COTE Description-AIAOC 2016
West Hollywood A.V.S.R.S

1: Intent & Innovation
The A.V.S.R.S. (Automated Vehicle Storage and Retrieval System) grid neutral project was designed to become a catalyst for place making within a densely populated urban environment and be a model for smart sustainable design practices, the creation of urban open space opportunities, community engagement and public art.

2: Community
The automated system's limited footprint and building mass resulted in additional open space on site creating a courtyard that is used by both City Hall and the Community for events. The building design is a bridge between the dense commercial boulevard and the residential neighborhood with public art by local and international artist included as an integral part of the structure and site.

3: Site
100% of all stormwater is conveyed into a CDS Unit that pretreats the water before it goes into a cistern tank. The stormwater is then discharged into a bio treatment planter which is a secondary cleaning system before entering the storm drain system.

4: Bioclimatic Design
The system offers a clean, environmental alternative to conventional parking systems. Automobiles are non-operational during the parking and retrieval process causing a reduction in CO2 emissions which equates to removing 92 cars from the road each year or the planting of 67,000 trees.

5: Light and Air
Light pollution from the site to the adjacent residential neighbors is greatly reduced due to the solid nature of the parking warehouse and the automated nature of the system. A large glass wall allows a visual glimpse into one of the vehicle lift systems creating an exciting element of animation through an art installation net of three thousand glass spheres.

6: Water
The drip irrigation system eliminates any overspray onto buildings and walk ways and is 35% more efficient than baseline case. In addition, the system was designed with careful consideration of climate factors such as building orientation relative to shade and sun exposures.

7: Energy
The efficient structure has a 52 kilowatt roof mounted photo-voltaic array which not only creates a grid neutral facility but also supplements the power needs of the existing City Hall facility.

8: Materials
All of the façade and wall materials were created from recycled Trespa panels, 3 Form panels and Resysta panels that are all manufactured utilizing strict environmental practices. The majority of the building structure is made from poured in place concrete with a high fly ash content which was sourced locally.

9: Long Life
The project is a series of flexible column with load bearing walls at the perimeter to allow for easy reconfiguration of equipment or use.

10: Feedback
Using BIM/3D energy software to optimize the building's performance was particularly helpful in sizing the PV array so that the City could qualify the payback and therefore viability with the public. The project's stormwater management practices are a model for the City and have been used as a case study for permitting applicants within the City.

AIAOC Design Awards Performance Data Worksheet

Areas in Green are instructions.

1. BRIEF STATEMENT

In the space below list the energy efficiency and environmental performance goals for the project. These could be as simple as to comply with code minimum or as ambitious as to achieve zero net energy and/or eliminate all materials on the Living Building Challenge Red List. You are encouraged to describe environmental strategies throughout your design awards submittal materials .

The A.V.S.R.S. (Automated Vehicle Storage and Retrieval System) was designed to be unlike a typical parking structure where it would provide more power than it uses with conservation measures and a 52 kW PV array. It would have a Civic role in place making within a densely populated urban environment that created open space opportunities, be a model for smart sustainable design practices and provide community engagement via a public art program. The building offers a clean, environmental alternative to conventional parking systems: automobiles are non-operational during the parking and retrieval process causing a reduction in CO2 emissions which equates to removing 92 cars from the road each year or the planting of 67,000 trees.

2. ENERGY EFFICIENCY

Projects in California (Complete section A *or* B. Complete C only if applicable.)

A. Modeled Performance for California Projects (If you complied using a computer model.)

Enter information from the Title 24 Building Energy Standards compliance report below. If you complied under 2013 Title 24, refer to form CF-1R-PERF for Residential Bldgs and NRCC-PRF for Nonresidential & Highrise Residential Bldgs.

Year of Title 24 Standard Used	Energy Budget of Baseline Bldg (Code Min) in kBtu/sf/yr	Modeled Performance Of Your Design in kBtu/sf/yr	Percent Savings Beyond Code Minimum
2008	5.0	4.2	20%

B. Prescriptive Compliance for California Projects (If you did NOT comply using a computer model.)

Year of Title 24 Standard Used	In the *prescriptive compliance path* , individual building components meet minimum requirements. If your project complied prescriptively, but your goal was to exceed minimum performance, enter the year of standard at left and briefly describe your energy efficiency strategy below.

C. Measured Performance for California Projects (If Available)

If you have measured data showing actual energy use for 12 months, enter it below as Energy Use Intensity (EUI) in kBtu/sf/year.

Projects Outside of California (Complete section E *or* F. Complete G only if applicable.)

E. Modeled Performance for Non-California Projects (If you complied using a computer model.)

Enter information from the energy compliance report below. Your engineer or energy modeler should be able to provide this information.

Year of Title 24 Standard Used	Energy Budget of Baseline Bldg (Code Min) in kBtu/sf/yr	Modeled Performance Of Your Design in kBtu/sf/yr	Percent Savings Beyond Code Minimum

F. Prescriptive Compliance for Non-California Projects (If you did NOT comply using a computer model.)

Standard and Year of Standard	Some projects comply via the *prescriptive path* , where individual building components and equipment must meet minimum requirements. If your project complied prescriptively, but your goal was to exceed minimum performance, briefly describe what you did below.

G. Measured Performance (If Available)

If you have measured data showing actual energy use for 12 months, enter it below as Energy Use Intensity (EUI) in kBtu/sf/year.

3. RENEWABLE ENERGY & NET ENERGY USE (If Applicable)

If the project includes renewable energy, either on-site or through a purchase of off-site renewable energy, provide information on source, annual output, and net energy consumption.

Renewable Source	Annual Renewable Energy Production	Net Energy Consumption	Modeled or Actual Data
Roof Mounted Photovoltaic Panels.	78,000 kWh	0	Modeled

4. WATER EFFICIENCY, REUSE, AND MANAGEMENT (If Applicable)

California water efficiency standards are part of Title 24, Part 11, typically referred to as CalGreen. If your project achieved performance significantly beyond CalGreen minimum requirements, or incorporates innovative water efficiency, reuse, and management strategies and/or equipment, concisely describe them below.

The drip irrigation system eliminates any overspray onto buildings and walk ways and is 35% more efficient than the baseline. In addition, the system was designed with careful consideration of climate factors such as building orientation relative to shade and sun exposures. As part of the site system, 100% of all stormwater is conveyed into a CDS Unit that pretreats the water before it goes into a cistern tank. The stormwater is then discharged into a bio treatment planter which is a secondary cleaning system before entering the storm drain system.

5. MATERIAL USE & SELECTION FOR RESOURCE EFFICIENCY & HEALTH (If Applicable)

Briefly describe *exemplary* steps you took related to material use and selection. Examples might include exemplary performance in use reduction or reuse, incorporation of life cycle assessment and environmental product declarations, occupant and environmental health criteria & avoidance of chemical hazards, embodied energy and carbon, among many others.

All of the decorative façade and wall materials were created from Trespa panels, 3-Form panels or Ressta panels. The material composition of these products are inherently sustianable and the products are manufactured utilizing strict environmental practices. The majority of the building structure is made from poured in place concrete with a high fly ash content with was sourced locally. All sealants, adhesives and paints were chosen based on low VOC content. In addition, over 80% of the construction waste was diverted from landfills per the West Hollywood municipal requirements.