X. C. SUSTAINABILITY AND RESOURCE MANAGEMENT

Traffic Mitigation

Traffic flow and vehicle trips in the vicinity of Caesars New York will be mitigated through a combination of techniques including mass transportation (the Harriman Train Station is adjacent to the site), through buses and shuttles, and through infrastructure improvements as well as through traffic demand management, as described in the Traffic Study prepared by TRC Engineers, Inc. (please see IX.A.2.b_A1, and VIII.C.17.d.).

The existing Harriman Train Station is located immediately adjacent to the site. Shuttles will run between the station and Caesars New York utilizing on-site roadways and thus not entering the off-site roadway network. The existing train line will be able to transport guests to and from Caesars New York and thus reduce the amount of traffic on the adjacent roadway network.

Caesars will utilize various buses and shuttles to bring traffic to and from the resort. Buses currently travel from different places of origin to take patrons to Woodbury Common. Similar bus patterns will be utilized on Caesars New York. In addition, shuttles will run between the property and the nearby Woodbury Common, which will further reduce off-site traffic.

Roadway infrastructure improvements, as described in detail in the Traffic Study, include significant modifications to the Route 17/Route 6/Route 32/Thruway Connection interchange, implementation of an Adaptive Traffic Signal Control system, widening of Route 17 to maintain a four-lane section with turn lanes, removal of the abandoned railroad bridge and abutments, and installation of new traffic signals. These roadway infrastructure improvements will improve upon existing conditions, even after accounting for traffic from Caesars New York. In addition, these improvements will also improve safety.

Traffic Demand Management measures will also be implemented. Employee work shifts will be scheduled so that they generally do not coincide with peak traffic times. In addition, there will be multiple shifts so that not too many employees are starting/ending their shifts all at the same time but that the shift changes are dispersed.

LEED Certification

Sustainable Design

Caesars New York's design strives to achieve a new standard of performance in sustainable design for gaming developments. An integrated design process will ensure optimal performance of the facility, while maintaining the integrity of the existing site. Located adjacent to wetland area, Caesars New York seeks not only to protect, but also enhance the ecological function and integrity of this environment. The incorporation of meticulous site planning and storm water management strategies, paired with high performance systems design sets this project apart from the conventional casino design. Maintaining a palpable connection to the surrounding landscape, visitors are encouraged to experience Hudson Valley Region through an array of amenities made easily accessible by the facility's design. With integrity and efficiency as guiding design principles, the project will operate optimally and aggressively pursue savings. With a corporate commitment to achieve a minimum LEED Silver rating, Caesars will strive to achieve a LEED Gold certification for Caesars New York.

Sustainable Sites

The proposed site plan has been developed with the primary driver not only to protect, but also to enhance the adjacent wetlands areas. By integrating the facility and associated infrastructure within the existing landscape and topographic features, visitors of the facility are introduced to the local ecology and environment of Woodbury, NY. All construction, including the facility itself and access roads are carefully placed to avoid any disruption of the wetland function. Additional site work intends to augment the watershed footprint, increasing the capacity of storm water capture area filtering through the wetland. Bioswales will line access roads paved with pervious materials, capturing and passively filtering hardscape runoff before it enters the wetlands and recharges groundwater supply. Detention tanks will capture additional rainwater at Hotel and Casino roofs, for reuse in landscape irrigation and cooling tower make up, reducing potable water consumption.

Although it is assumed most visitors will drive to the facility, a Metro North rail stop is located adjacent to the property, with complimentary shuttle service to the reception and check-in desk. Additional transportation services including a shuttle for employees and public bus service is intended to reduce traffic congestion and minimize transportation related emissions. Secure bicycle storage and changing facilities will be provided for employees, as well as designated preferred parking for fuel-efficient and low-emission vehicles.

Situated on the boarder of Harriman State Park, site features will include bicycle and jogging paths, offering outdoor recreation and incorporating the regional New York landscape into the facility amenities. Site landscape will be selected to promote adaptive and native species suited to the regional climate and requiring limited irrigation. Additional studies are intended to further develop a landscape design that will enhance biodiversity and provide habitat for native species of flora and fauna.

Water Conservation

The capture and reuse of storm water for cooling tower makeup and landscape irrigation reduces potable water demand while also protecting the watershed and promoting wetland function. Detention tanks of approximately 50,000-100,000 gallons on the Casino roof will provide 30% irrigation demand, with the remaining capacity to provide cooling tower makeup.

Closely tied to the wetland integrity, water conservation is a primary objective for the development. In addition to storm water reuse for cooling tower makeup and landscape irrigation, the facility seeks to reduce water consumption through low flow fixtures in the Casino and Hotel. The low flow fixture selection detailed below results in an anticipated 27% water use reduction.

- Toilets: 1.28 gpf
- Urinals: 0.125 gpf
- Public Lavatories: 0.5 gpm
- Guestroom Lavatories: 1.5 gpm
- Showers: 1.8 gpm

Energy and Atmosphere

With round the clock operations, high guest satisfaction criteria, and often wasteful energy-use habits by visitors, casinos are traditionally higher consumers of energy. High levels of ventilation and lighting drives energy-use upward, making energy efficiency measures and base building systems paramount in improving environmental performance. The systems design for the Woodbury development utilizes passive strategies to capture efficiencies, which along with 10% on-site photo voltaic (PV) generation, achieves 30% energy cost savings as compared to ASHRAE 2007 baseline. For additional details on all proposed baseline and improved building design elements and measures please see attachment X.C.2_A2 Energy Analysis Output.

The project includes a central plant configuration with efficient hot water condensing boilers and waterside economizers with heat recovery. Occupancy sensors in hotel guestrooms automatically shut down lights and HVAC, saving energy when these spaces are unoccupied. LED lighting systems throughout the Casino floors target low Lighting Power Densities (LPD), and daylight controls along perimeter areas reduce electric lighting where natural daylight provides sufficient illumination.

The facility will produce 10% of its annual electricity consumption through on-site photovoltaic panels, mounted on the exposed top level of the parking structure. Additional analyses are warranted to identify the required area and generation capacity of the solar installation, however concept design energy modelling indicates PV generation capacity between 1.4-2 MW annually. The addition the PV system will increase energy cost savings by

approximately 7%, achieving total energy cost savings of 30% compared to ASHRAE baseline. This installation will not only reduce the facilities pull on the grid and consumption of conventional fossil fuels, but also promote the infrastructure of the renewables industry in the update New York region. Panels may be integrated with a storm water capture strategy that diverts surface runoff to below grade retention basins, allowing for a slow release for groundwater recharge.

In addition to the highly efficient systems design and equipment selection, energy consumption throughout the hotel and casino will be sub-metered and monitored in real-time to provide a thorough account of the primary drivers of energy consumption. This active monitoring will be part of a full measurement and verification (M&V) plan to ensure the optimized function of equipment and controls.

All refrigerants will be free of chlorofluorocarbons (CFCs) as well as have low global warming potential (GPW) and ozone depleting potential (ODP) to reduce harm to the ozone layer and potential greenhouse gas (GHG) emissions.

Materials and Resources

Materials selection throughout the project will be prioritized to promote health for indoor occupants, efficiency in materials resource use, and product life span. Red list materials, identified as harmful to humans by the US EPA, will be avoided on the project. To the greatest extent possible materials will be specified for high recycled and regional content, reducing extraction of virgin materials, while also promoting the local economy and reducing transport related emissions. FSC-certified wood and rapidly renewable materials will also be targeted. In effort to minimize impact and preserve the integrity of the region, which includes Harriman State Park, materials will be carefully selected to reduce embodied carbon, prevent habitat destruction, and reduce toxic content.

Waste management will also be an operational priority of the facility. Initial construction waste will be carefully managed, with a goal to divert at least 90% from the waste stream. A comprehensive recycling plan for Hotel and Casino operations will divert glass, plastics, metals, and paper based products from the waste stream. Organic waste will be diverted for composting for possible distribution to neighboring agricultural operations.

Indoor Air Quality

Because most of the visitors' time will be spent indoors, the facility intends to promote indoor air quality and enhance the indoor experience for all occupants. Gaming floors will take advantage of natural daylight, reducing electric lighting consumption while providing views to the exterior landscape. Connection to the outdoors integrates the facility into the landscape, creating a unique amenity facility that appreciates the natural character of the Upstate New York region.

Finishes will be selected for low Volatile Organic Compound (VOC) content, protecting occupant health. Air quality and ventilation performance will also be monitored with CO2 sensors, ensuring sufficient fresh air in all spaces.

Path Beyond

In order to ensure the achievement of a LEED Silver rating and improve the sustainable profile of the facility to potentially achieve LEED Gold, additional design features could be incorporated to reduce energy and water consumption, and promote a healthy and comfortable environment for occupants. The inclusion of a Combined Heat and Power (CHP) plant would capture thermal efficiencies of electricity generation, providing free heating for domestic hot water supply. The inclusion of a cogeneration plant could increase energy cost savings to 51% compared to ASHRAE baseline. Finally, smart zoning of the gaming floors to reduce HVAC and lighting powers during periods of low occupancy or use could further reduce energy consumption, while also providing a programming benefit of concentrating users of the gaming floor in more lively densely occupied areas.

Attachments:

X.C.2_A1 LEED Scorecard

X.C.2_A2 Energy Analysis outputs

X.C.2_A3 Environmental Strategies Graphic

Attachment X.C.2_A1

LEED 2009 for New Construction
Woodbury Development

Achievability				
hi	med	low	NP	
65	3	17	25	62 Projected Points

Certified 40 to 49 points **Silver** 50 to 59 points **Gold** 60 to 79 points **Platinum** 80 or more points
Achievability rating: **Hi** = 90%, **Med** = 60%, **Low** = 10%, **NP** = not possible.

						Prerequisites	Standard	Comments
Y				SS	Prereq 1	**Construction Activity Pollution Prevention**	Create and implement erosion control plan that meets the 2003 EPA Construction General Permit.	This prerequisite will be met with an ESC plan for all construction activities
Y				WE	Prereq 1	**Water Use Reduction:** 20%	Reduce water use by 20% over the baseline specified in LEED.	Low flow fixtures achieve 27% water savings
Y				EA	Prereq 1	**Fundamental Commissioning of Building Energy Systems**	Engage commissioning agent, and develop and execute a commissioning plan.	This prerequisite will be achieved
Y				EA	Prereq 2	**Minimum Energy Performance**	Reduce energy cost by 10%, compared to ASHRAE 90.1-2007, Appendix G	Initial analysis indicates 30% energy cost savings compared to ASHRAE baseline
Y				EA	Prereq 3	**Fundamental Refrigerant Management**	Eliminate CFCs in building HVAC&R.	Refrigerants will be CFC free
Y				MR	Prereq 1	**Storage & Collection of Recyclables**	Provide space for the collection and storage of paper, cardboard, glass, plastic, and metals.	Recycling bins will be provided throughout the casino and Hotel floors, with dedicated storage BOH
Y				IEQ	Prereq 1	**Minimum IAQ Performance**	Meet sections 4 through 7 of ASHRAE 62.1-2007.	Systems will be designed according to ASHRAE 62.1 standards
Y				IEQ	Prereq 2	**Environmental Tobacco Smoke** (ETS) **Control**	Prohibit smoking inside building, and locate exterior smoking areas at least 25 feet away from building.	Smoking is prohibited inside of the building and within 25 feet of any entrances or air intakes

						Sustainable Sites	Standard	Comments
17	0	0	9					
1				SS	Credit 1	**Site Selection**	Do not develop sites that are prime farmland, floodplains or wetlands, parkland, or key habitat.	As required by DEC, all site wetlands have 100 ft buffer
			5	SS	Credit 2	**Development Density and Community Connectivity**	Locate project in dense areas or near key community services.	The proposed site is not in a developed community and this credit is not possible
			1	SS	Credit 3	**Brownfield Redevelopment**	Locate project on a remediated brownfield site.	The project site is not a brownfield and this credit is not possible
6				SS	Credit 4.1	**Alternative Transportation:** Public Transportation Access	Locate project within 1/2 mile of a rail station or 1/4 mile of two bus lines.	The project is located within 1/2 mile from a Metro North rail stop and this credit will be achieved
1				SS	Credit 4.2	**Alternative Transportation:** Bicycle Storage & Changing Rooms	Provide bicycle racks for 5% of building occupants and showers for 0.5% of FTE occupants.	This credit will be achieved with 6 shower facilities accessible to all employees and storage for 140 bicycles
3				SS	Credit 4.3	**Alternative Transportation:** Low-Emitting and Fuel-Efficient Vehicles	Provide preferred parking for hybrid vehicles for 5% of the project's parking capacity.	This credit will be achieved with 220 preferred parking spaces for low-e/fuel efficient vehicles
			2	SS	Credit 4.4	**Alternative Transportation:** Parking Capacity	Do not exceed zoning parking requirements; provide preferred carpool parking for 5% of parking capacity.	Provided parking exceeds zoning requirements and this credit is not achieved
1				SS	Credit 5.1	**Site Development:** Protect or Restore Habitat	Limit all site disturbance 40' from building perimeter, 10' from walkways, 15' from roadways, and 25' from permeable surfac	This credit is achieved by limiting site disturbances around constructed areas
1				SS	Credit 5.2	**Site Development:** Maximize Open Space	Exceed zoning open space requirements by 25%.	This credit is achieved by exceeding 40% open space requirements by 25%
1				SS	Credit 6.1	**Stormwater Design:** Quantity Control	No net increase site runoff, OR, reduce over existing conditions by 25%.	This credit is achieved through a comprehensive stormwater management plan
1				SS	Credit 6.2	**Stormwater Design:** Quality Control	Develop stormwater plan that meets local best management practice, and removes 80% TSS.	This credit is achieved through a comprehensive stormwater management plan
1				SS	Credit 7.1	**Heat Island Effect:** Non-Roof	Use open-grid paving, light-colored paving, or provide shade on 50% of all hardscape.	This credit is achieved by covering 100% of parking structure with PV panels
1				SS	Credit 7.2	**Heat Island Effect:** Roof	Use light-colored membrane for 75% of roof or vegetated roof for 50% of roof.	This credit is achieved with high SRI roofing materials
			1	SS	Credit 8	**Light Pollution Reduction**	No nighttime light trespass from building AND meet exterior lighting requirements of ASHRAE 90.1-2007.	Given the LZ1 lighting zone, this credit is difficult to achieve and will not be pursued

						Water Efficiency	Standard	Comments
2	3	3	2					
2				WE	Credit 1	**Water Efficient Landscaping:** 50% Reduction	Reduce potable water used for irrigation by 50%	Stormwater reuse, drip irrigation, and hardy plant selection achieve this credit
		2		WE	Credit 1	**Water Efficient Landscaping:** No Potable Water	No potable water use for irrigation.	The current landscape design includes potable drip irrigation and this credit is not achieved
			2	WE	Credit 2	**Innovative Wastewater Technologies**	Reduce water used for sewage conveyance by 50%.	This credit will not be pursued
	3	1		WE	Credit 3	**Water Use Reduction:** 30% / 35% / 40%	Reduce water use by 30%/35%/40% over the baseline specified in LEED.	Low flow fixtures achieve 27% water savings

						Energy & Atmosphere	Standard	Comments
22	0	11	2					
3				EA	Credit 1	**Optimize Energy Performance:** 12% / 14% / 16%	Reduce building energy cost by 12%/ 14%/ 16% compared to ASHRAE 90.1-2007, Appendix G.	Initial analysis indicates 30% energy cost savings compared to ASHRAE baseline
3				EA	Credit 1	**Optimize Energy Performance:** 18% / 20% / 22%	Reduce building energy cost by 18%/ 20%/ 22% compared to ASHRAE 90.1-2007, Appendix G.	Initial analysis indicates 30% energy cost savings compared to ASHRAE baseline
3				EA	Credit 1	**Optimize Energy Performance:** 24% / 26% / 28%	Reduce building energy cost by 24%/ 26%/ 28% compared to ASHRAE 90.1-2007, Appendix G.	Initial analysis indicates 30% energy cost savings compared to ASHRAE baseline
1		2		EA	Credit 1	**Optimize Energy Performance:** 30% / 32% / 34%	Reduce building energy cost by 30%/ 32%/ 34% compared to ASHRAE 90.1-2007, Appendix G.	Initial analysis indicates 30% energy cost savings compared to ASHRAE baseline
		3		EA	Credit 1	**Optimize Energy Performance:** 36% / 38% / 40%	Reduce building energy cost by 36%/ 38%/ 40% compared to ASHRAE 90.1-2007, Appendix G.	Initial analysis indicates 30% energy cost savings compared to ASHRAE baseline
		2	2	EA	Credit 1	**Optimize Energy Performance:** 42% / 44% / 46% /48%	Reduce building energy cost by 42%/ 44%/ 46%/ 48% compared to ASHRAE 90.1-2007, Appendix G.	Initial analysis indicates 30% energy cost savings compared to ASHRAE baseline
2				EA	Credit 2	**On-Site Renewable Energy:** 1% / 3%	Produce renewable energy on-site for 1%/ 3% of building energy consumption, calculated by cost.	PV installation over parking structure will generate no less than 10% building electricity demand
2				EA	Credit 2	**On-Site Renewable Energy:** 5% / 7%	Produce renewable energy on-site for 5%/ 7% of building energy consumption, calculated by cost.	PV installation over parking structure will generate no less than 10% building electricity demand
1		2		EA	Credit 2	**On-Site Renewable Energy:** 9% / 11% / 13%	Produce renewable energy on-site for 9%/ 11%/ 13% of building energy consumption, calculated by cost.	PV installation over parking structure will generate no less than 10% building electricity demand
2				EA	Credit 3	**Enhanced Commissioning**	Design review, post occupancy review, recommissioning manual.	Enhanced commissioning will be performed in accordance to credit requirements
2				EA	Credit 4	**Enhanced Refrigerant Management**	Select refrigerants with low global warming potential and ozone depletion potential.	All refrigerants with be CFC free and selected for minimal GWP and ODP
3				EA	Credit 5	**Measurement & Verification**	Develop and implement an M&V plan that meets IPMVP, Options B or D.	Systems and equipment will be real time monitored as part of a comprehensive M&V program
		2		EA	Credit 6	**Green Power**	Purchase Green-e certified electricity supply for 2 years, for 35% of building's electricity demand.	This credit will not be pursued

						Materials & Resources	Standard	Comments
7	0	0	7					
			3	MR	Credit 1.1	**Building Reuse:** Maintain Existing Walls, Floors, & Roof, 55% / 75%/ 95%	Maintain existing structure and envelope for 55% / 75% / 95% of the existing building.	The project is new construction and this credit is not possible
			1	MR	Credit 1.2	**Building Reuse:** Maintain Existing Interior Nonstructural Elements, 50%	Use existing interior nonstructural elements in at least 50% of the completed building.	The project is new construction and this credit is not possible
2				MR	Credit 2	**Construction Waste Management:** 50% / 75%	Create a construction waste management plan and recycle and/or salvage construction waste.	Best industry practices will achieve minimum 75% diversion of construction waste
			2	MR	Credit 3	**Materials Reuse:** 5% / 10%	Use salvaged, refurbished, or reused materials for 5% / 10% of construction materials, calculated by cost.	Provided the cost of construction materials, this credit is difficult to achieve and will not be pursued
2				MR	Credit 4	**Recycled Content:** 10% / 20% (post-consumer + 1/2 pre-consumer)	Use materials or products with recycled content for 10% / 20% of construction materials, calculated by cost.	Construction materials will be specified for recycled content to achieve 20% minimum by cost
2				MR	Credit 5	**Regional Materials:** 10% / 20%	Use materials extracted and manufactured within 500 miles for 10%/20% of construction materials, calculated by cost.	Construction materials will be specified for regional content to achieve 20% minimum by cost
			1	MR	Credit 6	**Rapidly Renewable Materials**	Use rapidly renewable materials for 2.5% of construction materials, calculated by cost.	Provided the cost of construction materials, this credit is difficult to achieve and will not be pursued
1				MR	Credit 7	**Certified Wood**	Use FSC-certified wood for 50% of wood-based materials, calculated by cost.	Wood materials will be specified for FSC certification

9	0	3	3	Indoor Environmental Quality		Standard	Comments
1				IEQ Credit 1	**Outdoor Air Delivery Monitoring**	Install monitoring of outdoor air on ventilation systems and monitor CO2 concentrations.	Systems design includes outdoor airflow monitoring and CO2 sensors in densly occupied spaces
		1		IEQ Credit 2	**Increased Ventilation**	Increase ventilation rates by 30% above ASHRAE 62.1-2007.	Ventilation rates do not exceed ASHRAE 62.1 and this credit will not be achieved
1				IEQ Credit 3.1	**Construction IAQ Management Plan:** During Construction	Develop an IAQ plan that meets SMACNA IAQ Guidelines for Occupied Buildings Under Construction.	Construction activities will be performed in accordance with SMACNA standards
		1		IEQ Credit 3.2	**Construction IAQ Management Plan:** Before Occupancy	Provide air quality testing or building flush-out prior to occupancy.	Schedule contraints do not allow for building flushout or air testing, and this credit will not be pursued
1				IEQ Credit 4.1	**Low-Emitting Materials:** Adhesives & Sealants	Use adhesives and sealants that comply with the SCAQMD Rule #1168	Adhesives and sealants will be specified for low VOC content
1				IEQ Credit 4.2	**Low-Emitting Materials:** Paints & Coatings	Use products with VOC levels specified in Green Seal Standard GS-11 and GC-03, and SCAQMD Rule 1113.	Paints and coatings will be specified for low VOC content
1				IEQ Credit 4.3	**Low-Emitting Materials**: Flooring Systems	Use carpet that meets the CRI Green Label requirements and FloorScore compliant hard surface flooring.	Hard flooring systems will be FloorScore compliant and carpet will be CRI Green Label Plus certified
1				IEQ Credit 4.4	**Low-Emitting Materials:** Composite Wood & Agrifiber Products	Use materials with no added urea-formaldehyde resins or adhesives.	Material will be specified for no added urea-formadlahyde
1				IEQ Credit 5	**Indoor Chemical & Pollutant Source Control**	Floor grates at doors, MERV 13 filters, and exhausts and hazardous liquid container in chemical use areas.	All primary entances will have 10 ft of entryway systems; MERV 13 or better filters will be used
			1	IEQ Credit 6.1	**Controllability of Systems:** Lighting	Provide lighting controls for 90% of individuals AND 100% of group lighting controls.	The programming of a Casino floor makes this credit unlikely
			1	IEQ Credit 6.2	**Controllability of Systems:** Thermal Comfort	Provide comfort controls or operable windows for 50% of individuals AND 100% of group spaces.	The programming of a Casino floor makes this credit unlikely
1				IEQ Credit 7.1	**Thermal Comfort:** Design	Meet ASHRAE 55-2004, Thermal Comfort Conditions for Human Occupancy.	Systems will be design according to ASHRAE 55 standards
1				IEQ Credit 7.2	**Thermal Comfort:** Verification	Meet IEQc7.1, provide permanent monitoring system, and perform a thermal comfort survey after occupancy.	Project employees and hotel guests will be provided thermal comfort surveys
		1		IEQ Credit 8.1	**Daylight & Views:** Daylight	Meet prescriptive requirements, or achieve 25 footcandles, in 75% of regularly occupied spaces.	Daylight harvesting will be employed on the gaming floor, however the credit threshold will not be met
			1	IEQ Credit 8.2	**Daylight & Views:** Views	Provide direct views to the outside in 90% of regularly occupied spaces.	The deep floorplate and configuration of the gaming floors makes this credit difficult to achieve

6	0	0	0	Innovation in Design		Standard	Comments
1				ID Credit 1.1	**Innovation in Design, Green Cleaning**	Develop a comprehensive green cleaning program with sustainable purchasing policy and operations	A green cleaning policy will be employed
1				ID Credit 1.2	**Innovation in Design, Green Education**	Program accessible to occupants highlighting sustainable aspects	A Green Education program accessible to the public will be developed
1				ID Credit 1.3	**Innovation in Design, Greatly Exceed SSc6 .1 Stormwater Management**	Document a comprehensive approach to capture and treat stormwater runoff above the credit requirement	A comprehensive stormwater management plan exceeds the LEED credit standards
1				ID Credit 1.4	**Innovation in Design, Greatly Exceed SSc7.1 Heat Island-Non Roof**	Demonstrate 100% of on-site parking spaces located under cover	This credit is achieved with 100% parking covered by PV installation
1				ID Credit 1.5	**Innovation in Design, Greatly Exceed MRc4**	Achieve 30% materials cost of recycled or regional content	Construction materials will be specified for recycled content and this credit will be achieved
1				ID Credit 2	**LEED™ Accredited Professional**	LEED Accredited Professional on design team.	This credit is achieved by Atelier Ten's participation in project design

2	0	0	2	Regional Priority		Standard	Comments
1				RP Credit 1.1	**On-Site Renewable Energy: 9% / 11% / 13%**	Produce renewable energy on-site for 9%/ 11%/ 13% of building energy consumption, calculated by cost.	This credit is achieved with 10% on-site renewable energy
1				RP Credit 1.2	**Stormwater Design: Quality Control**	Develop stormwater plan that meets local best management practice, and removes 80% TSS.	This credit is achieved with a comprehensive stormwater management plan
			1	RP Credit 1.3	**Innovative Wastewater Technologies**	Reduce water used for sewage conveyance by 50%.	This credit will not be pursued
			1	RP Credit 1.4	**Brownfield Redevelopment**	Locate project on a remediated brownfield site.	The project site is not a brownfield and this credit is not possible

Attachment X.C.2_A2

X.C.2_2 Energy Analysis Output

Executive Summary

Hourly, whole building simulation was used to analyze the Proposed Design and test five additional energy efficiency measures (EEMs) to evaluate the improvement in both energy and cost performance. The Proposed Design will use 29% less energy and cost 30% less than the Baseline ASHRAE 90.1-2007 case. This will make the project eligible for 10 LEED EAc1 points.

Additional opportunities were tested that further reduce the annual energy cost of the proposed design. Combined Heat and Power (CHP) reduced the annual energy cost of the Proposed Design by an additional 20% and should be studied further to determine whether it is life cycle cost effective. EEM's 2-4 do not provide the savings that CHP does, but they do combine to provide an additional 5% energy savings, which would make the project eligible for two additional LEED points. The final measure that was tested, ground source heat pumps, is not an effective strategy for this project and it is not recommended for further consideration at this time.

End Use Characterization

End use graphs are helpful tools for understanding how different end uses contribute to the overall energy use of the project.

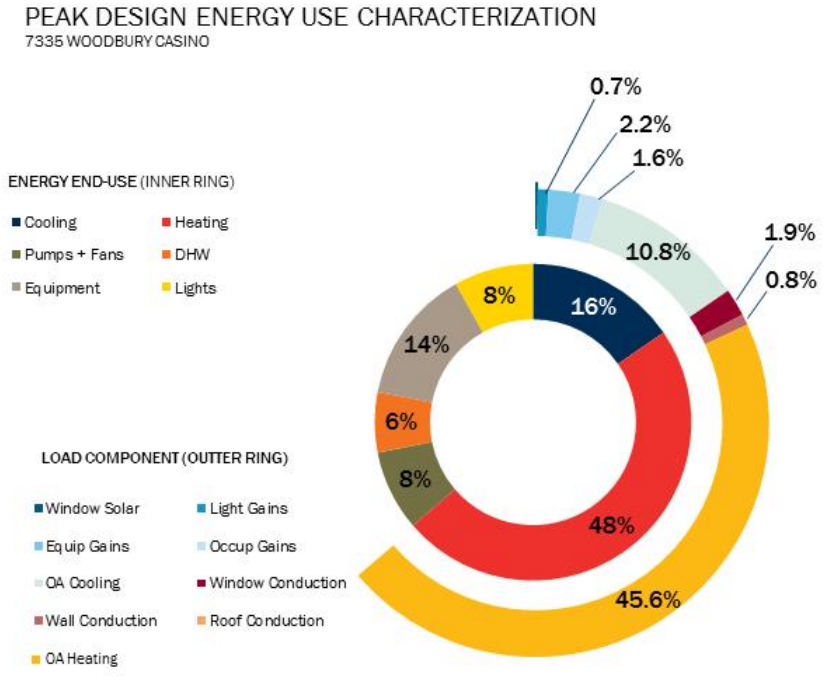


FIGURE 1 – PEAK DESIGN ENERGY USE CHARACTERIZATION

PEAK DESIGN ENERGY USE CHARACTERIZATION

This chart shows the end use breakdown of the peak design energy use. This shows that heating and cooling, comprising 64% of the total peak energy, are the two predominant end uses. Lighting and Equipment loads are the next two largest peak end uses, which is expected in a casino given the high equipment loads from the gaming equipment and food service areas, as well as the higher lighting power that goes along with the casino gaming areas. The outer ring of the chart indicates the breakdown of the heating and cooling energy into the different components that are the main load drivers. In each case conditioning of outdoor ventilation air is the main driver for peak heating and cooling energy use requirements (88% of peak heating and cooling).

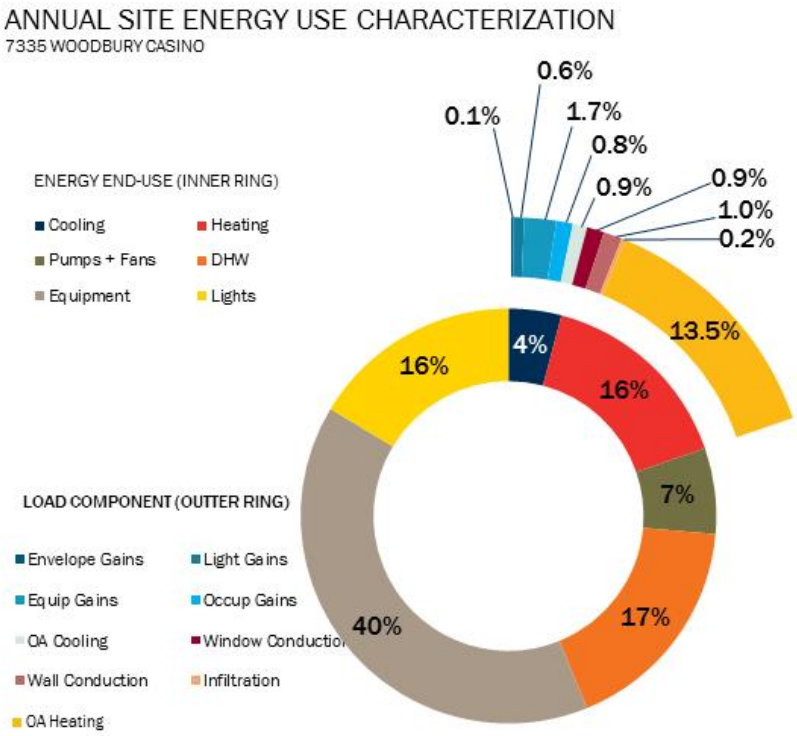


FIGURE 2 – ANNUAL SITE ENERGY USE CHARACTERIZATION

ANNUAL SITE ENERGY USE CHARACTERIZATION

The Annual Site energy use characterization shows the breakdown of total annual energy use by different end use categories. This graph is important because rather than showing just the design peak it shows energy use for the entire year. On an annual basis heating and cooling only constitute 20% of the energy consumption and equipment and lighting now make up 56%, over half of the total annual energy use. This is a complete reverse from what we see in the previous chart. Service water also comprises a large fraction of the total annual energy use. During the design of the

casino it will be important to spend some effort looking at how equipment, lighting, heating and service water energy use can be minimized in order to further reduce overall annual energy use.

Proposed Design

The Proposed Design incorporates a number of energy efficiency measures achieve a combined 30% reduction in annual energy cost and a 29% reduction in annual energy consumption compared to the ASHRAE 90.1-2007 baseline case. The proposed improvements include:

- Increased wall and roof insulation
- Low-e Double pane insulating glass
- LED Lighting systems
- Lighting control strategies based on occupancy in back of house areas and the hotel
- High efficiency, variable speed, water cooled centrifugal chillers
- Variable speed pumping for hot water, chilled water and condenser water systems
- Water side economizer for efficient winter time cooling
- High efficiency condensing boilers to produce heating hot water and service water
- Enthalpy wheels for heat recovery
- On-site electric generation with photovoltaic to meet 10% of annual electric consumption

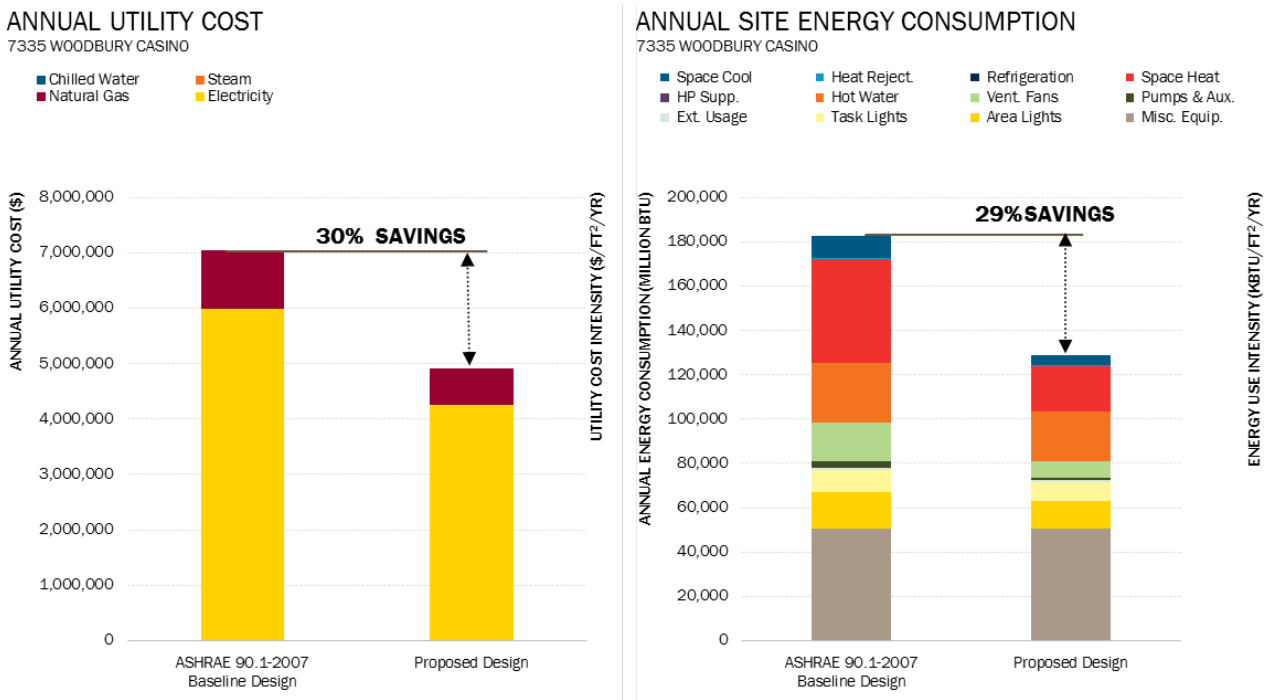


FIGURE 3 – SUMMARY OF THE PROPOSED DESIGN ENERGY PERFORMANCE

As previously mentioned additional opportunities for energy savings can be found by investigating how to reduce service water heating, equipment and lighting loads which are currently the largest end use categories in the Proposed Design. As part of this initial investigation five additional energy efficiency measures were studied to test their impact on the Proposed Design.

Additional Energy Efficiency Measures

Five additional energy efficiency measures were tested to see how they would impact the performance of the proposed design. It should be noted that none of these strategies are incorporated into the Proposed Design, but they were tested to illustrate the type of analysis that would be performed by the design team if selected for this project. EEM 1 through EEM 4 are all recommended improvements for this project. Figure 3 and Figure 4 show a summary of this analysis from both an energy and a cost perspective.

EEM 1. Combined heat and Power – Based on the electric and thermal load profiles of the Proposed design the project will support between 1.5MW to 2.0 MW of combined heat and power resulting in a significant drop in annual energy cost for the project.

EEM 2. Demand Response – This EEM looks at the cost savings associated with designing the back-up generators to be used as part of a demand response program.

EEM 3. Service Water heat recovery. EEM 3 tests using warm condenser water from the production of chilled water to pre-heat the cold make-up water supplied to the Service water system.

EEM 4. Ventilation controls – EEM 4 tests using a demand control ventilation strategy in the hotel and the casino to reduce the heating and cooling associated with ventilation air.

EEM 5. Ground Source Heat Pumps – EEM 5 tested a ground source heat pump system instead of boilers and chillers. The analysis showed that this project is not a good application for ground source heat pumps because of the annual load imbalance between heating and cooling. The analysis also shows that a ground source heat pump system would actually have a higher annual energy cost than the proposed design. For these two reasons this strategy should not be considered for this project.

EEM 6. Combined EEM Case – This case looks at the accumulated benefits of EEM 2, 3 and 4. Although the overall savings percentage is small these three EEM's are relatively low cost to implement and will have a relatively short simple payback

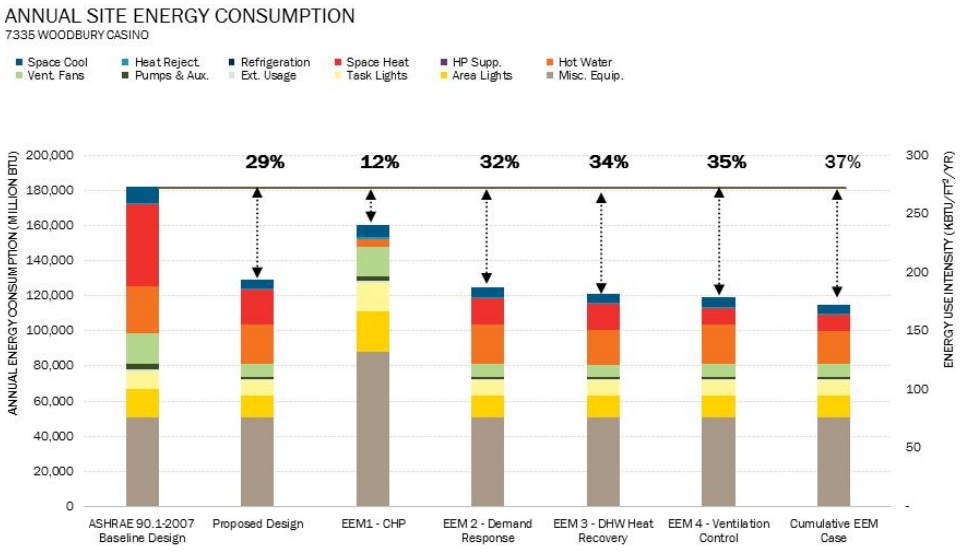


FIGURE 4 – SUMMARY OF THE ADDITIONAL EEMs ANNUAL ENERGY PERFORMANCE

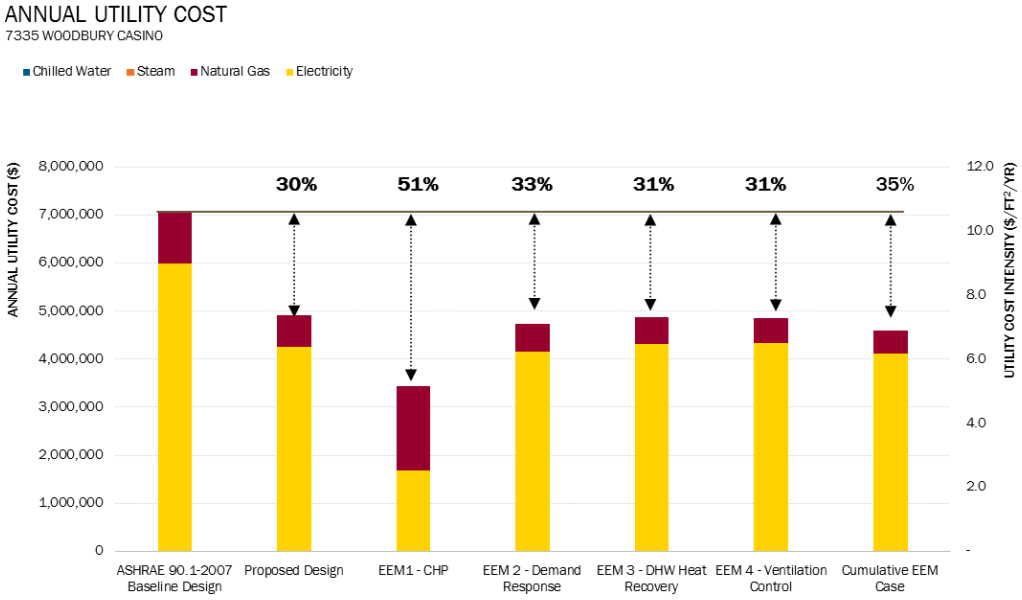


FIGURE 5 – SUMMARY OF ADDITIONAL EEM ANNUAL ENERGY COSTS

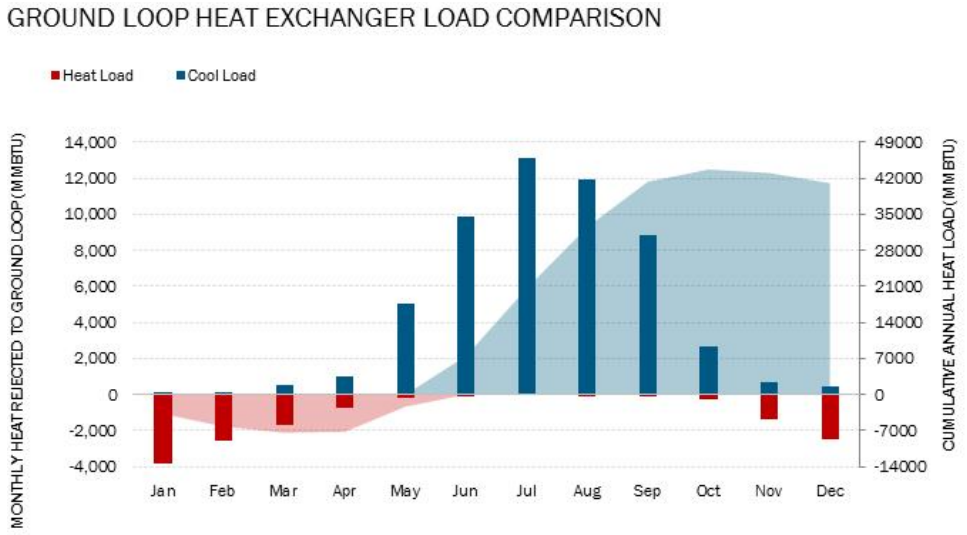


FIGURE 6 – SUMMARY OF GROUND SOURCE LOOP LOAD ANALYSIS

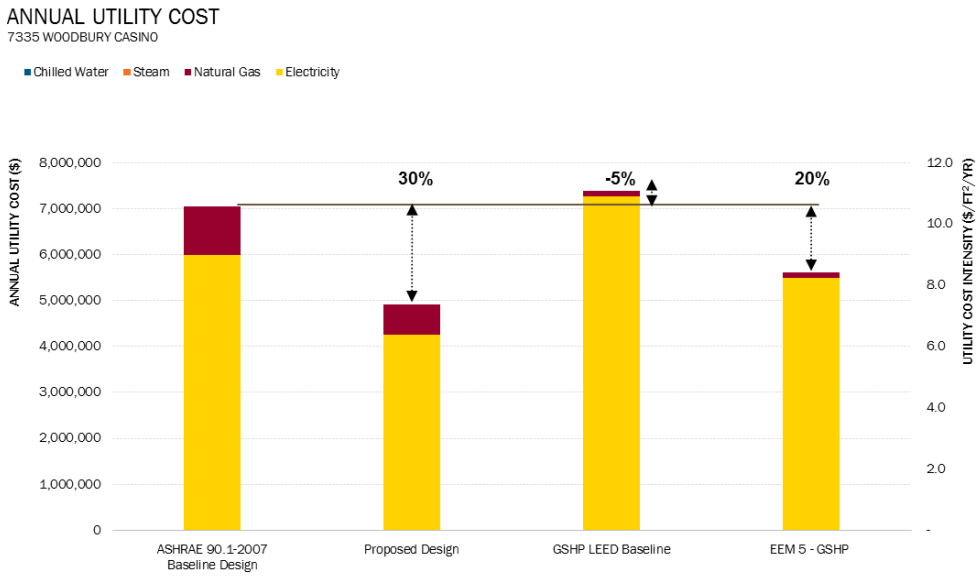
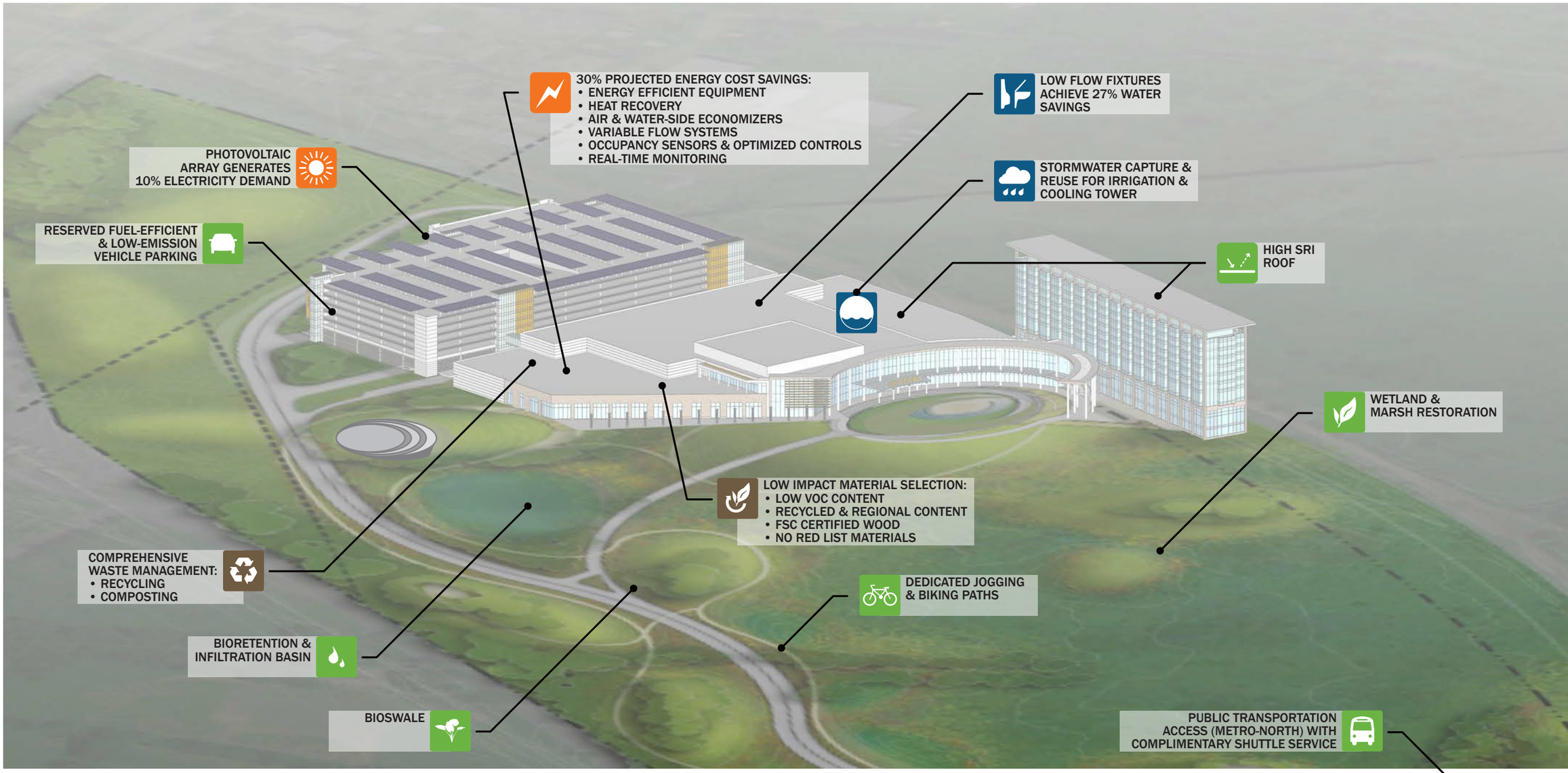


FIGURE 7 – SUMMARY OF EEM 5 ANNUAL ENERGY COSTS

Attachment X.C.2_A3



CAESARS NEW YORK

WOODBURY, NEW YORK

ENVIRONMENTAL STRATEGIES

CAESARS ENTERTAINMENT

atelier ten

Energy Efficient Equipment

Energy Star rated appliances will be used throughout the facility where available - this is expected to include refrigerators, dishwashers and other equipment. Some commercial equipment uses alternate rating schemes (i.e. ASHRAE 90.1) instead of Energy Star.

All relevant HVAC, plumbing equipment and plumbing fixtures will meet the requirements of ASHRAE 90.1 and LEED. HVAC systems will incorporate numerous energy saving features including high efficiency equipment, heat recovery, economizer for air and water systems, optimized control strategies and variable flow systems.

Energy recovery systems will be provided in air handling units to transfer energy from the exhaust air stream to the incoming outside air intakes. Waste heat will also be recovered from the chiller condensers and used to pre-heat domestic hot water. Air handling units will be provided with economizer modes for free cooling when outside conditions allow it. Open cell cooling towers combined with free-cooling heat exchangers will be utilized for energy savings on the water side as well.

Fans will be provided with Electrically Commutated Motors (ECM) to vary fan speed on smaller air handling systems like fan coil units or with Variable Frequency Drives (VFD) for the larger units such as air handlers. The motors will modulate speed based on system pressure requirements. Pumps will also be provided with Variable Frequency Drives (VFD) to vary water flow as required by the systems.

Six, 6,000 MBH heating hot water condensing boilers (including one back-up unit) will be installed to provide heat for HVAC. An efficiency of 95% can be achieved at a return water temperature of 110°F. Hot water will be distributed via an efficient variable primary pumping system.

Three, 1,800 ton centrifugal chillers will be installed (including one back up unit). At least one chiller will have variable frequency drive (VFD) control. A part load, NPLV, efficiency of 0.536 kW/ton or better will be achieved. Chilled water will be distributed via an efficient variable primary pumping system.

Efficient packaged cooling towers with VFD fan control will serve the chillers. The cooling towers will be oversized for approximately 60 GPM/fan HP to reduce fan energy.

Storm Water

Caesars New York will use the standard listing of green infrastructure techniques to determine how the project complies with the GP-10 protocol. The protocol includes maximizing retainage of natural terrain, use of 'at the source' green measures such as roadside swales, and conveyance by swales in lieu of drainage systems. In addition, the feasibility of green roofs will be considered. Once the protocol is evaluated and quantified, an adequacy determination will be made and the short fall, if any, will be provided by other means such as infiltration. The sandy/gravelly soils prevalent within the site should allow enough area to meet GP-10 volume requirements.

For more information, please refer back to questions VIII.C.17.a and VIII.C.17.e on the topics of infrastructure requirements for freshwater and storm water resources.

Water Conservation

Caesars New York is committed to utilizing water in an environmentally responsible manner. Consistent with Caesar's emphasis on sustainability, the project will use reduced water flow technologies coupled with water re-use technologies wherever possible. As described in more detail below, these efforts include:

- Rainwater will be stored and used for irrigation and for cooling tower make-up needs
- Reduced Irrigation Needs through efficient planting and irrigation systems
- Low Flow Water Closets will be used
- Low Flow Urinals will be used
- Low Flow Lavatories will be used
- Low Flow Shower Heads will be used

The following Water Efficiency measures will be implemented to achieve a 20-30% potable water savings:

- Rainwater Harvesting - Rainwater will be collected and used for irrigation and for cooling tower make-up water needs so that the need for potable water will be reduced. We estimate that a storage tank or multiple storage tanks of approximately 50,000 to100,000 gallons will be appropriate for collection of rainwater from a majority of the roof area.

- Reduced Irrigation Needs- Irrigation needs will be minimized with the use native plant materials and soils that promote water retention. Where irrigation is required it will be made up from a combination of harvested rainwater and/or reclaimed water.

- Low Flow Water Closets - Low flow 1.28 gpf flush water closets will be used in public spaces, back of house spaces, and hotel rooms.

- Low Flow Urinals - Low flow 0.125 gpf flush urinals will be used in all public spaces and back of house spaces.

- Low Flow Lavatories - Low flow 0.25 gpm faucets will be used in all public spaces and back of house spaces. Hotel bathrooms will use 1.0 gpm lavatories.

- Low Flow Shower Head - Low flow 1.8 gpm shower heads will be used for showers.

- The cooling tower and irrigation water supply will be configured to enable connection to a future municipal greywater system.

Attachment X.C.5_A1 provides the calculation of the water savings derived from the efficiency measures listed above.

Water Strategy

In analyzing the water savings for the project, a holistic approach was taken. As such, the entire interior water use for the project was studied. This approach was used to give a more accurate picture of the water savings in lieu of a more simplified LEED based approach which does not take into account other significant water users (food service, pools and spas) in a facility of this type. To establish the baseline water demand, flow rates listed in NYSDEC 2014 edition will be used. Once the baseline demand is established, LEED based calculations will be done for the public/back-of-house areas and the hotel guestrooms to establish percentage of water savings based on using water conserving plumbing fixtures and then implementing greywater re-use. The results are summarized below.

Attachments:

X.C.5_A1 Caesars New York Daily Water Load Calculation

Attachment X.C.5_A1

Vanderweil Engineers, LLP
Plumbing Calculation Sheet

Job Number: 27821 Date: 12-Jun-14
By: Chkd By: LR
Project **Caesars/ New York, NY**
Segment:

Water Use Summary

Program Area	Baseline Water Use (GPD)	Adjusted Water Use for Low Flow Fixtures (GPD)	Potable Water Used (GPD)	Treated Reclaimed Water Used (GPD)
Casino	67,300	46,572	46,572	N/A
Hotel Tower	33,000	22,836	22,836	N/A
Spa and Fitness Center at Hotel	2,249	1,556	1,556	N/A
Flex Entertainment	6,300	4,410	4,410	N/A
Restaurants (total of 6)	43,750	37,188	37,188	N/A
Streets of NY (food court)	10,150	8,628	8,628	N/A
Bars	5,000	5,000	5,000	N/A
Cooling Tower Make-up	110,808	N/A	77,566	33,242
Exterior Irrigation System	26,000	N/A	18,200	7,800
	304,557	126,189	221,955	41,042

Projected water saving **82,602 gpd**
27% reduction

Notes:
1. Low flow fixtures will be as follows:
water closets - 1.28 gpf; urinals - 0.125 gpf, lavatories in public bathrooms - 0.25 gpm, lavatories in hotel - 1.0 gpm, showers in hotel - 1.8 gpm
2. Reclaimed water system will provide 30% of the required water for cooling tower and exterior irrigation system.

Vanderweil Engineers, LLP
Plumbing Calculation Sheet

Job Number: 27821 Date: 26-Jun-14
By: Chkd By: LR
Project **Caesars/ New York, NY**
Segment:

Potable Water Load

Program Area	Employees FTE	No. of Keys	No. of Seats/visitors	Programed Area [SF]	GPD/FTE	GPD/Key	GPD/Seat-visitor	GPD/SF Area	Total GPD	Total CMD
Casino	1,122			168,250	15			0.30	67,300	256
	0				15			0.30	0	0
	0				15			0.30	0	0
Hotel Tower		300			15	110			33,000	125
Spa and Fitness Center at Hotel	17		100	8,300	15		20	0.30	2,249	9
	0				15				0	0
Flex Entertainment	20		300	20,000	15			0.30	6,300	24
										0
Restaurants (total of 6)			1,250				35		43,750	166
Streets of NY (food court)			290		15		35		10,150	39
	0				15		35		0	0
	0				15		35		0	0
	0				15		35		0	0
	0				15		25		0	0
	0				15		5		0	0
	0				15		35		0	0
	0				15		35		0	0
Bars			250		15		20		5,000	19
	1,158	300	2,190							
									167,749	637

DO NOT TOUCH CELLS BELOW

150	sf area per employee
1000	sf area per employee
500	sf area per employee
0.1	per room
500	sf area per employee
1000	sf area per employee
1000	sf area per employee
0.1	per dinning table
0.1	per dinning table
0.1	per dinning table
0.1	per dinning table
0.1	per dinning table
0.1	Per Dinning Table
0.1	Per Dinning Table
0.5	Per Dinning Table
0.5	Per Dinning Table
0.1	Per Dinning Table

GPD Gallons per Day

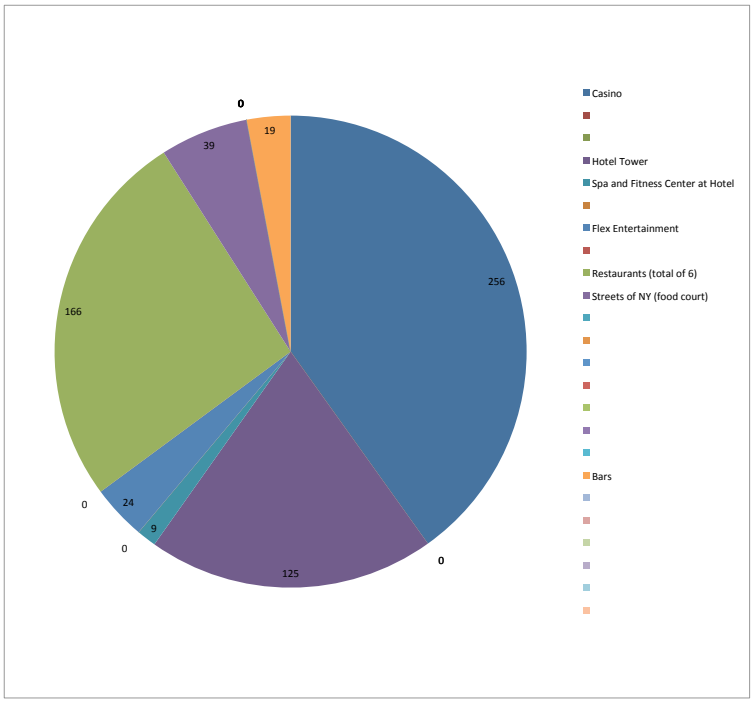
FTE Full Time Equivalent

Industrial Water Load

System		Hours of Operation	Peak flow /average GPD ratio		GPM				Total GPD	Total CMD
Cooling Plant Make-up		24	0.57		135				110,808	421
Recreation									0	0
Exterior Irrigation									26,000	99
									0	0
									136,808	520

Total Water Load

Total GPD	Total CMD
304,557	1,157


0
19
39
166
256
0
24
9
0
125
0
Casino
Hotel Tower
Spa and Fitness Center at Hotel
Flex Entertainment
Restaurants (total of 6)
Streets of NY (food court)
Bars

Renewable Energy

Caesars takes environmental preservation seriously, and is committed to environmental preservation through our Code Green sustainability program. Part of our overall company strategy is to reduce carbon emissions that contribute to global climate change. We pursue energy efficiency in existing and new buildings, along with the deployment of renewable energy technologies. We were recently recognized by the EPA at their climate leadership awards for reducing our greenhouse emissions by over 12% on an absolute basis from 2007 to 2012. This exceeded our 10% reduction goal a year ahead of schedule, despite Caesars' growth during that period.

The facility will deploy photovoltaic panels on top of the parking structure to generate renewable, carbon dioxide free electricity for at least 10 percent of the anticipated annual electrical energy consumption. The parking structure is approximately 180,000 square feet in area and is un-shaded. It is anticipated that this will yield approximately 1,400,000 kwh per year of renewable electrical energy. As the design progresses, updated energy modeling will be performed to confirm that this amount exceeds the 10 percent threshold.

The photovoltaic arrays will be mounted to a support structure over the top level of parking. The installation will have the additional benefit of shading the top level of parking, thereby reducing the heat island effect and increasing the comfort of guests in the summer time. The electricity generated by the photovoltaic system will be conditioned and fed into the electrical distribution system for the casino and will be able to distribute to any part of the main facility. A glare analysis will be conducted to optimize the photovoltaic orientation to confirm that it does not create a glare issue for guests and that the panels are oriented to increase the amount of electricity generated by them.

If additional renewable energy turns out to be needed based on energy modeling projections that change as the design progresses, these will be procured from NYSERDA qualified providers. At present this is not anticipated.

Energy Consumption Monitoring

The electrical distribution system includes sub-metering for each individual building / major building component: Hotel, Casino and Parking Garage. Additionally sub-meters will be included at the substation feeder level to separately meter major energy usages such as lighting/receptacle loads, process loads (gaming and IT), and mechanical systems. Tenants will be sub-metered as well.

Natural gas will be sub-metered, allowing the operator to track consumption by the central plant and other base building infrastructure, as well as by restaurant tenants.

Cold water and hot water will be sub-metered to each retail and food service tenant.

Meters will be connected to the building management system (BMS) allowing operators to monitor energy consumption in real time and make operational adjustments to improve energy performance.

Domestic Slot Machines

The majority of the slot machines purchased for the Caesars New York will be manufactured domestically. Companies such as IGT, Bally and WMS Gaming, all manufacture domestically and are core providers for slot machines.

A selection of core product line is determined from demographics of the market and expected visitation. The individual product selection will be based on a complete assessment of competitive slot floors as well a study of the newest offerings from each manufacturer.

It would be typical for the largest five, core gaming vendors to make up approximately ninety percent of the slot product. Those vendors are: IGT, Bally, WMS Gaming, Aristocrat and Konami. At existing Caesars properties, approximately ninety-eight percent of the units are manufactured domestically. See the table below:

Table X.C.8.1

Caesars Company-Wide Units by Manufacturer

Vendor	%
Ainsworth	1.0%
Aristocrat	14.0%
Bally Gaming Inc.	15.0%
MGAM	2.0%
IGT	40.0%
Konami	9.0%
Aruze	1.0%
WMS Gaming Inc.	18.0%
Grand Total	**100.0%**
highlighted denotes domestic manufacturers	
98% Manufactured Domestically	

By comparison, a newer East Coast casino, Maryland Live, has a similar slot mix and approximately ninety-eight percent of the units are manufactured domestically. See the table below:

Table X.C.8.2

Maryland Live Slot Units by Manufacturer				
Vendor	**%**	**Current Units**		
AGS	0.5%	20		
Ainsworth	0.7%	30		
Aristocrat	13.4%	573		
Bally Gaming Inc.	16.8%	718		
Diamond Game	0.5%	20		
IGT	36.7%	1569		
Konami	11.3%	483		
Spielo	1.0%	42		
WMS Gaming Inc.	19.2%	822		
Grand Total	**100.0%**	**4277**		
highlighted denotes domestic manufacturers				
98% Manufactured Domestically				