

Inverted Crown versus Shed Section Comparison

	Inverted Crown	Shed Section
Grading:		
Follows Existing Topography	(-) east side of the roadway slopes upward against the prevailing existing west-to-east slope	(+) more closely follows existing topography which slopes from west to east in much of the corridor
Earthwork Quantities	(-) increased excavation or fill	(+) less excavation or fill
Utilities	(-) more likely to impact existing underground utilities due to need to lower roadway	(+) less likely to impact existing underground utilities due to less need to lower roadway
Effect on Properties:		
Driveway Grades	(-) higher roadway grade on east side requires either steeper driveway areas or more regrading of driveways and parking areas	(+) better matching of roadway grade on east side to existing elevations lessens effect on driveways and parking areas
Accessibility	(-) higher grade on east side requires more reconstruction of access or ramps with handrails to achieve ADA accessibility	(+) better matching of roadway grade on east side to existing elevations lessens need for reconstruction of access or ramps with handrails to achieve ADA accessibility
Retaining Walls	(-) creates an additional grade difference of 1-1.5' (vs. shed) at the back of sidewalk, increasing the height of any needed retaining walls throughout the corridor	(+) better matching to existing grade reduces the height of any needed retaining walls throughout the corridor
Future Redevelopment	(-) requires new development to match the increased grade difference with additional fill or excavation	(+) better matching to existing grade reduces grading impacts to new development
Stormwater:		
Location of Facilities	(+) uses most of the center median for stormwater treatment, achieving a goal of the LGVCP, may require additional off-site treatment facilities. Also, the need for using the entire available median reduces design flexibility to introduce "upland" areas with monument trees etc.	(+) uses both the center median and planter areas on the east side for stormwater treatment, achieving a goal of the LGVCP. It is anticipated that much of the available planter areas on the east side will be used for stormwater treatment, reducing design flexibility in these areas. This option should provide opportunity for "upland" areas in the median.
Intersection Drainage	(-) requires additional drainage inlets in intersections to ensure the intersections remain free of standing water or ice	(+) better matches the existing intersection grades ensuring positive drainage of the pavement
Cost:		
Construction	(-) requires additional excavation, retaining walls and driveway/parking lot reconstruction over the shed concept, may add as much as \$1 million to the project	(+) requires less excavation, retaining walls and driveway/parking lot reconstruction
Redevelopment	(-) new development will incur higher costs to match the roadway's elevation	(+) better matching of existing grades reduces grade impacts to new development and associated added costs

(+) – Positive Attribute
 (-) – Negative Attribute

Evaluation Notes:

WHPacific has continued development of the project profile and cross-section. Representative cross-sections showing how the shed section and inverted crown concept fit into the existing topography are included in the PAC Packet. A more detailed explanation will be provided at the PAC Meeting.