Recommendation of Todd Prager and Associates (pp. 21 – 22)

"In weighing the various costs and benefits, a reasonably prudent management alternative is Option B which involves:

- *Tree retention;*
- *Reduction pruning to reduce risk of branch failure;*
- *Installing supplemental support to further reduce risk of branch failure and reduce likelihood of target impacts;*
- *Root zone management to improve soil and root zone conditions; and*
- *Ongoing monitoring on a five year or less interval to proactively address ongoing risks."*

Table 1. Preliminary One-Time Costs for Option B

Reduction Pruning		
Traffic control** (itemized in Table 3)	$7,500	$8,340
Reduction pruning by Certified Arborist*	5,000	12,000
Supplemental Support Systems		
Dynamic cabling support*	1,200	4,000
Root Zone Management**		
Arborist task supervision ($140 per hour for 8 hours)	1,120	1,120
Excavator rental ($120 per hour for 8 hours with $200 mobilization fee)	1,160	1,160
Dump truck rental ($190 per hour for two hours)	380	380
Disposal fee	450	450
Native planting (bunchgrass and wildflower)****	100	100
Organic mulch*	100	100
Labor for mulch installation*	1,080	1,080
Soil nutrient testing (optional)***	48	48
Soil density testing (optional) by certified geoengineer*	600	1,000
Permitting		
WA Department of Archeology Historical Preservation (DAHP) Permit**	5,000	10,000
Subtotal	**23,738**	**39,778**
Contingency Cost of 25%	5,934.50	9,944.50
TOTAL	**$29,672.50**	**$49,722.50**

Estimate Sources:
* Estimate provided by Todd Prager and Associates in *Tree Risk Assessment for Davis-Meeker Oak*
** Estimate provided by City of Tumwater Transportation and Engineering Department
***Thurston Conservation District provides soil nutrient sampling services.
****Northwest Meadowscapes provides a variety of native planting seeds.

Table 2. Possible Ongoing Costs for Option B

Monitoring and ongoing maintenance**	Recurring	$2,000	$10,000
Cable inspections include equipment rental**	Annually	$5,000	$10,000
Reinstallation (every 8 years)*	Every eight years	$1,200	$4,000
Level 2 basic visual tree assessment*	Every five years or after storm events	$800	$1,500
Level 3 advanced tree assessment *	Every five years or after storm events	$3,000	$6,000

Estimate Sources:
* Estimate provided by Todd Prager and Associates in *Tree Risk Assessment for Davis-Meeker Oak*
** Estimate provided by City of Tumwater Transportation and Engineering Department

Table 3. Preliminary Traffic Control Costs for Reduction Pruning

One Way Alternating Option – Two Days of Work Assumed	
Traffic control devices – Signs and cones	$1,000
Portable Changeable Message Sign (PCMS) boards x3 (Old 99 North, Old 99 South, and Henderson Boulevard locations)	2,500
Flaggers x2 ($80 per hour for 16 hours)	2,560
Traffic control supervisor ($80 per hour for 16 hours)	1,280
Mobilization, set up, and tear down	1,000
TOTAL	**$8,340**

Detour Option – Two Days of Work Assumed	
Traffic control devices – Signs and cones	$3,000
Portable Changeable Message Sign (PCMS) boards x3 (Old 99 North, Old 99 South, and Henderson Boulevard locations)	2,500
Mobilization, set up, and tear down	2,000
TOTAL	**$7,500**