

COST ESTIMATES

SOUTH SHORE AREA

SUMMARY OF ALTERNATES FOR SOUTH SHORE AREA

| Alternate No. Description | SS - 1 | | SS - 2 | | SS - 3 | |
|----------------------------------|--|--|---|---|---|---|
| | Low Pressure Grinder Pump Collection and Transmission System with Treatment in Lagoon South or East of Bel-Air | Low Pressure Grinder Pump Collection and Transmission System with Community Septic Tank and Effluent Pump and STEP Collection and Transmission System for the Remainder with ADVANTEX Treatment on the South Edge of Bel-Air | Low Pressure Grinder Collection and Transmission System with Community Septic Tank and Effluent Pump and STEP Collection and Transmission System for the Remainder with ADVANTEX Treatment on the South Edge of Bel-Air | Low Pressure Grinder Collection and Transmission System with Community Septic Tank and Effluent Pump and STEP Collection and Transmission System for the Remainder with ADVANTEX Treatment on the South Edge of Bel-Air | Low Pressure Grinder Collection and Transmission System with Treatment at City of Storm Lake WWTP | Low Pressure Grinder Collection and Transmission System with Treatment at City of Storm Lake WWTP |
| Construction Cost | \$2,717,891.09 | \$2,546,056.02 | \$2,546,056.02 | \$2,546,056.02 | \$2,050,064.22 | \$2,050,064.22 |
| Annual Amortization ¹ | \$186,933.52 | \$175,114.89 | \$175,114.89 | \$175,114.89 | \$141,001.13 | \$141,001.13 |
| Annual O & M Costs | \$37,078.23 | \$36,779.17 | \$36,779.17 | \$36,779.17 | \$70,560.00 ² | \$70,560.00 ² |
| TOTAL ANNUAL COSTS | \$224,011.74 | \$211,894.06 | \$211,894.06 | \$211,894.06 | \$211,561.13 | \$211,561.13 |
| AVERAGE MONTHLY COSTS | \$106.67 | \$100.90 | \$100.90 | \$100.90 | \$100.74 | \$100.74 |

¹20 Years @ 3%

²Based on 6,000 gallons per month and 50 % Surcharge

ALTERNATE SS - 1
Low Pressure Sewer South Shore Area
Lagoon Treatment SE of Area

| | Quantity | Unit | Unit Cost | Total | |
|---|----------|-------|-------------|-----------------------|-----------------------|
| LPS Grinder Pump System | | | | | |
| 2" Force Main | 6,722 | LF | \$9.50 | \$63,859.00 | |
| 2.5" Force Main | 2,909 | LF | \$10.50 | \$30,544.50 | |
| 3" Force Main | 12,317 | LF | \$12.00 | \$147,804.00 | |
| 4" Force Main | 4,565 | LF | \$15.00 | \$68,475.00 | |
| 5" Force Main to Treatment Lagoon | 10,000 | LF | \$17.50 | \$175,000.00 | |
| 4" Gravity Service Line (30' EA) | 5,250 | LF | \$20.00 | \$105,000.00 | |
| 1 1/4" Service Line (50' EA) | 8,750 | LF | \$9.00 | \$78,750.00 | |
| Individual Grinder Pump (Simplex) | 170 | EA | \$4,500.00 | \$765,000.00 | |
| Individual Grinder Pump (Duplex) | 5 | EA | \$5,000.00 | \$25,000.00 | |
| Spare Grinder | 10 | EA | \$1,500.00 | \$15,000.00 | |
| Flushing Station | 20 | EA | \$1,500.00 | \$30,000.00 | |
| Isolation Valve | 20 | EA | \$450.00 | \$9,000.00 | |
| Air Release Manhole | 5 | EA | \$1,500.00 | \$7,500.00 | |
| Street, Sidewalk, Driveway Replacement | 500 | SY | \$50.00 | \$25,000.00 | |
| Crushed Stone Replacement | 1,500 | TN | \$15.00 | \$22,500.00 | |
| Drain Tile Repair | 20 | EA | \$250.00 | \$5,000.00 | |
| Construction Staking | 1 | LS | \$5,000.00 | \$5,000.00 | |
| Mobilization, Bonds & Insurance (5%) | | | | \$78,921.63 | |
| Contingencies (10%) | | | | \$165,735.41 | |
| | | | | \$1,823,089.54 | |
| Non Construction Costs (15%) | | | | \$273,463.43 | |
| | | | | \$2,096,552.97 | \$2,096,552.97 |
| TOTAL PROJECT COST - LPS | | | | | |
| UNIT COST PER HOUSEHOLD | | | | | \$11,980.30 |
| Lagoon Wastewater Treatment System | | | | | |
| Clear and Grub | 1 | LS | \$5,000.00 | \$5,000.00 | |
| Excavation & Embankment | 25,000 | CY | \$3.50 | \$87,500.00 | |
| Lagoon Liner - Bentonite | 250 | TN | \$250.00 | \$62,500.00 | |
| 4" Perforated Tile | 2,500 | LF | \$15.00 | \$37,500.00 | |
| Silt Fence | 5,000 | LF | \$2.00 | \$10,000.00 | |
| Construction Staking | 1 | LS | \$5,000.00 | \$5,000.00 | |
| Rip Rap | 2,500 | TN | \$25.00 | \$62,500.00 | |
| Influent Control Structure | 1 | LS | \$15,000.00 | \$15,000.00 | |
| Effluent Control Structure | 1 | LS | \$15,000.00 | \$15,000.00 | |
| Intermediate Control Structure | 1 | LS | \$15,000.00 | \$15,000.00 | |
| 8" DIP Lagoon Piping | 250 | LF | \$35.00 | \$8,750.00 | |
| 8" PVC Lagoon Piping | 750 | LF | \$25.00 | \$18,750.00 | |
| Crushed Stone Surfacing | 800 | TN | \$15.00 | \$12,000.00 | |
| Field Fence with Gate | 2,500 | LF | \$5.00 | \$12,500.00 | |
| Warning Signs | 5 | EA | \$100.00 | \$500.00 | |
| Seeding | 1 | LS | \$7,500.00 | \$7,500.00 | |
| 8" Effluent Pipe | 500 | LF | \$35.00 | \$17,500.00 | |
| Mobilization, Bonds & Insurance (5%) | | | | \$19,625.00 | |
| Contingencies (10%) | | | | \$41,212.50 | |
| | | | | \$453,337.50 | |
| Non Construction Costs (15%) | | | | \$68,000.63 | |
| Land | 10 | Acres | \$10,000.00 | \$100,000.00 | |
| | | | | \$621,338.13 | \$621,338.13 |
| TOTAL PROJECT COST - TREATMENT | | | | | |
| UNIT COST PER HOUSEHOLD | | | | | \$3,550.50 |
| | | | | | |
| TOTAL PROJECT COST | | | | | \$2,717,891.09 |
| UNIT COST PER HOUSEHOLD | | | | | \$15,530.81 |

ALTERNATE SS - 2
Low Pressure Sewer Casino
STEP System Casino to Bel-Air
ADVANTEK Treatment at Bel-Air

| | Quantity | Unit | Unit Cost | Total |
|--|----------|-------|-------------|-----------------------|
| LPS Grinder Pump System - Casino Beach Area | | | | |
| 1.5" Force Main | 350 | LF | \$9.00 | \$3,150.00 |
| 2" Force Main | 400 | LF | \$9.50 | \$3,800.00 |
| 2.5" Force Main | 1,100 | LF | \$10.50 | \$11,550.00 |
| 3" Force Main | 1,450 | LF | \$12.00 | \$17,400.00 |
| 4" Force Main | 0 | LF | \$15.00 | \$0.00 |
| 4" Gravity Service Line (30' EA) | 1,650 | LF | \$20.00 | \$33,000.00 |
| 1 1/4" Service Line (50' EA) | 2,750 | LF | \$9.00 | \$24,750.00 |
| Individual Grinder Pump (Simplex) | 55 | EA | \$4,500.00 | \$247,500.00 |
| Individual Grinder Pump (Duplex) | 0 | EA | \$5,000.00 | \$0.00 |
| Spare Grinder | 2 | EA | \$1,500.00 | \$3,000.00 |
| Flushing Station | 3 | EA | \$1,500.00 | \$4,500.00 |
| Isolation Valve | 5 | EA | \$450.00 | \$2,250.00 |
| Air Release Manhole | 2 | EA | \$1,500.00 | \$3,000.00 |
| Street, Sidewalk, Driveway Replacement | 100 | SY | \$50.00 | \$5,000.00 |
| Crushed Stone Replacement | 500 | TN | \$15.00 | \$7,500.00 |
| Drain Tile Repair | 5 | EA | \$250.00 | \$1,250.00 |
| 13,500 Gallon Primary Septic Tank | 1 | | \$25,000.00 | \$25,000.00 |
| 1,500 Gallon Pump Tank with Effluent Pump | 1 | EA | \$5,000.00 | \$5,000.00 |
| Construction Staking | 1 | LS | \$1,500.00 | \$1,500.00 |
| Mobilization, Bonds & Insurance (5%) | | | | \$19,957.50 |
| Contingencies (10%) | | | | \$41,910.75 |
| | | | | \$461,018.25 |
| Non Construction Costs (15%) | | | | \$69,152.74 |
| Subtotal - LPS - Casino | | | | \$530,170.99 |
| STEP System Casino to Bel-Air | | | | |
| Collection and Transmission Mains | 23,213 | LF | \$11.72 | \$272,056.36 |
| 4" Service Lines | 3,600 | LF | \$20.00 | \$72,000.00 |
| 1 1/4" Service Lines | 6,000 | LF | \$9.00 | \$54,000.00 |
| Complete STEP Units | 25 | EA | \$5,500.00 | \$137,500.00 |
| Existing Septic Tank Modification | 70 | EA | \$3,500.00 | \$245,000.00 |
| STEP Pump Basins Only (Reuse Exist ST) | 25 | EA | \$3,000.00 | \$75,000.00 |
| Spare Effluent Pumps | 8 | EA | \$500.00 | \$4,000.00 |
| Flushing Station | 7 | EA | \$1,500.00 | \$10,500.00 |
| Isolation Valve | 5 | EA | \$450.00 | \$2,250.00 |
| Air Release Manhole | 6 | EA | \$1,500.00 | \$9,000.00 |
| Street, Sidewalk, Driveway Replacement | 400 | SY | \$50.00 | \$20,000.00 |
| Crushed Stone Replacement | 1,000 | TN | \$15.00 | \$15,000.00 |
| Drain Tile Repair | 15 | EA | \$250.00 | \$3,750.00 |
| Construction Staking | 1 | LS | \$5,000.00 | \$5,000.00 |
| Mobilization, Bonds & Insurance (5%) | | | | \$46,252.82 |
| Contingencies (10%) | | | | \$97,130.92 |
| | | | | \$1,068,440.10 |
| Non Construction Costs (15%) | | | | \$160,266.01 |
| Subtotal STEP System - Casino to Bel-Air | | | | \$1,228,706.11 |
| Advantex Wastewater Treatment System | | | | |
| Site Grading and Preparation | 1 | LS | \$15,000.00 | \$15,000.00 |
| Advantex Treatment System | 21 | EA | \$23,809.53 | \$500,000.13 |
| Effluent Metering & Piping | 1 | LS | \$5,000.00 | \$5,000.00 |
| Disinfection Facilities | 1 | LS | \$25,000.00 | \$25,000.00 |
| Fencing & Warning Signs | 1 | LS | \$5,000.00 | \$5,000.00 |
| Final Site Cleanup, Grading & Seeding | 1 | LS | \$5,000.00 | \$5,000.00 |
| Mobilization, Bonds & Insurance (5%) | | | | \$27,750.01 |
| Contingencies (10%) | | | | \$58,275.01 |
| | | | | \$641,025.15 |
| Non Construction Costs (15%) | | | | \$96,153.77 |
| Land | 5 | Acres | \$10,000.00 | \$50,000.00 |
| Subtotal Treatment System | | | | \$787,178.92 |
| TOTAL PROJECT COSTS | | | | \$2,546,056.02 |
| UNIT COST PER HOUSEHOLD | | | | \$14,548.89 |

**OPERATION AND MAINTENANCE COSTS - SOUTH SHORE AREAS
STEP AND LPS SYSTEMS**

COLLECTION AND TRANSMISSION

| | STEP System Operation & Maintenance | | | | LPS - Grinder Pump System Operation & Maintenance | | | | |
|--------------------------------------|-------------------------------------|-----------------|--------------|---------------------|---|--------------|-----------------|--------------|----------------------------|
| | No. of Units | Interval, Years | No. per Year | Estimated Unit Cost | Annual Cost | No. of Units | Interval, Years | No. per Year | Estimated Unit Annual Cost |
| Pump Out Septic Tanks | 175 | 8 | 21.88 | \$300.00 | \$6,562.50 | 0 | | | |
| Pump Inspection & Repair | 175 | 3 | 58.33 | \$17.50 | \$1,020.83 | 175 | 8 | 21.88 | \$362.50 |
| Control Panel Inspection & Repair | 175 | 15 | 11.67 | \$100.00 | \$1,166.67 | 175 | 15 | 11.67 | \$100.00 |
| Pump Replacement | 175 | 15 | 11.67 | \$490.00 | \$5,716.67 | 175 | 20 | 8.75 | \$1,532.50 |
| Air Valve Maintenance | 5 | 1 | 5.00 | \$17.50 | \$87.50 | 5 | 1 | 5.00 | \$17.50 |
| Gate & Flush Valve Operation | 5 | 1 | 5.00 | \$6.25 | \$31.25 | 5 | 1 | 5.00 | \$6.25 |
| Telemetry Calls | 175 | 20 | 8.75 | \$55.00 | \$481.25 | 175 | 20 | 8.75 | \$55.00 |
| Force Main Cleaning | | 20 | 0.05 | \$5,450.00 | \$272.50 | 20 | 20 | 0.05 | \$5,450.00 |
| Billing, Collection & Administration | | | | | \$5,000.00 | | | | \$5,000.00 |
| Subtotal | | | | | \$20,339.17 | | | | \$28,378.23 |

TREATMENT

| | ADVANTEX | | | CONTROLLED DISCHARGE LAGOON | | |
|--------------------------------|------------------|-----------------|--------------------|-----------------------------|-----------------|-------------------|
| | Estimated /Month | Estimated /Year | Annual Costs | Estimated /Month | Estimated /Year | Annual Costs |
| Component Maintenance, MHR. | 10 | 120 | \$4,200.00 | 5 | 60 | \$2,100.00 |
| System Maintenance, MHR. | 20 | 240 | \$8,400.00 | 10 | 120 | \$4,200.00 |
| Power, KwHr | 1500 | 18000 | \$1,440.00 | 0 | 0 | \$0.00 |
| Effluent Testing, No. of Tests | 1 | 12 | \$1,800.00 | 1 | 12 | \$1,800.00 |
| Other Costs | | | \$600.00 | | | \$600.00 |
| Subtotal | | | \$16,440.00 | | | \$8,700.00 |

TOTAL ESTIMATED ANNUAL O & M COSTS

| | |
|--|--------------------|
| STEP Plus Advantex Treatment | \$36,779.17 |
| LPS/Grinder Pump Lagoon Treatment | \$37,078.23 |
| Average Monthly Cost | \$17.51 |
| | \$17.66 |

COST ESTIMATES

LAKE CREEK AREA

SUMMARY OF ALTERNATES FOR LAKE CREEK

| Alternate No. Description | LC - 1 Low Pressure Grinder Pump Collection and Transmission System with Treatment at City of Alta WWTP | LC - 2 STEP System with ADVANTEX Treatment and Effluent Pumping out of Drainage Basin |
|----------------------------------|--|--|
| Construction Cost | \$901,613.44 | \$1,241,190.39 |
| Annual Amortization ¹ | \$62,011.97 | \$85,367.69 |
| Annual O & M Costs | \$30,195.31 ² | \$23,290.00 |
| TOTAL ANNUAL COSTS | \$92,207.28 | \$108,657.69 |
| AVERAGE MONTHLY COSTS | \$102.45 | \$120.73 |

²Based on 6,000 gallons per month and 0 %
Surcharge Plus O & M for LPS

¹20 Years @ 3%

Assumption: Sewer District Operate &
Maintain LPS, Alta Charge City Rates to
Receive & Treat Waste

ALTERNATE LC - 1
Low Pressure Sewer
Force Main to Alta

| | Quantity | Unit | Unit Cost | Total |
|---|----------|------|-------------|---------------------|
| LPS Grinder Pump System - Lake Creek | | | | |
| 1.5" Force Main | 3,000 | LF | \$9.50 | \$28,500.00 |
| 2" Force Main | 2,750 | LF | \$10.50 | \$28,875.00 |
| 2.5" Force Main | 3,826 | LF | \$10.50 | \$40,173.00 |
| 3" Force Main | 1,200 | LF | \$12.00 | \$14,400.00 |
| 4" Gravity Service Line | 2,200 | LF | \$20.00 | \$44,000.00 |
| 1 1/4" Service Line | 3,000 | LF | \$9.00 | \$27,000.00 |
| Individual Grinder Pump (Shallow) | 60 | EA | \$4,500.00 | \$270,000.00 |
| Individual Grinder Pump (Deep) | 8 | EA | \$5,000.00 | \$40,000.00 |
| Spare Grinder | 4 | EA | \$1,500.00 | \$6,000.00 |
| Flushing Station | 5 | EA | \$1,500.00 | \$7,500.00 |
| Isolation Valve | 5 | EA | \$450.00 | \$2,250.00 |
| Air Release Manhole | 3 | EA | \$1,500.00 | \$4,500.00 |
| Street, Sidewalk, Driveway Replacement | 200 | SY | \$50.00 | \$10,000.00 |
| Crushed Stone Replacement | 500 | TN | \$15.00 | \$7,500.00 |
| Drain Tile Repair | 10 | EA | \$250.00 | \$2,500.00 |
| Construction Staking | 1 | LS | \$2,000.00 | \$2,000.00 |
| Mobilization, Bonds & Insurance (5%) | | | | \$26,759.90 |
| Contingencies (10%) | | | | \$56,195.79 |
| | | | | \$618,153.69 |
| Non Construction Costs (15%) | | | | \$92,723.05 |
| TOTAL PROJECT COST - LPS | | | | \$710,876.74 |
| | | | | |
| Force Main to Alta | | | | |
| 3" Force Main | 7,800 | LF | \$12.00 | \$93,600.00 |
| Additional Treatment Plant Capacity | 1 | LS | \$50,000.00 | \$50,000.00 |
| Mobilization, Bonds & Insurance (5%) | | | | \$7,180.00 |
| Contingencies (10%) | | | | \$15,078.00 |
| | | | | \$165,858.00 |
| Non Construction Costs (15%) | | | | \$24,878.70 |
| TOTAL PROJECT COST - LPS | | | | \$190,736.70 |
| | | | | |
| TOTAL PROJECT COST | | | | \$901,613.44 |
| UNIT COST PER HOUSEHOLD | | | | \$12,021.51 |

ALTERNATE LC - 2
STEP System Lake Creek
ADVANTEK TREATMENT
Pump Effluent out of Area

STEP System - Lake Creek

| | | | |
|--|-----------------------------|------------|--------------|
| Collection & Transmission Mains | 10,776 LF | \$10.50 | \$113,148.00 |
| 4" Service Lines | 5,000 LF | \$20.00 | \$100,000.00 |
| 1 1/4" Service Lines | 3,000 LF | \$9.00 | \$27,000.00 |
| Complete STEP Units | 40 EA | \$5,500.00 | \$220,000.00 |
| Existing Tank Modification | 20 EA | \$3,000.00 | \$60,000.00 |
| STEP Pump Basins | 8 EA | \$3,300.00 | \$26,400.00 |
| Spare Effluent Pumps | 3 EA | \$500.00 | \$1,500.00 |
| Flushing Station | 3 EA | \$1,500.00 | \$4,500.00 |
| Isolation Valves | 3 EA | \$450.00 | \$1,350.00 |
| Air Release Manhole | 2 EA | \$1,500.00 | \$3,000.00 |
| Street, Sidewalk, Driveway Replacement | 200 SY | \$50.00 | \$10,000.00 |
| Crushed Stone Replacement | 400 TN | \$15.00 | \$6,000.00 |
| Drain Tile Repair | 6 EA | \$250.00 | \$1,500.00 |
| Mobilization, Bonds, & Insurance (5%) | | | \$28,719.90 |
| Contingencies (10%) | | | \$60,311.79 |
| | Subtotal | | \$663,429.69 |
| Non Construction Costs (15%) | | | \$99,514.45 |
| | Subtotal STEP in Lake Creek | | \$762,944.14 |

Advantex Wastewater Treatment System

| | | | |
|--|---------------------------|-------------|--------------|
| Site Grading & Preparation | 1 LS | \$5,000.00 | \$5,000.00 |
| Advantex Treatment System | 9 EA | \$24,000.00 | \$216,000.00 |
| Effluent Metering & Piping | 1 LS | \$4,000.00 | \$4,000.00 |
| Disinfection Facilities | 1 LS | \$20,000.00 | \$20,000.00 |
| Fencing & Warning Signs | 1 LS | \$5,000.00 | \$5,000.00 |
| Final Site Clean-up, Grading & Seeding | 1 LS | \$5,000.00 | \$5,000.00 |
| 3" Force Main to pump out of Drainage Area | 7,500 LF | \$12.00 | \$90,000.00 |
| Mobilization, Bonds, & Insurance (5%) | | | \$17,250.00 |
| Contingencies (10%) | | | \$36,225.00 |
| | Subtotal | | \$398,475.00 |
| Non Construction Costs (15%) | | | \$59,771.25 |
| Land | 2 Acres | \$10,000.00 | \$20,000.00 |
| | Subtotal Treatment System | | \$478,246.25 |

| | |
|--------------------------------|-----------------------|
| TOTAL PROJECT COSTS | \$1,241,190.39 |
| UNIT COST PER HOUSEHOLD | \$16,549.21 |

