

**Master Plan Sustainability Report**

For

**Jordan Downs Redevelopment**

Los Angeles, CA

December 2010

Table of Contents

INTRODUCTION AND EXECUTIVE SUMMARY ..... 2

1.0 LEED ND CHECKLIST ..... 4

2.0 LEED ND CATEGORIES ..... 4

2.1 SMART LOCATION AND LINKAGES (SLL)..... 4

1. SLLc4, Bicycle Network and Storage ..... 5

2.2 NEIGHBORHOOD PATTERN AND DESIGN (NPD) ..... 6

1. NPD Prerequisite 3, Connected and Open Community..... 6

2. NPD Credit 1, Walkable Streets ..... 6

3. NPD Credit 5, Reduced Parking Footprint ..... 7

4. NPD Credit 7, Transit Facilities ..... 8

2.3 GREEN INFRASTRUCTURE AND BUILDING (GIB) ..... 9

1. GIB Credit 4: Water Efficient Landscaping ..... 9

2. GIB Credit 8: Stormwater Management..... 10

3. GIB Credit 9: Heat Island Reduction..... 10

4. GIB Credit 11: On-Site Renewable Energy Sources..... 11

5. GIB Credit 13: Infrastructure Energy Efficiency ..... 12

6. GIB Credit 17: Recycled Content in Infrastructure..... 12

3.0 INNOVATION AND DESIGN (ID)..... 13

4.0 REGIONAL PRIORITY ..... 13

LEED Neighborhood Development Checklist ..... 14-28

## INTRODUCTION AND EXECUTIVE SUMMARY

This report addresses the Master Plan site design for the Jordan Downs Redevelopment in terms of sustainability. The Redevelopment includes a mix of 1600-1800 residential units, retail space, a Family Resource Center, a 6 acre Central Park, and a Job Center designed and organized to embrace the qualities of a sustainable community. The report utilizes the standards established by the US Green Building Council (USGBC) under the Leadership in Energy and Environmental Design for Neighborhood Development (LEED ND) Rating System to assess the Master Plan sustainable development goals, opportunities, current status, and next action items.

Through the Master Planning effort the project has been designed to meet LEED ND sustainability goals at the Gold certification level or higher (97 points). Highlights of the sustainability goals that have been incorporated into the Master Plan include:

- Appropriate building massing and density to create a human-scaled community that relates to the scale of the surrounding communities.
- Walkable, pedestrian –friendly streets to promote socializing and physical activity.
- Capitalizing on public transportation to reduce vehicle usage.
- Significant reduction in potable water used for irrigation through native and drought tolerant plants and drip irrigation.
- Reduce heat island effect through appropriate placement of trees to provide shading to hardscape areas that are prone to collect heat.
- Stormwater retention to reduce stormwater runoff and pollutants.
- Stormwater retention tanks will provide irrigation to landscaping thus potentially reducing some landscaped areas of the project site to no potable water use for irrigation.
- On-site renewable energy source implemented as solar hot water panels on the rooftops to provide domestic hot water.
- Reduce energy consumption of infrastructure of the project by providing energy efficient street lights and traffic lights.
- Reuse of existing material on site for building new infrastructure, including crushing of existing asphalt paving and concrete sidewalks to be reused in new infrastructure.

*This report is based on information gathered from Master Plan design documents, Community Meetings at Jordan Downs Recreation Center, and information supplied from project team members.*

### LEED for Neighborhood Development

LEED Neighborhood Development (LEED ND) is a rating system that integrates the principles of smart growth, new urbanism, and green building into the first national standard for neighborhood design. Using the framework of other LEED rating systems, LEED for Neighborhood Development recognizes development projects that successfully protect and enhance the overall health, natural environment, and quality of life of communities. The rating system encourages smart growth and new urbanism best practices, promoting the location and design of neighborhoods that reduce vehicle miles traveled and communities where jobs and services are accessible by foot or public transit. It promotes more efficient energy and water use, which is especially important in urban areas such as Jordan Downs where infrastructure is often overtaxed.

Under the LEED ND version 2009 program there are 110 points available, divided into 12 prerequisites and 51 credits across 5 categories: Smart Location and Linkage, Neighborhood Pattern and Design, Green Infrastructure and Buildings, Innovation and Design, and Regional Priority.

For a complete account of LEED ND design requirements, the intent of each credit and credit documentation requirements, refer to the Reference Guide “*LEED ND 2009 Rating System*” available on the USGBC website (<http://www.usgbc.org>). Also, the LEED 2009 Reference Guide for Green Neighborhood Development is scheduled to go on sale the end of the year (2009).

### **Jordan Down Sustainability Summary**

The infill location of Jordan Downs has many inherent qualities that are the bones to creating a sustainable neighborhood in an urban setting. These qualities have been embraced and strengthened in the Master Plan and promote one of the primary goals for a LEED ND project, which is to reduce vehicle miles traveled. These qualities include:

- Expanding transit stops with the existing public infrastructure.
- Improved connectivity of streets, sidewalks, and green space.
- A strong network of internal streets and connections to surrounding communities allowing pedestrians and bicyclists to move more efficiently and more safely.
- Compact neighborhood with sufficient density.
- Human-scaled streetscape with a mixed-use urban form.

The neighborhood pattern and design encompasses many sustainability strategies that will further reduce the carbon footprint of the community while creating healthier, cleaner environments for the residents and neighbors. These include:

- Area dedicated to open space has increased from 6 acres to 8 acres even with the addition of 900-1100 units. This provides a redistribution of open space for private, semi-public, and public space supporting a variety of activity and social interaction.
- Opportunity to grow food gardens will be available for residents with private outdoor space. Local food will also be provided by fruit-bearing street trees, and the Mudtown Farms Community Gardens.
- Tuck-under parking helps reduce surface parking, thus minimizing black surfaces that create heat-island effect. With less area occupied by surface parking, more area is available for open space.
- Light colored paving for pedestrian paths and open space will further minimize heat-island effect.
- A palette of infiltration planter and bioswales throughout the site allow stormwater to feed landscaping and percolate through the soil to recharge groundwater supplies and reduce untreated effluent from reaching the ocean.
- Reuse of stormwater for irrigation.
- Efficient drip irrigation system.

Strengthening the neighborhood sustainability qualities of Jordan Downs enhances the opportunities for implementing sustainability in future developments in the surrounding Watts area. The bicycle network of the Watts area is sparse, offering no connections to existing bicycle paths in areas beyond Watts. To promote bicycling as a viable option for travel to outer neighborhoods, establishing a bike network for the Watts area should be considered.

### **Green Buildings**

The LA Green Building Plan includes a series of requirements and incentives for developers to meet the US Green Building Council's Energy and Design standards for LEED NC (New Construction), Core & Shell, or Homes. These requirements will apply to buildings at Jordan Downs that meet the following criteria:

- New mixed-use and residential building, consisting of at least 50 dwelling units in a building which has at least 50,000 square feet of floor area, and in which 80% of the buildings' floor area is dedicated to residential.

These buildings must meet the equivalent to LEED certified level. Expedited service for building permits is available for the buildings meeting an equivalent to a LEED Silver certification level or higher.

The project team has incorporated sustainability strategies into the Master Plan that should continue to be expanded and developed as the project progresses. Building energy efficiency, water efficiency, indoor environmental quality, and resource conservation are key areas to address during the design and construction of the buildings to achieve sustainability goals and meet the city requirements. It will be critical as the project moves forward to continue to align the project design development with the sustainability goals established in this phase and to continue a holistic approach towards sustainability throughout the design and construction process. In meeting these aggressive sustainability goals, the project will also support the city of LA in the Green LA Action Plan that calls for reducing greenhouse gas emissions to 35% below 1990 levels by 2030.

## JORDAN DOWNS SUSTAINABILITY PLAN FULL REPORT

### 1.0 LEED ND CHECKLIST

A LEED ND Checklist has been developed for the Master Plan Redevelopment sustainability review and is included at the conclusion of this report. The checklist is a tool that should be updated throughout design development to enable the project team to clearly understand how the design development and construction is positioned to meet the project's established goals and values. Additionally, the team should build upon this checklist and develop detailed design and construction measures to be employed in order to meet the sustainable goals for the project. These should be routinely monitored to ensure complete compliance over the duration of the project.

The content of the checklist includes an overview of each credit requirement, current credit status, and project specific information for each credit. The status of each credit is indicated as Inherent, Achievable, Challenges, or N/A (Not Applicable), which includes the following information:

- **“Inherent”** – Indicates the credit requirement is achieved through inherent qualities of the project site.
- **“Achievable”** - These credits are achievable if the design elements that are currently incorporated in the Redevelopment are employed.
- **“Challenges”** - These credits may be achieved but may require significant project scope and/or design adjustments and/or cost considerations.
- **“N/A”** – These credits are not viable for the project to achieve or they are not applicable to this project.

The attached LEED checklist for the Jordan Down's project indicates that if all of the *“Inherent”* and *“Achievable”* points are achieved the project will have 63 points, a LEED ND Gold Rating. Although it is too early in the process to determine a LEED certification level, it is helpful to make this projection to allow the project team to set priorities and make important decisions affecting sustainability.

### 2.0 LEED ND CATEGORIES

This section summarizes the current status and the recommended next steps for specific credits within each LEED ND category that may present challenges and/or have potential to be incorporated into the Specific Plan. The references to LEED credits in this section are abbreviated for simplicity. Please refer to the checklist at the end of this report for a more detailed description of each LEED Credit.

The construction of the project has been planned in 4 phases. For the purposes of this report the Master Plan has been considered in its entirety. The project team will need to decide between a joint registration for all four phases of the Jordan Downs Redevelopment or individual registrations for each phase of the project. Depending on which path the project team pursues, the calculation procedures and feasibility of several LEED credits will be affected. There are also 3 stages of certification available for projects that may have significantly longer construction periods. Information on the 3 stages is available in the LEED ND Reference Guide referenced above.

#### 2.1 SMART LOCATION AND LINKAGES (SLL)

Most of the points available in this category are pre-existing conditions of the project site and surrounding area. Projects located in an existing neighborhood with an existing public transportation infrastructure are positioned to earn many points offered in this category. Jordan Downs meets many of these requirements as a redevelopment project connected to several options of public transportation. However, several points in this category focus on the density and street grid of the areas surrounding the project site. These points may be difficult to achieve due to the street grid broken by large industrial areas adjacent to the project boundary. Sustainable strategies that are not inherent in the site location are bicycle routes and connections to existing bicycle routes. **Exhibit 1: Bicycle Network** illustrates the bicycle routes in the surrounding Los Angeles area including Class I, dedicated exclusive bike path for bike and pedestrian traffic; Class II, marked lanes exclusively for bike travel on roadways; and Class III, bike routes that are marked but must share the roadway with other vehicles. The Class III routes may also be called sharrows, referring to the bicycle-plus-arrow markings as illustrated in **Exhibit 2: Sharrow**. The markings are intended to indicate where bicyclists should ride to avoid traveling within the door zone of parked cars. Sharrows provide an opportunity for Jordan Downs Redevelopment to encourage safer and more comfortable bike travel through the site.

1. SLLc4, Bicycle Network and Storage

**Current Status: Challenges**

The requirements for this credit include locating a project within 1/4 mile of a bicycle network of at least 5 miles, or a bicycle network within a 1/4 mile that connects to at least 10 diverse uses within 3 miles. Currently no bicycle network is within 3 miles of the Jordan Downs site. However, a bicycle network is beginning to take shape in Los Angeles, and several bicycle lanes already exist throughout the City. As the LA bicycle network continues to expand, Jordan Downs Redevelopment should continue to evaluate and pursue potential bicycle routes and connections.

Also, moving forward the project should determine what streets may be appropriate for sharrow street markings within the Jordan Down site. These pavement markings will create a Class III bike route through the project that will eventually connect to the larger Los Angeles bike network.

**Cost Implications:** Bicycle storage included in Master Plan scope and the base cost of the Cost Report. Cost implications for Class III bike routes are minimal and include the cost of pavement markings.

**Recommended Next Steps:**

- In the following design phases of the project, bicycle storage should be incorporated into all buildings and outdoor gathering areas to meet the occupant and visitor percentage outlined for this credit.
- Determine what streets are appropriate for sharrow markings to create a Class III bike route through the site.
- Expansion of bicycle routes in the communities surrounding Jordan Downs is necessary before Jordan Downs has the possibility of connecting to the city bike routes. Considerations by the city for future expansion of bike routes should emphasize the Watts area that is currently significantly distant from the network.

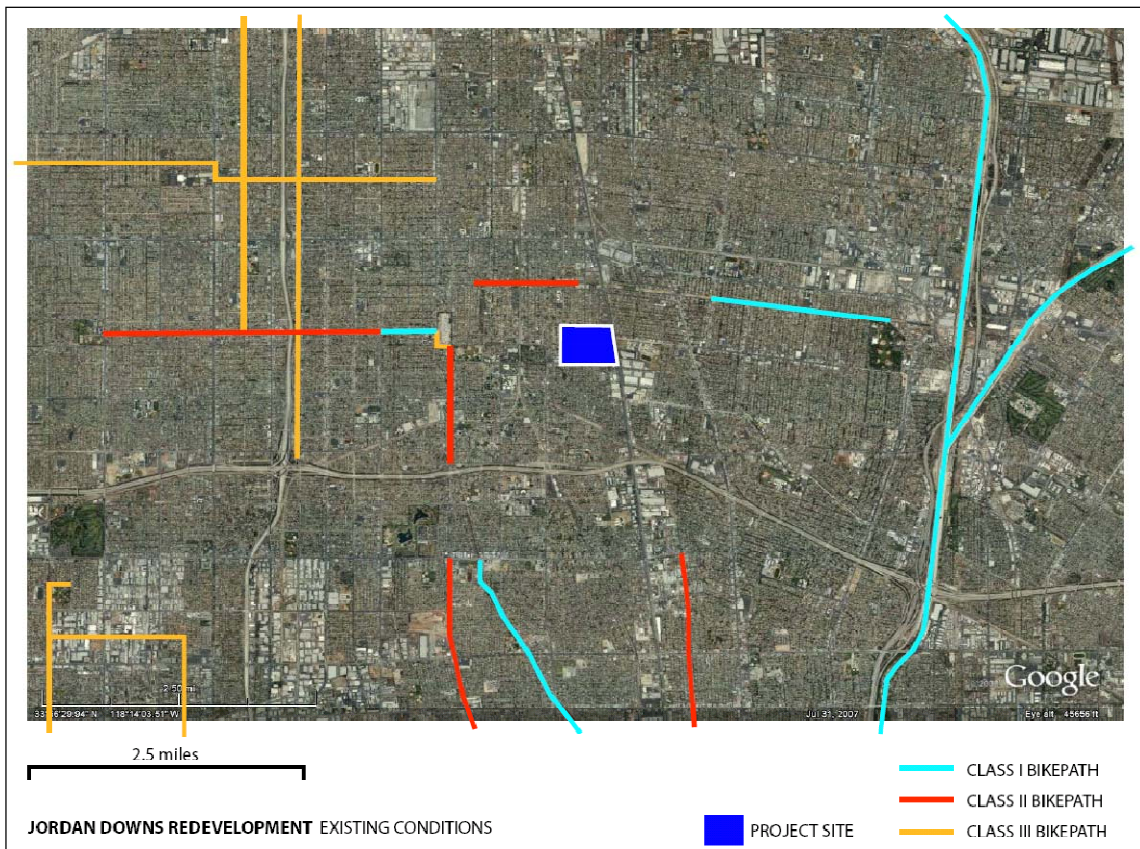


EXHIBIT 1: Bicycle Network; Represents bike routes in the Los Angeles region surrounding the project site relative to the site. Class I, dedicated exclusive bike path for bike and pedestrian traffic; Class II, marked lanes exclusively for bike travel on roadways; and Class III, bike routes that are marked but must share the roadway with other vehicles.



Exhibit 2: Sharrow, a pavement marking installed on streets appropriate for bicyclists but too narrow for conventional bike lanes. The bicycle-plus-arrow markings can be placed in the middle or to the side of the travel lane.

## 2.2 NEIGHBORHOOD PATTERN AND DESIGN (NPD)

The Jordan Downs Master Plan Redevelopment is designed as an accessible, mixed-use, walkable, urban infill project with a Central Park as the core of the new community. As the LEED ND Checklist at the conclusion of the report indicates, the Redevelopment meets many of the LEED-ND credit requirements in this category. The potential credit opportunities moving into the next phase of the project are related to human-scaled streetscapes with buildings that are pulled up to the sidewalk to create a continuous street wall, wide sidewalks, appropriate street widths and non-residential buildings meeting FAR requirements. These features are meant to create a safe and inviting neighborhood that promotes reduced vehicle usage through improved walkability and transportation efficiency. Parts of the following sustainable strategies have been articulated in the Master Plan Redevelopment and can be further developed in the next design phase, as discussed below.

### 1. NPD Prerequisite 3, Connected and Open Community

**Current Status: Required**

The Master Plan Redevelopment improves connectivity by extending major through-ways within the Jordan Downs community. The through-ways include Century Blvd, Tweeter Blvd, and Laurel Street. Through-streets on the perimeter of the project site and Jordan Down streets connecting to the surrounding neighborhood street grid further improves connectivity. The project meets the prerequisite requirements for this credit of at least 140 intersections/square mile. Also required is at least one through-street and /or non-motorized right-of-way, intersecting or terminating at the project boundary at least every 800 feet.

**Cost Implications:** This credit relies on existing conditions of the site and street design. No costs are directly applicable.

**Recommended Next Steps:**

- Ensure the project meets the 800 feet project boundary requirement. If a through-street is not provided every 800 feet, non-motorized right-of-ways should be considered in the next design phase to promote connectivity. Portions of the project boundary may not apply such as the SE corner of the project that has Jordan High School existing buildings. Please refer to the Reference Guide for boundary obstacles that are exempt.

### 2. NPD Credit 1, Walkable Streets

**Current Status: Achievable/Challenges**

This credit promotes walking by providing safe, appealing, and comfortable street environments. The Master Plan Redevelopment has created a pedestrian friendly street grid design. This design will encourage walking,

improve accessibility to public transit, and create tree-lined streets for shaded walkways as illustrated in [Exhibit 3: Pedestrian Friendly Streets](#).



Exhibit 3: Pedestrian Friendly Streets

There are 16 possible criteria to achieve for this credit. The criteria reviewed and determined achievable at this phase in the Master Plan design include:

- At least 80% of total linear ft of street-facing building facades are no more than 25' from property line.
- Continuous sidewalks are provided along both sides of all streets within project.

**Cost Implications:** This credit relies on the street design and building guidelines. No costs are directly applicable.

**Recommended Next Steps:**

- Provide functional building entries at average every 75' along non-residential/mixed-use buildings & blocks or 30' to achieve additional criteria.
- Ensure no blank walls longer than 40% of a façade, or more than 50' occur along sidewalks.
- Provide on-street parking for a minimum of 70% of both sides of all new and existing streets including the project side of bordering streets.
- Provide at least 50% of ground-floor dwelling units to have an elevated finished floor no less than 24" above the sidewalk grade.
- Ensure 100% of mixed use buildings include at least 60% of the street level facade as retail, live/work, and/or ground floor dwelling units.
- Allow 40% of all street frontages within the project, have a minimum building-height-to-street-width ratio of 1:3, or one foot of building height for every three feet of street width.
- Evaluate if feasible to provide 75% of exclusively residential streets designed for a target speed of no more than 20 mph and 70% of non-residential/mixed-use streets designed for a target speed of no more than 25 mph.
- Two criteria that may be challenging to achieve but should still be considered include: 1) All ground-level retail, service, and trade uses that face a public space have clear glass on at least 60% of their facades between 3 and 8 feet above grade. 2) Any ground-level retail, service, or trade windows must be kept open and visible (un-shuttered) at night, and must be stipulated in binding documents.

3. NPD Credit 5, Reduced Parking Footprint

**Current Status:** Achievable

Parking for the Master Plan Redevelopment has been designed to increase pedestrian orientation of the project. Tuck-under parking design has contributed to the small area designated for surface parking areas as illustrated in **Exhibit 4: Reduced Surface Parking**. Compliance with this credit requires using less than 20% of the total development footprint for parking (does not include street parking) and no individual parking lot can exceed 2 acres. This credit should be achievable with the small area designated for parking and with the parking area serving the northeast corner of the master plan not exceeding 2 acres.

Bicycle storage will be an important consideration in the upcoming design phases and capacities for bike storage should be considered early to ensure proper space is allotted.

**Cost Implications:** This credit relies on incorporating parking into the project without adding a large amount of surface parking. No costs are directly applicable.

**Recommended Next Steps:**

- Ensure no individual surface parking lot exceeds 2 acres.
- Provide a combination of bike and carpool spaces to meet credit requirements. The bike parking should be located within 200 yards of the building entrance that it services.

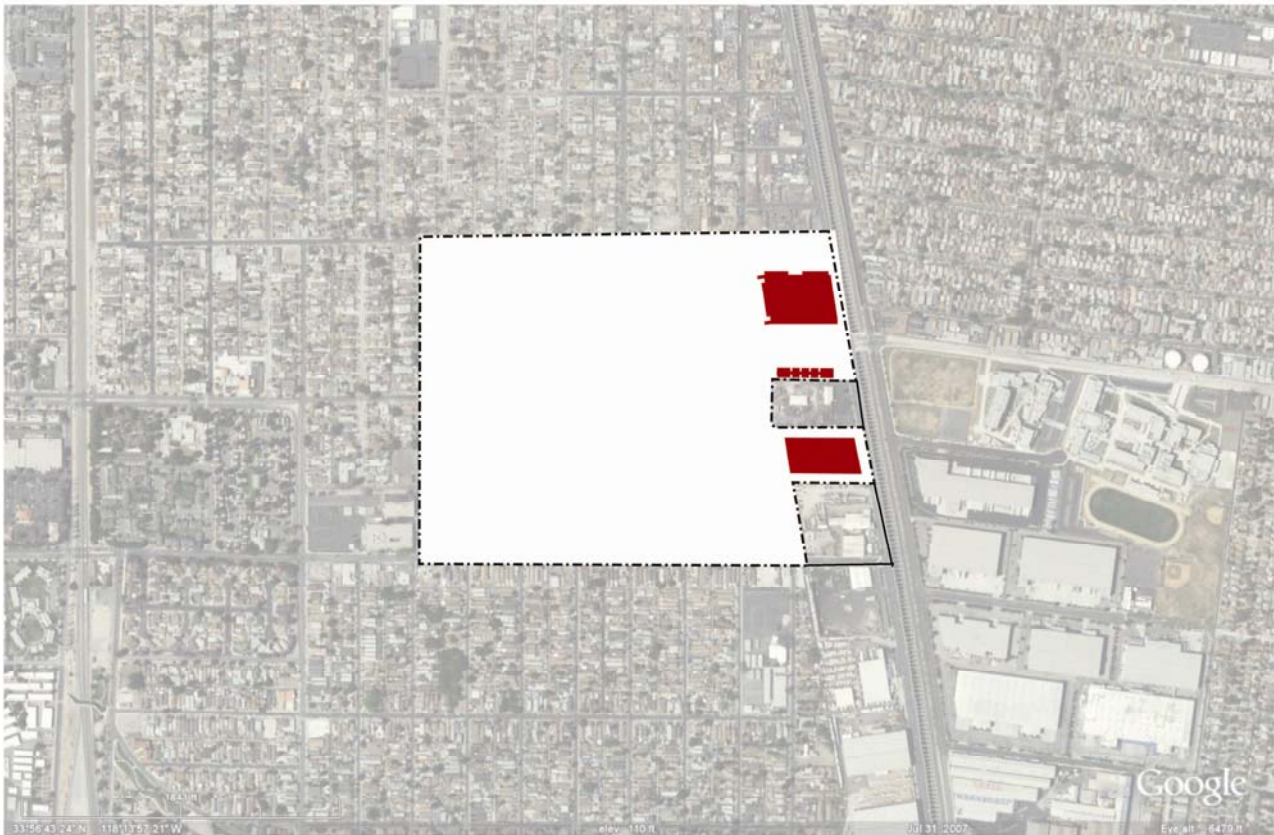


EXHIBIT 4: Reduced Parking; Red represents the surface parking areas on the Master Plan site.

4. NPD Credit 7, Transit Facilities

**Current Status: Achievable**

This credit is to encourage transit use by providing safe, convenient and comfortable transit waiting areas. The Master Plan includes 3 new transit stops. The project has an opportunity to work with the transit agency on the new and existing transit stop locations to ensure inclusion of lighting, benches, and kiosks. Currently three public bus routes border the perimeter of the project: DASH, 117, and 254.

Cost Implications: Three new transit facilities are included in Master Plan scope and base cost of the Cost Report. Upgrades to six existing transit stops at the project boundary are also included in the scope and base cost, including; covered shelter, benches, lighting and kiosks.

Recommended Next Steps:

- Provide partially/completely covered shelters with at least one bench at each of the transit stops.
- Ensure that the shelter is illuminated.
- Provide kiosk, bulletin boards, and/or signs devoted to providing local transit information, which should be specified in the infrastructure cost budget, drawings, and specifications.

## 2.3 GREEN INFRASTRUCTURE AND BUILDING (GIB)

Green building and infrastructure strategies need to be developed early in the design process as the project moves towards the Specific Plan. The appropriate LEED rating (LEED for New Construction/Homes/Schools/Retail Commercial Interiors/Core & Shell) should be evaluated for each building type early in the design process. Many of the new buildings in the project will fit the criteria set by the city of LA requiring the building to reach sustainability standards equivalent to LEED certification. The project should strive for a minimum of LEED Silver certification for each building type. The inclusion of solar thermal panels in the project scope to provide domestic hot water and appropriate building massing and shading that have been incorporated into the Master Plan design should greatly reduce energy loads in the new buildings. This energy reduction should position the new buildings for a feasible LEED Gold certification.

Studies show that incorporating the building sustainability goals early in the design phase will eliminate or significantly reduce costs that are usually attributed to ‘green’ costs. The following are GIB credits that require goal setting and decision making early in the next phase to ensure the sustainable strategies are effectively incorporated into the project.

### 1. GIB Credit 4: Water Efficient Landscaping

Current Status: Achievable

To limit or eliminate the use of potable water for landscape irrigation is the intent of this credit. Potable water use for irrigation must be reduced by at least 50% to meet the requirements. The Master Plan landscape design includes native/drought resistant plants that will meet this goal. Including bio-retention designed to feed landscaping, illustrated in **Exhibit 5: Stormwater Bio-retention** and capturing stormwater for irrigation will further reduce potable water consumption, positioning the site landscape for potentially using no potable water for irrigation. Determining areas where no permanent irrigation is needed and areas that will require irrigation should be determined early in the next phase. This will help mitigate any unnecessary irrigation and/or to ensure selected landscape areas are responsive to stormwater/reclaimed water available for the specific area.

The city of Los Angeles has a water reclamation project that supplies recycled water for landscape and cooling water for power plants. Plans are under way by the city to further develop the water reclamation. The project should continue to evaluate possibilities to connect to this reclaimed water for landscape irrigation at Jordan Downs.

Cost Implications:

Drip irrigation is more efficient than spray irrigation and should be used over spray when possible. Drip is also the only irrigation system that the city of LA allows for the reuse of stormwater for irrigation. There is a \$0.75 per square foot premium for drip irrigation and maintenance costs usually run slightly higher. However, drip irrigation is becoming a standard irrigation system for environmental responsible use of potable water for irrigation and premiums should diminish with time. Drip irrigation has been included in the base cost of the Cost Report.

Recommended Next Steps:

- Calculate the areas of outdoor water use based on native/drought resistant plants. Confirm through calculations if a combination of reclaimed water and water collected through the detention tanks and bio-retention will be sufficient to meet the outdoor water requirements.
- Continue to evaluate possibility of using reclaimed water provided by city of LA.



EXHIBIT 5: Stormwater Bio-retention

## 2. GIB Credit 8: Stormwater Management

### Current Status: **Achievable/Challenges**

The intent of this credit is to reduce pollution and hydrologic instability from stormwater and to promote aquifer recharge. Up to four points are available if 95% of stormwater is retained. Through careful Master Plan designing, the project is positioned to meet a high percentage of stormwater retention by minimizing impervious surfaces and thus reducing the volume and intensity of stormwater runoff. The Master Plan has open space throughout the project to support stormwater retention strategies including vegetated swales incorporated as landscape features in the larger open areas such as the Central Park, and landscape strips between the sidewalks and back of curbs to absorb and divert stormwater runoff. Stormwater retention tanks are part of the Master Plan and will provide grey water for irrigation. The reuse of stormwater will also help support achieving GIB credit 4, Water Efficient Landscaping.

Cost Implications: Stormwater retention tanks have been accounted for in the Master Plan scope and the base cost of the Cost Report. There should be no cost premium to provide separate systems for private and public stormwater reuse for irrigation.

### Recommended Next Steps:

- Set design goals for percent of stormwater to be retained on site.
- Confirm if a combination of landscape strategies and stormwater retention tanks are sufficient to comply with the stormwater runoff goals.

## 3. GIB Credit 9: Heat Island Reduction

### Current Status: **Achievable**

Reducing heat islands to minimize impact on the microclimate is achieved by using light colored concrete and open grid paving systems as illustrated in **Exhibit 6: Paving Materials**. Tree canopies over parking areas, and reducing the amount of pavement also contribute to heat island reduction. The Master Plan has minimized pavement to pedestrian and vehicular circulation and appropriate recreation areas and has incorporated a tree planting design that will provide shading of parking areas and sidewalks. To further reduce the heat island effect on the project site light colored paving materials should be incorporated and open grid paving systems where appropriate. Providing 50% of the total site hardscape areas with a combination of these strategies will meet the requirements for this credit.



Exhibit 6: Paving Materials, open grip paving and light colored concrete.

***Cost Implications:*** There should be no cost implications if heat island reduction strategies are implemented early in the design process.

***Recommended Next Steps:***

- Develop a combination of strategies to achieve the 50% hardscape area that meets the >SRI 29 and/or shading requirements.

4. GIB Credit 11: On-Site Renewable Energy Sources

***Current Status: Challenges***

Preliminary analysis for renewable energy sources determined the most accessible and cost effective technology for this project type and location is solar hot water panels, illustrated in **Exhibit 7: Solar Hot Water Panels**. Solar hot water panels are very effective for residential domestic water usage and potentially the same solar thermal installation can be used for producing hot water, cooling in the summer, and heating in the winter (requires larger roof area). Solar photovoltaic (PV) panels were considered; however due to the significantly greater area required for the PV panels it was determined that solar hot water collection panels are more space efficient with relatively lower costs. However, with federal, state, and local incentives for solar PV panels, this technology should continue to be evaluated.



Exhibit 7: Solar Hot Water Panels

***Cost Implications:*** Solar hot water panels are estimated to be \$85 per square foot and have been included in the base cost of the Cost Report.

***Recommended Next Steps:***

- Establish implementation of the solar hot water panels into the design development of the buildings.
- Continue evaluating feasibility of photovoltaic panels.

5. GIB Credit 13: Infrastructure Energy Efficiency

***Current Status: Achievable***

Energy use for operating public infrastructure can be reduced by using energy efficient traffic lights and street lights as well as efficient sewer/wastewater pumps. The credit requires achieving a 15% annual energy reduction. Effective energy efficient street lighting design integrates efficient lamp technologies, optimum pole placement, efficient fixture photometrics and aesthetics while using the least amount of energy and meeting requirements for visibility and light levels.

***Cost Implications:*** Energy efficient street lights have a premium of \$250 per light and energy efficient traffic lights have a premium of \$500. These are included in the Master Plan scope and in the base cost of the Cost Report.

***Recommended Next Steps:***

- Determine list of energy efficient measures (with efficiency ratings) to achieve 15% annual savings.

6. GIB Credit 17: Recycled Content in Infrastructure

***Current Status: Challenges***

Recycled aggregates can be used mainly for road base, cement concrete, and asphalt as they consist mainly of crushed concrete and crushed asphalt pavement. It is possible to recover asphalt paving materials from any demolished roads in this project. For recycled concrete, one alternative is to haul the concrete debris to a permanent recycling facility, for crushing and screening. Another approach is to do the crushing and screening at the demolition site where the aggregate is reused as soon as it is processed. This may reduce transportation costs, energy use, and wear and tear on roads and equipment.

***Cost Implications:*** CMU walls on the existing site are to be demolished and carried away, not reused for Master Plan construction. There is a cost premium for crushing and screening demolished asphalt and concrete at the project site. Crushing asphalt paving on the existing site for reuse is \$0.75 per square foot. Crushing concrete sidewalks on existing site for reuse is \$1.00 per square foot. This crushing is included in the Master Plan scope and base cost of the Cost Report.

*Recommended Next Steps:*

- Provide a list of materials that will be used in roadways, parking lots, sidewalks, and curbs, and a list of recycled material content with their percentages that will be used.
- The project must also include recycled content in any concrete piping in order to comply with this credit.

### 3.0 INNOVATION AND DESIGN (ID)

The intent of innovation and design credits is to provide projects the opportunity to be awarded points for exceptional performance above the requirements set by the LEED-ND Rating System and/or innovative performance in green building, smart growth, or new urbanist categories not specifically addressed by the LEED-ND Rating System. Projects that incorporate sustainability into the design at an early stage will typically discover that exceeding certain requirements becomes inherent in the design. Given below are some of the ID credits that this project can potentially pursue:

- Exemplary performance in stormwater management.
- Exemplary performance in recycled content for infrastructure.
- Exemplary performance in walkable streets (meet all A through P LEED requirements and add innovative ideas).

### 4.0 REGIONAL PRIORITY

To provide incentive to address geographically specific environmental issues, USGBC regional councils and chapters, the Congress for the New Urbanism chapters, and representatives of Smart Growth America's State and Local Caucus have identified 6 credits per rating system that are of particular importance to specific areas. Each Regional Priority credit is worth an additional 1 point, and a total of 4 additional points may be earned by achieving Regional Priority credits, with 1 point earned per credit. If the project achieves more than 4 Regional Priority credits, the team can choose the credits for which these points will apply. The Regional Priority credits that apply to specific project locations will be available on the USGBC website.

# LEED Neighborhood Development Checklist

## Jordan Downs Redevelopment Master Plan Sustainability Assessment

Inherent	Achievable	Challenges	N/A			
12	51	25	9	<b>TOTAL POINTS =</b>	<b>97</b>	Certified: 40-49 Points, Silver: 50-59 Points, Gold: 60-79 Points, Platinum 80+ Points
9	7	6	5	<b>SMART LOCATION AND LINKAGES</b>		<b>Master Plan Assessment</b>
X				<b>Prereq 1</b>	<b>Smart Location &amp; Linkage</b> All Projects: a) locate the project on a site served by existing publicly owned water & wastewater b) locate the project within a legally adopted, publicly-owned planned water and wastewater service area, and provide new water and wastewater infrastructure for the project. OPTION1 - Locate the project on an infill site.	Jordan Downs is located on an infill site and will be served by publicly-owned planned water and wastewater service.
X				<b>Prereq 2</b>	<b>Imperiled Species and Ecological Communities</b> OPTION1 - No Species Present or Likely; Consult with state Natural Heritage Program to determine if species listed under the Endangered Species Act, the state's endangered species act, or species ecological communities classified by NatureServe as G1 or G2, have been found on site.	Jordan Downs should meet this requirement. The EIR team will complete any necessary assessment.
X				<b>Prereq 3</b>	<b>Wetland and Water Body Conservation</b> OPTION1 – NO WETLANDS, WATER BODIES, OR LAND WITHIN 100’ OF THESE AREAS Locate the project on a site that is 100’ or further from wetlands and/or water bodies	Project is located on a site that includes no wetlands, no water bodies, no land within 50’ of wetlands and no land within 100’ of water bodies.
X				<b>Prereq 4</b>	<b>Agricultural Land Conservation</b> OPTION2 - Infill Site; Locate the project on an infill site.	Project is located on an infill site and is not within a designated agricultural preservation district.
X				<b>Prereq 5</b>	<b>Floodplain Avoidance</b> OPTION2 - Infill or Previously Developed Sites - located a site on an infill site, follow National Flood Insurance Program requirements	Jordan Downs complies to 100-yr floodplain per FEMA map.

## LEED ND Checklist

5		5	<p><b>Credit 1</b></p> <p><b>Preferred Locations (1-10 points)</b>            Locate the project in one of the following locations:            OPTION1 - Location Type; a previously developed infill site that is also a previously developed site (5 points), an infill site that is not a previously developed site (3 points), an adjacent site that is also a previously developed site (2 points), a previously developed site that is not an adjacent or infill site (1 point)            OPTION2 - Connectivity; Locate project in area with the following connectivity:            Intersections/sq. mile - 400 or greater (5 points), <math>\geq 350</math> and <math>&lt; 400</math> (4 points), <math>&gt; 300</math> and <math>&lt; 350</math> (3 points), <math>&gt; 250</math> and <math>&lt; 300</math> (2 points), <math>&gt; 200</math> and <math>&lt; 250</math> (1 point)            OPTION 3 - Designated High Priority Location; Locate a project in a high priority Brownfield redevelopment area.</p>	<p>LEED ND places a high value on preserving greenfield sites and redeveloping infill sites. Due to its location and inherent qualities, the Jordan Downs Redevelopment site will receive several points under this credit. The project is located on an infill site that is also a previously developed site (5 points); however due to large city blocks and large areas of industrial land areas, the project does not meet the connectivity requirements for additional points.</p>
2			<p><b>Credit 2</b></p> <p><b>Brownfield Redevelopment (1-2 points)</b>            OPTION2 - High Priority Brownfield; Locate project on a site, part or all of which is documented as contaminated (by means of an ASTM E1903-97 Phase II Environmental Site Assessment or a local Voluntary Cleanup Program) OR on a site defined as a Brownfield by a local, state or federal government agency; AND Remediate site contamination such that the controlling public authority approves the protective measures and/or clean-up as effective, safe, and appropriate for the future use of the site. Must be within a defined High Priority Brownfield location.</p>	<p>Per State of California requirements, the Annex site may require significant environmental remediation. Phase I of the Environmental Site Assessment has been completed and Phase II is currently in progress. In addition, the site is located in a Federal Empowerment Zone. Jordan Downs can achieve this goal through the development process.</p>
	7		<p><b>Credit 3</b></p> <p><b>Locations with Reduced Automobile Dependence (1-7 points)</b>            OPTION1 - Locate project on a site with transit service so that at least 50% of dwelling units and non-residential building entrances (inclusive of existing buildings) are within a 1/4 mile walk distance of bus stops, or within a 1/2 mile walk distance of bus rapid transit stops, or light rail stations.            Trips per week: 60 pr/weekday + 40 pr/Sat &amp; Sun =1pt; 76 pr/weekday + 50 pr/Sat &amp; Sun =2pt; 100 pr/weekday + 65 pr/Sat &amp; Sun =3pt; 132 pr/weekday + 85 pr/Sat &amp; Sun =4pt; 180 pr/weekday + 130 pr/Sat &amp; Sun =5pt; 246 pr/weekday + 150 pr/Sat &amp; Sun =6pt; 320 pr/weekday + 200 pr/Sat &amp; Sun =7pt</p>	<p>Currently Jordan Downs residents use more public transit and own less cars than the regional average. Jordan Downs Master Plan further supports the use of public transit through walkable streets and more connections within the community making it easier to walk from point A to point B. All of the dwelling units and non-residential building entrance are within a 1/4 mile walk distance of bus stops and /or 1/2 mile walk distance of bus rapid transit stops and light rail stations.</p>
		1	<p><b>Credit 4</b></p> <p><b>Bicycle Network and Storage (1 point)</b>            BICYCLE NETWORK - Locate project within 1/4 mile of a bicycle network of at least 5 miles, or a bicycle network within a 1/4 mile that connects to at least 10 diverse uses within 3 miles.            AND provide bicycle storage - Multifamily Residential; Provide at one indoor bicycle storage space for 30% of residents. Retail - provide storage for 10% of planned retail workers and one bicycle space per 5,000 square feet of retail space for customer.</p>	<p>A bicycle network is beginning to take shape in Los Angeles, and several bicycle lanes already exist throughout the City. However, currently no bicycle network is within 3 miles of the Jordan Downs site. The LA bicycle network will continue to expand and the Jordan Downs redevelopment should continue to evaluate and pursue potential connections.</p>

## LEED ND Checklist

		3		<p><b>Credit 5</b></p> <p><b>Housing and Jobs Proximity (1-3 points)</b>          OPTION 1: Include a residential component equaling at least 30% of the project's total building square footage, and locate the project such that the center is within 1/2 mile walk distance of a number of pre-project jobs equal to or greater than the number of dwelling units in the project.</p>	<p>Due to the significant jobs-housing imbalance in Watts, job development is a priority in this project and a great sustainability opportunity. Pre-project jobs in the area include commercial, industrial and institutional; Auto Detailing Shop, Head Start Day Care, Steel Pipe Cutting, Ornamental Iron Works, Truck Storage, Recycling Center, David Starr Jordan High School, Maxine Waters Employment Preparation Center, Dept. of Rec &amp; Park. The pre-existing jobs within a 1/2 mile walk from the project center is low making this credit difficult to achieve. However, the Redevelopment team has put a great emphasis on improving this condition by designating over 14 acres to employment uses, including up to 200,000 square feet of retail.</p>
1				<p><b>Credit 6</b></p> <p><b>Steep Slope Protection (1 point)</b>          OPTION1 - No Disturbance of Slopes Over 15%; Locate a site that has no pre-project slopes greater than 15%, or avoid disturbing portions of projects that have pre-project slopes greater than 15%.</p>	<p>Jordan Downs has no pre-project slopes greater than 15%.</p>
1				<p><b>Credit 7</b></p> <p><b>Site Design for Habitat or Wetlands Conservation (1 point)</b>          OPTION1 - Sites with No Significant Habitat or Wetlands/Water Bodies; Locate the project on a site that does not have significant habitat as defined by the state's Natural Heritage Program.</p>	<p>Jordan Downs meets this requirement.</p>
		1		<p><b>Credit 8</b></p> <p><b>Restoration of Habitat or Wetlands (1 point)</b>          Restore wildlife habitat and wetlands that have been harmed by previous human activities - use only native plants in an area at least 10% of the development footprint and remove any invasive species. Protect such areas from development in perpetuity by donating or selling the land or a conservation easement on the land to an accredited land trust or relevant public agency.</p>	<p>Considering the redevelopment scope, restoring 10% of the development footprint to native plants may not be feasible due to the lack of green space available.</p>
		1		<p><b>Credit 9</b></p> <p><b>Conservation Management of Habitat or Wetlands (1 point)</b>          Create a long-term (at least 10-yr) management plan for on-site native habitats, wetlands, water bodies and their buffers and a guaranteed funding source for management</p>	<p>Considering the redevelopment scope, creating a long-term conservation management for habitat may not fit with the land-use planning proposed for the project site's open green space. With the limited amount of open space on the project site and the likeliness of community use of the open space, these requirements will be difficult to achieve.</p>

# LEED ND Checklist

3	27	10	3	Neighborhood Pattern & Design		Master Plan Assessment
	X			Prereq 1	<p><b>Walkable Streets</b> Design and build the project such that all of the following are achieved:</p> <p>a. A principal functional entry for 90% of buildings has a front façade that faces a public space such as a street, square, park, paseo, or plaza, but not a parking lot.</p> <p>b. A minimum of 15% of all street frontages located within the project have a minimum building-height-to-street-width ratio of 1:3</p> <p>c. Continuous sidewalks or equivalent provisions for walking are provided along both sides of 90% of streets within the project, including all streets bordering the project. New sidewalks must be at least 4' wide in residential and 8' wide in non-residential or mixed-use blocks.</p> <p>d. No more than 20% of the street frontages within the project are faced directly by garage and service bay openings.</p>	Jordan Downs Redevelopment mission of creating a vibrant, urban community while minimizing the need for vehicles, achieves the intent of this credit with the walkable streets design including a Master Plan with buildings that have a front façade that faces the street, with townhouses and mid-rise buildings that will meet the 1:3 building-height-to-street-width ratio, and with continuous sidewalks on the majority of the streets. The redevelopment process will need to ensure that the Specific Plan meets these requirements with new sidewalks at least 8 feet wide on retail and/or mixed use blocks and at least 4 feet wide on all other blocks, and with garages and service bay openings occupying no more than 20% of the street frontages.
	X			Prereq 2	<p><b>Compact Development</b> OPTION1 - For Projects with Transit Service - Build residential components of the project at 12 or more dwelling units per acre of buildable land for residential use. AND build any non-residential components of the project at 0.80 FAR or greater for components located within the SLLc3 specified walk distances of transit service and 0.50 FAR or greater for non-residential components falling outside of the specified walk distances.</p>	Jordan Downs meets the 2-point threshold in SLLc3 Option 1 and the Redevelopment of the minimum density considered of 1600 units (42 units pr/acre) meets the required density for the residential component of this prerequisite. The Redevelopment has designated 14 acres to non-residential components including retail, industrial, and commercial. During development of the Specific Plan for the project HACLA and the City of LA will be determining zoning requirements. The FAR should meet the minimum requirements of 0.80 and 0.50 FAR for this prerequisite.
	X	X		Prereq 3	<p><b>Connect and Open Community</b> Design the project with at least one through-street and/or non-motorized right-of-way intersecting the project boundary at least every 800 feet. AND OPTION1 - For Projects with Internal Streets; Design a project with at least 150 intersections/sq. mile</p>	Jordan Downs Redevelopment has made significant steps towards connecting to the major through-ways including, Century Blvd, Tweeter Blvd, and Laurel Street. Through-streets on the perimeter are also incorporated into the Master Plan improving connectivity to the surrounding neighborhoods. Non-motorized right-of-ways should be considered in the next design phase to ensure the project meets the 800 feet project boundary requirement.

**LEED ND Checklist**

<b>1</b>	<b>8</b>	<b>3</b>	<b>Credit 1</b>	<p><b>Walkable Streets (1-12 points)</b>Promote walking and bicycling by providing safe, appealing, and comfortable street environments. A project may earn up to a maximum of 12 points by meeting these criteria:</p> <p>a. At least 80% of total linear ft of street-facing building facades are no more than 25' from property line. b. At least 50% of total linear ft of street-facing building facades are no more than 18' from property line. c. At least 50% of the total linear feet of mixed-use and non-residential street-facing building facades in the project are within one foot of the sidewalk. d. Functional building entries occur at average of 75' along non-residential/mixed-use buildings &amp; blocks. e. Functional building entries occur at average of 30' along non-residential/mixed-use buildings &amp; blocks. f. All ground-level retail, service, and trade uses that face a public space have clear glass on at least 60% of their façades between 3 and 8 feet above grade. g. No blank walls longer than 40% of a façade, or more than 50 feet occur along sidewalks. h. Any ground-level retail, service, or trade windows must be kept open and visible (un-shuttered) at night, and this must be stipulated in CC&amp;Rs or other binding documents. i. On-street parking is provided on a minimum of 70% of both sides of all new and existing streets including the project side of bordering streets. j. Continuous sidewalks, or equivalent provisions for walking, are provided along both sides of all streets within the project, including the project-side of streets bordering the project. k. If the project has ground-floor dwelling units, at least 50% of those units must have an elevated finished floor no less than 24 inches above the sidewalk grade. l. In non-residential or mixed-use projects, 50% or more of the total number of office buildings include ground floor retail along 60% of the length of the street façade &amp; 100% of mixed use buildings include at least 60% of the street level facade as retail, live/work, and/or ground floor dwelling units. m. At least 40% of all street frontages within the project, have a minimum building-height-to-street-width ratio of 1:3, or one foot of building height for every three feet of street width. n. 75% of exclusively residential streets are designed for a target speed of no more than 20 mph. o. 70% of new non-residential/mixed-use streets are designed for a target speed no more than 25 mph.</p>	<p>Jordan Downs Redevelopment meets two of the walkable street criteria as designed through the master planning phase and several more can be achieved if goals are incorporated early into the design process for the Specific Plan. The criteria that are met with the Master Plan design: a. 80% of total linear ft of street-facing building facades are no more than 25' from property line. j. Continuous sidewalks are provided along both sides of all streets within project. The following are walkable street goals that are achievable for this project and should be incorporated early into the next design phase: b, c, d, e, g, i, k, l, m, n, o, p. Security issues may make the following criteria challenging however these goals should still be considered: f, h (Please note, the number of criteria achieved does not equal the number of points earned for this credit)</p>																						
	<b>3</b>	<b>1</b>	<b>2</b>	<b>Credit 2</b>	<p><b>Compact Development (1-6 points)</b> Design and build a project to achieve the densities shown in the table below:</p> <table border="1"> <thead> <tr> <th>Residential (DU/acre)</th> <th>Non-residential (FAR)</th> <th>Points Available</th> </tr> </thead> <tbody> <tr> <td>10 to 13</td> <td>&gt; 0.75 and ≤ 1.00</td> <td>1</td> </tr> <tr> <td>&gt; 14 and ≤ 18</td> <td>&gt; 1.00 and ≤ 1.25</td> <td>2</td> </tr> <tr> <td>&gt; 19 and ≤ 25</td> <td>&gt; 1.25 and ≤ 1.75</td> <td>3</td> </tr> <tr> <td>&gt; 26 and ≤ 38</td> <td>&gt; 1.75 and ≤ 2.25</td> <td>4</td> </tr> <tr> <td>&gt; 39 and ≤ 63</td> <td>&gt; 2.25 and ≤ 3.00</td> <td>5</td> </tr> <tr> <td>&gt; 63</td> <td>&gt; 3</td> <td>6</td> </tr> </tbody> </table>	Residential (DU/acre)	Non-residential (FAR)	Points Available	10 to 13	> 0.75 and ≤ 1.00	1	> 14 and ≤ 18	> 1.00 and ≤ 1.25	2	> 19 and ≤ 25	> 1.25 and ≤ 1.75	3	> 26 and ≤ 38	> 1.75 and ≤ 2.25	4	> 39 and ≤ 63	> 2.25 and ≤ 3.00	5	> 63	> 3	6	<p>The compact development and walkable streets that have been achieved with the Jordan Downs Master Plan are the core aspects of sustainable development. The mixed-use development will have between 1600-1800 residential units along with retail, commercial, and community service space. The exact DU/acre and FAR will be determined during the upcoming design development of the Specific Plan.</p>
Residential (DU/acre)	Non-residential (FAR)	Points Available																									
10 to 13	> 0.75 and ≤ 1.00	1																									
> 14 and ≤ 18	> 1.00 and ≤ 1.25	2																									
> 19 and ≤ 25	> 1.25 and ≤ 1.75	3																									
> 26 and ≤ 38	> 1.75 and ≤ 2.25	4																									
> 39 and ≤ 63	> 2.25 and ≤ 3.00	5																									
> 63	> 3	6																									

## LEED ND Checklist

	<b>3</b>	<b>1</b>		<p><b>Credit 3</b></p> <p><b>Mixed-Use Neighborhood Centers (1-4 points)</b>            Include a residential component in the project that constitutes at least 25% of the project's total building square footage; at least 50% of dwelling units to be within 4 mile walk distance of at least four diverse uses --- Number of uses: 4-6=1pt; 7-10=2pts; 11-18=3pts; &gt;19=4pts</p>	<p>The Jordan Downs mixed-use neighborhood will offer many community amenities. As part of the Human Capital Plan the community has provided input throughout the master planning process to ensure the amenities most sought after are considered and provided. These community amenities cover the diverse uses required by this credit including; food retail, community-serving retail, services, civic/community facilities. The maximum 4 points should be achievable for this credit.</p>
	<b>4</b>	<b>3</b>		<p><b>Credit 4</b></p> <p><b>Mixed-Income Diverse Communities (1-7 points)</b>            OPTION1 - Diversity of Housing Types; Total variety of housing (size and type) within the project, or within 1/4 mile of the center of the project should achieve at least 0.5 according to the Simpson Diversity Index.            OPTION2 - Affordable Housing; Include a proportion of rental and/or for-sale dwelling units priced for households earning below area median income (AMI).            OPTION3 - If a project earns at least two points in Option 1 and at least two points in Option 2 (at least one of which must be earned by providing housing at or below 80% AMI), an additional point is earned.</p>	<p>Ensuring a mix of housing to attract diverse incomes is a key sustainability strategy of this project that will bolster overall diversity and will help accomplish community development goals. A variety of housing types have been presented and analyzed throughout the master planning process of Jordan Downs. The lower density of 1600-1800 residential units chosen by the community will allow for a mix in sizes and types of housing including; town homes, 2-3 bedroom apartments, and 1 bedroom senior living housing. The exact mix has not been defined in this master planning phase and will continue to be developed in the following design phases and funding opportunities.</p>
	<b>1</b>			<p><b>Credit 5</b></p> <p><b>Reduced Parking Footprint (1 point)</b>            For new non-residential buildings and multifamily residential buildings, either do not build new off-street parking lots, or locate all new off-street surface parking lots at the side or rear of buildings.            AND            Use no more than 20% of the total development footprint area for all new off-street surface parking facilities, with no individual surface parking lot larger than 2 acres.            AND            Provide bicycle parking and storage for a capacity of the following new buildings:            Multifamily Residential is 30% of residents, Retail is 10% of retail worker planned occupancy, Commercial Non-Retail is 10% of planned occupancy            AND            For new non-residential and mixed use buildings, provide carpool parking spaces equivalent to 10% of the total automobile parking for each non-residential and mixed use building on the site.</p>	<p>The surface parking footprint in the Jordan Downs Master Plan has been greatly reduced by using tuck-under parking, allowing more area for open space and housing and creating a more pedestrian oriented site. Using less than 20% of the total development footprint for parking (does not include street parking) is achievable. The northeast corner of the master plan site consists of retail, commercial and a job center. In order to achieve this credit, the parking lot serving this area should not exceed 2 acres. Bicycle storage will be an important consideration in following design phases and should strive to meet the required capacities for this credit.</p>

## LEED ND Checklist

			<b>1</b>	<b>Credit 6</b>	<p><b>Street Network (1-2 points)</b>            Include a through-street and/or non-motorized rights-of way intersecting, or terminating at the project boundary at least every 400 feet. Portions of the boundary are excluded where connections cannot be made because of physical obstacles (listed with LEED credit).            AND            Locate and/or design the project such that its internal connectivity, and/or the connectivity within a 1/4 mile radius from the geographic center of the project, falls within one of the ranges listed in the following table: Connectivity (intersections/sq. mile): &gt; 300 and ≤400=1pt; &gt; 400=2</p>	<p>The Master Plan increases connectivity within the project and to the surrounding area with more through streets and intersections at the perimeter of the project boundary and connecting the Century/Tweety Boulevard and Laurel Street. However the surrounding community includes large areas of industrial use land that breaks-up the street network thus making the intersection requirement for this credit difficult to achieve. The redevelopment of Jordan Downs will open opportunities to future projects in the Watts area for continuing improvement of street networks.</p>
	<b>1</b>			<b>Credit 7</b>	<p><b>Transit Facilities (1 point)</b>            Provide or identify covered and partially enclosed shelters within project and project boundary, adequate to buffer wind and rain, with at least one bench and illumination, at each public transit stop identified by transit agency.            AND            Provide kiosks, bulletin boards, and/or signs devoted to providing local public transit information as part of the project, including basic schedule and route information at each public transit stop within or bordering the project. In lieu of new stops, this requirement can be satisfied with a commitment from the transit agency to provide increased service to the 50% build-out stops.</p>	<p>The continuing development of the Master Plan to the Specific Plan should involve working with the transit agencies that currently serve the Jordan Downs area to determine potential new transit stop locations to serve the increased population and improvements to existing stops. Necessary improvements should also be analyzed and funding secured to ensure all measures possible are implemented to increase safety, availability, and comfort at transit stops and ultimately increasing ridership. Addressing these issues will help develop an effective public transit network for Jordan Downs.</p>
		<b>2</b>		<b>Credit 8</b>	<p><b>Transportation Demand Management (1-2 points)</b>            OPTION1 - TDM Program; Create and implement a comprehensive transportation demand management (TDM) program for the project aimed at reducing weekday peak period trips by at least 20% and fund for a minimum of two years following build out of the project (1 point)            OPTION2 - Transit Passes - Provide transit passes valid for at least one year to each resident and employee locating within the project during the first three years of project occupancy (1 point)            OPTION3 - Developer Sponsored Transit; Provide transit service (with vans, shuttles, buses) to rail, ferry, or other major transit facilities and/or another major destination such as a retail or employment center            OPTION4 - Vehicle Sharing - Locate the project such that 50% of the dwelling units and business entrances are within a ¼ mile walk distance of at least one vehicle in a vehicle-sharing program            OPTION5 - For 90% of multifamily dwelling units, their associated parking spaces are sold or rented separately from the dwelling units.</p>	<p>All of these options are possible for the Jordan Downs redevelopment; however a financial commitment and time commitment would be required. The Jordan Downs residents indicated they use public transit frequently, but were disappointed by the overall haphazard service across the network. Option 1, a TDM Program could improve coordination of the transit network with the project needs and create an opportunity to boost ridership and accessibility. Option 2, offering transit passes to residents is also an opportunity to increase ridership and would complement the pursuit of Option 1. All of these options should be considered as the project moves forward to determine what approach is most feasible for increasing accessibility and ridership of the public transit systems serving Jordan Downs.</p>

## LEED ND Checklist

1				<p><b>Credit 9</b></p> <p><b>Access to Civic &amp; Public Space (1 point)</b>          Locate and/or design project so that a park, publicly-accessible schoolyard, or plaza is at least 1/6 acre in area, lies within a ¼ mile walk distance of 90% of planned and existing dwelling units and business entrances.          AND          For projects larger than 7 acres, locate and/or design the project so that the average size of parks within and/or contiguous to the project is at least 1/2 acre.</p>	<p>The Central Park is the core of the Jordan Downs Redevelopment along, with other open space on the site totaling 8 acres of open space, to facilitate social networking, civic engagement, physical activity, and time spent outdoors. With the current lack of public parks in the Watts area the new Central Park will provide a significant contribution to Jordan Downs and Watts as a whole.</p>
1				<p><b>Credit 10</b></p> <p><b>Access to Recreation Facilities (1 point)</b>          Locate and/or design the project so that a publicly-accessible outdoor recreation facility (e.g., general playfields, soccer, baseball, basketball or other sports fields) totaling at least one acre, or a public indoor recreational facility, lies within ½ mile walk distance of 90% of dwelling units and business entrances.</p>	<p>The Central Park of the Jordan Downs Master Plan offers public outdoor recreation areas including a soccer field. The Master Plan also provides a new joint-use gymnasium and pool facility. These recreational facilities, close to work and home, enable physical activity and social networking.</p>
	1			<p><b>Credit 11</b></p> <p><b>Visibility &amp; Universal Accessibility (1 point)</b>          For each new residential dwelling unit type developed, design a minimum of 20% of the dwellings in that type category (and not less than one) to comply with the Universal Design Requirements outlined in the credit.</p>	<p>Many of the residents at Jordan Downs are elderly and/or disabled making this goal vital to the sustainability of Jordan Downs. As the design process moves forward this goal should be incorporated into the Specific Plan.</p>
	2			<p><b>Credit 12</b></p> <p><b>Community Outreach and Involvement (1-2 points)</b>          OPTION1 (1 point) - Meet with adjacent and nearby neighbors, and local public officials, to solicit input          • Host an open community meeting during the conceptual design phase;          • Modify the project’s conceptual design as a direct result of community input          • Work directly with community associations and/or the local government to advertise public meetings          • Establish ongoing means for communication between the developer and the community          OPTION2 (2 points) - Comply with the provisions in Option 1; and conduct a design charrette over at least two days that includes, at a minimum, citizen preparation of conceptual project plans and drawings.</p>	<p>The Community Outreach headed by HACLA for the Jordan Downs Redevelopment has met all of the requirements possible at this phase to meet this credit. As the project continues an ongoing means for communication should be established between the developer and the community throughout the Specific Plan development and construction phases.</p>
	1			<p><b>Credit 13</b></p> <p><b>Local Food Production (1 point)</b>          OPTION1 - Dedicate permanent and viable growing space and/or related facilities (such as greenhouses) within the project at least 60 SF per dwelling unit          OPTION2 - Purchase shares in a Community Supported Agriculture (CSA) program located within 150 miles of the project site for at least 80% of the households within the project for two years.          OPTION3 - Locate and/or design project such that the center is within 1/2 mile of a farmer’s market, with vendors’ items grown within 150 miles of project site, and that operates at least once a week for at least 5 months of the year.</p>	<p>Currently the project has 2 options to achieve this credit; there is a community garden on the site (Mudtown Farms), and there is a local farmer’s market. The private open space allotted to townhouse residents will also apply to this credit.</p>

## LEED ND Checklist

	2			<p><b>Credit 14</b></p> <p><b>Tree-Lined and Shaded Streets (1-2 points)</b>          OPTION1 – Tree-Lined Streets (1 point); Design and build the project to provide street trees on both sides of 60% of new and existing streets within the project and on the project-side of bordering streets.          AND/OR          OPTION2 – Shaded Streets (1 point); Trees or other structures provide shade over at least 40% of the length of sidewalks on streets included within or contiguous to the project.          AND          For All Projects; Obtain a registered landscape architect's determination that planting details are appropriate to growing healthy trees in the project context.</p>	<p>The entire project site has Sycamore tree-lined streets planned with a few Palm tree-lined streets for visual landmarks. The project should have no difficulty in achieving this credit.</p>
	1			<p><b>Credit 15</b></p> <p><b>Neighborhood Schools (1 point)</b>          Include a residential component in the project that constitutes at least 30% of the project's total building square footage; and locate or design the project so that at least 50% of project dwelling units are within a ½ mile walk distance of an existing or planned school entrance.          Streets bordering</p>	<p>Currently David Starr Jordan High School is on the site and Phase 4 of the Master Plan may include investments in school grounds for an elementary school. To meet this credit the new school campus must not exceed 5 acres. There are also several schools in adjacent neighborhoods of Jordan Downs that can contribute to achieving this credit.</p>

0	17	9	1	GREEN INFRASTRUCTURE & BUILDINGS		Master Plan Assessment
X				<p><b>Prereq. 1</b></p> <p><b>Certified Green Buildings</b>            Design, construct, or retrofit one whole building to be certified through a third-party green rating system.</p>	<p>Green building strategies should continue to be developed as the design progresses towards the Specific Plan. The appropriate LEED rating (LEED for New Construction/Homes/Schools/Retail Commercial Interiors/Core &amp; Shell) should be evaluated for each building type early in the design process.</p>	
	X			<p><b>Prereq. 2</b></p> <p><b>Minimum Building Energy Efficiency</b>            For 90% of non-residential buildings, mixed use buildings, and multifamily residential buildings four stories or greater: New buildings constructed as part of the project must, on average, be 10% better than ANSI/ASHRAE/IESNA Standard 90.1-2007.            AND            For new multifamily residential buildings three stories or fewer and new single-family residential buildings: 90% of new buildings must meet Energy Star or equivalent criteria.</p>	<p>Energy efficiency should be incorporated into the building design throughout the design process and evaluated during design to confirm energy efficiency. Many design strategies can be implemented to increase energy efficiency including but not exclusive to: appropriate placing of windows, high-performance glazing, shading elements incorporated into building design, energy efficient HVAC, equipment, and natural ventilation.</p>	

## LEED ND Checklist

X				<p><b>Prereq. 3</b></p> <p><b>Minimum Building Water Efficiency</b>            For non-residential buildings, mixed-use buildings, and multifamily residential buildings four stories or more: Indoor water use in new buildings and buildings undergoing major renovations as part of the project must, on average, use 20% less water than baseline buildings.            AND            For new multifamily residential buildings three stories or fewer and new single-family residential buildings: 90% of buildings must use a combination of water fixtures that would earn 3 points through the Indoor Water Use credit of LEED for Homes 2008.</p>	<p>Improving water efficiency is becoming an increasingly more important goal for the City of Los Angeles due to drought conditions and shortage of outside water resources. The Jordan Downs Redevelopment has an opportunity to go beyond the 20% water efficiency of this prerequisite by incorporating grey water reuse to further reduce potable water usage. Water savings strategies should be considered in the early design phases as the project moves forward.</p>
X				<p><b>Prereq. 4</b></p> <p><b>Construction Activity Pollution Prevention</b>            Implement an Erosion and Sedimentation Control (ESC) Plan for all construction activities associated with the project.</p>	<p>This prerequisite will be achieved through the California required SWPPP.</p>
	5			<p><b>Credit 1</b></p> <p><b>Certified Green Buildings (1-5 point)</b>            OPTION1 – PROJECTS WITH 10 OR FEWER HABITABLE BUILDINGS; Design, construct, or retrofit one whole building to be certified through a third-party green rating system.            OR            OPTION2 – PROJECTS OF ALL SIZES; Design, construct, or retrofit a percentage of the total project building square footage to be certified under one of the LEED building rating systems listed above, beyond the prerequisite requirement.</p>	<p>The project should commit to a goal of how many buildings will be certified early in the next design phase. See GCT Prereq 1 for comments.</p>
	2			<p><b>Credit 2</b></p> <p><b>Building Energy Efficiency (2 points)</b>            For non-residential buildings, mixed use buildings, and multifamily residential buildings four stories or greater: 90% of new buildings constructed as part of the project must, on average, be 18% (1 point) or 26% (2 points) better than ANSI/ASHRAE/IESNA Standard 90.1-2007            AND            For new multifamily residential buildings three stories or fewer and new single-family residential buildings: 90% of new buildings achieve a Home Energy Rating System (HERS) index score of at least 75.</p>	<p>Energy efficiency of 26% and higher is possible with a timely commitment to the goal at the beginning of the upcoming design phase. Improving building energy efficiency in the middle or the end of the design process is much more costly and time consuming. With the Climate Action Plan issued by Los Angeles Mayor Antonio Villaraigosa, this should be a high priority goal for the project. Achieving this credit will also count towards achieving points under the individual LEED building rating certification. See GIB Prereq 2 for additional comments.</p>
	1			<p><b>Credit 3</b></p> <p><b>Building Water Efficiency (1 point)</b>            For non-residential buildings, mixed use buildings, and multifamily residential buildings four stories or greater: Indoor water use in new buildings and buildings undergoing major renovations as part of the project must, on average, use 40% less water than baseline buildings.            AND            For new multifamily residential buildings three stories or fewer and new single-family residential buildings: 90% of buildings must use a combination of water fixtures that would earn 5 points through the Indoor Water Use credit of LEED for Homes 2008.</p>	<p>Along with providing the most water efficient plumbing fixtures to the buildings, other water saving strategies to consider in the next design phase include: reusing grey water collected from storm drains, sinks, and washing machines for toilet flushing. Achieving this credit will also count towards achieving points under the individual LEED building rating certification. Please see comments for GIB prereq. 3 for more comments.</p>

## LEED ND Checklist

	1			<b>Credit 4</b>	<p><b>Water Efficient Landscaping</b> Reduce potable water consumption for outdoor landscape irrigation by 50% from a calculated mid-summer baseline case.</p>	<p>The 50% reduction of potable water should be achievable with proper plant selection including native and drought tolerant plants. The project should push for no-potable water use for irrigation. The project team should consider possible strategies for potable water use for landscaping including: collecting stormwater to be used for irrigation, directing stormwater flow to planted areas, and high efficient irrigation system for areas that do need it.</p>
			1	<b>Credit 5</b>	<p><b>Existing Building Reuse (1 point)</b> To achieve this credit, no historic building or portion of a historic building may be demolished or altering of any cultural landscapes as part of the project. AND Reuse the existing building stock, achieving the greater of the two benchmarks specified below (based on surface area): 50% of one existing building structure (including structural floor and roof decking) and envelope OR 20% of the total existing building stock (including structure and envelope)</p>	<p>The project scope does not include any reuse of existing buildings.</p>
		1		<b>Credit 6</b>	<p><b>Historic Resource Preservation and Adaptive Use (1 point)</b> To achieve this credit, no historic building or portion of a historic building may be demolished as part of the project.</p>	<p>The Master Plan includes preserving the Freedom Tree and creating a park setting surrounding the tree to enhance the cultural landscape. <i>The David Starr Jordan Downs High School qualifies as a historic building and will remain unaltered on the project site.</i></p>
	1			<b>Credit 7</b>	<p><b>Minimize Site Disturbance in Design and Construction (1 point)</b> OPTION 1 – DEVELOPMENT FOOTPRINT ON PREVIOUSLY DEVELOPED LAND; Locate 100% of the development footprint on areas that are previously developed and for which 100% of the zone of construction impact is previously developed; OPTION 2 – UNDEVELOPED PORTION OF PROJECT REMAINS UNDISTURBED; Depending on the density of the project, do not develop or disturb a portion of the land that has not been previously developed on the site. AND FOR ALL PROJECTS; Survey the site to identify the condition and characteristics of on-site trees and preserve a minimum of 75% of all non-invasive trees over 18 inches in DBH, and a minimum of 25% over 12 inches DBH of deciduous, and 6 inches DBH if conifer.</p>	<p>Option 1 - Jordan Downs is located on a 100% previously developed site. A tree assessment by an ISA Certified Arborist should be completed early in the next phase to determine what trees may be preserved during redevelopment.</p>

## LEED ND Checklist

	2	2		<b>Credit 8</b>	<p><b>Stormwater Management (1-4 points)</b> Implement a comprehensive stormwater management plan for the project that infiltrates, re-uses, or evapotranspires the below-specified amount of rainfall from the project's development footprint (inclusive of existing buildings and surfaces) and other areas that have been graded so as to be effectively impervious. 80% = 1 point, 85% = 2 points, 90% = 3 points, 95% = 4 points. Two points can be earned when 85% rainfall has been retained and the project achieves 2 points for each of the following credits: NPDe1, NPDe2, NPDe3.</p>	Retaining stormwater reduces pollution and hydrologic instability, two highly important issues for southern California. The percentage of rainfall the project should design to retain is a goal that should be set at the beginning of the next design phase.
	1			<b>Credit 9</b>	<p><b>Heat Island Reduction (1 point)</b>            OPTION1 – NON-ROOF MEASURES; Provide 50% of the non-roof site hardscape (including roads, sidewalks, courtyards, parking lots, and driveways) with shade, light colored paving materials, and/or open grid pavement systems.            OR            OPTION 2 – HIGH REFLECTANCE &amp; VEGETATED ROOFS; Use roofing materials that have a SRI equal to or greater than 29 for steep-sloped and 78 for low-sloped for a minimum of 75% of the roof surface of all new buildings within the project; or install a vegetated ("green") roof for at least 50% of the roof area of all new buildings within the project.            OR            OPTION 3 – MIXED NON-ROOF AND ROOF MEASURES; Use a mix of strategies under Options 1 &amp; 2 to meet the following criteria:  <math>(\text{Area of Non-Roof Measures}/0.5) + (\text{Area of SRI Roof}/0.75) + (\text{Area of Vegetated Roof}/0.5) \geq \text{Total site Hardscape Area} + \text{Total Roof Area}</math></p>	Through a mix of strategies the project should achieve this credit. Providing shade from open structures such as those supporting solar photovoltaic panels, a light colored paving palette for hardscape areas such as courtyards, public plazas, and sidewalks are strategies used for reducing heat gain. Using highly reflective material for the roofing to reduce heat gain will also improve the energy efficiency of the project.
	1			<b>Credit 10</b>	<p><b>Solar Orientation (1 point)</b>            OPTION1 – BLOCK ORIENTATION (FOR PROJECTS EARNING AT LEAST 2 PTS UNDER NPDe2: COMPACT DEV); Locate the project on existing blocks, or design and orient the project, such that 75% or more of the blocks, have one axis within plus or minus 15 degrees of geographical east/west, and the east/west length of those blocks are at least as long, or longer, as the north/south length of the block; and earn at least two points under NPD Credit 2: Compact Development;            OR            OPTION 2 – BUILDING ORIENTATION (AVAILABLE FOR ALL PROJECTS); Design and orient 75% or more of the project total building square footage (excluding existing buildings) such that one axis of each qualifying building is at least 1.5 times longer than the other, and the longer axis is within 15 degrees of geographical east/west axis.</p>	The project blocks have been designed to fit into the existing grid surrounding the project.

## LEED ND Checklist

		1		<p><b>Credit 11</b></p> <p><b>On-Site Renewable Energy Sources (1-3 points)</b> Design and incorporate, for the use of multiple buildings, on-site non-polluting renewable energy generation technologies such as solar, wind, geothermal, small scale/micro hydroelectric, and biomass with production capacity of at least 5% of the project's annual electrical and thermal energy cost. 5% = 1 point, 12.5% = 2 points, 20% = 3 points.</p>	<p>Solar energy generation is a good option to further reduce the carbon footprint of the project. Solar panel locations could include rooftops and shading structures. The pursuit of this goal should be decided early in the following design phase to ensure that the necessary infrastructure is included in the project design. Federal, state and local funding may help offset cost.</p>
		2		<p><b>Credit 12</b></p> <p><b>District Heating and Cooling (2 points)</b> Design and incorporate into the project a district heating and/or cooling system for space conditioning and/or water heating of new buildings in the project (at least 2 buildings total) such that at least 80% of the project's annual heating and/or cooling consumption is provided by the district plant.</p>	<p>This goal reduces air, water, and land pollution resulting from energy consumption in buildings by employing energy efficient district technologies.</p>
	1			<p><b>Credit 13</b></p> <p><b>Infrastructure Energy Efficiency (1 point)</b> Design or purchase any traffic lights, street lights, water and wastewater pumps and treatment systems that are included as part of the project to achieve a 15% annual energy reduction beyond an estimated baseline energy use for this infrastructure.</p>	<p>These energy saving measures will further reduce the carbon footprint of the project.</p>
		2		<p><b>Credit 14</b></p> <p><b>Wastewater Management (1-2 Points)</b> Design and construct the project to retain on-site at least 25% of the average annual wastewater generated by the project (exclusive of existing buildings), and reuse that wastewater to replace the use of potable water. Additional points are awarded as follows: 25% = 1 point, 50% = 2 points Provide on-site wastewater treatment to a quality required by state and local regulations for the proposed reuse.</p>	<p>This is an excellent goal for the project considering the shortage of potable water in the Los Angeles area. However, there will be costs to achieving this credit that may make it challenging. The project team would need to commit to this credit early in the next design phase to incorporate this goal with the minimal costs. Achieving this credit will also count towards achieving points under the individual LEED building rating certification. See additional comments under for GIBc3.</p>

## LEED ND Checklist

		1		<p><b>Credit 15</b></p> <p><b>Recycled Content in Infrastructure (1 Point)</b>            Use materials for new infrastructure such that the sum of post-consumer recycled content, in-place reclaimed materials, and one-half of the pre-consumer recycled content constitutes at least 50% of the total mass of infrastructure materials. Infrastructure items that apply include:</p> <ul style="list-style-type: none"> <li>a. Roadways, parking lots, sidewalks, pavers, curbs</li> <li>b. Water retention tanks and vaults</li> <li>c. Base and subbase materials for the above</li> <li>d. Stormwater, sanitary sewer, and water piping</li> </ul>	<p>To achieve this credit, infrastructure items should be specified early in the project to determine availability and cost for recycled materials and should consider the following recycled materials: for new roadways, parking lots, sidewalks, and curbs any aggregate base and aggregate subbase should be considered for at least 90% by volume for recycled aggregate materials, asphalt base should be considered for a minimum of 15% by volume recycled asphalt pavement, asphalt concrete pavement should be considered for a minimum 15% by volume recycled asphalt pavement, Portland cement concrete pavement should be considered for recycled mineral admixtures to reduce by at least 25% the concrete mix's typical Portland cement content and a minimum of 10% by volume reclaimed concrete material aggregate.</p>
	1			<p><b>Credit 16</b></p> <p><b>Solid Waste Management Infrastructure (1 Point)</b>            Meet at least 4 of the following 5 requirements: the following requirements and publicize their availability and benefits:</p> <ul style="list-style-type: none"> <li>a. Include at least one recycling or reuse station as part of the project available to all project occupants</li> <li>b. Include at least one drop-off point as part of the project available to all project occupants for office or household potentially hazardous wastes</li> <li>c. Include at least one compost station as part of the project</li> <li>d. Recycle and/or salvage at least 50% of non-hazardous construction and demolition debris</li> </ul>	<p>Along with reducing waste in landfills, the proper disposal of waste is a great community educational opportunity for recycling and conserving resources. Achieving this credit will also count towards achieving points under the individual LEED building rating certification.</p>
	1			<p><b>Credit 17</b></p> <p><b>Light Pollution Reduction (1 point)</b>            For purposes of this credit, shared portions of a project are publically or privately-owned areas and facilities dedicated to common use:            All exterior lighting:</p> <ul style="list-style-type: none"> <li>- In residential area, use motion sensors to reduce light levels by at least 50% when no activity has been detected in 15 minutes.</li> <li>- In all shared areas, have automatic controls capable of turning off exterior lighting when sufficient daylight is available.</li> <li>- CC&amp;Rs to require continued adherence.</li> </ul> <p>AND</p> <p>Document which one or more of the lighting zones defined below describes the area(s) immediately around the project, and follows the requirements for those specific zones: LZ1 — Dark (Park and Rural Settings), LZ2 — Low (Residential areas), LZ3 — Medium (Commercial/Industrial, High-Density Residential), LZ4 — High (Major City Centers, Entertainment Districts. Where roadway lighting is part of the project, such lighting shall meet the requirements for the defined zones.</p>	<p>The exterior lighting will need to be evaluated for safety and way finding to determine what lighting strategies will meet the projects goals along with minimize light trespass from site, reduce sky-glow to increase night sky access, improve nighttime visibility through glare reduction, and reduce development impact on nocturnal environments.</p>