**A Comparison of Silver State Sustainable Homes Criteria**

**With the USGBC LEED v4 Homes and the BIG Green Point Rated Programs**

**October 15, 2020**

**EXECUTIVE SUMMARY**

LEED v4 Homes/MFMR and the Silver State Sustainable Homes (S3H) are similar programs. Similar categories are covered, although each program includes distinct mandatory requirements and optional points that do not overlap. Importantly, the S3H and LEED v4 Homes pathways incorporate ENERGY STAR performance targets for building energy performance standards, and features that focus on improving indoor air quality and health by considering material selection and ventilation strategies. A project that meets the S3H Tier 1 will most likely meet or exceed the Certified Tier of LEED Homes and MFMR. Likewise, S3H Tier 2 and Tier 3 will most likely meet the Silver and Gold LEED Tiers.

Green Point Rated (GPR) and S3H are also similar programs. They each have five similar categories, mandatory requirements and optional points. A project that meets the S3H Tier 1 will most likely meet or exceed the Certified Tier of GPR. Likewise, S3H Tier 2 and Tier 3 will most likely meet the Silver and Gold GPR Tiers.

**Part 1 - LEED v4**

**INTRODUCTION:**

**LEED (Leadership in Energy and Environmental Design)** is a rating system administered by the United States Green Building Council (USGBC) to encourage sustainable building practices. The LEED program is now an international program with rating systems in several countries. LEED rating systems are applicable to buildings (including schools, residential, commercial) as well as neighborhoods. The LEED v4 Homes Design and Construction program focuses on whole buildings and has two pathways: Homes and Multifamily Lowrise (Homes) which applies to single-family homes and low-rise multi-family units; and Multifamily Midrise (MFMR) Midrise residential buildings. LEED adopted a v4.1 Residential Building Design and Construction Multifamily Homes and Multifamily Homes Core and Shell which is now available for all countries except the United States and Canada. Projects in the United States and Canada can continue to use the LEED v4 rating systems available to residential projects and can substitute credits from the LEED v4.1 Residential rating systems. USGBC describes LEED v4.1 as their most inclusive and transparent platform to date.

A LEED Certified home is one verified by an independent third party to have met standards beyond conventional building practices to create a healthier, more sustainable and energy efficient home.

To achieve LEED certification of a home, builders are required to meet prerequisite measures and a minimum amount of optional credits. Levels of certification that can be achieved are Certified, Silver, Gold, and Platinum based on the amount of points earned, Platinum being the highest.

**PROGRAM ELIGIBILITY:**

The LEED v4 Homes pathway applies to single family homes and low-rise multi-family buildings (one to three stories). These projects may be new construction or rehabilitation.\*

The LEED MFMR pathway applies to mid-rise multi-family buildings (four to eight plus stories). These projects may be new construction or rehabilitation.\* Buildings that are greater than eight stories should contact the USGBC to determine the appropriate pathway. Under either pathway of the LEED v4 Homes Design and Construction program, prerequisites and credits are applicable for the entire building, not just the residential spaces.

**POINT STRUCTURE:**

LEED v4 BD+C: Homes and MFMR include four levels of certification that a project may achieve through meeting the applicable prerequisites and optional credits for the project type. The certification tiers include Certified (40-49) points, Silver (50-59), Gold (60-79), and Platinum (80+ Points).

**CERTIFICATION:**

To certify to the LEED v4 Homes Design and Construction system, project teams will:

* Register: Register the project in LEED Online
* Identify: Assemble the project team and assign roles for the submission.
* Build: Ensure the project is built to meet the stated goals and have the green measures verified by the Verification Team.
* Verify: The project verification team confirms all prerequisites and pursued credits
* Review: The Green Raters submits the appropriate documentation to the LEED for Homes Provider for review and then the GBCI review begins.
* Certify: Achieve certification and marketing support.

A Green Rater must be involved throughout the design and construction process of each LEED v4 certified home. At design, the Green Rater will be responsible for confirming all prerequisites and credits in the applicable LEED v4 rating system have been incorporated into the plans. During construction, the LEED Rater will perform onsite verification (including diagnostic testing) at key intervals. And prior to submission of the project to GBCI, the LEED Rater will be responsible for confirming that all of the necessary credits have been met.

The LEED Rater will conduct several inspections and provide performance testing for several credits including:

* Preliminary Ratings
* Mid-construction verification visit
* Final construction verification visit
* Supplemental Documentation

Verification fees will be negotiated between the Green Rater and the project team. In addition the USGBC has its own fee structure for project certification. The certification fee depends upon the project rating program and size. Please consult the USGBC Homes program fee page for additional information.

**SIMILARITIES AND DIFFERENCES WITH THE SILVER STATE SUSTAINABLE HOMES CRITERIA:** Similarities:

* Similar categories are covered by Silver State Sustainable Homes (S3H) and the LEED v4 Homes-MFMR (LEED) pathways, although each program has mandatory requirements and optional points that do not overlap.
* LEED and S3H require onsite verification by a trained and certified Rater
* A pre-construction plan review and plan is a component of both programs. In the S3H this requirement is addressed in the mandatory Plan Review. In LEED, a preliminary meeting to identify the goals of the project is described in the optional credit: Integrative Process.
* S3H and LEED incorporate ENERGY STAR performance targets to set requirements for the building energy performance standards.
* S3H and LEED include features and points that focus on improving indoor air quality and health by considering material selection and ventilation strategies.

Differences:

* The S3H is designed for the IECC Climate Zones 3 and 5 with mandatory measures that are more prescriptive and set a floor that exceeds code and addresses regional needs. Decisions that are available in LEED for building envelope and water efficiency are already incorporated into S3H.
* S3H is provided for affordable housing projects in Nevada, LEED is provided for all home types and provided throughout the U.S and in several other countries.
* The S3H is designed for typical affordable home projects that are financed by the LIHTC program and subject to limited budgets for some amenities and material selections. LEED is provided for every type of home project and every budget.
* LEED v4 Homes implements a Home Size Adjuster which provides credit for smaller home sizes. This is not necessary for typical affordable home projects and no credit is available in S3H for smaller home sizes.
* Through prerequisites and points S3H emphasizes to a greater degree solar renewable power installation in order to provide an innovative pathway to meet Nevada’s shorter term (2030) and longer-term (2050) renewable energy goals.
* A project that meets the S3H Tier 1 will most likely meet or exceed the Certified Tier of LEED Homes and MFMR. On the other hand, a LEED v4 BD+C Homes and MFMR may not meet all of the mandatory requirements of the S3H. Likewise, S3H Tier 2 and Tier 3 will most likely meet the Silver and Gold LEED Tiers.

**CATEGORY COMPARISON:**

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| **Category Comparison Homes and MF Lowrise MF Midrise** |

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| LEED Categories | S3H SECTION ALIGNMENT | Prerequisites | Optional  Points | Prerequisites | Optional  Points |
| Location and Transportation | Site Development | 1 | 15 | 1 | 15 |
| Sustainable Sites | Site Development | 2 | 7 | 2 | 7 |
| Water Efficiency | Water Efficiency | 1 | 12 | 1 | 12 |
| Energy and Atmosphere | Energy Efficiency | 4 | 38 | 3 | 37 |
| Materials and Resources | Resource  Efficiency | 2 | 10 | 2 | 9 |
| Indoor  Environmental | Indoor Air  Quality | 7 | 16 | 7 | 18 |
| Innovation | NA | 1 | 6 | 1 | 6 |
| Regional Priority | NA | NA | 4 | NA | 4 |

**Part 2 - GREEN POINT RATED**

**INTRODUCTION**

**The Green Point Rated (GPR) program** is offered by **Build It Green** (BIG), a non-profit membership organization whose mission is to promote healthy, durable, energy- and resource-efficient buildings in California. The Build It Green rating standard began in Alameda County, California and is the result of the 2005 merger of the Green Resource Center and Bay Area Build It Green. GPR is provided in California and the certification program is tailored to California and

IECC Climate Zones 3 and 4. Levels of certification that can be achieved are Certified, Silver, Gold, and Platinum based on the amount of points earned, Platinum is the highest.

**PARTICIPATION AND ELIGIBILITY**

The GPR program is aimed at recognizing all scales of residential projects that build to its standards. The program has distinct paths to certify New Construction, Substantial and Moderate rehab projects. Projects eligible for GPR include:

* Single-family homes (including townhomes that share a common vertical wall)
* Low-rise multifamily (1-3 story buildings, including duplexes or other stacked housing units that share a common ceiling or floor)
* Mid- to High-rise Multifamily (4+ story buildings)
* Existing buildings undergoing gut-rehab (Whole House)
* Existing building undergoing moderate-rehab (Elements)

All projects participating in the GPR certification program must use a GreenPoint (GP) Rater. See “Certification” for more details about the certification process.

**POINT STRUCTURE**

The GPR certification has a 4 tiered certification structure similar to LEED. There are different certification pathways for Single Family and Multifamily construction, and for New Homes and Existing Homes. The GP Rater determines which checklists and manuals apply to a project. The New Home rating system is for designing and building new homes. To qualify for GPR certification the project must meet all prerequisites, meet all of the required Methods and Materials standards and earn a minimum of 50 points that come from the remaining categories, which include: Community, Energy, Indoor Air Quality/Health, Resources and Water. Certified (50-79) points, Silver (80-109), Gold (110-139), and Platinum (140+ Points).

**CERTIFICATION PROCESS**

Ratings are performed by certified GP Raters, independent professionals trained and certified by Build it Green. The rating process is a non-invasive physical examination of building systems, structures, materials and components to assess energy and water efficiency, indoor air quality, resource efficiency of materials and construction methods, and construction quality.

Buildings pursuing Certification under the GPR System must follow the steps below:

* Find a GP Rater
* The Rater calls an orientation meeting for all project participants and makes sure everyone understands and agrees to build to GPR standards. The Rater uses the GPR Checklist to create a customized list of construction practices that will be used in the project. When everyone has

agreed on the checklist, the Rater submits a project planning score sheet to Build It Green and the construction team uses it to guide the project.

* The Rater and the construction team coordinate appointments for verification that everything is being done correctly.

The Rater compiles documentation, calculates scores, and submits all necessary documentation to Build It Green for processing.

* Build It Green mails the GPR certificate to Rater, who then provides it to the project team.

The Rater will generally engage in at least four of the five following activities during the course of project design and construction:

* Plan check
* Rough inspection
* Final inspection
* Supporting documentation review
* Performance testing

**SIMILARITIES AND DIFFERENCES WITH GREEN COMMUNITIES CRITERIA**Similarities:

* GPR is a quality standard, both GPR and S3H would produce a verified green building.
* Both GPR and S3H cover roughly the same categories although each program has some mandatory requirements (prerequisite) and/or optional points that do not overlap.
* GPR and S3H require onsite verification by a trained and certified Rater
* A pre-construction plan review is a component of both programs. In the S3H this requirement is addressed in the mandatory Plan Review.
* Both standards have tiered certification levels although like LEED, GPR has four tiers and S3H has three.

Differences:

* S3H is designed with more mandatory measures (prerequisites) than GPR.
* With significantly less mandatory requirements GPR gives a project more flexibility in reaching the standard.
* GPR is tailored and provided in California and IECC Climate Zones 3 (Marine, Hot-Dry) and 4 (Marine) while S3H is designed and provided in Nevada and IECC Climate Zones 3 (Hot-Dry) and 5 (Dry).
* S3H is provided for affordable housing projects in Nevada, GPR is provided for all home types in California.
* Minimum code in California requires that solar power offset 100% of the projected electric energy use on residential new construction projects. The requirement applies to all low-rise (3 stories or less) residential new construction projects. The S3H service area does not have that requirement.
* S3H is designed for typical affordable home projects that are financed by the LIHTC program and subject to limited budgets for some amenities and material selections. GPR is provided for every type of home project and every budget.
* A project that meets the S3H Tier 1 will most likely meet or exceed the Certified Tier of GPR. On the other hand, a GPR project may not meet all of the mandatory requirements of the S3H. Likewise, S3H Tier 2 and Tier 3 will most likely meet the Silver and Gold GPR Tiers.