SUMMARY:

The City of Pullman "Garden House" at Lawson Gardens project will consist of a new sustainable building and related site improvements placed within Lawson Gardens, Pullman's formal garden in the middle of Pioneer Hill and gracious legacy of Gerald Lawson who donated the land and initial funds for development, dedicated to the memory of his wife, Alice. The new facility will provide much needed meeting and event space for 16 to 120 person events such as weddings, anniversaries, reunions, holiday parties and business retreats. The garden House will serve to further enhance tourism and Pullman's quality of life.

The new structure will consist of approximately 3,800 square feet on a single level containing the following spaces:

- (1) Events Room capable of seating approximately 120 in rows of chairs or 104 at 60" round tables. Features will include full A/V capability and an intimate, acoustically superior environment.
- Outdoor Plaza immediately adjacent to the Events Room divided by a 40' wide operable window wall system.
- (2) Meeting Rooms suitable for seating 16 people each at a conference table, with A/V capability. May also be used as (1) Bride's Room and (1) Groom's Room.
- (2) Restrooms, each adjacent to one of the Meeting Rooms, with access from building interior and exterior.
- (1) Serving Kitchen for catered food staging / serving. Does not have cooking or warming equipment.
- (2) Table and Chair Storage Closets for facility flexibility / multiple uses.
- (1) Mechanical Room and (1) Janitor Room.

Site work shall include the new plaza with stamped, colored concrete, retaining walls, a seat wall, concrete stairs, new parking stalls to replace those lost to the building footprint and new landscaping beds to coordinate with the existing gardens. Large, colorful planter pots will add interest and themed parking lot lighting shall provide safety and security, yet full cut-off fixtures will not allow lights to glare in neighboring residences.

The new building and grounds shall complement and enhance the existing formal garden, incorporating an aesthetic reminiscent of a garden house. This style incorporates low to medium roof pitches, generous roof overhangs, clerestory windows, warm color palette and building massing which accentuates the horizontal. The new building shall harmonize with the new well house building to the north.

DESIGN NARRATIVES:

The following narratives provide the background information regarding the different disciplines within the design team. The systems and approaches contained within these narratives will be further developed as the design progresses beyond this Conceptual Work.

ARCHITECTURAL:

Context / Site

The Gardens House at Lawson Gardens is to be located at the north end of Lawson Gardens and accessed from the existing parking lot. The primary entry access will be at the north wall of the building from a new sidewalk with universal access from parking level per State Accessibility Guidelines / ADA.

The building design concept will encroach upon and displace approximately 10 parking stalls, thus 10 new stalls will be added to the west end of the current parking lot. Other building access from the exterior shall include the restroom doors, the exit doors from the Events Room and through the moveable window wall. Parking lot lighting will be added, utilizing themed full cut-off fixtures to minimize light trespass to neighboring residential area.

Building Arrangement

The building is planned for flexibility and economy. Whereas the Lobby is not separated from the Events Room, it will be distinguished by differing ceiling plane / height, floor color and wall finishes. However, for a larger function it will serve to add capacity to the Events Room.

Similarly, the moveable window wall system in its "open" position will allow a larger function (weather permitting), by arranging chairs / tables outdoors.

The "Groom / Meeting" and "Bride / Meeting" Rooms shall have minimal built-in furnishings, etc. which will allow flexibility of use. A/V systems will be included in both rooms.

The Serving Kitchen is located to the (north) parking lot side to allow caterers convenient access through a separate service door. There is no food preparation or warming equipment planned for this space – it is just a convenient room for the caterer to move prepared food in, arrange it, serve it and collect dirty dishes to clean elsewhere. This room will comply with building code and NSF guidelines with stainless steel counters and non-absorbent floor, wall and ceiling finishes and an array of electrical outlets.

Exterior

The massing and architectural vocabulary shall be consistent with the surrounding houses, the Well House 8 building to the northwest as well as the formal Japanese-style garden. The intent will be to respect and emulate, but not copy traditional or other design icons.

Exterior materials shall include pre-cast concrete, concrete masonry, cementituous siding, high performance glass, prefinished metal fascia and concrete "shake" or simulated "slate tile" roofing.

Interiors

The interior volumes shall be appropriate for this size of event center, not grand. The color palette shall be neutral but warm, using natural and sustainable materials.

Flexibility in uses shall come from easily maintained, durable surfaces such as polished concrete floors, panelized wood and gyp board walls, stone or masonry veneer walls, and a combination of exposed T&G ceilings or suspended acoustical "t-bar" ceilings.

CIVIL:

The Center will be served by existing wet & dry utilities; however, connection to these existing utilities will require new infrastructure construction. The following narrative describes this effort.

Sanitary Sewer (City of Pullman)

Extend the sanitary sewer from the proposed Center approximately 200 feet east to connect to the existing 6-inch gravity sanitary sewer. Sufficient capacity exists in this line as the only upstream connections are the scout house, the City of Pullman Wellhouse No. 8 and the restrooms in the maintenance facilities at Lawson Gardens. The proposed pipe size is 4-inch PVC. No pumps will be necessary.

Storm Sewer (City of Pullman)

An existing 6-inch storm drain exists in the parking lot of Lawson Gardens near the proposed Center. Since the only new stormwater generated by the Center will be from the roof, the roof drains can be connected into the existing storm drain under the parking lot of the Gardens. The proposed pipe is 4-inch PVC and the length is 25 feet. A rainwater collection system with interpretive, educational signage may be integrated for watering plants or to supply a water feature.

Domestic Water (City of Pullman)

Domestic water service will be provided from the same water main that serves Lawson Gardens. The new domestic connection will be upstream of the irrigation connection for the Gardens. The type of pipe is 2-inch PVC and the length is 170 feet. Backflow prevention will need to be included for the domestic water services and a water meter is required. If the building will be sprinkled for fire protection, connection for this service can be made adjacent to the domestic water connection. At this point, however no fire sprinkler system is required or envisioned. Sufficient capacity exists in the existing line to serve the proposed Center.

Franchise Utilities (Frontier (telephone) & Avista (power & gas))

The closest location for these utilities is Derby Street. Due to the aesthetic nature of the Gardens, it is preferred that all franchise utilities be placed underground. The nearest location for connection of power and telephone is a telephone pole just east of the scout house. The natural gas is in Derby Street. New underground conduits will be placed from this pole to a point just east of the proposed Center. An existing 6" conduit was placed underneath the Gardens driveway during an earlier project. The power & telephone can be placed in this conduit; however, an open trench across the parking lot will be necessary to accommodate the gas line. From this point, the new utilities will be placed along the south side of the Gardens parking area. The type of conduit for the power and telephone is 2-inch schedule 40 PVC and the length is 400 feet (x2). For the gas, the pipe will likely be 1-inch polyethylene (furnished and sized by Avista).

STRUCTURAL:

Foundations:	Conventional Reinforced Concrete Spread Footings
Stem Walls:	Insulated, Reinforced Concrete
Floor:	Reinforced slab-on-grade over 6" compacted fill over compacted native soil or structural fill.
Walls: siding	Insulated Wood Frame with fiberglass batts and rigid insulation board and concrete / masonry / veneer.
Roof Structure:	Lower - TJIs and structural plywood at low roofs or Structural Insulated Panels (SIPS). Upper - Heavy timber, T&G decking and TJI's or SIPS.
Columns & Beams:	Steel beams and columns where concealed; wood beams and columns where exposed.

MECHANICAL:

PROJECT SCOPE

HVAC System:	Two high efficiency, variable speed, gas fired condensing style furnaces, cooling coils and two SEER 17 condensing units. Ducting to individual spaces.
Plumbing System:	One high efficiency gas fired water heater, ADA compliant fixtures, sensor operated faucets and low water-use fixtures.

APPLICABLE CODES AND STANDARDS

The building mechanical systems will be designed in accordance with the following codes and standards:

- 2009 International Building Code (IBC)
- 2009 International Mechanical Code (IMC)
- 2009 Uniform Plumbing Code
- WAC 51-13 - Washington State Ventilation and Indoor Air Quality Code
- 2009 Washington State Non Residential Energy Code

MECHANICAL SYSTEMS

HVAC Systems:

High efficiency (95%) variable airflow gas fired condensing furnace, cooling coil and SEER 17 condensing unit. This system combination is one of the most efficient, yet quietest systems available on the market today. Two systems located within a central mechanical space will be used to condition this facility. All combustion air venting will be through the use of two

3" diameter PVC vents stubbed out through the exterior wall. The outside condensing units have a sone rating comparable to that of a typical household refrigerator.

Air Distribution:
Supply air will be distributed from the fan-coil units and air handling units by galvanized steel sheet metal ducts. Adjustable core ceiling diffusers will be utilized in areas with lay-in ceilings. Areas without lay-in ceilings will utilize sidewall supply grilles, or displacement ventilation diffusers.

Exhaust Systems:
Toilet rooms will be exhausted with ceiling mounted exhaust fans interlocked with the light switch. The maximum sone ("noise") rating of the exhaust fans will be no greater than 1.0. Louvered exterior wall vents will be used to discharge the air.

Plumbing Systems:
All plumbing fixtures will be commercial grade fixtures. Toilets and urinals will have automatic, battery-operated water-conserving flushometer valves. Lavatories and sinks will have low flow water–conserving faucets. Serving Area sinks will be heavy-duty stainless steel for longevity and ease of maintenance. Where required for barrier-free access, fixtures will comply with Americans with Disabilities Act (ADA) guidelines.

A separated combustion, high-efficiency domestic water heating system will be provided. The domestic hot water systems will have pumped re-circulation to maintain water temperature at the remote fixtures. If necessary due to water quality issues a water softener can be provided to condition water for the hot water system, which will prolong the life of the heaters and help avoid mineral buildup on the faucets.

Roof drains and over-flow roof drains will be provided to drain rainwater from the roofs. The main drains will be piped to underground storm water piping for removal from the site or to a rainwater collection system while the back-up over-flow roof drains will discharge to grade at the building perimeter.

Building Automation and HVAC Temperature Controls:
A Web-accessible, Direct Digital Controls (DDC) system will be used to control and monitor all new HVAC equipment and space temperatures. Each furnace a will have individual scheduling, heating, cooling and ventilation controls.

Sustainable Design:
Varying air handler fan speeds:

Fan speeds may be adjusted not only in response to heating or cooling needs, but also to limit peak electrical demand. Most buildings exhibit thermal inertia, meaning that the mass of the structure and its contents tend to stabilize temperature changes even when heating and cooling systems work to alter them.

Take advantage of this stabilizing effect by reducing air handler fan speeds and the cooling or heating inherent in circulating air for brief periods (for example, 10 minutes out of an hour) when power cost is most costly. By sequentially shifting this reduction among all air handlers, no one space feels the reduction long enough to result in a significant change to occupant comfort.

Carbon dioxide sensors:
Carbon dioxide sensors shall be used to control outside air intake. As with temperature control, sound HVAC design provides sufficient fresh air to deal with the worst case scenario, including full occupancy in a zone such as meeting rooms. Most of the time, however, these spaces are only partially filled, so that far more outside air is brought in than required by code or comfort under this condition. Conditioning of outside air, at times, can account for nearly half the load on an HVAC system.

By measuring carbon dioxide in return air, a reasonable estimate of the number of occupants may be made, allowing for a reduction in outside air.

ELECTRICAL:

PROJECT SCOPE

The purpose of this electrical narrative is to provide a general overview of the intended electrical work associated with this project. The scope of the electrical work for this project includes electrical work associated with the following systems:

- New Electrical Service from Avista Utilities
- Normal Power Electrical Distribution System
- Motor Controls and Electrical Equipment Connections
- Interior Lighting and Interior Lighting Controls
- Exterior Lighting and Exterior Lighting Controls
- Fire Alarm System
- Telecommunications System

APPLICABLE CODES AND STANDARDS

All electrical work shall be in complete accordance with the latest revised edition of the following:

- National Electrical Code
- International Building Code
- International Fire Code
- Regulations of the State Fire Marshal
- Americans with Disabilities Act (ADA)
- Illuminating Engineers Society of North America (IESNA)

NORMAL POWER ELECTRICAL DISTRIBUTION SYSTEM

Normal power will be distributed throughout the building at 208/120V. Motor loads ½ HP and larger will be 208V three phase. Lighting throughout the building shall be 120V. 120/208V electrical distribution shall be utilized within the building in order to serve receptacles and other miscellaneous 120V and 208V loads. Circuit breaker panelboards shall be located throughout the building to adequately serve the associated building loads and minimize the length of branch circuit runs. Multi stage surge suppression shall be provided by installing transient voltage surge suppressors at the main distribution panel and at appropriate panelboard locations.

MOTOR CONTROLS AND ELECTRICAL EQUIPMENT CONNECTIONS

Motor starters and disconnects will typically be located in close proximity to each associated piece of mechanical equipment. Motor control centers will be utilized when several pieces of mechanical equipment which require motor starters are located in close proximity to one another. Variable frequency drives will be provided by the mechanical contractor and installed by electrical contractor for various pieces of mechanical equipment if applicable.

INTERIOR LIGHTING AND INTERIOR LIGHTING CONTROLS

Lighting throughout the interior building spaces will respond to the primary use of each space while maintaining a level of flexibility to react to future use of each space. Lighting system design foot candle levels will be in accordance with IES standards. In general, areas within the building will be illuminated to the following light levels:

Building Area	Foot-Candles
Events Room	40 to 60 variable, zoned and dimmable.
Conference Rooms	40
Restrooms	30
Janitor Rooms	30
Storage Rooms	20
Mechanical Room	30
Electrical Room	30

Uniform ambient lighting will establish a basic minimum lighting level throughout each individual space with task, display and accent lighting used to supplement specific areas as required. Specific attention will be given to the lighting in order to minimize glare. Lighting within the building will be primarily fluorescent. Fluorescent lamps shall be primarily T8, T5, or compact fluorescent. Exterior, building-mounted lighting shall be recessed.

Exit lighting will be LED type with integral battery backup. Emergency egress lighting will be provided throughout the path of egress, and will be supplied with integral battery backup in the event of a failure on the normal power system.

Occupancy sensors will be utilized to automatically shut off the lighting when these spaces are unoccupied. Occupancy sensors shall be dual technology type. Either ceiling mounted or wall mounted occupancy sensors will be utilized depending on the physical size and specific geometry of the room being controlled. Within normally occupied spaces, multi-level switching will be provided in conjunction with occupancy sensors, and will utilize two or more manual wall switches.

Site lighting poles / fixtures shall be full cut-off and generally match those installed at Riverwalk.

EXTERIOR LIGHTING AND EXTERIOR LIGHTING CONTROLS

Exterior lighting will be selected to match the architectural building exterior. In general, exterior areas will be illuminated to the following light levels:

Exterior Area	Foot-Candles
Exterior Entry	5
Exterior Walkways	2
Parking Areas	1

Exterior entry lighting which illuminates the path of egress will be supplied with integral battery backup in the event of a failure on the normal power system. The exterior lighting will be automatically controlled via outdoor photocell and astronomical time clock, which will allow the exterior lighting to be automatically turned on and off at pre-programmed times, or be automatically controlled via outdoor photocell.

FIRE ALARM SYSTEM

A complete battery backed addressable fire alarm system with manual pull stations, automatic detection and ADA compliant horn/strobes will be provided as required to meet the governing codes. The building will not have a fire sprinkler system.

TELECOMMUNICATIONS SYSTEM

Conduit pathways will be provided for new owner provided telecom devices. Specific device location will be closely coordinated with the owner's I.T. department director and staff.

SUSTAINABLE DESIGN

All sustainable design measures considered will be evaluated completely with regards to their associated sustainable and economic aspects. The following is a brief list of items related to the building electrical systems which are being considered for this project.

- Energy efficient fluorescent or LED lighting will be utilized as the primary light source within the building in order to reduce the energy consumption associated with the lighting system to the fullest extent possible.
- Occupancy sensors will be utilized to automatically shut off the lighting within offices, conference rooms, and restrooms when these spaces are unoccupied. This will allow the interior lighting within these areas to be automatically turned off during unoccupied times, thereby increasing the available energy savings associated with the interior lighting system.
- Within normally occupied spaces, multi-level switching will be provided in conjunction with occupancy sensors, and will utilize two or more manual wall switches. The utilization of multi-level switching within these spaces will allow the user to manually reduce the light levels within their spaces if desired, further increasing the available energy savings associated with the interior lighting system.
- Exterior lighting will utilize full cut off light fixtures in order to avoid light trespass and meet associated dark sky lighting requirements.
- An astronomic time clock in combination with photocell will be used to control the exterior lighting system. This will allow the exterior lighting system to be automatically turned on and off at pre-programmed times, thereby increasing the available energy savings associated with the exterior lighting systems.