



LEED v4 BD+C

Preliminary Project Checklist

Project Name: SSL South Arlington - SILVER (50-59 points)

Date: 5.31.2023

| | | |
|---|---|---|
| Y | ? | N |
| 1 | | |

Credit Integrative Process 1

| 8 | 2 | 6 | Location and Transportation | 16 |
|---|---|---|---|----|
| | | | Credit LEED for Neighborhood Development Location (N/A) | 16 |
| 1 | | | Credit Sensitive Land Protection | 1 |
| | | 2 | Credit High Priority Site | 2 |
| 3 | 1 | 1 | Credit Surrounding Density and Diverse Uses | 5 |
| 2 | 1 | 2 | Credit Access to Quality Transit (RP) | 5 |
| 1 | | | Credit Bicycle Facilities | 1 |
| | | 1 | Credit Reduced Parking Footprint (RP) | 1 |
| 1 | | | Credit Green Vehicles (RP) (v4.1 Electric Vehicles) | 1 |

| 5 | 2 | 3 | Sustainable Sites | 10 |
|---|---|---|---|----------|
| Y | | | Prereq Construction Activity Pollution Prevention | Required |
| 1 | | | Credit Site Assessment | 1 |
| 1 | 1 | | Credit Site Development - Protect or Restore Habitat (RP) | 2 |
| 1 | | | Credit Open Space | 1 |
| | | 3 | Credit Rainwater Management (RP) | 3 |
| 1 | 1 | | Credit Heat Island Reduction | 2 |
| 1 | | | Credit Light Pollution Reduction | 1 |

| 7 | 1 | 3 | Water Efficiency | 11 |
|---|---|---|---|----------|
| Y | | | Prereq Outdoor Water Use Reduction | Required |
| Y | | | Prereq Indoor Water Use Reduction | Required |
| Y | | | Prereq Building-Level Water Metering | Required |
| 1 | 1 | | Credit Outdoor Water Use Reduction | 2 |
| 4 | | 2 | Credit Indoor Water Use Reduction | 6 |
| 2 | | | Credit Cooling Tower Water Use (v4.1 Process Water Use) | 2 |
| | | 1 | Credit Water Metering | 1 |

| 11 | 0 | 22 | Energy and Atmosphere | 33 |
|----|---|----|---|----------|
| Y | | | Prereq Fundamental Commissioning and Verification | Required |
| Y | | | Prereq Minimum Energy Performance | Required |
| Y | | | Prereq Building-Level Energy Metering | Required |
| Y | | | Prereq Fundamental Refrigerant Management | Required |
| 5 | | 1 | Credit Enhanced Commissioning | 6 |
| 6 | | 12 | Credit Optimize Energy Performance (RP) | 18 |
| | | 1 | Credit Advanced Energy Metering | 1 |
| | | 2 | Credit Demand Response | 2 |
| | | 3 | Credit Renewable Energy Production | 3 |
| | | 1 | Credit Enhanced Refrigerant Management | 1 |
| | | 2 | Credit Green Power and Carbon Offsets | 2 |

| 4 | 2 | 7 | Materials and Resources | 13 |
|---|---|---|--|----------|
| Y | | | Prereq Storage and Collection of Recyclables | Required |
| Y | | | Prereq Construction and Demolition Waste Management Planning | Required |
| | | 5 | Credit Building Life-Cycle Impact Reduction | 5 |
| 1 | 1 | | Credit BPD and Optimization - EPDs | 2 |
| | 1 | 1 | Credit BPD and Optimization - Sourcing of Raw Materials (v4.1) | 2 |
| 2 | | | Credit BPD and Optimization - Material Ingredients | 2 |
| 1 | | 1 | Credit Construction and Demolition Waste Management | 2 |

| 8 | 0 | 8 | Indoor Environmental Quality | 16 |
|---|---|---|--|----------|
| Y | | | Prereq Minimum Indoor Air Quality Performance | Required |
| Y | | | Prereq Environmental Tobacco Smoke Control | Required |
| 1 | | 1 | Credit Enhanced Indoor Air Quality Strategies | 2 |
| 3 | | | Credit Low-Emitting Materials | 3 |
| 1 | | | Credit Construction Indoor Air Quality Management Plan | 1 |
| | | 2 | Credit Indoor Air Quality Assessment | 2 |
| 1 | | | Credit Thermal Comfort | 1 |
| 1 | | 1 | Credit Interior Lighting | 2 |
| | | 3 | Credit Daylight | 3 |
| 1 | | | Credit Quality Views | 1 |
| | | 1 | Credit Acoustic Performance | 1 |

| 5 | 0 | 1 | Innovation | 6 |
|---|---|---|--|---|
| 1 | | | Credit LEED Accredited Professional | 1 |
| 1 | | | Credit Innovation: Occupant Comfort Survey | 1 |
| 1 | | | Credit Innovation: Green Building Education | 1 |
| 1 | | | Credit Innovation: Purchasing - Lamps | 1 |
| | | 1 | Credit Innovation: Bird Collision Deterrence | 1 |
| 1 | | | Credit Innovation: Walkable Project Site | 1 |
| | | | Credit Innovation: TBD | 1 |

| 1 | 1 | 2 | Regional Priority | 4 |
|---|---|---|---|---|
| | 1 | | Credit SD - Protect or Restore Habitat (2 pt threshold) | 1 |
| | | 1 | Credit Access to Quality Transit (4 pt threshold) | 1 |
| 1 | | | Credit Green Vehicles (1 pt threshold) | 1 |
| | | 1 | Credit Optimize Energy Performance (10 pt threshold) | 1 |

50 8 52 TOTALS Possible Points: **110**

Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum: 80 to 89 points

SUNRISE SENIOR LIVING – SOUTH ARLINGTON
LEED v4 Summary (Preliminary)
Goal: SILVER
5.31.2023

The proposed project will be registered under LEED v4 with some credits using the v4.1 Beta Updates as identified below. We will continue to research credit options as the design progresses. The final check list shall be determined at the time the building permit is submitted.

INTEGRATIVE PROCESS

- Integrative Process (1 point) – Will pursue.

LOCATION & TRANSPORTATION

- LEED for Neighborhood Development Location – Not applicable. The project is not located in a development certified under LEED for Neighborhood Development and this credit cannot be combined with the other LT credits. The LT category is limited to 16 points total.
- Sensitive Land Protection (1 point) – Will pursue.
- High-Priority Site and Equitable Development (1-2 points) – Will not pursue. This credit is for economically disadvantaged communities or Brownfields, neither of which applies.
- Surrounding Density and Diverse Uses (1-5 points) – Will pursue. Based on a Walk Score of 77, a minimum of 3 points can be achieved under Option 3. Surrounding density needs to be confirmed to determine if additional points can be achieved using Option 1 + Option 2. More than (8) diverse uses are available.
- Access to Quality Transit (1-5 points) – Will pursue Path 1 – Access to Public Transit Service for 2 points. There are a minimum of (2) bus routes (ART and WMATA) that stop within ¼ mile of the main entrance. The number of trips should be able to earn 2 points, possibly 3. Path 2 requires 30-45 total daily trips, which would be under-utilized at an assisted living facility, and would not earn any more points than Path 1. Since we cannot meet the threshold of 4 points, we also cannot earn the Regional Priority bonus point.
- Bicycle Facilities (1 point) – Will pursue.
 - Bicycle Network – The site has a Bike Score of 88; it is assumed this requirement can be met.
 - Bicycle Storage & Shower Rooms – A separate shower room will be provided for staff use. A minimum of (4) bike racks (short-term) will be provided near the

building entry and a minimum of (4) bike racks (long-term, covered) will be provided in a location to be determined. There are also two Capital Bikeshare stations located within a half mile of the site. Sunrise of Old Town was able to meet this credit using the same number of bike racks plus access to the bikeshare.

- Reduced Parking Footprint (1 point) – Will not pursue.
 - Provide no parking or 30% reduction below base ratios (0.35/DU for assisted living), do not exceed minimum local code requirements. Not permitted by Arlington and not desired by neighbors.
 - Provide (1) Carshare space – not desirable for this facility.
 - Unbundled parking – not applicable or desirable for this facility.
- Electric Vehicles (1 point) – Will pursue v4.1 Beta Update Level 2 (208-240V) charging for 5% of all parking spaces. Based on 54 spaces, 3 charging stations will be required.
 - See below for additional Arlington County Green Policy requirements.

SUSTAINABLE SITES

- Prerequisite: Construction Activity Pollution Prevention
- Prerequisite: Environmental Site Assessment – Phase 1 or local equivalent.
- Site Assessment (1 point) – Will Pursue.
- Protect or Restore Habitat (1-2 points) – Will pursue. The landscape design and calculations need to be finalized to determine whether we can earn 1 or 2 points.
- Open Space (1 point) – Will pursue.
- Rainwater Management (1-3 points) – Will not pursue. The stormwater required to be infiltrated on site cannot be achieved due to highly compacted clay soil. Infiltration facilities have a high failure rate. All the stormwater is treated and directed toward the municipal storm sewer system. A very small amount will be evapotranspired in the urban bio-retention facilities, but not near the 80th percentile rainstorm event.
- Heat Island Reduction (1-2 points) – Will pursue a minimum of 1 point. Roof and site design and calculations need to be finalized to determine if we can earn 1 or points points.
- Light Pollution Reduction (1 point) – Will pursue.

WATER EFFICIENCY

- Prerequisite: Outdoor Water Use Reduction – No Irrigation or reduced irrigation
- Prerequisite: Indoor Water Use Reduction
- Prerequisite: Building-Level Water Metering – Share data with USGBC for 5 years
- Outdoor Water Use Reduction (1-2 points) – Will pursue 50% reduction for 1 point.
- Indoor Water Use Reduction (1-6 points) – Will pursue 40% reduction (4 points).
- Optimize Process Water Use (1-2 points) – Will pursue 2 points for commercial kitchen and laundry equipment under the v4.1 Beta Update. The project will not have cooling towers or evaporative condensers.
- Water Metering (1 point) – Will not pursue. There is cost premium involved since we must specify either BMS or self-standing submitter station to send readings to and share with USGBC. We would also need to submit for domestic water heating, cooking, and laundry (process load), irrigation and overall building flow which means more complex domestic water distribution.

ENERGY AND ATMOSPHERE

- Prerequisite: Fundamental Commissioning and Verification
- Prerequisite: Minimum Energy Performance
- Prerequisite: Building-Level Energy Meeting
- Prerequisite: Fundamental Refrigerant Management
- Enhanced Commissioning (2-6 points) – Will pursue enhanced systems commissioning for 3 points and building enclosure commissioning for 2 points.
- Optimize Energy Performance (1-18 points) – Will pursue a minimum of 6 points. Under the current energy model, we can achieve 6 points, but we will attempt to get up to 20% energy savings as the design is further developed.
- Advanced Energy Metering (1 point) – Will not pursue. There is a very significant premium to introduce a BMS system. The additional submeters mean more complex power, water, and gas distribution, etc. since each meter requires separate lines.

- Demand Response (2 points) – Will not pursue. Demand response is not ideal for assisted living since it involves temporarily curtailing building-level energy use (cooling) during times of peak demand. It is also subject to availability.
- Renewable Energy Production (3 points) – Will not pursue. The amount of electricity produced by photovoltaics would be low due to the available roof area and orientation, and there is no return on investment.
 - See below for additional Arlington County Green Policy requirements.
- Enhanced Refrigerant Management (1 point) – Will not pursue. Difficult to achieve with the planned HVAC system.
- Green Power and Carbon Offsets (1 point) – Will not pursue.

MATERIALS AND RESOURCES

- Prerequisite – Storage and Collection of Recyclables
- Building Life-Cycle Impact Reduction – Will not pursue.
 - Option 1 (5 points): The building is not historic.
 - Option 2 (5 points): Building reuse is not feasible due to requirements of ADA, construction type, building program, etc.
 - Option 3 (2-5 points): The building will be new construction and due to its size would not be able to meet the 25% reused surface area threshold for 2 points.
 - Option 4 (3 points): The Whole-Building Life-Cycle Assessment needs to be performed to determine if a 10% reduction in GWP is possible.
- Environmental Product Declarations (1-2 points): Will pursue a minimum of 1 point. Materials are chosen specifically for assisted living use. The necessary EPDs may not be available.
- Sourcing Of Raw Materials (1-2 points): Will not pursue. It may be possible to achieve 1 point under the v4.1 Beta Update which lowers the threshold to 15%. The necessary sourcing information may not be available and/or the raw materials may not be present in sufficient quantities.
- Material Ingredients (1-2 points): Will pursue Options 1 (Material Ingredient Reporting) and 2 (Material Ingredient Optimization) for 2 points. Materials are chosen specifically for assisted living use. The necessary material ingredient reporting may not be available.
- Construction and Demolition Waste Management (1-2 points): Will pursue 1 point for diversion.

INDOOR ENVIRONMENTAL QUALITY

- Prerequisite: Minimum Indoor Air Quality Performance
- Prerequisite: Environmental Tobacco Smoke Control
- Prerequisite: Minimum Acoustic Performance
- Enhanced Indoor Air Quality Strategies (1-2 points) – Will pursue (3) among the (5) possible strategies listed below) for 1 point. Cannot achieve (6) strategies for 2 points.
 - Strategy 1 – Entryway Systems
 - Strategy 2 – Interior cross-contamination prevention.
 - Strategy 3 – Filtration of Outdoor Air
 - Strategy 4 – Filtration of Recirculated Air
 - Strategy 9 – Carbon Dioxide Monitoring (audible alarm)
- Low-Emitting Materials (1-3 points) – Will pursue 3 points.
- Construction Indoor Air Quality Management Plan (1 point) – Will pursue.
- Indoor Air Quality Assessment (1-2 points) – Will not pursue. The timing does not usually work for Option 1; it is either too hot or cold outside. It also requires a high number of air changes, and it would take months to purge sufficiently with the planned HVAC system. If the outdoor temperature and humidity were ideal and the system was run in economizer mode the entire time, it may take one month.
- Thermal Comfort (1 point) – Will pursue.
- Interior Lighting (1-2 points) – Will pursue 1 point for Color Rendering or Lighting Control. (1 strategy for 1 point; 3 strategies for 2 points).
 1. Glare control – More applicable to an office environment. Unclear if we could meet this strategy with typical Sunrise fixtures. Glare is more of an issue for office computer users, not assisted living.
 2. Color Rendering – CRI 90 may be possible for some, but not all fixtures (where LED lamp is built-in). The McLean Village project had over 30 different light fixture types (all interior and exterior lights were LED).
 3. Lighting Control – Dimmable or multi-level lighting for 90% of all regularly occupied spaces. Additional cost of dimmers. Feasible for LED fixtures (no drivers).
 4. Surface Reflectivity – Limits finish selections. Materials and colors are chosen specifically for assisted living use.

- Daylight (1-3 points) – Will not pursue. This credit is more applicable to an office environment where perimeter ceiling lights can be automatically turned off on sunny days. This is not desirable or practical for assisted living given the variety of living conditions and the need for well-lit spaces. All resident rooms will have a minimum of (1) 6' x 6' window in each living room and bedroom. Common area rooms for residents have windows and are open to the corridor or have glass doors. Borrowed lights and skylights are also used to bring natural light into interior corridors. There will be ample daylight to connect building occupants with the outdoor and reinforce circadian rhythms.
- Quality Views (1 point) – Will pursue.
- Acoustic Performance (1 point) – Will not pursue. This credit is mainly for classrooms and large open offices.

INNOVATION

LEED AP + 5 Innovation credits maximum:

- Will pursue:
 - LEED Accredited Professional (1 point)
 - Occupant Comfort Survey (1 point) Green Building Education (1 point)
 - Green Building Education (1 point)
 - Purchasing – Lamps (1 point)
 - Bird Collision Deterrence (1 point) – Will not pursue. Patterned or frit glass may be disorienting to seniors. Significant expense, but only achieves one point.
 - Walkable Project Site (1 point) – If pursued, building could not move any closer to S. Glebe Road to achieve required set back.

REGIONAL PRIORITY

Maximum of 4 Regional Priority credits:

- Will pursue:
 - Electric Vehicle Charging (1 point)
- May pursue:
 - Protect or Restore Habitat (1 point) – Will pursue if we are able to meet the 2 point threshold.
- Will not pursue (cannot meet threshold):
 - Reduced Parking Footprint (1 point) – required point threshold: 1.
 - Access to Quality Transit (1 point) – required point threshold: 4.
 - Not enough bus trips to meet the required threshold.
 - Rainwater Management (1 point) – required point threshold: 3.
 - Optimize Energy Performance (1 point) – required point threshold: 10.