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| **COMPONENT 1 - Site Improvement - Asphalt Resurfacing** | | | |
| **Physical Description** |  | | |
| **Financial Analysis** |  | | |
| **Potential Deterioration** | The asphalt paved areas are susceptible to indentations from vehicles, especially from heavy vehicles turning on the hot asphalt surface. Ground settling, and ponding water may cause cracking and alligatoring as well. | | |
| **Condition Analysis** |  | | |
| **Life Cycle Analysis** | Date of Aquisition:  Expected Lifespan:  Effective Age:  Remaining Lifespan:  Estimated Year of Repair or Replacement: | | 1992  25  18  7  2017 |
| **Unit Quantity and Cost Estimates** | Unit Quantity:  Cost Estimate:  Current Repair or Replacement Cost Estimate: | | 7155 squareFeet  $3.34 per squareFeet  $23,897.70 |
| **Deficiency Analysis** |  | | |

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| **COMPONENT 2 - Site Improvement - Asphalt Replacement** | | | |
| **Physical Description** |  | | |
| **Financial Analysis** |  | | |
| **Potential Deterioration** | As asphalt is a by-product of crude oil, and refining has found ways to remove and use the volatiles out of crude oil, the quality of asphalt has decreased and additives such as polymers, latex, tire rubber have improved some of the asphalt qualities. As aggregates have different expansion characteristics than the asphalt, internal thermal expansion stresses deteriorate the asphalt. Water enters pavement from cracks, from edges from ground water. The soils under and at the edges of asphalt is affected by vegetation’s moisture cycles as big tree roots’ moisture is drawn away and then allows water to be replaced when the rains occur thus causing soil expansion leading to cracks in the asphalt. Typical damage is cracking, alligator cracking, surface pumping, edge ravelling problems and vegetation in the field of pavement. | | |
| **Condition Analysis** |  | | |
| **Life Cycle Analysis** | Date of Aquisition:  Expected Lifespan:  Effective Age:  Remaining Lifespan:  Estimated Year of Repair or Replacement: | | 1992  50  15  35  2042 |
| **Unit Quantity and Cost Estimates** | Unit Quantity:  Cost Estimate:  Current Repair or Replacement Cost Estimate: | | 7155 squareFeet  $12.50 per squareFeet  $89,437.50 |
| **Deficiency Analysis** |  | | |
| Figure 1: Ashphalt cul-de-sac. | | Figure : Junction or transition between concrete rollover curbs and asphalt blacktop surface. | |

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| **COMPONENT 3 - Site Improvement - Stamped Concrete** | | | |
| **Physical Description** |  | | |
| **Financial Analysis** |  | | |
| **Potential Deterioration** | Stamped concrete is prone to deterioration from vehicular traffic and chemical damage. Like conventional concrete, stamped concrete will provide decades of service when properly installed and maintained, even when exposed to harsh winter weather. Adding steel reinforcement or wire mesh as well as fiberglass flakes augments the strength of the stamped concrete and helps to control cracking. Resealing the wear surface every few years – or as needed to protect the surface from stains and maintain color vibrancy helps to meet the stamped concrete’s lifespan. | | |
| **Condition Analysis** |  | | |
| **Life Cycle Analysis** | Date of Aquisition:  Expected Lifespan:  Effective Age:  Remaining Lifespan:  Estimated Year of Repair or Replacement: | | 1992  50  43  7  2042 |
| **Unit Quantity and Cost Estimates** | Unit Quantity:  Cost Estimate:  Current Repair or Replacement Cost Estimate: | | 519 squareFeet  $12.50 per squareFeet  $6,487.50 |
| **Deficiency Analysis** |  | | |
| Figure : Asphalt surface. | | Figure : Asphalt roadway. | |

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| **COMPONENT 4 - Site Improvement - Curb Replacement** | | | |
| **Physical Description** |  | | |
| **Financial Analysis** |  | | |
| **Potential Deterioration** | The concrete sections are prone to settlement damage, to impact damage from machinery and vehicles and from exposure to the elements. They typically last longer if they are well maintained, powerwashed regularly, and sealed. They typically last longer than the asphalt roadway but are typically replaced concurrently. | | |
| **Condition Analysis** |  | | |
| **Life Cycle Analysis** | Date of Aquisition:  Expected Lifespan:  Effective Age:  Remaining Lifespan:  Estimated Year of Repair or Replacement: | | 1992  50  15  35  2042 |
| **Unit Quantity and Cost Estimates** | Unit Quantity:  Cost Estimate:  Current Repair or Replacement Cost Estimate: | | 570 squareFeet  $32.58 per squareFeet  $18,570.60 |
| **Deficiency Analysis** |  | | |
| Figure : Stamped concrete surface. | | Figure : Moss growth in stamped concrete grooving. | |
| Figure 7: Uneven edge transition between the stamped concrete and the asphalt. | | Figure : Stamped concrete inset pattern detail. | |
| Figure : Concrete cracking in the perimeter portion. | | Figure : Junction between stamped concrete and concrete rollover curbs. | |

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| **COMPONENT 5 - Site Improvement - Street Lights** | | | |
| **Physical Description** |  | | |
| **Financial Analysis** |  | | |
| **Potential Deterioration** | The fact that the majority of these fixtures are exposed to the elements indicated that their deterioration is accelerated and as such, their finishes should be monitored for evidence of paint peeling and coating damage as well as paths that insects and or water may follow which might lead to electrical wire damage and or short circuits. | | |
| **Condition Analysis** |  | | |
| **Life Cycle Analysis** | Date of Aquisition:  Expected Lifespan:  Effective Age:  Remaining Lifespan:  Estimated Year of Repair or Replacement: | | 1992  70  22  48  2062 |
| **Unit Quantity and Cost Estimates** | Unit Quantity:  Cost Estimate:  Current Repair or Replacement Cost Estimate: | | 1 squareFeet  $2,500.00 per squareFeet  $2,500.00 |
| **Deficiency Analysis** |  | | |
| Figure : Chipped concrete curb. | | Figure : Extended view of concrete curb and transition to asphalt roadway as well as an exposed aggregate concrete driveway. | |
| Figure : Curved internal curbing | | Figure : Curved convex curbs facing out from the cul-de-sac at the entrance. | |

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| **COMPONENT 6 - Site Improvement - Transformer Enclosure** | | | |
| **Physical Description** |  | | |
| **Financial Analysis** |  | | |
| **Potential Deterioration** | Inclement weather, freeze thaw cycles, improper installation or maintenance and impact damage are factors that drive deterioration of this component. Deterioration of the mortar can cause the structure to crack allowing vegetation egress. | | |
| **Condition Analysis** |  | | |
| **Life Cycle Analysis** | Date of Aquisition:  Expected Lifespan:  Effective Age:  Remaining Lifespan:  Estimated Year of Repair or Replacement: | | 1992  60  22  38  2052 |
| **Unit Quantity and Cost Estimates** | Unit Quantity:  Cost Estimate:  Current Repair or Replacement Cost Estimate: | | 192 squareFeet  $35.00 per squareFeet  $6,720.00 |
| **Deficiency Analysis** |  | | |
| Figure : Internal standard street light | |  | |

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| **COMPONENT 7 - Site Improvement - Monument** | | | |
| **Physical Description** |  | | |
| **Financial Analysis** |  | | |
| **Potential Deterioration** | The monument is prone to damage from ground settling and damage from the elements to the wear surface and may require some re-mortaring. | | |
| **Condition Analysis** |  | | |
| **Life Cycle Analysis** | Date of Aquisition:  Expected Lifespan:  Effective Age:  Remaining Lifespan:  Estimated Year of Repair or Replacement: | | 1992  50  22  28  2042 |
| **Unit Quantity and Cost Estimates** | Unit Quantity:  Cost Estimate:  Current Repair or Replacement Cost Estimate: | | 1 squareFeet  $4,000.00 per squareFeet  $4,000.00 |
| **Deficiency Analysis** |  | | |
| Figure : Safety wall around transformer | | Figure : Close-up of transformer block wall with mortar at joints. | |
| Figure 18: Aerial view of cracking mortar inside the transformer enclosure | | Figure 19: Transformer enclosure base course. | |

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| **COMPONENT 8 - Site Improvement - Underground Water Services** | | | |
| **Physical Description** |  | | |
| **Financial Analysis** |  | | |
| **Potential Deterioration** | As the site services are under the frost line they typically last as long as the development unless damage occurs to the connections. We assume that the city had the responsibility of maintaining the latter. | | |
| **Condition Analysis** |  | | |
| **Life Cycle Analysis** | Date of Aquisition:  Expected Lifespan:  Effective Age:  Remaining Lifespan:  Estimated Year of Repair or Replacement: | | 1992  70  22  48  2062 |
| **Unit Quantity and Cost Estimates** | Unit Quantity:  Cost Estimate:  Current Repair or Replacement Cost Estimate: | | 1 squareFeet  $5,000.00 per squareFeet  $5,000.00 |
| **Deficiency Analysis** |  | | |
| Figure : Southwest view into the cul-de-sac towards the monument | | Figure : Brick wall cap detailing on monument. | |
| Figure : Moss growth in the monument. | | Figure : Square pillar at the end of the monument. | |

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| **COMPONENT 9 - Site Improvement - Underground Sewer and Drainage Servies** | | | |
| **Physical Description** |  | | |
| **Financial Analysis** |  | | |
| **Potential Deterioration** | As the site services are under the frost line they typically last approx. as long as the development unless damage occurs to the connections. We assume that the city had the responsibility of maintaining the latter and that this has been done in the past. | | |
| **Condition Analysis** |  | | |
| **Life Cycle Analysis** | Date of Aquisition:  Expected Lifespan:  Effective Age:  Remaining Lifespan:  Estimated Year of Repair or Replacement: | | 1992  70  22  48  2062 |
| **Unit Quantity and Cost Estimates** | Unit Quantity:  Cost Estimate:  Current Repair or Replacement Cost Estimate: | | 1 squareFeet  $5,000.00 per squareFeet  $5,000.00 |
| **Deficiency Analysis** |  | | |