic control measures)
2. Pre-design, design, and inspection costs
3. Permits and fees
4. Performance and related bond costs not included in construction costs
5. Actual financing costs related to items 1-4 of this section
6. All fees and expenses reasonably incurred concerning the preparation of the Special Refunding Agreement

The City Council and Director of Utility Services have determined that Item 2 shall not exceed 15% of the construction cost. The actual final cost of the work shall be depreciated

annually over fifty years using the straight-line method of depreciation. Special refunding fees collected by the City shall be computed in accordance with the Municipal Code, based on the prime rate that is published in the Wall Street Journal.

Costs for each of the four projects that constitute the St. Rose Sewer Project have been calculated based on the actual costs associated with Construction of the specific segment. General costs that were associated with the entire project or portions thereof, were prorated per foot for the total length of sewer that was associated with the cost. Standard costs such as the Geotechnical Report, NDEP Permit, and printing costs were spread equally between the segments that were associated with the fees. Estimated costs are presented in Table 1. The City shall verify final costs.

The segment's percentage of total cost will be further evaluated to obtain the Segment Cost per ERU, based on the following equation:

(Equation 1) $$\text{Segment Cost per ERU} = \frac{\text{Segment cost (\$)}}{\text{Segment's available ERU capacity}}$$

For Sub-Areas requiring the use of successive downstream segments, the costs along the route will be additive, for example:

(Equation 2) Sub-Area C fees (Total cost per ERU) =
Segment C Cost per ERU +
Segment B Cost per ERU +
Segment A Cost per ERU

Refer to Table 2 for detailed calculations for Costs per ERU per Sub-Area. **Costs per ERU per Segment are summarized as follows:**

SEGMENT	Cost per ERU per Segment
SEGMENT A	$32.63
SEGMENT B	$40.33
SEGMENT C	$84.20
SEGMENT D	$0.77

CALCULATION OF PRO-RATA SHARE OF REFUND TO DEVELOPERS

Two developers have fronted the costs for the Project, each with different contributions. In order to assist the City with facilitating the distribution of refunding amounts, an analysis is provided to determine the percentage of refunds that each developer is due. These percentages shall be multiplied by the amounts collected by the City from customers in the Special Refunding Area.

Pulte Homes, Inc will be contributing for estimated 10,935 ERU's in Sub-Area C and 5,731 ERU's in Sub-Area A (in accordance with the *Predesign Report for the St. Rose Parkway Sewer*, June 2005). The estimated contribution for Pulte Homes, Inc. is $1,905,547.13, which is 14.90% of the estimated total cost. Pulte Homes, Inc has paid $8,308,541.74 or 64.95% of the total costs. Thus, Pulte Homes, Inc. is due an estimated refund of $6,402,994.61 or 76.14% of the expected reimbursement total.

South Edge, LLC will be contributing for an estimated 15,760 ERU's in Sub-Area C (in accordance with the *South Edge Water and Sewer Master Plan, Version 2.1*, June 2007.) The estimated contribution for South Edge, LLC is $2,476,841.60 which is 19.36% of the estimated total cost. South Edge, LLC has paid $4,483,306.09 or 35.05% of the total costs. Thus, South Edge, LLC is due a refund of $2,006,464.49 or 23.86% of the expected reimbursement total.

For every one dollar collected by the City of Henderson from customers in the Special Refunding Area, $0.7614 shall be paid to Pulte Homes, Inc and $0.2386 shall be paid to South Edge, LLC.

These established percentages are based on the estimated total costs and are presented in Tables 3 and 4. These percentages have been updated with the final costs evaluated in the Final Audit Report, dated April 15, 2007, prepared for the City of Henderson by Gomez Consulting Group, Inc.

REMAINING ERU'S ELIGIBLE FOR REFUNDING

Segment capacities are calculated indirectly based on the peak flow conveyed through the pipe (Refer to Method of Calculation Section). However, the ERU's eligible for Refunding are determined based on the total cumulative flows from all upstream nodes. Flows entering the system at any of the nodes will directly decrease the number of available ERU's in the proceeding Segments.

A summary of the remaining ERU's per segment can be referenced in Table 5 in the Appendix.

REFUNDING REPORT FOR ST ROSE SEWER SPECIAL REFUNDING AREA

Summary of Total Costs after Audit

	SEGMENT					
	Segment D	Segment C	Segment B	Segment A	Description	DEVELOPER
			CONSTRUCTION			
Construction 1	$30,080.00	$5,344,168.25	$1,640,877.17		Construction Fees	Pulte
Construction 2			$1,388,690.99	$2,539,408.81		Landtek
Construction 3			$64,048.00		Meadow Valley Additional Construction	Pulte
Construction 4	$253.63	$38,526.14	$6,220.23		Pipe Storage: Alper Property	Pulte
Construction 5		$15,000.00			Nigro Sidewalk Drain	Pulte
Construction 6	$60.87	$9,246.27	$1,492.86		Flow Monitoring Teledyne	Pulte
Construction 7		$5,000.00			Nigro Development Steel Casing	Pulte
Construction 8	$33.32	$5,061.91	$817.27		Paradigm Consultants	Pulte
Construction 9	$1,366.69	$207,601.33	$33,518.26		Stanley Construction Management	Pulte
Construction 10					Construction Management	Landtek
Construction 11					Construction management	Landtek
BREAKDOWN	Pulte	$7,403,372.20	Landtek=	$3,928,099.80		
			DESIGN			
Design 1	$3,629.34	$551,299.75	$89,010.06		GC Wallace Engineering	Pulte
Design 2	$209.90	$209.90	$209.90		Mercury LDO	Pulte
Design 3	$171.29	$25,488.58	$9,300.79	$8,782.53	Kleinfelder/ Geotech	Pulte
Design 4			$40,081.77	$113,312.80	VTN	Landtek
Design 5			$35,304.79	$89,695.19	Stanley	Landtek
BREAKDOWN	Pulte	$688,312.05	Landtek=	$278,394.55		
			PERMITS AND FEES			
Permits and Fees 1	$1,062.20	$161,349.60	$26,050.68		COH Plan Approval Fees	Pulte
Permits and Fees 2	$66.67	$66.67	$66.67		NDEP Permit	Pulte
Permits and Fees 3			6204.59	$24,085.77	COH Plan Check Fees	Landtek
Permits and Fees 4			$32,935.80	$126,604.53	Inspection Fees	Landtek
Permits and Fees 5			$525.19	$774.81	NDOT	Landtek
BREAKDOWN	Pulte=	$188,662.49	Landtek=	$191,130.69		
			RIGHT OF WAY AQUISITION			
ROW Acquisition 1	$266.28	$21,398.16	$6,530.56		Land America Lawyers Title	Pulte
ROW Acquisition 2			15210.12	$20,470.93	Land Acquisition	Landtek
ROW Acquisition 3			$21,314.00	$28,686.00	COH Fees	Landtek
BREAKDOWN	Pulte=	$28,195.00	Landtek=	$85,681.05		
TOTAL	$37,200.19	$6,384,416.56	$3,418,409.70	$2,951,821.37		

St Rose Sewer Totals	
Construction	$11,331,472.00
Design	$966,706.60
Permits and Fees	$379,793.18
ROW Acquisition	$113,876.05
TOTAL	**$12,791,847.83**

Pulte Contribution=	$8,308,541.74
Landtek Contribution=	$4,483,306.09

4/29/2008

PRINTED: APRIL 30, 2008

SEGMENT A (NODE 2-1)
LENGTH: 3,780 LF
SEGMENT CAPACITY: 43.95 MGD

SEGMENT B (NODE 3-2)
LENGTH: 3,966 LF
SEGMENT CAPACITY: 41.44 MGD

SEGMENT C (NODE 4-3)
LENGTH: 10,767 LF
SEGMENT CAPACITY: 37.47 MGD

SEGMENT D (NODE 5-4)
LENGTH: 71 LF
SEGMENT CAPACITY: 24.84 MGD

NOTE:
PROPERTY LOCATED OUTSIDE OF THE CITY OF HENDERSON CORPORATE BOUNDARY BUT LOCATED WITHIN THE ST. ROSE REFUNDING AREA WILL BE REQUIRED TO PARTICIPATE IN THE REFUNDING AGREEMENT IF CONNECTING TO A COH SEWER UPSTREAM OR ON THE ST. ROSE SEWER.

N

Feet
0 3,000 6,000 12,000

1 inch equals 5,000 feet

THE CITY OF HENDERSON
A Place To Call Home

REFUNDING REPORT FOR ST. ROSE SEWER SPECIAL REFUNDING AREA

LEGEND

- ST ROSE SEWER SPECIAL REFUNDING AREA
- ST. ROSE SEWER (PROJECT)
- EXISTING BACKBONE INFRASTRUCTURE
- SUB AREA A
- SUB AREA B
- SUB AREA C
- SUB AREA D
- NODE (POINT AT WHICH SUB-AREA FLOWS ENTER SYSTEM
- HENDERSON CORPORATE BOUNDARY
- PREVIOUSLY SOUTH WEST REFUNDING AREA

EXHIBIT I
ST. ROSE SEWER
SPECIAL REFUNDING AGREEMENT

G. C. WALLACE COMPANIES
ENGINEERS | PLANNERS | SURVEYORS

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TABLE 2
ST. ROSE SEWER SPECIAL REFUNDING REPORT
COST PER ERU PER SUB-AREA

			(S)	(T)	(U)	(V)
	NODES		**5-4**	**4-3**	**3-2**	**2-1**
	SEGMENT/SUB-AREA		**D**	**C**	**B**	**A**
(A)	SEGMENT COST		$37,200.19	$6,384,416.56	$3,418,409.70	$2,951,821.37
(B)	SEGMENT LENGTH (LINEAL FEET)		71	10,767	3,966	3,780
(C)	DEPTH TO DIAMETER RATIO		0.75	0.75	0.75	0.75
(D)	CONSTRAINING DIAMETER (INCHES)		36	42	48	48
(E)	CONSTRAINING SLOPE (FOOT / FOOT)		0.0040	0.0040	0.0024	0.0027
(F)	SEGMENT PEAK FLOW CAPACITY (MILLION GALLONS PER DAY)		24.84	37.47	41.44	43.95
(G)	SEGMENT AVERAGE FLOW CAPACITY(GALLONS PER DAY)		12,033,119	18,957,150	21,189,229	22,614,908
(H)	1 EQUIVALENT RESIDENTIAL UNIT (GALLONS PER DAY)		250	250	250	250
(I)	ESTIMATED SEGMENT'S AVAILABLE ERU'S	**[G ÷ H]**	48,132.48	75,828.60	84,756.92	90,459.63
(J)	COST PER ERU	**[A ÷ I]**	$0.77	$84.20	$40.33	$32.63
(K)	***COST PER ERU PER SUB-AREA ****		***$157.93***	***$157.16***	***$72.96***	***$32.63***
(L)	MAXIMUM FEES TO BE COLLECTED PER SUB AREA		$7,601,561.82	$4,352,722.94	$651,409.93	$186,079.63

* COST PER ERU PER SUB-AREA D [SJ+TJ+UJ+VJ]
COST PER ERU PER SUB-AREA C [TJ+UJ+VJ]
COST PER ERU PER SUB-AREA B [UJ+VJ]
COST PER ERU PER SUB-AREA A [VJ]

TABLE 3
REFUNDING REPORT FOR ST ROSE SEWER SPECIAL REFUNDING AREA
Cost Contributions

	COSTS				
DEVELOPER	Construction	Design	Permits and Fees	Right-of-Way Acquisition	Phase Totals
Pulte Homes Contribution	$7,403,372.20	$688,312.05	$188,662.49	$28,195.00	$8,308,541.74
Landtek Contribution	$3,928,099.80	$278,394.55	$191,130.69	$85,681.05	$4,483,306.09
TOTALS	**$11,331,472.00**	**$966,706.60**	**$379,793.18**	**$113,876.05**	**$12,791,847.83**

TABLE 4
ST. ROSE SEWER SPECIAL REFUNDING REPORT
CALCULATION OF PRO-RATA SHARE OF REFUND TO DEVELOPERS

	CONTRIBUTIONS BY ERU				PROJECT CONTRIBUTION		PREVIOUSLY PAID		REFUND	
DEVELOPER	ERU CONTRIBUTION SUB-AREA	ERU CONTRIBUTION (SEGMENT C)	ERU CONTRIBUTION SUB-AREA	ERU CONTRIBUTION (SEGMENT A)	ESTIMATED CONTRIBUTION TO PROJECT COST	PERCENTAGE OF TOTAL COST	AMOUNT PREVIOUSLY PAID TOWARD PROJECT	PERCENTAGE OF TOTAL COST	TOTAL AMOUNT TO BE REFUNDED	PERCENTAGE OF TOTAL REFUND
PULTE HOMES, INC.	C	10,935	A	5731	$ 1,905,547.13	14.90%	$ 8,308,541.74	64.95%	$ 6,402,994.61	76.14%
SOUTH EDGE, LLC	C	15,760	N/A	N/A	$ 2,476,841.60	19.36%	$ 4,483,306.09	35.05%	$ 2,006,464.49	23.86%
TOTALS		***26,695***		***5,731***	***$ 4,382,388.73***	***34.26%***	***$ 12,791,847.83***	***100.00%***	***$ 8,409,459.10***	

TABLE 5
ST. ROSE SEWER SPECIAL REFUNDING REPORT
REMAINING ERU'S PER SEGMENT

SEGMENT	SEGMENT CAPACITY (ERU's)	PULTE CONTRIBUTIONS (ERU's)	SOUTH EDGE CONTRIBUTIONS (ERU's)	REMAINING ERUs ELIGIBLE FOR REFUNDING* (ERU's)
D	48,132.48	0	0	48,132.48
C	75,828.60	10,935.00	15,760.00	49,133.60
B	84,756.92	10,935.00	15,760.00	58,061.92
A	90,459.63	16,666.00	15,760.00	58,033.63

**NOTE*: Segment capacities are dependant upon the systems upstream flows. Flows entering the system at any of the nodes will directly decrease the number of available ERU's in the proceeding Segments. Example-Ten (10) ERU's entering the system at Node 5 (Segment D) will decrease all downstream segment capacities by 10. Ten (10) ERU's entering the system at Node 3 (Segment B) will decrease the available capacities of both Segment B and Segment A.

St Rose Parkway Sewer

TABLE A: Segment Summaries

SEGMENT A

Phase	Diameter (in)	Sta 1	Sta 2	Length (lf)
2A	48	30+88.10	45+84.75	1496.65
2A	30	100+00	103+34.10	312.76
2B	48	45+84.75	61+86.01	1601.26
2B	30	61+86.01	66+84.29	369.77
Segment A Summary				
	30"	682.53	LF	
	48"	3097.91	LF	

Pipe Capacity Constraint: Phase 2A Manhole 3A to 5A
48" @ 0.27%= 43.95 MGD
D/d= 0.75

SEGMENT B

Phase	Diameter (in)	Sta 1	Sta 2	Length (lf)
1	42	245+46.48	253+35.36	788.88
1	48	253+35.36	262+84.82	949.46
2	48	8+60.36	20+50.35	1190.01
2A	48	20+50.35	30+88.10	1037.75
Segment B Summary				
	42"	788.88	LF	
	48"	3176.85	LF	

Pipe Capacity Constraint: Phase I Manhole 24 to 25
48" @ 0.24%= 41.39 MGD
D/d= 0.75

SEGMENT C

Phase	Diameter (in)	Sta 1	Sta 2	Length (lf)
1	42	138+70.88	245+46.48	10,675.60
1	27	19+53.86	20+16.26	62.40
1	21	10+00	10+15.75	15.75
1	21	30+00	30+12.97	12.97
Segment C Summary				
	42"	10,675.60	LF	
	27"	62.40	LF	
	21"	28.72	LF	

Pipe Capacity Constraint: Phase 1 Manhole 1 to 14
42" @ 0.40%= 37.47 MGD
D/d= 0.75

4/29/2008

St Rose Parkway Sewer

TABLE A: Segment Summaries

SEGMENT D

Phase	Diameter	Sta 1	Sta 2	Length
	(in)			(lf)
1	36	138+00	138+70.88	70.88
Segment C Summary				
	36	70.88	LF	

Pipe Capacity Constraint:

Phase 1 Manhole 1 to 14
36" @ 0.40%= 24.84 MGD
D/d= 0.75

14.16.010 General provisions.

A. Purpose and Policy. This chapter sets forth responsibility, authority, and provisions to provide a mechanism for the orderly development of the utility system through refunding of costs associated with the design and construction of utility infrastructure.
B. Scope. The provisions of this chapter shall apply to all residents of the city and/or users of city provided utilities.
C. Administration. Except as otherwise provided herein, the director shall administer, implement, and enforce the provisions of this chapter. Any powers granted or duties imposed upon the director may be delegated by the director to persons acting in the beneficial interest of or in the employment of the city.
D. Compliance. All provisions of this chapter are subject to compliance procedures as outlined in this title and the department service rules. (Ord. 2536 § 84, 2006)

14.16.020 Cost for infrastructure.

The cost to design and construct any water, sewer, and/or reclaimed infrastructure required in connection with the extension of the public utility system to serve the customer shall be advanced by the customer requesting such service. (Ord. 2536 § 85, 2006)

14.16.030 Construction specifications.

All utility extensions, facilities and/or infrastructure to be constructed by the customer shall conform to adopted standards. (Ord. 2536 § 86, 2006)

14.16.040 Standard refunding.

A. Standard Refunding Agreements.
1. The city may enter into an agreement which provides for repayment of a portion of the cost of the main extension lying between the original point of supply and the customer's property from main frontage fees collected from other properties frontage to the main extension covered by such agreement during the term provided in the agreement or until the amount advanced by the customer has been satisfied, as determined in accordance with the provisions of this title and/or the department's service rules.
2. The following items may be eligible for standard refunding:
a. Water, sewer, and reclaimed water main extensions to a project;
b. Water, sewer, and reclaimed water main extensions adjacent to a project; and/or
c. Water, sewer, and reclaimed water mains replacing existing mains.
3. The period during which refunds are due shall be twenty years, commencing on the date when the infrastructure covered by the agreement is completed, tested, and accepted by the city.
4. Construction shall be deemed to be complete when the utility infrastructure is constructed according to the approved plans and satisfies all applicable testing and acceptance criteria.
5. The city council shall grant the director the authority to enter into and execute any standard refunding agreement in which the city is not a participant. Should the city be a participant in a standard refunding agreement, such agreement must be approved according to city standard operating procedures and policies.
B. Standard Refunding Conditions.
1. Application for standard refunding agreement shall be submitted to the department in writing accompanied by documentation as required by the city from customer(s) constructing such infrastructure covered by the agreement. This application shall be submitted within ninety days of date of acceptance by the city of the infrastructure to be covered by such agreement.
2. All customers entering into any refunding agreement with the city shall pay all fees as outlined in this title and/or the department service rules. These fees are due and payable at the time of the execution of the agreement.
3. Customers may be eligible for a refund of main frontage fees collected by the city from other properties in accordance with this title.
4. All standard refunding calculations shall be rounded to the nearest foot and shall be assessed

based on the frontage of the applicant's property, as indicated by the most current data in the Clark County assessor office records, adjacent to the right-of-way or easement where the existing water, sewer, or reclaimed water main is located in accordance with this title and/or the department's service rules.
5. After execution of a valid standard refunding agreement, all main frontage fees collected in accordance with this title and/or department service rules shall be paid within sixty days from the date of collection.
6. In the event any expense is incurred by the city within a period of one year after acceptance of the infrastructure installed by the customer covered by a standard refunding agreement due to defective materials or workmanship the amount of such expense shall be deducted from any refund(s) that may become due to the customer thereafter. (Ord. 2536 § 87, 2006)

14.16.050 Special refunding.

A. Special Refunding Agreements.
1. The city may enter into a special refunding agreement which provides for repayment of a portion of the cost of that backbone infrastructure lying between the original point of supply and the customer's property from special refunding fees to be collected by the city from other customers obtaining direct or indirect service from the backbone infrastructure during the term provided in the special refunding agreement, pursuant to this title, or until the proportional cost of design and construction advanced by the customer has been repaid, whichever is earlier.
2. Any special refunding agreement entered into by the city must be based upon a refunding report completed in accordance with the department service rules and adopted by the city council.
3. The term of any special refunding agreement shall be twenty years, which will commence on the date the infrastructure covered by the special refunding agreement is completed, tested and accepted by the city.
4. Application for special refunding agreement shall be submitted to the director in writing accompanied by documentation as required by the city within ninety days of the date of acceptance of the pre-design report by the city for the infrastructure to be covered by such agreement. All final costs are subject to verification by the city.
5. The amount subject to repayment under a special refunding agreement shall be the amount of the actual cost of the work as verified by the city. The final cost of the work shall be the basis for the determination and calculation of refunds under the special refunding agreement. Final costs that are eligible for inclusion in the special refunding agreement are:
a. Actual construction costs (including administration and safety and traffic control measures);
b. Design engineering costs and inspection costs not to exceed an aggregate fifteen percent of subsection (A)(6) of this section;
c. Permits and fees;
d. Performance and related bond costs to the extent not included in subsection (A)(6) of this section;
e. Actual financing costs related to subsections (A)(5)(a) through (A)(5)(d) of this section. Said financing costs shall be computed through the date of final acceptance of the backbone infrastructure by the city; and
f. All fees and expenses reasonably incurred concerning the preparation of the special refunding agreement shall be added to the refunding amount.
6. Construction shall be deemed to be complete when the utility infrastructure is constructed according to the approved plans and satisfies all applicable testing and approval criteria.
B. Special Refunding Conditions.
1. Customers entering into any special refunding agreement with the city shall pay all fees as outlined in this title and/or the department service rules. These fees are due and payable upon execution of the agreement.
2. After execution of a valid special refunding agreement, special refunding fees collected in accordance with this title and/or department service rules shall be paid to the customer within thirty days from the last business day of the quarter in which such fees were collected and will be issued in accordance to the procedures outlined in the department service rules.
3. Special refunding fees collected by the city shall be computed as follows:
a. As to the portion of cost attributable to the holder of the special refunding agreement, advances shall be accrued quarterly with interest equal to one-fourth the prime rate plus two percentage points with a maximum of ten percent per year. The prime rate that is published in the

Anita Marquez

From: Marvin Maize
Sent: Wednesday, April 30, 2008 7:48 AM
To: Anita Marquez
Subject: FW: Tropicana Wash Sewer Proposal
Importance: High
Attachments: CIM2COLORIMAGER1963.pdf; CIM2COLORIMAGER1964.pdf; CIM2COLORIMAGER1965.pdf

Anita,

Would you take a look at this and put together a response?

thanks
Marvin

From: Ryan Belsick
Sent: Tuesday, April 29, 2008 5:47 PM
To: Marvin Maize
Cc: Nick Golz; Jerry Pruitt
Subject: Tropicana Wash Sewer Proposal
Importance: High

Marvin,

I am preparing a supplement to the Tropicana Wash project that may include either adding additional RCBs or a bridge structure at the intersection of Flamingo Road and the Tropicana Wash (Aerial attached for reference). There is an existing 18" sewer that runs under 3-existing 12x5 RCBs (attached plans show compressible backfill between the bottom of the RCBs and top of pipe) . Will you please prepare a manhour estimate for the redesign of this sewer section assuming additional RCBs/bridge will be added? The profile may or may not need to be flattened, but I want to assume the worst case. The maximum width of the RCBs/bridge would be approximately 70'. Please assume that there will be Predesign (30%), Prefinal Design (90 percent) and Final Design (100 percent) submittals. Include manhours and fees for each submittal. I have also attached as-builts of the existing sewer from CCWRD. I will also need a very preliminary cost estimate.

Will you please forward the manhour and cost estimates to me by this Friday?

Thanks and please let me know if you have any questions.

Ryan