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**EARTHWORK OBSERVATION AND MATERIALS TESTING COST ESTIMATE**  
**Golden Avenue and Rainbow Avenue Waterline Replacement**

Task					Estimated Units	Unit Rate	Total
<b>Trench Backfill</b>							
Field Soils and Materials Tester	30	Days @	4	hrs/day	120	\$ 129.00	\$ 15,480.00
Laboratory Compaction Curve	2	Tests @	1	each	2	\$ 235.00	\$ 470.00
Mileage	30	Trips @	26	miles/trip	780	\$ 0.76	\$ 592.80
<b>SUBTOTAL =</b>							<b>\$ 16,542.80</b>
<b>Subgrade and Aggregate Base Preparation</b>							
Field Soils and Materials Tester	10	Days @	4	hrs/day	40	\$ 129.00	\$ 5,160.00
Mileage	10	Trips @	26	miles/trip	260	\$ 0.76	\$ 197.60
<b>SUBTOTAL =</b>							<b>\$ 5,357.60</b>
<b>Site Concrete</b>							
ACI Concrete Tester	2	Days @	4	hrs/day	8	\$ 128.00	\$ 1,024.00
Travel Time - cylinder pick up	2	Days @	1	hrs/day	2	\$ 100.00	\$ 200.00
Concrete Compressive Strength Cylinders	2	Sets @	5	cylinders/set	10	\$ 34.00	\$ 340.00
Mileage	4	Trips @	26	miles/trip	104	\$ 0.76	\$ 79.04
<b>SUBTOTAL =</b>							<b>\$ 1,643.04</b>
<b>Hot Mix Asphalt</b>							
Field Soils and Materials Tester	10	Days @	4	hrs/day	40	\$ 129.00	\$ 5,160.00
Mileage	10	Trips @	26	miles/trip	260	\$ 0.76	\$ 197.60
<b>SUBTOTAL =</b>							<b>\$ 5,357.60</b>
<b>Report Preparation and Project Management</b>							
Senior Engineer	16	Weeks@	0.5	hrs/week	8	\$ 185.00	\$ 1,480.00
Supervisory Technician	16	Weeks@	1.5	hrs/week	24	\$ 140.00	\$ 3,360.00
Project Assistant	16	Weeks@	0.5	hrs/week	8	\$ 86.00	\$ 688.00
<b>SUBTOTAL =</b>							<b>\$ 5,528.00</b>
<b>TOTAL:</b>							<b>\$ 34,429.04</b>



