

Staff Report

for the Regular Meeting of the Board of Directors, December 13, 2017

TO: Board of Directors

FROM: Gary D. King, PE, PhD, Engineering Manager
Tonia M. Tabucchi Herrera, PE, Associate Engineer

DATE: December 6, 2017

SUBJECT: Rattlesnake Road Backbone Extension Project (FATR#1089)

ENGINEERING

RECOMMENDATION:

Approve a construction contract to T&S Construction Inc. for the Rattlesnake Road Backbone Extension Project in the amount of \$2,546,233.00; approve the budget amendment, and authorize the General Manager to execute the necessary documents.

BACKGROUND:

Water service to more than 4,000 LaBarr Meadows, Alta Sierra, and Brewer BEP area connections rely on a single water main to and from Osborn Hill Tanks as a source of supply. See attached exhibit for reference. Currently, the District has approximately 19,230 treated water services, or 20% of our existing treated customers are affected by this connection. These 4,000 services are vulnerable to a water outage should any portion of the pipeline between Osborn Hill and Alta Sierra Reservoir experience a problem. Additionally, routine maintenance on the existing pipeline cannot be accomplished without adversely affecting a large number of customers.

The Rattlesnake Road Backbone Extension Project (Project) would provide for a redundant feed for the water supply to the region. See attached exhibit for reference. The Project has been adequately sized to provide the needed demand for the region if an emergency should arise. Additionally, the Project would allow for completion of two additional projects to replace aged components -- LaBarr Meadow PRV replacement and Osborn Hill pipeline -- that would otherwise require significant service interruptions in order to complete.

The Project would provide availability to treated water for properties along the route; provide fire hydrants; and provide stub outs for future extensions of pipelines.

On October 10, 2017, the District invited nine (9) prime contractors to quote on the Project. A pre-quote meeting was held in the Boardroom on November 2, 2017. The District received six quotes. Three quoters formally declined to bid.

The low quoter is T&S Construction, Inc. at \$2,546,233.00. Attached are the detailed quote results and engineer's estimate. Below summarizes the quotes received.

	Base Quote	Base + Opt 6
T & S Construction, Inc.	\$ 2,351,673.00	\$ 2,546,233.00
C & D Contractors, Inc.	\$ 2,446,090.00	\$ 2,642,024.00
McGuire & Hester	\$ 2,684,050.00	\$ 2,808,650.00
Mountain Cascade	\$ 2,950,470.00	\$ 3,184,970.00
Lorang Brothers Construction, Inc.	\$ 3,132,828.00	\$ 3,295,466.00
Hansen Brothers Enterprises	\$ 3,279,825.00	\$ 3,466,227.00

Staff recommends that the Board award the construction contract to T&S Construction, Inc. in the amount of \$2,546,233.00. This would complete the base bid work as well as the necessary Optional Item 6, the PRV station.

BUDGETARY IMPACT:

Funding for the project comes from five sources:

- \$62,400 of the project funding will come from the Community Investment Program (10151-52912). The budget before this project was \$1,011,277.51, and after this project commitment, the budget will be 948,877.57.
- \$110,685.97 of the project funding will come from PRV Program (10151-52908), and there will be no remaining budget after this project commitment for 2017. These funds will be recovered by future customer connections as Pipeline Reimbursement (Policy#3175).
- \$277,961.08 of the project funding will come from the Minor System Improvement Program (10151-52909). The budget before this project was \$593,471.54, and after this project commitment, the budget will be \$315,510.46. These funds will be recovered by future customer connections as Pipeline Reimbursement (Policy#3175).
- \$615,227.55 of the project funding comes from 2017 Backbone Extension Program 10151-5291. There is no remaining budget after this project commitment for 2017. These funds will be recovered by future customer connections as Pipeline Reimbursement (Policy#3175).
- \$1,479,958.40 of the project funding will come from Capacity Fees Reserve to pay for transmission) and PRV portions of the project, current Capacity Reserve is \$5,715,219. A portion of these funds will be recovered by future customer connections as capacity fees for connection to this pipeline.

The attached budget amendment is to transfer these funds as part of this project approval.

Attachments (5): Detailed quote results
 Budget Amendment Osborn Hill Tanks Service Area
 Rattlesnake Road Backbone Extension Project exhibit



**NEVADA IRRIGATION DISTRICT
BUDGET AMENDMENT REQUEST**

Request Number

Req. No BA 2017 - 60

Date: 12/4/2017
 To: Remleh Scherzinger, General Manager
 From: Department Manager(s)

Initial *RS*

Budget Transfer: Enter Operating/Capital Expenditure or Revenue line items.

Department	Object / Account	Increase/(Decrease)
10151 Engineering	52912 Proj Bud: Community Invest	\$ (62,400.00)
10151 Engineering	52908 Proj Bud: PRV Program	\$ (110,685.97)
10151 Engineering	52909 Proj Bud: Minor System	\$ (277,961.08)
10151 Engineering	52911 Proj Bud: Backbone Extension	\$ 451,047.05

Budget Increase: Enter Operating/Capital Expenditure or Revenue line items.

Department	Object / Account	Increase/(Decrease)
10151 Engineering	52911 Proj Bud: Backbone Extension	\$ 1,479,958.40

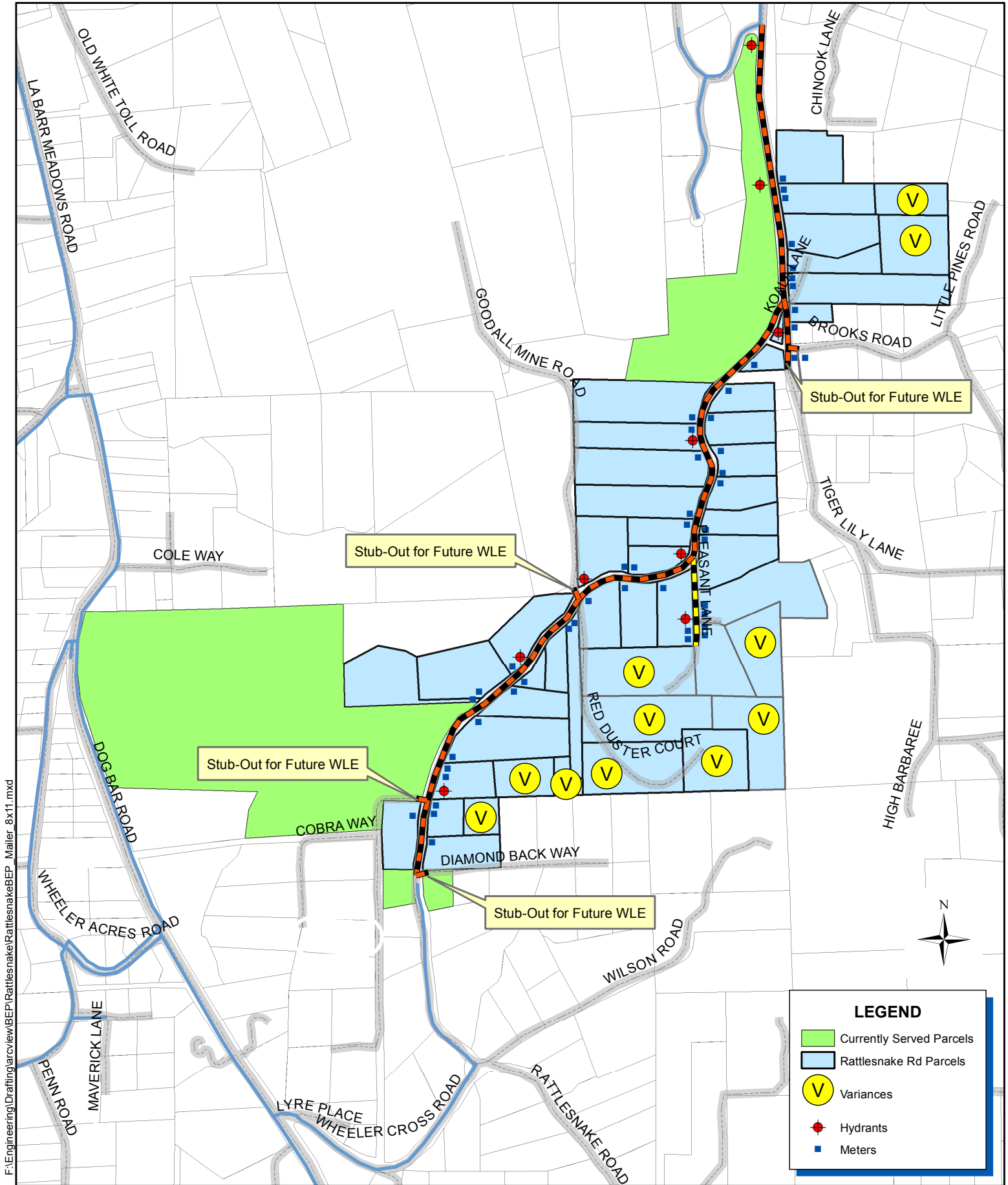
Division Fund	Funding Account	Increase/(Decrease)
10 Water Fund	34053 Capacity Fees - Treated	\$ (1,479,958.40)

Explanation: Enter narrative explaining reason for amendment.

These funds are for the construction of the Rattlesnake Backbone Extension Project(FATR#1089)

APPROVALS:

	<u>Date</u>	<u>Signature</u>	<u>AGM/FM Initials</u>	<u>Approved/Denied</u>
Level I:				
Level II:				
Level III:				



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RATTLESNAKE ROAD BACKBONE EXTENSION PROJECT



Date: 11/28/2017

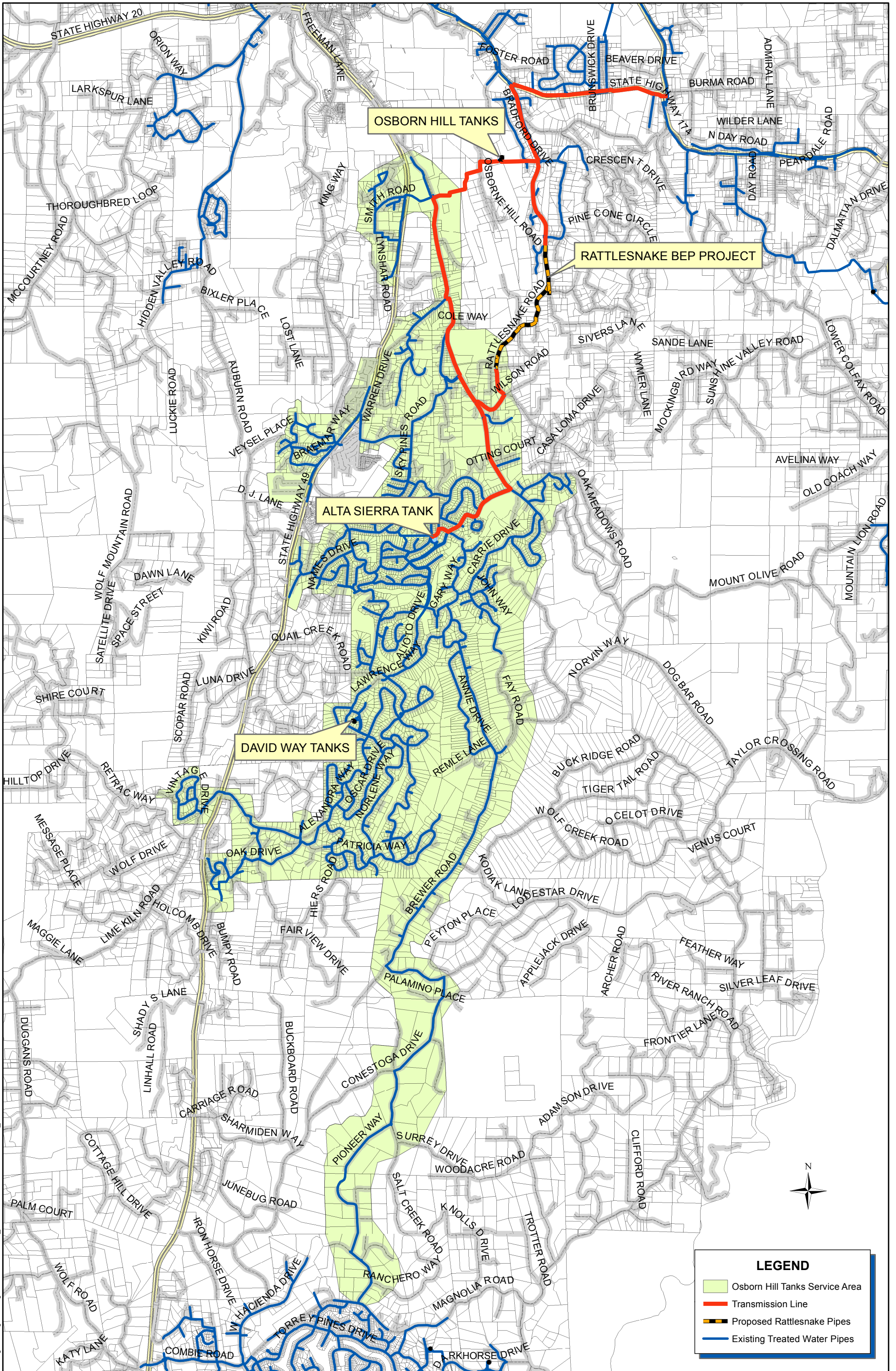
Drawn By: D. HUNT

NEVADA IRRIGATION DISTRICT

NEVADA COUNTY -- PLACER COUNTY
GRASS VALLEY, CALIFORNIA

Scale: 1" = 800' @ 8-1/2x11

Sheet: 1 of 1



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NEVADA IRRIGATION DISTRICT
 NEVADA COUNTY – PLACER COUNTY
 GRASS VALLEY, CALIFORNIA

OSBORN HILL TANKS SERVICE AREA

Drawn By: D. HUNT Date: 11/27/2017 Scale: 1"=3/4 mile @ 11x17 Sheet: 1 of 1

Basis of award is Sections 1, 2, Section 3 Option B and Section 4 -- Total Base Quote.

Section 1 – Applies for the entire project (all sections, roads, and sites)

Item	Description	Qty	Unit	Engineer's estimate		T&S Construction		C&D Contractors		McGuire & Hester		Mountain Cascade		Lorang Brothers		Hansen Brothers	
				Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount
1	Mobilization/Demobilization	1	LS	\$142,000	\$ 142,000	\$ 75,000	\$ 75,000	\$ 94,043	\$ 94,043	\$ 213,000	\$ 213,000	\$ 100,000	\$ 100,000	\$ 160,000	\$ 160,000	\$ 7,201	\$ 7,201
2	Clearing, Grubbing, Tree Removal	1	LS	\$ 5,000	\$ 5,000	\$ 7,000	\$ 7,000	\$ 4,102	\$ 4,102	\$ 75,000	\$ 75,000	\$ 25,000	\$ 25,000	\$ 31,000	\$ 31,000	\$ 5,758	\$ 5,758
3	Construction Staking (Survey)*	1	LS	\$ 50,000	\$ 50,000	\$ 12,000	\$ 12,000	\$ 9,372	\$ 9,372	\$ 20,000	\$ 20,000	\$ 14,000	\$ 14,000	\$ 12,000	\$ 12,000	\$ 79,032	\$ 79,032
4	NPDES General Permit SWPPP*	1	LS	\$ 30,000	\$ 30,000	\$ 13,000	\$ 13,000	\$ 23,891	\$ 23,891	\$ 2,500	\$ 2,500	\$ 3,200	\$ 3,200	\$ 3,500	\$ 3,500	\$ 27,898	\$ 27,898
5	Seeding and Mulching*	1	LS	\$ 5,000	\$ 5,000	\$ 10,000	\$ 10,000	\$ 7,932	\$ 7,932	\$ 6,500	\$ 6,500	\$ 6,400	\$ 6,400	\$ 5,000	\$ 5,000	\$ 2,557	\$ 2,557
6	Rock Excavation – Unforeseen	1000	CY	\$ 300	\$ 300,000	\$ 1	\$ 1,000	\$ 216	\$ 216,000	\$ 100	\$ 100,000	\$ 15	\$ 15,000	\$ 5	\$ 5,000	\$ 307.03	\$ 307,030
7	AC Overlay	250	CY	\$ 300	\$ 75,000	\$ 220	\$ 55,000	\$ 627	\$ 156,750	\$ 300	\$ 75,000	\$ 480	\$ 120,000	\$ 650	\$ 162,500	\$ 249.50	\$ 62,375
Total Section 1 Quote Price					\$ 607,000		\$ 173,000		\$ 512,090		\$ 492,000		\$ 283,600		\$ 379,000		\$ 491,851

Section 2 – Rattlesnake Road (including Brooks Road)

Item	Description	Qty	Unit	Engineer's estimate		T&S Construction		C&D Contractors		McGuire & Hester		Mountain Cascade		Lorang Brothers		Contractor 6	
				Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount
1	18" DIP water main fully restrained	6658	LF	\$ 280	\$ 1,864,240	\$ 231	\$ 1,537,998	\$ 206	\$ 1,371,548	\$ 225	\$ 1,498,050	\$ 250	\$ 1,664,500	\$ 251	\$ 1,671,158	\$ 278.50	\$ 1,854,253
2	8" DIP water main	385	LF	\$ 100	\$ 38,500	\$ 75	\$ 28,875	\$ 97	\$ 37,345	\$ 100	\$ 38,500	\$ 180	\$ 69,300	\$ 132	\$ 50,820	\$ 193	\$ 74,305
3	1" Combo ARV	6	EA	\$ 4,000	\$ 24,000	\$ 4,300	\$ 25,800	\$ 2,492	\$ 14,952	\$ 4,000	\$ 24,000	\$ 3,100	\$ 18,600	\$ 4,540	\$ 27,240	\$ 3,733	\$ 22,398
4	New single meter assembly*	26	EA	\$ 2,500	\$ 65,000	\$ 3,600	\$ 93,600	\$ 2,999	\$ 77,974	\$ 3,000	\$ 78,000	\$ 7,550	\$ 196,300	\$ 5,150	\$ 133,900	\$ 6,394	\$ 166,244
5	New double meter assembly*	5	EA	\$ 3,200	\$ 16,000	\$ 4,500	\$ 22,500	\$ 3,582	\$ 17,910	\$ 4,000	\$ 20,000	\$ 5,940	\$ 29,700	\$ 5,780	\$ 28,900	\$ 8,462	\$ 42,310
6	New high pressure single meter assembly*	7	EA	\$ 3,000	\$ 21,000	\$ 4,000	\$ 28,000	\$ 3,215	\$ 22,505	\$ 3,500	\$ 24,500	\$ 6,150	\$ 43,050	\$ 5,070	\$ 35,490	\$ 7,996	\$ 55,972
7	New high pressure double meter assembly*	1	EA	\$ 3,700	\$ 3,700	\$ 5,000	\$ 5,000	\$ 3,853	\$ 3,853	\$ 4,500	\$ 4,500	\$ 6,300	\$ 6,300	\$ 5,820	\$ 5,820	\$ 9,797	\$ 9,797
8	Fire hydrant assembly	8	EA	\$ 7,000	\$ 56,000	\$ 7,800	\$ 62,400	\$ 9,698	\$ 77,584	\$ 10,000	\$ 80,000	\$ 10,900	\$ 87,200	\$ 11,000	\$ 88,000	\$ 12,526	\$ 100,208
9	Butterfly valve – 18"	6	EA	\$ 3,000	\$ 18,000	\$ 5,000	\$ 30,000	\$ 1,637	\$ 9,822	\$ 8,000	\$ 48,000	\$ 6,670	\$ 40,020	\$ 5,450	\$ 32,700	\$ 5,642	\$ 33,852
10	BO Assembly Type B	5	EA	\$ 3,000	\$ 15,000	\$ 4,000	\$ 20,000	\$ 2,085	\$ 10,425	\$ 5,500	\$ 27,500	\$ 3,180	\$ 15,900	\$ 4,380	\$ 21,900	\$ 5,870	\$ 29,350
11	Testing and Disinfection	1	LS	\$ 15,000	\$ 15,000	\$ 7,000	\$ 7,000	\$ 9,377	\$ 9,377	\$ 15,000	\$ 15,000	\$ 18,500	\$ 18,500	\$ 50,000	\$ 50,000	\$ 30,903	\$ 30,903
12	Stub at Goodall Mine Rd (Sta. #53+80.07 +/-)*	1	LS	\$ 13,000	\$ 13,000	\$ 17,000	\$ 17,000	\$ 16,170	\$ 16,170	\$ 25,000	\$ 25,000	\$ 25,250	\$ 25,250	\$ 32,000	\$ 32,000	\$ 23,500	\$ 23,500
13	Stub at Turquoise Pl (Sta. 70+85.62 +/-)*	1	LS	\$ 15,000	\$ 15,000	\$ 18,000	\$ 18,000	\$ 15,629	\$ 15,629	\$ 25,000	\$ 25,000	\$ 25,250	\$ 25,250	\$ 33,000	\$ 33,000	\$ 23,535	\$ 23,535
14	Stub at Diamond Back Way (Sta. 75+75.04 +/-)*	1	LS	\$ 13,000	\$ 13,000	\$ 17,000	\$ 17,000	\$ 15,765	\$ 15,765	\$ 25,000	\$ 25,000	\$ 24,000	\$ 24,000	\$ 32,000	\$ 32,000	\$ 22,031	\$ 22,031
15	Stub at Brooks Road (Sta. #203+85.49 +/-)*	1	LS	\$ 19,000	\$ 19,000	\$ 17,000	\$ 17,000	\$ 11,302	\$ 11,302	\$ 15,000	\$ 15,000	\$ 21,000	\$ 21,000	\$ 20,600	\$ 20,600	\$ 25,635	\$ 25,635
16	Connection on Rattlesnake Detail (Sta. #10+00 +/-)*	1	LS	\$ 2,500	\$ 2,500	\$ 13,000	\$ 13,000	\$ 5,704	\$ 5,704	\$ 25,000	\$ 25,000	\$ 12,000	\$ 12,000	\$ 25,000	\$ 25,000	\$ 7,590	\$ 7,590
17	Rattlesnake Rd at Brooks Detail (Sta # 27+01.50 +/-)*	1	LS	\$ 11,500	\$ 11,500	\$ 9,000	\$ 9,000	\$ 16,441	\$ 16,441	\$ 15,000	\$ 15,000	\$ 22,000	\$ 22,000	\$ 35,000	\$ 35,000	\$ 16,781	\$ 16,781
18	Connection on Rattlesnake Detail (Sta. #76+57.75 +/-)*	1	LS	\$ 2,500	\$ 2,500	\$ 11,000	\$ 11,000	\$ 5,704	\$ 5,704	\$ 10,000	\$ 10,000	\$ 8,000	\$ 8,000	\$ 25,000	\$ 25,000	\$ 7,347	\$ 7,347
19	Culvert Replacement at discretion of Inspector*	5	EA	\$ 3,000	\$ 15,000	\$ 2,500	\$ 12,500	\$ 1,838	\$ 9,190	\$ 3,000	\$ 15,000	\$ 23,000	\$ 115,000	\$ 35,000	\$ 175,000	\$ 7,128	\$ 35,640
20	48" Culvert Replacement on Rattlesnake Canal (Sta. #15+15.97 +/-)*	1	LS	\$ 8,000	\$ 8,000	\$ 32,000	\$ 32,000	\$ 19,969	\$ 19,969	\$ 30,000	\$ 30,000	\$ 36,000	\$ 36,000	\$ 37,000	\$ 37,000	\$ 26,365	\$ 26,365
21	24" Culvert Replacement on Rattlesnake Canal (Sta. #57+60.74 +/-)*	1	LS	\$ 6,000	\$ 6,000	\$ 22,000	\$ 22,000	\$ 12,188	\$ 12,188	\$ 20,000	\$ 20,000	\$ 28,000	\$ 28,000	\$ 31,000	\$ 31,000	\$ 18,760	\$ 18,760
22	Existing PRV Station @ Bradford Improvements*	1	LS	\$ 10,000	\$ 10,000	\$ 31,000	\$ 31,000	\$ 37,129	\$ 37,129	\$ 35,000	\$ 35,000	\$ 35,000	\$ 35,000	\$ 39,000	\$ 39,000	\$ 31,807	\$ 31,807
Total Section 2 Quote Price					\$ 2,251,940		\$ 2,060,673		\$ 1,818,486		\$ 2,098,050		\$ 2,540,870		\$ 2,630,528		\$ 2,658,583

Section 3 – Pleasant Lane

Option B

Item	Description	Qty	Unit	Engineer's estimate		T&S Construction		C&D Contractors		McGuire & Hester		Mountain Cascade		Lorang Brothers		Hansen Brothers	
				Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount
1	Rattlesnake Rd at Pleasant Ln detail (Pleasant Ln Sta #100+00 +/-)* Option B	1	LS	\$ 12,000	\$ 12,000	\$ 20,000	\$ 20,000	\$ 17,388	\$ 17,388	\$ 19,000	\$ 19,000	\$ 30,000	\$ 30,000	\$ 34,000	\$ 34,000	\$ 30,332	\$ 30,332
Total Option B Section 3 Quote Price					\$ 12,000		\$ 20,000		\$ 17,388		\$ 19,000		\$ 30,000		\$ 34,000		\$ 30,332

Section 4 – Final Road Resurfacing

Item	Description	Qty	Unit	Engineer's estimate		T&S Construction		C&D Contractors		McGuire & Hester		Mountain Cascade		Lorang Brothers		Hansen Brothers	
				Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount
1	Mobilization/Demobilization/SWPPP Improvements*	1	LS	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
2	Type II micro surfacing*	160,000	SQFT	\$ 0.55	\$ 88,000	\$ 0.50	\$ 80,000	\$ 0.48	\$ 76,800	\$ 0.40	\$ 64,000	\$ 0.50	\$ 80,000	\$ 0.43	\$ 68,800	\$ 0.48	\$ 76,800
3	Restriping*	1	LS	\$ 22,000	\$ 22,000	\$ 16,000	\$ 16,000	\$ 19,326	\$ 19,326	\$ 9,000	\$ 9,000	\$ 14,000	\$ 14,000	\$ 18,500	\$ 18,500	\$ 20,259	\$ 20,259
Total Section 4 Quote Price					\$112,000		\$98,000		\$98,126		\$75,000		\$96,000		\$89,300		\$99,059

				Engineer's estimate		T&S Construction		C&D Contractors		McGuire & Hester		Mountain Cascade		Lorang Brothers		Hansen Brothers	
				Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount
Total Base Quote					\$ 2,982,940		\$ 2,351,673		\$ 2,446,090		\$ 2,684,050		\$ 2,950,470		\$ 3,132,828		\$ 3,279,825

Optional Section 6 – Above PRV station and enclosure (sheets 21 &22)*

		Engineer's estimate				T&S Construction		C&D Contractors		McGuire and Hester		Mountain Cascade		Lorang Brothers		Hansen Bros	
Item	Description	Qty	Unit	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount
1	Above PRV stations and enclosure (sheet 21 &22)*	1	LS	\$ 85,000	\$ 85,000	\$ 155,000	\$ 155,000	\$ 172,578	\$ 172,578	\$ 100,000	\$ 100,000	\$ 175,000	\$ 175,000	\$ 121,000	\$ 121,000	\$155,901	\$ 155,901
2	12" DIP dissipater line *	166	LF	\$ 120	\$ 19,920	\$ 160	\$ 26,560	\$ 97	\$ 16,102	\$ 100	\$ 16,600	\$ 250	\$ 41,500	\$ 193	\$ 32,038	\$ 144.50	\$ 23,987
3	Dissipater structure	1	LS	\$ 6,000	\$ 6,000	\$ 13,000	\$ 13,000	\$ 7,254	\$ 7,254	\$ 8,000	\$ 8,000	\$ 18,000	\$ 18,000	\$ 9,600	\$ 9,600	\$ 6,514	\$ 6,514
<i>Total Optional Section 6 Quote Price</i>					\$ 110,920		\$ 194,560		\$ 195,934		\$ 124,600		\$ 234,500		\$ 162,638		\$ 186,402
		Engineer's estimate				T&S Construction		C&D Contractors		McGuire and Hester		Mountain Cascade		Lorang Brothers		Hansen Bros	
Base bid and optional item 6					\$ 3,093,860		\$ 2,546,233		\$ 2,642,024		\$ 2,808,650		\$ 3,184,970		\$ 3,295,466		\$ 3,466,227