MEMORANDUM

Date: December 4, 2014

To: Olympia and EPA Staff

From: CD+A Consultant Team

Re: Greening Capitol Way (1403): Description of Final Design Concepts

COMMUNITY DESIGN + ARCHITECTURE

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Introduction

The following is a description of the attached final design concepts that have been prepared by the CD+A Team based on city and community input and other refinements to the draft design concepts prepared for the September 29 and 30 and October 1 charrette and other concepts generated during the charrette. In addition, an appendix with green infrastructure toolbox elements is provided at the end of this memorandum.

Existing conditions, and therefore existing rights-of-way, are based on best available information. The city provided base information through digital geographic information systems (GIS) and automated computer aided design and drafting (ACAD) database files and aerial photography. Using these files, right-of-way, lane, and other street element widths were measured and rounded to the nearest whole number.

The following describes general approaches for the design concepts: please note that not all approaches have been developed for each of the study focus sites.

No traffic, multi-modal, and hydraulic assessment or modeling has been done as part of the preparation of the design concepts. However, it appears that there is flexibility in terms of existing and project traffic levels, adequate intersection level of service, stormwater catchment and treatment areas, etc. that these various design approaches are feasible. Design concepts should be evaluated and modeled to make final determinations related to traffic, multi-mobility, hydraulic, and stormwater design and identify potential impacts.

Key "Givens" of the street concept designs include:

- 11' lanes for bus travel along Capitol Way
- 10' minimum travel lanes, dual center turn lanes, other turn lanes
- 7' parking lanes
- 5' bike lanes
- Bus stops at curb, typically in line with parking lanes or in travel lane
- Corner bulb outs when adjacent to on-street parking or bus bulb out

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- Vehicles can use bike lane to pull off to side while waiting to park so other vehicles may be able to continue along the street where no second lane or center turn lane is available
- Vehicles can use center dual turn lane to move around vehicles stopped in travel lane

Design Concept Descriptions

A series of five study site locations were defined by the city prior to the charrette. During the charrette these concepts were found to be more generally applicable to segments of Capitol Way from the Farmer's Market up to the Capitol Campus. The following description is organized by street segment and use the five study site locations to illustrate design concepts that are generally applicable to the entire segment.

The Capitol Way Corridor-wide Diagram conceptually illustrates recommended vehicle and bicycle lanes within the study area, and indicates suggested bus stops, on-street parking, and mid-block pedestrian crossings. These improvements can enhance walkability, functionality and livability along the corridor; support economic vitality and placemaking; increase sustainability; and achieve environmental goals.

Overall design options or suggestions for further evaluation include:

- Introduce a shared street concept in the northern segment of Capitol Way due to the low traffic volumes, and the benefits of increased pedestrian activity, improved safety, and placemaking that this concept can bring to this part of Capitol Way and downtown.
- Reduce the number of travel lanes where traffic volumes permit. In the shared street district at the north, this results in having two lanes, which widens to three lanes (two travel lanes and a center shared or dual turn lane) through the core of downtown, and then transitioning to the existing four or greater lanes (two travel lanes in each direction with or without dedicated turn lanes) in the southern portion of Capitol Way. In a few instances, "bump outs" or a bypass lane at bus stops are provided to allow free flowing traffic around bus stops so traffic does not back up behind a bus that stops at a transit bulb out in a travel lane. The shared/dual turn lane also allows for vehicles to make left turns and/or pull around vehicles parking or loading. Travel lanes are reduced to increase the pedestrian realm and shorten pedestrian crossing distances, as well as to provide new bicycle facilities, on-street parking, and green infrastructure.
- Amanda Smith Way becomes a one-way street (and couplet to the existing one-way Talcott Avenue) to allow some of the right of way to be allocated to a green street connection between Capitol Way and Capitol Lake.
- Provide an uphill climbing bicycle lane where the hillside gradient is steep to provide a separation between bicycles and vehicles where their speed difference is greatest.
- Place bus stops typically at the "far side" of an intersection and design them in concert with street lanes to limit traffic backing up while the bus is stopped for loading.
- Provide pedestrian mid-block crossings in the downtown core to expand connectivity and use the existing alley network.
- Expand or maintain parking opportunities and separate pedestrians and traffic using on-street parking in strategic locations.

- Improve the 14th Avenue and Capitol Way intersection. The issues surrounding this area are too complex and outside of the focus of this effort. The city should work with the State to create a more pedestrian-friendly and accessible environment through further assessment and design development for this key gateway from the region to the Capitol Campus and downtown beyond.

Capitol Way from Market Street/Corky Avenue and Olympia Avenue

This segment includes low volume streets and a mix of residential, industrial, and commercial uses. With many vacant or underutilized sites, this segment is ripe for redevelopment and infill. Capitol Way's width has been identified as being problematic for many of the area's senior community residents. Due to these conditions, this segment is designated as a Shared Street district. Implementing a shared streets network would increase the public realm and community open space while continuing the functionality for vehicles and transit.

B Avenue to A Avenue

Existing

Capitol Way between B and A Avenues consists of a 60' curb to curb section within a 77' right of way; the dimensions of individual elements are included in the illustration of the section. Relatively newly planted street trees and street lights exist along the eastern sidewalk. Street lights are a contemporary interpretation of a historic pole and double light fixtures, a cobra head on an S-curved arm above the street and a pedestrian scale acorn fixture over the sidewalk. No improvements exist on the west side of the street, because this fronts on a vacant development site.

Shared Streets

This design concept illustrates how a street can be designed to provide flexibility in use by creating a curbless "shared space" that can serve multiple functions and be shared by different users. Traffic is slowed by the design, and pedestrians and bicyclists are emphasized over vehicles. See the attached section and plan drawings and case study sidebar.

This concept provides a 22' wide travel area for vehicles, equivalent to space for two 11' travel lanes, roughly within the center of the right of way; a chicane is illustrated at one point that shifts the travel way laterally within the right of way that encourages slower traffic speed. On each side of the travel way a flexible open space area is provided that can range from about 15 to 40 feet in width. This flexible space can provide for a 7' foot area that is typically used for parallel parking, intermittent shallow stormwater planters, and paved and boardwalk areas that are primarily used by pedestrians but that can also provide space for diagonal parking, temporary kiosks or food truck parking, public seating areas, and a range of other public activities and landscaping. The majority of the paved area should be a consistent pervious paving treatment with special pavers with a color and tactile quality to them that delineate the edge between the area that is more typically used by vehicles and bicyclists and the area most often used exclusively for pedestrians. The special pavers ***should not*** need to be ADA-style tactile domed and bright yellow pavers, because speed management of vehicles and signage can make it clear to vehicles that they need to yield to pedestrians throughout the entire shared street.

The entire shared street space could be used for public gatherings or special events such as street fairs, food truck round up, seasonal expanded farmers markets, and the like; and possibly closed to traffic for some of these activities. See attached drawings for how these uses could be integrated into the street.

In the short term, many of the complete street and public open space goals of the shared street can be achieved with design treatments that are cost efficient and quick to implement. This will create an improved pedestrian realm until funding can be obtained to complete the full shared street concept. The street curb to curb section can undergo a road diet to reallocate the center dual turn lane and bike lanes to widened pedestrian space and diagonal parking in lieu of parallel parking. Treatments such as movable planters and pavement painted to delineate corner bulb outs and new pedestrian seating areas and parking configurations, and the introduction of parklet-style wood platforms can be installed to extend the pedestrian area. Unlike typical parklets, these would not have side rails to allow for passengers to enter and egress from the adjacent parked cars.

Along Capitol Way, shared streets could occur between Olympia Avenue and the Farmer's Market (Market Way/Corky Avenue). These shared street blocks could support a larger, shared street district surrounding them. The District could be bounded by Columbia Street, Olympia Avenue, Franklin Street, and Market Street/Corky Avenue. The streets within this area all experience low traffic volumes, and are projected to continue to carry low vehicle volumes in the future. The increased use of the public right of way as public open space will complement the existing Farmers Market and senior housing uses, as well as the potential for increased mixed use development in this district of downtown. Intersections can be raised to continue the shared street concept between blocks and emphasize the pedestrian realm. The introduction of vehicle stop control at intersections is especially important for the needs of the adjacent senior housing community.

The introduction of boardwalk surfacing allows for more extensive infiltration through green infrastructure, while still providing an ADA accessible surface. Boardwalks are extended over the stormwater treatment area to allow for larger bioretention areas below. Intermittent varying width stormwater planters can separate the travel way and parking areas from "shared space". Trees and green infrastructure opportunities provide for intermittent planters and extended curb bulb outs, as well as the pervious paving allows for infiltration of stormwater. Stormwater planters would be shallow and retain limited amounts of stormwater runoff to address high water table and tidal influences. These and other green infrastructure systems are described further in the Appendix- Green Infrastructure Toolbox Elements located at the end of this memorandum.

Capitol Way from Olympia Avenue to Legion Way

This segment of Capitol Way is in the historic district of downtown. It has narrow sidewalks, many in poor condition due to heaving from the street tree roots. The concept for this segment, the Core Downtown Main Street, introduces a road diet, reducing four travel lanes to two travel lanes and a dual left turn lane. The majority of the parallel parking is maintained. Stormwater curb extensions, grated street trees, and pervious paving are included in the parking lane and corner bulb outs. Widened sidewalks are possible with the reallocation of street width from the removed travel lane.

4th Avenue to 5th Avenue

Existing

The block between 4th and 5th Avenues is one of the busiest on the corridor both in terms of pedestrian traffic and business activity. The current cross section consists of three 9' travel lanes and one 10' wide travel lane, 12' wide sidewalks, and two 8' wide parking lanes. There is no left turn at 4th Avenue as that street is one way east bound. Therefore the turn lane may be able to be eliminated at that intersection,

depending on the street channelization north of 4th. The curb to curb section is 53' and the right of way is 77'.

"Road Diet" design concept: two travel lanes and center dual turn lane

A road diet reduces the number of through lanes to one in each direction and provides either a dual left turn lane or back-to-back turn pockets in segments with higher expected left turn demand. This then allows the allocation of remaining right-of-way to parking, landscape/green infrastructure, and/or wider pedestrian space (either as sidewalks or boardwalks over green infrastructure).

The street section between 4th and 5th Avenues consists of two 11' travel lanes, a 10' center dual turn lane or median, two 7' parking lanes with trees planted intermittently and two 15.5' sidewalks with pervious boardwalk strips. Boardwalks are extended over the stormwater treatment area to provide pervious paving and allow for larger bioretention areas below. At intersections, the corners could be bulbed out to provide larger stormwater planter areas and reduce pedestrian crossing distances. This element would not be possible if a north to eastbound right turn lane became necessary at 4th Avenue. Where trees are planted within the parking lane, tree grates, designed to support the weight of vehicles, and tree guards can be provided to enhance the character of downtown, improve tree root and canopy area, and allow for green infrastructure opportunities. Because 4th Avenue is one-way westbound, there is no northbound left turn at that intersection. To facilitate traffic circulation south to eastbound left turns are also prohibited at 5th Avenue during certain hours, keeping with the city's current protocol. Sidewalk extensions (curb bulbs) are recommended at both sides of intersections unless other elements are needed such as bus stops.

A mid-block pedestrian crosswalk with sidewalk extensions is recommended between 4th Avenue and Legion Way. This would expand pedestrian routes and choices while slowing down traffic.

A planted median could be substituted for the center dual turn lane if left turns into alleys are not necessary. If the center turn lane option is selected, the pavement should be pervious.

Capitol Way and Legion Way Intersection

The concept design for this intersection provides for pedestrian, bicycle, and transit improvements. Pedestrian crossings are realigned to provide more direct pedestrian circulation, and crossing distances are shortened by reducing corner radii and providing corner bulbouts where on-street parking is present. An entry plaza into Sylvester Park supports the significance and importance of this public open space. A road diet, realignment of the travel lanes, and redistribution of on-street parking allows for bus stops to be moved out of travel lanes to improve traffic flow and allows for a bicycle climbing lane up the hill towards the Capitol Campus improving bicycle access and safety.

Existing

Legion Way is one of the downtowns most important and pedestrian friendly east-west Avenues with direct connections to the popular Capitol Lake Park. The intersection at Legion Way features 4 narrow travel lanes (roughly 9 to 10 feet wide) and parallel parking on both sides of Capitol Way north of Legion Way. South of Legion Way, the north bound curb side travel lane is about 16 feet wide and there is no parallel parking on the east side of the street. Sidewalks are approximately 12 feet wide. Sylvester Park, Olympia's most central and historic downtown park, fronts on the intersection's south east corner.

Two Travel lanes, dual turn lane and uphill climbing bike lane

The redesign for the Legion Way intersection is recommended to feature the following street improvements:

South of Legion, Capitol Way includes a 11' northbound through lane, a north to east bound right turn lane with pocket, and a 11' southbound through/right turn lane. There is a transit bus pull out and a southbound bicycle climbing lane on the west side of the street. While the bus stop is a far side location, the signal at Legion Way will enable busses to re-enter traffic when the north-south direction light is red. The northbound through lane does change alignment, which will tend to calm traffic speeds.

North of Legion, the street cross section features two 11' travel lanes, one in each direction, and a 10' dual turn lane or median terminating at Legion in a small island near the crosswalk. There is a transit bus stop on the east side. As in the case of the southbound bus stop, the signal at Legion Way will enable busses to re-enter traffic.

Left turns from Capitol Way to Legion Way are prohibited during certain hours.

The bus stops, bicycle lane and right turn pockets complicate the construction of sidewalk extensions on all corners but the northwest. However, reduced curb turning radii and other opportunities to reduce pedestrian crossing distances at this central intersection should be explored in more detail during design development. Parking lanes, center turn lanes and sidewalks all should include storm water management features such as pervious paving.

Sidewalks of 12.5' width and 7.5' wide curb extension stormwater planting strips are provided on both sides of the street. In some instances, sidewalks are extended over the stormwater treatment areas with a boardwalk design treatment, or pervious pavement strips are suggested between the curbside trees.

Also included are new curb bulbs with landscaping on Capitol Way north of Legion Way and on Legion west of Capitol. The curb radius at the entrance to Sylvester Park can be reduced to 15 feet, which will be adequate because of the bike lane on Legion.

The double fixture street light used in block A to B Avenues on Capitol Way (pedestrian scaled acorn fixture with cobra head) with banner poles could be used on both sides of the street and along the rest of the corridor to provide a unified character and better lighting of the street.

The existing trees on the perimeter of Sylvester Park are protected within this concept design and some improvements to the park entry at the Legion Way intersection are possible to emphasize the importance of this public open space.

Way-finding and/or artwork could be integrated into this intersection as Legion Way is the downtown's most southern through east-west street, fronts on Sylvester Park and connects directly to Capitol Lake Park.

Capitol Way from Legion Way to 11th Avenue

This segment of Capitol Way continues the road diet concept and street improvements recommended for the segment to the north, and transitions from a three lane road diet to a four lane street at Union Avenue where traffic volumes increase. Where four lanes of traffic are present, the lane widths have been minimized to provide for new stormwater curb extensions and bicycle climbing lane up the hill (between

Union and 11th Avenues). The use of larger landscaped stormwater curb extension planters support the extension of the landscape character of the Capitol Campus along Capitol Way.

9th Avenue to 10th Avenue

Existing

Capitol Way along this block consists of four travel lanes with a parking lane on the west side, and 12' sidewalks on both sides. The curb to curb dimension is 53' wide and the right of way is 77'. There are street trees along this block, and the street lights are standard cobra heads. This is a fairly consistent section along the South Downtown segment of Capitol Way.

Two Travel Lanes and Dual Turn Lane with Bike Lane

This design concept reduces the number of travel lanes to two – one 11' southbound and northbound lanes, with a 10' center dual left turn lane to introduce a road diet approach. The west side of the street also includes a 5' uphill climbing bike lane. Both sides of the street would have a 7.5' parking lane and 12.5 sidewalks. The parking lane has intermittent stormwater curb extensions and is paved with pervious pavement. The center dual left turn lane and a 4' strip along the curbs between street trees also have pervious pavement.

Pervious paving, landscape strips and bulb outs within the parking lane and along the curb allow for green infrastructure opportunities. Due to the slope of the street, introduced green infrastructure will ideally be terraced with check dams to work with the grades.

The double fixture street light used in block A to B on Capitol Way (pedestrian scaled acorn fixture with cobra head) with banner poles is used on both sides of the street. Boardwalk paving is continued along this segment of the street to provide continuity of this design feature along Capitol Way.

An uphill climbing bike lane is a lane that is only provided in the uphill direction. The presence of a dedicated bike lane provides a designated and clear area to the bicyclist from faster moving traffic adjacent to her. These are typically used in situations where the right of way is constrained and can not accommodate bike lanes in both directions. In these cases, it is assumed that a bicyclist can travel downhill at faster speeds and thus does not need greater protection from adjacent vehicles.

Capitol Way from 11th Avenue to Maple Park Drive

This segment of Capitol Way continues the minimized width four lane street concept from the previous segment due to anticipated future traffic volumes. The reallocated lane width provides for new stormwater curb extension planters and increases pedestrian and landscape improvements from 11th Avenue south. To expand upon the gateway character desired for this intersection, entry plazas can be placed at the corners.

Capitol Way at 11th Avenue Intersection

This intersection is the transition point between two segments of the design concept for Capitol Way and reinforces the gateway between the Capitol Campus and downtown Olympia, to the north.

Existing Condition

The north side of the Capitol Way and 11th Avenue intersection is characterized by a downward slope from south to north, with a street alignment angling to the west at Union Avenue, the next intersecting

street to the north along Capitol Way. The northeastern corner at 11th is adjacent to a parking lot. The northwestern corner is adjacent to a building that is slated for demolition and replacement by a new state office building; this building is currently in early design development. The street section of Capitol Way is four travel lanes and a left turn lane.

The south side of the intersection is the northern boundary of the Capital Campus. The historic West Campus, including the state capital building, is southwest of the intersection and the historic courthouse is to the southeast, as is part of the East Campus area. These areas are predominantly large open spaces with buildings set well back from the street. The street section consists of four travel lanes and a left turn lane, along with a bus pullout lane at the southwest corner. South of North Diagonal street there is a center median and along the western side of Capitol Way is a parking lane and shared bike/vehicle lane (Class III bikeway).

The west side of the intersection has two travel lanes with a left turn lane. The east side is the same, but also has two bike lanes.

Three to Four Travel Lanes with Uphill Climbing Bike Lane

The design concept for the intersection in the north-south direction has four lanes of traffic - one southbound, one left turn in each direction, and two northbound. South of North Diagonal, in the southern direction, the bus stop lane becomes a second southbound lane. Existing on street parking in front of the Capitol Mall is retained on the west side of the street.

The additional width gained on the north side of the intersection allows for a 5’ uphill climbing bike lane and 6’ curb extension stormwater planter. These allow for a separation between pedestrians and vehicle traffic, while visually narrowing the street for vehicle traffic to slow speeds. No modifications are suggested for the 11th Avenue cross section. The southwest corner of Capitol Way and 11th Avenue is reconfigured to provide a more gracious corner with a wider corner radius and entry plaza. Corner bulb outs are provided at the intersection of North Diagonal and Capitol Way for pedestrian travel.

The idea of converting a portion of the large lawn in front of the Courthouse and the Capitol grounds into rain gardens is part of the area’s green infrastructure improvements. The pervious paving, landscape strips, stormwater planters, and potential rain gardens within the West Campus area and Courthouse grounds allow for green infrastructure opportunities.

Additional trees and landscape areas along the street, following the *West Campus Historic Landscape Preservation Master Plan*, can be added to extend the character of the Capitol Campus up to the intersection and along Capitol Way. The *West Campus Historic Landscape Preservation Master Plan* suggests that on-street parking be removed along the West Capitol Campus. This would increase street tree, landscape, and stormwater planter areas.

A minor modification to the 1063 Capitol Way State Office Building, currently under design, located at the northwest corner of the intersection could create a visual and physical link between the Capitol Campus and the block of Capitol Way to the north of the 11th Avenue intersection. The building’s proposed “front porch” design could be modified to allow the entry stairs that are now oriented only towards 11th Avenue to turn the corner towards Capitol Way.

The removal of or redesign of the small parking lot in front of the Courthouse, located at the southeast corner, could strengthen the gateway character at this intersection. These modifications could also improve the visual and physical character of the grounds and provide for a flexible use of the space when not needed for parking. The removal of the parking lot or repaving with pervious pavers would allow for

the introduction of bioretention or rain gardens. All of these opportunities would provide a site for a historic fountain that is currently in storage.

Appendix

Green Infrastructure Toolbox Elements

Pervious Paving

There will be areas along the Capitol Way corridor where the need for hardscape will trump the desire for additional landscape space. In these areas, the use of pervious paving for stormwater management makes of sense and there are many types of systems that can be employed. Interlocking concrete joint pavers offers the most versatility in terms of colors, shapes, and patterning. They are relatively easy to install and can equally be easily removed and replaced if there is a need to access subsurface utilities without residual scaring and patchwork from saw-cutting conventional paving. Boardwalks are also becoming a useful tool for allowing stormwater to infiltrate through the boardwalk gaps while having a unique and more natural paving surface.

Conventional Landscaping and Street Trees

Enhancing conventional landscaping and pedestrian circulation along the street frontage has a lot of benefits and is a commonly undervalued approach to stormwater management. Many downtown streets are often paved from the building zone to the curb zone with little or no ground plane landscaping. From a stormwater perspective, every square foot of new conventional landscape space is essentially removing the same amount of impervious area off the stormwater collection system. Many cities have made a conscious effort to introduce more landscaping to the streetscape in order to redefine the character of downtown streets and enhance the pedestrian experience.

Stormwater Curb Extensions (aka Bulb Outs)

There are many instances along Capitol Way where the parking zones could be reconfigured to allow for stormwater curb extensions. These types of stormwater facilities replace either existing parking spaces or areas within the parking zone striped as “no parking” with a landscape system that captures stormwater runoff. Stormwater curb extensions can be designed in many shapes and sizes and can also be the method for supporting new street trees outside of the sidewalk zone.

Downspout Disconnection to Above Ground Planters

Landscape space does not have to be built into the ground to achieve stormwater benefits. The use of movable landscape planters can take the place of conventional landscape but also have the ability to be quickly relocated to respond to needs of storefronts, special events, or other occasions. Planters can be made of a wide variety of materials with a common approach of using metal due to its durability in downtown environments. These above ground planters can also serve a higher stormwater function to accept stormwater runoff from the extensive array of building downspouts connected to street level awnings/overhangs.

Stormwater Planters

Stormwater planters are one of the most common types of landscape stormwater facilities in urban downtown conditions. These landscaped systems can be quite flexible in their shape and size, can capture either street runoff or sidewalk runoff, or can be utilized with or without on-street parking. Stormwater planters along Capitol Way could be used at individual tree locations or they can be a linear and interconnected part of the sidewalk zone. Given the high pedestrian use of the downtown core area, stormwater planters should be graded as shallow as possible to minimize the need for exposed curbs and other potential trip hazards.

Landscape Infiltration Gaps (LIG's)

Being "micro-managed" typically has a negative connotation. However, when talking about stormwater management, micro-management is a good thing. A newer concept for reducing pervious area is to combine the use of pervious paving with landscape at a micro scale using Infiltration cracks. Landscaped Infiltration Gaps (LIG's) are small gaps in paving that are filled with walkable landscape material that can accept stormwater runoff at a micro-level. Surface cracks are commonplace within the urban environment, more likely by accident with pavement that is failing and plant material growing in the voids. LIG's formalize this process by intentionally introducing gaps in paving material and can be artfully introduced into the streetscape by defining lines, zones, and spaces.

Grated Landscape Areas (GLA's)

Grated Landscape Areas (GLA's) have a metal grate placed over the landscape system to allow for either pedestrian and/or vehicular traffic on top of them. Essentially this stormwater system has the best of both worlds: a landscape system for stormwater management, but also a viable walking/driving surface. Typically slip-resistant steel bar-grated is used for grated green gutters with the openings between the grates being a function of ADA compliance. The plant material within grated green gutter systems is typically low-growing and can also survive in reduced light conditions.

Rain Gardens

There are several locations along the Capitol Way corridor where rain gardens, or larger landscape areas used for stormwater management, can be utilized. These rain gardens can take the form of any shape or size and can help set up special focal points or connections along Capitol Way. The frontage along the state capitol is one location and there are multiple locations along Capitol Way where a literal landscape/stormwater connection can be made between Budd Inlet and Capitol Way.

Green Gutters

Like many downtown streets with a high demand for pedestrian or bike infrastructure, there is a strong desire for separating and buffering vehicular traffic. The use of green gutters, which are long, narrow, and shallow landscaped stormwater planters, can help provide additional separation from vehicular traffic without having significant grade separation. Green gutters placed between pedestrian/bike use and vehicular traffic can accept stormwater runoff from the vehicular traffic's impervious area and/or the sidewalk zone. Green gutters are typically no greater than 4' wide and no less than 1.5' wide.

Transit/Parklet Stormwater Canopies

In areas where there are significant amounts of pedestrian activity such at transit stops and parklets, there may be very little space that can be devoted for on-street landscaped stormwater facilities. There are

however some exciting opportunities to manage rainfall before it even reaches the Capitol Way ground level. Using transparent stormwater canopies that collect and direct stormwater runoff into raised, small-footprint landscape planters or even using green roofs over transit stops and parklets could help manage stormwater at these locations. Furthermore, the art and architecture of the stormwater canopies would again create a unique and innovative look along the Capitol Way corridor.

Green Walls/Stormwater Walls

In recent years, green walls have become popular to help transform blank vertical surfaces into living canvases of public art. They are especially useful to significantly green a space, albeit on the vertical plane, without taking up valuable ground plane space. Though green walls are often viewed as an aesthetic tool, they can take on a much more functional role when they are combined to actively accept stormwater runoff from building sources and help slow the movement of water, like the bark infrastructure of a tree. These "stormwater walls" could be very effective in the prominent alley system within the Olympia downtown core where space is very tight and roof downspouts are there for the taking.