

IN THE SUPREME COURT OF THE STATE OF NEVADA

CITY OF LAS VEGAS, A POLITICAL  
SUBDIVISION OF THE STATE OF  
NEVADA,

Appellant,

vs.

180 LAND CO., LLC, A NEVADA  
LIMITED-LIABILITY COMPANY; AND  
FORE STARS, LTD., A NEVADA LIMITED-  
LIABILITY COMPANY,

Respondents.

180 LAND CO., LLC, A NEVADA  
LIMITED-LIABILITY COMPANY; AND  
FORE STARS, LTD., A NEVADA LIMITED-  
LIABILITY COMPANY,

Appellants/Cross-Respondents,

vs.

CITY OF LAS VEGAS, A POLITICAL  
SUBDIVISION OF THE STATE OF  
NEVADA,

Respondent/Cross-Appellant.

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JOINT APPENDIX  
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**MOJAVE NATIVE AND ADAPTIVE SPECIES**

The following list, adapted from previous versions of SNWA's and Southern Nevada Regional Planning Coalition's Regional Plant Lists of Mojave desert native and adaptive species by common name, is rated on environmental and temperature tolerance, water efficiency, canopy coverage, diversity, maintenance needs, and disease resistance. These are appropriate for public and private street trees and landscaping. The Planning Department shall maintain a complete list of approved tree, shrubs, groundcover, grasses, and perennials.

**Preferred High Quality Trees**

- Arizona ash
- Bay Laurel
- Blue Elderberry
- Blue Palo Verde
- Cat Claw Acacia
- Chaste Tree
- Chilean Mesquite
- Chinese Date
- Chinese Pistache
- Coolibah tree
- Cork Oak
- Desert Museum Palo Verde
- Desert Willow
- Escarpment Oak
- Fan-Tex/Rio Grande Ash
- Foothills Palo Verde
- Goldenrain
- Holley Oak
- Honey Locust
- Japanese Pagoda
- Kidneywood
- Lacebark Elm
- Littleleaf ash
- Modesto Ash
- Mulga Acacia
- Netleaf hackberry
- Pomegranate
- Raywood ash
- Sawleaf Zelkova
- Screwbean Mesquite
- Shoestring Acacia
- Sonoran Emerald Palo Verde
- Southern Live Oak
- Sweet Acacia
- Texas Ebony
- Texas Mountain Laurel
- Texas Olive
- Thornless Chilean Mesquite
- Twisted Acacia
- Valley Oak
- Velvet Mesquite

- Western Honey Mesquite
- White Thorn Acacia
- Wilson Olive
- Xylosma

**Additional Approved Trees**

- Aleppo pine
- Almond
- American elm
- Amur maple
- Argentine mesquite
- Arizona cypress
- Australian pine
- Blackbrush acacia
- Blue atlas cedar
- Blue leaf wattle
- Blue oak
- Brazilian bluewood
- Buckley oak
- Bur oak
- Burford holly
- Camperdown wych elm
- Canby oak
- Carob
- Cathedral live oak
- Cedar elm
- Chihuahuan orchid tree
- Chilean palo verde
- Chinquapin oak
- Chir pine
- Cider gum
- Common hackberry
- Coonavitra wattle
- Desert gum
- Desert ironwood
- Desert oak
- Desert scrub oak
- Fern of the desert
- Fig
- Foothill pine
- Fruiting, Contorted mulberry
- Fruitless olive

- Gambel oak
- Golden leadball tree
- Gooddings willow
- Heritage live oak
- High Rise live oak
- Indian rosewood
- Ironwood
- Italian buckthorn
- Jujube
- Leather leaf acacia
- Mastic tree
- Medierranean hackberry
- Mexican buckeye
- Mexican ebony
- Mexican plum
- Mexican redbud
- Mexican sycamore
- Monterrey oak
- Mt. Atlas mastic tree
- Nellie R. Stevens holly
- One seed juniper
- Orchid tree
- Osage orange
- Palo brea
- Pecan
- Pistachio
- Prairie flameleaf sumac
- Red ironbark
- Red push pistache
- Red river gum
- Red thorn
- River she oak
- Seedless hybrid mesquite
- Shumad oak
- Silver dollar gum
- Single leaf ash
- Sonoran hybrid palo verde
- Stone pine
- Strawberry tree
- Swamp mallee
- Tenaza
- Texas honey mesquite
- Texas redbud

**MOJAVE NATIVE AND ADAPTIVE SPECIES**



- Thornless honey mesquite
- Thornless hybrid mesquite
- Thornless hybrid palo verde
- Turkish pine
- Utah juniper
- Wavy leaf oak
- Weeping acacia
- Weeping bottlebrush
- Western redbud
- Western soapberry
- White poplar
- Whitehord acacia
- Willow acacia
- Willow leaf peppermint gum
- Willow pittosporum
- Wilson holly
- Yaupon holly

- Chaparral sage
- Chihuahuan sage
- Cliff goldenbush
- Cliff rose
- Compact jojoba
- Compact Texas Ranger
- Cooper's wolfberry
- Creeping Acacia
- Creosote
- Damianta
- Desert Almond
- Desert Milkweed
- Desert Olive
- Desert Ruellia
- Desert Saltbrush
- Emu bush
- Evergreen sumac
- Feathery senna
- Four wing saltbush
- Fremont's Barberry
- Green cloud Texas Ranger
- Greythorn
- Indigo bush
- Jojoba
- Las Vegas Valley Buckwheat
- Little Leaf Ash
- Little Leaf Cordia
- Littleleaf Sumac
- Lynn's Legacy Texas Ranger
- Mexican Bird of Paradise
- Mexican Blue Sage
- Mexican Cliffrose
- Mexican Elderberry

**Shrubs, Groundcover and Vines**

- Apache plume
- Arizona mescal bean
- Arizona rosewood
- Baja fairy duster
- Big sage brush
- Black Dalea
- Blackbrush
- Bladdersage
- Cimarron Ranger
- Quail Bush
- Brittlebush
- Buckwheat
- Chuparosa



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**MOJAVE NATIVE AND ADAPTIVE SPECIES**

- Mexican Honeysuckle
- Mojave sage
- Mormon tea
- Narrowleaf rosewood
- Nevada Mormon Tea
- Nevada Smokbush
- Pale Wolfberry
- Pink Fairy Duster
- Pink Indigo Bush
- Purple Sage
- Quailbush
- Raincloud Texas Ranger
- Red Bird of Paradise
- Red Justicia
- Rio Bravo Texas Ranger
- Saltbush
- Sand Sage
- Scrub Live Oak
- Shadscale
- Sierra Bouquet Texas Ranger
- Silver Cloud Texas Ranger
- Silver Dalea
- Snakeweed
- Spiny Senna
- Skunk bush
- Sugar Bush
- Sweet Bush
- Texas Ranger
- Thundercloud Texas Ranger
- Turpentine Broom
- Turpentine Bush
- Utah Butterfly Bush
- Velvet Leaf Senna
- Virgin River Brittlebush
- White Bursage
- White Cloud Texas Ranger
- Wild Buckwheat
- Winterfat
- Wolf Berry
- Wooly Bursage
- Wooly Butterfly Bush
- Yellow Rabbit Brush
- Yellow Snapdragon
- Yerba Santa
- Desert Carpet Creeping Acacia
- Desert Sand Verbena
- Dwarf Coyote Brush
- Four O'Clock
- Goodding Verbena
- Goosefoot Mallow
- Indigo Bush
- Sierra Gold Dalea
- Spurge
- California grape
- Canyon grape
- Rogers red grape
- Western Virgin's bower

**Agave, Cacti, Succulents, Yucca**

- Banana Yucca
- Beaked Yucca
- Bear Grass
- Beavertail cactus
- Beehive cactus
- Bigelow's Nolina
- Black Spine Prickly Pear
- Blue Nolina
- Blue Yucca
- Bristly Prickly Pear
- Buckhorn cholla
- Bunny ears
- Claret Cup
- Common Pincushion
- Compass Barrel Cactus
- Cottontop cactus
- Cow's Tongue
- Desert Spoon
- Diamond Cholla
- Englemann's Prickly Pear
- Fishhook Barrell cactus
- Giant Sword Flower
- Green Desert Spoon
- Harriman's yucca
- Indian fig cactus
- Joshua tree
- Mojave Prickly Pear
- Mojave yucca
- Nevada agave
- Night bloom yucca
- Ocotillo
- Old Man Prickly Pear
- Orange Tuna Cactus
- Our Lord's Candle
- Palm Yucca
- Pancake Prickly Pear

- Pencil Cholla
- Pincushion
- Pine Cone Prickly Pear
- Queen Victoria Agave
- Red Yucca
- Silver Cholla
- Silver Dollar Cactus
- Soaptree Yucca
- Staghorn Cholla
- Stick Palm
- Strawberry Hedgehog
- Teddy Bear Cholla
- Texas Bear Grass
- Treebear Grass
- Twisted Yucca
- Yellow Yucca

**Grasses**

- Alkali Sacaton Grass
- Autumn Glow
- Big Galleta Grass
- Blue Grama Grass
- Blue Oat Grass
- Bull Grass
- Deer Grass
- Desert Needlegrass
- Dwarf Pampas Grass
- Feather Reed Grass
- Indian Ricegrass
- Nashville
- Pampas Grass
- Purple Threewain
- Regal Mist Muhly Grass
- Side Oats Grama



**IMPLEMENTATION STRATEGIES**

- In keeping with Tree City USA and urban forestry commitments, plant 60,000 high quality trees composed of a diverse list of native and adaptive species on public and private property that are tolerant of heat, cold, and wind; water efficient; low maintenance; non-invasive, and pest and disease resistant.
  - To further reduce extreme heat and the urban heat island effect, support and accent trees with heat and water efficient native and adaptive plants, including shrubs, groundcover, vines, agaves, cacti, succulents, yuccas, ornamental grasses, and perennials
  - Amend relevant Chapters of LVMC, including Titles 13 and 19, to provide specific measures on urban forestry that will increase the amount of shade and vegetative surfaces to provide urban cooling
  - Strengthen landscaping requirements within LVMC Title 19 to ensure trees and landscaping are not lost due to exceptions or waivers of codified standards
  - Re-evaluate standards for exceptions and waivers to landscaping requirements, especially for residential and commercial perimeter buffer areas and parking lot landscaping
  - Create a tree board to review and approve urban forestry issues
  - Should a variance, exception, or waiver be requested within a development application to the City, or require approval by the Planning Commission or City Council, the City should develop a fee-in-lieu of requirement to fund the planting of new trees
  - Work with SNWA to create a tree and landscaping program that incentivizes the replacement of sick, dying, non-native, or non-adaptive tree and plant species with xeriscaping, water efficient, drought tolerant species that provide community benefits and increase the City's tree canopy
  - Ensure the City's urban forester has access to resources in order to spend a minimum of \$2 per capita on the City's trees and urban forests, plant new trees and remove unsafe, damaged or diseased trees, and maintain and contract public trees.
  - Ensure that developers and applicants meet city landscaping efforts and require substantial evidence that landscaping plans or lack of landscaping will not compromise City objectives.
- Require planning staff to properly evaluate trees and landscaping plans during site development reviews and properly administer standards contained within the zoning ordinances.
- Adopt a tree protection ordinance that requires or incentivizes protection of trees on private land
- Within each area of the city, especially those with vulnerable populations, and when temperatures exceed 100 degrees, prepare an adequate extreme heat response.
  - Ensure cooling centers are prepared to open at each City of Las Vegas senior center and community cooling center, especially those in vulnerable communities
  - Leverage social media resources to communicate extreme heat conditions to outdoor workers, seniors, children, and cooling center locations
  - Budget additional resources toward extreme heat response
- Institute resilient best management urban design practices to ensure high quality landscape architecture and energy efficiency for public facilities and private developments.
  - Allow and incentivize green roofs, especially to meet open space requirements and for infill and mixed-use developments
  - Install physical shade structures at parks, along heavily traveled complete streets, or at key mobility hubs.
  - Amend requirements for building surfaces and materials to reflect sunlight and absorb heat
- Increase outreach and education on trees and landscaping
  - Annually celebrate Arbor Day by issuing official proclamations each Arbor Day, planting new trees at city parks, facilities, and CCSD schools within the public right of way
  - Educate members of the public about the importance of trees and their necessity as a means of reducing the urban heat island effect

**STRENGTHEN RECREATION AND CULTURAL OPPORTUNITIES FOR RESIDENTS AND VISITORS ACROSS THE CITY**

Parks and recreation assets are one of the greatest contributors to environment and quality of life in the City of Las Vegas. As part of the The Las Vegas 2050 Master Plan, residents ranked parks and recreation as the most affordable and highest quality amenity across all wards. The Las Vegas Parks and Recreation Department provides access to facilities, connections to nature and preservation of the Mojave Desert while offering beautiful parks, sports fields, reservable areas, pools, sports leagues, classes and activities for all ages and skill levels for the benefit of the city’s residents. Key to the department’s mission and success are:

- Maintaining and programming over 100 parks and facilities within the City limits, offering amenities for all individual and all levels
- Programming classes, sports, activities, campus, aquatics, events and rental facilities
- Providing pop-up parks to connect underserved areas with free activities, crafts, games, sports and fun

The use of these resources is reinforced by the statistically significant ward-based resident survey where 67% of residents find parks above average quality, 73% of residents feel at least moderately safe in City parks, and over 60% of residents use amenities like open spaces and walking trails at parks.

73% of residents also noted that there are park amenities that are missing or could be improved, thus, embedded in the Master Plan recommendations is a desire to increase the quantity of parks and access to parks in the City as growth continues. This plan sets targets and strategies to increase the quantity of open spaces and recreation elements in the city to 7 acres per 1,000 residents within a ¼ mile walk. This represents a significant increase over the current quantity of parks per resident. This element emphasizes constant updating and measuring success as decisions are made,

**SEE ALSO SECTION III.E:**  
 Connectivity



visualizing city-wide and neighborhood planning-area scale opportunities for as low as 5 acres per 1,000 residents and up to 10 acres per 1,000 residents. The Master Plan allows for flexibility in future planning and design of specific elements that meet the unique demographic demands of each community in conjunction with infill and redevelopment opportunities. The 2050 Master Plan generally emphasizes infill and adaptive reuse as the City grows “up and not out”. The Parks and recreation component similarly focuses on infill strategies as part of the best practices and tools. This section is specifically supplemented by a more in-depth CAPRA-accredited study. Specific recommendations regarding open space programming and character shall be included in future studies.

- Mini-park/ Pocket park
- Urban plaza /Pocket plaza
- Square
- Neighborhood park/Urban park
- School park
- Community park
- Special use

**OUTCOMES**

- The City will provide 7 acres of parkland / 1,000 (by 2050)
- Attain CAPRA (Commission for the Accreditation of Park and Recreation Agencies) certification

**INFILL PARK STRATEGIES**

- Leverage SNPLMA funds to build infill and adaptive re-use park spaces in key locations (i.e. new downtown infill park at Washington, Lamb and the Las Vegas Wash)
- Utilize left over and underutilized right-of-way spaces for mini-parks, urban plazas and/or linear parks (i.e. 3rd and Coolidge in downtown Las Vegas)
- Utilize roof spaces for plazas and mini-parks
- Utilize space above parking lots and parking structures for park spaces
- Emphasize placemaking through arts and culture
- Prioritize adaptive reuse

**PARKS AND RECREATION BEST PRACTICES**

- Connect to nature and unique local environment characteristics
- Meet the community where they are and engage a variety of age groups via design, elements, access and programming
- Utilize performance landscapes that not only meet the needs of the community but also meet environmental targets, goals and metrics
- Measure outcomes and adjust accordingly to achieve objectives
- Create a culture of innovation to improve quality and functionality in the parks and recreation system
- Emphasize a park management system and culture that emphasizes community and employee engagement and accountability
- Ensure use of native plant materials and low water use
- Prioritize shade creation through structures and plant materials
- Minimize use of lawn spaces
- Prioritize safety through Crime Prevention Through Environmental Design Principles (CPTED)
- Minimize use of fencing
- Prioritize multi-modal connectivity between parks spaces and between living, working and other active spaces in the City
- Program amenities and furnishings with input from the community and in the context of demographics and the larger park system



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**THE CITY PROVIDES NEW, HIGH QUALITY PARKS AND RECREATIONAL FACILITIES, YET MORE WILL BE NEEDED AS THE CITY GROWS**

As described for each Area of the City in Chapter 2, the City of Las Vegas owns and operates 1,700 acres of park space. Given the City’s population of approximately 675,000, this yields a service level of approximately 4.4 acres per 1,000 persons, which falls short of national benchmarks of 5.0 to 10.0 acres per 1,000 residents.

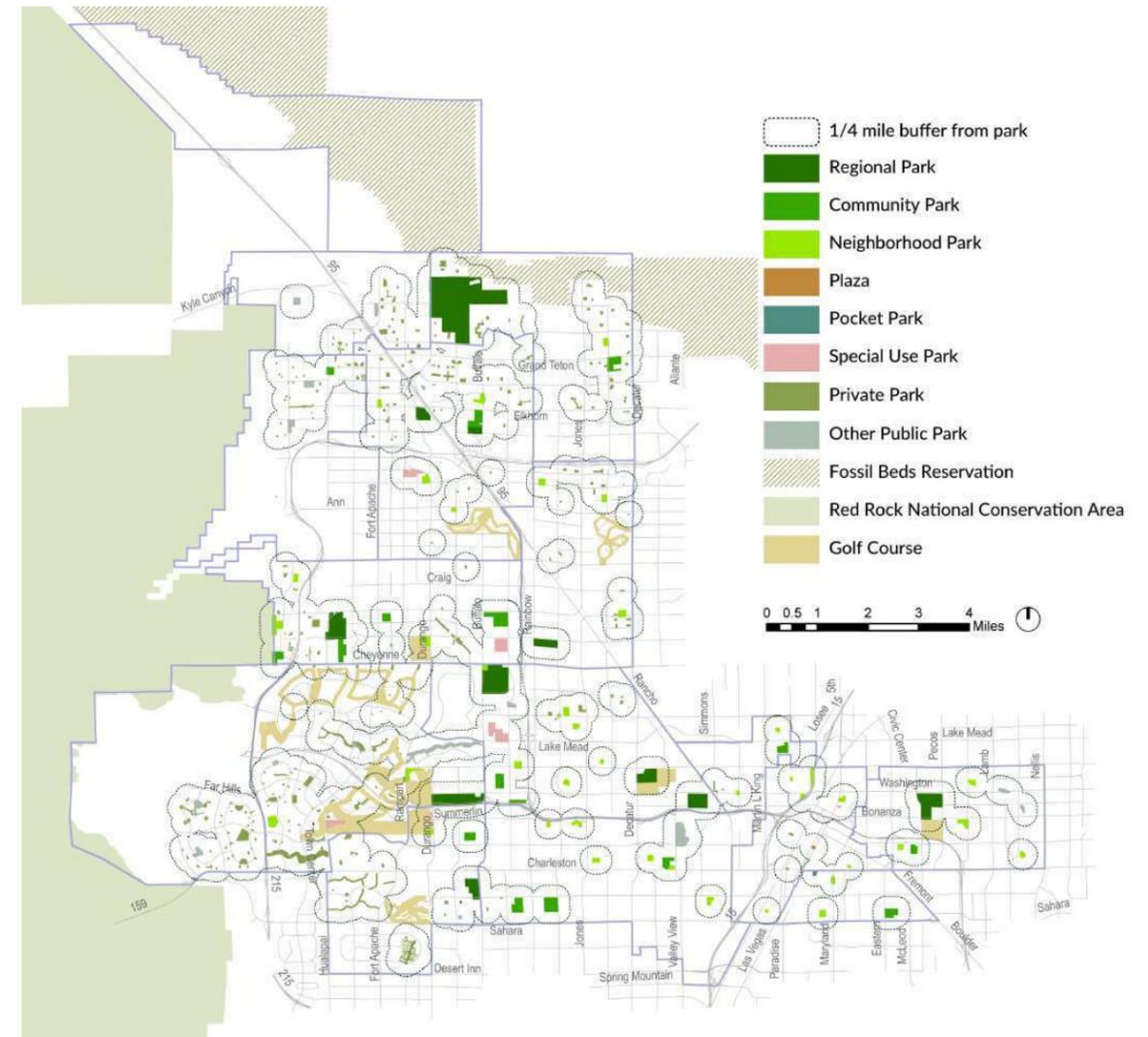
Overall, the City has been steadily increasing its service level over the course of the last Master Plan, largely due to SNPLMA funding. However, new funding, in addition to city capital funding, such as a bond, will likely be required for future needs. Although standards and service levels are intended to measure the city’s progress in serving the recreational needs of its citizens, in order to create a complete picture of the city’s park system, other types of park space that add to and complement the city’s system should also be addressed, including linear parks (trails and greenways) and quasi-public open spaces like public golf courses

Throughout public outreach, residents ranked parks and recreation as the most affordable and highest quality amenity. Most that visit use them for exercise activities or places to take children with walking trails, open spaces, and picnic areas being the most commonly used amenity. Use of other amenities varied depending on location and availability; aside from use of sport fields, residents also make use of dog parks, playgrounds and splash pads; use of sport courts vary by demographics - basketball courts and skate parks have higher rates of use in urban areas of the City by younger residents, while tennis, volleyball, horseshoe,

bocce, and shuffleboard are used more in suburban areas, often by families and seniors. Approximately three quarters of residents also reported that the quality of parks were excellent or good. About one-third of residents felt amenities were missing from parks, while forty percent believed parks could be generally improved with bathrooms, improved cleanliness, shade, and playgrounds. While most residents reported feeling safe while visiting parks, they also desired more security.

Beyond city-focused and recreation efforts, other federal (F), state (S), and local (L) efforts have contributed to conserving, creating, and maintaining local area parks that should influence City parks and recreation strategies, despite not all facilities being located within City limits.

- (F) The Red Rock Canyon National Conservation Area Establishment Act and Red Rock Canyon National Conservation Area Resource Plan ensure the provision of unique recreational opportunities to residents and visitors and greatly enhances the portfolio of parks and leisure facilities provided by the city.
- (F) The Southern Nevada Public Lands Management Act (SNPLMA) allows the Bureau of Land Management (BLM) to dispose of public land, with a portion of land sales proceeds that may be used for conservation and the development of parks, trails and natural areas by local and federal agencies. The City accesses these funds through a competitive application process.
- (S) The Nevada Division of State Parks (NDSP) serves as a liaison to the National Parks Service and is responsible for creating a Statewide Comprehensive Outdoor Recreation Plan (SCORP).



PARK TYPE	NUMBER	ACREAGE
Community	16	249.1
Neighborhood	42	197.4
Plaza	2	1.1
Pocket park	3	0.5
Regional	11	1,120.5
Special use	6	133.4



**KEY ACTIONS**

- Adopt a Parks System Master Plan
- Increase the amount of park and open space acreage and develop innovative park typologies as part of redevelopment
- Continue to integrate education, arts, and culture into community centers
- Ensure safe, accessible park design

Building upon the parks classifications established as part of the previous Master Plan, this section aligns park typologies with current zoning transects and includes character descriptions, size, amenities, use and place type applicability for all park types. The classification system utilized by the city of Las Vegas is based on the guidelines established by the National Recreation and Park Association (NRPA) and local factors and will be expanded upon as part of subsequent studies. Park typologies for the 2050 Master Plan include:

MINI-PARK/POCKET PARK	
DESCRIPTION/ CHARACTER	A compact green space for a wide range of informal or formal activities in close proximity to neighborhood residences, featuring trees and vegetation.
SIZE	Max. 0.50 acres
AMENITIES/USES	Passive/active (unstructured) open space, civic uses, including picnic shelters, casual seating, trails and paths, community gardens and public art.
APPLICABLE PLACE TYPES	Regional Center, Mixed-Use Center, Neighborhood Center Mixed-Use, Mixed Residential, Traditional Neighborhood, New Subdivision, Subdivision Retrofit

URBAN PLAZA/POCKET PLAZA	
DESCRIPTION/ CHARACTER	A formal space for commercial and civic activities, surrounded on three sides by buildings, located at the intersection important streets. While primarily hardscape, urban plazas and pocket plazas feature trees, vegetation, and greenery that contrast with the surrounding built environment.
SIZE	0.25-2 acres (pocket plazas are smaller)
AMENITIES/USES	Seating, play equipment, sport courts, passive/active (unstructured) open space, civic uses, including outdoor pavilions, open-air shelters, outdoor assembly, outdoor seating, public restrooms, commercial uses, including a farmer's market and outdoor dining, playgrounds, public art.
APPLICABLE PLACE TYPES	Regional Center, Mixed-Use Center, Neighborhood Center Mixed-Use

SQUARE	
DESCRIPTION/ CHARACTER	A formal space for unstructured recreation and civic purposes, spatially defined by buildings, tree-lined streets, walkways and planting at all edges. Squares are frequently located at the intersection of important thoroughfares, featuring abundant seating opportunities in the midst of hardscape or landscaped surroundings.
SIZE	0.50 -5 acres
AMENITIES/USES	Passive (unstructured) recreation, no organized sports, civic uses including outdoor pavilions, open-air shelters, community gathering, outdoor seating, commercial uses, including the farmer's market and outdoor dining, paths, community gardens, playgrounds, public art/creative space.
APPLICABLE PLACE TYPES	Regional Center, Mixed-Use Center, Neighborhood Center Mixed-Use

URBAN PARK/NEIGHBORHOOD PARK	
DESCRIPTION/ CHARACTER	A formal and/or natural park that serves as the recreational and social focus of a neighborhood and serves those residents within one-half mile. Paths, lawns, planted walkways, and formally arranged trees are present, occasionally around a civic element located at a prominent location.
SIZE	Min. 0.50 acres
AMENITIES/USES	Passive/active (unstructured) open space, civic uses, including outdoor pavilions, open-air shelters, community gathering, outdoor seating and public restrooms. Trails for bicycles and pedestrians, community gardens, playgrounds, and public art.
APPLICABLE PLACE TYPES	Regional Center, Mixed-Use Center, Neighborhood Center Mixed-Use, Corridor Mixed-Use, Mixed Residential, Traditional Neighborhood, New Subdivision, Subdivision Retrofit

COMMUNITY PARK	
DESCRIPTION/ CHARACTER	A park that serves a broader purpose than neighborhood parks and serves those residents within three miles.
SIZE	10-50 acres
AMENITIES/USES	The same uses as neighborhood parks, as well as sports fields, sports courts, skateboarding areas
APPLICABLE PLACE TYPES	Subdivision Retrofit, New Subdivision, Rural Preservation

SCHOOL PARK	
DESCRIPTION/ CHARACTER	A school playground and sports field that may be open for public use during times that the school is closed. For purposes of this plan, the service area for School Parks will be the same as that for Neighborhood Parks, or one-half mile. Requires CCSD joint use of facilities agreements
SIZE	Varies based on the type of school; ES: 3-4 acres; MS: 5-6 acres; HS: 10-15 acres
AMENITIES/USES	Play equipment, sport courts, sport fields
APPLICABLE PLACE TYPES	Mixed-Use Center, Neighborhood Center Mixed-Use, Mixed Residential, Traditional Neighborhood, New Subdivision, Subdivision Retrofit

SPECIAL USE	
A park or facility with a very specific use which is generally oriented for a specific purpose. Examples include, but are not limited to: equestrian parks, extreme sports parks, dog parks, motocross tracks, and competitive tennis facilities. The standard amenities vary depending upon the specific type of park/facility. Recreation trends identified by ongoing public needs assessments may also indicate demand for new special use parks/facilities. These facilities serve the entire community and do not have size or service area requirements of their own.	

GREENWAY	
Greenways are linear parks most applicable along corridors and through neighborhoods. Read more about these connectors in section E.	

 **SEE ALSO CHAPTER 4, SECTION III:**  
Public Facilities and Services

 **SEE ALSO TITLE 19.09.080:**  
Civic Space Standards



**COMMUNITY AND SENIOR CENTERS CAN BE LEVERAGED TO BE ANCHORS FOR NEIGHBORHOODS AND AREAS OF THE CITY**

The City's community and senior centers are the flagship locations for the public to gather for recreation, group and leisure activities, social support, public information, and other purposes.. As described in Section II of this Chapter, the City has relatively few of these facilities, which serve a wider population. Still, less than half of the City's residents are within a two-mile drive of a community center, and even fewer are within a short walk or bike ride. The lack of these places indicates a need for more of them, especially because they are publicly facing and provide the opportunity for residents to directly interact with the City.

Large community centers and other regional facilities are designed to serve a broad cross-section of the community. Each offer a wide variety of recreational, social, performing

and visual arts and educational needs for adults, seniors, and youth. These centers are typically co-located or are adjacent to a community park, and feature indoor or outdoor swimming pools, gyms and athletic rooms, classrooms, and game rooms. Two of these facilities, Durango Hills and Centennial Hills Community Centers, are operated through a public-private partnership with the YMCA.

Smaller neighborhood community and senior centers offer smaller scale programming space that can be used for a variety of general recreational, social, performing and visual arts activities. Because there are fewer of these types of facilities, such as Cimarron Rose Community Center, these would be an ideal model to add more facility space that not only increases community accessibility to a center, but also helps expand the City's recreational programming it already offers.

Given that these locations are important places for residents to interact and serve as anchors for neighborhoods and entire areas of the City, they should be thought of and leveraged in different ways. While many of these community centers already offer a wide range of recreational and leisure programming, these places should be thought of in the context of other goals in this plan, specifically for education and workforce development, as discussed in Chapter 3. Offering these spaces for rent, for specific special purpose classes, continuing education, or for partnerships with UNLV, CSN, or other workforce development programs. Such multi-use, multi-purpose community centers are not a new concept; specific centers could be piloted for this type of use to determine how they would work beyond just a place for the community to recreate.

**PARKS AND RECREATION OFFERS A WIDE RANGE OF PROGRAMMING AND LEISURE ACTIVITIES**

In addition to the facilities it provides, the Parks and Recreation Department offers a wide range of programming and classes. City staff organize and provide a number of classes for community participation, enrichment, and recreation at its parks and community centers, including:

- Active adult classes
- Adaptive and therapeutic recreation
- Swimming and aquatics
- Gym and fitness classes
- Arts, crafts, cooking, and performing arts
- Sport leagues and an annual Corporate Challenge

These activities are a hallmark of any world-class parks and recreation department's programming. Continued funding and expansion of these options for residents will further improve the livability and health of residents.

Finally, the City should set itself apart in the region by constructing additional facilities or developing special programming that is unique to Las Vegas and may not be found in great supply anywhere else in the region. The City has previously constructed and expanded unique leisure amenities, such as bocce, pickleball, and roller hockey; offering other unique, one-of-a kind facilities such as a velodrome, a model railroad park, fields for rugby, field hockey, lacrosse, or cricket. The City should also consider making an investment in an open-air or partially enclosed outdoor amphitheater venue for year-round large-scale ticketed performing arts events.

**IMPLEMENTATION STRATEGIES**

- Adopt a Parks System Master Plan
  - Quantify and inventory existing park amenities and determine exact locations of new facilities.
  - Determine community needs and preferences for different park types and amenities.
- Increase the amount of park and open space acreage and develop innovative park typologies as part of redevelopment
  - Prioritize use of SNPLMA, a new parks bond, and other applicable funding for new targeted parks, trails, and community centers, or for the upgrade, maintenance, or renovation of existing ones
  - Develop a large scale, regional open-air or partially enclosed outdoor amphitheater
  - When new City parks cannot be built in areas of the City lacking sufficient space, require open space provisions for private development
- Continue to integrate education, arts, and culture into community centers
  - Offer a variety of new classes and uses for community centers.
  - Pilot different multi-use, multi-purpose activities at community centers to attract new users.
- Develop additional smaller, neighborhood oriented community and senior centers for each area of the City
- Ensure safe, accessible park design
  - Construct new parks and facilities that offer unique and specialized designs and amenities not typically found in the region
    - » Velodrome
    - » A children's "exploration park"
    - » Demonstration or botanical gardens
    - » Miniature railroad park
    - » Mini golf or pitch-and-putt
    - » Mazes
    - » Archery range
    - » Fields for rugby, field hockey, and lacrosse
    - » Cricket oval
  - Require community gardens as part of zoning
  - Design parks with CPTED principles
  - Provide sports fields that use both natural and artificial turf as a means to save and conserve water
  - Provide shade and trees, while also limiting non-functional turf and using drought tolerant landscaping

EQUITABLE	RESILIENT	HEALTHY	LIVABLE	INNOVATIVE
Increase the overall quantity and connectivity of parks and open space throughout the City to ensure all residents have access to parks nearby their homes 	Utilize drought tolerant, water efficient parks and open space landscapes that address other environmental outcomes while also meeting the needs of the community. 	Provide aesthetically pleasing, comfortable, and safe opportunities for residents of all ages to connect with nature. 	Provide high quality, enjoyable recreation and leisure spaces of all types that emphasize placemaking space, arts, and culture. 	Develop unique greenways, right-of-way spaces, rooftops, and spaces above parking structures for plazas, mini-parks, or park spaces if a traditional park cannot be built. 

# III.E PARK CONNECTIVITY

✓ NRS 278.160.1(f)

## IMPROVE ACCESS AND CONNECTIVITY OF OPEN SPACES FOR ECOLOGICAL, SOCIAL, HEALTH, AND QUALITY OF LIFE BENEFITS

Access to parks and open space was repeatedly identified as a top priority throughout the 2050 Master Plan planning process. Residents highlighted the region's natural features and recreation opportunities as key amenities. As the City of Las Vegas has grown rapidly, some parts of the city lack sufficient walkable and bikable access to parks and open space. As the City prioritizes locations for new parks, safe, convenient access to those parks is paramount to help motivate residents to choose a healthier alternative to driving. Walkable and bikeable access is especially important in areas where personal automobile ownership is lower.

While the Transportation section (Chapter 4) and the City's Layered Complete Street Network addresses non-motorized connections more explicitly, this section recommends design improvements to consider these connectors as an extension of the park system. Improving access to parks and open space meets the guiding principles to improve equitable neighborhood vitality and health.



### SEE ALSO CHAPTER 4 (I.A):

Connect and enhance accessible bike and pedestrian facilities as part of a safe, efficient road network that supports all transportation modes throughout the City.

### OUTCOMES



- 85% of housing units are within ½ mile of public parks by 2050
- 90% of housing units are within 3 miles of trail by 2050

### KEY ACTIONS



- Work with appropriate agencies and stakeholders to implement the Vegas Valley Rim Trail.
- Continue to improve bicycle and pedestrian access along major roads and increase safety of alternative transportation.
- Revise residential zoning to require a greenway along corridors and limit the use of walls.
- Explore public-private partnerships to formalize public access to privately-held open spaces

## NEIGHBORHOODS NEED BETTER CONNECTIONS AND MORE BUFFERS

To improve walkable access between sites and the street network, buffers such as walls and fences should be de-emphasized as the buffer treatment of choice. More permeable buffer solutions involving vegetation and more frequent access points will help contribute to walkable access. Traditional subdivision design has limited points of vehicular entry that typically dissuades pedestrians and bicyclists from accessing nearby amenities. As the bird flies, access to open space or neighborhood commercial may be walkable but the perimeter wall typical of subdivisions makes the walk out of reach.

Future subdivisions should be planned with friendlier buffers along corridors to make it more appealing for pedestrians and bicyclists to utilize greenway and trail amenities.

One of residents' primary concerns was the lack of public access to private open space amenities. In areas lacking public parks, these private open spaces should be prioritized for public-private partnerships to encourage walks from neighbors.



## BARRIERS TO SAFE, CONVENIENT ACCESS:

- Insufficient separation between the bike/pedestrian facility and vehicular traffic
- Physical barriers between neighborhoods and corridors
- Uninviting, hot, long expanses lacking sufficient shade

## BENEFITS OF GREENWAYS AND TRAILS

As a tool for improving mobility and the environment, greenways and urban trails can provide a wide range of benefits - particularly when designed for all ages and abilities. Benefits include:

- Increased mobility and transportation options. Connects residents to jobs, commercial areas, institutions, and other destinations.
- Improved community health through active living. Creates attractive, safe and accessible places to walk, bicycle, hike, run, and more.
- Generates economic activity. Adds to property value, attracts businesses and residents, and contributes to tourism.
- Provides environmental benefits. Manages stormwater, protects and restores habitat, and improves air and water quality.
- Enhanced cultural awareness and community identity. Connects to local heritage, interpretive opportunities, and community recreation.

"I love being able to take a morning walk from my house through the desert areas near my neighborhood"

- Participant at Cetennial Hills Community Center

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20644

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LAS VEGAS MASTER PLAN

2-205

02. LAND USE + ENVIRONMENT

**CONNECTOR/TRAIL TYPES**

**Chapter 4's Layered Complete Streets Network**

- **Greenways.** Greenways, as either Regional or Shared Use Trails effectively connect park system components together to form a continuous park environment. Long, linear, dedicated open spaces that include a mixture of natural land areas, open spaces and typically include trails. Trails can take a number of forms, from paved shared-use or all-purpose trails for use by pedestrians and cyclists, to dirt trails or bridle trails. Typically, greenways are separated from streets and other public rights-of-way.

- **Park Trail.** Multi-purpose trails located within greenways, parks and natural resource areas. Focus is on recreational value and harmony with natural environment.

Type I: Separate/single-purpose hard-surfaced trails for pedestrians or bicyclists/in-line skaters.  
 Type II: Multipurpose hard-surfaced trails for pedestrians and bicyclists/in-line skaters.  
 Type III: nature trails for pedestrians. May be hard- or soft-surfaced.

- **Shared Use Paths.** Multipurpose trails, as Shared Use Trails that emphasize safe travel for pedestrians to and from parks and around the community. Focus is as much on transportation as it is on recreation. Connector Trails are typically paved, all-purpose trails situated within more built up and developed areas and may have less greenspace or natural area associated with the trail. Connector Trails can take on several forms, from off street paths (i.e. wide sidewalks next to roadways) to separated and/or protected bicycle lanes,

or to off-street pathways that connect through public or private property.

Type I: Separate/single-purpose hard-surfaced trails for pedestrians or bicyclists/in-line skaters located in independent row (i.e., old railroad right-of way).

Type II: Separate/single-purpose hard-surfaced trails for pedestrians or bicyclists/in-line skaters located in road right-of-way.

While the preference is always for separated trails and off-street greenways, where there is not sufficient right-of-way space or property access more conventional "Bike Streets" may be required in a limited context to provide important network connections:

- **Separated Bike Lanes and Cycletracks.** Paved segments of roadways that serve as a means to safely separate bicyclists from vehicular traffic.

- **Buffered Bike Lanes:** Designated portions of the roadway for the preferential or exclusive use of bicyclists.

- **Bike Lane:** Shared portions of the roadways that provide separation between motor vehicles and bicyclists, such as paved shoulders.

Different greenway and trail types are appropriate for different locations throughout the city. Increasing the safety and usability of greenways will encourage more users who are less comfortable with riding or walking in close proximity to vehicles.



ATTY FEE MOT - 0239

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# III.F FOOD + URBAN AGRICULTURE

✓ NRS 278.160.1(i)

## ENSURE ACCESS TO FRESH, HEALTHY FOOD

Food systems consist of the resources, capital, and activities of food for the health and wellbeing of the City's residents, whether from agricultural production, distribution, accessibility, to waste. Historically, farm and ranch based agriculture have been limited by water availability, quality soil, and the size of Southern Nevada's small towns – only a handful of agricultural operations have been successful in Southern Nevada's modern history. Today, there are approximately fifty certified food producers in the region. The majority of these producers use traditional growing techniques and are either small scale or family-owned operations, such as Gilcrease Orchard in the Tule Springs planning area, community gardens, or community supported agriculture (CSA). A number of stakeholders help oversee the food system:

- The Nevada Department of Agriculture, which regulates all aspects of agricultural production, livestock, consumer equity, and food systems.
- The State Division of Welfare and Social Services, which oversees federal nutrition and assistance programs, such as the Supplemental Nutrition Assistance Program (SNAP).

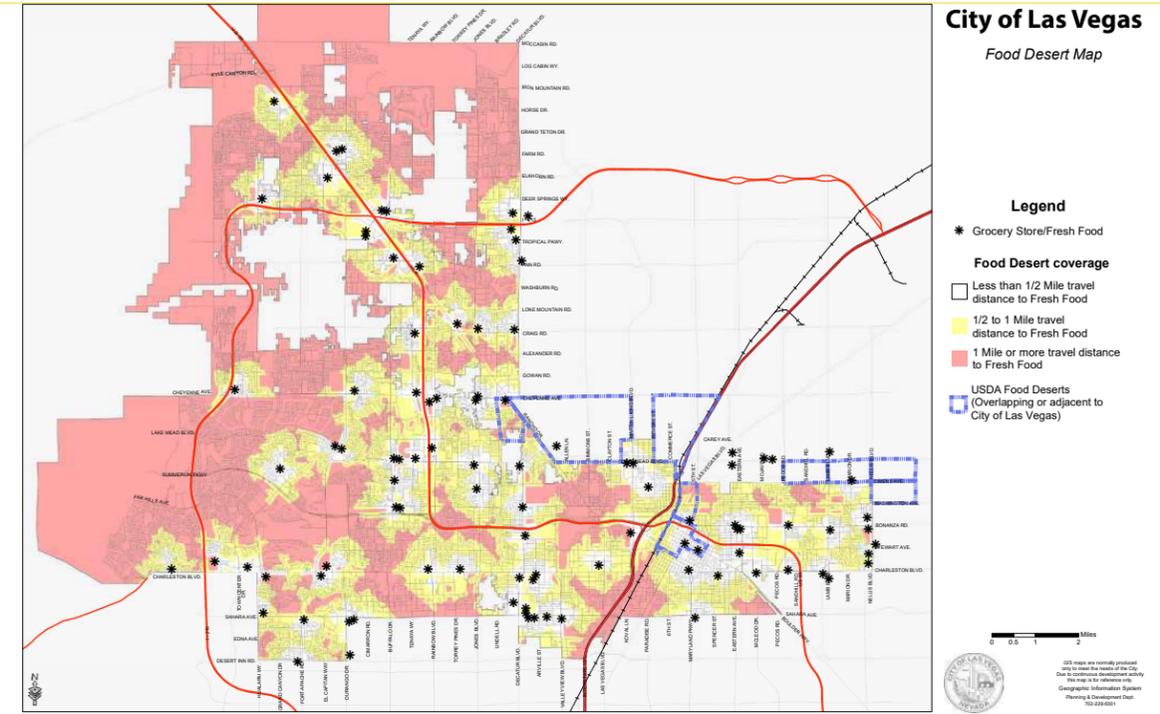
- The City regulates animals and agricultural land use activities pursuant to LVMC Title 7 and LVMC Title 19. The City has taken a measured approach as a community stakeholder to food access and agricultural production, but will take a more active role in implementing this plan.
- The Southern Nevada Food Council convenes stakeholders representing Southern Nevada's food system to promote equitable access to healthy food, sustainable food production and consumption, and reduction of food waste.
- As a part of the University of Nevada's land grant mission and pursuant to NRS 549, the University of Nevada Extension provides outreach and extended education to Las Vegas residents, specifically as it relates to food safety, healthy living, horticulture, and urban agriculture. The Extension also works closely with the Conservation District of Southern Nevada to promote and develop community gardens and urban agriculture.
- The Southern Nevada Health District oversees and regulates food operations and preparation.

### KEY ACTIONS

- Decrease food deserts and reduce food swamps in low-income, food insecure planning areas, further incentivize the establishment of grocery stores and healthy food retail outlets.
- Provide at least one accessible community garden for urban agriculture activity in each planning area.
- Work closely with the Southern Nevada Food Council, CCSD, the University of Nevada Cooperation Extension, Three Square Food Bank, and other stakeholders to address food insecurity, hunger, and access issues for city residents.
- Further expand allowable agricultural uses and activities within the community.

### OUTCOMES

- At least one City-owned, operated, or leased community garden or urban agricultural site within each area of the city by 2030.
- No food deserts exist in the City by 2050.
- The percentage of residents within ¼ mile of a food hub, healthy food retail outlet, or grocery store increases over time
- The percentage of residents that are food insecure and utilizing SNAP decreases over time
- The percentage of children, seniors, and other identified vulnerable population that are food insecure decreases over time



EQUITABLE	RESILIENT	HEALTHY	LIVABLE	INNOVATIVE
Increased neighborhood food access and the elimination of food deserts must be prioritized to reduce hunger and food insecurity.	A number of adaptable plants can be grown in home and community gardens, providing a supplemental source of food.	Ensuring access to healthy foods by decreasing the area of food swamps and increasing the amount of healthy food businesses.	Accessible healthy food outlets, community gardens, and farmers markets are necessary and desirable amenities for City residents.	Repurposing and diverting food from the hospitality industry has reduced the total volume of food waste.
				

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LAS VEGAS MASTER PLAN

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02. LAND USE + ENVIRONMENT

**FOOD IMPORTATION PRESENTS A SUPPLY-CHAIN DEPENDENCY CHALLENGE AND POTENTIAL VULNERABILITY**

According to the Bureau of Economic Analysis, 92% of all the food in Las Vegas is shipped by truck and only 8% of the foods purchased in grocery stores and markets are grown locally or within the region. This high rate of both domestic and global food importation by way of truck leaves Southern Nevada vulnerable to disturbances in the transportation system. Shipping and supply chain disruptions across the country or the world, the closure of Interstate 15, or spikes in fuel prices have the potential to impact the Southern Nevada food system for residents, businesses, and visitors in the following ways:

- Large distances between producers and consumers increases transportation costs which can be reflected in higher food prices.
- Many foods, such as fresh fruits and vegetables, lose a bulk of their nutrients after four days. While canning, drying and freezing can minimize the loss of nutrients, food trip length can affect nutritional quality and create challenges for healthy food to be in supply and affordable.
- Food production is energy and water intensive to feed millions of Americans and meet demand for products.

**FOOD SYSTEMS MAY FUNDAMENTALLY BE ALTERED IN THE FUTURE**

Climate change may result in further drought, altered precipitation patterns, and increased water stress in key farming regions, both domestically and abroad. Because plants are sensitive to high temperatures during the flowering and seed development stages, changing climatic conditions may reduce yields, and therefore impact food quality and cost. Temperature increases and drought may have an impact on food production, especially in prime agricultural areas, which not only affects Las Vegas, but the rest of the country:

- California, one of the world’s largest and most diverse agricultural economies, and Southern Nevada’s most important market for food. The state is already showing ill effects from loss of farmland, the chronic overuse of its water supply, and the impact of wildlifes.

- Increased temperatures in the Great Plains, where wheat and corn are among the most important crops and are staples for breads and starches, could stress overall plant growth and production.
- The southeast, home to fruit and nut orchards, is projected to pass the threshold of ninety-four degrees, a point that impacts plant photosynthesis.
- Drought conditions and disease have reduced output of the citrus crop in Florida, corn and soybean crops in the Midwest and the vegetable and dairy production in California.

Should climate change increase temperatures to these levels, prices could increase for major staple crops used in a variety of products, including wheat, rice, and corn by 2050. Higher temperatures and less easily available water have resulted in a three percent price increase in most fruits and vegetables. Due to lower corn production, animal feed costs have also been rising; this is reflected back in the prices consumers pay.

**FOOD ACCESS CAN BE ASSESSED FOR EACH AREA OF THE CITY**

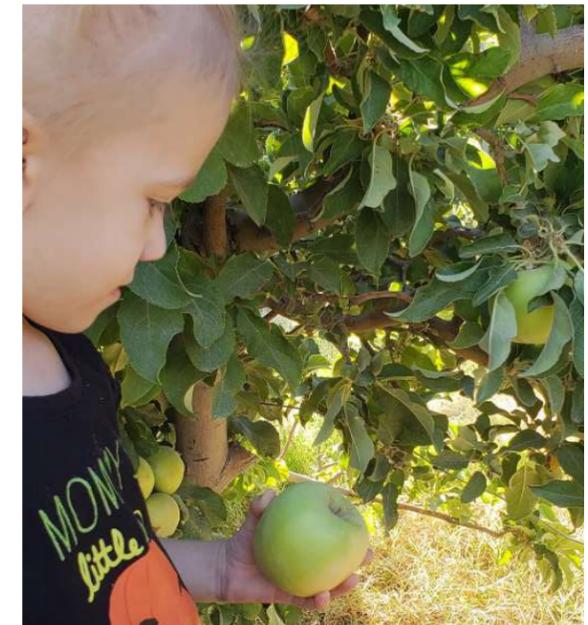
Urban food deserts refer to low-income, low-food access areas. They have high concentrations of poverty at or below 80 percent AMI, in which either 500 people or one-third of the population live more than one mile from a grocery store or healthy food retail outlet that contains all major food departments. Food swamps represent areas with a high abundance of fast-food and takeout restaurants in low-income areas. Within the City of Las Vegas, both food deserts and swamps exist around the Downtown Las Vegas and West Las Vegas areas, where approximately 12,000 residents reside.

Food access considers location of food from one of the City’s grocery stores or healthy food outlets and its overall affordability. In terms of transportation accessibility, access is determined by vehicle ownership or public transportation access. Economic and land use forces, including land value, lease rates, and population density determine grocery store location decisions. Even if transportation is adequate in some areas, grocery stores may not be close enough to neighborhoods. These factors, alone and in tandem, can mean major grocery stores will have difficulty being profitable in low-income neighborhoods. Within the City’s food deserts, residents are at a higher risk of hunger, poor nutrition, and poor health.

The average American household spends approximately 9.5 percent of its disposable budget on groceries. Nationally, food costs have been rising for many basic staples. This can affect disposable income as well as create challenges for people to pay for other necessities, ultimately leading to hunger and poor nutrition as people choose less nutritious options for their meals.

**FOOD INSECURITY AND HUNGER ARE DISCRETE ISSUES THAT MUST BE ADDRESSED TO ENSURE RESIDENTS ARE HEALTHY**

Hunger is the physical sensation of discomfort from lack of food intake; the USDA defines food insecurity as a lack of consistent access to enough food needed for an active, healthy life. The Supplemental Nutrition Assistance Program (SNAP), provides nutrition assistance to people with low incomes, helping families to purchase healthy foods. Participation rates can be a benchmark measure for community health and wellbeing. More than 106,000 households, equal to one out of every ten people in Southern Nevada, receive an average SNAP benefit of \$260/month. For many households, this is most, if not all, the monthly food budget. Nearly 50 percent of these SNAP recipients are children 18 years of age and younger. Approximately 180,000 students enrolled at CCSD schools



**A DAY IN THE LIFE**

**SPACE FOR CONNECTING**

*Carla Delisle, Former Las Vegas Historic Preservation Commission Member*

In a city of big roads, high speed limits, and limited transportation alternatives, Carla depends on her car more than she’d prefer. She tends to avoid using public transportation because the travel times are too long and bus routes to the busier parts of town are rarely straightforward. For sure, Carla loves her downtown historic neighborhood. She just wishes it included more walking and biking options. She wishes the entire city did.

When she considers the city as a whole, Carla sees vast amounts of open space that feel underused. She’d love to see more areas designated for adult recreation, dog parks, BBQs and picnics, and sports. Even simple public benches would be welcome. Considering Las Vegas’s sometimes harsh, high-desert climate, she’d also welcome more shade.

Carla’s grocery shopping options are limited to a few large chain stores. She’d love for a few smaller, more health-conscious markets to open up nearby. “Maybe the city could offer temporary public uses, or pop-ups, as experiments to see what people will do when they have more lifestyle options,” she considers.

“And if we had one or two more expressways together with more direct routes to the main areas of town, people would go and stay outside more,” she says. “This would encourage more connectivity among residents.”

participate in the Free and Reduced Lunch Program, which is approximately 60% of all students and significantly higher than the national rate of 40%.

Other means of distributing food include:

- Three Square, Southern Nevada’s only major food bank, whose mission is to help reduce hunger in Southern Nevada. Three Square combines food banking (warehousing donated canned and boxed goods), food rescue (obtaining surplus or unused meats, bread, dairy and produce from hospitality and grocery outlets), and pre-cooked meals. Three Square served more than 41 million meals across Southern Nevada in 2019.
- Food pantries distribute non-perishable grocery products to families struggling with hunger. Some within the City are aligned with the Three Square food bank.
- The Summer Food Service Program (SFSP), funded by the USDA and administered by the Nevada Department of Agriculture, provides meals to children 18 years of age and younger in low-income areas during the summer. The program ensures that children have access to nutritious meals during their school breaks when free and reduced meals are not available to them.
- Community meal sites provide hot meals to the homeless and those in need.
- Food hubs are businesses or organizations that actively manage the aggregation, distribution and marketing of source-identified food products primarily from local and regional producers to strengthen their ability to satisfy wholesale, retail, and institutional demand. A food hub can expand capacity for urban agriculture and regional growing and often have teaching and meal-prep facilities where consumers can learn about food and nutrition, where their food comes from, and how to grow food in their own communities. Entrepreneurs can learn to build small food enterprises in shared commercial kitchen spaces. While Southern Nevada does not currently have a food hub, introduction of one may help expand and sustain local capacity for urban agriculture.

**INNOVATIVE EFFORTS IN SOUTHERN NEVADA REDUCE FOOD WASTE**

Food waste presents a major challenge to both the region’s food system and environment and is an issue that must

be addressed in depth. A relatively small amount of the region’s waste is organic. Thanks to the efforts by resorts on the Las Vegas Strip and Downtown Las Vegas, which generate a large share of organic material, and the Three Square Food Bank, increased attention has been paid to diverting food from the landfill, thus decreasing food waste. Efforts have also been made to repurpose and compost food waste. For many decades, Las Vegas Livestock (formerly known as RC Farms), a local pig farm, has successfully diverted food waste and has repurposed it for animal feed. Although these efforts have yielded success, more study on this issue must be done to ensure food waste is reduced.

**DESERT URBAN AGRICULTURE CAN SUPPLEMENT FOOD SUPPLIES**

Despite limited rainfall, aridity, and extreme temperatures, a wide variety of food can be produced and livestock raised within Las Vegas. Crops suitable for Las Vegas’s climatic conditions can be produced for urban agriculture applications, as evidenced by the University of Nevada Reno Extension’s demonstration gardens and Master Gardener Orchard near the Tule Springs area. However, Las Vegas clearly cannot invest in agricultural development at levels that will sustain the City’s current and future population. Strategies and methods that can make urban agriculture a community amenity should continue to be pursued, such as:

- Rural preservation areas within the City permit crop production and animal husbandry.
- The City has previously enacted ordinances that permit community gardens in all zoning districts with limited conditions. Not only are community gardens an amenity that allow residents to grow, new placetypes will encourage the incorporation of such gardens as an allowable use. After successfully permitting poultry (“backyard chickens”) in residential zoning districts, the allowable uses at each type should also be further researched and increased, including allowing apiaries and additional small-animal husbandry.
- A limiting factor to urban agriculture, however, may be water and its costs; all urban agricultural activities would be required to use metered water from the Las Vegas Valley Water District (LVVWD), which is progressively more expensive based on consumption and meter size.

- Farmers markets are excellent amenities that can increase access to healthy food. Due to the lack of major agricultural production in Southern Nevada, most farmers markets are small, specialized, typically do not offer a fixed stock of supplies, and are not typically used by the average consumer for food staples. Most farmers markets import food from growing regions in California, Northern Nevada, or Utah; because most are small, their presence does not necessarily mitigate food deserts; however, their presence provides supplemental food access.
- Some alternative farming operations have been established in Southern Nevada, including hydroponic and aquaponic systems and are permitted in commercial and industrial areas. While both systems are water-based, both use 5-10% of the water used in traditional farming and a fraction of the land. As a result, while these systems may have high initial costs, they can be



operated in a climate controlled settings and provide an efficient alternative to traditional farming.

**IMPLEMENTATION STRATEGIES**

- Decrease food deserts and reduce food swamps in low-income, food insecure planning areas, further incentivize the establishment of grocery stores and healthy food retail outlets.
  - Further permit and incentivize food hubs, healthy food retail outlets, or grocery stores
  - Utilize City funding, redevelopment tools, New Market Tax Credits and other forms of innovative financing to attract businesses
- Provide at least one accessible community garden for urban agriculture activity in each planning area.
  - Conduct regular inventories of vacant land owned by the city to determine whether these lands are suitable for urban farming and gardening.
  - Ensure access for urban agricultural activities by acquiring, leasing or purchasing vacant land for use as community gardens
  - Reserve space at City parks and community centers for community gardens
- Work closely with the Southern Nevada Food Council, CCSD, the University of Nevada Cooperation Extension, Three Square Food Bank, and other stakeholders to

- address food insecurity, hunger, and access issues for city residents.
  - Consider making food access requirements as part of development within TOD place types
  - Explore reducing food swamps with fast-food distance separation requirements
  - Incentivize and develop food hubs
  - Develop educational programs for City residents
  - Develop community gardens
  - Study, discuss and take action on food issues, access, and security and food waste for the benefit of residents, business, and visitors
- Further expand allowable agricultural uses and activities within the community.
  - Require community gardens as part of zoning regulations and requirements
  - Amend LVMC Title 7 and LVMC Title 19 to expand allowable agricultural uses and activities, and the zoning districts they are allowed in, especially in rural preservation areas, including crop production, apiaries, and small-animal husbandry.

# III.G ENVIRONMENTAL JUSTICE

✓ NRS 278.160.1(a)(1))

## REDUCE LEVELS OF POLLUTION THAT IMPACT AIR, LAND AND WATER, AND AFFECT SENSITIVE POPULATIONS

Environmental justice is the concept that all people have equal right to a clean and healthy environment with respect to spatial relationships to environmental concerns, equal protection from negative environmental impacts and equal access to decisions made by the Planning Commission or City Council. No population bears a disproportionate share of negative environmental consequences resulting from industrial, municipal, and commercial operations or from laws, regulations, or policies. Meaningful involvement requires effective access to decision makers for all, and the ability in all communities to make informed decisions and take positive actions to produce environmental justice for themselves.

Today, pollution from stationary and mobile sources can impact the City's water, ground, and air that can affect the health, especially sensitive populations like children and the elderly, as well as disproportionately affected low income and minority populations. Because pollution is a regional issue, the 2050 Master Plan takes a regional approach to mitigate land, water, and air pollution concerns in the context of the environmental element.

Because this plan emphasizes infill development and redevelopment, especially on sites and locations that may be considered brownfields or have forms of soil contamination, Not only does infill and redevelopment help reduce commute times for drivers and minimize air pollution, it also helps conserve land by alleviating development pressure, and clean up existing brownfields, it also helps support economic development by increasing property values through new development, promoting affordable housing, returning tax value to greyfield sites, and reducing blight. Two key sources of water pollution are from stormwater and wastewater treatment discharge. Wherever the source of contamination, ultimately, pollutants make their way back to Lake Mead through the Las Vegas Wash. The National Pollutant Discharge Elimination System (NPDES) permit program regulates water pollution from for both stormwater and non-stormwater sources and discharges and requires the implementation of best management practices to



### KEY ACTIONS

- Hire a staff member within the City that has experience with environmental justice.
- Implement the actions from the Land Use Chapter that reduce or eliminate brownfield and greyfield locations.
- Implement projects and actions from other parts of this plan that improve air and water quality:
- Incorporate environmental justice criteria and priorities into LVMC and continue to enforce environmental regulations and permitting to ensure clean air and water.

### OUTCOMES

- Achieve attainment or maintenance status for all measured criteria pollutant
- For any non-attainment pollutants, a decrease in the annual concentration
- By 2050, no brownfields are found within the City.
- The annual number of days in which the Air Quality Index (AQI) exceeds 100 decreases over time
- For each identified planning area, priority environmental justice conditions, risks, and exposure are reduced



reduce pollutants to the maximum extent practicable. Furthermore, given possible future drought conditions, water must be withdrawn from lower elevations, which may require increased treatment of the drinking water supply given the higher load of pollutants entering the lake.

Air pollution primary comes from two sources: mobile sources, primarily from combustion from single-occupant automobiles, and stationary sources, including those from power generation. Additionally, the Valley's natural topography and desert environment contributes to unhealthy air by trapping pollution and creating haze. The region's lack of rain and increasing temperatures can contribute to higher levels of pollutants. Exposure to air pollutants causes a range of respiratory ailments and cardiovascular risks. Health impacts cause thousands of hospitalizations annually and increase the financial burden of chronic diseases. Outdoor air quality is related to many other goal areas and outcomes in this plan.

The 2050 Master Plan works to ensure City planning areas and neighborhoods are not overburdened by pollution and that low-income people and minority groups have

equitable access to the City's services and facilities without experiencing disproportionate health, environmental, or economic impacts.

A number of other regionally-based functions are delegated to different organizations to control the various forms of pollution:

- The Clark County Department Environment and Sustainability (DES, formerly known as the Department of Air Quality) is the region's designated air pollution control board that implements and enforces air pollution control and operates pursuant to NRS 445B.500. It is also responsible for:
  - Air quality permitting.
  - Regulation and enforcement of air pollutants.
  - Preparation of studies and plans to comply Federal air quality standards.
  - Monitoring air quality conditions and informing the public about current air conditions.

EQUITABLE	RESILIENT	HEALTHY	LIVABLE	INNOVATIVE
Environmental justice ensures specific groups are not overburdened by the effects of air, land, and water pollution.	A resilient environment adapts to pollution while mitigating efforts help prevent it and its effects on the population	Avoiding and mitigating air quality concerns, improving water quality, and eliminating brownfield sites ensure healthy outcomes	Developing TOD and implementing this plan's infill and redevelopment strategy at brownfield locations ensures the creation of a livable community.	Transportation electrification and renewable energy play an important role in reducing stationary and mobile emissions.

ATTY FEE MOT - 0243

- NV Energy, a private, investor owned utility that generates both renewable and non-renewable electricity, generates some emissions from power generation.
- Several City of Las Vegas departments oversee different aspects of pollution prevention:
  - The City's Department of Public Works oversees capital project and infrastructure planning and project development. Its Environmental Division is responsible for the City's wastewater treatment plant, as well as stormwater and wastewater treatment discharges pursuant to the NPEDs and MS4 permits.
  - The Planning Department oversees the entitlement of land and implementation of the City's zoning ordinances to protect the health, safety, and general welfare of City residents. The City's Code Enforcement division also ensures property upkeep and ensure noise policies are not violated.
  - The Economic and Urban Development Department and the City's Redevelopment Agency, which works to eliminate blighting conditions and remediate brownfields, most notably, the former Union Pacific Railroad brownfield now known as Symphony Park in Downtown Las Vegas.
- With respect to air quality from mobile sources, the Regional Transportation Commission of Southern Nevada (RTC), is responsible for the administration of:
  - Streets and Highways funding, engineering, and capital project construction, for which air quality impacts are closely modeled and monitored. Federal funding from transportation projects could be lost if the region fails to comply
  - RTC public transportation and paratransit services, which is further covered under TI-5
  - Transportation Demand Management Programs and incentives through "Club Ride."

Ultimately, a variety of Federal and state laws help control pollution, but the implementation of those laws take place at the State, county, and city level.

- The City, County, LVVWD, RTC are required to report to the U.S. Environmental Protection Agency or the

Nevada Division of Environmental Protection (NDEP) on a number of laws and programs, including:

- Safe Drinking Water Act
- Clean Air Act
- Clean Water Act
- Underground Storage Tanks

Noise is a similar form of pollution; at sustained high levels, ambient noise can be harmful to people's health. Ambient noise varies widely throughout the City, whether for residential areas that ensure noise levels are safe for people to live in or for vibrant and active commercial areas. The City does play a role in determining where and how noise is mitigated.

Not only do both the public and private sector entities play important roles in regulating and ensuring the control of pollution, it can be prevented by individuals.

Southern Nevada's desert environment, topography, and pollution from stationary and mobile sources pose a challenge for being in attainment with Federal air quality standards. The annual maximum tolerable level of air pollution is an Air Quality Index less than 100.

Southern Nevada's air quality is monitored and measured within the boundary of Nevada Hydrographic Area 212, covering the Las Vegas Valley. Through the Clean Air Act, the EPA established National Ambient Air Quality Standards (NAAQS) for six regulated criteria air pollutants as well as baseline "healthy" levels air:

• **Carbon monoxide (CO): In attainment**

- During winter months, CO levels tend to rise. CO can block oxygen from the brain, heart, and vital organs, with fetuses, babies, and people with chronic illnesses being especially susceptible to its effects. Long-term exposure to low levels may lead to increased respiratory illness and heart conditions. Individuals already having respiratory ailments or heart problems are at the greatest risk for further negative health impacts from breathing high concentrations of carbon monoxide. The Las Vegas Valley was designated as a 'serious' non-attainment area in 1993. Conditions improved after implementing and maintaining a State Implementation Plan. The Las Vegas Valley has maintained attainment levels for carbon monoxide (CO) since 1999, due to regulations on gasoline

that help to control CO emitted into the atmosphere. Programs targeted to the repair of gross emitting and smoking vehicles also had a positive impact on air quality due to the large proportion of air pollution coming from older vehicles.

• **Nitrogen dioxide (NOx): In attainment**

- NOx may cause lung irritation and potentially make people more prone to respiratory infections such as pneumonia and influenza. According to EPA data, it is responsible for 80 percent of the total NOx emissions in Clark County. Since the closure of the coal-fired Reid Gardner Generating Station in Moapa NOx emissions in Clark County have significantly decreased.

• **Ozone (O3): EPA designated Clark County as an O3 nonattainment area in 2014**

- Ozone is the only pollutant not directly emitted; it forms through the reaction of nitrogen oxides (NOx), volatile organic compounds (VOCs), and sunlight. The EPA and the American Lung Association determined that long term exposure to ozone may cause harm to the central nervous system and cause damage to the reproductive system. Ozone can also cause developmental harm in young children. DAQ issues advisories when ozone and particulate matter levels become unhealthy and recommends those with sensitive respiratory systems stay indoors. Concentrations of ozone are not uniform and vary from day to day and from place to place. Other environmental impacts from long term ozone pollution include damage to ecosystems and landscaping and the degradation of building materials. As part of the nonattainment designation, DES established a transportation rule with motor vehicle emission budgets to show progress consistent with adopted control measures and projected emissions.

• **Particulate matter (PM): In attainment**

- Measured at 2.5 and 10 parts per million, PM is the mixture of airborne solid particles and liquid droplets. PM can settle in the lower portion of the lungs and can cause asthma and respiratory issues. Fine particulates also create haze and reduced visibility. It can come directly from construction



sites, unpaved roads, and fires. Airborne particulate matter in Southern Nevada is dominated by dust. Secondary particles come from atmospheric chemical reactions emitted from power plants and automobiles. Soils, including those with high silt content in the western and northwestern planning areas of the City that are disturbed through recreational uses or construction, can become airborne during strong wind events. As a result of not being in attainment during the 1990's, dust control permitting was a required management practice; as a result, levels of PM10 have shown a continued decline since the early 2000s despite rapid growth in the Valley.

• **Sulfur dioxide (SOx): In attainment**

- Burning sulfur-containing fuels (such as coal), distillation of sulfur from fuels can cause airborne sulfur dioxide.

• **Lead (Pb): In attainment**

- Lead monitoring is not continuous, so no real time measurements can be made. Once taken exposed, lead makes its way through the bloodstream and is accumulated in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidneys, the immune system, and the cardiovascular system. Lead exposure also affects the oxygen levels within blood. Aside from burning

of fuel, no major sources of lead are present in the City of Las Vegas.

Because prevailing wind flows from California's converge in the Mojave Desert, poor air, dust, and PM are typically transported pollutants into Nevada. More than three quarters of air pollution generated within Las Vegas comes from engine or machine exhaust, transportation generated emissions, and construction. Topography and local weather serve to trap pollution in parts of the Las Vegas Valley; surrounding mountains reduce the wind speeds that would carry pollution away, increasing pollutant concentrations in the valley itself. During cold weather, thermal inversions can develop. If winds are calm, the eastern part of the Valley has higher pollutant levels, usually for CO, due to its lower elevation. Ten official air pollution monitoring stations record meteorological data and measure pollutants in real time.

The EPA uses the Air Quality Index (AQI) to rate air quality based on the National Ambient Air Quality Standards (NAAQS). The scale includes categories of good, moderate, unhealthy for sensitive groups, unhealthy, and hazardous. Over the past three years, the AQI has generally improved, but must continuously be monitored:

Cities that violate the NAAQS for one or more of the criteria pollutants are in nonattainment of the standard based severity. After the Clean Air Act was amended in 1990, the region was classified as a "moderate" non-attainment area for both PM10 and CO, requiring the submission of a state implementation plan containing local regulations and plans to be in attainment of standards. Long-term plan were put in place to demonstrate how the region will meet and continue to maintain compliance with standards. They address:

- **Mobile sources** - The greatest source of the City's (and the Southern Nevada region's) pollution is transportation related emissions. Non-compliance with Federal air quality standards can also affect transportation funding.
- **Stationary sources** - site-specific locations that generate emissions. Permits are issued to facilities that emit pollution to ensure they control emissions and do not harm public health or degrade regional air quality. Permits may include limits on both construction and operation activities and are required before activity or pollution emissions begin. New sources must also

be reviewed and permitted to ensure pollution is controlled. Stationary sources are regulated as major, minor, or exempt sources, based on the tons of any regulated pollutant, and each have different permitting requirements.

To mitigate air pollution from mobile and stationary sources, a combination of actions can be taken from a number of other goals that will ultimately decrease the number of poor air quality days, improve the annual AQI to levels less than 100, and ensure attainment of NAAQS:

- The transition to cleaner energy sources through energy efficiency and renewable energy projects will yield numerous benefits, including cleaner air and reduced emissions.
- Ensure balance between economic development goals while scrutinizing development applications through the LVMC Title 19 Special Use Permit process for any major industrial-oriented emitters and for environmental justice concerns.
- Decreasing overall VMT and increasing transit use through implementation of RTC's On Board Mobility Plan and the infill and redevelopment strategy detailed in the Land Use and Environment Chapter.
- Transportation electrification will ultimately reduce mobile emissions and demand for fuel.
- Planting trees to increase the overall tree canopy and decrease the urban heat island effect, which will also help reduce air pollution.

**THE CITY MUST ASSESS, MITIGATE, AND REDUCE THE NUMBER OF BROWNFIELDS AND GREYFIELDS THROUGH THE CITY'S TOD, INFILL AND REDEVELOPMENT STRATEGY**

Brownfields include previously developed land that has been contaminated, while greyfields include obsolete, underused, or failing land or buildings. The presence of hazardous materials in brownfields with contaminated soil and groundwater, can increase the risk of adverse health effects to exposed populations. Short term dangers include acute health effects such as poisoning and injuries, while long-term effects include poisoning, cancers, birth defects, and other chronic non-carcinogenic effects. Pollution can negatively impact minority and low-income communities, as well as sensitive sub-populations like

children, pregnant women, and the elderly, all of whom can be disproportionately affected.

The City of Las Vegas is fortunate to have few brownfield locations requiring major long-term hazardous material clean-up or environmental remediation, and no properties subject to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The City does, however, have legacy locations, especially within Downtown Las Vegas, Downtown South, East Las Vegas, West Las Vegas, Charleston, and Twin Lakes planning areas. Other locations and areas of concern may also exist throughout the community, including current and former gas stations, dry cleaners, medical facilities, and buildings that may contain toxic materials like lead or asbestos.

Far more prevalent within the same planning areas are greyfield locations, containing abandoned, idle, underutilized or vacant buildings and property. Empty and unused asphalt typifies these locations. While brownfields have actual contamination that requires cleanup, many greyfields may remain neglected due to the real or perceived complication

and expense of redevelopment. These locations commonly include strip malls and neighborhood shopping centers.

Both brownfield and greyfield property cleanup and environmental remediation can reduce liabilities associated with reusing contaminated sites, converting vacant, underutilized land into productive resources that reduce blight, improve aesthetics, and improve community health and well-being. Within each planning area, these must be assessed in close coordination with this plan's Economic Development and Land Use goals for TOD.

**CONTINUE ENSURING HIGH STANDARDS FOR WASTEWATER TREATMENT AND STORMWATER POLLUTION PREVENTION**

Pollution could threaten Southern Nevada's groundwater, soils, and drainage through the Las Vegas Wash to Lake Mead through both natural contamination and spills, leaking pipes and underground storage tanks, urban runoff, industrial operations, and forms of agriculture. Water percolating through soil picks up naturally-occurring minerals, salts and

AIR QUALITY INDEX (AQI) REPORT-LAS VEGAS	2019	2018	2017
Days "Good" (AQI 0-50)	154	122	136
Days "Moderate" (AQI 51-100)	206	194	200
Days "Unhealthy for Sensitive Groups" (AQI 101-150)	5	48	28
Days "Unhealthy" (AQI 151-200)	0	1	1
Days "Very Unhealthy" (AQI 201-300)	0	0	0
AQI Max	122	154	154
AQI Median	54	61	58
Days of CO	1	0	0
Days of NO2	18	45	37
Days of O3	252	227	234
Days of Sox	0	0	0
Days of PM 2.5	86	79	84
Days of PM 10	8	14	10

organic compounds causing mineralization. If levels are high enough, groundwater can no longer be used in the water supply without higher levels of treatment.

- Non-point source water pollution occurs when stormwater and irrigation water flows over developed or disturbed land, carrying contaminants and entering waterways directly through storm drains or percolating into groundwater. It is much more difficult to control than point-source discharge from wastewater treatment plants.
- Point-source water pollution threatens water quality from specific permitted and non-permitted sites. Well-managed groundwater basins are monitored to detect leaks so that any harmful intrusions can be addressed quickly by local agencies. Dry cleaners and gas station with underground storage tanks have been prominent polluters in the past with most soil and groundwater contamination occurring from these leaking or spilling sources

Keeping contaminated sites from further polluting soils, aquifers, and watersheds has been a major City focus. Runoff from construction activities can similarly have an impact on water quality. NDEP's Stormwater Program requires developers and contractors of construction sites to obtain a permit prior to discharging water. All construction sites over one acre must develop a Stormwater Pollution Prevention Plan to keep sediment, turbidity, and other pollutants from impacting water quality.

The National Pollutant Discharge Elimination System (NPDES) permit program regulates water pollution from point sources that discharge pollutants. In accordance with the Clean Water Act and NRS Chapter 445A, the Regional Flood Control District is part of the NPDES stormwater discharge permit that authorizes both stormwater and non-stormwater discharges from the municipal separate storm sewer system (MS4) to the Las Vegas Wash. In return, the permit specifies monitoring requirements, best management practices (BMPs), and conditions designed to promote the reduction of pollutants in both stormwater and permitted discharges to the "maximum extent practicable." The City's Public Works Department - Environmental Division, discharges treated wastewater into the Las Vegas Wash and monitors groundwater discharge permits pursuant to LVMC Title 14; it must continue to responsibly

abide by regulations to comply with Federal environmental laws.

The City also participates on the Stormwater Quality Management Committee with the Regional Flood Control District, which informs the general public of measures necessary to protect water quality and other NPDES compliance activities. The RFCD monitors stormwater quality and promotes the construction of facilities that will help reduce the concentration of pollutants in stormwater runoff.

**THE CITY MUST BE AWARE OF ENVIRONMENTAL JUSTICE AND WORK WITH COMMUNITY GROUPS**

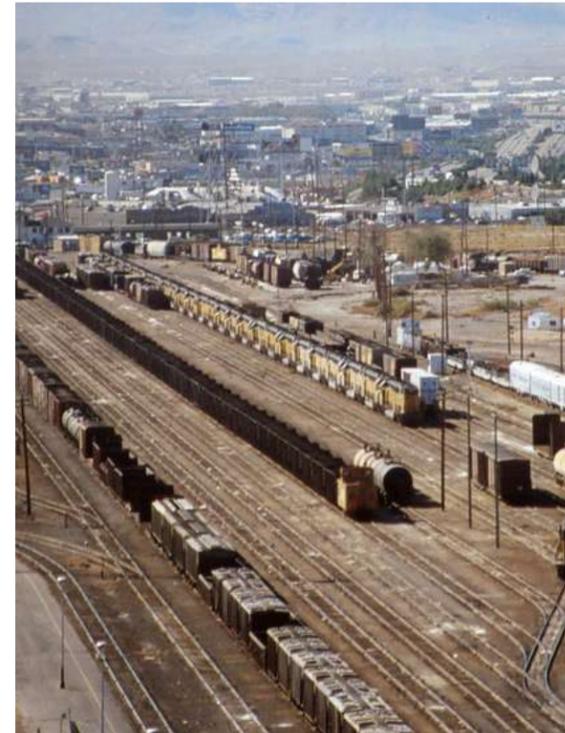
Different parts of the City may have different risks with respect to the impact of environmental pollution on the community. Conditions may be site-specific, such as brownfields in West Las Vegas or Downtown Las Vegas, or may be broader such as the construction of the Downtown Access Project that will replace the I-515/Future I-11 viaduct through Downtown and East Las Vegas. While necessary for transporting people and goods, such a facility may also contribute to respiratory health concerns for the residents that live nearby.

Environmental justice includes not only the impacts of pollution, but also the impacts to the neighborhoods people live and work in. The City's low-income or minority population must be experiencing a disproportionate health or environmental effect, such as increased illnesses or death, direct pollution; disruption of the availability of public and private facilities and services; displacement of people and businesses, and/or the isolation, exclusion, or separation of people within a given community or from the broader community.

The initial city-wide assessment includes consideration of the following factors:

- Proximity to roadways for noise and pollution.
- Exposure to lead based on age of home construction.
- Proximity to air and water point source polluters, such as industrial emitters of noxious odors.
- Proximity to commercially or industrially zoned land

Additional aspects focused on accessibility to certain community assets, such as the presence of food deserts, parks, transit availability, and proximity of City facilities.



**RECENT SUCCESS**

The City's most successful brownfield cleanup and remediation is Symphony Park in Downtown Las Vegas. Since the founding of Las Vegas, the 61-acre site was contaminated by petroleum spills, solvents, and metals from railroad operations. During the 1990's, Union Pacific Railroad began the process of cleaning up the brownfield and moving railyard operations through a soil remediation and groundwater management program approved by NDEP. As part of its redevelopment efforts, the City purchased "Union Park" in 2000 to develop for a mixed-use development. In 2010, NDEP awarded additional funds for continued implementation of the Soil and Groundwater Management Plan (SMP) through the Nevada Brownfield Program. Since then, the area was renamed "Symphony Park" after the Smith Center for the Performing Arts was constructed, the Discovery Museum and Lou Ruvo building housing the Cleveland Clinic opened, and parking facilities were completed. In 2020 and 2021, two mixed-use housing developments will open with further redevelopment planned in the future.

NDEP BROWNFIELDS	PLANNING AREA/ LOCATION	DESCRIPTION
UPRR	Downtown Las Vegas (Symphony Park)	Soil contamination from diesel spills
Cleveland Clinic	Downtown Las Vegas (Symphony Park)	Other contamination from parking lot surface staining
1122 D St	Downtown Las Vegas (Historic Westside)	CLV ownership-asbestos
1100 D St	Downtown Las Vegas (Historic Westside)	CLV ownership-asbestos
308 Jefferson	Downtown Las Vegas (Historic Westside)	CLV ownership-asbestos

2-220

LAS VEGAS MASTER PLAN

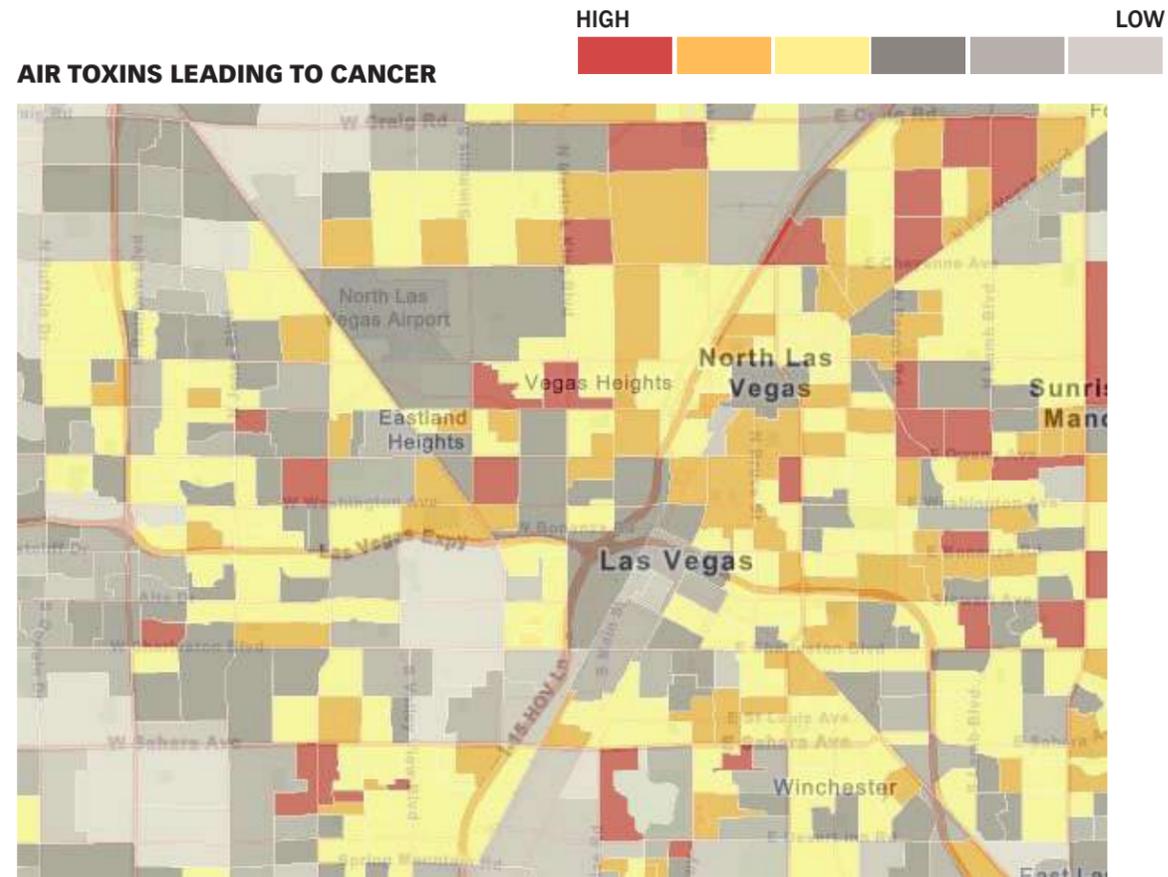
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02. LAND USE + ENVIRONMENT

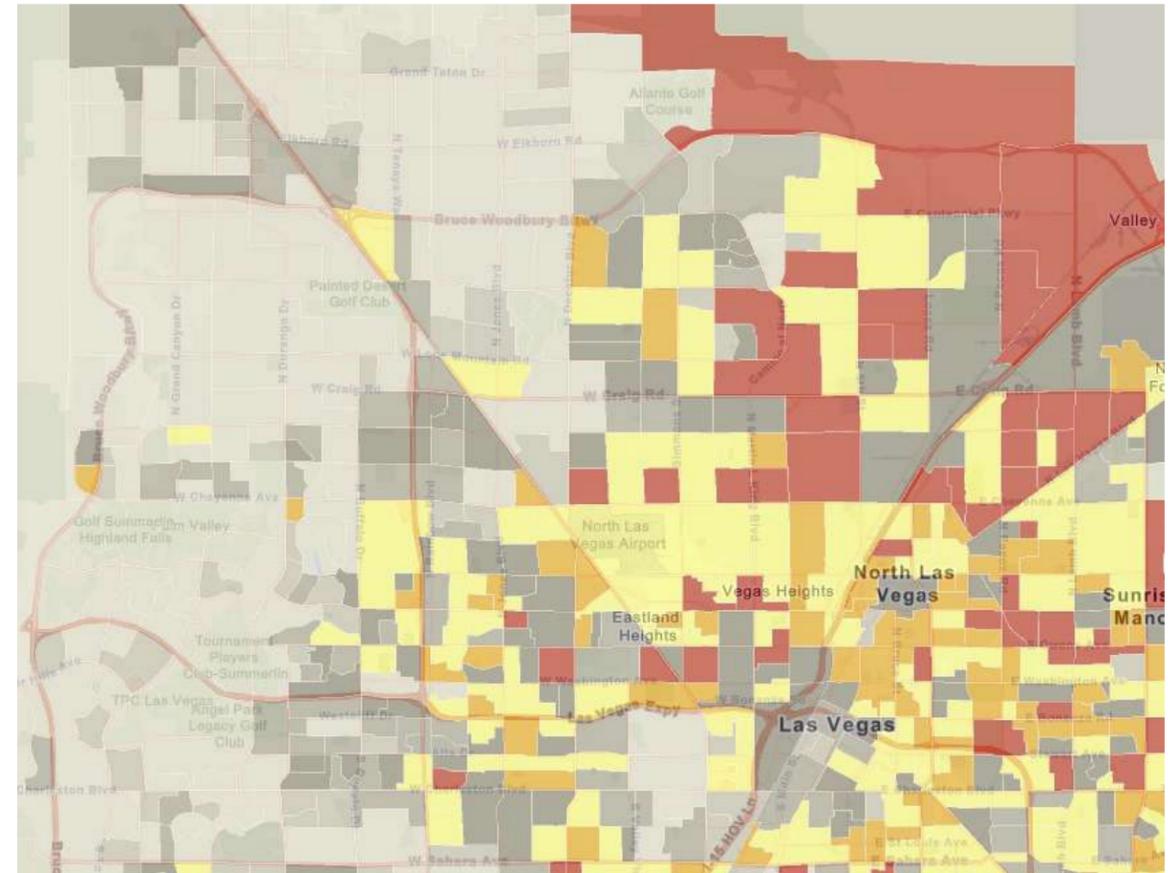
Priority planning areas include those with neighborhoods containing high populations of low-income residents, racial and ethnic groups, combined with higher concentrations of environmental risks and pollution using EPA's EJSCREEN tool. It reveals that the urban planning areas immediately around Downtown Las Vegas have the higher levels of risk and vulnerability.

Over the next thirty years, the City must begin taking steps to make measurable reductions in risk and vulnerability. Conditions can be changed to reduce the threat or occurrence of the impact itself, for example, through site remediation efforts or brownfield cleanups. Relocating impacted populations can similarly reduce the risk associated with the condition. However, when vulnerable populations do not have resources to relocate, the City must work to find way to ensure even greater disproportionate impacts never occur.

To reduce environmental justice risks, specific stationary and mobile sources of pollution must either be eliminated, the vulnerability must be significantly reduced, and/or health indicators dramatically improve. The City can also address environmental justice through policy making and specific amendments to LVMC made by the Planning Commission or City Council. Reducing the impact of environmental justice burdens will require a series of significant, coordinated investments and projects that demonstrate a reduction in vulnerability that is being systematically monitored over time.

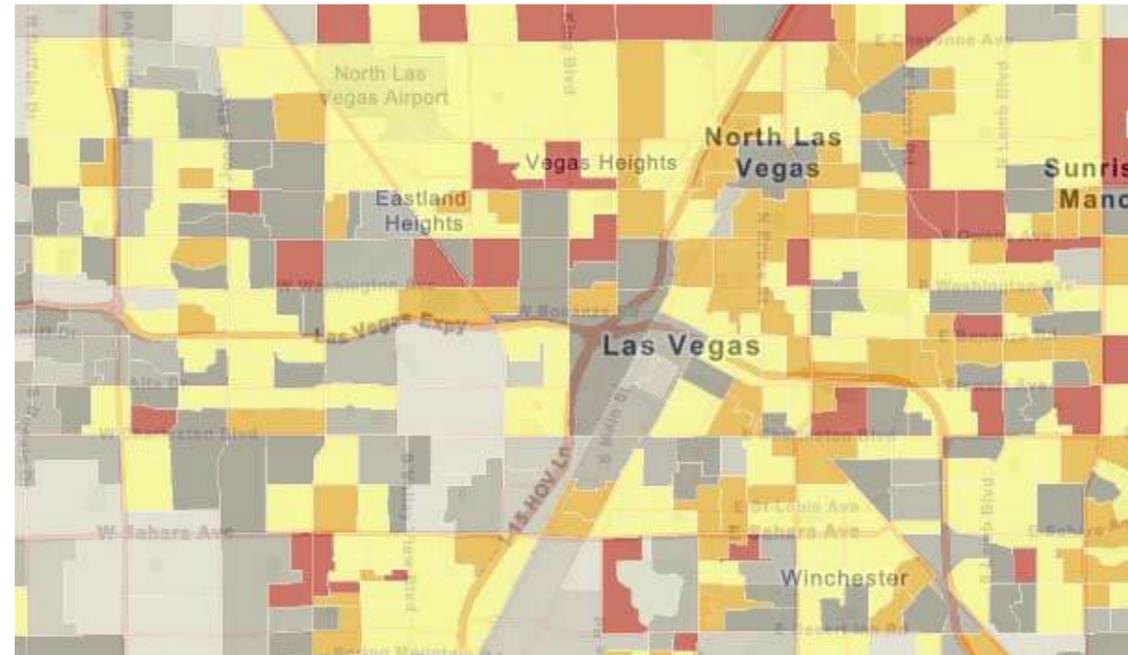


**OZONE**

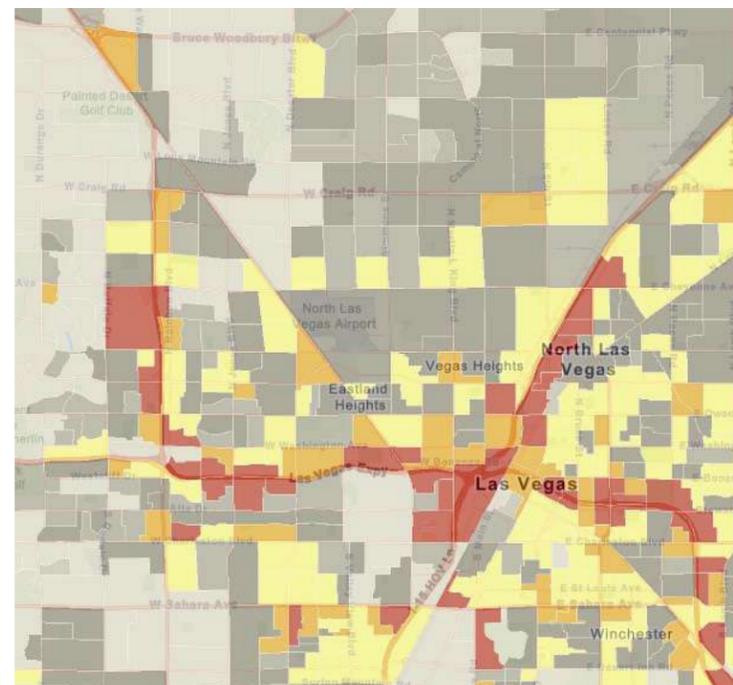


ENVIRONMENTAL JUSTICE RISK	AREA/LOCATION	DESCRIPTION
Ozone	East Las Vegas, West Las Vegas	High concentrations of ozone in low income Latino and black neighborhoods
Traffic	East Las Vegas, Downtown Las Vegas, Charleston, West Las Vegas, Twin Lakes	Widespread noise, air pollution, and emissions concerns for neighborhoods along US 95, I-15, and I-515
Lead Paint	East Las Vegas, Downtown Las Vegas, Downtown South, West Las Vegas, Twin Lakes	Older homes containing lead-based paints
Brownfields	Downtown Las Vegas	Concentration of several brownfields in Downtown's Historic Westside district

**AIR TOXINS LEADING TO RESPIRATORY DISEASE**



**TRAFFIC**



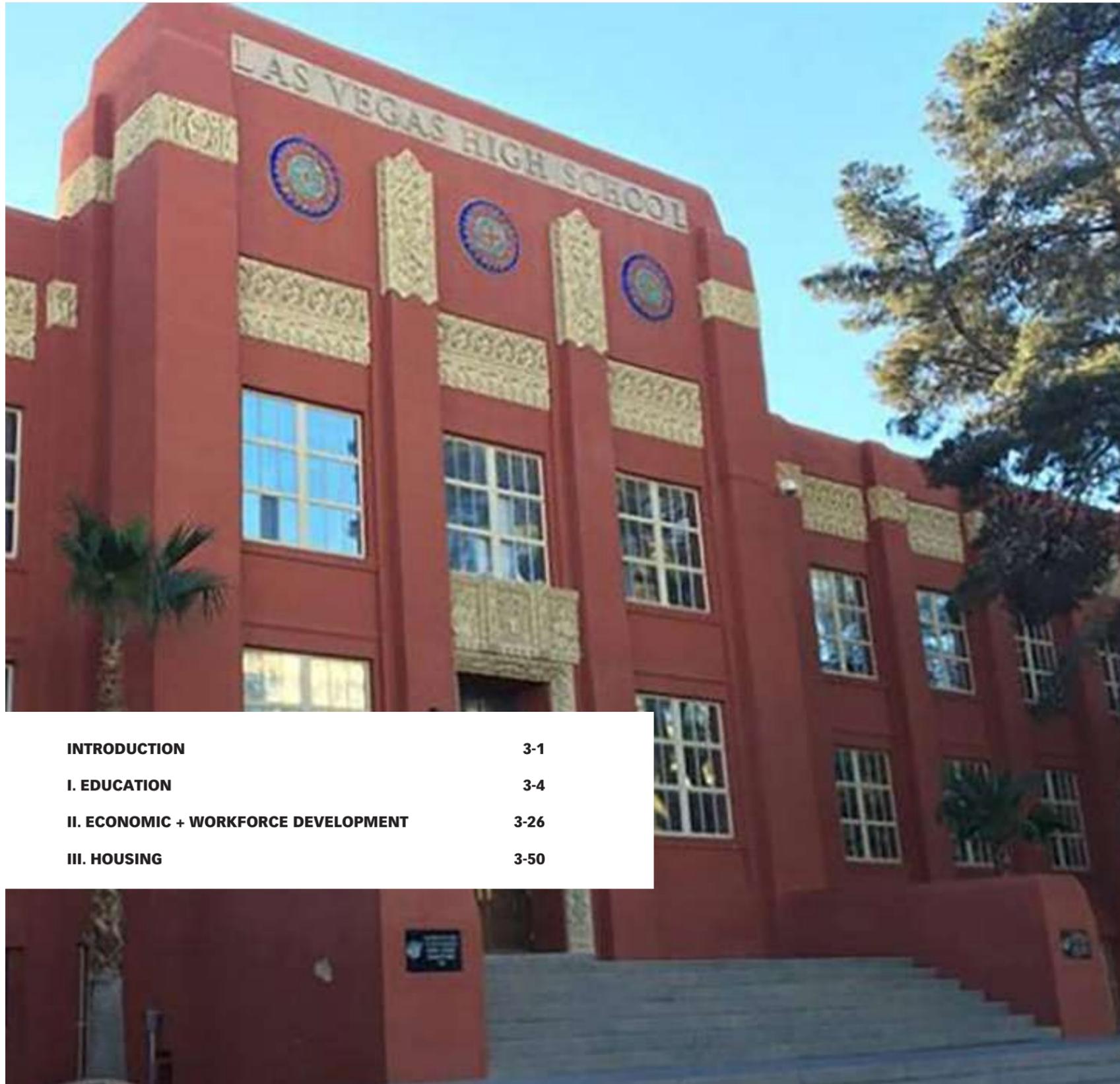
**LEAD PAINT**



**IMPLEMENTATION STRATEGIES**

- Hire a staff member within the City that has experience with environmental justice and assign to an appropriate department.
- Implement projects and actions from other parts of this plan that improve air and water quality, including from:
  - Urban Forestry
  - Complete Streets and Highways
  - Transit
  - Energy
  - Waste
  - GHG Emissions
- Implement the actions from the Land Use Chapter that reduce or eliminate brownfield and greyfield locations:
  - Implement recommended RC, TOD, TOC, and NMXU placetypes
  - Develop an inventory of infill, brownfield, and greyfield sites of greatest priority and potential for development or redevelopment
  - Collaborate with NDEP to advance current or any future brownfields cleanup, should they develop
  - Establish a program to provide information and assistance to owners, potential buyers, and development regarding brownfield assessments, cleanups, redevelopment strategies, and available resources
  - Support temporary, creative neighborhood uses for vacant properties and greyfields
  - Ensure the Planning Department's Code Enforcement division enforces greyfield and vacant lot cleanup to improve chances of site redevelopment and to deter crime
- Incorporate environmental justice criteria and priorities into LVMC and continue to enforce environmental regulations and permitting to ensure clean air and water.
  - Make local infrastructure improvements identified in the CIP, including street, water, sewer, storm drain, and energy, to revitalize redevelopment or blighted areas and catalyze private reinvestment
  - Create and enforce anti-idling regulations, especially around schools and within specific areas of the city with sensitive populations
  - Continue enforcement of dust control permits from construction activity
  - Incorporate environmental justice criteria and priorities into LVMC Title 19 zoning, and site development reviews of new projects
  - Create an interdepartmental working committee to discuss environmental justice concerns and mitigation strategies
  - Monitor and enforce environmental regulations and permits pursuant to LVMC Title 14
  - Implement projects to reduce pollution exposure in prioritized planning areas with environmental justice risks and vulnerabilities
  - Strengthen the City's noise ordinance based upon results from a local assessment of commercial and residential areas

**ATTY FEE MOT - 0248**



# 03. ECONOMY & WORKFORCE

## INTRODUCTION

As a city focused on growth, Las Vegas has committed to creating cutting-edge “smart city” priorities and initiatives. While smart strategies have typically referred to using technology as a means of improving urban performance, Las Vegas’s smart strategy also refers to its people. A city’s economic growth is closely related to the education of its residents. Although education is not a sole indicator of future salary potential for a person, it is generally an important one. Generally, for each level of education a person gains, a percentage of growth is gained. Therefore, for Las Vegas to grow economically, it not only needs to attract new residents- it needs improve educational outcomes of its existing ones.

School quality is often linked to overall quality of life, yet those in the City face disproportionate impacts, especially between urban and suburban schools. Future collaboration with Clark County School District’s (CCSD) will be key to ensure the city’s schools are supportive of the City’s goals to provide equitable, innovative opportunities across its neighborhoods.

Growing a smart population requires more than just good schools; it requires a holistic economic strategy that attracts the brightest and the best. Schools provide the groundwork for educating children and are a key part of a growth strategy. Like other cities who largely suffered from ‘boom and bust economies’ of the post 2008-recession, Las Vegas also must compete against other cities of similar size who are looking to pull in talent. Denver, Pittsburgh, Salt Lake City, Phoenix and Austin are doing the same, so Las Vegas must ensure that it has a robust pipeline for talent that includes housing, education, and workforce. Doing so will ensure Las Vegas is developing its own people while recruiting new residents.

While education and an economic development strategy are not required by NRS for inclusion in a master plan, the City recognizes its inextricable relationship to physical planning. Improving education, diversifying the economy, and developing a resilient workforce were repeatedly brought up by participants throughout the planning process. Las Vegas is at a unique turning point in its history as a city where its future economy will be driven less by new subdivision growth at its periphery and more by redeveloping within existing areas. As the local economy shifts to knowledge-driven, tech-based industries, the City will be able to help prioritize workforce training to respond to the “smart” innovation in the entertainment, military, and health sectors.

<b>INTRODUCTION</b>	<b>3-1</b>
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<b>II. ECONOMIC + WORKFORCE DEVELOPMENT</b>	<b>3-26</b>
<b>III. HOUSING</b>	<b>3-50</b>

# GOALS

## I. EDUCATION

- A. Achieve equitable attainment of quality education - Pre-K through higher education - to support a strong workforce and quality of life.
- B. Support school siting and learning environments for all ages through thoughtful land use and transportation planning

## II. ECONOMY

- A. Support diverse employment and entrepreneurship for the existing and future workforce that capitalizes on skills, especially in emerging sectors
- B. Prioritize key redevelopment opportunities, incentivize, and actively promote their reuse
- C. Uphold sound fiscal policies and transparency that increases efficiency in order to provide higher quality of services

## III. HOUSING

- A. Increase affordable housing types and choices for all income levels near existing and new employment centers.
- B. Develop services that help the homeless and prioritize the needs of the most vulnerable members of the community

### RELATION TO SOUTHERN NEVADA STRONG IMPROVE ECONOMIC COMPETITIVENESS AND EDUCATION

Goals work to align future development styles or “place types” with the needs of small businesses and workers in the region’s target sectors.

- 1. Aligning land use and transportation plans with regional economic development plans.
- 2. Ensuring that Southern Nevada offers a range of place types to attract and retain future workers, visitors, businesses and entrepreneurs.

3. Enhancing the role of small businesses and entrepreneurs as leaders in economic diversification and revitalization.

4. Increasing collaboration between the state government, local governments, and the region’s higher education institutions to align economic development and education efforts.

5. Supporting the educational system and learning environments through thoughtful land-use and transportation planning.

# SUMMARY OF ECONOMY & WORKFORCE STRATEGIES BY GUIDING PRINCIPLE



## EQUITABLE

- Improve access to jobs
- Improve workforce training
- Improve access for all communities + language barriers
- Emphasize education (access and quality)
- Emphasize early childhood programs
- Utilize development practices support & prioritize education
- Create affordable social services for an aging population
- Create more affordable healthcare options
- Encourage accessible healthcare beyond urgent care and hospitals
- Create affordable childcare services
- Transition training for digitalization



## RESILIENT

- Emphasize economic diversity
- Develop a more diverse talent pool
- Diversify business types
- Cultivate fully-formed philanthropic centers
- Emphasize education (access and quality)
- Improve access to food (global leaders in resilient food access in a desert climate)
- Prepare workers for digitalization transition
- Prepare for an aging population
- Prepare for disasters
- Expand efforts to include mothers and single-parents in the economy
- Develop a “beyond resorts” mentality that diversifies jobs and economy



## HEALTHY

- Improve healthcare access
- Improve mental health
- Improve health literacy
- Develop a more healthy workforce
- Increase living wages
- Create a more effective healthcare system
- Improve access to social services (aging, disability, etc)
- Emphasize healthcare industry education & jobs
- Prioritize healthcare district development
- Increase access to healthy food/ latchkey and summer
- Improve job stability



## LIVEABLE

- Increase access to amenities, services
- Emphasize cultural tourism
- Prioritize historic preservation
- Complement gaming and entertainment industry
- Prioritize technology / “cutting edge” gaming
- Emphasize a Las Vegas for all ages
- Create inclusive economic practices
- Prioritize housing and utilities as an affordable percentage of income



## INNOVATIVE

- Engage medical tourism
- Increase healthcare education & jobs
- Focus on niche R&D
- Lead innovative technology creation including UAV + AV
- Capitalize on air force bases synergy
- Foster entrepreneurship
- Prioritize economic diversity
- Capitalize on financial, real E\estate, and other professional services
- Increase maker space and flexible workspace
- Capitalize on proximity to Los Angeles
- Create more smart jobs (robotics, AV, and digitalization)

ATTY FEE MOT - 0250

# EDUCATION



## GOALS

- A. Achieve equitable attainment of quality education - Pre-K through higher education - to support a strong workforce and quality of life.
- B. Support school siting and learning environments for all ages through thoughtful land use and transportation planning

3-4

LAS VEGAS MASTER PLAN

3-5

03. ECONOMY & WORKFORCE

# I.A. EQUITABLE EDUCATION

NRS 278.160.2

## ACHIEVE EQUITABLE ATTAINMENT OF QUALITY EDUCATION — PRE-K THROUGH HIGHER EDUCATION — TO SUPPORT A STRONG WORKFORCE AND QUALITY OF LIFE

The quality of the City’s educational system is among the top rated public concerns and leading priority areas for residents. When surveyed, residents consistently raised concerns about the quality of the educational system and cited education being the one thing that they would want changed about the city. During public outreach, residents ranked education as the highest priority issue that the City faces over the next thirty years and spoke frequently about improving schools. The importance of educating the community’s students, whether primary, secondary, or higher education, has historically not been a direct charge or function of the City. Given that Nevada has often ranked last or toward the bottom of recent national education metrics, it is not hard to understand why it is such a great public concern. There are definite bright spots throughout the City and community, with many academic success stories, good schools, and dedicated teachers. Educational advocacy organizations, including Opportunity 180, parent-teacher associations, and other non-profits highlight the need for good schools that are accountable, and that translate to college and career-ready young adults. The City simply cannot ignore education as an issue – poor academic performance and weak educational trends must end.

While the City doesn’t provide traditional direct educational support, it does have a vested interest in educational outcomes and offers a number of supportive programs. The Department of Youth Development and Social Innovation was formed in 2015 to focus on educational outcomes, supplementing education provided by CCSD and community partnerships through Strong Start, Strong Schools, and Strong Future initiatives. Since its foray into education, the City provides:

- Safekey before and after school programs, offered at about 70 of the City’s CCSD schools.
- ReInvent Community Schools focuses on expanded learning at underperforming schools around Downtown,

and the after school Ignite STEM program for middle school students.

- Pre-K education through Strong Start Academies
- College prep and career path programs, including Batteries Included, and My Brother’s Keeper.

Because residents demand improvements to education, it is important to examine educational factors, roles, and relationships between the City and institutions of learning within Southern Nevada:

- The educational system is a highly regarded quality of life measure. Parents of children want their children to attend high quality schools. This is true also of the ability to attract new residents to the City; educational options, quality of schools, and overall educational outcomes are often leading factors on locations to live when weighing places to live from a potential resident from out of state. Similarly, businesses looking to start or relocate to the City often consider the quality of the educational system, as it is just as important a factor for recruiting from the workforce as it is to have employees satisfied with the schools they send their children to.
- There is stark contrast in quality between schools; the performance of schools may be dependent upon a variety of factors, but noticeable trends indicate that geography, demographics, and socio-economics play a role in educational outcomes for the City’s students.

We need to create a system that actually cares about the students

– Transit user at Bonneville Transit Center



- Multiple pathways must be open to students when they graduate; for many, entering the workforce with a good paying job is an important attainable aspect, provided that the quality of education doesn’t require extensive retraining or remedial work. Similarly, graduating students must be prepared to enter college without reliance on remedial classwork.
- Successful educational outcomes have greater potential to yield direct and indirect benefits to the City and community. Students that graduate high school, receive vocational or workforce development training, or attain degrees from Nevada’s institutions of higher learning have a greater potential to remain within the City and state, thereby contributing to overall positive community development.

Public schools are the predominant method of educating the students of Southern Nevada, with relatively few private school options available. Over time, efforts have been made to increase options and school choices that have led to the growth of additional charter, private, and parochial school options. Development of these choices are important steps that should be made to increase educational quality and outcomes for students of all backgrounds, and must be done without compromising the public education system.

At the state level, the state Department of Education (NDOE), led by the Superintendent of Public Instruction and Board of Education, sets educational policy, curricula, and academic and achievement standards consistent with state statutes. It also oversees teacher licensure for all public and private school educators and measures student accountability. Since 1956, the Nevada Legislature consolidated unified

### KEY ACTIONS

- Expand the role and scope of the Department of Youth Development and Social Innovation as a partner to educate City youth.
- Continue offering and expand supplemental before and after school programs to achieve better K-12 educational outcomes
- Develop an educational support program with underperforming CCSD schools to provide additional resources for students and parents.
- Resolve to support continuing education, workforce development, and collegiate program to improve post high school educational outcomes.
- Partner with NSHE to expand UNLV and CSN campuses and siting and development of a new state college campus tailored to City of Las Vegas residents with a dedicated focus on granting targeted and specialized 2 and 4 year degrees to further add teacher capacity.

### OUTCOMES

- 95% of adult population has attained a high school diploma by 2050
- 33% of adult population has attained at least a Bachelor’s degree by 2030 and 40% by 2050.
- CCSD graduation rates increase to 95% by 2050.
- Literacy and subject matter proficiency rates improve over time for elementary, middle and high school students.
- The 4-year cohort high school graduation rate for all public schools in the City from each race/ethnicity, special education, ELL students, and low-income subgroup of students is 90% by 2050.
- All schools within the City will be rated three stars or higher on the Nevada School Performance Framework
- Per pupil funding rates are greater than the national average

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public school districts into countywide school districts. From that point, the City has been served by the Clark County School District (CCSD), which has grown to become the fifth largest school district in the country with an enrollment exceeding 325,000 students:

- CCSD is overseen by a seven member elected Board of Trustees. Overseeing the organization is the district's Superintendent of schools and supported by a wide range of administrative and academic functions. Approximately 23,000 full-time and substitute teachers and 19,000 support staff educate and serve students.
- In general, education, school districts, and the system of public instruction is governed under Title 34 of NRS, in addition to chapters on taxes to financially support schools and education. More than half of the funding for K-12 education is through locally derived sources, with approximately a third distributed from the state, primarily from local sales taxes, property taxes and the Local School Support Tax. Federal funding, in the form of grants distributed from the U.S. Department of Education, provides the remainder. Funding for public schools, known as "the Nevada Plan," has historically been complex and controversial, with per-pupil instructional spending wavering between \$5,000 - \$6,000. Much of these revenues are expended for teachers and personnel, but a sizable share is also spent on instruction, school capital projects, transportation, and other administrative expenses.
- The Nevada System of Higher Education (NSHE) oversees community colleges and universities throughout the state. Governed by the Nevada Board

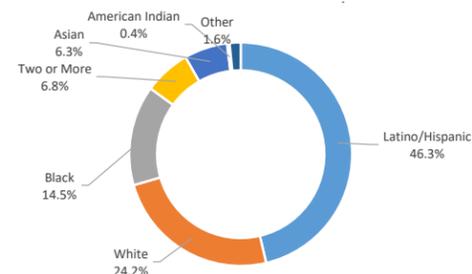
of Regents, NSHE institutions provide an important pathway for people to attain Associates, Bachelors, and advanced degrees. The University of Nevada, Las Vegas (UNLV) and College of Southern Nevada (CSN) are the City's most important local post-secondary pathways for people to earn degrees. They are also vital for workforce and economic development because they train students new skills and trades, provide innovative research and development opportunities, promote internationally recognized scholarship, help increase employment and worker wages, and provide public health services in a teaching setting.

**THE CITY'S EDUCATIONAL OUTCOMES VARY WIDELY, ESPECIALLY BETWEEN DIFFERENT COHORTS**

Maintaining and growing a healthy community and competitive economy begins with early childhood education. As a student progresses, education should be accessible to everyone, regardless of demographic or socio-economic status. But for decades, the City and community's poor educational outcomes have varied widely between geography, subgroups, and populations, indicating strongly correlated and widening gaps for local outcomes. Furthermore, the link between educational attainment and earnings potential is well documented. Research by the Institute for Social Research at the University of Michigan shows that, on average, households headed by a high school graduate accumulate 10 times more wealth than households headed by an individual who dropped out of high school and even more with the attainment of Bachelor's or advanced degrees.

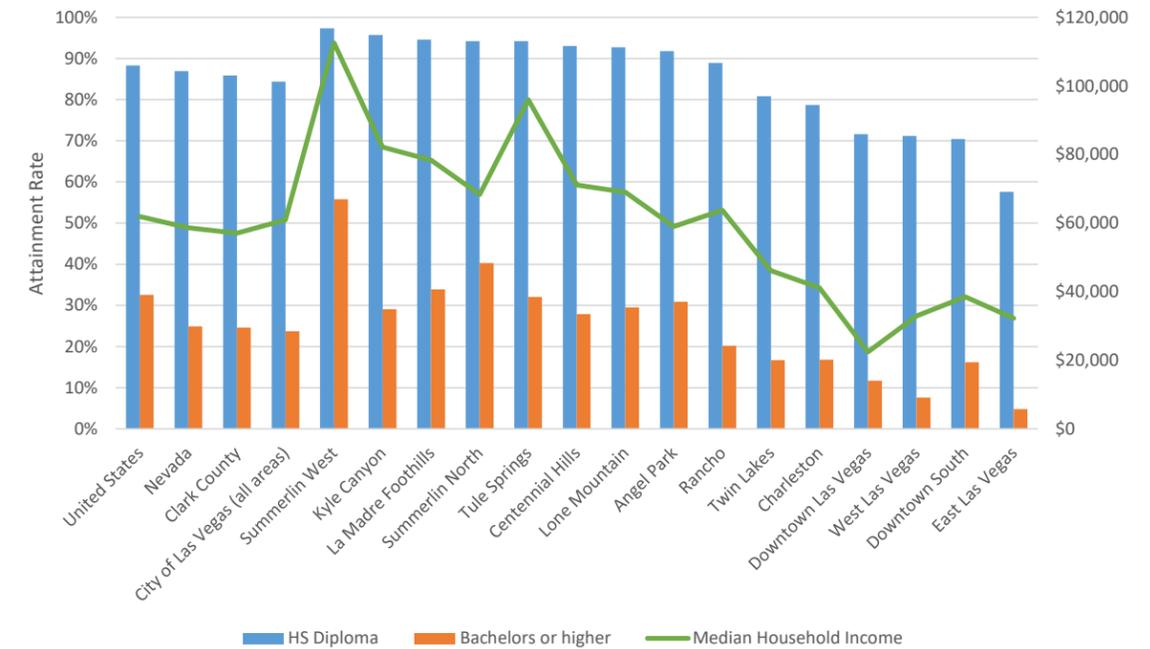
Educational attainment rates for the City are below the national and statewide rates. Citywide, approximately 84%

**STUDENT RACE AND ETHNICITY**



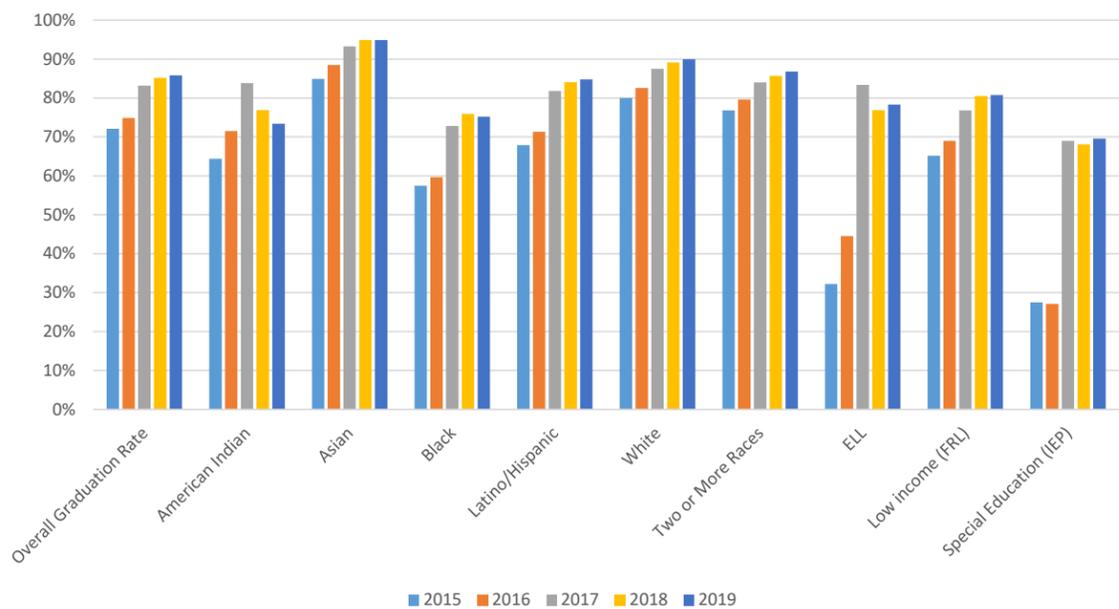
Source: NDOE

**EDUCATIONAL ATTAINMENT AND INCOME - ADULT 25 AND OLDER**



Source: City of Las Vegas / ACS 5 year estimate

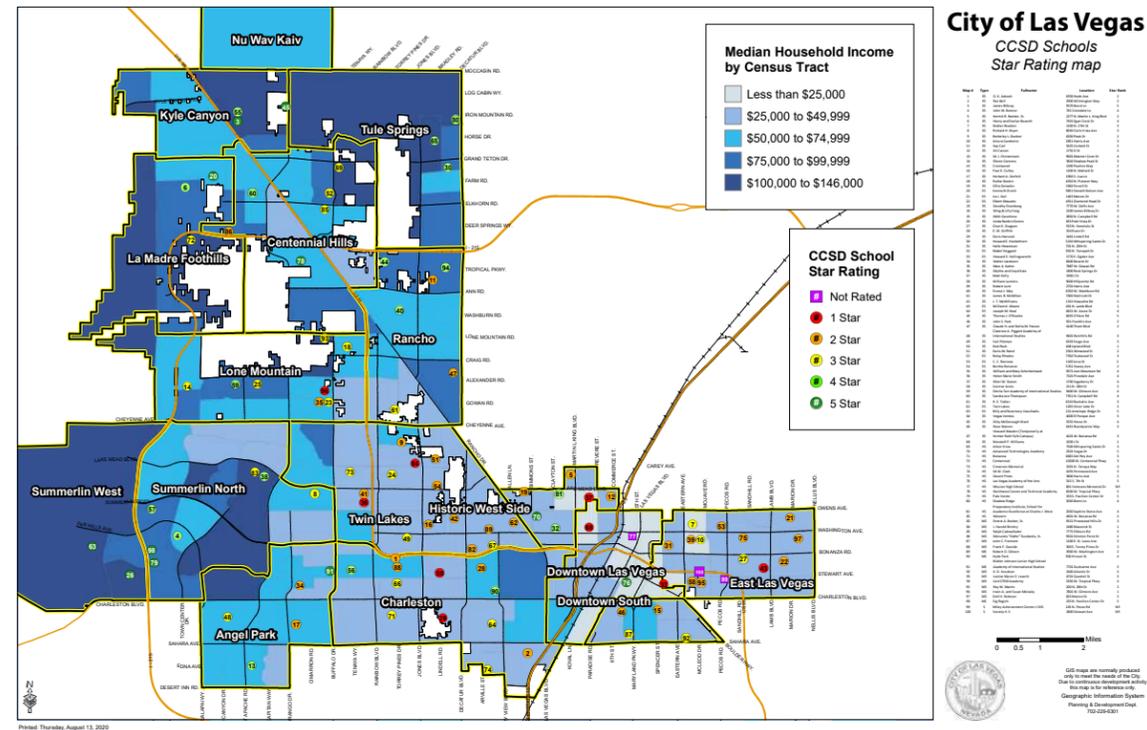
**GRADUATION RATES - FOUR-YEAR COHORT**



Source: NDOE



SCHOOL ACHIEVEMENT



NDOE 1 and 2 star schools with Census blocks indicating school size and poverty rates. The majority of underperforming schools are mostly located around the areas surrounding Downtown Las Vegas.

Source: NDOE

of residents at least age 25 have a high school diploma, while just under a quarter have a Bachelor's degree or higher. Nationally, the rate of attaining a high school diploma has increased over the past decade to 88%, while the rate of attaining a Bachelor's degree or higher is nearly one-third. While many of the areas around Downtown Las Vegas have lower educational attainment rates compared to suburban areas, particularly concerning is an especially low rate in East Las Vegas, which has high populations of Spanish speakers, low-income households, and Latinos; less than 60% of residents have obtained a diploma and fewer than 5% have a college degree.

Clark County School District has been consistently ranked as one of the worst performing school districts nationally. The results of the 2017 National Assessment of Education Progress showed Nevada ranked no higher than 43rd (out of 52) in any of the study's categories on student metrics

and performance in various subject areas. CCSD fared only slightly better when compared to 26 other large, urban school districts, but still below the national average. However, CCSD has had success in improving the four-year adjusted cohort high school graduation rate overall throughout the district. Over the past five school years, the overall graduation rates have increased and strong gains have been made for each respective subgroups, especially Latinos, which make up almost half of the CCSD student population. Specific areas of improvement must be made for CCSD's American Indian and black student populations as well as English Language Learners and special education students, which have all made overall gains and improvements, but still fall below an 80% graduation rate.

Despite those successes, there is a stark contrast between urban and suburban school performance, which is specifically linked with student achievement outcomes

or graduation rates. Almost half of the CCSD schools within or serving the City are underperforming, receiving a performance rating of 1 or 2 stars on the NDOE's school achievement rating scale. Geographically, the core planning areas surrounding Downtown Las Vegas, including East Las Vegas, Downtown South, West Las Vegas, Charleston, and Twin Lakes have the highest concentration of schools rated as underperforming.

When a school becomes listed as underperforming, NDOE can designate it as a "Comprehensive Support and Improvement school," making it eligible for support and intervention, as well as for additional funding support. A school may also be designated as a "Targeted Support and Improvement" or "Additional Targeted Support and Improvement" school if it has consistently underperforming student subpopulations within certain academic performance indicators. Within the City, there are 25 schools meeting CSI criteria and 37 schools meeting TSI/ATSI criteria. Overall improvement in student performance over a multi-year period pursuant to a school improvement plan removes the designation.

Among the state and national programs have been deployed and implemented through the NDOE and CCSD to help boost academic achievement are:

- Title I of the Elementary and Secondary Education Act: this federally funded program provides additional finance assistance to schools with high percentages of children from low-income families. More than three quarters of the CCSD schools within the City have Title I status.
- Victory Schools: Additional funding dedicated by the Legislature allocated to underperforming schools in the twenty poorest zip codes, in which additional services are provided to families of students. Ten schools within or serving Las Vegas are Victory schools.
- Zoom Schools: 19 City schools receive additional funding provided from the Nevada Legislature to support English Language Learners (ELL).
- Additional funding and grants from other state or local sources.

All City of Las Vegas students deserve to learn and graduate from quality schools and have the opportunity to enter a career-path that advances their social mobility. The City of Las Vegas must continue monitoring student and school achievement data. After each academic year, as a partner

to CCSD and individual schools, it should work with them to offer additional supplemental interventions through YDSI, particularly within planning areas with concerning educational attainment and school performance rates.

**CCSD MUST CONTINUE TO HIRE AND RETAIN WELL TRAINED TEACHERS AND REDUCE THE OVERALL STUDENT-TEACHER RATIO**

Class sizes do not only pose an issue from a school facilities standpoint; a wide body of academic research affirms that smaller class sizes results in more individualized learning, increased student engagement, and fewer disciplinary problems. Class size also correlates well with improved student outcomes and achievements, including greater subject proficiency and higher test scores. However, as CCSD has grown, so have student-teacher ratios. According to the US Department of Education, the national average public school student to teacher ratio is approximately 16:1. CCSD schools frequently exceed statutory minimum leading to school overcrowding and requiring class size reduction variances from NDOE. As a result, virtually all 1 and 2 star rated schools required such variances, meaning students attending lower performing schools are much more likely to experience overcrowding and larger class sizes.

Related to class size is the District's ability to hire and retain teachers. Nevada is not alone to the national shortage of teachers and has a turnover rate of nearly 20%. As teachers continue to retire at an increasing rate and despite hiring bonuses and incentives that have been employed, it has not been enough to fill position needs. At the beginning of



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the 2019 school year, CCSD was still short a staggering 750 teaching positions and has had to rely on a substitute pool. Nevada’s higher education teaching programs reported a 19% decrease from 2010 to 2015 of candidates completing programs. Even if CCSD was able to resolve its teacher shortage, sufficient funding has not been available to cover the cost of hiring additional teachers nor the related costs to supply additional classrooms.

While the City does not have direct control of this issue, it can contribute indirectly by:

- Improving and marketing the City’s overall livability and quality of life to make the region attractive for potential teachers
- Collaborating with CCSD to advocate for higher teacher pay and, if necessary, dedicated teacher incentives
- Pursuing additional NSHE teacher programs and capacity to increase the overall graduation rate of teacher candidates

**HIGH QUALITY SCHOOLS MUST BE HEALTHY, VIOLENCE-FREE, POSITIVE LEARNING ENVIRONMENTS WITH DIVERSE ELECTIVE, ATHLETIC, AND ARTISTIC OPPORTUNITIES**

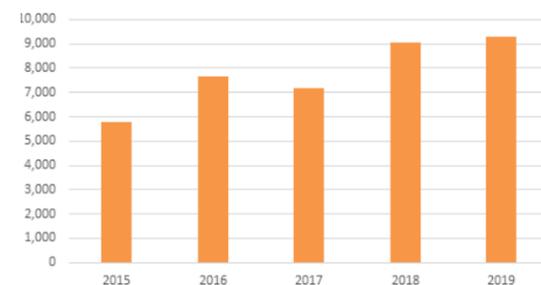
Nutrition is an important part of learning, as is the opportunity for before, during, and after school enrichment activities including elective classes, music and fine arts, athletics and other extra-curricular activities. With such a focus on educational achievement, it is important to remember that students need school environments with physical activities and constructive diversion offerings in addition to academics. Unfortunately, over time, opportunities have

shrunk as the share of funding towards these programs have been reallocated toward academics, especially for low-income schools that cannot afford additional programs like the arts and athletics that can carry considerable expenses. From an equity standpoint, offerings must be just as accessible at schools in low-income urban areas as well as high-income suburban ones. Both YDSI and the Parks and Recreation departments could have an opportunity to expand and direct targeted recreational and extracurricular offerings to CCSD students, especially in areas where program funding threatens their existence or reduces participation rates.

Like many school districts in America, many students rely on school for meals. These programs are often necessities, especially within low-income areas where families of students may be struggling with food insecurity or hunger. CCSD has high rates of students qualifying for income-based reduced price or free school breakfast and lunch; approximately 70% of students are eligible for free or reduced price breakfast or lunch. Both eligibility and participation rates have been increasing over time. While these programs are provided with assistance from the USDA, the City can work to improve local efforts that improve healthy food access for families with children.

High quality schools must be safe environments conducive to learning. Parents of CCSD students do not tolerate bullying or school violence, nor does the District. In addition to endangering students’ personal safety, incidents of violence on school campuses or on the way to or from school threaten students’ ability to learn and succeed. Nationally, school violence rates average about 19 incidents per 1,000 students from middle to high school age kids. Unfortunately,

**INCIDENTS OF SCHOOL VIOLENCE**



Source: NDOE

CCSD school violence rates, including incidents between students, toward staff, and weapons, have been increasing, with a rate of 28.6 incidents per 1,000 students. To the extent that it can, the provision of YDSI programs and City resources could be used to mitigate school safety concerns.

**THE CITY RECOGNIZES THAT EDUCATION IS AN IMPORTANT QUALITY OF LIFE ISSUE AND IS BUILDING UPON THE SUCCESS FOSTERED BY THE CITY’S DEPARTMENT OF YOUTH DEVELOPMENT AND SOCIAL INNOVATION**

When the City took the bold step of creating the Department of Youth Development and Social Innovation (YDSI), it was done because of the long-standing recognition of education as a quality of life issue. The programs offered by YDSI are largely focused on improving educational outcomes, especially for younger students and schools that are underperforming.

While graduation rates are an important educational metric, subject matter proficiency and mastery of concepts at an elementary, middle, and high school level are more of an indicator of student success. English, language arts, reading and math proficiency standards are a key indicator of whether students have acquired the knowledge necessary to succeed in more advanced classwork in higher-grade levels. According to the National Assessment of Educational Progress (NAEP), average scores for elementary school students across the country have remained below proficient, while Nevada schools score significantly lower on average than the country. CCSD schools, whether elementary, middle, or high schools, have historically had lower test scores and proficiency rates than state and national rates. However, between 2017 and 2019, there have been demonstrated improvements in elementary reading proficiency, and marginal improvements for math or for middle schools or high school. Compared to other large school districts, CCSD indicators are close to other overall average.

Unfortunately, there are also demonstrated variations in subject matter proficiency levels for different racial, ethnic, and income student subpopulations. If not addressed early, learning and proficiency issues could compound themselves, having an impact on graduation, college attendance, and securing a job with a good wage. Given

**A DAY IN THE LIFE**

**MORE PLACES TO CALL HOME**

*Tiffany Jenkins, Youth Development Manager*

Living, working and raising children in Las Vegas, Tiffany has a lot invested in seeing her city thrive. Both of her children attend magnet schools: She regards the public school options in her Westside neighborhood, as in most of the rest of the city, to be weak. She’d love to see more places nearby for her children to play, too. She appreciates the fact that her city job helps to empower young people. That said, she believes the city could do even more for them.

What if the city developed a resource-pooling program that provided more affordable housing options? That’d certainly help her friend Donna and her three children, who sometimes live with Tiffany temporarily when Donna can’t afford a rental. “The city is building new homes, but only for those who can afford them,” Tiffany says, “not for the people who already live here.” She’d like to see housing developed outside of lower income areas. Also, could the casinos contribute to an education tax? she wonders. Tourism money seems to go right back into tourism.

On a smaller scale, Tiffany sees an opportunity to develop more marketing and resources aimed at providing drug program information and awareness to children and parents alike. Together with easier-to-find information about the housing programs that do exist, she believes, these modest efforts would represent a real step towards enriching her and her neighbors’ quality of life.

these factors, addressing disparities among student subgroups early could lead to fewer equity issues in the future. YDSI programs that supplement traditional student instruction are designed to improve student performance.

For three decades, the City has offered the low-cost Safekey and Ignite programs. Offered at the City’s elementary schools, Safekey provides before and after-bell opportunities for learning in a safe environment. The program provides scheduled literacy programs, time to complete homework, and extra-curricular activities. Not only does Safekey extend

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the school day, it also assists parents who are required to work during the day to provide a supervised child care option. Similarly, Ignite is the middle school after-school program. It also provides recreational activities and study time, but also provides STEAM learning, social and civic activities, and teaches responsibility and leadership. Each of these programs has high participation rates during the academic year. Each of these programs have proven to be effective, well-developed, and fill an important need for residents with young children. In the future, the City must look at additional targeted enhancements that are unique to each program, for each school, in each area of the City. With additional research, the City may be able to tailor additional approaches and targeted offerings that are directly related to improving school performance, done before or after school hours. The City could look into the provision of an innovative career pathway program for high school kids, such as a school-to-career initiative, linked-learning approaches, and career academies. Such approaches that integrate academics with skills and exposure to occupations can help for career preparation. The City should also consider its community centers as spaces for holding educational classes and YDSI programming.

In addition to K-12 school programs, families deserve high-quality and affordable early childhood development and education options. The National Institute for Early Education Research showed only 1% of 3-year-olds and 5% of 4-year-olds enrolled in Nevada's Pre-Kindergarten Programs in 2018. Fortunately, the City is working to address child-care and pre-K with the development of the Strong Start initiative, a campaign that advocates for and brings awareness to the importance of early childhood education, school readiness and literacy. The City has funded several Strong

Start Academies in areas that have demonstrated need, including around Downtown Las Vegas and Twin Lakes. The City also initiated a mobile Pre-K academy intended to be offered within low-income and affordable neighborhoods; this option brings pre-k to parents and kids instead.

**CHANGES TO THE NEVADA PLAN AND EDUCATIONAL FUNDING HAVE HELPED, BUT ADEQUATE FUNDING AT OR ABOVE NATIONAL PER-PUPIL FUNDING RATES IS NEEDED**

Approximately half of Nevada's state budget is dedicated toward education, including roughly a third toward K-12 education with the remainder toward NSHE. Applying more funding toward education and schools alone simply will not address overarching issues with improving student performance. Educational funding does, however, need to be closely scrutinized and compared with important national metrics, especially the national per pupil funding rates. Recent improvements in student performance are encouraging, as well as the growth and development of NSHE institutions which should be seen as investments for the future.

Since the 1950's, the State Distributive School Account provided direct state financial funding to school districts and charter schools for K-12 public education in Nevada. Known as the "Nevada Plan," school funding provides school districts a guaranteed dollar amount of basic state support per student. The Nevada Plan is funded each biennium through state General Fund appropriations derived from sales taxes, mining land leases, interest from the Permanent School Fund, marijuana taxes and fees, and a portion of the gaming tax. School districts also receive revenue from the local school support sales tax, property taxes, governmental services taxes, franchise taxes, and various other local and federal revenues.

School districts and charter schools receive their apportionments from the account on the basis of student enrollment. Each school district is guaranteed a specific amount per student, which is developed through a formula that considers the demographic, economic, and wealth characteristics of the district. Allotments of licensed employees and related costs are determined based on the differences in costs between different types and sizes of county school districts.

The Nevada Plan has been criticized in the past for being woefully outdated, inefficient, and not meeting the standard for the state's educational needs. Efforts to reform education funding are a regular topic during each legislative session, including diversifying education funding streams, weighting criteria, consideration of student subpopulations, and increasing the overall per-pupil expenditure – recent changes to the Plan have yielded some improvements. Debates over policy and funding will not end anytime soon. Nevertheless, metrics for spending and student performance must be closely monitored. At the same time, efficient use of resources on the largest portion of Nevada's budget that every City resident contributes to must continue to be made. To the extent that it can contribute, the City must be supportive of the overall efforts to invest in schools, teachers, instruction, whether for CCSD or NSHE.

**THE CITY MUST LEVERAGE ITS RELATIONSHIP WITH NSHE INSTITUTIONS FOR THE BENEFIT OF THE COMMUNITY AND REGION**

In 2018, two of Nevada's higher education institutions achieved the distinction of R1 "Very High Research Activity" status by the Carnegie Classification system: University of Nevada, Reno, the state's land-grant flagship institution, and the University of Nevada, Las Vegas. This accomplishment

has been heralded as it has demonstrated the standing of the institution at the same level as more 130 other prestigious doctoral universities nationwide. UNLV's hard-fought standing has proven its successful ascent at an elevated tier that recognizes:

- High expenditures in research and development, especially in science and engineering
- The number of doctoral degrees awarded,
- The number of research focused faculty

UNLV and CSN both play important, albeit differing, roles to the City and region as a whole by providing post-secondary education that trains the workforce and contributes to the overall state and local economy. As a major research institution, UNLV's focus has been educating students, developing new innovations, promoting and providing public health care, and stimulating economic development and diversification. With a student population exceeding 30,000 undergraduate, graduate, professional and postdoctoral students and faculty and staff exceeding 1,000, UNLV offers more than 350 Bachelor's, Master's, and Doctoral degrees in a wide range of academic and professional schools and colleges. It is also one of the most diverse universities in the nation, with nearly two-thirds of students identifying as a racial or ethnic minority.



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UNLV and its colleges and schools have been a consistent partner with the City. Despite its main campus not being physically located in the City, UNLV's expansion of a satellite campus within the Las Vegas Medical District is noted throughout this plan as essential for teaching and training in health care, as well as the provision of health care services. As recommended in the Vision 2045 Downtown Masterplan, the City must proactively engage in the full development of the UNLV School of Medicine. The City must also work to develop and cultivate a branch campus and incubator within the core of Downtown itself. Because UNLV has proven that it can provide important research and services directly to the City, including studies, partnerships, studio classes, and policy recommendations, having close accessibility to City Hall would help Downtown growth, redevelopment, and new student life.

CSN, the largest institution in the NSHE system, has three main campuses, including the Charleston campus, and eight learning centers, three of which are located at CCSD schools within the City. CSN primarily provides affordable, 2-year workforce development and training programs and Associate's, with some Bachelor degree offerings. 750 CSN faculty members instruct more than 30,000 students at all of its campuses, of which about a quarter are full-time. Nearly two-thirds of the student body are Latinos. During an average academic year, CSN will confer approximately 4,000 degrees and certificates to its graduates. The City has been a partner with CSN and included them as a tenant at City Hall to teach classes and make higher education accessible. That partnership also extends to a cooperative development agreement with the City to eventually develop a long awaited northwestern campus in Centennial Hills. This development will fill a gap in one of the City's fastest growing areas. And because CSN continues to grow in students demand, the City must work with it to facilitate future growth, classroom space, and expansion at its Charleston campus, which has considerable space to do so, and is directly accessible along the future high capacity transit line proposed for Charleston Blvd.

However, a final missing component must be developed. As described throughout this chapter, a future aspirational need that should be closely studied is the development of City-oriented, mid-tier state college granting 2- and 4-year degrees with specific, targeted programs that will fill workforce development gaps. Such a proposal is not without precedent; in the early 2000's, the Nevada Legislature

and NSHE studied and eventually established Nevada State College in Henderson. Nevada State has a dedicated campus that was developed in partnership with the City of Henderson; its mission, while similar to that of UNLV and CSN as provide of post-secondary education, is slightly different in focus. As a public state college, its primary degrees serve the local community and workforce, with colleges and programs dedicated toward nursing, teaching, and liberal arts with an emphasis in making the school affordable and accessible to the community's minority and low-income communities. Given the educational attainment and workforce metrics, the City arguably makes the case for the need, especially if the proposed institution is oriented toward the City's populations. UNLV and CSN will both continue to play a vital role to Las Vegas; a new NSHE institution, however, would be a potential game-changer for equitable higher education in the future.

Finally, continuing education opportunities must continue to play a role for the residents of Las Vegas. Many private colleges, institutes, and education programs offer classes, certificates, and learning opportunities for those interested in learning a new subject or skill. As part of its land grant mission of teaching, research, and service, the University of Nevada's Cooperative Extension service is an example of a community partnership in which the City has previously co-promoted its life-long learning opportunities, including 4-H youth development, nutrition, agriculture and horticulture, and STEM programs. Funded in part by the USDA and local property taxes, the City has also collaborated with the University of Nevada to provide space at city parks and facilities for community gardens and urban agriculture; the extension has also opened a knowledge center in the Historic Westside of Downtown Las Vegas. Where possible, the City must continue this and other partnerships and joint use of City facilities for extension and continuing education programs and activities that are of value to the community.

**IMPLEMENTATION STRATEGIES**

- Expand the role and scope of the Department of Youth Development and Social Innovation as a partner to educate City youth.
  - Continue to advocate for equitable school funding for CCSD's schools.
- Continue offering and expand supplemental before and after school programs to achieve better K-12 educational outcomes
  - Strengthen opportunities for parental and community involvement in schools
  - Increase funding and resources to support Strong Start early childhood development programs in the community
  - Increase programming and support for Safekey and other after-school activities, tutoring, and extended day programs, especially for students who need additional academic assistance outside of the school day
- Develop an educational support program with underperforming CCSD schools to provide additional resources for students and parents.
  - Support programs and initiatives that narrow the digital divide among households.
  - Increase the number of children served through YDSI programs.
  - Increase social service provisions at schools and community centers to help students and families succeed.
- Reduce licensing and zoning barriers and provide incentives to increase quality and options available for childcare early childhood education providers.
  - Implement educational policies and programs that reduce income inequality and increase income mobility.
- Resolve to support continuing education, workforce development, and collegiate program to improve post high school educational outcomes.
  - Partner with CCSD and employers to ensure youth are introduced to opportunities, internships, and apprenticeships in target industries.
  - Empower community centers to offer quality education and workforce development programs and initiatives
- Partner with NSHE to expand UNLV and CSN campuses and siting and development of a new state college campus tailored to City of Las Vegas residents with a dedicated focus on granting targeted and specialized 2 and 4 year degrees to further add teacher capacity.
  - Work with NSHE to expand the CSN Charleston campus
  - Work with UNLV to develop a campus in Downtown Las Vegas.

EQUITABLE	RESILIENT	HEALTHY	LIVABLE	INNOVATIVE
Every child, regardless of gender, race, socio-economic background, or ability, must be afforded the right to a high quality education.	The City can be a partner with CCSD and NSHE in the provision of supplemental educational programs for students of all ages.	Provision of healthy meals and physical education promotes improved educational outcomes.	The hallmark of every community is having a high quality educational system with high performance student outcomes.	Boosting higher education opportunities will allow for increased contributions to the local workforce and economy.
				

# I.B LINK SCHOOL FACILITIES TO LAND USE

✓ NRS 278.160.1(e)(6) and NRS 278.180

## SUPPORT SCHOOL SITING AND LEARNING ENVIRONMENTS FOR ALL AGES THROUGH THOUGHTFUL LAND USE AND TRANSPORTATION PLANNING

Clark County School District (CCSD) operates and maintains all public schools within the region. Based on the designed capacities, including portable classrooms, there are approximately 100 CCSD schools within the City of Las Vegas:

- 10 high schools (plus 5 others that draw City residents)
- 17 middle schools (plus 5 others that draw City residents)
- 70 elementary schools (plus 8 others that draw City residents)
- 6 additional magnet schools, career and technical academies, and alternative schools

These schools include some of the oldest in the Las Vegas Valley, and over time, some have been rebuilt or replaced with a new school. Historically, the School District has conducted its own capacity and enrollment studies and projections and works with local jurisdictions on school facility siting.

According to CCSD's estimates, CCSD enrolled 105,000 students districtwide during the 1988-89 school year; thirty years later, district enrollment grew 200% to more than 324,000 students enrolled in all CCSD schools. With that growth, however, there is only enough designed program capacity for 314,000 students, meaning that some schools are overcrowded.



### OUTCOMES

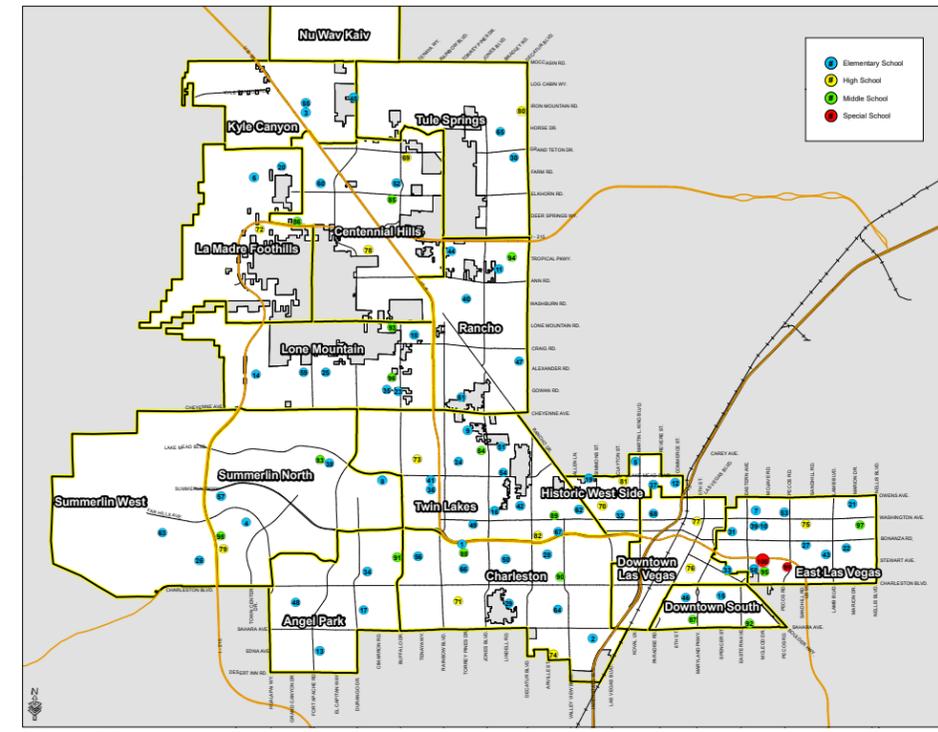


- No school within the City of Las Vegas will be greater than 125% of its designed capacity by 2025, and no school will be greater than 110% of its designed capacity by 2030.
- The City will work with CCSD to site, permit, and/or construct at least 18 new elementary schools, 3 new middle schools, and 3 new high schools as population increases and space by 2050.
- Percentage of schools within City of Las Vegas meeting the State of Nevada class-size requirements will increase by 50%.

Education must be better because kids have to attend the school you are zoned for. Charter schools are difficult to get into.

- Mother at East Las Vegas Community Center

### CCSD SCHOOL FACILITIES



City of Las Vegas  
CCSD Schools  
City of Las Vegas Locations

### KEY ACTIONS

- Coordinate with CCSD on future school and facility needs to better integrate school siting, future student growth, and facility needs in city capital improvement programming
- Resolve to support future bond measures for capital improvement plans that alleviate overcrowding, add classrooms, and eliminate portables
- For future CCSD school facilities, additions, and expansions, partner with CCSD to acquire land or property for schools where overcrowding exists, expedite permitting and construction and ensure optimal locations of schools within master planned communities
- Continue working with CCSD on Safe Routes to School for existing and future schools
- As part of a larger legislative request, coordinate with CCSD to enable additional development funding for school construction
- Work with CCSD to ensure dedicated magnet schools and academies and special and alternative schools are built and equitably distributed so additional seats are available
- Better assess new charter and private school development, while accommodating their construction

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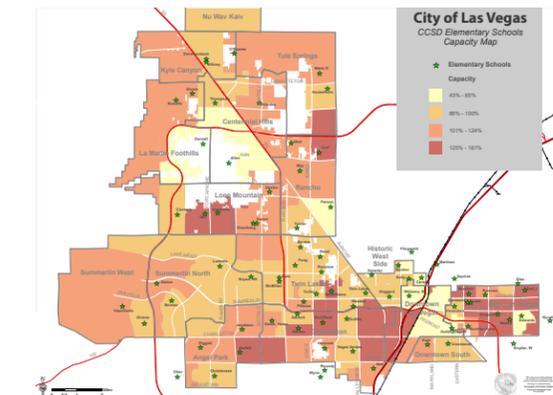
**MANY CCSD SCHOOLS COMMONLY FACE OVERCROWDING ISSUES, ESPECIALLY IN GROWING AREAS**

School overcrowding has been a common and unfortunate issue that Clark County School District (CCSD) confronts annually. The most recent National Education Association report ranked Nevada as the number 1 state for the most pupils-to-teacher ratio, with 25.86 students enrolled per teacher. In 2019, the Nevada Department of Education (NDE) showed CCSD reporting all three categories for justifying Class Size Reduction (CSR) variances: facility limitations, hiring difficulty, and funding limitations. Each quarter, schools that cannot meet the state's legally prescribed pupil-to-teacher ratio requirements (16:1 for Kindergarten, 17:1 grades 1 and 2, and 20:1 grade 3) must submit a variance request to the state Department of Education.

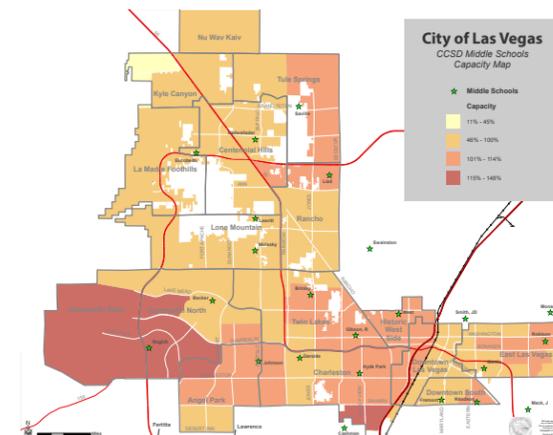
Current overcrowding trends are most apparent in elementary schools and high schools; within developed areas, students zoned for elementary schools in East Las Vegas, Charleston, and Downtown Las Vegas are the most impacted by severe overcrowding; similarly, middle schools that draw students in Charleston are also experiencing overcrowding. Three high schools within the central valley (Clark, Rancho, and Desert Pines, each of which have magnet programs) face major overcrowding. Given the sizes, capacities, and locations of existing schools, as well as the CCSD 2015 CIP, even the addition of more classroom space, facility replacements, alone may not be enough in the short-term. While some school rezoning may help to rebalance student populations, a long-term school construction solution will be needed for these areas.

In developing areas there is the dual challenge of building schools for new development and anticipation of future growth. While new middle schools are not yet needed in these areas, one new high school is slated to be constructed in Kyle Canyon to alleviate overcrowding conditions at Centennial, Shadow Ridge, and Arbor View high schools. Because the City anticipates 300,000 more people living within its boundaries and increased housing density in older neighborhoods to accommodate these additional residents, the City must accurately track the need for additional schools throughout the City and work with CCSD to build new schools or increase capacity at existing schools to improve service and further reduce overcrowding.

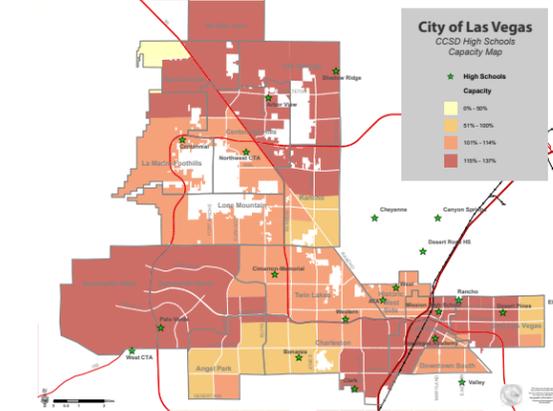
**CCSD SCHOOL ENROLLMENT AND PERCENTAGE OF CAPACITY**



Elementary Schools

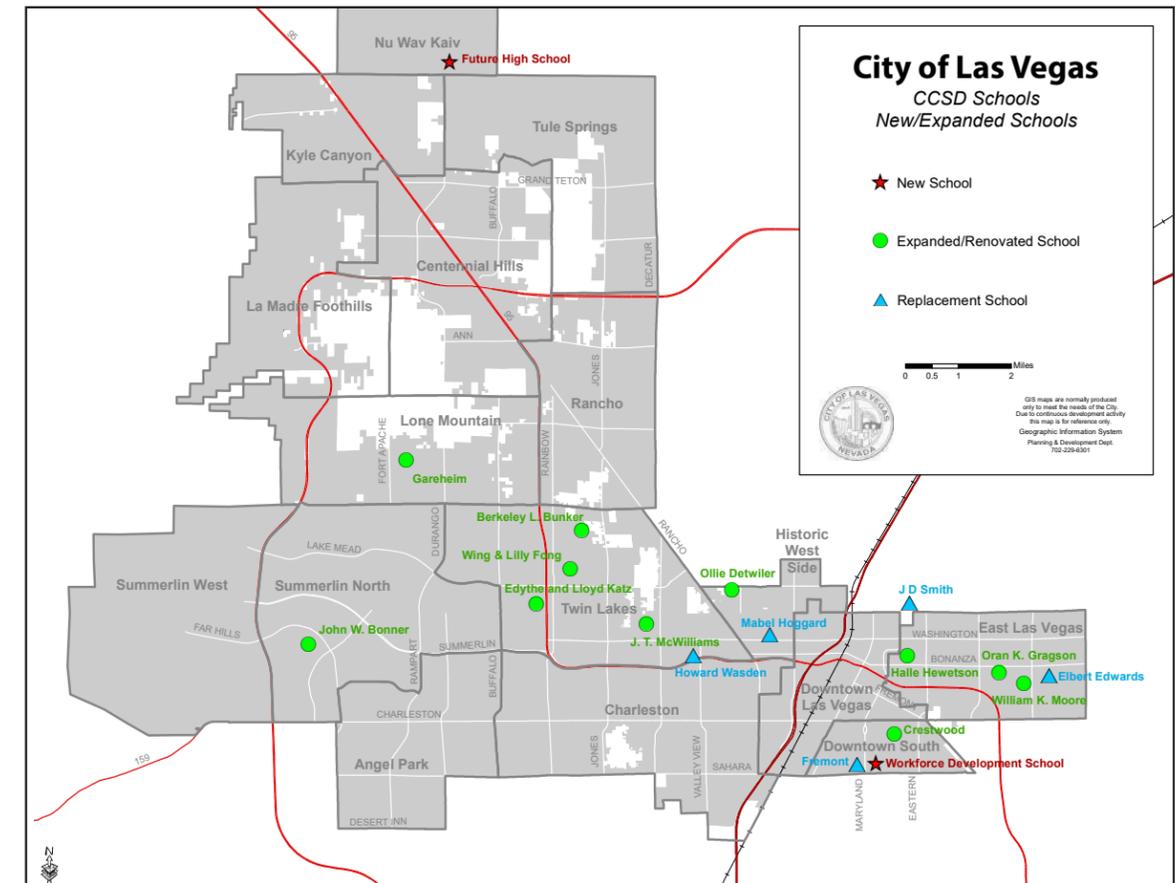


Middle Schools



High Schools

**CCSD CAPITAL IMPROVEMENT PLAN (2015): NEW SCHOOLS, REPLACEMENTS, AND CLASSROOM ADDITIONS**



**THE CITY IS PREPARED TO WORK WITH CCSD ON RECOMMENDED SCHOOL CONSTRUCTION AT LOCATIONS THAT ARE SAFE, ACCESSIBLE, AND EQUITABLE**

Given current data and projected student population growth in the future, new schools and classrooms will be required. Because of the projected population growth, not only do new schools need to be constructed, existing zoning must be rebalanced in certain areas. Based on population needs and housing enrollment variables, CCSD will need to fund, construct, and maintain at minimum:

- 4 new high schools
- 5 new middle schools
- 20 new elementary schools

School location is largely dependent upon land availability. While this presents an issue for “infill schools” in developed urban areas, one tool that has allowed for the construction of schools is the Southern Nevada Public Lands Management Act (SNPLMA). Through SNPLMA, the City works with BLM and CCSD to jointly identify parcels for sale through provisions of the Recreation and Public Purposes Act. At that point, government entities can obtain those lands through lease or at a rate below market value. However, some areas require additional attention, especially within master planned communities, where CCSD may be in competition with developers for parcels for schools.

Infill school locations, which may be needed in the future to further alleviate overcrowding, present a greater challenge. Site constraints, challenges with existing infrastructure, and building requirements may impose additional costs. While the addition of new classrooms and wholesale school replacements have been done in a manner that has avoided additional constraints, the City must further assist CCSD in fast-tracking school construction in these areas, avoiding barriers, and assisting CCSD to get schools built where they will be needed most. Schools themselves can vary widely in terms of size, design, and features. Depending on the type of school, the programs it offers, and the student enrollment. School sizes have typically ranged from 40 acres for a standard high school to a compact 4-acre elementary school site in Downtown Las Vegas. The City must work with CCSD to explore the construction of multi-

grade facilities, non-traditional school designs at locations smaller in acreage, require multi-story school buildings, or be located in existing buildings that must be reconfigured and renovated to comply with applicable standards, regulations, or statutes. An opportunity to attempt or pilot this concept may exist in Downtown Las Vegas.

The challenge in either case is to ensure any new school, whether urban or suburban, is equitable in terms of the facility’s offerings. This issue has a considerable degree of complexity, including the ultimate composition of neighborhoods that feed into a school. The goals contained within the Land Use chapter seek to mitigate neighborhood homogeneity by providing increased housing options, diversity of uses, a range of transportation types and choices, and balanced neighborhood amenities. If, however, individual schools have certain demographic trends, now or in the future, the City and CCSD must work together to ensure neighborhood school zoning does not result in racial or socioeconomic segregation and develop strategies that may address the issues on a case-by-case basis.

Consideration must be made to as to how students safely access schools. The Federally funded Safe Routes to School program ensures safe transport for school children and has thus far helped address challenges and barriers for CCSD students to walk and bike to school. Safe Routes to School works between schools and community partners to identify improvements, programs, and policies through a coordinated action plan. Since Safe Routes to School’s inception, additional laws have been put into place by the Nevada Legislature to address school zone safety, as well as by providing additional enforcement tools and penalties that can be imposed on violators by CCSD police and LVMPD. The City’s Public Works Department works with CCSD to ensure school zones are clearly marked, constructs school flashers, crosswalks, sidewalks, bike lanes and other recommended safety improvements. The closer the proximity of a school to neighborhoods increases the likelihood of students of all ages to walk, bike, or take transit, thus reducing CCSD school bus transportation needs, additional VMT, congestion and unsafe conditions immediately around or near schools. As such, the City must continue to be a partner to implement school action plans and provide necessary infrastructure to ensure existing and future schools all have safe routes.

**RECOMMENDED FUTURE SCHOOLS - LONG TERM NEED**

Area	Elementary	Middle	High
Angel Park	1 new school	Rebalance zoning with share of new Charleston MS	
Centennial Hills	2 new schools with large capacities		
Charleston	2 new schools with large capacities; rebalanced zoning	1 new school	A new school serving Charleston, Downtown Las Vegas, West Las Vegas, and Downtown South
Downtown Las Vegas	New K-12 concept school located in Arts District	Share of Fremont MS replacement (2015 CIP)	1 new school serving multiple areas
Downtown South	1 new school (2015 CIP: Workforce Development Swing School at Gorman site)	Reutilization of Fremont MS (2015 CIP)	A new school serving Charleston, Downtown Las Vegas, West Las Vegas, and Downtown South
East Las Vegas	Rebalance zoning	Rebalance zoning	Rebalance zoning
Twin Lakes	Rebalance zoning	Rebalance zoning with share of new Charleston MS	
La Madre Foothills	2 new schools with large capacities	Share of new Kyle Canyon MS	Share of new Kyle Canyon, Lone Mountain HS
Lone Mountain	2 new schools with large capacities	Share of new Rancho MS	1 new school
Kyle Canyon	1 new school (built as part of Skye Canyon)	1 new school (built as part of Skye Canyon)	1 new school
Nu Wav Kaiv	2 new schools	Zone for existing middle school, share of new Kyle Canyon MS	Share of new Kyle Canyon school
Rancho	1 new school	1 new school	
Summerlin North	Rebalance zoning	Rebalance zoning with share of new Summerlin West MS	Rebalance zoning
Summerlin West	3 new schools	1 new school	1 new school
Tule Springs	1 new school; rebalance zoning at others	Share of new Rancho MS	
West Las Vegas	1 new school		A new school serving Charleston, Downtown Las Vegas, West Las Vegas, and Downtown South

	2019-20 ENROLLMENT	DESIGNED CAPACITY	NUMBER OF SCHOOLS	CCSD SCHOOLS WITHIN CLV
Elementary (K-5)	148,004	142,804	229	70
Middle (6-8)	74,920	80,249	59	17
High (9-12)	98,822	88,815	49	10
Special & Alternative	1,250	2,119	19	-
<b>TOTAL</b>	<b>323,777</b>	<b>313,987</b>		

Source: CCSD

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**ADDITIONAL CAPITAL FUNDING FOR NEW SCHOOLS, RENOVATIONS AND MODERNIZATIONS WILL BE REQUIRED**

CCSD’s Capital Improvement Program (CIP) uses voter approved bond funds backed by several funding sources, including property taxes, real estate taxes, and hotel room taxes, that allow the district to address growth. School bond funding can only be used toward CIP projects that construct, replace, or renovate schools. Clark County voters have previously approved bonds allowing for the construction of more than 100 new schools. In 2015 and 2017, the Nevada Legislature authorized a \$4.1 billion extension of the CIP for an additional 10 years to keep pace with population growth. The 2015 CIP was approved by CCSD’s Board of School Trustees to address school overcrowding, replacements, classroom additions, and modernization projects. While the CCSD 2015 CIP is intended to be adaptable, it is clear that new schools and classroom space will be needed in the future beyond what the current bond fund can provide. Additionally, school maintenance for the district’s existing and growing facility footprint will be required into the future; older schools in particular may need routine repairs to critical systems for school operations outside of a major modernization or full-facility replacement and life cycle replacements. The City must be prepared to work with CCSD and legislators to ensure future bonds and school funding is made available.

**WORK WITH CCSD TO ENSURE ACCESS TO MAGNET, SPECIAL, AND ALTERNATIVE SCHOOLS**

CCSD has a number of special and alternative schools that are provided for gifted and talented education, alternative instruction, or to fulfill a requirement to educate students in atypical situations. A number of these programs and schools are located within the City of Las Vegas. Among them are:

- Magnet and career and technical academies housed in a dedicated “whole school.” In addition to traditional instruction, these schools have their own specialized curricula that fulfils a special education capstone for gifted students or a career pathway. These schools provide the benefit of improving teaching and learning outcomes, school integration, school choice, and

expanding career and post-secondary education opportunities.

- Magnet programs and select schools also exist as a “school within a school” at traditional schools, in which neighborhood zoned students share the school with students accepted districtwide.
- Special and alternative schools provide education to students with behavioral or disciplinary problems, special education to qualifying students, and adults that have dropped out of school.

To ensure continued access and to provide a degree of school choice, the City must work with CCSD to ensure dedicated schools are built and equitably distributed and additional seats are available for gifted students

**MORE SCHOOL AND EDUCATIONAL CHOICES CAN HELP BALANCE THE NEED FOR NEW SCHOOLS**

A wide range of other school choices must be made available to help balance CCSD’s needs to fund and build new schools. Schools granted a charter from the State Public Charter School Authority can provide traditional school education or virtual or distance education using public funding, but must meet the regulations of the charter and other state and Federal regulations and requirements. Since charter schools were authorized by the Nevada Legislature in 1997, these schools have seen their enrollment slowly grow over time while still ensuring student performance meets state standards. Enrollment at Nevada’s charter schools during the 2019-2020 school year has increased to more than 40,000 students. Most of the 22 charter campuses within the City of Las Vegas are physical campuses with smaller class sizes, student-teacher ratios, and enrollments, and combined grades. Private non-sectarian, college preparatory, and religious schools provide another alternative for parents. As with charter schools, acceptance though an application process is required, and tuition can vary widely. Throughout Clark County, there are 115 private schools serving more than 22,000 students. Demand for these schools is high and often leads to lottery admission and waiting lists; charter school access can also lead to longer commutes by students and parents to drop off their kids at a school. When proposed, the City must work with charter and private school applicants to determine transportation logistics, school siting and design issues.

**IMPLEMENTATION STRATEGIES**

- Coordinate with CCSD on future school and facility needs pursuant to NRS 278.180 and NRS 278.185:
  - Track density as it increases in neighborhoods and predict when increased population requires the additional identified schools within each respective planning area (TABLE)
  - Work with CCSD to zone City of Las Vegas students with schools geographically located within the City, where possible (TABLE)
  - Better integrate school siting, future student growth, and facility needs in city capital improvement programming
- Resolve to support future bond measures for capital improvement plans that:
  - Construct new schools to alleviate overcrowding
  - Add classrooms to existing schools to increase their capacity
  - Reduce or eliminate portable classrooms in favor of permanent classroom facilities
  - Support adjustments to school bond or construction bond to provide additional classrooms where most needed
- For future CCSD school facilities, additions, and expansions:
  - Partner with CCSD to acquire land or property for schools where overcrowding exists
  - Permit and approve smaller school building designs to provide access to neighborhoods where overcrowding exists
  - Recommend school site locations models for urban areas
- Support CCSD’s direction to build multiple-story schools where appropriate
- Work with CCSD to ensure sustainable and resilient green school design strategies are employed
- Ensure CCSD is positioned to negotiate optimal location of schools within master planned communities
- Continue working with CCSD on Safe Routes to School to ensure individual school plans can be implemented and provide necessary infrastructure to ensure existing and future schools all have Safe Routes
- As part of a larger legislative request with respect to capital improvement funding, coordinate with CCSD to propose a bill draft request at a future session of the Nevada Legislature:
  - To enable a development impact fee or voter approved question for school construction; or,
  - To amend NRS 278B to allow impact fees for new development to be imposed for the purposes of land acquisition or school construction; and,
  - In either case, later authorization of such an impact fee by City Council pursuant to the chapter.
- Work with CCSD to ensure dedicated magnet schools and academies and special and alternative schools are built and equitably distributed so additional seats are available
- Better assess new charter and private school development, while accommodating their construction
  - As development applications or agreements are received, coordinate with CCSD and determine number of students served within zone or area, whether CCSD, charter, or private schools

EQUITABLE	RESILIENT	HEALTHY	LIVABLE	INNOVATIVE
As new schools are constructed or as existing schools are rezoned, the City and CCSD must pledge to ensure fair access and school amenities, no matter the location 	New schools and existing school campuses must embrace designs and upgrades with sustainable features 	An appropriate geographic balance of schools in neighborhoods that reduces distances and encourages students to walk or bike to school safely 	Schools, whether new or existing, are sited in a manner that’s accessible and safe for students to access 	Development of new types of schools can help ease overcrowding in neighborhoods with high growth and demand 

# || ECONOMY

## GOALS

- A. Support diverse employment and entrepreneurship for the existing and future workforce that capitalizes on skills, especially in emerging sectors
- B. Prioritize key redevelopment opportunities, incentivize, and actively promote their reuse
- C. Uphold sound fiscal policies and transparency that increases efficiency in order to provide higher quality of services



3-26

LAS VEGAS MASTER PLAN

3-27

03. ECONOMY & WORKFORCE

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# II.A ECONOMIC + WORKFORCE DEVELOPMENT

NRS 278.160.2

## SUPPORT DIVERSE EMPLOYMENT AND ENTREPRENEURSHIP FOR THE EXISTING AND FUTURE WORKFORCE THAT CAPITALIZES ON SKILLS, ESPECIALLY IN EMERGING SECTORS

Las Vegas has been one of the great economic success stories of the United States. Its rapid growth, particularly in the gaming and tourism industries, has fostered the development of thousands of local jobs and developed a thriving support economy. However, the great recession of 2008 was especially hard on Las Vegas. Fortunately, its recovery has been, in large part, a success, based on a number of economic indicators: unemployment has remained less than 5% in 2019, overall employment and job growth has been increasing, visitation is strong, and in terms of overall GDP in 2017, the region is at \$112,288 (millions of current dollars). One of the top priorities that emerged from the economic downturn was the need to diversify the region's economy, lowering its reliance on gaming, tourism, services and construction.

The City's Department of Economic and Urban Development (EUD) serves as the lead department to support business development, attract new employment opportunities, and focus on overall economic development initiatives for the City. EUD helps to foster new development, infill, and redevelopment through business incentives, coordination between city departments, and specifically targeted projects. Finally, the City's Planning Department licenses and regulates businesses within its jurisdiction, pursuant to Title 6 of Las Vegas Municipal Code. Ultimately, one yield of economic and business development are business licensing fees and taxes, a comparatively small, yet important, source of revenue.

From a state and regional perspective, Nevada's advantage is that it is a business friendly state that has comparatively lower regulations, is geographically well-situated from a transportation and distribution perspective, and has a favorable tax environment, with no personal or corporate income taxes, franchise taxes, or unitary taxes. A number of state and regional organizations and boards play a key role in ensuring successful business and economic development:

- At the state level, the Governor's Office of Economic Development (GOED) leads economic diversification and business attraction efforts through incentive programs, and venture funds for targeted business growth and expansion purposes. The State's Department of Business and Industry and its divisions similarly oversee business development functions.
- The Las Vegas Global Economic Alliance (LVGEA) is the region's economic development authority dedicated to attracting businesses, growing the region's economy, and coordinating strategies. Most importantly, it has led efforts to develop a Comprehensive Economic Development Strategy for Southern Nevada.
- The state's Department of Employment, Training, and Rehabilitation (DETR) runs job placement and training programs (Nevada JobConnect) and offers services for people with disabilities. It works closely with Workforce Connections, the regional Local Workforce Development Board for Southern Nevada.

### WHAT DO YOU THINK IS THE BIGGEST BARRIER TO OPENING A BUSINESS?

Foundational banking knowledge

- Latin Chamber of Commerce, 4/26/2019

The city can implement a support toolkit for new/future business owners

-City Hall 3/20/2019

Financial aid/assistance for startups

- Latin Chamber of Commerce, 4/26/2019



### OUTCOMES



- The number of businesses and the total employment related to each targeted industry sectors as identified in the Comprehensive Economic Development Strategy increases over time:
  - Number of trained workers in each demanded sector
  - Percentages of creative industries as a share of all businesses
- Local and regional economic and business indicators improve, maintain positive trends or increases over time:
  - At least 20 small businesses per 1,000 residents by 2035
  - More than half of the region's location quotients
  - Visitation rates to Las Vegas
  - Gross domestic product
  - Number of new business establishments
  - Number of jobs created by small businesses
  - Percentage of new startup businesses still active after one year
  - Percentage of businesses that are minority, female, or veteran owned increases over time
- Percentage of new startup businesses still active after one year
- Percentage of businesses that are minority, female, or veteran owned
- Worker productivity index
- The City's unemployment rate maintains a negative trend over time and is less than or equal to the national unemployment rate
- Equity indicators improve over time:
  - By 2050, 80% of City residents are paid or exceed a living wage rate
  - The Gini Coefficient remains low and decreases over time (0 representing perfect equality and 1 representing perfect inequality)
  - Percentage of people employed or unemployed are proportional to the City's demographic groups
- Wages and personal economic indicators improve, maintain positive trends, or increase over time
  - The local average wage is greater than the national average wage
  - Area Median Income
  - Debt to income ratio

3-28

LAS VEGAS MASTER PLAN

3-29

03. ECONOMY & WORKFORCE

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**GAMING AND TOURISM MUST CONTINUE TO REMAIN AN IMPORTANT FOCUS**

Since its founding, Las Vegas has built a global brand around gaming and tourism which continues to dominate the economy. In 2018 resorts and casinos in Nevada brought in nearly \$12 billion in revenue – the third largest total in the state’s history. The city is well positioned to take advantage of Downtown’s Gaming Districts comparative advantage regionally. Due in part to redevelopment investments, downtown casinos have led growth in this sector and reports from Nevada Gaming Control Board showed that Downtown Las Vegas casinos showed considerably stronger growth than gaming establishments anywhere else in Nevada, with a 7% growth rate in 2018. Regionally, nearly 150,000 hotel rooms are available, many of which are located on the Las

Vegas Strip, and are typically occupied 88% of the time on average.

Another key factor is the marketing and branding of Las Vegas. The Las Vegas Visitors and Convention Authority (LVCVA), of which the City is a member of, helps promote and attract visitors and conventions to the City. It is also the operator of the Las Vegas Convention Center and the expanding Convention Center District, located just south of Downtown Las Vegas. Through the efforts of LVCVA, 42.1 million people visited Las Vegas in 2018, including 6.5 million convention attendees. Most visitors arrive at McCarran International Airport, which saw 50 million enplanements. Between 15-20 million arrive by car, the majority of which are from California along I-15. Because Las Vegas is such a globally connected city, visitation is projected to continue to grow to more than 50 million within the next decade. Even as the visitor profile evolves over time, LVCVA and the City must continue to market Las Vegas as a major resort destination to not only recreate, but to do business.

Recent reports from UNLV and the gaming industry have focused on the future of gaming. Their research has found that millennials tend to play traditional casino games less and are preferring experience-based activities. What is promising is LVGEA’s target industries all appear in the American Gaming Association’s nation-wide study on top industries and small business categories supported by casinos. An example of one of these potential growth areas is the video game industry, which a 2017 report from the

Entertainment Software Association showed that the video game industry grew in Nevada. The Center for Gaming Innovation at UNLV also sees the potential of the video game industry growing in Las Vegas. The City’s EUD can facilitate regional goals by encouraging innovation related to its most successful industry and supporting local talent like UNLV’s International Gaming Institute, launched in 2013, which since then has filed 40 patent applications –seven of which have resulted in commercialized products and games.

**THE CITY MUST CONTINUE TO DIVERSIFY THE ECONOMY IN EMERGING SECTORS TO REMAIN COMPETITIVE AND “RECESSION”-PROOF**

According to LVGEA’s Comprehensive Economic Development Strategy, Las Vegas has prepared to target a handful of appropriate industries for Southern Nevada through a process that must be addressed on a frequent basis. While economic growth and workforce development of the metro area must continue to be coordinated regionally, maintaining future growth, diversification and skill development must be the focus of the City’s efforts over the near and long-term to insulate the region and aid in economic recovery when economic decline cycles change. To compete globally, especially with tourism destinations in the Pacific Rim, gaming and tourism must continue to be Las Vegas’ greatest economic strength. The City must therefore work with LVGEA, GOED, and LVCVA to employ complimentary tourism-based economic strategies to retain and expand our market share in gaming, especially with new innovations in gaming software and technology.

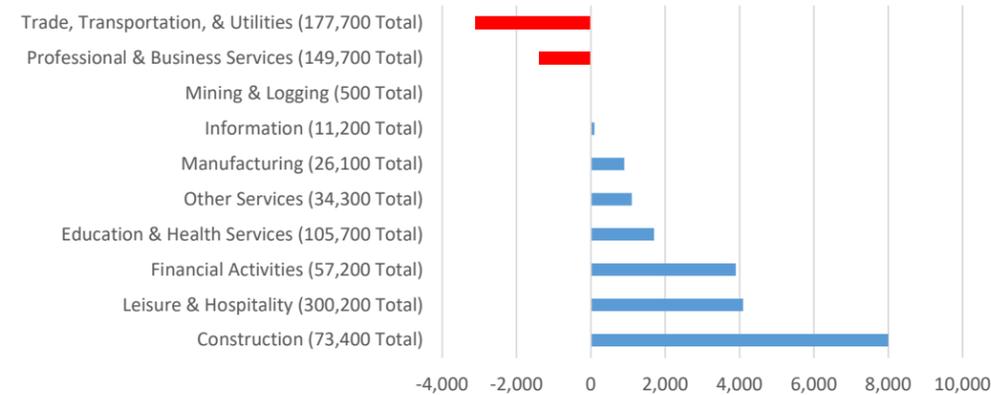
McCarran International Airport, the fifth busiest airport in the US, offers direct non-stop flights nationwide to cities and countries across the world, making Las Vegas a well-connected global city. Both Interstate 15 and the Union Pacific Railroad corridor connect Las Vegas directly to Southern California, its largest market of 24 million residents, as well as to massive ports of Los Angeles and Long Beach. Similarly, the completion of Interstate 11 to full interstate standards will improve speed and connections to both Northern Nevada and Arizona. For these reasons, the City can continue to benefit as a logistics and distribution hub for the regional and global supply chain. To the extent



**KEY ACTIONS**

- Participate in the drafting of future iterations of the Comprehensive Economic Development Strategy (CEDs) and develop a strategic plan that specifically aligns and implements the strategy
- Partner with regional organizations to incentivize and attract new businesses with well-paying jobs to targeted sectors
- Foster a low cost and responsibly regulated business environment where small businesses can grow and thrive
- Collaborate, expand, and contribute to regional workforce development efforts with key education stakeholders and providers

**ANNUAL JOBS ADDED/LOST BY SECTOR (2019)**



Source: Applied Analysis

**SEE ALSO CHAPTER 4:**  
Smart Systems

“Diversify economy with technology and manufacturing”  
- Kick-Off Event at City Hall

“Small business, entrepreneurship friendly. Need network!”  
-City Hall 3/20/2019

ATTY FEE MOT - 0264

the City can play a role regionally, it must continue to support transportation investments that ensure the flow of freight to other parts of the region, state, and country.

According to a study by the University of Nevada, healthcare jobs account for 10 percent of Nevada’s workforce, and will only continue to grow as the population ages, retirees move to Las Vegas, and new residents relocate to Southern Nevada. The City stands to benefit immensely from the full development of the UNLV School of Medicine and substantial investment in the Medical District in Downtown Las Vegas. While Southern Nevada has a wide range of specialty medical services, it continues to lack general practitioner doctors and registered nurses. The City must incentivize and invest in medical workforce training entities, both public and private, that graduate new professionals and aid in the realization of a comprehensive regional health care system. Finally, due to its proximity, future opportunities also exist to make medical tourism a focus, especially for Downtown Las Vegas.

Since the 1940’s, Nevada has played an important role in national defense, both for testing and training for the US Air Force and US Department of Energy. While Cold War-era nuclear testing activities have ceased, the Nevada National Security Site is still a test site for defense and energy technologies. Southern Nevada employs more than 12,500 active-duty and civilian personnel at Nellis and Creech Air Force Bases and an opportunity to commercialize technology like drones, unmanned aerial vehicles, autonomous systems, and robotics has the greatest potential. It will be equally important for Nevada System of Higher Education institutions and workforce development programs to train workers for this future commercial technology. The City can also benefit through the full development of the “Job Creation Zone” in the northwestern Nu Wav Kaiv area along the I-11, where opportunities to leverage light manufacturing and aerospace, UAV, autonomous technologies, and supportive

Target Industries and Sectors	Top Associated Occupations
Gaming & Tourism	Accountants, auditors, chefs, front line supervisors
Health Care	Registered nurses, general practitioners (MD/DO), pharmacists
Logistics & Light Manufacturing	Civil and electrical engineers and technicians
Clean Energy	Solar installers
Defense & Unmanned Aerial Systems	Software developers, IT security, computer systems analysts, aerospace engineers
Global Finance	Financial managers, accountants, auditors

military or defense activities can exist, in partnership with the Las Vegas Paiute Tribe.

In 2016, the Las Vegas City Council formed an Innovation District within Downtown Las Vegas and created a comprehensive “Smart Vegas” innovation initiative built around public safety, economic growth, mobility, education, social benefit, and health care to become a “Smart City.” Smart Vegas establishes a framework for developing new innovations and emerging technologies to position the City to attract and grow many of the target industries identified by LVGEA.

Among the additional recommendations within Las Vegas, Smart Vegas includes a number of notable recommendations that should be further developed throughout the City:

- Serve as a test-bed and incubator for smart technology, innovations, and the “Internet of Things.”
- Continued development of a fiber network and connected corridors to allow for the deployment and implementation of autonomous and connected vehicle

Southern Nevada has great potential to leverage further development of clean energy. Given Nevada’s expanded renewable portfolio standard and other outcomes listed in this plan, the expertise at UNLV and DRI, Las Vegas has an accessible market for renewable energy development, not only for NV Energy, but to transmit and export to other grids within the region. Given the City’s long-standing commitment to sustainability and resilience, it will continue to be an

ideal place to develop and implement this technology in the future.

Finally, it should be noted that other industries and sectors that are not listed as targeted, as well as indirect and supportive occupations that are still important to overall community health and quality of life, may have high need and must be addressed. Notably, public school teachers, construction labor, and medical staffing are among the top skilled occupations that are consistently in high demand. While the rates of demand, pay, and availability based on local and national conditions may vary, these must still be addressed.

Another factor underscoring the need to diversify the economy is the challenge of automation. Predictions on how many jobs will be affected by automation vary, but one report from Ball State University estimates “38% to 65% of jobs in Southern Nevada are at risk of being automated – either part or in full – during the next 10 to 15 years.” This transition is already underway in a number of resort properties on the Las Vegas Strip. Because Las Vegas’ service sector economy shows considerable risk and exposure to job loss, the City must:

- Develop an economic development plan that is consistent and supportive of regional efforts and specifically addresses target industries, sectors, and occupations.
- Invest significant resources to increase employment opportunities in target industries and work with its regional partners to replace those jobs and better prepare the workforce and business community to thrive during economic shifts and downturns.
- Make significant efforts to increase economic activity related in key sectors, including health care and life sciences; business and IT ecosystems; clean technology; defense and unmanned aerial systems; and global finance, banking, and business services.

By further balancing economic sectors, the City and region as a whole will likely suffer fewer economic losses, will be more resilient during periods of economic volatility, and will create and retain good paying jobs in sectors that are needed.



**WORKFORCE DEVELOPMENT IS CRUCIAL FOR FUTURE SUCCESS IN EMERGING SECTORS AND MUST CONTINUE TO DIVERSIFY**

According to research from Georgetown University’s Center on Education and the Workforce, nationwide demand for good jobs requiring more than a high school diploma, but less than a bachelor’s degree, is rapidly accelerating to meet changing industry dynamics and the skilled workforce that must accompany this evolution. For example, historically, two out of three entry-level jobs required a high school diploma or less. The City’s workforce has been ranked as one of the most diverse in the U.S., especially in the following categories: racial and ethnic diversity, linguistic diversity, and birthplace diversity, making Las Vegas a truly international city. Las Vegas has a rapidly growing workforce that is well-versed in customer service and also one of the nation’s most diverse. Each major Chamber of Commerce, including the Las Vegas Metro Chamber of Commerce, the Urban Chamber, the Latino Chamber, and the Asian Chamber, reported workforce development as a top priority and key to diversifying the region’s workforce.

Unfortunately, according to DETR, the occupations in each identified sector face annual workforce gaps in the foreseeable future. If not addressed, job capacity issues will pose a challenge to attract and sustain economic growth in the identified target industries. Furthermore, to remain competitive with other cities, trained workers that learn skills act as a force in driving employee wage growth. According

“Increase access to education, lower eligibility requirements for licensing by increasing financial options, incorporate debt consolidation/rehabilitation programs for entrepreneurs.”

– Kick-Off Event at City Hall

**A DAY IN THE LIFE**

**NURTURING NEW COMMUNITY LEADERS**

*Jessica Boudreau, Founder and Executive Director of a Leadership Non-Profit for Local Youth*

A Las Vegas resident for more than a decade, Jessica feels a deep attachment to her community. She also has the pleasure of seeing how her work is making a difference in young people’s lives. That said, she knows far too many Las Vegas residents who are struggling simply to get by. And she rarely meets individuals who have risen to positions of leadership within their communities.

Breaking the cycle of generational poverty is a big obstacle to overcome, she observes. A predominance of tourism-generated, low-growth potential jobs contributes to this long-term challenge. How does someone learn to work their way up the leadership ladder when so few role models exist?

Jessica envisions a Las Vegas in which residents’ basic, everyday needs are met more efficiently. In turn, this will allow them to focus on longer-term goals. More micro-grants and pooling of government finances, along with educational opportunities for business and leadership, could do a lot to help residents move forward.

“When you don’t have people in leadership who come from the community, the residents tend to be poorly represented,” Jessica points out. “People are pretty committed to living here once they decide they like it. They’re self-motivated to make it a better place. They often just need a little guidance.”

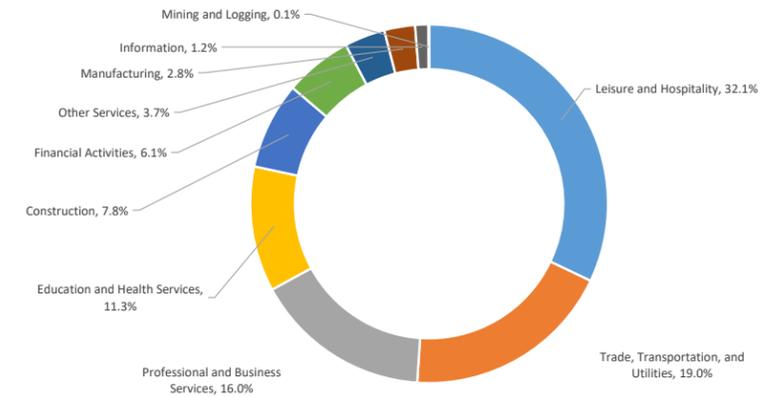
- CCSD provides workforce pathway opportunities for students that provide job training to help them become career-ready and require minimal training before moving into the workforce.
- The College of Southern Nevada, the largest institution of NSHE, has a major branch campus in the Charleston planning area that offers two and four year degrees, workforce training certificate programs, and apprenticeships for occupations in identified and high-demand sectors. The City must also work with NSHE on the siting and development of a new state college campus tailored to City of Las Vegas residents. This college would have a dedicated focus on granting targeted and specialized 2 and 4 year degrees to further add to the regional workforce supply and enhance the region’s workforce development capacity.
- As Southern Nevada’s major research university, UNLV plays a specialized role in workforce development by serving as the primary degree-granting institution for those occupations and jobs that require the highest levels of skill development and training, backed by research and support from the university’s tenured faculty. UNLV’s role is also one of business incubator, and can help direct both graduates of Bachelor’s degrees and advanced degrees to businesses that have located in the region to attract graduates. Most notably, UNLV’s William F. Harrah College of Hotel Administration offers degrees for hospitality, gaming, and entertainment, while the Howard Hughes College of Engineering offers a range of majors and minors that serve a variety of the targeted sectors. Several schools, including the Schools of Nursing, Medicine, and Dental Medicine, the Lee Business School, and the Boyd School of Law provide fulfill the need of providing a pathway to fully licensed occupations in critical areas.
- Aside from the Schools of Medicine and Dental Medicine, UNLV lacks a major physical presence within the City of Las Vegas itself. It is therefore important for the City establish a satellite branch campus of UNLV to focus on business development, innovation, and technology within Downtown Las Vegas. The City must also partner with statewide research programs and unique course offerings from the University of Nevada and University of Nevada Cooperative Extension to

to LVGEA’s Workforce Blueprint, which identifies projected growth across target industries to workforce demands, actual job growth outpaced national averages and exceeded forecasts. As such, the identified high-demand occupations are currently the educational and training areas of focus at NSHE institutions, CCSD, Workforce Connections, and other workforce development programs. The programs these entities provide are essential to feeding workforce supply into the local economy and ensuring gaps are filled:

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LAS VEGAS MASTER PLAN

**EMPLOYMENT BY SECTOR (2019)**



Source: Applied Analysis

- further their land-grant mission of teaching, research, and outreach.
- A wide number of private workforce training and education providers exist throughout the region, each catering to specific fields and occupational areas. As the region’s Local Workforce Development Board, Workforce Connections and its partners have focused on growing opportunities and partnerships between these training providers (as well as with CCSD and NSHE institutions) and employers for students. Where it can aid Workforce Connections to match students to jobs, either through local planning efforts, providing training space, or through other economic development efforts, the City must be prepared to take steps now to sustain positive and promising developments in cultivating a skilled workforce that aligns with the needs of industry—particularly for the occupations in greatest demand and those with known labor supply challenges. Because the City is represented on its Local Elected Official consortium board, the City’s elected representative can help guide Workforce Connections policy efforts.

**SEE ALSO:**

- LVGEA Workforce Blueprint 2.0
- LVGEA Comprehensive Economic Development Strategy
- Workforce Connections Local Plan

Finally, to provide additional opportunities to facilitate the advancement of high-school, continuing education, and workforce development efforts, the City must determine additional strategies to bring opportunities closer to residents, especially for targeted racial and socio-economic groups, sensitive populations, such as seniors, ex-convicts, or homeless individuals. It can do so by designating space within each district as a job training and workforce development zone and partner with CCSD, Workforce Development organizations, and NSHE to offer classes in those spaces.

**AS EMPLOYMENT RATES GROW, SO WILL WAGE GROWTH**

Total employment has steadily grown within the City and region since the Great Recession; nearly 61,000 non-farm payroll jobs were added in the City of Las Vegas since 2010, increasing the total to 305,000 jobs today at approximately 20,000 businesses. The top non-public agency employers employing more than 1,000 people within the City of Las Vegas are predominantly gaming-tourism and health care companies.

The income distribution and median income of Las Vegas has declined sharply, from about \$73,000 to \$60,000 for a household of three. Median income was actually slightly greater in Las Vegas than in the U.S. as a whole in 1999, but fell below the national median during the Great Recession. Incomes have subsequently shifted back in a more positive

3-35

03. ECONOMY & WORKFORCE



direction, but have not yet returned to pre-recession levels. In 2019, the Brookings Institution, in collaboration with UNLV, highlighted the need for colleges and cities to contribute towards building the middle class, especially in cities like Las Vegas who was “among the ten metros hit hardest by the Great Recession,” and where middle income earners were “hit hardest of all.” Their findings highlight that in Las Vegas “middle wages (especially the second and third quintiles)... experienced a persistent gap in wage growth through 2016, even as those at the top and bottom kept pace with” areas less-affected by the Recession. In order to build a strong middle class, economic development initiatives must create employment opportunities for various abilities and skill levels ensuring that wages grow for all income levels, including for individuals with barriers to entering workforce. Additionally, successful workforce development initiatives must respond quickly and effectively to the shifting needs of private industry and should use the strategic vision and goals found in the Workforce and Opportunity Act’s Nevada State Plan for guidance.

**SMALL BUSINESS DEVELOPMENT AND ENTREPRENEURSHIP WILL BE KEY FOR SUSTAINABLE ECONOMIC GROWTH**

Small businesses help contribute to positive increases in the economic health and sustainability of a city. An increase in small business starts, the creation and retention of jobs, and the increased circulation of local capital are all hallmarks of desirable outcomes the City should strive for. Growing the City’s local talent and businesses should include support and resources for entrepreneurs and small businesses. Research consistently shows the critical role that small businesses and entrepreneurs play

in local economies by creating jobs and their resiliency during economic downturns. In Nevada, small businesses employed 42% of the private workforce, and firms with fewer than 100 employees had the largest share of small business employment. In addition, the number of proprietors increased in Nevada by 2.5% year-over-year. A 2018 analysis by Business.org listed Las Vegas as one of the “top 40 start-up cities” factoring criteria like young adult residents, educational attainment of young adults, employment rates, affordability, and start-up surges.

The City must invest and market its local talent and small business community to encourage long-term sustainable economic growth. It must also partner with each Chamber of Commerce and their respective initiatives to foster small-business growth, diversity, and equity goals. The City can support small business development and entrepreneurs directly by offering targeted incentive and financing programs, offering places for new start-ups or live-work areas, such as the Las Vegas Arts District within Downtown Las Vegas, and work on reasonable business-friendly licensing efforts that help ease up-front start-up costs.



**SEE ALSO CHAPTER 2:**  
Land Use Tools: Redevelopment Toolkit  
Catalytic Redevelopment Sites

**INFILL AND ECONOMIC DEVELOPMENT OPPORTUNITIES**



The Las Vegas Enterprise Park is a 75 acre mixed-use business park developed by the City in the heart of West Las Vegas near Lake Mead and Martin Luther King boulevards. The park is unique in that it features inner city infill and mixed-use development under the city’s zoning standards allowing for modern administrative facilities, research institutions and specialized manufacturing operations. The park has been able to generate new economic development for the area with businesses that include Cox Communications, the Urban Chamber of Commerce, Fresenius Dialysis Medical Center, the FBI, and the US Postal Service. Approximately 10 acres of land remains for development and will soon be accompanied by the Historic Westside Legacy Park, which will exhibit individuals that made significant contributions to the area.



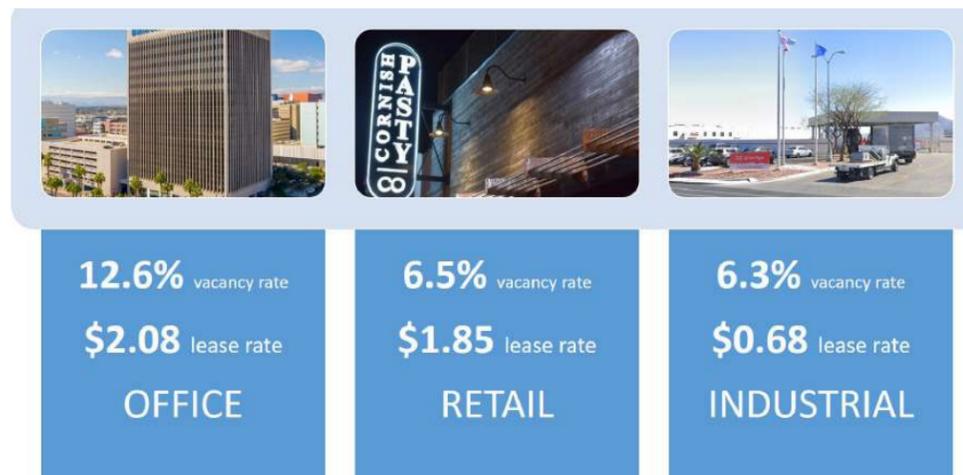
The Cashman Complex represents another large City-owned infill and economic development opportunity. The 50 acres on the northern end of Downtown Las Vegas includes Cashman Center, a multi-use facility, home to the Las Vegas Lights Football Club of the United Soccer League and currently being used for COVID-19 testing. While the Cashman District is envisioned by the Vision 2045: Downtown Las Vegas Masterplan to be a new mixed-use sports and economic development project, it currently features the 10,000 seat stadium, nearly 100,000 square feet of exhibition space and meeting rooms, and a 1,900 seat theater. Because the City’s innovation efforts are ramping up throughout this corridor as part of the Smart Vegas and Innovation District efforts, potential industries could be targeted to locate within this area.

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2018-19 LOCAL INDICATORS

- Gini Index: 0.461
- Average Annual Wage: \$34,101
- Median Household Income: \$54,694
- Las Vegas-Henderson-Paradise GDP (2018): \$122,424 (Millions of current dollars, MSA)
- Small businesses per 1,000 residents:
- Visitor volume: 45,699,300
- Las Vegas Strip gross gaming revenue: \$6.59 billion
- Total business establishments: 20,232

Source: Applied Analysis, UNLV Center for Business and Economic Research, City of Las Vegas, LVCVA



IMPLEMENTATION STRATEGIES

- Participate in the drafting of future iterations of the Comprehensive Economic Development Strategy (CEDs) and develop a strategic plan that specifically aligns and implements the strategy
  - Actively collaborate with GOED, LVGEA, and all local Chambers of Commerce on coordinated economic development initiatives
  - Continuously assess target sectors and top occupations to determine job and economic development trends, workforce and training needs
- Partner with regional organizations to incentivize and attract new businesses with well-paying jobs to targeted sectors
  - Leverage state incentives and tax credits provided through GOED, state agencies, or authorized by Legislative action.
  - Partner with the US Air Force and US Department of Defense to increase economic development around military-related business activity derived from Nellis and Creech Air Force Bases.
  - Develop the Nu Wav Kaiv Job Creation Zone with the Las Vegas Paiute Tribe
  - Actively market Las Vegas and its economic development advantages and geographic and locational attributes to businesses and customers locally, regionally, and globally.
  - Create effective local business marketing campaigns that celebrate local talent, companies, inventions, or products
  - Support and partner with trade and professional associations relevant to target industries.
- Foster a low cost and responsibly regulated business environment where small businesses can grow and thrive
  - Continuously assess business licensing regulations, permitting, and fees, as provided for in Title 6 of Las Vegas Municipal Code.
  - Partner with local chamber groups to create strategies that help grow local small business community and support entrepreneurship.
  - Provide for and support incubator spaces for small businesses.
- Develop a business support toolkit for new or future City of Las Vegas small business owners and entrepreneurs that guides them through the business formation and regulation process
- Permit and encourage cottage industry and home-occupied businesses.
- Facilitate the formation of small business and "locally owned" associations
- Aid in the organization and formation of industry specific business associations
- Provide micro-loans, technical assistance, and incentives for small businesses, especially those owned by minorities or businesses serving distressed neighborhoods.
- Collaborate, expand, and contribute to regional workforce development efforts with key education stakeholders and providers
  - Work with the Nevada Legislature and NSHE on the siting and development of a new state college campus tailored to City of Las Vegas residents.
  - As contemplated by the Vision 2045 Downtown Las Vegas Masterplan:
    - » Establish a satellite branch campus of UNLV
    - » Fully develop the UNLV School of Medicine in Downtown's Medical District
  - Develop opportunities for targeted programming provided by the University of Nevada and the University of Nevada Cooperative Extension
  - Support expansion of workforce development programs at CCSD schools and NSHE institutions
  - Permit expansion and further development of CSN's Charleston campus
  - Work with NSHE on the development and build-out of CSN's planned Centennial Hills campus.
  - Evaluate and designate space within each area, at each community center or other appropriate City facility as a job training and workforce development zone and partner with CCSD, Workforce Development organizations, and NSHE to offer classes in those spaces.
  - Develop an employment rehabilitation and workforce development program for targeted City populations, including the homeless, ex-convicts, and seniors.

EQUITABLE	RESILIENT	HEALTHY	LIVABLE	INNOVATIVE
Ensure that the labor force is diversified and that access to good paying job opportunities are available to all.	Diversification in the local economy will allow for Las Vegas to respond faster during economic downturns and reduce their overall severity by being less dependent on a handful of economic sectors.	Fully investing and supporting economic diversification and workforce development efforts on health care, medical education, and supportive occupations is necessary to attract new residents and for the existing population.	Developing both targeted and non-targeted economic development sectors and occupations provide wages, means to do business, and help improve overall quality of life.	Development and implementation of "Smart Vegas" innovation efforts and technology-based sectors will allow Las Vegas to lead the way in the 21 <sup>st</sup> Century.

## II.B REDEVELOPMENT

✓ NRS 279

### PRIORITIZE KEY REDEVELOPMENT OPPORTUNITIES, INCENTIVIZE, AND ACTIVELY PROMOTE THEIR REUSE



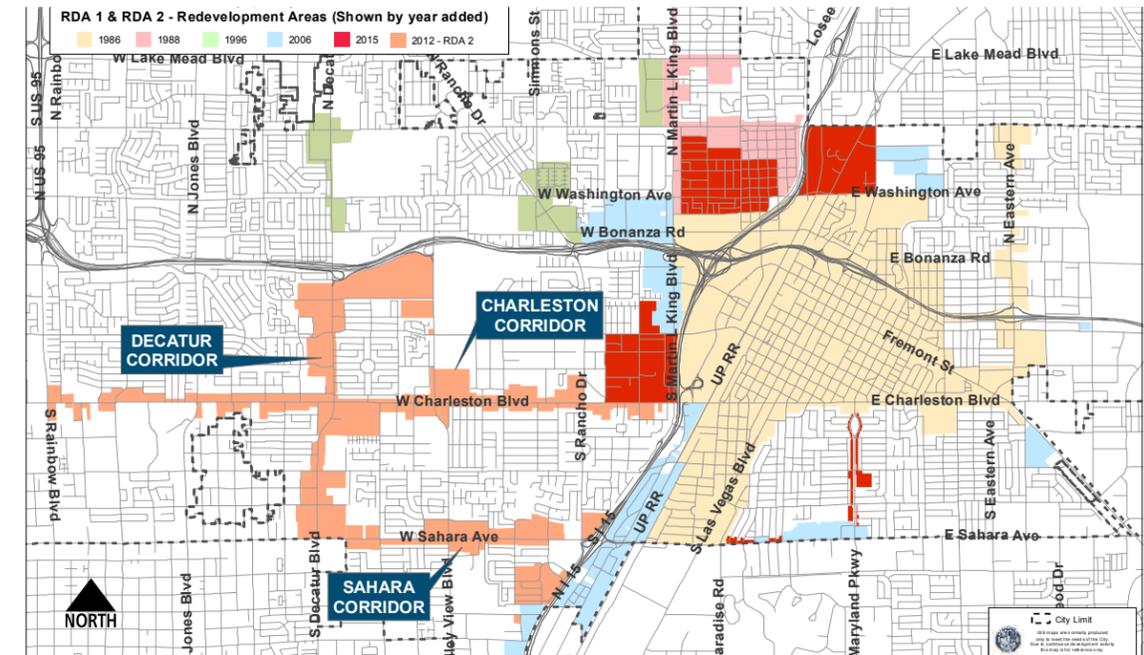
Successful redevelopment efforts require dedicated ingredients for success, including a market, proper locations, good urban design, financing, entrepreneurship, and time. The City's Redevelopment Agency (RDA) was created in 1986, and expanded to two areas covering nearly 5,000 acres within the central areas of Las Vegas. As a separate entity governed by the City Council, its purpose is to reduce blight, generate new business and economic development opportunities, and revitalize downtown Las Vegas and commercial corridors immediately surrounding Downtown. Under the authority of NRS 279 and the City's Charter, the RDA derives its revenue from property tax increment revenue and is enabled with additional tools and incentives that allow it to invest in business development within its designated geographies. Through the aid of the City's RDA, the City can align investment, regulations, and incentives to ensure successful project development.

#### REDEVELOPMENT AND INFILL MUST BE COORDINATED WITH LAND USE GOALS

The City currently has a total inventory: 48 million GSF; approximately 45% of this total is office, 20% is industrial, and 35% is retail.

The impact of e-commerce over the past decade has been phenomenal, transformative, and disruptive; unfortunately, this has led to consequences that have left a dramatic imprint on the physical landscape of urban areas. As large national retailers, corporate chains, and businesses have felt pressure from consumers and have made decisions to close "brick and mortar" locations as they adapt to rapidly changing economic conditions, commercial properties, shopping centers, and retailers have left a wide range of vacant spaces available. The City's average office, retail, and industrial vacancy rate in 2019 is about 9%; these rate has been stable since the Great Recession, and different submarkets within Las Vegas fluctuate. Similarly, average asking rents have been steadily increasing in each sector. If these spaces are not otherwise reused, repurposed, or redeveloped, blighting conditions will emerge.

Less than 3% of the City's land is zoned for industrial uses, primarily around Downtown Las Vegas, in which it is redeveloping as a Regional Center with form-based zoning; similarly, only a handful of office/business parks are within the City, including Spectrum, Las Vegas Technology Center, and Las Vegas Enterprise Park. As the 2050 land use strategy and general plan amendments are deployed citywide, it is anticipated that 72 million square feet of



new non-residential space may be produced across the recommended range of place types. In coordination with the Planning Department, EUD must work together to:

- Ensure redevelopment and infill development are directed to appropriate locations within those place types once evaluated for compatibility and suitability to job creation.
- Assist new startups, small businesses, or other general commercial and retail find space in locations with new transit-oriented development, mixed-use corridors, and neighborhood centers, especially any jobs or companies with targeted occupations.
- When and where needed, and as any blighting conditions exist, consider creation of new redevelopment areas or expansion of the existing RDA-1 and RDA-2 and further incentivize new business development within those areas.

**SEE ALSO CHAPTER 2:**  
Land Use Tools: Redevelopment Toolkit



- Further leverage City, State, and Federal incentives and programs as a tool to attract target economic sectors and companies with desired occupations.

- Direct appropriate defense, UAV, automation, and technology businesses requiring large footprints to the Congressionally designated job creation zone within the Nu Wav Kaiv area in northwestern Las Vegas as infrastructure is developed and extended to the area.

#### THE RDA MUST REFINE REDEVELOPMENT CRITERIA TO ATTRACT APPROPRIATE DEVELOPMENT

As redevelopment is planned and occurs in the City, it will be critical to evaluate their potential for further redevelopment in the future. The City must continuously identify redevelopment sites (in addition to those highlighted in Chapter 2: Land Use) and package them for marketing and solicitation of developers. In order to prioritize and evaluate the likelihood of redevelopment, the following criteria should be used:

- Size (if there are a number of parcels, the ability to easily assemble)

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- Vacant/building (amount of rehabilitation or demolition needed)
- Rebuild/rehab
- Public/private ownership (if private, willing owner)
- Contamination (remediation could be a challenge to redevelopment)
- Potential to spur further redevelopment
- Obstacles to redevelopment
- Parking availability

Developers typically look for project locations where the potential for success is fairly certain and risks limited. This means that they are attracted to communities with strong markets where the infrastructure is in place, reasonably priced, quality development sites are available, and the development review process is quick. They also look for opportunities to enter a market right before it “takes off” and capture the heavy demand and associated real estate price or rent increases.

There is specific information they look for that will minimize the amount of time it takes to make a go- /no-go decision. For example, is there a market for the type of development being sought by the community? What is the role of the community within the region (i.e. bedroom community,

employment destination, transportation hub, etc.)? Are reasonably priced sites available for development of redevelopment? Is necessary infrastructure in place or will this be needed and add to the cost of the project? How accessible is the development location and how large a market area can they draw from?

These are all vital questions that can be partly answered by the community, making it easier to pique the interest of a developer. Time is money and the less time developers have to commit to looking at a project/community, the more likely they are to dig deeper and hopefully show interest in moving forward. Some of this information might already be available while additional work is needed to gather the remaining data. It is up to the City, RDA, business leaders, and civic associations to work together to assemble developer information and then actively recruit developers and businesses that match the redevelopment vision. Shifting the development model from greenfield subdivisions to infill redevelopment poses extra challenges for developers, so having a unified vision and incentive toolbox is paramount to making redevelopment happen.



**IMPLEMENTATION STRATEGIES**

- Update and adopt a Redevelopment Plan for both RDA-1 and RDA-2 in alignment with this plan and the Vision 2045 Downtown Las Vegas Masterplan
- Modify the RDA's TIF program for specific identified purposes and to capture added value.
- Consider selective expansion of redevelopment areas consistent with Land Use goals and the 2050 General Plan to ensure redevelopment, small business development, and the ability to attract major large employers that are aligned with the Comprehensive Economic Development Strategy (CEDs)
  - Expand and prioritize job creation zones, including in the Nu Wav Kaiv Area with the Paiute Tribe.
  - Direct appropriate and qualifying businesses with space needs, especially those in targeted industries, to specific sites within the City, provided they are compatible with
  - Incentivize and subsidize shared housing options that provide quality live-work options for start-ups in target industries.

**OUTCOMES**

- By 2050, all assessed blighted and deteriorating areas within RDA-1, RDA-2, and other designated infill or redevelopment areas will have been successfully ameliorated
- Over time, an increase of the percentage of all new commercial, residential, mixed-use that occur within RDA-1, RDA-2, and other designated infill or redevelopment areas.
- The RDA's tax increment increases over time

**SUCCESSFUL REDEVELOPMENT: SYMPHONY PARK**



Over time, the Parkway Center and 61 acre Symphony Park redevelopment projects have successfully transformed the former Union Pacific Railroad yard into a successful repurposing of industrial brownfield land into new assets. Projects have included the Clark County Government Center, Las Vegas Premium Outlets North, World Market Center, Lou Ruvo Center for Brain Health, Discovery Children’s Museum, and Smith Center for Performing Arts. New additions include two new parking facilities with ground-floor retail, a 315,000 square foot Expo Center adjacent to World Market Center, and the 320 unit Auric luxury apartments and 290 unit Aspen Heights mixed-use complex. Several additional developments have been approved that will eventually complete the buildout of the remaining parcels on site

EQUITABLE	RESILIENT	HEALTHY	LIVABLE	INNOVATIVE
New mixed-use housing projects at infill sites can incorporate affordable housing while respecting existing neighborhoods	Redeveloping land within the City reduces the need to extending infrastructure and expanding the urban footprint into sensitive desert lands	Redevelopment can transform blighted areas into walkable neighborhoods	Repurposing brownfield and greyfield space into livable, communities can add life to repurposed land	The RDA can help attract targeted businesses and sectors into the areas that allow innovation to thrive.
				

# II.C PUBLIC FINANCE

✓ NRS 278.160.1(e)(1)

## UPHOLD SOUND FISCAL POLICIES AND TRANSPARENCY THAT INCREASES EFFICIENCY IN ORDER TO PROVIDE HIGHER QUALITY OF SERVICES

The City places a high priority on sound fiscal stewardship and organizational efficiency. While revenues and expenditures fluctuate over time, sound public finance requires adherence to several general principles. Each fiscal year as the City submits its annual budget to Department of Taxation in Carson City, the City strives to ensure that its budget is structurally balanced, that service levels are maintained through economic cycles, and that the priorities and areas of focus of the City Council and City Manager can be enhanced in a way that ensures the budget is balanced and cuts aren't made that impact services in other areas. With these principles, and as described in Chapter 5, this plan can serve as a guide to prioritizing budgets to accomplish the plan's goals, achieve outcomes, and meet the expectations of the public and City leadership.

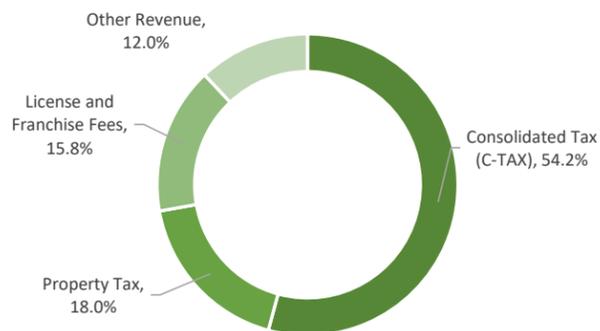
The Department of Finance guides the budget making process. Finance must carefully account for, monitor, and balance ongoing expenditures and ensure that they do not grow faster than ongoing revenues. In addition, if enhancements are to be made to a City Council priority area, it must find ways to reallocate funding or cut service levels in other areas.

The general fund is the City's main operating fund and accounts for the majority of the City's revenue and

expenditures. The general fund pays for all services not required to be paid for or funded separately and includes the City's most basic services and covers internal services, such as employee salaries and benefits and building and facility operations. The fund also pays for debt service on general obligation (property tax-backed) or revenue bonds that have been issued, typically for capital expenditures. The City is also enabled to create local improvements like roads, drainage, and for which a Special Improvement District is created; bonds issued for the project are repaid by assessments placed on the properties within the district and repaid by the owners. The City maintains a healthy AA bond rating and has issued. Rounding out the budget are special revenue funds created by the City Council for expressed purposes. The Capital Projects Fund includes a dedicated budget that is aligned with the City's Capital Improvement Plan, covering buildings, roads, The city also maintains four enterprise funds that collect user fees and provide services for sewer, parking, building and safety, and golf course activities. Finally, in the event of emergencies, the City maintains a fiscal stabilization fund, targeted at 20 percent of the total budget.

Like many U.S. cities and local governments in Nevada, the City has restrictions that make it difficult to raise revenue, to make expenditures according to community

### TYPICAL GENERAL FUND REVENUES



Source: CLV Finance Department (FY18-20)

priorities, and to respond to economic fluctuations. These factors make it difficult from making impactful investments during economic growth periods and make them less resilient during downturns. To the extent that it must, the City will continue its responsible fiscal stewardship in its expenditures, seek stable and equitable revenue streams, and work to attain greater control over its fiscal affairs.

### ECONOMIC DIVERSIFICATION IS ESSENTIAL TO STABILIZING REVENUE STREAMS

The City's budget is reliant upon a mix of different revenue sources, most of which are collected and distributed by the Nevada Department of Taxation.

- Consolidated Tax (C-TAX):** Comprised of sales (accounting for more than 80% of the C-TAX), liquor and cigarette excise, real property transfer, and vehicle taxes distributed to Nevada's local governments and special districts by formula. With locally approved options, sales taxes components are split for specific purposes, including for the Regional Flood Control District, RTC and RTC Transit, LVMPD, SNWA, and state education. The cyclical economy of Southern Nevada and its historic dependence on tourism and consumer spending has meant revenue is dependent upon the C-TAX, which accounts for more than half of general fund revenue in any fiscal year. Sales tax is highly sensitive and elastic in that it is more responsive to economic changes than other sources, and may erode over time.
- Property taxes:** Enabled through the City Charter and account for approximately a fifth of the City's revenue. As determined by jurisdiction, the City's overall 2020 rate of 3.2782 is among the higher rates within Southern Nevada. As with the sales tax, portions of the property tax rate are also dedicated toward the City (0.6765) and LVFR (0.0950), while other components are dedicated toward specific purposes, including to the State, Clark County, CCSD, LVMPD, LVCC Library District, indigent persons assistance, and to the University of Nevada Cooperative Extension. Due to the Great Recession, property taxes were capped by the Nevada Legislature and allow little room for growth. Residential property taxes, accounting for 80% of the City, are capped at 3% and commercial property taxes



#### KEY ACTIONS

- Work to attain reasonable legislative changes that permit flexibility in revenue generation.
- Adopt budget savings and government efficiency measures.
- Maintain accessible and transparent budgets, audits, and reviews of City expenditures.
- Resolve to align the annual budget and capital improvement projects to achieve outcomes of the master plan.

#### OUTCOMES

- Maintain a fiscal reserve of at least 20% of operating costs with sufficient ending cash balances of 10% or prior year's expenditures for operations, 20% for benefits, and 25% for capital projects
- Develop at least one new consensus-based revenue stream
- The per capita amount of competitive Federal grant awards to the City increase over time

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are capped at 8%, with additional secondary caps that slow growth of revenue further; most non-residential growth that has largely been occurring within the City's RDA. While these caps were effective at providing relief to property owners during the economic downturn, the unintended consequence has been that property tax revenues have not been allowed to reasonably recover and has constrained the revenue source. Furthermore, if the City reaches its limit in new subdivision growth over the next thirty years, few new properties will be added to the City's assessment rolls.

- **Licensing and Franchise fees:** The City is enabled to impose fees for the operation of business and provision of different types of services.
  - The City is enabled to create utilities for which it is authorized to make usage charges. City residents are charged for sewer connections and service.
  - The City is may grant franchises for the provision of utilities and services. Fees are collected from each franchisee for the provision of the service and utilization of the City's right of way.
  - Other specific user fees may be charged, including for the issuance of building permits, for the use of City parks or for City programs, or for parking. A small amount of revenue may also be derived from tickets, fines, liens, and other civil penalties that violate LVMC.
- **Other statutorily enabled revenue or fees for specific purposes:** Other sources of revenue may include fuel revenue indexing taxes for streets and highways, a residential construction tax for the construction of parks and recreational facilities, traffic signals and transportation improvements per housing unit, and a development fee applied toward the Clark County Desert Conservation Program.
- **Grants:** The City receives revenue in other forms from the Federal or State government, non-profits, or foundations, including through formula grants like the Community Development Block Grant, the proceeds of nominated land sales through SNPLMA, or through one-time competitive grants. To buoy City revenues, the City must also work to increase the overall share of competitively awarded grant funding, especially from Federal funding sources. Nevada especially has had a

historically poor rate of capturing Federal grant money, receiving an average of \$1,475 per capita, one of the lowest rates in the nation. The City must improve upon this and hire specific staff to apply for – and manage – state and Federal grants.

It is important to remember that a number of other taxes may be imposed for state, regional or local services in which the City has no direct control. During each biennium, the Nevada Legislature considers and approves a budget recommended by the Governor. In addition to state sales (slightly less than one third of the state budget), the state's general fund receives revenue from:

- Gaming taxes
- Mineral proceeds (mining) taxes
- Room taxes
- Live entertainment taxes
- Commerce tax
- Fuel taxes
- Marijuana taxes

These funds collected by the state may then be spent on programs and infrastructure as part of the state general fund, or distributed back to other agencies that provide services, construct capital projects, and administer programs. Of the typical biennial budget, the state general fund and Federal fund represent roughly two thirds of the budget, with the state highway fund, transfers and balances, and other funds accounting for the remainder. Nearly half of the state budget is dedicated toward K-12 and higher education, followed by Health and Human Services, much of which is dedicated toward Nevada's expanded Medicaid program authorized under the Affordable Care Act. Aside from the state Department of Corrections, all other state departments usually only represent a tenth of total spending.

However, more tax burdens have been shifting from residents to tourists. While this approach has been successful and have helped pay for tourism improvements such as road improvements, Allegiant Stadium, and the Las Vegas Convention Center, it could potentially have adverse affects over time. When coupled with other tourism-based fees and costs, new tourism based taxes may have the

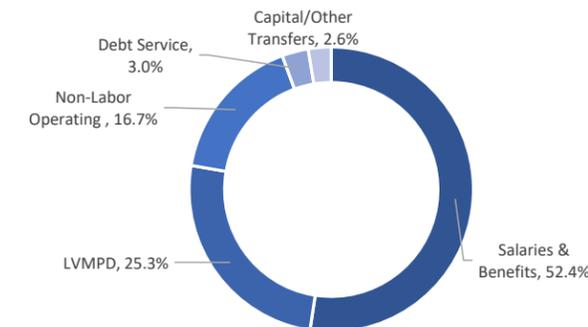
potential of warding away potential visitors or customers, or at the very least, make them less inclined to spend as much as they would, especially if other gaming and tourism destinations are closer, don't require travel, and have less discretionary expense.

**EFFICIENT CITY GOVERNMENT REQUIRES CLOSE ATTENTION TO EXPENDITURES**

During each budget cycle, the Finance Department provides City Departments baseline labor and non-labor budgets and guidelines for both discretionary and non-discretionary expenditures. The general fund's largest budget component is salaries and benefits. Funding must also be dedicated to the LVMPD, whose overall share has been growing faster than other expenditures and is comprised mostly of salaries and benefits. Together with LVMPD, labor costs can total approximately three quarters of a general fund budget during a typical fiscal year. These costs have tended to increase over time, but changes in the labor force, retirements, and collective bargaining agreements with each of the City's bargaining units have evolved over time. The result has sometimes meant that positions must remain unfilled or frozen. For the first time, a ten-year forecast for the general fund revealed staffing levels may remain flat. Because structural deficits can become a concern during periods of economic uncertainty, and given the revenue constraints on the City, unfunded mandates and dependence on one-time revenues or unanticipated expenditures are often attempted to be avoided, deferred, or mitigated. Additionally, if more money is applied or reallocated to a priority area, reductions must be made to other areas, absent any new revenue.

Nevertheless, the City has put an emphasis on savings and has developed innovative solutions to reducing its

**TYPICAL GENERAL FUND EXPENDITURES**



Source: CLV Finance Department (FY18-20)

operational costs, eliminating wasteful or duplicative expenditures. In previous years, the City has completed reviews in which employees were encouraged to participate in the process of improving efficiencies and cutting expenditures. The City's Sustainability Initiative have reduced its utility costs by investing in renewable energy and energy efficiency projects.

As a best practice, the City has devoted considerable efforts to ensure transparency. Its online open data portal, open checkbook, and open budget allow the public considerable access to how the City spends taxpayer money. In addition, the City Auditor provides an additional level of independent scrutiny on city expenditures. These efforts must be continued into the future and refined in ways that make information even more accessible.

**THE CITY WILL NEED TO BALANCE BUSINESS FRIENDLINESS WITH THE RESTRICTED POWERS OF TAXATION CONSTRAIN THE CITY'S REVENUE ALTERNATIVES**

Nevada often markets its business friendliness and low tax rates as an economic development tool; Nevada has no personal or corporate income, franchise, inventory, inheritance, unitary, or estate taxes. These have had a positive effect in attracting new businesses and companies into the City and state. However, for more than fifty years, state and local leaders have raised concerns about revenue alternatives. At 6.85%, Nevada has a higher state sales tax rate than many others across the country. When local sales tax options are included, Las Vegas has a rate that is pushing close to 9%. At some point in the future, these issues may come to a head as the City (and state) determine how to generate revenue for increasing governmental service demands and costs.

A number of limitations are placed on taxation and revenue, including restrictions within the Nevada Constitution, and those within NRS. Voter approved constitutional amendments have exempted food, other than prepared food for immediate consumption, and medical equipment from the sales tax and total tax levies cannot exceed five cents per dollar of assessed valuation. Nevada is a "Dillon's Rule" state, meaning a municipality is granted only those powers expressly authorized by the Nevada Legislature. Furthermore, this means that the City cannot create or increase any taxes that are not otherwise enabled

or authorized pursuant to Nevada Revised Statutes or the City Charter. Any changes to Nevada’s structure have been the cause of much debate or discussion. The subject contains a high degree of sensitivity because of its direct impact to businesses and residents. Supermajority approval is required of both the Assembly and Senate for legislative measures, while approval through the initiative process requires a majority vote of the public. If a change is made to the Nevada Constitution supermajority approval at two legislative sessions and voter approval, or through a Constitutional initiative with approval at two general elections. While these issues have been debated over the decades, the City must examine new revenue alternatives in partnership with other local governments, the business community, and the public.

Some new and revenue enhancement options, either as standalone measures or in combination, may include:

- Modification of the fixed property tax caps to allow the City more flexibility and reliability in annual revenue streams.
- Funding the State Infrastructure Bank and Clean Energy Fund for state-backed project loans to the City.
- Requesting more enabling powers for local governments, specifically, for general law and chartered cities to ensure the revenue stream can be controlled at the municipal level. Because the City Charter acts as a form of self-governance, these could require voter approval for authorization in an effort to ensure proper justification. Similarly, enabling the use of overrides for specific purposes for different taxes and revenue streams could provide exceptions on use, length of terms for a tax, or an increase in the statutory ceiling of the tax rate.
- Expand the use of enabled revenue alternatives and working with legislators and other leaders to develop and reform tax and revenue alternatives that are more progressive and equitable, including some that haven’t previously been attempted, including:
  - Land value taxes – these taxes split the property tax into two components – land and buildings. The value of the land, which is taxed at a higher rate, is then assessed in addition to the improvements. The benefit is that land value taxes are more

equitable and economically sustainable, as well as a tool to encourage investment and development and discourage speculation.

- Service based taxes – applying discretionary taxes based on a broad base of services that may be statutorily exempt or otherwise not addressed. This approach is distinguished from direct sales and oriented toward the provision or rendering of services themselves.
- Utilization of special improvement districts (SID) – through its charter and NRS 271, the City can form SIDs for a wide range of infrastructure projects. A special assessment is levied on properties within the district, which back bonds issued by the City. Proceeds from the assessments repay the bonds over time. Thus far, SIDs within the City have typically been limited to a limited number of project types; however, the Legislature has expanded allowable uses to include new types, including tourism and entertainment projects, art, and neighborhood improvements.
- Increased utilization of developer-based contributions, such as impact fees and exactions – The City is currently enabled to create impact fees for new development through NRS 278B and already makes services and infrastructure requirements for new development under development agreements. Additional broad based development fees could be applied so that growth pays for growth.
- Fuel taxes – While Nevada has been progressive with implementing fuel revenue indexing, increasing the state’s motor fuel tax rate, and removing the Constitutional prohibitions of spending revenue. In addition, other transportation revenues should be further developed as fuel efficiency and technology improves and mobility trends shift, such as vehicle miles traveled taxes, congestion pricing and high occupancy tolling user fees, and
- Reductions in sales tax rates – As sales taxes and options have risen, there may be opportunities to make specific reductions as new forms of revenue that are more equitable take place
- Reforms to mining, mineral net-proceeds and gaming taxes – Prior efforts have been made

to modify the rates for mining and gaming taxes, some of which have included increasing the overall rates, and removing established caps. As the value of minerals fluctuates, especially during different economic cycles, modestly higher rates may capture ; similarly, gaming tax rates have been proposed specifically to provide

- Approval and creation of a lottery. Nevada’s Constitution prohibits lotteries, making it one of five states with no state or multi-state lottery and often loses millions in ticket sales. Should a constitutional amendment be approved, a reasonable system could be established to allows both restricted and non-restricted gaming to share in ticket sales, with revenues distributed to state and local general funds.

**TO ENHANCE THE BUDGET PREPARATION PROCESS, THE MASTER PLAN CAN BE A TOOL TO ALIGN ANNUAL BUDGETS WITH CITYWIDE PRIORITIES**

Planning and budgeting are important to the future of the City, but neither should exist in a vacuum. Both must be closely aligned and reviewed both separately and together for the City to succeed in providing services to its citizens, fulfilling the priorities of the City Council and achieving the goals of this plan. Because the City has finite and constrained resources, the annual budget is a critical part of making sure it allocates funds appropriately for growth and the processes are intertwined. During each budget cycle for both the general fund and the capital improvements plan, this plan recommends conducting a thorough assessment of annual priorities with a direct focus on how a plan outcome

can be achieved as a mean to spend both discretionary or non-discretionary resources. Three elements, described further in Chapter 5, are important to ensure the plan and budget are aligned: ensuring budgetary alignment with the plan’s outcomes, transparency within the City and with the public during the budget making process, and ongoing measurement and evaluation.

**IMPLEMENTATION STRATEGIES**

- Work to attain reasonable legislative changes that permit flexibility in revenue generation.
  - Coordinate with other local governments, the business community, and the public to propose new or enhanced revenue options to the Legislature
  - Lobby to fund the State Infrastructure Bank and Clean Energy Fund
- Adopt budget savings and government efficiency measures.
  - Hire grant writers and reconstitute an interdepartmental grant management team
  - Implement operational cost savings measures
  - Develop an internal efficiency committee
- Maintain accessible and transparent budgets, audits, and reviews of City expenditures.
  - Hold open budget forums and public review of the budget and CIP
- Resolve to align the annual budget and capital improvement projects to achieve outcomes of the master plan.

EQUITABLE	RESILIENT	HEALTHY	LIVABLE	INNOVATIVE
The City must explore the development of progressive, broad based revenue streams that are equitable for all residents and fair for business.	Dedicating a healthy reserve will ensure the City can manage emergencies that require unforeseen expenditures	During each budget cycle, the financial health of the City will be assessed, with needs of the city and community prioritized	A disciplined municipal public finance system will ensure adequate services and infrastructure can be provided	New techniques and tools can help generate new streams of revenue while efficiencies in government can streamline service delivery.
				



# HOUSING



## GOALS

- A. Increase affordable housing types and choices for all income levels near existing and new employment centers.
- B. Develop services that help the homeless and prioritize the needs of the most vulnerable members of the community

# III.A HOUSING CHOICES

✓ NRS 278.160.1(c) and NRS 278.235

## INCREASE AFFORDABLE HOUSING TYPES AND CHOICES FOR ALL INCOME LEVELS NEAR EXISTING AND NEW EMPLOYMENT CENTERS

Housing is a human right and fundamental requirement for residents and our City to thrive. Over the coming decades, housing affordability and availability was ranked as the one of the top issues during the 2050 Master Plan outreach period, as was homelessness. With an estimated 310,000 new residents joining the City's population by 2050 and existing challenges facing current city residents seeking housing, the City of Las Vegas is developing innovative solutions to ensure housing for all residents. Most importantly, new housing that is constructed will be done by focusing development into identified and targeted infill and redevelopment areas, taking advantage of the place types described in the Land Use and Environment Chapter.

Historically, housing in Las Vegas developed first in the downtown area, followed by western and northwestern expansion. As the City developed and faced the financial crisis during the 2008 recession, housing prices dipped substantially, increased, and continue to increase today. Concurrently, wages in Las Vegas have remained low for

the majority of the population, widening the income gap between low income and mid-to-high wage earners. With a shrinking middle class, economic mobility seems out of reach for many residents as middle class incomes have not caught up to national averages since the 2008 recession.

By focusing on availability, affordability, and access, the City of Las Vegas supports the assumption that upper class residents who can afford market rate housing will have little need for housing assistance while those who are a part of the "missing middle" and lower income levels would benefit from thoughtful, equitable, city-led initiatives.

Today, residents experiencing homelessness, low-income housed residents, and middle and higher income households face extremely diverse opportunities and challenges to obtain and keep a roof over their heads, in addition to meeting the costs associated with education, transportation, employment, healthcare, open space, and well-being. With an increasingly shrinking middle class since the 2008 recession, the stratification between income levels is dramatically shifting; as median household incomes have decreased, the City is at risk of continuing to not have enough affordable housing leading to 2050. As population grows and current trends in household income

### OUTCOMES

- The percentage of new residential development that occurs within this plan's Regional Centers, Mixed-Use Centers, Corridor Mixed-Use, or Neighborhood Center Mixed-Use place types increases over time.
- 80% of City residents spend less than 45% of AMI on housing and transportation costs combined by 2050.
- Beginning in 2021, the City and SNRHA develop affordable housing at a rate of at least 1,000 units annually.
- Beginning in 2023, and annually thereafter,
  - There is no net loss of subsidized affordable units
  - Any loss of subsidized affordable units are replaced with new affordable units
- 33% of total housing available is affordable housing, divided into affordability rates at 80% AMI, 50% AMI, and 30% and below AMI

	PRESERVE & SUPPORT	INCREASE ACCESS
HOMEOWNERSHIP	Support existing homeowners	Support first time buyers
RENTAL	Support existing renters	Create new affordable housing

 **SEE ALSO CHAPTER 2:**  
Neighborhood Toolkit

change, the City must create more diverse housing options, with leadership and assistance from:

- The private sector, comprised of a sizable economic sector of lenders, builders, and developers that provides market-rate housing for sale.
- Non-profit affordable housing service providers, such as Nevada HAND, that are dedicated to developing high quality, affordable housing for seniors and working families.
- The City, pursuant to its Charter, is authorized to develop and provide affordable housing consistent with state law; however, it is prohibited from imposing taxes unless otherwise authorized. Notwithstanding, several departments play a direct role in the creation of housing opportunities and the administration of housing policy:
  - The City's Department of Community Services oversees services for neighborhoods, affordable housing, seniors, and for the homeless population. It is also responsible for:
    - » Development of the City's Five-Year Consolidated Plan that is submitted to the U.S. Department of Housing and Urban Development (HUD). The Consolidated Plan and Analysis of Impediments provide a detailed strategic plan for addressing the affordable housing needs. A Strategic Plan includes building or rehabilitating renter units and includes more than 4,000 "Section 8" vouchers for rental housing provided by the Southern Nevada Regional Housing Authority, opportunities for home ownership through the development or rehabilitation of approximately 300 owner occupied units, and down-payment



### KEY ACTIONS

- Diversify and improve housing stock to include a range of building types and "missing middle" housing appropriate for transit-oriented developments.
- Integrate affordable housing into the place types identified in the Land Use Chapter through the use of zoning regulations and other enabled policies.
- Amend LVMC Title 19 to remove affordability barriers and to allow more mixed residential dwelling unit types in areas of transformation and enhancement, including accessory dwelling units, garage conversions, casitas, or granny flats, with selective applications in areas of preservation.
- Accommodate a population increase of approximately 309,000 new residents by constructing approximately 110,000 new dwelling units, of which 121,000 of the City's total 366,535 projected units must be affordable or meet HUD's affordability criteria.

EQUITABLE	RESILIENT	HEALTHY	LIVABLE	INNOVATIVE
Housing is a human right; the provision of which must be available for all, regardless of age, race, ethnicity, family status, or income type. 	New and existing housing must be built or upgraded as energy and water efficient dwelling units to ensure the conservation of resource. 	Development of a diverse array of quality housing, including those within transit-oriented developments can help create healthy walkable neighborhoods. 	A wide range of affordable housing choices provide options to residents of all-income levels at different locations with close access to amenities. 	New affordable housing development techniques can help incentivize the development of new dwelling units. 

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assistance. The Consolidated Plan is designed with objectives intended to be achieved over a five year period, with funding allocated to specific projects that implement it.

- » Implementation of Federal formula programs, including the Community Development Block Grant (CDBG), HOME Investment Partnership (HOME), the Housing Opportunities for Persons with AIDS (HOPWA), and the Emergency Solutions Grant (ESG) programs
- » Addressing the challenge of homelessness and operation of the City's Courtyard Homeless Resources Center.
- The Planning Department regulates land use and entitlement, pursuant to LVMC Title 19. Through this plan and its implementation, Planning permits the development and construction of new housing types at a wide range of densities and for certain conditions. The Planning Department also contains the Code Enforcement Division, which has the authority to cite and condemn buildings and houses that are deemed to have blighting conditions or are structurally unsafe.
- The Department of Building and Safety oversees the safe construction and alteration of all types of dwellings for occupancy. As a function of the development process, the Building Department reviews and adopts new codes, checks and reviews structural drawings, and inspects the construction of the building to ensure the building is safely built.

- The Southern Nevada Regional Housing Authority (SNRHA) serves as the primary authority for affordable housing within the region after combining the housing agencies from Las Vegas, Clark County and North Las Vegas in 2010. Organized under Chapter 315 of Nevada Revised Statutes, the SNRHA:

- Maintains and manages conventional public housing units for applicants who are income qualified.
- Manages and maintains properties that do not receive Federal aid.
- Administers the housing choice voucher ("Section 8") program.
- Constructs and manages public housing

- The Nevada Housing Division, the state department that oversees the construction and development of affordable housing, including for and placement of manufactured homes, mobile homes and parks.

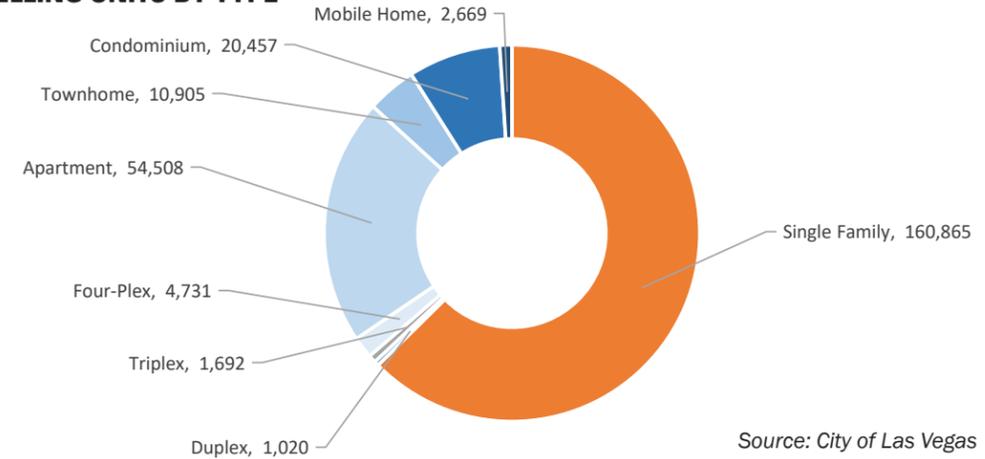
**THE CITY LACKS DIVERSITY IN HOUSING TYPES AND CHOICES, BUT FORTUNATELY, MUCH OF THE CITY'S HOUSING STOCK IS NEW AND IN RELATIVELY GOOD CONDITION**

The city of Las Vegas is home to approximately 670,000 people living within 257,000 dwelling units. The City's housing is predominantly low-density single-family residential construction – approximately two-thirds of all dwelling units and City zoned land. A typical Las Vegas home is 1 story, 2,000 square feet, and constructed in 1990's. Multi-family dwelling unit types are also not diverse; approximately 90% of all multi-family dwelling units are apartments, condominiums, or townhomes, with little diversity of any other type. Of these, approximately 15% were vacant, with the majority being rental properties.

Fortunately, most of the housing stock within the City of Las Vegas is in relatively good condition; because more than 80% of all construction has taken place after the 1980's, newer building codes have applied, making them code-compliant.

City wide, to ensure good standards and quality housing types, the City's Building and Safety Department must continue to regularly adopt and update its uniform codes to ensure high quality, structurally safe, and energy and water efficient buildings are built.

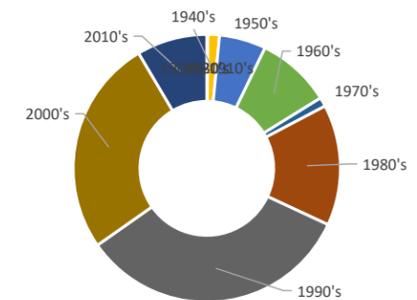
**DWELLING UNITS BY TYPE**



Source: City of Las Vegas

The deterioration of housing, however, can create blighting conditions. A similar geographic pattern can be seen, as well as from Code Enforcement actions taken by the City, and include a high share of planning areas in and around Downtown Las Vegas. The City estimates that about 1,800 housing units were inadequate or substandard. This is due primarily to the age of the housing. The majority of the housing units within the City are considered adequate for the same reason. Approximately 75 percent of the housing in Las Vegas has been built since 1980, making them more likely to be code compliant.

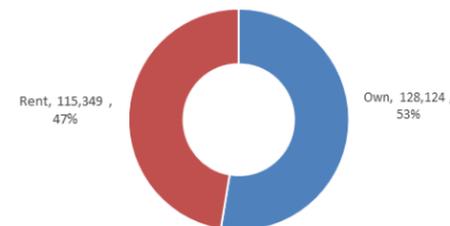
**YEAR OF CONSTRUCTION**



Source: City of Las Vegas

New housing units must be built to be resource efficient. While building new units to a green building standard should be strived for, a number of builders construct above code or resource efficient options; some take advantage of local existing programs, including NV Energy's solar incentive program or SNWA's WaterSmart new homes program. For existing building stock, rehabilitations and retrofits, weatherization it required to ensure houses are cost efficient and comfortable for occupants. However, outside of the City utilizing its broad redevelopment powers,

**HOUSING TENURE**



Source: City of Las Vegas / ACS 5 year estimate



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DETACHED RESIDENTIAL	TOWNHOMES	LOW/MID-RISE MIXED-USE	HIGH-RISE MIXED-USE
<b>RESIDENTIAL DENSITY</b> 4-6 housing units per acre	<b>RESIDENTIAL DENSITY</b> 12-16 housing units per acre	<b>RESIDENTIAL DENSITY</b> 20-40 housing units per acre	<b>RESIDENTIAL DENSITY</b> 40-80 housing units per acre
<b>BUILDING HEIGHT</b> 1-2 story	<b>BUILDING HEIGHT</b> 2-3 story	<b>BUILDING HEIGHT</b> 3-7 story	<b>BUILDING HEIGHT</b> 8-30 story
<b>USES</b> Single family residential (suburban)	<b>USES</b> Single/multi-family retail with limited retail	<b>USES</b> Multi-family residential, mixed-use with office, retail, entertainment	<b>USES</b> Multi-family residential, mixed-use with office, retail, entertainment and cultural/civic destinations
<b>MOBILITY</b> Private vehicle and some bicycle	<b>MOBILITY</b> Private vehicle, bus, bicycle and some pedestrian	<b>MOBILITY</b> Some fixed-rail train, bus rapid transit, bus, shuttle, private vehicle, bicycle and pedestrian	<b>MOBILITY</b> Fixed-rail train, bus rapid transit, bus, private vehicle, bicycle and pedestrian
<b>OPEN SPACE</b> Private open space (yards), little public open space	<b>OPEN SPACE</b> Public open space, some private open space	<b>OPEN SPACE</b> Public open space, some civic space	<b>OPEN SPACE</b> Public open space, civic space, multi-modal systems

Townhomes, Duplex, Triplex, Multiplex, Courtyard, and Live/Work constitute needed forms of missing middle housing, which can be developed within the three right functional typologies

TOTAL DEVELOPED AND PROJECTED HOUSING UNITS						
Area	Existing Single-Family	Existing Multi-Family	Future Single-Family	Future Multi-Family	Total New Units	Total Units (2050)
Angel Park	12,772	10,185	531	3,290	3,821	26,778
Centennial Hills	18,903	4,783	438	7,067	7,505	31,191
Charleston	14,693	14,422	877	9,429	10,306	39,421
Downtown Las Vegas	1,755	12,226	83	10,191	10,276	24,255
Downtown South	4,083	1,814	136	3,312	3,448	9,345
East Las Vegas	9,248	12,938	326	3,848	4,173	26,360
Twin Lakes	19,932	17,343	266	8,241	8,506	45,782
La Madre Foothills	8,967	1,484	5,995	2,246	8,240	18,692
Lone Mountain	15,924	4,851	2,875	2,121	4,996	25,771
Kyle Canyon	3,894	380	8,238	1,904	10,142	14,416
Nu Wav Kaiv	0	0	3,616	2,893	6,509	6,509
Rancho	12,868	3,235	376	3,872	4,248	20,351
Summerlin North	18,873	8,737	0	1,390	1,390	29,000
Summerlin West	6,167	538	13,255	6,976	20,231	26,936
Tule Springs	8,908	492	2,290	507	2,797	12,197
West Las Vegas	3,698	2,846	229	2,758	2,987	9,531
<b>TOTAL</b>	<b>160,685</b>	<b>96,274</b>	<b>39,531</b>	<b>70,045</b>	<b>109,576</b>	<b>366,535</b>

Source: Placebuild Analysis

TOTAL DEVELOPED AND DEVELOPABLE ACRES OF LAND BY RESIDENTIAL LAND USE TYPE					
Area		Single-Family	Attached Residential	Multi-Family Residential	Vacant Private Land
Angel Park	Existing	2,243.7	72.6	480.4	80.3
	Future	2,131.5	69.3	266.7	57.8
Centennial Hills	Existing	2,584.3	32.4	213.7	558.3
	Future	2,455.1	32.4	213.7	229.3
Charleston	Existing	2,981.0	111.6	563.8	141.5
	Future	2,829.2	110.2	495.5	97.1
Downtown Las Vegas	Existing	379.3	108.2	246.7	278.4
	Future	360.8	150.0	223.7	241.4
Downtown South	Existing	679.0	48.4	29.8	59.7
	Future	645.0	46.0	28.5	26.1
East Las Vegas	Existing	1,750.3	139.6	378.5	129.0
	Future	1,656.3	110.7	249.6	86.9
Twin Lakes	Existing	2,876.7	185.2	763.1	169.1
	Future	2,725.3	154.4	653.9	102.4
La Madre Foothills	Existing	1,043.4	0.0	55.3	3,368.5
	Future	1,043.4	0.0	55.3	1,478.4
Lone Mountain	Existing	1,901.6	60.9	228.2	981.4
	Future	1,806.5	57.9	206.1	0
Kyle Canyon	Existing	639.3	0.0	19.1	2,766.0
	Future	607.4	0.0	19.1	0
Nu Wav Kaiv	Existing	0.0	0.0	0.0	9,485.5
	Future	0.0	0.0	0.0	7,212.2
Rancho	Existing	2,598.1	25.4	109.0	284.5
	Future	2,463.9	22.6	103.7	93.8
Summerlin North	Existing	3,677.9	185.3	363.6	33.7
	Future	3,677.9	185.3	363.6	16.6
Summerlin West	Existing	1,167.0	0.0	28.5	6,843.9
	Future	1,167.0	0.0	28.5	1,919.6
Tule Springs	Existing	1,902.9	0.0	0.0	923.5
	Future	1,807.7	0.0	0.0	198.8
West Las Vegas	Existing	600.0	45.3	117.3	138.6
	Future	536.8	30.1	103.9	40.0
<b>TOTAL</b>	<b>Existing</b>	<b>27,024</b>	<b>1,015</b>	<b>3,597</b>	<b>26,242</b>
	<b>Future</b>	<b>25,914</b>	<b>969</b>	<b>3,012</b>	<b>10,410</b>

Source: Placebuild Analysis

efforts should be taken to further address the rehabilitation and improvement of existing housing, both exterior and on the interior of the structure.

**MAINTAINING EXISTING AND DEVELOPING NEW AFFORDABLE HOUSING TO MEET THE NEEDS OF THE COMMUNITY MUST BE MET THROUGH A VARIETY OF STRATEGIES**

The City of Las Vegas aims to have a diversity of housing options available so that no residents have to pay more than 30% of their household income on housing itself. From 2010-2017, the City's percentage of low income households, defined as households earning 80% of less of the Area Median Income (AMI) as household income, remained relatively static while population increased. The same is true for very low income (50% or below AMI) and extremely low income (30% of below of AMI). As a result, more than 82,000 City households qualified for assistance, while 64,000 experienced a household burden like overcrowding or substandard housing conditions.

From a geographic standpoint, most low-income households are located in the core urban districts around Downtown Las Vegas. Notably, these areas also have the highest concentrations of minority households, single heads of household, persons per household, and people with a disability. In 2018, the:

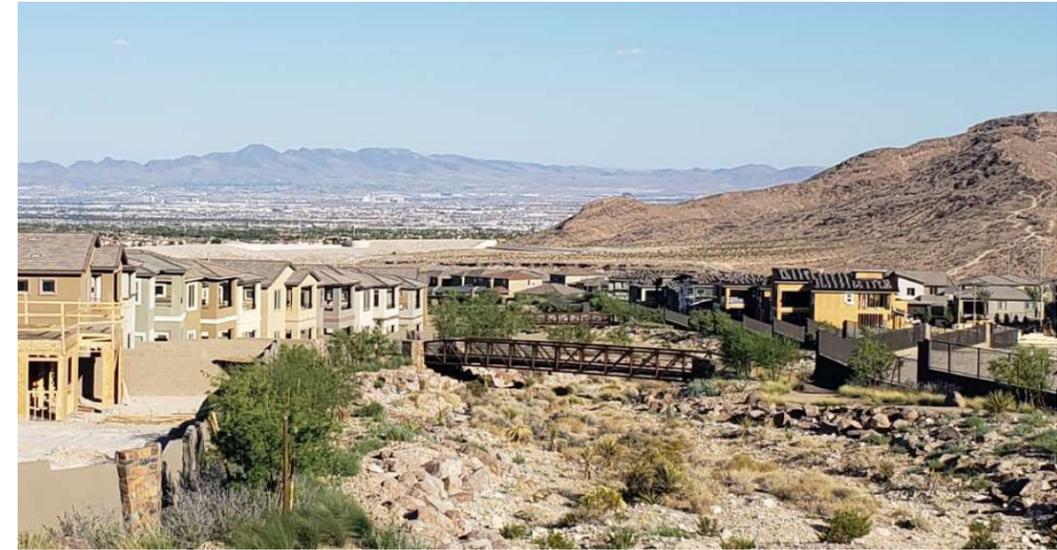
- Median mortgage payment is \$1,295 and 21% of household income; and the
- Average monthly median monthly rent payments are \$1,023 and 25% of household income.

HOUSING AFFORDABILITY		
	PRESENT	2050 OUTCOME
City Households	256,959	366,535
% Households 80% below AMI	40.2%	33%
% Households 50% below AMI	23.8%	20%
% Households 30% below AMI	12.8%	5%

Source: City of Las Vegas / ACS 5 year estimate

Demographically, as the Baby Boomer generation retires, the percentage of residents over the age of 60 is projected to increase, potentially driving demand for “active adult” and senior housing. The Millennial generation, the largest generational cohort, is primarily made up of renters; however, should their household sizes and incomes increase over time, their preferences will drive changes in housing demand away from renting multi-family types to more single-family. Finally, Latinos and Hispanics are projected to account for more than 40% of Las Vegas’s population by 2050. With that increase, national studies have indicated more of a preference for homeownership, but affordability is a factor. Regardless, growth within this demographic will drive demand for a range of housing types and sizes.

While housing availability is limited in the City of Las Vegas, affordability across household incomes is a challenge. Home ownership rates, which had been increasing steadily since 1990, declined after peaking at 62 percent in 2006



and falling to 57 percent in 2010. Half of the homes sold in Las Vegas a decade ago, during the aftermath of the recession, were affordable to low income households, with nearly all homes sold affordable to households making AMI. The key issue at this point was not so much housing affordability, but the credit worthiness or the ability to make a down payment. However, over time, home values have increased, with median home values across Southern Nevada predicted to reach just below \$300,000 in 2020.

While housing prices are on the rise, so are rental prices. Single family homes have experienced a 6% rent increase in the last year while median apartments rents have increased more than 5% in 2019 alone. As housing prices increase, wages in Las Vegas remain low for the majority of the population. Hourly wages in Las Vegas are 12% below the national average with the majority of occupations paying well below industry national averages. Employees of the tourism and service industries all earn less than 30% of area median income, qualifying those individuals for affordable housing. Because housing and rental prices are increasing and wages are not following in proportion for the majority of occupations in Las Vegas, the income gap between low income and mid-to-high wage earners is predicted to increase dramatically, affecting housing affordability.

Nevada has the largest shortage of affordable housing in the country. For every 100 households earning 30%

or less of AMI, only 19 affordable units are available and affordable. Las Vegas fares even worse than the state of Nevada with only 10 available and affordable units for every 100 households earning 30% or less of AMI. With no current requirements for developers to build affordable housing alongside market-rate housing, affordable housing is facing a major crisis in the City of Las Vegas.

In 2018, 60% of the City of Las Vegas’ population is “housing insecure,” or spending more than 30% of household income on housing costs . With median household incomes ranging from \$37,000 - \$60,000 , the majority of the City’s population lives in the “missing middle,” earning too much to qualify for Federal housing assistance but too little to purchase or rent in a city where cost of living is rising rapidly. In 2019, Las Vegas was identified as having the largest rent increases of any city in the country with housing prices steadily increasing on an annual basis . Rent in the state of NV has increased faster than renter household income over the past 16 years, and home ownership rates have been slow to recover since the Great Recession . For residents who do not earn enough household income to rent or own available housing in the City, increasing wages and/or increasing housing options at diverse price points will ensure housing. Given the City’s geographic, land-locked constraints to building, housing development built in a denser community would allow more people to be housed across the City.

**MONTHLY RENT VS. MORTGAGE**



Source: City of Las Vegas / ACS 5 year estimate

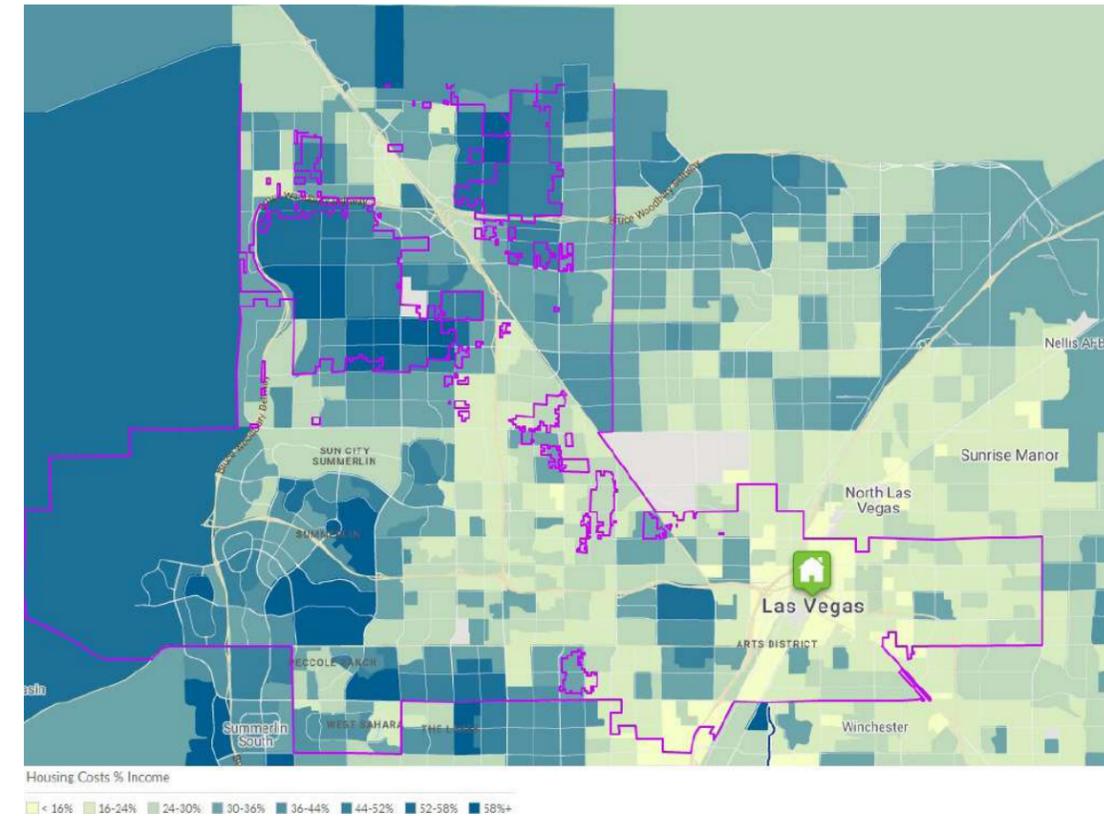
**TOTAL ACRES OF LAND USE PLACE TYPES DESIGNATED FOR NEW HOUSING, PRESERVATION, OR RETROFIT**

Area	Mixed Residential	Traditional Neighborhood	Subdivision Retrofit	New Subdivision	Rural Preservation
Angel Park	3.4	0.0	112.2	8.0	0.0
Centennial Hills	0.0	0.0	129.2	0.0	0.0
Charleston	146.9	3.9	0.0	0.0	0.0
Downtown Las Vegas	0.0	18.5	0.0	0.0	0.0
Downtown South	37.6	0.0	0.0	0.0	0.0
East Las Vegas	41.6	87.1	0.0	0.0	0.0
Twin Lakes	22.6	60.1	0.0	0.0	0.0
La Madre Foothills	0.0	1,400.8	31.9	1,927.0	680.0
Lone Mountain	0.0	0.0	0.0	1,684.3	101.6
Kyle Canyon	0.0	197.6	120.2	411.1	347.7
Nu Wav Kaiv	140.0	151.4	0.0	3.9	0.0
Rancho	0.0	0.0	0.0	1,033.3	0.0
Summerlin North	8.1	134.2	0.0	58.9	54.7
Summerlin West	0.0	0.0	0.0	32.2	0.0
Tule Springs	0.0	0.0	0.0	4,596.0	0.0
West Las Vegas	0.0	0.0	95.1	400.5	324.2
<b>TOTAL</b>	<b>400.2</b>	<b>2,053.6</b>	<b>488.6</b>	<b>10,155.3</b>	<b>1,508.3</b>

**TOTAL ACRES OF RE-DESIGNATED TRANSIT-ORIENTED PLACE TYPES**

Area	Regional Centers (RC)	Transit-Oriented Development (TOD)	Corridor Mixed Use (TOC)	Neighborhood Mixed Use Center (NMXU)
Angel Park	0.0	56.4	68.5	231.7
Centennial Hills	414.7	0.0	0.0	10.6
Charleston	0.0	175.6	161.2	57.9
Downtown Las Vegas	184.5	0.0	0.0	0.0
Downtown South	0.0	43.6	33.8	26.7
East Las Vegas	0.0	156.8	86.4	20.9
Twin Lakes	0.0	58.8	58.1	24.9
La Madre Foothills	0.0	0.0	0.0	136.0
Lone Mountain	0.0	0.0	0.0	160.4
Kyle Canyon	0.0	0.0	0.0	153.0
Nu Wav Kaiv	0.0	175.9	148.4	68.5
Rancho	0.0	0.0	0.0	206.7
Summerlin North	0.0	72.6	92.6	42.5
Summerlin West	99.3	0.0	0.0	0.0
Tule Springs	0.0	0.0	0.0	328.3
West Las Vegas	0.0	0.0	0.0	36.2
<b>TOTAL</b>	<b>698.4</b>	<b>739.7</b>	<b>649.0</b>	<b>1,504.2</b>

**HOUSING COSTS AS A PERCENTAGE OF INCOME**



Source: CNT - Housing + Transportation Index



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Further constraining residents with variable household incomes, state tenant laws are among the most restrictive in the country. Landlords are able to rent on an annual basis, and if a tenant chooses to break a lease, they would be responsible for paying out the remainder of the lease until a new tenant takes over the unit. Additionally, landlords can evict tenants four days after a rent payment is due. These policies can create major financial and housing hardships for residents who are laid off, lose a job, or experience a healthcare challenge.

While current barriers to housing include availability and affordability, the ultimate goal of the City of Las Vegas 2050 Master Plan is to provide recommendations so that every resident is able to thrive. While housing is one very important component of a healthful, successful life, access to other services, such as quality education, gainful employment, legal assistance, reliable public transportation, compassionate healthcare, nutritious food, affordable utilities, open space, and culturally-appropriate financial services all provide opportunities for a resident to live life to the fullest. Working alongside existing service providers and encouraging new businesses with locally-focused corporate philanthropy and social responsibility programs could prove a helpful source of wraparound services for all residents.

To be proactive, the City must invest in shelter space, transitional, and permanent supportive housing to create alternatives to renting and buying a traditional home for diverse populations. Housing options must reflect the

diversity of the City’s community. Without initiatives to create different models of housing ownership for all income levels, the City will not be able to house its residents in a helpful, affordable way.

**AFFORDABLE HOUSING OPTIONS ARE LACKING AND IMPEDIMENTS REMAIN, DEMONSTRATING AN OVERALL PROSPECTIVE NEED FOR THE COMMUNITY**

There are approximately 10,000 project and tenant based housing vouchers currently in use, while another 2,700 units are available in select sectors. While housing is a multi-dimensional issue, income and availability are amongst the most significant resources determining whether a population is able to access and afford housing options in the area. The City of Las Vegas currently owns 903 affordable housing units for low income and very low income individuals. As a result, the City faces the daunting challenge of creating at least 5,000 affordable housing units in a five year period in order to address the existing lack of affordable housing. While the City can take advantage of the Southern Nevada Public Lands Management Act (SNPLMA) to reserve locations for affordable housing, many locations may not be appropriate for its development, especially when combining housing and transportation costs. As originally determined for the Southern Nevada Strong Regional Plan, the Regional Analysis of Impediments suggested the jurisdictions increase affordable housing by amending zoning standards

**ZONING BARRIERS TO AFFORDABILITY**

- Lot-size requirements
- Parking requirements
- Height and density limitations
- Accessory dwelling unit limitations
- Allowing pre-fabricated housing and other non-traditional development models

**SEE ALSO CHAPTER 2: LAND USE**  
Neighborhood Toolkit

Impediments to the development of affordable housing include, but are not limited to the following:

- Community Support: NIMBYism from the community due to perceptions on affordable housing
- Financing for Home Ownership:
- Permit and Plans Review Time
- Costs of construction
- Water connection fees: while these have been steadily increasing for all development types, these fees are especially impactful.

**NEW HOUSING TYPES AND LOCATIONS MUST ALIGN WITH THE PLAN’S OVERALL STRATEGY FOR TOD, INFILL, AND REDEVELOPMENT**

Infill development in areas with lower infrastructure and service costs must be supported by the City to maximize tax revenue and minimize the provision of service costs. Given current land uses, vacant land within the City could enable the construction of 111,000 conventional new housing units within new subdivisions. However, because there is a lack of higher density “Missing Middle” housing potential that can help fill the gap for workforce and lower-income households, an opportunity exists to develop this type of housing, utilizing this plan’s approach and strategy of transit-oriented development (TOD), infill, and redevelopment. The use of regulatory and design strategies contained within the Land Use Chapter will enable the development of compatible infill and redevelopment with a mix of housing types in neighborhoods close to employment centers,

commercial areas, and where transit or transportation alternatives exist.

- For areas of transformation and enhancement, the RC, TOD, TOC, and NMXU place types enable the zoning types that will permit and allow the provision of a wide assortment of housing types.
- Some areas of enhancement and transformation may include existing traditional neighborhoods with mixed types of residential or could undergo subdivision retrofits. Zoning provisions within LVMC Title 19 must be amended to allow more mixed residential dwelling unit types in these areas, including accessory dwelling units, garage conversions, casitas, or granny flats, with selective applications in areas of preservation. The development and implementation of programs to preserve and maintain existing subsidized and unsubsidized affordable housing in transit-served areas, compact and mixed-use areas, and areas with rapidly-rising housing costs may be required.
- There are more than 26,000 acres of vacant land within Las Vegas, much of which are in developing western and northwestern planning areas; there are no impediments to the developing of new subdivisions to currently undeveloped areas within the City other than the cost of the infrastructure itself and the release of land over time.
- Finally, for areas dedicated for preservation, historic neighborhoods will likely be preserved and see limited or carefully reviewed additional alternations or additions; some areas of rural preservation permit (or will continue to permit) low-density, single-family housing types.



Name	Low income units maintained	Very low income units maintained	Low income units funded or developed	Very low income units funded or developed
Single Family Rehabs			66	20
City Impact				65
Tenaya Senior Apartments			269	3
Baltimore and Cleveland Gardens	199	2		
Wardell Street Townhomes			7	54
Ruby Duncan Manor		30		
City TBRA			3	45
HOPWA Transitional and permanent housing			9	131
<b>TOTAL: 903</b>	199	32	354	318

Source: City of Las Vegas Office of Community Services

FINANCIAL TOOLS AND STRATEGIES		
	Financing Strategies	Policy Changes
<b>Developer Assistance Programs</b>	<ul style="list-style-type: none"> <li>Tax-credit initiatives to help offset the cost of development for affordable housing, including developer education for the Low Income Housing Tax Credit.</li> <li>Joint Venture Development</li> <li>TIF</li> <li>Fannie Mae’s Healthy Housing Rewards Program</li> <li>Affordable Housing Trust Funds</li> <li>Private equity vehicles. Real estate investment entities use private capital to acquire and rehabilitate multifamily workforce and affordable housing properties, delivering a range of returns to equity investors.</li> <li>Below-market debt funds. public/private/NGO provides affordable housing developers with low-cost loans</li> <li>State and local bond initiatives</li> </ul>	<ul style="list-style-type: none"> <li>Expand incentives for developers</li> <li>Partnership between City and private sector in making underused government-owned sites available for affordable housing, such as repurposed rights-of-way, surplus properties, or land-entitlement-swaps</li> <li>Affordable Housing Bonus Program</li> <li>Zoning Changes to allow smaller housing types</li> </ul>
<b>Homeowner Assistance Programs</b>	<ul style="list-style-type: none"> <li>Housing Rehab Grant Programs</li> <li>Federal Home Loan Bank of San Francisco Affordable Housing Grant Program (plus homeowner education &amp; assistance)</li> <li>Offer tax abatement to small-rental building owners to offset rehabilitation expenses</li> <li>Develop mortgage assistance programs</li> </ul>	<ul style="list-style-type: none"> <li>Incorporate transit-oriented development by locating housing near public transportation and other amenities</li> <li>Use rent control as a tool to make older rental properties more affordable for long-term residents, especially the elderly</li> </ul>
<b>Investor Financing &amp; Assistance Programs</b>	<ul style="list-style-type: none"> <li>Real estate investment trusts (REITs), through which a longstanding mechanism for raising real estate capital for other product types is used expressly to develop and preserve affordable rental units, generating a range of returns</li> <li>Private equity vehicles, through which real estate investment entities use private capital to acquire and rehabilitate multifamily workforce and affordable housing properties, delivering a range of returns to equity investors</li> <li>Opportunity zones</li> </ul>	

**IMPLEMENTATION STRATEGIES**

- Diversify and improve housing stock to include a range of building types and “missing middle housing” appropriate for transit-oriented developments that accommodate population and dwelling unit projections
  - Routinely update and adopt the HUD Consolidated Housing Plan and provide annual assessments to the Nevada Division of Housing, pursuant to NRS 278.235, determining how many housing units are needed, how many are constructed, how many are affordable, and how many affordable units are lost.
  - Progressively adopt new building codes that ensure the construction of quality housing.
  - Develop and offer a housing rehabilitation and upgrade program to improve the quality of neighborhood building stock.
- Amend LVMC Title 19 to remove affordability barriers and to allow more mixed residential dwelling unit types in areas of transformation and enhancement, including accessory dwelling units, garage conversions, casitas, or granny flats, with selective applications in areas of preservation:
  - Through the Site Development Review process, analyze transit access, housing, and transportation costs.
  - Provide analysis on the impact of new development and capacity of infrastructure and proximity of services, especially for neighborhoods with housing affordable to low and moderate income households.
  - Review additions or accessory dwelling unit applications in neighborhood preservation areas and historic districts to ensure appropriate use and maintaining neighborhood integrity.
- Incentivize and actively assist with the construction, development, and financing of affordable housing:
  - Implement recommended financial tools and strategies for developers, homeowners, and investors.
  - Reduce or subsidize building permits for affordable housing projects.
  - Expedite planning entitlement approval and plans checks for affordable housing projects.
  - Lease or sell City land to developers exclusively for the development of affordable housing.
- Directly utilize CDBG or other Federal funding.
- Purchase or reserve SNPLMA land at a reduced price, provided that the land is within ¼ mile walking distance of an established RTC Transit route.
- Establish a trust fund and land bank for the acquisition, construction or rehabilitation of affordable housing.
- Provide in-kind support for affordable housing developments that are financed, wholly or in part, with low-income housing tax credits, private activity bonds or money from a governmental entity.
- Authorize density bonuses or other incentives to encourage an affordable housing component and TOD.
- Authorize an inclusionary zoning provision for qualified projects, including for TOD place types.
- Seek authorization for tax abatements and other buyer incentives to incentivize demand in target development areas.
- Create and utilize gap financing mechanisms, such as tax credits, grants, low interest loans, and other subsidies, to enable development of mixed-income developments and build market strength.
- Leverage major employers and anchor institutions to create residential market demand incentives in target development areas.
- Partner with nonprofit or faith-based organization(s) to provide, education, counseling, and financial assistance to homebuyers or renters, particularly minorities, the elderly, and the disabled.
- Integrate affordable housing into the place types identified in the Land Use Chapter through the use of zoning regulations and other enabled policies
  - Develop an inventory of infill, previously developed, brownfield, or greyfield sites of greatest priority and potential for development or redevelopment.
  - As part of a larger legislative package, amend the Las Vegas City Charter to enable the ability of the City to raise revenue for the construction or provision of affordable housing.

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# III.B HOMELESSNESS

✓ NRS 278.160.2

## DEVELOP SERVICES THAT HELP THE HOMELESS AND PRIORITIZE THE NEEDS OF THE MOST VULNERABLE MEMBERS OF THE COMMUNITY

Homelessness occurs when a combination of an individual's personal health, economic, or social systems and networks break down, ultimately leading to the loss of their home. Coupled with a variety of economic and social factors, homelessness represents an evolving challenge that has grown over time and has required the City to rise to the challenge in response. Bold action and leadership is required to break the cycle of homelessness within Las Vegas.

During the 2019 Housing and Urban Development (HUD) Point-in-Time Count, Southern Nevada recorded 5,530 unsheltered homeless individuals. The City estimates that more than 60% of this population is concentrated in the districts of Downtown Las Vegas, particularly within Symphony Park, Historic Westside, Cashman, and the Medical District, equaling 2,330 unsheltered homeless individuals. This has a pronounced effect on the health, safety and economic vitality of our community.

For many years, the City has borne the brunt of homelessness, a troubling issue that has been brought to the forefront by previous City administrations. Nevada has the third highest rate of total unsheltered homeless individuals in the U.S. Recent estimates from the homeless Census point-in-time count approximate 15,000 individuals experiencing some form of homelessness in Clark County during the year. More than two-thirds of the individuals experiencing severe, chronic homelessness in Southern Nevada are within the City of Las Vegas, making up nearly 2,500 unsheltered individuals within the City with the majority concentrated around Downtown Las Vegas.

Confronting homelessness has been rated as a top issue by City residents during public outreach for the Master Plan, and it has been a strategic priority of the Mayor and City Council. Despite repeated attempts to quell and address the roots of the issue, homelessness is a multi-faceted challenge layered with complexity. At its heart, homelessness is not a matter the City confronts alone; it must take a renewed approach that pools resources.

Considerable effort, funding, and resources have been placed toward combatting homelessness with the City's Office of Community Services leading direct efforts. This Master Plan builds upon the existing efforts developed by the City and its Strategic Plan to End Homelessness and includes specific recommendations and comprehensive steps that must be taken that are evidence-based and "Housing First."

### OUTCOMES



- The total unsheltered homeless population is reduced 50% by 2035, with functional-zero homelessness by 2050
- The percentage of total residents and household living below the poverty line decreases by 25% by 2030 and those extremely low income households living at 30% of AMI decreases 50% by 2030
- The number and percentage of families, women, youth, LGBTQ, and additional homeless subpopulations that are homeless or living below the poverty line decreases over time
- The total unit count of bridge, transitional, and rapid-rehousing unit types increases to meet or exceed demand

### SEE ALSO

Help Hope Home Plan to end Homelessness

City of Las Vegas Strategic Plan to End Homelessness



Southern Nevada Plan to End Youth Homelessness



- Homeless individual outreach with the provision of triage and basic services. This must be a coordinated entry and assessment process that provides rapid, efficient engagement
- A range of specialized housing types, including bridge and transitional housing, permanent supportive housing and non-subsidized affordable housing.
- Emergency and traditional shelters; construction of the Courtyard Homeless Resource Center, a location north of Downtown Las Vegas within the "Corridor of Hope," is one example where homeless individuals can access direct services and resources. Other shelters and resources within the area are concentrated around this area.
- Regional partners have made strides to address homelessness, but as an emerging practice community, the City must be dedicated to disruptive, innovative change with assistance from public, private, non-profit, and faith-based regional partners, including:
  - Help Hope Home, the HUD backed Continuum of Care for Southern Nevada, the entity that provides services to individuals and families who are experiencing homelessness and promotes a community-wide commitment to end homelessness. The City

EQUITABLE	RESILIENT	HEALTHY	LIVABLE	INNOVATIVE
Providing resources to the most vulnerable members of society is essential, especially for families, youth, the elderly, LGBTQ, veterans and victims of domestic violence.	Bridge, transitional and rapid rehousing can reduce the region's overall chronic homelessness rates, allowing residents to quickly recover.	Treating homelessness requires efforts to ensure individuals are not suffering from acute of chronic physical or mental conditions.	Addressing homelessness head-on will not only improve quality of life for homeless individuals, but also for people that live and work throughout the City.	Development and complete build-out of the Courtyard homeless resources center has been an innovative in homeless services provision.
				

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**KEY ACTIONS**

- Adopt and annually evaluate the City’s Homeless Strategic Plan designed to guarantee that basic needs are met in the community and ensure it is in alignment with Help Hope Home, the Southern Nevada Continuum of Care and other regional efforts
- Employ direct homelessness prevention measures and a “Housing First” strategy to quickly and efficiently serve at-risk or homeless individuals
- Provide intervention services, to serve as a basic temporary resource and provide a pathway out of homelessness
- Develop sustainable funding streams and resources that can be leveraged and applied to combatting homelessness
- Educate the community and homeless individuals and families on homelessness issues while thoughtfully mitigating impacts of homelessness on the community

collaborates with this regional board and with local non-profits to provide housing and supportive services. It also maintains and updates the regional plan

- Stakeholders within the Corridor of Hope that provide direct assistance, emergency shelter, food, showers, clothing and other basic needs
- County resources, including from the Department of Social Services
- The City’s Homeless Advisory Committee and its subcommittees.
- Public Safety, departments, including Law enforcement, including LVMPD, Las Vegas City Marshals, and paramedics from Las Vegas Fire and Rescue
- The Multi-Agency Outreach and Resource Engagement (MORE) Team, a multidisciplinary group including law enforcement support in addition to key social service providers. The MORE focus is to engage rather than enforce laws to help homeless persons connect to services needed to break the cycle of homelessness

- State resources and legislative committees that can provide direct funding and support for housing and emergency services.

**THE CITY SEES FLUCTUATIONS IN THE NUMBER OF INDIVIDUALS EXPERIENCING HOMELESSNESS, BUT WITH A COORDINATED ENTRY AND ASSESSMENT APPROACH, THE CITY CAN BETTER UNDERSTAND WHO’S HOMELESS AND WHY**

Each homeless or at-risk individual has a story with unique circumstances; homeless women, children, youth, seniors, and veterans each present different issues or challenges that may require differed targeted interventions. It is important to recognize that each individual and family has rights and that a concerted effort must be made to improve their quality of life, even for those individuals or families that are service resistant.

Understanding the makeup and characteristics of the homeless population helps describe how homelessness occurs and explains some of the trends. Of the 5,530 people found to be experiencing homelessness during the 2019 Point in Time Count:

- more than 70% were men,
- 54% white, 37% black
- 91% were adults over age 18

In addition, more than 550 were veterans, 340 were families with children, and nearly 1,200 were unaccompanied youth or young adults.

40% of those counted were sheltered, with the majority in emergency shelter. Of the remaining 60%, more than half were found on the street, in vehicles, or in encampments. Another 280 were found living in storm drains and 230 were located at the City’s Courtyard Resource Center. Fortunately, this total represents an overall decrease in the number of individuals counted during a given Census, down from a five year count of 7,500 in 2015.

In 2018, Nevada had the highest rate of unaccompanied homeless youth in the nation. The City has been supportive of youth-based initiatives, including the Southern Nevada Plan to End Youth Homelessness. The City must continue align with this vision ensure that homelessness among

unaccompanied youth is rare, brief, one-time and equitably addressed. For those that do experience homelessness, many report the reason linked to being kicked out of their parent’s house, suffered emotional abuse, experienced family dysfunction, have status as LGBTQ, endured domestic violence, aged out of the foster care system, or were displaced from unstable, crowded, living conditions. The Corridor of Hope currently has limited youth services and data representing the experiences of homeless youth, but reports indicate it is a growing problem.

Families also endure homelessness, and the City remains committed to keeping homeless families together, no matter how they are structured. During difficult situations like homelessness, families are separated while experiencing homelessness with members split between men’s only, women’s only, children’s only shelters. The City will strive to ensure families remain together.

The City has seen dramatic decreases in homeless veterans. This was the result of previous national and local efforts to specifically target veteran homelessness to get this group to “functional zero.” The lessons learned for decreasing veteran homeless rates must also be applied to other vulnerable subsets of the homeless population.

Case management efforts are currently in place, however, to the extent that the assessment system can be refined, a uniform and centralized coordinated entry and assessment process must be delivered that provides rapid, efficient engagement with individuals. While different service providers may be involved or play roles in the process, the case management system must include a shared master list



of all individuals, regular conferences to collectively review and plan interventions, and match available resources with demand.

**THE ROOT OF MOST HOMELESSNESS STEMS FROM LOSS OF EMPLOYMENT AND INABILITY TO AFFORD BASIC COST OF LIVING EXPENSES**

Overall, the reported causes for homelessness vary by subpopulation; however, one of the most important common themes is the loss of a job or source of income. Compounded by a secondary factor, such as substance abuse, loss of familial support, or physical or mental health issue can be a determinant that pushes an individual into homelessness.

**REPORTED CAUSES OF HOMELESSNESS**

**2019 HELP-HOPE-HOME SURVEY RESPONSES**

- Top reported factors causing homelessness:
  - Lost job and unemployment
  - Alcohol or drug abuse
  - Mental health issues
- Top reported housing stability factors
  - Lack of employment or income
  - Inability to afford rent
  - Inability to afford up-front “move in” costs
  - Housing not available

- Top causes of homelessness for families with children
  - Lost job and unemployment
  - Divorce or separation
  - Landlord stops renting (loss of home)
- Top causes of homelessness for youth – Nevada has highest incidence rate of youth homelessness in the nation (1/2 black, 1/3 white); 90% male, 16% LGBTQ
  - Kicked out of house by family (or friends)
  - Lost a job
  - Family / domestic violence

**A DAY IN THE LIFE**

**BRIGHTER PROSPECTS**

*Kai Grayson, Homeless Services Technician*

When helping the homeless, she encounters big obstacles, starting with the many restrictions placed on who may qualify for housing and health benefits. If someone has multiple criminal convictions, for example, she notes, certain agencies will disqualify them outright. For others, a bad rental or credit history can be grounds for disqualification. Some people don't make enough money, others too much. Kai believes that loosening restrictions would do a great deal to get more people into stable housing situations more quickly. For that matter, strong financial education programs could help may from becoming homeless in the first place.

Kai would love to see employers use non-traditional means of assessing candidates with spottier pasts. Wouldn't it be great if, in certain situations, employers required only a year's worth of previous work experience? Or if one's job prospects could be based on commitment to a recent training program, or on work ethic more than job or salary history?

Kai envisions a city that feels like it's focused on its residents as much as its tourists. A proposed monorail system represents a good start. Additional transportation systems would help even further. So, too, would more grocery stores, healthier food choices and nutritional education that could help to lower healthcare costs. They're all part of a positive change that, to Kai, feels well within reach.

A variety of barriers face the homeless population, whether chronically homeless, or those that are at-risk.

- For individuals that have lost employment, regaining employment may require an address, the ability to be reached through phone or email, an individual record of stable work history, transportation access to a job, and having no criminal convictions.
- Access to basic health care, including for common medical conditions and prescription drugs, as well as more complex issues, including mental and behavioral health, domestic abuse, trauma assistance, and substance abuse treatment may be another barrier for people experiencing homelessness. Two-thirds of respondents reported at least one disability, while

about 40% have or had a physical disability and 20% needing medical care but are unable to acquire it.

- Special populations, especially women, victims of domestic violence, homeless youth, veterans, LGBTQ, and individuals with HIV/AIDS all confront additional barriers requiring specialized interventions, counseling, or treatment
- Personal safety is a major issue confronted by the homeless population. Not only must individuals confront risks for higher rates of property and violent crime, they may also be vulnerable to risks identified under the Hazard goal of this plan, specifically extreme heat events and, for those keeping shelter in flood control facilities, flash flooding.
- The lack of consistent information for the homeless individuals can also be a challenge in making them aware of the availability of services. To address this, the City and other service providers developed and deployed Multi-agency Outreach Resources Engagement (MORE), and HELP of Southern Nevada's Mobile Crisis Intervention teams, on-street outreach that communicates services, gathers information, and connects individuals to emergency shelters, housing programs and other services.

**EARLY AND DIRECT PREVENTION AND DIVERSION MEASURES ARE THE FIRST MEANS OF ENSURING INDIVIDUALS DON'T BECOME HOMELESSNESS**

Many individuals at risk of homelessness, or are currently experiencing it often are not directly aware of the resources and supportive services available to prevent it. However, it is an important early step that help is given or obtained, otherwise, the overall long term costs of services will increase. Diversion strategies are temporary measures that assists individuals identify alternative arrangements for housing or employment through committed diversion, conversations with individuals, and creative and innovative approaches that are uniquely tailored to each individual. Ultimately, the City determines a better understanding of who may be at the edge of becoming homeless and why.

Therefore, the City and community stakeholders will continue to make concerted efforts to keep the cost of housing affordable and ensure that existing and future "prevention first" efforts are made available and communicated to



individuals in an accessible manner for individuals to obtain help. Several basic funded and targeted strategies, some of which are described by other goals within this Chapter of the plan, can help prevent housing loss; through the developed and enhanced case management system, the City and its stakeholders must develop and enhance individual prevention with a focus on:

- **Job placement and income** – Because loss of employment is the leading cause of homelessness, employment and re-establishment of income is the most important means of paying for a mortgage or rent. Job history and skill sets must be identified and determined. However, this must be offset through barrier mitigation, especially with respect to work history, the expense or lack of transportation, the need for proper clothing, lack of communication, or criminal convictions. In addition, the City and its stakeholders must work directly with DETR, private employers, and local businesses to hire individuals, and increase the number of those who are willing to become "second chance employers."
- **Workforce Development** - While timing may be an important factor for individuals with situations that are dire, where possible and most applicable, placement in workforce development programs, such as through Workforce Connections and other programs can enable an individual to develop new skills, provided that they translate into a job that provides adequate income.
- **Basic Temporary Financial Support** - As a last resort or supplemental means, direct financial support is proven to avoid, defer, or delay housing loss. Increasing the accessibility to federal and state public assistance and benefits programs can reduce individual household budgetary stress for other cost of living expenses, most directly through:

- Short or medium term housing support, including subsidizedm bridge, transitional, or rapid-rehousing
- Supplemental Security Income and Social Security Disability Insurance
- SNAP, TANF, and Medicaid
- RTC Transit passes for basic transportation needs

Through income replacement and enhancement, housing stability can be attained and homelessness prevented. These efforts must often be delivered quickly and efficiently. To the extent possible, as an individual or family is evaluated, applying preventative assistance rapidly will help avoid further disruptions to their life.

**FOR THOSE EXPERIENCING HOMELESSNESS, THE CITY AND OTHER CORRIDOR OF HOPE STAKEHOLDERS AND SERVICE PROVIDERS MUST CONTINUE TO PLAY AN INTERVENTION ROLE, SERVE AS A BASIC TEMPORARY RESOURCE, AND PROVIDE A PATHWAY OUT OF HOMELESSNESS**

Prevention and diversion measures may not always be successful for some individuals and circumstances. For other cases, transience and other untracked or new circumstances may result; whatever these cases may be, the provision of a short-term shelter option represents the City's most direct effort to intervene in homelessness in which the City and service have been assisting in getting homeless off the streets and into housing.

The Courtyard Homeless Resources Center is an innovative one-stop shop with access to medical, housing and employment services through a variety partners. As an emergency resource center, it has low-barrier, 24-hour access with few or no access requirements. Its services have helped connect individuals experiencing homelessness with intervention services including:

- Availability for clean, sanitary temporary shelter, including bathroom and shower access
- Laundry facilities
- A clinic with health services that provides basic medical care, screenings and service, including options to intervene and treat substance abuse and mental health
- Short-term storage of small items

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- Housing, legal, income and benefit assistance
- Connecting families with child care.
- Employment information and workforce development opportunities.

Modeled after other successfully implemented short-term shelters, the initial phase of the Courtyard opened in 2017 with several expansions anticipated to be completed in 2021. Upon completion, the Courtyard will contain an intake center, new buildings with classrooms, shower and restroom facilities, and case management areas for service providers to assist homeless individuals. The Courtyard also will feature a kitchen, mailboxes and a pet kennel. Other emergency shelters are also located within the Corridor of Hope. Approximately 2,000 beds are available for men, women, and families within this area, some of which may have minimum conditions, such as sobriety. Other non-profit and faith-based service agencies also provide a similar array of supportive services, some of which may be specialized or adapted to a specific mission, need, or focus.

The Courtyard has helped fill an existing service gap for homeless individuals around Downtown Las Vegas. By offering a place for consolidated service delivery, it serves as a “safe zone” where homeless individuals and families can seek respite during the day, and rely on a safe, location to spend the night. While these improvements have been incremental and may be too soon to tell their efficacy, the general framework for providing basic temporary resources, and provide a pathway out of homelessness must be to:

- Increase access to basic need, food, clothing, and shelter, including the overall utilization of the Courtyard Homeless Resource Center

- Continue providing and increase basic medical and mental health care services, as well create, develop, and expand a medical respite and recuperation program
- Coordinate the daytime use of overnight emergency shelters, monitor emergency shelter capacity and look for any emerging trends on the rate of homelessness, especially during periods of extreme heat or cold.
- Over time, reduce dependency on temporary services by decreasing the amount and frequency of users of these services.

The chronically homeless, individuals that have experienced homelessness for at least a year, repeatedly, or have a disabling condition, may present an additional dimension to the overall challenge homelessness. Recent counts have indicated the number of chronically homeless individuals has been increasing over time, with more than 600 chronically homeless on City streets and a quarter living unsheltered. More than half of the chronically homeless have some form of mental illness, while forty percent suffer from a physical or medical condition. Five percent are found to suffer substance abuse.

While the City’s MORE team has provided effective intervention efforts, but a share of the total population may not be willing or able to undergo any form of rehabilitation or desire assistance. However, it is important for the City and community stakeholders and service providers to make reasonable attempts are those individuals. For the chronically homeless and individuals that present more complex problems, treat and address each unique case with measured approaches.

**FOR THOSE THAT HAVE LOST A HOME, OR ARE AT RISK OF LOSING A HOME, THE CITY MUST EMPLOY A “HOUSING FIRST” APPROACH TO QUICKLY AND EFFICIENTLY RE-HOUSE INDIVIDUALS**

“Housing First” is a strategy to be used for those that have been assessed to be ready for a form of housing immediately, often with few or no preconditions or barriers. Using a robust case management system, Housing First prioritizes individuals and families with the greatest needs and vulnerabilities, and does to in a way that engages the owners of affordable housing. Unfortunately, there is an urgent need for these housing types, especially because of its short supply in Southern Nevada, and because of the number of “extremely low income” households below 30% of AMI.

There are several types of this special subset of affordable housing specifically dedicated and aligned for these populations, with only xxx of these housing types existing within the City from a handful of landlords and service providers:

- **Bridge housing:** provides immediate safe, temporary housing for those awaiting placement, typically no longer than 90 days.
- **Transitional housing:** is temporary supportive housing that bridges the gap from homelessness to permanent housing by offering structure, supervision, support for those with substance abuse, addictions or and mental health issues, life skills, education, job training, and/or workforce development. An important component is to ensure self-sufficiency is maintained while appropriate support and oversight is provided
- **Rapid re-housing:** is a form of housing designed to help individuals and families exit homelessness and return to permanent housing in the form of short or medium term rental assistance to achieve and maintain housing stability
- **Permanent Supportive housing:** housing that combines independent living and non-time-limited affordable housing assistance with supportive services. This represents the largest type used to re-house individuals in Las Vegas.

Because of the high demand for permanent supportive housing and rapid re-housing coupled with low supply, a dynamic shortage of these housing types exists. Coupled with the overall lack of affordable and low-income housing in Las Vegas, this remains one of the top challenges in finding places for people to live. While the overall quantity of these types are needed to assist individuals acclimate and transition, these housing types must be dispersed throughout the community at locations that have access to the On Board High Capacity Transit System, substantially subsidized, but close enough for an individual or family to easily access employment, basic services and assistance, and medical care, as needed. Where possible, these dedicated affordable units must be integrated with other dwelling units to provide a mix of incomes.

The City must also continue to work on regional efforts that preserve existing affordable housing inventory and ensure new developments include affordable housing units, as described in both the Housing goal and the Land Use Chapter of this plan. As authorized by the City Charter, it must also make direct investments in these types of

affordable housing, contract for the provision of housing, and as necessary, integrate dispersed affordable housing into new developments through zoning requirements, and request and make specific legislative and policy changes to enable Housing First development intended for homeless individuals and families.

**THE CITY MUST WORK TO EDUCATE THE COMMUNITY ON HOMELESSNESS ISSUES WHILE ALSO MITIGATING THE NEGATIVE EFFECT OF HOMELESSNESS ON THE BUILT ENVIRONMENT**

While homelessness can be both visible and invisible, the visible effects are what are most noticed. The MORE Team has noted that over time, a wider spread of homelessness and more calls for service to areas outside of the urban core, including suburban planning areas. Unfortunately, the effects, no matter there location have also had the effect of creating blighting conditions and safety concerns. Nowhere is this more pronounced than Downtown Las Vegas and throughout the Corridor of Hope, where the concentrating services, which are predictable and accessible by the population, has also meant a disproportionate share of homelessness conditions, services, and costs fall to the City.

These public concerns are those that cannot simply be ignored, as the ill effects of homelessness, whether loitering, panhandling, or encampments, can infringe

**THE MORE TEAM**

Calls for service involving the homeless often go to law enforcement for services. However, unless an actual emergency exists or a serious crime has been committed, law enforcement should not be utilized. The MORE Team is an alternative structure established so that homeless calls for service can be accepted, contact made, and transport of individuals offered. Attempts to avoid and reduce incarceration – and instead rely upon the dedicated services for the homeless, provided at the Courtyard and by other Corridor of Hope service providers – must be a best practice communicated to the public. While the MORE team does incorporate public safety officers, this unit frees up resources so LVMPD, Fire and Rescue, paramedics, or other first responders don’t need to.

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upon the rights of others, create nuisances, and lead to additional costs borne on the City. The City's Department of Operations and Maintenance have had to apply additional resources within Downtown Las Vegas and the Corridor of Hope to ensure waste was cleaned up and unsanitary and unhealthy conditions within City streets are properly removed. Should no action be taken by the City, problem areas could be exacerbated, leading to additional blighting conditions, increased waste from food, and the creation of spillover effects into surrounding neighborhoods.

Ultimately, proactive work to address these issues will help keep places clean and safe and positively influence property values. While some encampment clearance and right of way maintenance may be warranted and necessary, it must be done in a responsible, well-coordinated manner, with the MORE Team and other Corridor of Hope stakeholders and done so individuals can access services at the Courtyard Homeless Resources center and other service providers. It is necessary to carefully balance a reasonable concentration of services and affordable housing in Downtown Las Vegas, but at the same time, the City must continue to investigate dispersing resources and affordable housing to other areas of potential need, without creating ill effects in new areas. The City must in turn continue to work with the County, North Las Vegas, and Henderson on their respective solutions, which must incorporate an effort at geographic dispersal, especially so the City doesn't become a sole receiving source for all other regional homeless issues.

Finally, a key to ending homelessness in the City must include a component that educates and engages the community that provides general information on how the public can provide direct help. A structured program can help place donations, volunteers, and funding where they are needed most. The City has previously provided numerous features through the Office of Community Services and Communications. In the future, it must also implement a recognized and unified initiative to raise awareness and build support for people experiencing homelessness, so the unique problems facing these individuals and families are better understood.

**THE CITY LACKS RESOURCES TO ADDRESS HOMELESSNESS ALONE**

Because homelessness is widely recognized as a problem that must be addressed and the need for resources so great, fundraising, donations, and charitable contributions are a typical stream and source of revenue for basic service provision. These sources must continue to be developed

and emphasized, especially amongst philanthropic giving. However, because giving has its limits, may be cyclical, and may have restrictions on use, other resources and funding must be relied upon and leveraged. Efforts to implement additional elements of are constrained by financial resources. Housing First strategies require significant capital and operational investments and current resources have not been sufficient to meet the all demanded needs.

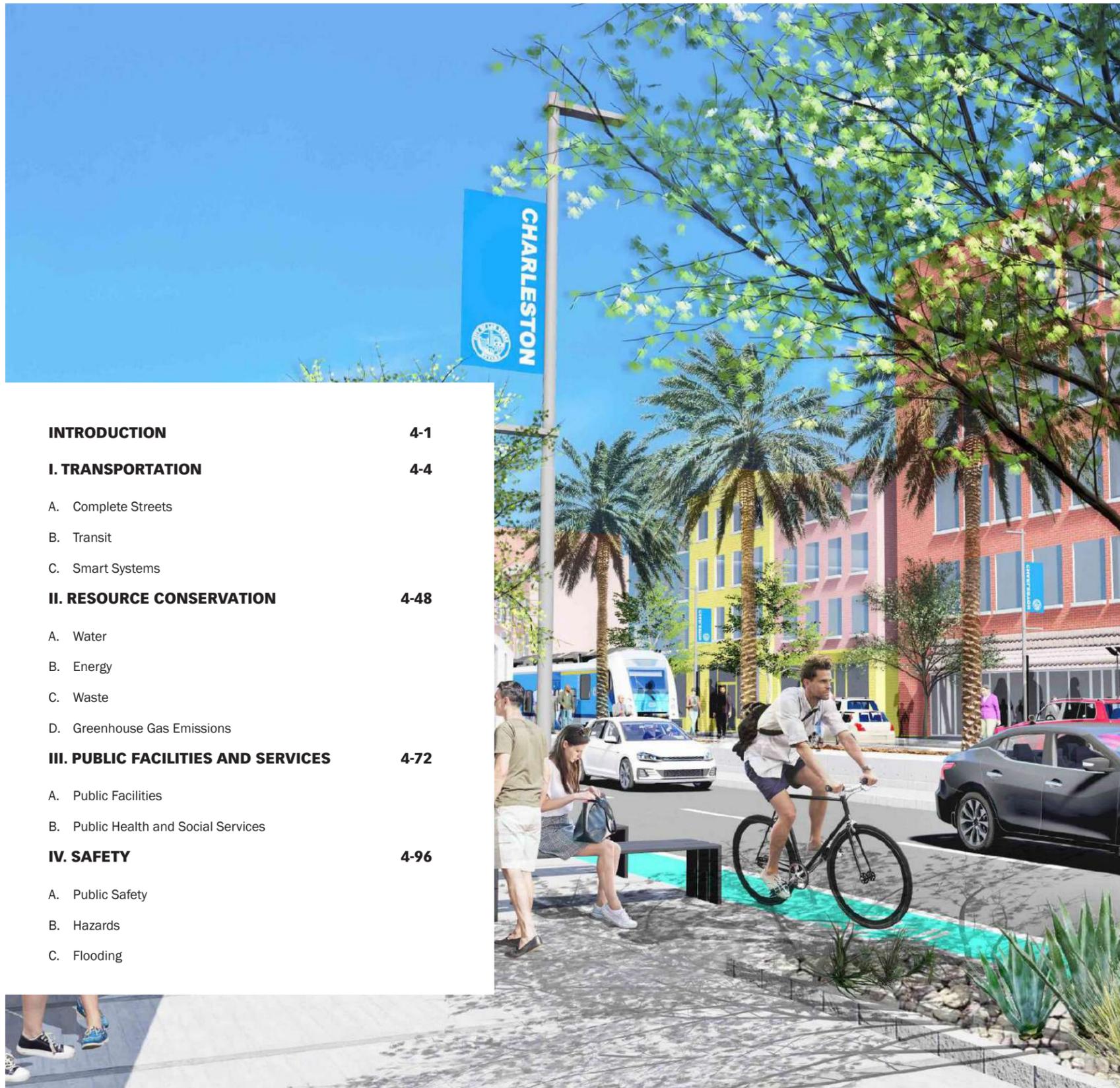
Like many municipalities, the City has worked to expand homelessness programs to address growing demands for services. Over time, the City has increased dedicated resources to increase the capacity of its Office of Community Services to address homelessness head on. The Courtyard project itself represents a more than \$20 million investment in new infrastructure and operating costs. However, it is clear that current Federal, state, and local funding sources are inadequate.

Although several funding streams contribute to homeless assistance programs in the city, more are required beyond the City's General Fund Budget and Capital Improvement Budget. Finding sources of sustainable funding will continue to be a major barrier. The city will expand on its current funding resources and collaborate with stakeholders to leverage resources and sources of funding by:

- Applying for state, pass-through, and Federal funding and grants from HUD, VA, Community Development Block Grant, VA, and other supportive grant funding sources that can be leveraged with privately funded monies, and city resources. This should be done in a coordinated manner or jointly through the Help Hope Home as the region's Continuum of Care, but where programs include local government involvement, the City can play a role in obtaining these funds
- Request from the Legislature general statutory laws or new enabling power to commit a dedicated source of funds to address homelessness. Because many funding sources may have constraints, flexibility is necessary to allow funding sources to be transferred, prioritized, and better used to meet needs. The ability to apply CDBG, RDA funding, and toward a newly created "End Homelessness" fund that could accomplish those strategies would provided latitude toward aligning money were it is needed and best spent.
- Pursue alternative or initiate new innovative funding sources to support the development of affordable/homeless housing. The Mayor's Fund for LAS Vegas LIFE is an example of an effort to apply philanthropic funding toward dedicated projects or issues, such as the Courtyard.

**IMPLEMENTATION STRATEGIES**

- Adopt and annually evaluate the City's Homeless Strategic Plan designed to guarantee that basic needs are met in the community and ensure it is in alignment with Help Hope Home, the Southern Nevada Continuum of Care and other regional efforts
  - Formally lead, centralize, and brand the City's coordinated response to homelessness
  - Monitor and evaluate the quality, comprehensiveness, and effectiveness of homeless services
  - Empower the Homelessness Advisory Committee and subcommittee as a working group to provide ongoing consultation with City departments and agencies responsible for providing services
  - Equip the MORE team and human services personnel with additional resources, skills, and training to effectively improve the well-being of vulnerable populations and communicate resources to the homeless population in coordination with non-governmental service providers
  - Deploy a coordinated entry and assessment program to better understand who's homeless and why
  - Implement case management to improve client support services and management
  - Share data and meet regularly with service providers
- Employ direct homelessness prevention measures and a "Housing First" strategy to quickly and efficiently serve at-risk or homeless individuals
  - Build, construct, contract for, incentivize or require bridge, transitional and rapid re-housing units
  - Implement the recommended affordable housing strategies enumerated within the Housing goal and the Land Use Chapter of this plan
  - Disperse new affordable housing units in or near new TOD place types to provide access to employment, basic services and assistance, and medical care,
  - Preserve existing affordable housing inventory and ensure no net loss of affordable or very affordable subsidized units
- Provide intervention services, to serve as a basic temporary resource and provide a pathway out of homelessness
  - Continue to monitor and coordinate daytime and overnight use of the Courtyard and other regional emergency shelters
  - Complete construction and build out of the Courtyard Homeless Resources Center
  - Provide dedicated temporary homeless services, including Job and income replacement programs, connections to workforce development, and connections to basic temporary financial support
  - Increase the number of volunteers and donation of resources of basic needs
  - Hire and provide basic medical and mental health care services,
  - Develop and expand a medical respite and recuperation program
- Develop sustainable funding streams and resources that can be leveraged and applied to combatting homelessness
  - Dedicate a grant writer or coordinator to apply for state, pass-through, and Federal funding and grants coordinated manner or jointly through the the Continuum of Care
  - As part of a larger Legislative package, request general laws or new enabling powers within the City Charter governing homelessness, with the ability to dedicate funding streams and the provision of additional dedicated incentives and tax credits for affordable housing
  - Create a flexible "End Homelessness" fund
  - Pursue alternative or initiate new innovative funding sources
- Educate the community and homeless individuals and families on homelessness issues while thoughtfully mitigating impacts of homelessness on the community
  - Establish and support programming and events that inform residents of available human services and connect vulnerable community members to available programs or services
  - Review and amend LVMC and city policies that directly affect the homeless population
  - Ensure waste, unsanitary, and unhealthy conditions within City streets and City property are properly abated
  - When warranted, clear encampments and remove unsafe conditions using a transparent, well-coordinated approach using the MORE Team and other Corridor of Hope stakeholders



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# 04. SYSTEMS & SERVICES

## INTRODUCTION

Physical infrastructure and public service systems are essential for the sustainability and resilience of Las Vegas. Considering the increase in population that is projected to come into Las Vegas by 2050, it is important to ensure that the physical and social networks that act as the foundation of the built environment are as flexible and innovative as possible. It is important to Las Vegas residents that infrastructure not only provide consistent and reliable services to citizens, but that it also be responsive to changing conditions like extreme weather events. As such, this plan recommends that the City move towards more localized, flexible infrastructure development.

Las Vegas has a good start, but more intentionally connecting the City's smart aspirations with conservation goals could help to better decouple development from resource-intensive growth, and also create jobs.

Considering renewable energy options in Las Vegas for new construction will be important, but so is addressing how current buildings and places consume energy.

Reconceptualizing the very definition of what constitutes infrastructure will also help position Las Vegas as a leader in resilience. For instance, streets can (and will) be ideal intersections of where mobility and ecological integration happens. Las Vegas must diversify its mobility offerings for 2050. At the same time, Las Vegas residents want to be able to make smaller, easier trips across their neighborhoods.

Not only must Las Vegas focus on resource conservation for 2050, it must focus on providing superior public facilities and services to make it a healthy, livable, and safe city. Mitigating natural hazards that impact the entire Southern Nevada region with high quality public safety and health services by leveraging existing institutions will elevate Las Vegas in the future.

# GOALS

## I. TRANSPORTATION

- A. Connect and enhance accessible bike and pedestrian facilities as part of a safe, efficient complete street and road network that moves people and goods.
- B. Make seamless transit options more convenient and better integrated with vibrant neighborhood and employment centers, better connecting people to their destinations.
- C. Strengthen smart transportation systems and infrastructure to foster economic development efforts.

## II. RESOURCE CONSERVATION

- A. Support efficient water management, reduce water consumption, and enact stronger water conservation strategies to minimize consumptive use
- B. Prioritize the use of renewable energy sources and improve energy efficiency.
- C. Reduce waste consumption and target net-zero municipal solid waste produced in the community.
- D. Mitigate and reduce municipal and community greenhouse gas emissions.

## III. PUBLIC FACILITIES AND SERVICES

- A. Provide equitable access to facilities and services that help meet residents' social needs, maximize their potential for development and enhance community wellbeing.
- B. Ensure healthy outcomes for all members of the community.

## IV. SAFETY

- A. Provide high quality emergency services, reduce crime and create safe, friendly communities that elevate social equity.
- B. Strengthen resilience to climate change risks, natural and man-made hazards, and extreme events.
- C. Minimize flooding risks to prevent damage to property and infrastructure

### RELATION TO SOUTHERN NEVADA STRONG INCREASE TRANSPORTATION CHOICE

Goals focus on developing a world-class transportation system and coordinating future transit investments with urban development

1. Developing a modern transit system that is integrated with vibrant neighborhood and employment centers, better connecting people to their destinations.
2. Connecting and enhancing bike and pedestrian facilities throughout the region.
3. Developing a safe, efficient road network that supports all transportation modes.

# SUMMARY OF STRATEGIES BY GUIDING PRINCIPLE



## EQUITABLE

- Emphasize seamless multi-modal transportation choice
- Prioritize capital improvements across planning areas
- Create Internet access for all
- Emphasize access/proximity to work, social services and transportation options
- Prioritize fair pricing of utilities and infrastructure as portion of income
- Train for smart jobs
- Integrate recycling for low-income areas
- Keep energy affordable even during growth



## RESILIENT

- Reduce emissions
- Develop emergency evacuation plans
- Diversify energy sources
- Prioritize infrastructure maintenance
- Plan for future transportation technology
- Prioritize flood management
- Improve emergency services
- Create smart grids to ensure flexible and responsive infrastructure
- Reduce stress on landfills
- Integrate building control technologies



## HEALTHY

- Incentivize walking and biking
- Utilize preventative Public Safety
- Prioritize mental health and wellness
- Improve air quality
- Develop reliable power, heating, and transport
- Empower smart decision-making
- Utilize electric vehicles reduce emissions
- Keep the desert deserted
- Transition to a low-carbon future
- Monitor and track energy and waste programs



## LIVEABLE

- Provide seamless transportation choices
- Increase parking strategies
- Strengthen connections to cultural destinations
- Provide public WiFi in the downtown/ public areas
- Ensure affordable utilities with competitive rates, when possible
- Track and monitor consumption choices
- Increase access
- Ensure reliable utilities for economic development
- Improve recycling and reduce waste stress



## INNOVATIVE

- Emphasize innovation and deployment of advanced technologies
- Continue to develop connected, autonomous vehicle infrastructure and unmanned aerial vehicles
- Improve Internet access speeds and capacity for business and industry
- Increase partnerships with private sector tech and transportation
- Create new innovation centers and districts
- Convert ethane to biogas
- Reuse waste-water to reduce water stress
- Embrace ecodistricts

# TRANSPORTATION



## GOALS

- A. Connect and enhance accessible bike and pedestrian facilities as part of a safe, efficient complete street and highway network that moves people and goods.
- B. Make transit options more convenient and better integrated with vibrant neighborhood and employment centers, better connecting people to their destinations.
- C. Strengthen smart transportation systems and infrastructure to foster economic development efforts.

## CONNECT AND ENHANCE ACCESSIBLE BIKE AND PEDESTRIAN FACILITIES AS PART OF A SAFE, EFFICIENT COMPLETE STREET AND HIGHWAY NETWORK THAT MOVES PEOPLE AND GOODS

Over the coming decades, transportation will continue to be a driving force for how Las Vegas grows as a region. Transportation impacts land use decisions, community air quality, and has significant implications for the environment as it accounts for approximately thirty percent of the total U.S. emissions. This includes the movements of goods through and within the city, residents to employment, education, health care, and daily needs, and visitors to resorts and attractions.

Southern Nevada's transportation network shifted away from being a rail stop to the automobile throughout the 20th Century. With nationwide construction of the US Highway System and later the Interstate Highway System, the Interstate 15 corridor helped fuel the City's growth and cemented its linkage to Southern California and to points further north and east. From Southern California, interstates and cross-country rail transportation routes connect ports on the Pacific Coast, including the intermodal Port of Los Angeles and Port of Long Beach with the interior of the country. Southern Nevada is approximately 300 miles from the ports, which receive freight shipped from across the Pacific Rim. Because Southern Nevada lacks major agriculture and heavy industry, it relies on product importation; 90% of all goods are imported globally to the region's residents and visitors. As such, disruptions to I-15, either through traffic congestion, collisions, or natural disasters, could interrupt or slow the supply chain.

The City lacks diversified transportation infrastructure that realizes all ages and abilities because of a century of policies and growth patterns focused on expanding outwards. More than 90% of commuters drive to work alone, while less than 5% bike, walk, or take public transportation. With three work shifts in the resort industry, some commutes occur during off-peak hours, but Southern Nevada retains a heavy morning and afternoon peak rush hour. Today many areas of the Valley experience traffic congestion, which in turn bears its own transportation impacts. A large portion of Las Vegas residents experience long commutes and the amount of time spent driving continues to rise. Public transit options are at the will of traffic congestion, and do

not always provide enhanced travel times. Growing traffic is linked with a higher number of traffic incidents, which account for recurring traffic delays. Freight movement is burdened by congestion. The City is improving pedestrian and bicycle access, comfort, and safety on roadways that were originally built with car-centric features, but there are still many roadways lacking this balance. The 42 million tourists that visited Las Vegas rely heavily on our transportation system, with 6 out of 10 visitors arriving by car, bus, or other form of ground transportation.

### LAYERED COMPLETE STREETS NETWORK

*The costs of traffic congestion, including wasted time, fuel, and emissions will continue to take a toll on the community unless a layered multi-modal, complete street network is developed. Therefore, complete streets within the City of Las Vegas are streets that safely and comfortably accommodate all users, regardless of mode, age, or ability. This includes pedestrians, bicyclists, mobility devices, public transportation, carpoolers, motorcyclists, single-occupant vehicles, trucks, public safety officials, and other users of the City's streets and highways.*

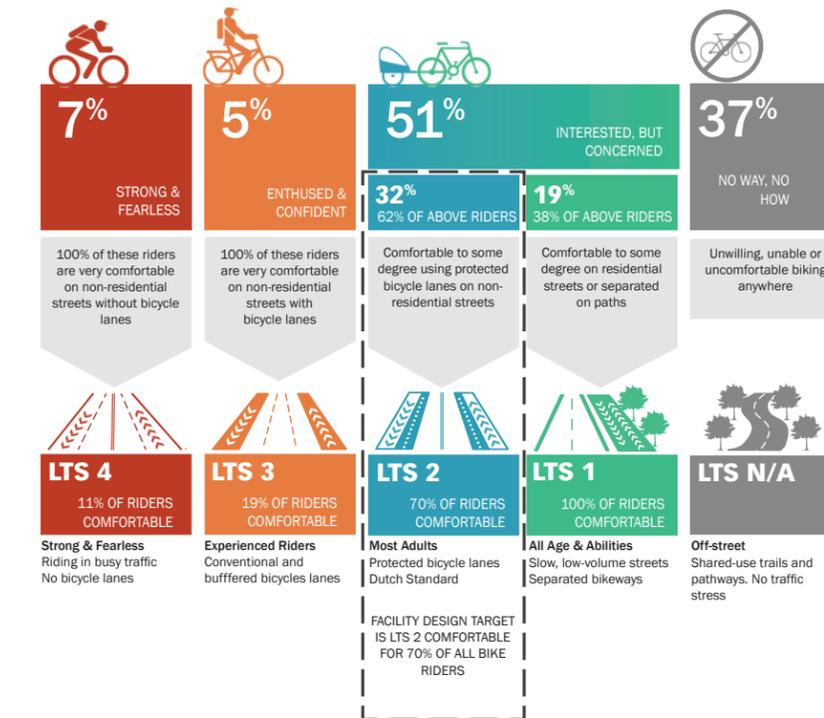
*The layered complete street network will be incorporated into the City's Master Plan for Streets and Highways. With respect to design, all such streets shall be designed pursuant to Titles 11 and 19 of the Las Vegas Municipal Code and will take into account PROWAG and ADA standards to equitably accommodate disabled persons and non-motorized users of streets. At a minimum, complete streets shall include sidewalks with amenity zones, transit stops with shelters and other passenger amenities, and bicycle facilities.*

**SEE ALSO**

- RTC Regional Transportation Plan (RTP)
- CLV Mobility Master Plan
- Master Plan of Streets and Highways Chapter 2: Park Connectivity
- Regional Bicycle and Pedestrian Plan

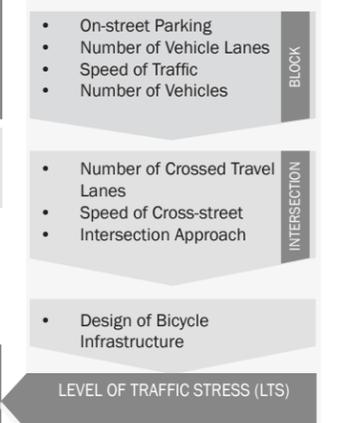
### REALIZING ALL AGES & ABILITIES

Linking types of bicycle riders to level of traffic stress and facility design



### BIKE RIDER TYPES AND TRAFFIC STRESS

This diagram shows the relationship between the types of bicycle riders and how their stress tolerance relates to Level of Traffic Stress (LTS) and the types of bicycle infrastructure that feels comfortable for those riders.



Source: (2016) Dill J. and McNeil N., *Revisiting the Four Types of Cyclists: Findings from a National Survey*, Journal of the Transportation Research Board.

### OUTCOMES

- Beginning in 2025, vehicle miles traveled (VMT) within the City is reduced 0.5% annually.
- By 2050, the mode split for Drive Alone is 40%, 20% for transit, and 5% for Walking and Biking.
- By 2050, the citywide Jobs-Housing balance index is 1 - 1.25.
- By 2050, the number of pedestrian, bicyclist, and vehicular fatalities caused by road crashes is zero.
- By 2050, 100% of identified sidewalks are PROWAG compliant, 70% of identified crosswalks are marked and if on street parking is present, have curb extensions.
- Maintain a minimum "Silver" level Bicycle Friendly Community designation from the League of American Bicyclists.

### KEY ACTIONS

- To reduce VMT and diversify the City's modal split, adopt the "Layered Complete Street Network" as part of the Master Plan for Streets and Highways, and construct the recommended improvements essential for traffic management, safety, and regional economic development.
- Achieve a jobs-housing balance through the adoption of TOD place types
- Infrastructure must be well maintained by properly allocating funding and resources
- Further reduce VMT, congestion, wasted time, and emissions by working with regional partners to embrace transit, TDM, TSM, carpooling, ridesharing, and other transportation solutions.

To facilitate the Layered Complete Street Network as part of its Master Plan for Streets and Highways, the city must work closely with the following entities:

- The Nevada Department of Transportation (NDOT) is responsible for planning, constructing and maintaining interstate and state highways and bridges. Among NDOT's important functions is obtaining Federal funding from the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) for significant transportation capital improvements through the Statewide Transportation Improvement Program (STIP). The STIP is prepared in cooperation with the state's four Metropolitan Planning Organizations (MPO) and includes the projects identified in their respective Transportation Improvement Programs (TIP).
- The Regional Transportation Commission of Southern Nevada (RTC) serves as the region's MPO and oversees public transportation, traffic management, road design, and funding. In this capacity, RTC is uniquely responsible for the administration of:
  - The Regional Transportation Plan (RTP), in which this Master Plan is intended to align with.
  - Streets and Highways funding, engineering, and capital project construction.
  - The provision of public transportation and paratransit services,
  - Transportation System Management (TSM) and Intelligent Transportation Systems (ITS), overseen by RTC's Freeway and Arterial System of Transportation (FAST). FAST monitors and manages

traffic on Southern Nevada's freeways and arterials on behalf of Clark County and the cities.

- Transportation Demand Management (TDM) Programs and incentives through "Club Ride."
- The Union Pacific Railroad (UPRR) owns and operates the sole Class I freight rail lines directly through the City of Las Vegas. Passenger rail service has yet to resume service into Las Vegas since it was discontinued in 1997.
- A variety of intracity bus services and motorcoaches operate to destinations across the region; as a low cost alternative, these services provide an important service, especially to those who may have no other means of travel available.
- The Clark County Department of Aviation operates McCarran International Airport and four other general aviation airports within Southern Nevada, including North Las Vegas Airport adjacent to the Rancho planning area. McCarran connects 150 national and international direct destinations and served 50 million passengers in 2019, making it consistently among the top ten busiest airports in the country.

Other state and local agencies are responsible for regulating transportation and ensuring public safety. They include:

- The Nevada Department of Motor Vehicles (DMV) which licenses drivers and registers vehicles
- A variety of police and traffic enforcement entities that are responsible for motorist, pedestrian and bicyclist safety, including the Nevada Highway Patrol (NHP), Las



Vegas Metropolitan Police Department (LVMPD), and the Las Vegas City Marshals. Each enforce and state and local traffic laws codified through NRS 484 and Las Vegas Municipal Code Title 11 (Vehicles and Traffic).

- The Nevada Transportation Authority administers and enforces Federal and state laws on passengers, motor carriers, autonomous vehicles, freight transportation, and transportation network companies (TNC's). In Clark County, the Nevada Taxicab Authority licenses and regulates taxis.

Finally, City of Las Vegas departments also oversee different aspects of transportation:

- The Public Works Department oversees capital project and infrastructure planning, construction management, and transportation engineering and operations services. The City regulates Streets and Highways pursuant to LVMC Title 11 (Vehicles and Traffic) and Title 13 (Streets, Sidewalks, and Public Places), including a wide range of local laws like speed limits, crosswalks, speed control devices, bicycles and other mobility devices, and the City's Master Plan of Streets and Highways.
- The Department of Operations and Maintenance is responsible for the maintenance of more than 1,300 miles of city roadways, sidewalks, paths, and trails. This includes the management of pavement, street rehabilitations, street sweeping, streetlights, and traffic signals.
- The Economic and Urban Development Department's Parking Services Division is charged with operating City-owned parking facilities, parking enforcement, and permitting for the City, with direct oversight of parking management within Downtown Las Vegas.
- The Planning Department has established complete street cross-sections, right of way design, and parking standards enacted throughout Las Vegas Municipal Code Title 19. The procedure by which street names and numbered addresses are assigned has been previously

**A DAY IN THE LIFE**

**PROVIDING MORE FOR PEDESTRIANS**

*Abigail Irving*

A native of LA, Abigail moved to Las Vegas in 2012 when she lost her vision. While she made the move for economic reasons, she hasn't regretted it. She loves the retirement complex where she lives and makes good use of the city's free, door-to-door paratransit services. The city's Blind Center of Nevada has also proven to be an excellent social and cultural hub for her. And at the time of her move the city provided mobility trainers to come to her home and work with her.

A good thing they did: "The city is extremely pedestrian-unfriendly," she says. Often, Abigail can feel the traffic whizzing by right next to her. She encounters telephone poles and even bus stops situated in the middle of already-narrow sidewalks. The sense of a lack of safety prevents her from feeling comfortable enough to use public transit.

Personally, Abigail doesn't feel challenged to live a healthy life in Las Vegas. But she can imagine how others with more limited accessibility might be. And, yes, she can envision how her own lifestyle might be better.

"I'd take my dog and go walking in my neighborhood without the risk of a car jumping the sidewalk," she says.

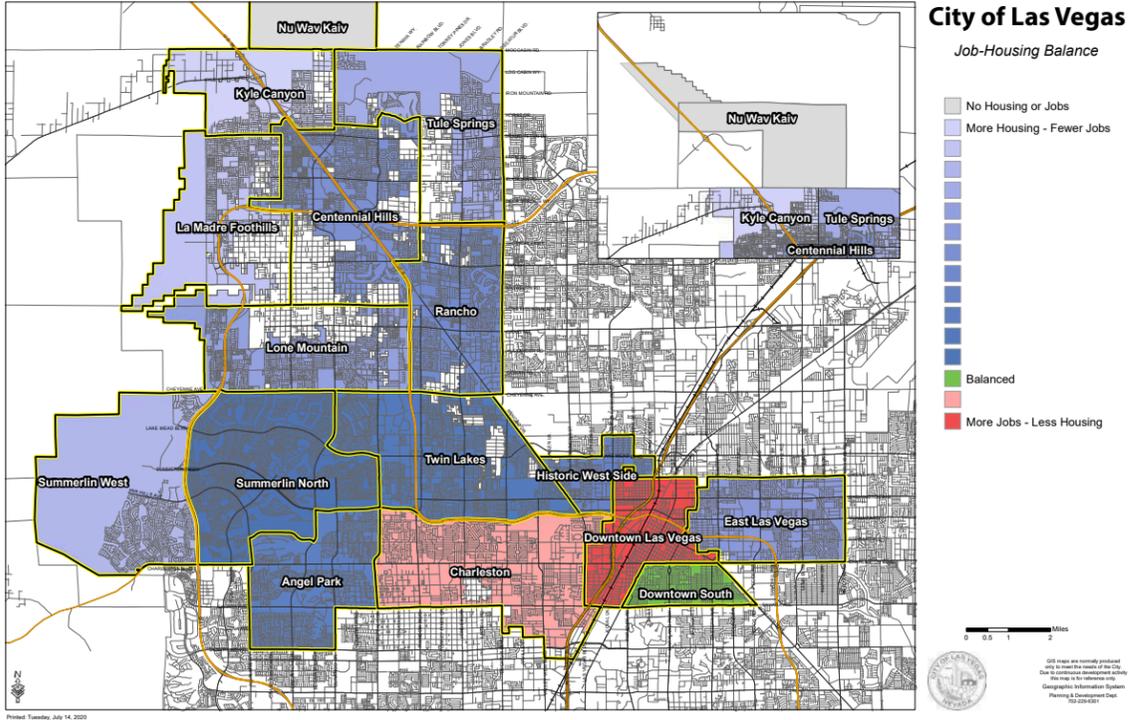
EQUITABLE	RESILIENT	HEALTHY	LIVABLE	INNOVATIVE
By developing a layered complete street network, users of all ages and abilities can move quickly and safely with choices of a variety of modes and the ability to move goods. 	A layered complete street network allows for efficiency and reduced energy and fuel consumption with multi-modal transportation choices that help reduce VMT and congestion. 	Active transportation modes like biking and walking and the provision of wide sidewalks, trails and bike lanes, promote healthy lifestyles and reduces vehicular emissions. 	A diversity of modal choices, paired with livable urban place types that balance housing and jobs will enhance the livability of the City. 	New, rapidly evolving transportation innovations play a role in developing a transportation system that provide travelers information. 

established and is detailed in Title 19.04.050 of the Las Vegas Municipal Code as well as in the City of Las Vegas Street Naming and Address Assignment Regulations, 2009 Edition. This system utilizes the intersection of Main Street and Fremont Street as its initial point, and it has been developed through the combined effort with all other jurisdictions in the Las Vegas Valley. A procedure to change the name of any street is detailed in Title 19.16.230 of the Las Vegas Municipal Code. The City Council may approve a name change if the change is in the best interest of the public and no person will be materially injured. At the request of the property owner or developer, the City may grant the approval of an address change. However, the proposed address change must not conflict with the addressing system, unless a waiver is approved by the City Council. Property owners do not have vested rights to street names and numbers, even if the address has been used for many years. When the City finds inconsistencies, and the Director of Planning

or designee determines a correction is needed, the property owner will be notified that a change may occur.

In addition to this Master Plan, the City's Mobility Master Plan serves as a detailed blueprint for mobility infrastructure within the city boundary. It is the result of a planning process led by the Department of Public Works, and lays out a total of \$3.2 billion of transportation investments.

**SEE ALSO CHAPTER 2**  
Areas of the City  
Park Connectivity



**LAYERED COMPLETE STREET NETWORK**

**TRAILS**

- **Regional Trails:** Major regional trailways and greenways for pedestrians and bicyclists that have minimal street crossings, grade-separated overcrossing or undercrossings, and dedicated rights of way, sometimes sharing space with a major freeway, highway, utility corridor, or regional flood control facility
- **Shared-use Trails:** Varied wide and improved sidewalks that accommodate major pedestrian (or bicycle) movement and feature diverse public amenities, especially trees, bike racks and bike infrastructure:
  - Pedestrian Malls and Plazas: Exclusive pedestrian zones (such as Fremont Street Experience)
  - Urban Paths: Marked and designated routes, especially within Downtown Las Vegas
  - Shared Use Paths: Paved paths and trails shared by bicyclists and pedestrians
  - Equestrian Trails: specifically dedicated for horse-use using different materials, but can also be utilized by hikers and pedestrians

**BIKE STREETS**

- **Separated Bike Lanes and cycletracks:** Bicycle facilities that provide physical barriers, two-way configurations or dedicated space separated from roadways
- **Buffered Bike Lanes:** Higher priority marked on-street bike facilities providing three-feet of dedicated space for bicyclists to ensure safe movement
- **Bike Lanes:** Marked on-street facilities providing minimum dedicated space for bicyclists

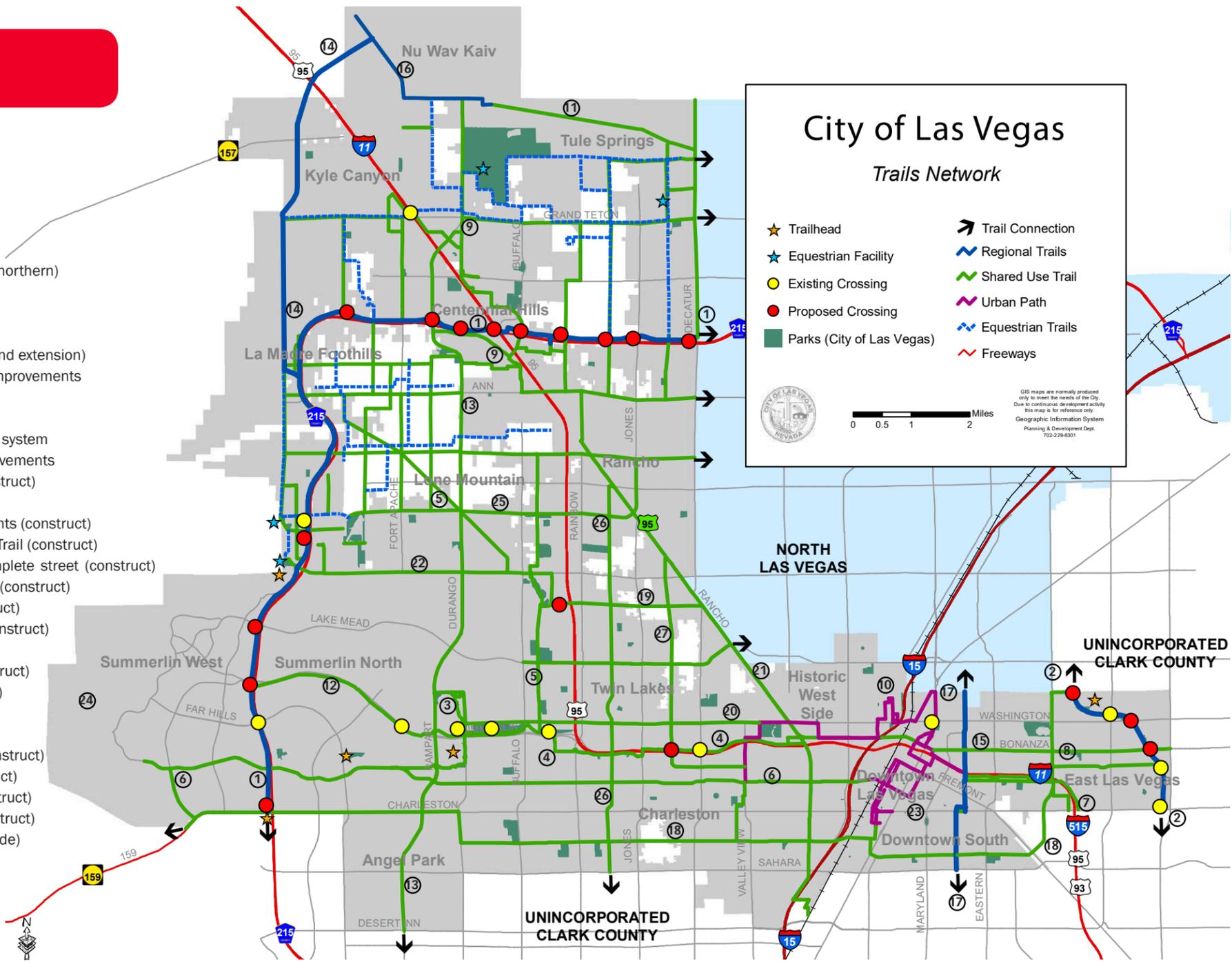
**STREETS, TRANSIT, AND FREEWAYS**

- **Local Streets:** Low speed bike and pedestrian friendly neighborhood streets that allow residents different alternatives
- **Collector Streets** (As Identified in the Master Plan for Streets and Highways): Lower speed streets that distribute cars, bikes, and pedestrians between arterials and neighborhoods. Access to adjacent land uses has lower levels of management and intersections between collectors have passive controls such as roundabouts. Some of these facilities may have overlaps with the network of Bike Streets.
- **Transit Streets** (as identified in the On Board Mobility Plan): Major and Minor arterial corridors that include mixed-use corridors that connect Regional Centers with other transit-oriented development and neighborhood mixed-use centers, each repurposed to move high volumes of people in-lieu of cars. LRT and BRT corridors feature center-running transitways in dedicated lanes, while Rapid Bus corridors allow for limited-stop service at key intersections. Intersections prioritize transit service.
- **Major and Minor Arterials** (As Identified in the Master Plan for Streets and Highways): Higher speed boulevards and roadways whose purpose is to move large volumes of traffic, local or rapid bus transit. Designated arterials also serve as truck routes to facilitate the distribution of freight. Special protections are included for bicyclists and pedestrians to ensure their safety and ability to cross streets at major intersections. Intersections between arterials feature signal protected turning movements, as warranted. Access to adjacent land uses has higher levels of management.
- **Freeways and Highways:** Limited access facilities or major state highways whose purpose is to move interstate, intrastate, and regional traffic, freight, and express transit over longer distances; can accommodate ridesharing and carpooling with an integrated HOV network that incorporates direct access interchanges.

TRAILS & BIKE STREETS MAP

SEE ALSO Chapter 2: Park Connectivity Chapter 5: Action Plan

- 1 Beltway Regional Trail (construct northern)
2 Las Vegas Wash Trail
3 Angel Park Trail
4 Bonanza Trail (extend east)
5 Lone Mountain Trail (Area trails and extension)
6 Downtown-Red Rock (Alta) Trail Improvements
7 515 Trail
8 Cedar Trail
9 Centennial Hills-Town Center Trail system
10 Pioneer Trail extension and improvements
11 Upper Las Vegas Wash Trail (construct)
12 Summerlin Pkwy Trail (construct)
13 Durango-Fort Apache improvements (construct)
14 Nah Gah Kaiv (Sheep Mountain) Trail (construct)
15 Bonanza Rd "Grand Paseo" complete street (construct)
16 Las Vegas-Tonopah Railroad Trail (construct)
17 Bruce-Spencer Greenway (construct)
18 Oakey-St Louis improvements (construct)
19 Peak Trail (construct)
20 Washington improvements (construct)
21 Rancho improvements (construct)
22 Cheyenne Trail (construct)
23 Downtown Trails (construct)
24 Summerlin West Trail system (construct)
25 Alexander improvements (construct)
26 Torrey Pines improvements (construct)
27 Michael Way improvements (construct)
Trail bridges and crossings (citywide)

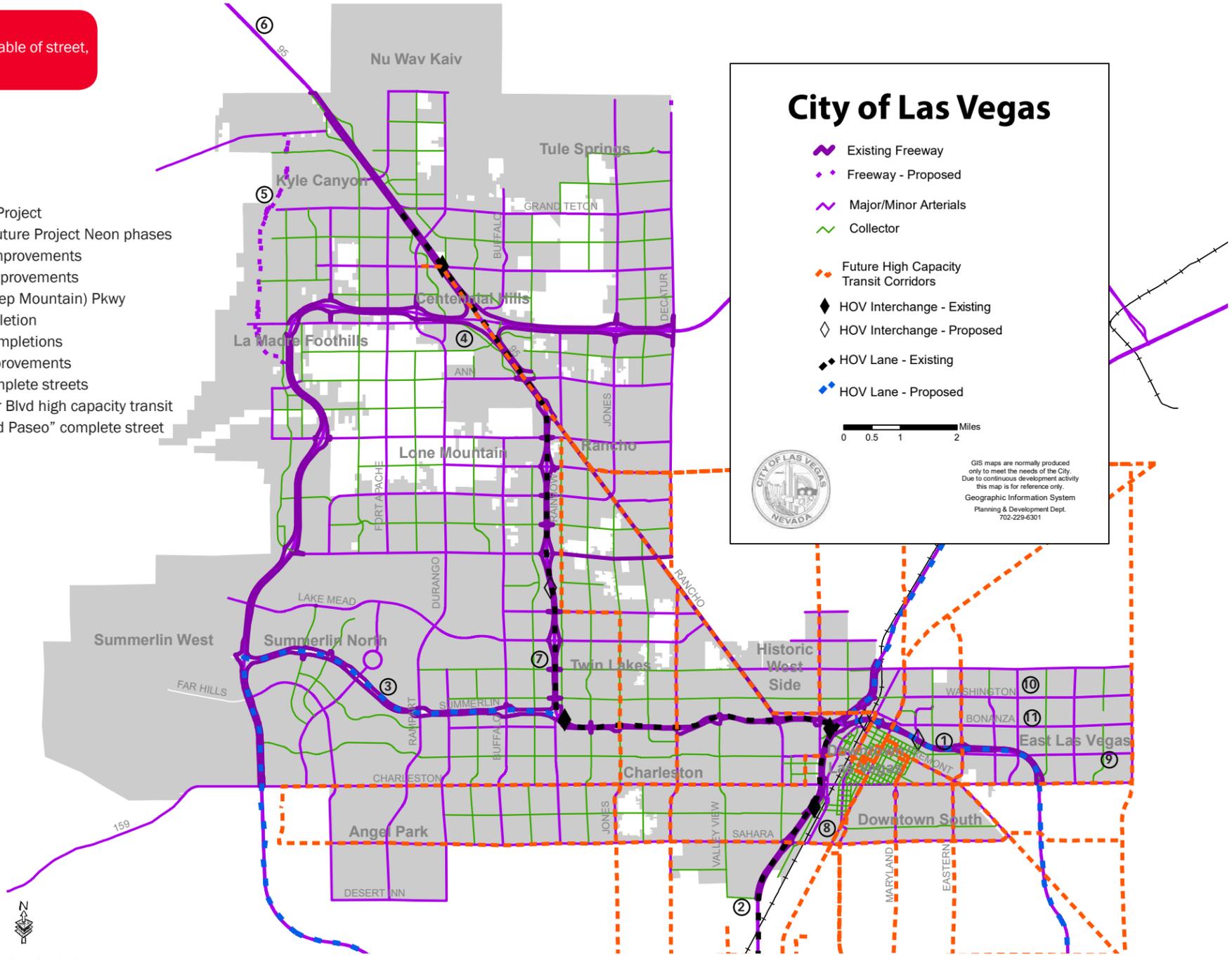


City of Las Vegas Trails Network legend and scale. Legend includes Trailhead, Equestrian Facility, Existing Crossing, Proposed Crossing, Parks, Trail Connection, Regional Trails, Shared Use Trail, Urban Path, Equestrian Trails, and Freeways. Scale is 0 to 2 miles.

STREETS, TRANSIT, AND FREEWAYS MAP

**SEE ALSO**  
Chapter 5: Action Plan - complete table of street, transit freeway projects

- ① Downtown Access Project
- ② I-15 - Flamingo / Future Project Neon phases
- ③ Summerlin Pkwy improvements
- ④ Centennial Bowl improvements
- ⑤ Nah Gah Kaiv (Sheep Mountain) Pkwy
- ⑥ Interstate 11 completion
- ⑦ US 95 overpass completions
- ⑧ Las Vegas Blvd improvements
- ⑨ East Las Vegas complete streets
- ⑩ Charleston-Decatur Blvd high capacity transit
- ⑪ Bonanza Rd "Grand Paseo" complete street



Printed: Thursday, September 10, 2020

**THE CITY’S MODAL SPLIT MUST CHANGE DRAMATICALLY OVER THE NEXT THIRTY YEARS TO REDUCE CONGESTION, IMPROVE AIR QUALITY, AND REDUCE EMISSIONS**

Like most cities in the United States, Southern Nevada residents use solo personal vehicles as the primary mode of choice to commute and for smaller trips. Two-thirds of Las Vegas residents commute into the center of the Valley to Downtown Las Vegas and the Resort Corridor for work each day.

Within Clark County, there are approximately 7,300 miles of streets and highways; together with the resident population and tourists, more than 18.77 billion miles were travelled in 2018. Of that street and highway system, the City of Las Vegas is responsible for 1,370 miles. This abundance of road supply, coupled with historic usage factors and fueled by rapid population growth have been the perfect recipe for all of the negative effects of automobile use. Simply put, street and highway transportation by private automobile alone is not sustainable in terms of economics, the environment, or in terms of equity.

Several factors explain why the car is Las Vegas’s mode of choice:

- As Southern Nevada rapidly grew over time, its arterial roadway network followed the north-south and east-west grid system that follows the township and range lines of the Public Land Survey System. The car was the only mode of transportation, and as such, influenced development patterns outside of Downtown Las Vegas throughout the latter half of the 20th century.
- Vehicle ownership data reflects the necessity of a car in Las Vegas, for which a typical resident owns approximately 2 per household.

- Approximately 6% of residents use some form of alternative transportation. For the decades prior to RTC forming and taking ownership of public transit, the provision of bus service in Las Vegas was poor, even with a small, relatively compact service area. Choice ridership, therefore, is considerably low. Lower income residents (that are less likely to own a vehicle) and those living within the urban core are more likely to take public transportation, bike, or walk. For example, within Downtown Las Vegas, 16.8% of people take public transportation and 12.2% use it in West Las Vegas.

Southern Nevada does have higher residential densities and is a well connected city in terms of roadway infrastructure; 16% of people live within a 15 minute travel time of their place of employment (compared to 25% nationally), while nearly half of the City’s residents live within a 30-minute travel window, compared to only 36% of people nationwide. However, the largest and most noticeable effect felt by commuters is traffic congestion. Most major street and highway routes experience some form of congestion, but the median Las Vegas commute to work is 25 minutes. Still, the number of trips by car on city roadways has continued to steadily increase, with many streets and highways reaching Level of Service (LOS) “D” “E” and “F” during peak commuting times. This represents thousands of hours wasted, lost economic output, and reduced productivity. Even as vehicle fuel efficiency has increased, the impact on vehicle based emissions and air quality has been detrimental.

To accommodate new residents, some improvements to the freeway system and street network may be necessary to move people conveniently and safely. While there is a need to increase transportation infrastructure capacity to serve future growth, the focus must be on increasing transportation choices. As noted in this goal and the City’s Mobility Master Plan, streets and highways cannot be the only solution to shifting modes, when considering:

- The cost of streets and highways are expensive, in excess of \$10 million per mile for an urban freeway and more than \$50 million for an interchange.
- The cost of right of way.
- The indirect costs of congestion, lost time, safety, and economic output.

**TRANSIT-ORIENTED DEVELOPMENT (TOD) PLACE TYPES (AS DESCRIBED IN THE LAND USE CHAPTER) ARE CRITICAL TO ACHIEVING A BALANCE BETWEEN JOBS AND HOUSING AND CAN AID IN MODAL SHIFTS**

The relationship between jobs and housing is critical to planning because it influences where people live, where businesses locate, and how people travel. The “jobs-housing balance” is an indicator for where people live relative to work, measuring the number of jobs per resident employee and is key when considering movement, land use, and environmental impact. Low values indicates a housing-rich area while a high value indicates a job-rich area.

The City of Las Vegas has relatively few concentrated areas with a jobs-housing balance. Implementing the City’s place types described in Chapter 2 will help facilitate a new balance of jobs and housing by providing affordable housing options near identified transit corridors described in the goals on Housing and Transit. Each recommended place type plays a role in redevelopment and infill opportunities given a mixture of complementary uses suitable for certain types of targeted employment. In some instances, there will be an increased probability residents may take jobs there.

**VMT MUST SIMILARLY BE REDUCED BY EMBRACING COMPLETE STREETS, TRANSIT, ACTIVE TRANSPORTATION PRINCIPLES, AND TRANSPORTATION DEMAND MANAGERMENTS**

Walking and bicycling are necessary active modes of transportation, and getting around without the need for using vehicles is something that offers a great degree of freedom as well as an affordable way of commuting. Together with transit, they offer a reasonable alternative to driving by car that can reduce VMT. As reflected in this goal’s Complete Streets statement, they are roadways designed to maximize public right-of-ways to accommodate all users and modes of transportation including pedestrians, public transportation, bicycles, and automobiles. Currently, there are no protected bike lanes within the City, but there are 23 centerline miles of buffered bike lanes, 240 miles of conventional bike lanes, 2 miles of sharrows, and 32 miles of off-street trails.

The transit-oriented built environment envisioned in this plan is intended to be designed as walkable and human scaled. The City has worked with RTC and other regional partners to create communities that are conducive to walking and biking, resulting in hundreds of miles of new paths, trails, and pedestrian oriented areas. The City’s premier pedestrian area is the Fremont Street Experience in Downtown Las Vegas, the canopied five-block pedestrian mall, operated as a public-private partnership between the City and a consortium of neighboring casinos. Other notable examples include the Las Vegas Wash Trail, the Beltway Trail, and Summerlin’s trail network. Design and construction should be coordinated with Chapter 2’s Park Connectivity goal.

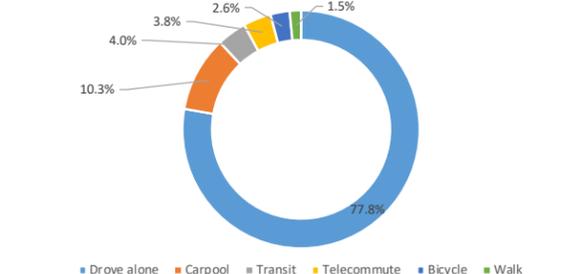
The City, RTC, and community stakeholders have worked hard to improve conditions for bicyclists. One of the primary ways has been through engagement with the League of American Bicyclists, a nonprofit organization that works to create bicycle friendly communities by advocating and promoting best practices. These are centered upon five core areas (the 5 E’s):

- Equity, Diversity, and Inclusion: A bicycle friendly America for everyone
- Engineering: Creating safe and convenient places to ride
- Education: Giving people of all ages and abilities the skills and confidence to ride
- Encouragement: Creating a strong bike culture that welcomes and celebrates bicycling
- Evaluation and Planning: Planning for bicycling as a safe and viable transportation option.

The League’s Bicycle Friendly Community program provides the City a tiered rating to improve conditions for bicycling, for which the City is currently rated as a Silver Bicycle Friendly Community.

Funded by the RTC, the Regional Bicycle and Pedestrian Plan established a guiding vision and goals related to the provision of a “safe, connected, and convenient walking and bicycling system” through the entire Valley. That plan’s recommendations are incorporated as a part of the Layered Complete Street Network, and are intended to be designed utilizing NACTO Urban Street Design Guide for best practices

**COMMUTE - MODE TO WORK**



Source: City of Las Vegas, ACS Estimates



for bike facilities, with the specific projects to be included in the City's Capital Improvement Plan.

Finally, RTC's Club Ride program, carpooling, and other TDM strategies, facilitated with dedicated managed facilities that reserve exclusive space and capacity for their proper functioning is a necessary tool for communities to effectively manage traffic congestion, make modal shifts, and increase public transportation ridership.

**MAJOR STREET AND FREEWAY IMPROVEMENTS, ESPECIALLY THE DOWNTOWN ACCESS PROJECT AND THE COMPLETION OF INTERSTATE 11, ARE ESSENTIAL FOR TRAFFIC MANAGEMENT, SAFETY, AND REGIONAL ECONOMIC DEVELOPMENT**

While it is true that a dramatic mode shift must be made, the street and highway network for 2050 must include a number of major capital projects that are currently included in RTC's Access 2040 RTP, NDOT's STIP, the Mobility Master Plan or are under development and will be included in the City's Capital Improvement Plan. Instead of solely making street and highway expansions based on adding additional highway capacity or access, new street and highway projects must be further assessed for their ability to better improve a facility's mobility and operations, improve motorist, bicyclist, or pedestrian safety, or enhance transit operations. Ultimately, this 2050 network's focus is on moving people or freight by providing a variety of modal choices that reduce VMT. Major city and state projects, some of which are listed in the Mobility Master Plan, include:

- Replacement and upgrade of the I-515 viaduct as part of the Downtown Access Project.
- Safety improvements through future Project Neon phases around the "Spaghetti Bowl" interchange and along I-15.
- Completion of the Centennial Bowl (US-95 / I-215) interchange and associated local access roads around Centennial Hills .
- Expansion of Summerlin Pkwy from I-215 to US-95 from 4 to 8 lanes, including extension of existing HOV lanes and completion of a system-to-system interchange at I-215.
- Construction of I-11 north.
- Construction of Sheep Mountain Pkwy.

Improvements to streets that calm traffic, reduce speeds, improve pedestrian or bicycle movements, or enhance transit operations, must be given greater priority for capital improvement project funding. These may include street and intersection recommendations and design elements from the NACTO Urban Street Guidelines (as incorporated into LVMC Title 19.04, - Complete Streets or Title 19.09 Form-Based Code), including, but not limited to:

- Reduced lane widths
- Wider sidewalks with amenity zones
- Curb extensions, pinchpoints, chicanes or bus bulbs
- Midblock crosswalks, scramble intersections, safety islands
- Roundabouts

**LAS VEGAS IS OPTIMALLY LOCATED TO CONTINUE GROWING AS A HUB FOR LOGISTICS, DISTRIBUTION, AND INTERMODAL FREIGHT**

The City is strategically situated geographically to have rapid access to major domestic and international markets with the presence of relatively new highway, rail, and airport infrastructure. Because the region is dependent upon freight movement for economic competitiveness, the City must ensure the safe movement of freight, whether by truck, air, or rail, work to ensure major infrastructure corridors are well-maintained and preserved, and that the overall transportation network is focused on efficient

and reliable multimodal movement for both shippers and receivers, whether within the City or as a stopping point to another destination.

The Union Pacific Railroad (UPRR), whose tracks parallel Interstate 15, accommodates rail traffic that connects large coastal ports with the major cities to the east. Nevada is a "pass through" state with more than 95 percent of mainline freight rail traffic traveling to and from Southern California's ports. I-15 is also important because it connects the West to the rest of the country. Goods traveling east must travel north along I-15 to connect east via I-70 in Central Utah or I-80 in Salt Lake City.

Trucks move more than half of the freight tonnage in the United States and can be used for both short (less than 750 miles) and long haul (more than 2,000 miles) distances; rail, conversely, is used to move goods traveling intermediate distances between 750-2,000 miles, but moves less than 40 percent of freight tonnage. Due to heavy truck use on Interstate highways, road maintenance and repair are frequently needed. Trucking is also a heavy contributor to emissions and air quality issues, with almost eighty percent of greenhouse gas emissions coming from trucks, but only eight percent from rail.

Southern Nevada's economy relies heavily upon trucking for necessary imports and its tourism, highway infrastructure changes, and fuel price volatility could have the potential of leaving Las Vegas vulnerable. Each could disproportionately affect tourism, lower-income residents, and other populations. Interstate 15 has historically been identified through Federal transportation and trade acts as a major trading route part of the CANAMEX (NAFTA) transportation corridor connecting Mexican, Canadian, and American trade. As a vital trade route, the U.S. Department of Transportation similarly designated US 93 in Arizona (slated to be upgraded to interstate standards as the new Interstate 11) as an emerging transportation corridor.

Overwhelmingly, the most important factor in freight logistics and route selection is free-flow movement with minimal congestion and impedance. However, the Spaghetti Bowl interchange where I-15 and I-515 converge currently has over 270,000 vehicles daily in central Las Vegas. Unless VMT is greatly reduced, the Spaghetti Bowl represents a major choke point on a essential trucking corridors. Additionally, I-515 includes the Downtown Viaduct, but is in dire need of replacement. Despite calls for an eastern

leg of the Las Vegas beltway, (a corridor that presents too many logistical challenges from a land use, routing, and cost standpoint to make it worthwhile) and rerouting trucks along the Southern and Western beltway, it is vital that this transportation corridor be upgraded through the Downtown Access Project.

Goods exported from Las Vegas are mostly distributed regionally around the Southwest. Trucks haul 83 percent of this volume. Within Southern Nevada, more than 90 percent of the tonnage moved was handled by trucks. This amount of importation requires warehousing, logistics, and distribution centers to store goods before further shipment to retailers or customers. Because more than 50 million people live within one day's drive of Las Vegas and due to Nevada's inexpensive operational costs and favorable tax climate, Las Vegas can capitalize as a hub for logistics, distribution, and intermodal freight, provided that other transportation and logistic factors are mitigated.

Because the I-15 corridor is the region's major freight corridor, many regional trucking and intermodal facilities have been constructed in major industrial zones and business parks. Relatively few major logistics hubs exist within the City of Las Vegas; Spectrum in East Las Vegas, the Las Vegas Tech Center in Twin Lakes, and the Las Vegas Business Park in West Las Vegas, as well as historic Downtown Las Vegas industrial uses around the Spaghetti Bowl, are among the major locations. Clustering has helped common infrastructure to be shared and used efficiently; however, this results in increased air and noise pollution for residents in adjacent areas, roadway wear and tear, and truck traffic. The City regulates freight distribution, and truck routes pursuant to Title 11.48 and the appended Master Plan of Streets and Highways, which permit truck routes on primary and secondary arterials. The development of a job creation zone in Nu Wav Kaiv, serving as a northwestern gateway and economic development hub, has the potential to create a new logistics point along the I-11 corridor.



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Over the past decade, rail traffic on UPRR tracks has declined due to rerouting trains with Midwestern and Eastern destinations; there has not, however, been a decrease in demand for services to, from, or through Las Vegas. Extending track sidings, upgrading rails and railyard facilities could increase the routing potential along the rail corridor and could present an opportunity to reroute freight onto rails and off of trucks on I-15. Finally, McCarran International Airport is the 36th busiest cargo airport in the world, handling more than 370 million tons of freight through the Marnell Air Cargo Center. This freight distribution facility houses large cargo haulers and sits on a designated foreign trade zone and is designed to handle future air cargo demand. Given the increased speed of global commerce and the need to remain economically competitive with other major metro areas and to further support economic development efforts, the City must resolve to support capacity and efficiency upgrades at McCarran, and if necessary, a new airport in Ivanpah Valley. With growth in trucking projected to rise 150 percent by 2050, the largest growth level of all transportation modes, it is clear that it will remain an important transport component in the future. The City must further work with NDOT, RTC, and other trucking stakeholder to study and plan for interstate and inter-city freight movement, electrify any future truck-stops to reduce truck emissions and prepare for the possible innovations in delivery methods, such as unmanned aerial vehicles (UAVs) and autonomous trucks.

**THROUGH FUEL REVENUE INDEXING, ROADWAY IMPROVEMENTS HAVE BEEN MADE, BUT OVERALL STREET AND HIGHWAY FUNDING MECHANISMS MUST BE ADDRESSED AT ALL LEVELS OF GOVERNMENT**

For nearly thirty years, the Federal motor fuel (gas) tax has remained unchanged at 18.4 cents per gallon for gasoline and 24.4 cents per gallon for diesel; similarly, Nevada’s gas tax, has remained at a rate of 33.8 cents per gallon for gasoline and 28.6 cents per gallon for diesel. Fuel taxes can only be used for the construction, maintenance, and repair of roadways, pursuant to Article 9 of Nevada’s Constitution. Because of this, the economic means of internalizing the externality by using fuel taxes on alternative modes of transportation to reduce VMT cannot be done. Meanwhile,

as vehicles become more technologically advanced and fuel efficient, state fuel tax revenues have declined.

To address this as funding gaps grew, Fuel Revenue Indexing (FRI) was authorized in 2013 in which the gas tax in Clark County is annually indexed against inflation to keep pace with material and labor costs. FRI funds generated from every gallon of gas sold are used to repay bonds. Projects funded by FRI have been included the initial three year period between 2014-2016 and raised approximately \$750 million in funding. A ballot question in 2016 was approved to continue to index fuel taxes through 2026; this extension is projected to generate an additional \$2-3 billion. As of 2020, 518 street and highway projects have been approved, of which 260 have been completed. The overall funding gap will likely be further exacerbated during and at the conclusion of FRI; long term, funding for needed improvements will continue to be needed especially as efforts to electrify vehicular transportation increase, more alternative fueled vehicles are on the road, and traditional vehicles increase in efficiency.

**THE AIRPORT WILL CONTINUE TO BE AN IMPORTANT GLOBAL HUB, BUT OPPORTUNITIES TO PROVIDE ALTERNATIVES TO INTERSTATE 15 MUST BE EXPLORED AND TAKEN ADVANTAGE OF**

Aviation is the economic lifeblood for the City and the Southern Nevada region as a whole. With six civilian airports for general commercial aviation and passenger traffic and two air force bases, Nellis and Creech, preservation of air space and careful limitations on building heights and design in airport overlay zones, especially for flight paths and air traffic for McCarran International Airport and North Las Vegas Airport, shall be enforced by the City by regulation under the Title 19 Unified Development Code. This may also



apply to helicopter traffic and future development of other aviation-oriented technologies as they evolve and develop, including UAV’s and other aircraft. Since defense and military facilities are tied to an important economic diversification sector, coordination with the Air Force and US Department of Defense must take place for any new subdivisions and suburban development in the City’s northwestern planning areas; the Nu Wav Kaiv area is particularly important to coordinate on given the potential for economic development efforts that may include defense and unmanned aerial vehicle research, testing, and development.

Usage trends and passenger volumes indicate that the airport may eventually reach a carrying capacity within the next decade. Because it is crucial as an airline hub, for air cargo, and for bringing millions of passengers to Las Vegas, the City must resolve to support regional efforts to bring funding for aviation infrastructure, maximize flight efficiency, and ensure no additional delays or flight cancellations occur for passengers. The introduction of a “metroplex” strategy by the Federal Aviation Administration will likely maximize air traffic in commercial airports while minimizing noise and disruption for city residents both short and long term. Short-haul flights between Southern California and Southern Nevada represent an increasing share of passenger traffic and serve as an alternative to driving along the I-15 corridor, but a few other alternatives must be addressed to alleviate pressure on the region’s airports:

- The City must continue its regional call for action for Caltrans to add additional capacity along Interstate 15 in California between Primm, NV and Barstow. Weekend and holiday traffic from California that results in hours-long delays represents a major threat to the tourism economy and freight movement. NDOT serves as a major partner to interface with California officials while efforts to support corridor improvements can take place with the state’s Congressional delegation.
- Intercity bus service has helped provide low-cost options for residents between cities throughout the West; these private efforts from motor carriers represent an additional option to shift modes, but they are still reliant on I-15 for trips to and from California.
- Construction and completion of high-speed rail between Las Vegas and Southern California, with an intermodal connection to Downtown Las Vegas. The provision of an

additional mode may help alleviate pressure on both passenger air service and I-15. Efforts to re-establish passenger rail service since Amtrak’s Desert Wind service was discontinued in 1997 have been ongoing through a variety of public and private commissions, authorities, and efforts from bi-state and regional levels. Financing, public money, Federally backed loans and bonds, however, have fallen through on previous proposals. Usage of Union Pacific tracks have also posed issues. The most recent high-speed rail efforts appears promising; largely paralleling the I-15 alignment with a station located near Warm Springs Road and I-15, the construction of high-speed rail could both shorten travel times, be competitive with private autos, and reduce emissions by using overhead electric. While ultimately such a connection must tie into California’s future high-speed rail network or major passenger stations like Union Station in Downtown Los Angeles, any form of rail service would provide a new alternative for more than 25 million Southern Californians to get to Las Vegas.

- When passenger and flight volume warrant, the City should resolve to support the construction of the proposed “Ivanpah Airport,” a commercial reliever airport located south of Las Vegas near Primm at the I-15 and Nevada-California state line, which may be necessary to increase regional passenger and freight capacity and may receive approval to be constructed within the next thirty years.

**STREETS, HIGHWAYS, AND BRIDGES WITHIN THE CITY MUST CONTINUE TO BE IN GOOD CONDITION AND WELL-MAINTAINED**

Nevada, and Las Vegas in particular, has among the best and well-maintained streets, highways, and bridges in the country. According to the American Society of Civil Engineer’s 2018 Infrastructure Report Card, most of Nevada’s roads and bridges, especially those in Southern Nevada, are in excellent condition since street and roadway infrastructure is so new and because FRI has helped raise funding for roadway repaving and street rehabilitation projects. Overall, less than 2% of Nevada’s bridges are estimated at being structurally deficient, none of which are located in Southern Nevada. However, as noted, the I-515 viaduct in Downtown Las Vegas, is perhaps the single best example of the need to proactively rehabilitate or replace bridge structures, particularly because of the risk of seismic activity described

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under Hazards. Other structures throughout the City must also be similarly be assessed, especially for any bridge reaching a design age of 50 years given that the design life will continue to increase over time as more are added.

Additionally, as new bridges and new miles of streets, highways, sidewalks, and trails get added, the cost to maintain that infrastructure will similarly increase over time. The City's Public Works and Operations and Maintenance Departments will continue to proactively assess the condition of these facilities and structures to make sure they are not a threat to public safety, damage property, or create additional liabilities for the City. The City will continue to maintain a five-year street arterial and asphalt reconstruction plan and the ten-year street rehabilitation and slurry seal program for local neighborhood streets. To help municipalities address this, the City must lobby the state to fund the recently created Nevada State Infrastructure Bank to assist in paying for critical infrastructure that could not otherwise be easily paid for by the City.

**RIDESHARING, CARPOOLING, VANPOOLING, AND CAR SHARING ARE VIABLE ALTERNATIVES TO SINGLE OCCUPANT TRAVEL**

Carpooling, vanpooling, and other high occupancy modes account for the next largest portion of modal share, albeit still less than 15% of trips by mode. Carpooling can be facilitated by having dedicated managed facilities that reserve exclusive space and capacity. It is also a necessary tool to effectively manage traffic congestion, make modal shifts, increase public transportation ridership, and reduce VMT. A freeway or surface street lane operating at capacity will handle approximately 2,000 vehicles per hour. However, when demand exceeds that capacity and heavy congestion ensues, a lane handles as few as 900 vehicles per hour. The greater number of people in each vehicle in an exclusive managed lane simply moves more people.

Since 2005, both NDOT and RTC have invested in a combination of HOV lanes and bus only lanes as a part of new BRT projects. Southern Nevada now has 22 miles of HOV lanes and 23 miles of exclusive bus-only lanes for RTC's BRT routes. Construction of these lanes has provided dedicated space for transit and has corresponded to increased ridership along these new routes. HOV lanes and direct-connection facilities not only facilitate carpooling,

but also the use and deployment of freeway express transit routes that connect RTC's suburban park and rides and transit centers to major employment centers in Downtown Las Vegas, the Las Vegas Strip, UNLV, and McCarran Airport.

One major form of carpooling is ridersharing. Prior to the development of app-based ridesharing programs and the authorization of "Transportation Network Companies" (TNC's), taxicab and taxicab companies represented substantial modal and market share, particularly for the visitors to Las Vegas. Widely popular since their introduction, TNC's have offered convenience, better quality door-to-door service, and competitive pricing with taxis. However, their popularity, combined with the degree of regulation and oversight, has contributed to issues for the entire transportation system, including increased traffic congestion and emissions, as well as personal safety concerns. In addition, in many cases, they have made themselves easier to supplant taxis, rather than be used as a chained carpool or vanpool trip.

The biggest impact has been ridership and revenue, which have been down consecutive years since the approval of TNC's by the Nevada Legislature. According to the Nevada Taxicab Authority, there were 27.5 million taxi rides and \$425 million in revenue in 2015. Taxi rides from the region's 16 approved taxicab companies dropped to about 20 million taxi trips and a combined \$323 million in revenue, more than a 13 percent decline from the prior year. Ride share use has continued to rise in the ensuing years, while taxicab usage has dropped considerably. A similar upheaval has occurred in public transportation ridership. Because TNC's are not required to share data, it is difficult to determine how many trips are actually being taken by TNC. Finally, as a new driver-based economy has emerged from the advent of TNC's, issues may eventually emerge with innovations like autonomous vehicles. Autonomous vehicles, whether driver



assisted or driverless, may further provide mobility options, but could present new challenges for existing TNC drivers and taxi drivers. Regardless of what happens with these innovations, TNC's represent a continuous and rapidly evolving challenge and opportunity.

For many visitors, car rentals are a key way to allow for personal mobility without having to rely on taxis, TNC's, or public transportation. The majority of visitors arriving by air rent from a consolidated car rental facility south of McCarran Airport that opened in 2007 and houses eleven rental car companies; many hotels and casinos also have on-site car rental locations. Car rentals can also be a necessity for resident use in the event no other transportation options are available. However, one option that has seen only limited deployment in Las Vegas are car share programs. Like rentals, they provide a short term car-based mobility option for short, in-city trips. By joining a car-share program, a user can share in the use of a fleet of cars for trips positioned within a defined geographic area, charged on a mileage or hourly rate. They can reduce transportation costs for residents by avoiding ownership, insurance, and maintenance costs. Car sharing's deployment has been limited to Downtown Las Vegas and hasn't seen continuous operation or success, partly because of the lack of permanent residents in Downtown and destinations nearby, despite higher densities. However, as development and redevelopment progresses and as other place types are developed, car sharing may emerge as another viable option for private companies to pursue or for the City to partner on.

For all forms of transportation, whether for drop-offs, taxis, TNC's, or car-share programs, the City has the authority to regulate and enforce curb space by designating loading zones, taxi-stands, and parking areas, pursuant to LVMC Title 11. As with parking, City must continually assess both the supply of these dedicated locations for these modes and balance and regulate them with actual demand.

**ZERO FATALITIES IS POSSIBLE, BUT ACTION MUST BE TAKEN TO ADDRESS CRASHES THAT CAUSE INJURIES AND DEATHS**

Sharing the road must be a continued focus as part of this plan, especially with respect to safety. Across Nevada, especially within Las Vegas, fatalities and injuries for motorists, motorcyclists, bicyclists, and pedestrians have reached epidemic proportions; streets in Southern Nevada have proven to be especially hazardous to vulnerable street users given the dramatic increase of pedestrian and bicyclist fatalities and injuries over the past decade. While that number of pedestrian fatalities fell to 60 in 2018 and 50 in 2019, there are still far too many people that have been killed or injured, especially for low-income populations that are more likely to be transit users, bicyclists, or pedestrians and must walk or bike along busy, high-speed arterial streets.

Due to a combination of distracted driving, high speeds, impairment, roadway and intersection design, and failure to obey lane markings or traffic control devices, Las Vegas has seen a steady rise of vehicular collisions resulting in deaths and serious injuries, especially on weekends and

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in the evening. As a result, the number of collisions, and fatalities have also contributed to Southern Nevada having among the top ten highest auto insurance premium rates in the country.

To reinforce the message of sharing the road, the City's Vision Zero program encourages motorists to always buckle up, never drive impaired, focus on the road, stop on red, be pedestrian and bicyclist safe, and to ride motorcycles safely. By employing a variety of strategies with respect to education, enforcement, and engineering, the City of Las Vegas will contribute efforts to reducing deaths and injuries on roadways from all modes to achieve "Zero Fatalities."

- From an enforcement perspective, reinforcement of traffic safety laws, including aggressive driving, distracted driving, DUI, motorcyclist use of helmets, the three-foot law for bicyclists, seat belts, speed limits, and obeying traffic control devices and lane markings.
- The provision of alternative modes of transportation like taxis, TNC's, public transportation provides alternatives to impaired driving. This is a message that must continue to be reinforced.
- Continue to make complete street engineering improvements that reduce speeds, increase visibility for drivers, pedestrians, and bicyclists, provide
- Educate all roadway users, whether motorists, motorcyclists, pedestrians, or bicyclists, basic safety information. This is especially important for "Safe Routes to Schools" to ensure the City's school children

can walk or bike to school from their neighborhood safely.

- Ultimately, the completion of RTC's On Board Mobility Plan, designation of TOD and other walkable place types and development of the layered complete street network with dedicated locations and facilities for bicyclists and pedestrians will contribute to an increased number of transit users, pedestrians, and bicyclists.

**PARKING HAS HIGH COSTS, TAKES UP CONSIDERABLE SPACE, IS EXPENSIVE TO PROVIDE, AND IS PLENTIFUL**

Among the considerations that must be made for auto-oriented transportation is mitigating the effects of vehicle storage and parking. The sheer amount of parking at many commercial locations distorts urban form; additionally the amount of pavement required for parking and the lack of adequate tree canopy has helped contribute to the urban heat island effect. The City Council is enabled to operate and regulate on-street and publically owned parking lots and parking areas throughout the City and establish the rates associated with it. Similarly, the Title 19 zoning code establishes minimum required parking standards for a wide range of use types. Over time, this has permitted the car to dominate the Las Vegas landscape.

Because of the overabundance of existing parking, there are prime opportunities to reutilize parking areas as a part of this plan's broader strategy of infill and redevelopment.



As a Regional Center, Downtown Las Vegas is currently the best environment to continue effectively enforcing parking standards and balancing parking supply (whether publicly or privately provided) with demand through pricing. As new high-density, transit-rich environments emerge, including at any of the recommended place types in the Land Use chapter, a parking management program must be carefully considered from the City or developers to ensure an adequate maximum supply of parking while encouraging the use of alternative modes for transport for others. The City, in turn, must study and re-examine its parking policies to determine additional means of solving parking issues and its impact on the built environment.

**AS PART OF COMPLETE STREET BEST PRACTICES, THE RELATIONSHIP BETWEEN BUILDING AND STREET MUST CONTINUE TO BE EXPLORED**

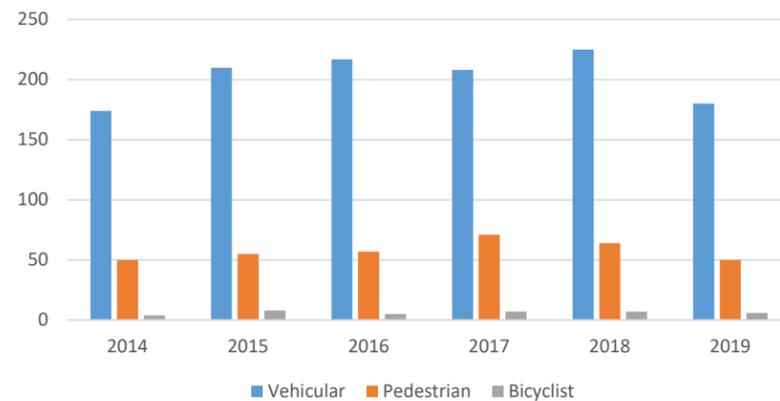
As applicants propose projects, it is important for the building or property owner have a clear understanding of the physical details of the structures they are proposing, the frontage to the street, and the components between building and street. The proper design of eye-level physical space is critical, and emphasis should be placed on urban design quality, including:

- Mental and Physical health; encourage walking and exploring neighborhoods by providing a comfortable and interesting place to walk through and carry on activities.
- Diversity of culture and places: there is no one size that fits all for neighborhoods and streets. These places are made out of our residents that live there, and Las Vegas aims towards maximizing living options that are diverse and need different types of infrastructure and development to be fulfilling and cater everyone's needs.
- Safety. Residents reported that crime in Las Vegas is a top concern. Although investments are directed toward enforcement and institutionalized policing, many studies show that the proper design of neighborhoods and streets can substantially reduce crime.
- Generation of value and revenue
- Cost-effectiveness
- Good design is design that can last and promotes the preservation of a good environment for our residents and the other species, plants or animals.
- Less pollution and less heat.

These attributes, discussed for each of the place types described in the Land Use Chapter, must ultimately be further addressed through amendments in the Title 19 Unified Development Code.



**FATALITIES - CLARK COUNTY**



Source: Nevada Department of Public Safety

**IMPLEMENTATION STRATEGIES**

- To reduce VMT and diversify the City’s modal split, adopt the “LAYERED COMPLETE STREET NETWORK” as part of the 2050 Master Plan for Streets and Highways, and construct or support the recommended improvements essential for traffic management, safety, and regional economic development
  - Complete (or support NDOT or RTC) the major identified street and freeway improvements, especially the Downtown Access Project and the completion of Interstate 11, that are essential for safety and regional economic development.
  - Complete the major identified transit, bicycle, and pedestrian improvements to ensure active transportation and alternatives for all users.
  - Adopt a Vision Zero resolution, continue implementing safety design improvements, prioritize Vision Zero over vehicular traffic flow, and work to ensure motorists, motorcyclists, bicyclists, and pedestrians are aware of their rights and responsibilities on the road.
  - Ensure law enforcement enforces traffic laws that apply to vulnerable users, especially pedestrians, bicyclists, and motorcyclists, and continue to expand public education efforts to share the road
  - To effectively manage parking and reduce parking oversupply:
  - Support carpooling and ridesharing efforts:
    - » Prioritize walking and biking improvements in areas with low auto ownership and lower incomes
    - » Revise access requirements for all developments to include all transportation modes
    - » Improve Title 19.04.40 connectivity standards to increase the overall connectedness of the layered complete street network
  - Resolve to support regional efforts to:
    - » Construct capacity improvements along Interstate 15 in Southern California
    - » Construct a reliever airport in the Ivanpah Valley as an air-freight and distribution hub when conditions warrant
    - » Complete high-speed rail connections to Southern California, provided construction of an intermodal station or connection in Downtown Las Vegas
- Work with NDOT, RTC, LVGEA and other public entities to develop a regional freight plan that addresses:
  - » Reduction and elimination of congestion on the City’s interstates and along major trucking routes that hinder the movement and distribution of goods.
  - » Electrification of freight infrastructure
  - » Create a northwestern transportation gateway in the Nu Wav Kaiv planning area
  - » Incentives for intermodal or multimodal freight,
  - » Development of urban freight distribution and consolidation centers
  - » Truck loading plans, multimodal infrastructure requirements, last-mile delivery solutions, and off-hour delivery programs.
- Infrastructure must be well maintained by properly allocating funding and resources:
  - Dedicate adequate funding to ensure public streets, trails, and rights of way in good condition and well-maintained
  - As road and bridge structures age, assess their structural integrity and prioritize the reconstruction of any that fail to meet standards
  - Ensure all City-maintained roads, pavements, and bridges are in fair or good condition

**IMPLEMENTATION STRATEGIES**

- Enable local governments to impose a limited fuel tax for local street and highway construction projects (NRS 373 - part of a larger Legislative package)
- Resolve to support an increase in state motor fuel tax for transportation funding
- Ensure well designed, high quality urban design, street and parking standards and incorporate street designs for street and bicycle facilities into Titles 13 and 19.
  - As part of complete street best practices to ensure high quality urban design, prioritize walking and biking improvements in areas with low auto ownership and lower incomes
  - Reduce speed limits on specific corridors and streets
  - Improve Title 19.04.40 connectivity standards to increase the overall connectedness of the layered complete street network and include appropriate cross sections for streets and trails
  - Revise access requirements for all developments to include all transportation modes
  - Adopt parking maximum requirements and reduce and eliminate minimum parking standards
  - Include bike parking requirements for specified uses
  - During future general plan amendments, identify underutilized parking lots to designate as TOD, TOC, NMXU land uses
  - Price public on-street and off-street parking at economical rates to help balance demand
  - Allow or permit paid parking as part of application proposals, traffic or parking management plans
  - Require bicycle parking or credits toward parking requirements based on proximity to transit lines
  - Return additional parking revenue to other services provided by the City of Las Vegas
- Strengthen parking lot perimeter and interior landscaping requirements to reduce urban heat, improve stormwater quality, and improve aesthetics.
- Further reduce VMT, congestion, wasted time, and emissions by working with regional partners to embrace transit, TDM, TSM, carpooling, ridesharing, and other transportation solutions.
  - Implement or deploy TDM strategies, including partnering with RTC to provide additional funds and incentives through RTC’s Club Ride program.
  - Provide and support HOV and bus-only facilities to ensure the movement of people
  - Pilot a car-sharing program within Regional Centers, TOD’s, TOC’s, or NMXU’s
  - Require TNC’s to share summary level transportation data to better assess mobility by ridesharing and impacts to the transportation network
  - Routinely assess curb-space and on-street and off-street parking for carshare vehicles, taxis, and TNC’s.
  - Collaborate with bicycle and pedestrian non-profits, large employers (gaming/resort properties) in providing additional safe, accessible routes and facilities for the large population of service workers who often rely on a bike for their commute to work.
  - Expand RTC Bike Share to other planning areas along identified corridors in the On Board mobility plan to facilitate first-last mile trips and work with RTC to expand its fleet of bikes and electric bikes.

## MAKE TRANSIT OPTIONS MORE CONVENIENT AND BETTER INTEGRATED WITH VIBRANT NEIGHBORHOODS AND EMPLOYMENT CENTERS, BETTER CONNECTING PEOPLE TO THEIR DESTINATIONS



Public transportation is essential to the overall transportation fabric. Not only does transit have the potential to move the largest number of people with the smallest physical footprint, but it also serves as the lifeblood for many Las Vegas residents as a reliable, accessible, and low-cost option to connect them to jobs and critical community resources. Furthermore, transit provides benefits to people who do not use it. For example, if ten people choose to ride a bus or train during rush hour, this results in an average of nine fewer cars on the road. This in turn leads to a more efficient transportation network, less traffic congestion, decreased emissions, and a safer community for all.

Nonetheless, only 4% of residents in Las Vegas use transit for their journey to work. While the list of proposed improvements to the transit system is substantial, there is also a social stigma and public perception that transit is only for those riders who have no other choice that must be overcome. In order to dispel this misconception, the City and its partners must incentivize “choice riders” or potential riders who have other means of transportation, to leave their vehicles at home in favor of making a commute using transit. Ideally in many cases, the user experience of a trip taken by a choice rider is one that is relatively comparable to using their own personal vehicle. It is convenient, accessible, and doesn’t involve a transfer. Furthermore, it does not require additional time to find parking while positively impacting the City’s carbon footprint. Unfortunately, while the supply bus-

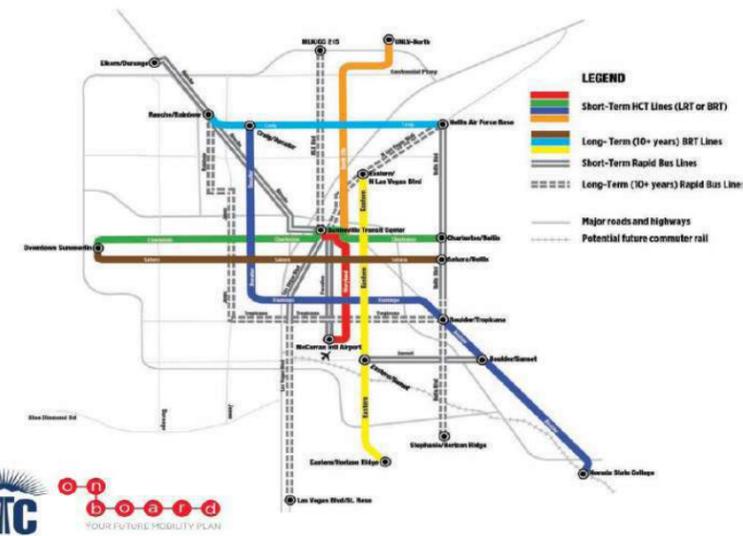
based transit in Southern Nevada is high, the demand of choice riders is relatively small.

For public transportation to be successful, it must be reliable, fast, accessible, and convenient to use. Transportation choice, and therefore multiple mode options, are critical and essential to reinforcing our urban neighborhoods and districts. Unlike some cities in the United States who have robust legacy transit infrastructure, Las Vegas has a more vehicle-centric foundation due to its development in the automobile era. With rapid construction of single-family detached housing during much of the 20th century, arterial streets and freeways served as the Valley’s infrastructure backbone. As a result, Las Vegas’ urban form and transportation infrastructure grew without much relationship to pedestrian or transit-oriented design and standards. In order to grow transit ridership, the City must coordinate with its partner, the Regional Transportation Commission of Southern Nevada (RTC) to implement existing recommendations to plan, fund, develop, incentivize, and implement community-friendly transit projects and programs.

The RTC, City, and community organizations work closely on the provision of public transportation and planning for transit service and facilities:

- RTC Transit is a fixed-route bus-based system comprised of more than 39 routes.
- RTC owns and operates a number of transit facilities including Bonneville Transit Center (BTC) which is RTC’s central transit terminal and hub in Downtown Las Vegas. A number of other transit centers and park ‘n’ rides are located throughout the RTC service area.
- RTC also offers on-demand, door-to-door, reservation-based paratransit service to passengers who are functionally unable to independently use the RTC’s fixed-route bus system.

Proposed Southern Nevada High Capacity Transit System



### KEY ACTIONS

- Working with RTC, resolve to build and implement the key recommendations of the On Board Mobility Plan, including:
  - Building the high capacity transit system;
  - Expanding transit service to maximize access to jobs and housing;
  - Making all travel options safer and more secure;
  - Making short trips easier;
  - Expanding service for seniors, veterans, and people with disabilities;
  - Connecting major regional destinations including McCarran International Airport, the Strip, and Downtown Las Vegas;
  - Providing reliable transit for Downtown Las Vegas and resort corridor employees;
  - Leveraging new technology to improve mobility.
- Implement the place types recommended in the Land Use chapter to facilitate mixed-use TOD, infill, and redevelopment within proximity of quality public transportation.
- Work with RTC to ensure equitable transit funding.

### OUTCOMES

- By 2050, the mode split is 20% for transit.
- 75% of the region’s residents are within a 1/2 mile of bus service, and 100% of the region will have access to some type of public transportation service by 2050.
- The number of dwelling units within ¼ mile of a public transit route increases over time.
- The number of dwelling units within ½ mile of a station of a high capacity transit route, transit center, park ‘n’ ride, or mobility hub increases over time.
- By 2050, 50% of homes are within ½ mile of a public transit route or are served by a call ‘n’ ride or microtransit service areas.
- By 2050, the population density along high capacity transit routes is at least 30 dwelling units per acre for BRT routes and 40 dwelling units per acre for LRT routes.

**SEE ALSO:**  
RTC On Board Future Mobility Plan

- The City has also funded and provided its own transit services, and is currently coordinating with RTC on several circulator services:
  - Downtown Loop circulator provides free rides in Downtown Las Vegas.
  - An autonomous circulator pilot shuttle through the Fremont East district in 2018.
  - Future GoMED autonomous circulator service between the Bonneville Transit Center and the Las Vegas Medical District.
- The Las Vegas Monorail does not enter the City, however previous plans called for its extension into Downtown Las Vegas from its current northern terminus at Sahara Avenue; future extensions of the privately funded system, including to Allegiant Stadium or McCarran Airport, and may present an opportunity to explore that northern extension in the future.
- The City is also authorized, through its charter, to construct, regulate, franchise, and license rail-based public transportation.

Currently, more than 400 transit vehicles and 300 paratransit vehicles convey passengers throughout the city and carry more than 64 million locals and tourists per year, with an average weekday ridership rate of more than 178,000. However, in order to meet our overall goals, the City and RTC must do more to grow ridership. The City’s Mobility Master Plan detailed a transit vision reflecting interconnected high capacity transit service that

links Regional Centers with mixed-use transit oriented development corridors. These corridors already have strong RTC Transit ridership, have transit-supportive densities, and have a variety of destinations.

This vision is thoroughly reflected in RTC’s On Board Mobility Plan, a plan recommending a crucial investment in nearly 200 miles of high capacity transit which includes:

- Building a high capacity transit system;
- Expanding transit service to maximize access to jobs and housing;
- Making all travel options safer and more secure;
- Making short trips without a personal automobile easier;
- Expanding service for seniors, veterans, and people with disabilities;
- Connecting public transit options to major regional destinations including McCarran International Airport, the Strip, and Downtown Las Vegas;
- Providing reliable transit for Downtown Las Vegas and resort corridor employees;
- Leveraging new technology to improve mobility.

**MULTIPLE MODAL OPTIONS AND TRANSPORTATION CHOICE ARE CRITICAL AND ESSENTIAL TO THE URBAN FABRIC**

For public transportation to be successful, it must be accessible to passengers and convenient to use. Las Vegas, however, was one of the few major U.S. cities to have missed a critical developmental milestone: the creation of a public transit system because of its urban growth and development in the automobile era. With rapid construction of single-family detached housing during much of the 20th Century, arterial streets and freeways served as the Valley’s infrastructure backbone. As a result, Las Vegas’ urban form and transportation infrastructure grew without much relationship to pedestrian or transit oriented design and standards. Traditional single-family development over the next 30 years will continue to occur on the outskirts of the City as it did during the previous 30, particularly in large master planned communities in the Summerlin West and Kyle Canyon planning areas, as described in the Land Use

Chapter. These developments will generate a substantial number of trips, such as work, shopping, and school, and will impact congestion levels within the Valley as a whole. But as described, these communities are relatively low density and auto-oriented. Because of these land use patterns:

- Transit-dependent riders and households with no vehicle ownership (23,766 within the City) are thus limited as to where they can live, typically around Downtown Las Vegas, West Las Vegas, Charleston, East Las Vegas, and Downtown South. These areas also tend to have lower household incomes and higher rates of rental housing;
- Residents of suburban communities have no public transportation option because it is not easily accessible. Currently, there are approximately 160,000 of the City’s housing units within ¼ mile of an RTC Transit route – two-thirds of the City’s total. 27,000 units (nearly all of which are single-family residential) are greater than a mile from service, making an easy walk to a bus stop relatively unlikely; and
- Lower densities make the likelihood of providing fixed-route transit service unlikely because of the high cost to serve those locations.

**RTC TRANSIT IS A WELL-RUN, EFFICIENT BUS-BASED TRANSIT SYSTEM, BUT RIDERSHIP ON SOME ROUTES HAS BEEN DECLINING**

Throughout public outreach to develop this master plan, City of Las Vegas residents have indicated broad support for more transportation options, provided that they are reliable, fast, accessible, and convenient. RTC Transit’s system characteristics are typical of other bus-based transit systems around the country, with some exceptions related to the “24-7-365” nature of the city.

RTC Transit’s service is provided on a grid system, with most major local routes traveling crosstown on major arterials. Among these are 9 “frequent service” routes that operate every 15 minutes (or better) during weekday daytime hours and 20 minutes or better during evenings and weekends. Service types provided include:

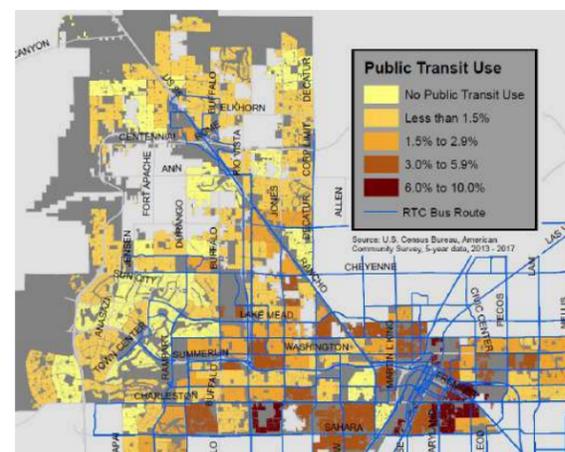
- Local routes, most of which provide service at 20 or 30 minute headways, with a few at hourly headways.

**TOTAL RIDERSHIP - RTC TRANSIT**



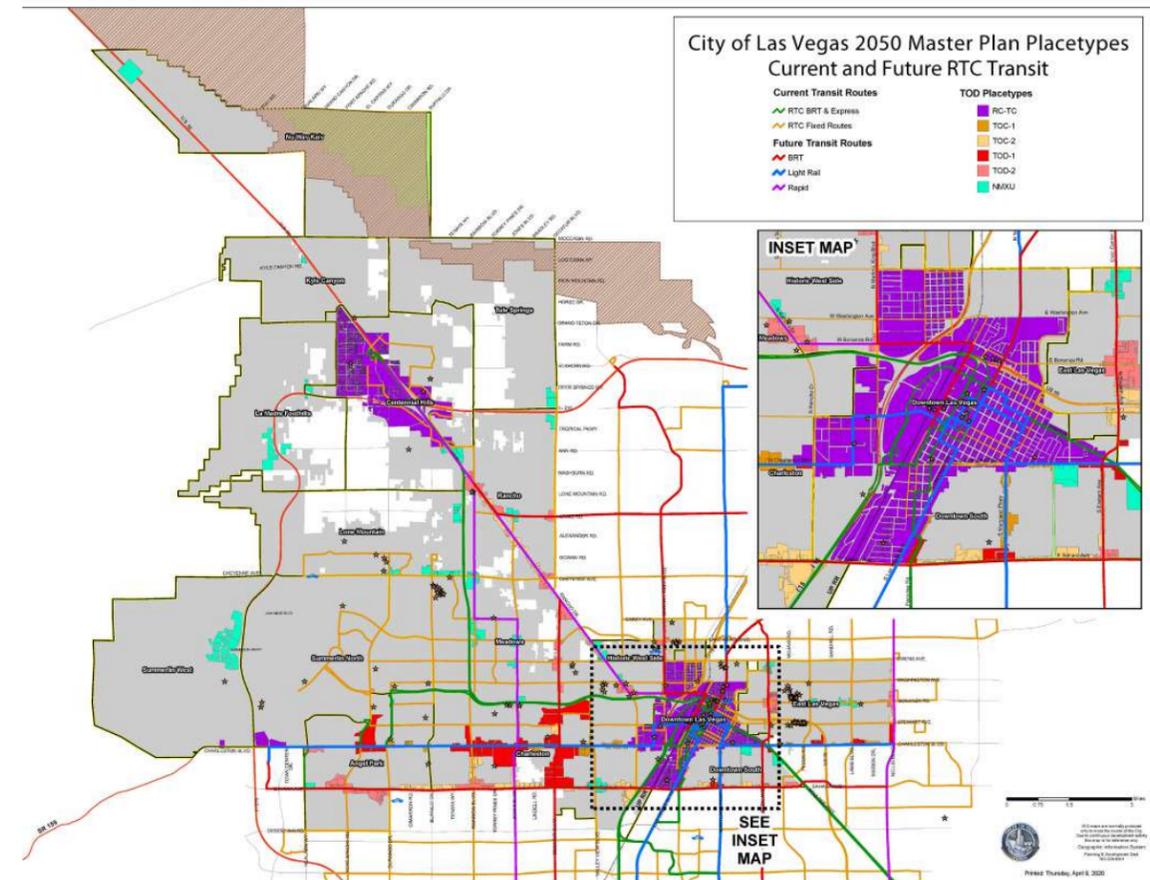
Source: RTC

- Las Vegas Strip service:
  - The Deuce on the Strip: operates double decker vehicles with frequent service
  - SDX: Strip-Downtown Express provides limited stop BRT service between the Las Vegas Premium Outlets North, Downtown Las Vegas, Las Vegas Convention Center, the Strip, and Las Vegas Premium Outlets South
- Bus Rapid Transit (BRT) – Including the SDX, four BRT routes offer frequent service, operate in dedicated lanes and have improved stops; many of these were originally built as a more robust type of service
- Express routes – RTC operates four freeway-based express routes on hourly headways that link suburban transit centers and park ‘n’ rides with Downtown Las Vegas and/or the Las Vegas Strip and McCarran Airport. These have higher amounts of choice riders, but also are the most-expensive to operate.
  - RTC Transit functions efficiently because it provides service and frequency based on the availability of destinations, population, and employment density. For any transit system, coverage of the transit network (and the extent of the paratransit service), can only be done if cost effective to do so. As a result, much of the high density urban core is well-served with high frequency transit, but lower density suburban areas like Kyle Canyon, La Madre Foothills, Tule Springs, many parts of Lone Mountain, Summerlin North, and Summerlin West have lower frequency transit or no transit service at all.



RTC TRANSIT SYSTEM RIDERSHIP				
ROUTE / SERVICE	Type	2019 Ridership	Average weekday ridership	PRVH
Deuce - Las Vegas Strip	Premium	7,416,101	20,645	73.1
SDX - Strip-Downtown Express	BRT	3,843,874	10,994	62.6
109 - Maryland Pkwy	Local	3,451,297	10,329	55.8
113 - Las Vegas Blvd North	Local	2,660,143	7,628	51.7
202 - Flamingo Rd	Local	4,329,828	12,586	50.8
BHX - Boulder Highway Express	BRT	3,855,130	11,308	45.8
206 - Charleston Blvd	Local	3,995,506	12,192	42.9
SX - Sahara Express	BRT	3,730,462	11,255	41.5
201 - Tropicana Ave	Local	3,329,964	9,697	41.1
215 - Bonanza Rd	Local	700,079	2,087	39.8
110 - Eastern Ave	Local	2,377,523	7,258	39.3
115 - Nellis Blvd / Stephanie St	Local	2,153,793	6,390	38.5
103 - Decatur Blvd	Local	1,867,434	5,633	38.3
203 - Spring Mtn / Desert Inn / Lamb	Local	2,743,803	8,245	37.4
210 - Lake Mead Blvd	Local	2,079,801	6,268	37.2
108 - Paradise / University Ctr	Local	769,644	2,239	36.2
105 - Martin L King Blvd	Local	1,048,762	3,204	33.2
117 - LV Blvd South / Silverado Ranch	Local	692,924	1,980	32.6
101 - Rainbow Blvd	Local	1,166,567	3,517	32.0
219 - Craig Rd	Local	747,331	2,299	31.6
111 - Pecos Rd / Green Valley Pkwy	Local	1,218,537	3,806	31.6
106 - Rancho Dr / Centennial Hills	Local	1,071,438	3,152	30.8
104 - Valley View Blvd / Arville St	Local	1,046,071	3,223	30.5
218 - Cheyenne Ave	Local	839,142	2,711	30.4
102 - Jones Blvd	Local	670,223	2,081	28.5
208 - Washington Ave	Local	889,422	2,771	26.1
214 - H St / D St	Local	300,616	934	24.4
119 - Simmons St / Koval Ln	Local	726,387	2,299	24.2
212 - Sunset Rd	Local	973,980	3,035	22.9
209 - Vegas Dr / Owens Ave	Local	301,843	926	22.2
DVX - Downtown-Veterans Express	Express	320,177	1,034	21.4
217 - Warm Springs/Downtown Henderson	Local	664,613	2,125	20.2
121 - Durango Dr / Buffalo Rd	Local	437,980	1,414	20.2
207 - Alta Dr / Stewart Ave	Local	274,588	836	19.6
120 - Fort Apache Dr / Rampart Blvd	Local	440,776	1,352	19.5
WAX - Westcliff / Airport Express	Express	319,428	941	17.0
CX - Centennial Express	Express	317,227	966	16.2
HDX - Henderson-Downtown Express	Express	325,921	960	14.7
122 - South Maryland / Horizon Ridge	Local	247,917	806	13.6
<b>TOTAL / AVERAGE</b>		<b>64,346,242</b>	<b>4,901</b>	<b>33.22</b>

Source: RTC



- There are more than 3,300 bus stops in the RTC system, 1,700 of which have shelters. 97% of transit trips begin and end by walking to and from an RTC Transit stop. In addition, RTC Transit vehicles are equipped with on-board bicycle racks; RTC transported more than 628,000 bikes in 2018. To improve the experience of all transit riders, it is critical to invest in making sidewalks and pathways that lead to a stop accessible to all people, safe, and comfortable to use.

Unlike some transit systems in other metro areas, RTC provides a fairly robust 24-7 span of service that accommodates employees of the tourism industry that may work overnight, graveyard, or swing shifts. 13 routes provide this service, often at hourly headways, which allows for direct connections to the Las Vegas Strip.

RTC also provides additional specialty services:

- Special event services, including dedicated express routes to T-Mobile Arena, Allegiant Stadium, and the Las Vegas Motor Speedway.
- Senior citizen services, including 12 “Silver Star” routes that provide loop circulator service to neighborhood destinations during certain days of the week, and flexible demand response (FDR), a call ‘n’ ride service for Sun City Summerlin and Centennial Hills.
- Transit services for senior and disabled veterans

RTC operates a cost effectively, with a farebox recovery ratio higher than most other comparable transit systems. RTC Transit fares are nominal, beginning at \$2 for a standard single ride in 2020, with options for daily, weekly, and monthly passes. Premium service routes that serve the

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Las Vegas Strip begin at \$6 for two hours. Over the last twenty years, ridership has generally increased on most routes, with periodic fluctuations across the entire system necessitating adjustments to route frequency, timing, and routing. One noted historic constant has been service on Strip routes being the most productive per passenger revenue vehicle hour (PRVH) at more than 60 passengers per vehicle per revenue-service hour – nearly twice the system-wide average of 33. These routes generate 17% of ridership within the system and are among the most profitable in the entire country for any mode. Other routes, including all of the commuter express routes offered to “choice riders,” have much lower PRVH rates, are expensive to operate, and not as efficient to provide. They are important with respect to the need to provide coverage and accessibility to other parts of the community. Notably, nearly all of the routes with low PRVH rates provide service to lower density suburban areas within the City of Las Vegas.

**PARATRANSIT SERVICE IS AN IMPORTANT COMPONENT TO PROVIDING EQUITABLE TRANSPORTATION**

RTC’s paratransit service area covers a wide area and provides a necessary (and required) service for disabled and mobility impaired people:

- In 2019, 1.35 million paratransit trips were taken with a 95% on-time performance, serving 63,000 seniors.
- Despite its reservation based, door-to-door service, it has a much higher cost to serve and therefore a greater subsidy at more than \$33 per trip. Furthermore, any expansion to the fixed route system that covers new areas must also expand the paratransit service area boundary.
- The reservation-based system could lead to long waits and delays for some passengers. While trips are programmed and coordinated, trips still must pick-up and drop-off other passengers, an inconvenience for those passengers making medical appointments or short trips. Trip optimization and a passenger notification system does attempt to mitigate these issues. As a result, RTC’s functional rider assessments are necessary to show that a passenger is eligible for service, for which RTC has 20,600 certified wheelchair uses; otherwise, RTC works with passengers on mobility



training to utilize the fixed-route bus service. RTC Transit has served 400,000 users with wheelchairs.

**THE TRANSIT EXPERIENCE MUST BE IMPROVED TO ENHANCE ITS QUALITY AND ATTRACT NEW RIDERS**

One of the greatest challenges to increasing the City’s overall modal split is to improve the overall quality and experience of transit. Many City of Las Vegas residents that were surveyed during Master Plan outreach supported and valued RTC Transit services, but opinions were mixed on its reliability – only half felt public transportation could get them to their destination reliably and on time. Suburban residents were typically more likely to find transit service unreliable, whereas residents around Downtown Las Vegas found it to be both reliable and reasonably fast; those residents also valued access to public transportation from where they lived.

RTC’s surveys on service also reveal important experiential oriented issues for existing passengers, choice riders, and tourists, including:

- Expanding coverage to more neighborhoods and more destinations. As such, service must ultimately be provided to every area throughout the City;
- Service during peak hours must be convenient and frequent; and
- Service must be safe; 75% of all passengers believe RTC Transit is safe; most surveyed believe lack of

security, poor lighting or other people at bus stops were the most unsafe factors

**TO ADDRESS A SHIFT IN MODES TO REDUCE CONGESTION, IMPROVE AIR QUALITY, AND EMISSIONS, THE CITY EMBRACES RTC’S ON BOARD MOBILITY PLAN FOR FUTURE HIGH CAPACITY TRANSIT AND WILL ADVOCATE FOR FUNDING IT**

Anticipated to be adopted by the RTC Board of Commissioners in 2020, RTC’s On Board Mobility Plan has been a two-year planning effort with considerable public stakeholder involvement. The On Board Mobility Plan includes eight “Big Mobility Moves” that would dramatically transform not only public transportation, but the region’s entire transportation network as a whole by 2050. As described in the plan, these moves will have a dramatic impact on the City and will build the backbone for transit-oriented development by providing the “Transit” in TOD, which is why its ultimate build-out and construction will be critical to achieving many of the goals of this Master Plan:

**Build the high capacity transit system** - On Board describes high capacity transit as high quality, fast, and frequent transit services that operates in dedicated lanes and/or with high level of transit priority and includes the modes of LRT, BRT, and Rapid Bus. Each will help improve overall transit system performance and passenger experience.

**Expand transit service to maximize access to jobs and housing** - Not only would On Board provide high capacity transit, traditional transit service would increase to incorporate new coverage and expanded service to new areas, but also demand responsive service, such as call ‘n’ rides, microtransit or other similar service types. In 2019, RTC offered a pilot app-based ride-sharing service dubbed “Trip to Strip” that allowed passengers to hail and be picked up in a 12-passenger van, similar to transportation network company ridesharing apps. The City’s development of loop and circulator service concepts such as the free Downtown Loop and the GoMED autonomous shuttle pilot in partnership with RTC has been an important step that demonstrates how the City and RTC can pilot, fund, and provide transit service when and where needs are identified. In addition to the RTC’s and On Board recommendations, among the recommended areas for expanded transit service are below and are specifically stated under “Actions”:

- Route extensions from existing service or new routes servicing NMXU within Summerlin West, Lone Mountain, Tule Springs, La Madre Foothills, Kyle Canyon, Centennial Hills, and Nu Wav Kaiv
- Microtransit serving identified planning areas:
  - Westcliff Transit Center, serving Summerlin North and Angel Park
  - Centennial Hills Transit Center and other identified transit centers in the northwestern planning areas, serving Centennial Hills, Nu Wa
  - Summerlin West

**Make all travel options safer and more secure-** As reflected in both City of Las Vegas and RTC passenger surveys, On Board recommends strengthening personal security and physical safety while riders walk to, wait for, and ride the bus. This includes more transit security and use of CPTED strategies at bus stops and transit centers. Safety has also been especially important due to the number of bus stops within the valley that have been struck by vehicles by careless or impaired drivers, killing and injuring those waiting. During the 2009 and 2011 Legislative sessions, RTC and local governments were directed to create a bus stop advisory committee and determine locations for stop relocations and bus turnouts, resulting in more than 400 stops being relocated. Since 2006, RTC no longer installs bus stops or shelters on a 5 foot sidewalk, but a 2009 study by RTC estimated nearly 1,000 stops did not meet this criteria. Of the bus stops that have been struck, many may have been placed in these locations because of the need for a stop near a busy transfer location or intersection but face right of way constraints. As such, the city must ensure that updates to Layered Complete Street Network cross sections in the Title 19 zoning code include transit stop design standards that ensure bus stops include bus turnouts or are protected from higher speed arterials and include designed space that will ultimately avoid injuries and fatalities of passengers by vehicles.

**Make short trips easier-** On Board shares the City’s goals of making it easier and safer to walk and bike along the Layered Complete Street Network. Reflecting the 2050 general plan, On Board recommends the creation of regional and neighborhood mobility hubs at key TOD, TOC, and NMXU locations that have residential densities

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exceeding 30 dwelling units per acre for BRT and more than 40 dwelling units per acre for LRT. Currently, few areas have dwelling units greater than 40 dwelling units per acre, but some emerge in close proximity to proposed near-term and long-term high capacity transit lines, especially within the Charleston, Downtown Las Vegas, and East Las Vegas planning areas. Each could also feature a range of transit and commercial amenities kiss 'n' ride drop off locations for transportation network companies and microtransit, provide convenient adjacent retail options, bike racks and infrastructure for first and last-mile connections, and secure, sheltered waiting areas featuring real-time transit information.

**Expand service** - Adding service for seniors, veterans, and people with disabilities, including the Flexible Demand Response, Silver Star routes, and Veterans services, as well as offering RTC's Paratransit service to new areas.

**Improve regional connections** - On Board will improve connections to major regional destinations including McCarran International Airport, the Strip, and Downtown Las Vegas.

**Provide reliable transit for resort corridor employees** - Because more than 30% of the region's jobs are in Downtown Las Vegas or along the Las Vegas Strip, many employees can only access employee only entrances leading to the "Back of House" located at the rear of most major properties. These areas are currently not well served by RTC Transit, but On Board recommends shuttles and pedestrian connections throughout the Las Vegas Strip corridor with direct links to Bonneville Transit Center in Downtown Las Vegas.

**Leverage new technology to improve mobility** - The On Board Mobility Plan recommends continued investment in technology to improve service. Simple programs, like providing smart-phone accessible apps and information to pay fares and get real-time schedule and wait times provide customer information and reinforce convenience and reliability. Furthermore, in an effort to reduce bus-based emissions and improve air quality, On Board would also invest in clean fuel technologies, transition existing buses to an all-electric fleet, and eventually incorporate autonomous technology into the fleet.

**HIGH CAPACITY TRANSIT, PARTICULARLY LIGHT RAIL TRANSIT, DESCRIBED IN THE ON BOARD MOBILITY PLAN, MUST BE CLOSELY COORDINATED WITH RTC AS IT HAS THE BEST OPPORTUNITY TO MAKE MIXED-USE TRANSIT ORIENTED DEVELOPMENT (TOD) A REALITY**

Of the place types described within the Land Use chapter and the 2050 general plan, Regional Centers (RC), Transit-oriented development (TOD), Transit-oriented corridors (TOC), and Neighborhood Mixed-Use Center (NMUC) each include a mixture of housing, office, retail, and/or other amenities integrated into a walkable neighborhood located near quality public transportation. TOD will result in:

- Increased transit ridership and fare revenue;
- Potential for added value created through increased and/or sustained property values where transit investments occur;
- Improved access to jobs, housing, and economic opportunity for people and working families of all ages and incomes; and
- Expanded mobility choices that reduce dependence on the automobile, reduce transportation costs, and free up household income for other purposes.

TOD opportunities are present along each identified On Board corridor based on the mode and ability to truly affect desirable change to land use. These corridors have the ability to foster new growth around transit because of the diverse and complementary high-activity uses along the corridor. Many of the parcels along these corridors are ideal for TOD, containing vacant, underutilized, or large contiguous lots.

TOD and redevelopment are also dependent on the underlying mode, transit service type, and ability to have an active pedestrian realm. While light rail transit (LRT) does represent a significant capital investment, it has produced hundreds of tangible results nationwide with economic value that can be captured in ways far greater than highway expansion and capacity investments can. It is therefore important to work closely with RTC's engineering and planning staff to carefully design transit utilizing Layered Complete Street Network principles.



In Southern Nevada, bus rapid transit (BRT) has thus far failed to generate any form of TOD. Many of the general features described for BRT that the On Board Mobility Plan recommends were simply not present in the operational characteristics of previous efforts; furthermore, perception issues of bus-based transit and a bus' lack of permanence don't typically translate to true TOD. It is imperative that with any bus-based high capacity transit lines that they be designed for permanence and with operational features that demonstrate a commitment to investments in the corridor including center-running dedicated lanes, larger stations, and branded rail-like vehicles. This will provide greater assurance that the route will remain in place.

To generate and produce TOD, access to fast, reliable transit service is critical to achieve its full potential. Light rail and more convenient transit options have regularly garnered widespread support during public outreach for the Master Plan process as well as a number of other studies, planning efforts, and projects:

- During Southern Nevada Strong outreach, 83% of residents surveyed wanted the region to pursue a high speed mass transit system such as light rail;
- The City of Las Vegas Mobility Master Plan's survey reported 94% of residents would use light rail or higher order mass transit if available;
- Maryland Parkway High Capacity Transit project surveys indicated more than 70% of respondents favoring light rail; and
- The RTC OnBoard 2018 Vision Survey indicated 83% of respondents having a positive impression of light rail

and that 60% would be encouraged to try high capacity transit as a new mode of travel.

**TRANSIT FUNDING MUST BE DRAMATICALLY INCREASED TO PROPORTIONATE AND MORE EQUITABLE LEVELS**

Funding for RTC Transit comes from a combination of sources, the primary ones being:

- Federal Transit Administration funding
- Other Federal grants, including Congestion Mitigation Air Quality (CMAQ) and the Surface Transportation Program (STP)
- Voter approved sales tax measures (1/4 and 1/8 percent Q10 funds)
- Transit fares
- Advertising revenue on RTC Transit vehicles, bus stops, and facilities.

In addition to the need of funding reflected in the RTC On Board Mobility Plans, ridership trends in the existing system are placing an additional revenue burden on the day-to-day operations of the transit system. The farebox recovery ratio, the amount of money the RTC collects from riders that offsets the total subsidy for transit operations, is approximately 40%, which according to the American Public Transportation Association (APTA) is twice the national average. Historically, the RTC's Strip routes have had a recovery ratio in excess of 150%, which has allowed the RTC to subsidize local service provided to the remainder of the system. Unfortunately, both ridership and revenue from RTC's Strip routes have continued to decline with an approximate 30% decline in ridership since 2014. This decline coincides with the authorization of transportation network companies (ie - Uber, Lyft etc) within the State of Nevada. Strip farebox revenue has subsequently fallen over the last five years from \$24 million to \$17 million. Despite this, the trend seems isolated to the Strip as ridership on all other local routes in the system experienced a 1% increase in 2019.

Should these trends continue, with ridership falling, farebox revenue declining, and overall operating losses increasing, RTC has estimated the gap could lead to less funding for service, bus replacements, and other transit infrastructure needs. Furthermore, if forecasted transit operating costs surpass revenue within the next five years, service may need to be cut, eliminated, or altered, despite the demand

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for transit, growth of the community, and the projected need for service. In the coming years, strategies must be developed to increase revenues by balancing the load on the system to be less reliant on tourism trends and provide the service necessary to grow and sustain ridership of residents. One such strategy, transit oriented development, would enact a funding mechanism to raise revenue and dedicate a portion of the proceeds back into the system for its costs and operations. This would be a critical method to finance the overall system.

EXISTING, FUTURE, AND RECOMMENDED MOBILITY HUBS			
PLANNING AREA	Name / Location	RTC Routes Served (2019-20)	Future On Board High Capacity Transit Routes /notes
Downtown Las Vegas	Bonneville Transit Center	Deuce, SDX, WAX, CX, HDX, DVX, BHX, 105, 106, 108, 109, 113, 206, 207, 208, 214, 215	Bike Service Center & Parking, Paratransit, Future On Board HCT
Angel Park	Westcliff Transit Center	WAX, 121, 208	Park & Ride (137 + 9 ADA spaces), Bike Parking, Paratransit
Centennial Hills	Centennial Hills Transit Center	CX, 106A, 106B	Park & Ride (872 + 27 ADA spaces), Bike Parking, Paratransit, Future Rancho Rapid, microtransit
Summerlin North / Clark County	Summerlin Transit Center	SX, 206	Future Charleston HCT, Sahara HCT
Charleston	West Charleston	206, 103	Future Charleston, Decatur HCT
East Las Vegas	East Charleston	115, 206, SX-A	Future Charleston, Nellis Rapid
Downtown South	Sahara/Maryland	SX, 109	Future Maryland HCT
East Las Vegas	Eastern/Bonanza	110, 215	Future Eastern HCT
East Las Vegas	Eastern/Fremont	BHX, 110, 206	Future Eastern HCT
West Las Vegas	Martin L King/Lake Mead	105, 210, 214	Future Martin L King Rapid
Rancho	Santa Fe	101, 106, 219	Future Craig HCT/Rancho Rapid
Rancho	Craig/Decatur	103, 219	Future Craig / Decatur HCT, possible connections to 102
Charleston	Sahara/Decatur	103, SX	Sahara HCT, Future Decatur HCT, possible connections to Route 102
Twin Lakes	Rancho/Decatur	103, 106	Future Rancho Rapid
Tule Springs	215/Decatur	103	Future express service, microtransit
Summerlin West	215/Summerlin		Future express service, microtransit
La Madre Foothills	215/Ann		Future express service, microtransit
Lone Mountain	215/Cheyenne		Extension of Route 218, Future express service, microtransit
Lone Mountain	95/Cheyenne	101, 104, 218	Future express service, microtransit
Kyle Canyon	95/Kyle Canyon		Future express service, microtransit; Required park 'n' ride pursuant to Kyle Canyon Development Agreement
Nu Wav Kaiv			Future express service, microtransit

**IMPLEMENTATION STRATEGIES**

- Resolve to support, fund, and help RTC implement the eight “big moves” identified in RTC’s On Board Mobility Plan:
  - Build the high capacity transit system
  - Expand transit service to maximize access to jobs and housing;
  - In conjunction with RTC, work to fund and develop new local and express routes that provide additional coverage and paratransit service to areas that currently lack service, including:
    - » Extension of crosstown Routes 103, 120, 121, 210, 218, and CX to existing or future mobility hubs
    - » A new Ann Road/Centennial Hills/Kyle Canyon crosstown route
    - » Provision of service within La Madre Foothills
    - » New express routes between the City’s Regional Centers and mobility hubs to those outside city limits.
    - » As it has done previously with the Downtown Loop and GoMED transit circulator services, work with RTC to develop circulator, loop, and microtransit service from identified transit centers
  - Make all travel options safer and more secure
    - » Work with RTC on specific aspects that improve the transit-user experience for riders
    - » Standardize the Layered Complete Street Network standards within Title 19 and streets and highways specifications for transit
- » Work with RTC to install transit supportive infrastructure that ensures fast, high quality service including major transit amenities, center running transit lanes, limited applications of mixed flow operations, bus turnouts, bus-only lanes, transit signal priority, and queue jump lanes to bypass traffic at major intersections
- Make short trips easier by constructing mobility hubs and transit centers or park ‘n’ ride facilities within each planning area at locations identified as part of the On Board Mobility Plan
- Provide reliable transit for resort corridor employees;
- Expand service for seniors, veterans, and people with disabilities;
- Leverage new technology to improve mobility;
- Improve connections to major destinations.
- Work with the RTC to ensure that transit funding be increased to levels comparable to the amounts provided to street and highways and advocate for legislative changes that ensure value capture from TOD.
  - Dedicate in-kind money for City-specific transit service, routes, and infrastructure.
  - Support measures for funding alternative modes of transportation at the Nevada Legislature, as well as value capture mechanisms that can apply toward transit infrastructure or operations.
  - Partner with the RTC on FTA applications.

EQUITABLE	RESILIENT	HEALTHY	LIVABLE	INNOVATIVE
The provision of transportation for all, regardless of income or location, ensures residents the ability to access neighborhoods, employment, and the daily needs of life	Public transportation, especially electrified modes, can reduce overall costs, reduce emissions, and be more efficient.	Transit helps support active transportation modes that result in improved health outcomes.	A well invested multi-modal transportation system is essential for a livable community for residents and businesses.	Investment in high capacity transportation and innovative associated technology like autonomous transit can help improve the efficiency of movement throughout the city.
				

## STRENGTHEN SMART TRANSPORTATION SYSTEMS AND INFRASTRUCTURE TO FOSTER ECONOMIC DEVELOPMENT EFFORTS



The City of Las Vegas has been a leading Smart City, partly because so much of its infrastructure and development has taken place rapidly and over the last thirty years, which has seen a massive technological revolution. Since the 2000s, new sets of tools and "smart" products have become mainstream and are in widespread use in our daily lives. These systems have made their way into infrastructure, and use a digital technology to communicate information and data for beneficial and practical uses. Smart technologies also have the capacity to help citizens monitor their use and impact of resources.

As described in the Economic Development goal, the City has led this transition with the creation of an Innovation District within Downtown Las Vegas and creating a

comprehensive "Smart Vegas" innovation initiative built around public safety, economic growth, mobility, education, social benefit, and health care – all under the guise of becoming a "Smart City." It has great potential to leverage further development of smart infrastructure, especially with knowledge and resources at UNLV. Ongoing efforts can be seen in two realms:

- Smart networks:
  - The City franchises telecommunications companies for use of the City's right of way and the provision of service to its residents and visitors. A number of franchises are granted for service in this space, including for Cox Communications and CenturyLink, two of the largest internet, television, and telephone communications providers.

**SEE ALSO:**  
Smarter Vegas Plan

- The Public Utilities Commission of Nevada (PUCN) also regulates local telephone service but in a limited capacity. Wireless providers are permitted and regulated by the City with respect to infrastructure siting, design, and typical operations.
- NV Energy developed one of the nation's first "smart grids." Through the use of smart metering, a wide range of data is collected for each customer and informs NV Energy's transmission and distribution networks.
- Smart mobility:
  - The Regional Transportation Commission of Southern Nevada (RTC), together with the Nevada Department of Transportation (NDOT) and local public entities, is responsible for the Freeway and Arterial System of Transportation (FAST), one of the first integrated transportation system management entities in the United States. FAST oversees both freeways and arterials and is responsible for regional intelligent transportation system (ITS) infrastructure.

Several City of Las Vegas departments oversee different aspects of smart infrastructure; the Department of Information Technology, led by the City's Chief Innovation Officer, and the Department of Public Works, which oversees capital project and infrastructure planning.

### KEY ACTIONS

- Construct a citywide fiber network to support the development of IoT, mobility, public safety, and other applications
- Fully leverage Downtown Las Vegas and Nu Wav Kaiv as innovation centers for future smart infrastructure where opportunities to leverage light manufacturing and aerospace, UAV, autonomous technologies, and supportive military or defense activities can exist.
- Further enable the electrification of transportation by continuing to develop vehicle charging infrastructure

### OUTCOMES

- Implementation and support of identified "Smart Cities" demonstration projects occurring within the City's Innovation District pursuant to the framework identified in the Smart Plan
- Debut annual "Emerging Technology" deployments.
- Ongoing deployment of coordinated FAST smart mobility TSM/ITS and V2I technologies for use and application by connected and autonomous vehicles
- Citywide implementation of a fiber-optic network for IoT devices by 2050
- Number of public EV charging stations increases to 1.07 per 10,000 residents
- EV registrations increases over time
- Creation of "Smart City" analytic dashboard



The City’s IIC@V offers configurable modular working spaces with both private and open offices and meeting rooms. The facility includes high-speed secured Wi-Fi and network.

**AS THE INTERNET OF THINGS CONTINUES ITS DEVELOPMENT, THE CITY OF LAS VEGAS HAS THE OPPORTUNITY TO BECOME THE LEADING SMART CITY; THE DEVELOPMENT OF A CITYWIDE FIBER NETWORK CAN SERVE AS THE BACKBONE FOR A RANGE OF APPLICATIONS**

Access to high speed internet may be taken for granted within urban areas, especially those with advanced and well-developed telecommunications networks already in place. However, secure internet access is critical for improving quality of life and ensuring access to an equitable future; online education, health care, personal safety, and even training applications online all can help an individual improve their lives. However, digitalization can also be equally dangerous if the skills and understanding of these technologies are not rolled out in conjunction with their infrastructure. To truly ensure “smart cities” help a city to grow better, Las Vegas will need to take a thoughtful approach to transitioning the skill-set of its citizens to the digital age. Doing so will ensure that becoming a “smart city” can become the guiding means of development for future Las Vegas generations.

The City of Las Vegas current smart efforts are centered within a test bed in its existing Innovation District. The Innovation District acts as a test bed for introducing advanced

technologies and new transportation infrastructure that can promote sustained economic development and an improved quality of life. Projects and solutions have been developed through collaborative efforts between the city and new technology partners. The City has leveraged its global location with international trade shows such as the Consumer Electronics Show to help companies showcase new and innovative technologies. The Innovation District Resolution also enables city staff to create partnerships to establish demonstration sites throughout the Innovation District. Once new technologies are tested and vetted, those with the greatest community impact, easiest citywide scalability, and potential for return on investment will be considered for deployment across the City and ultimately with other partner agencies. Within the District is the International Innovation Center @ Vegas (IIC@V), which began in 2019 as an incubator for the development of new and emerging technologies, including but not limited to IoT (Internet of Things), Artificial Intelligence (AI), virtual and augmented reality, cybersecurity, water science, and advanced mobile data. IIC@V houses both start-up and established companies.

At the heart of the Innovation District is robust connected vehicle infrastructure designed to support the operation of Connected Autonomous Vehicles (CAVS). The city’s significant investment in a high-speed fiber optic network supports the safe operation and assessment of CAVs,

making the area a hotbed of testing of technologies. To support the development of connected and autonomous vehicle technologies and building on the success of the International Innovation Center @ Vegas, the city of Las Vegas has allocated additional space for mobility technology startups as a new Advanced Mobility Center.

Since its inception, the District has already resulted in a multitude of projects including the automated vehicle technology companies Navya and Aptiv. Both have tested and deployed their Vehicle-to-Infrastructure (V2I) technology, with the former deploying an autonomous shuttle within the Fremont East District of Downtown Las Vegas. This template may be a model for other pilot microtransit projects, including GoMed between the City’s Downtown core and the Las Vegas Medical District and others described in the Transit goal.

The ultimate vision from the Smart Vegas plan is to continue testing and piloting new innovations that connect citizens and technology for an enhanced quality of life, improved economy, and future-focused environment. Future innovative Smart City projects and programs, in addition to mobility and connected or autonomous vehicles may include:

- Public Safety: Innovative technology that better informs first responders and decrease response times.
- Economic Growth: New technologies and infrastructure from increased private sector investment that promotes new business models, encourage operational efficiencies, and lead to new job opportunities
- Health Care: New technology advancements that connected and intelligent medical devices will encourage a broader view of health and well-being

**AS A LEADING EARLY ADOPTER IN INTELLIGENT TRANSPORTATION SYSTEMS AND TRANSPORTATION SYSTEM MANAGEMENT, THE CITY MUST FURTHER CONNECT SMART CITY EFFORTS WITH MOBILITY PLANNING**

FAST was one of the early TSM/ITS systems that rapidly deployed smart infrastructure along Southern Nevada’s roads. Traffic is monitored and managed through each city’s intelligent transportation system (ITS) devices including radar detection flow meters, closed circuit television cameras (CCTV), dynamic message signs (DMS), ramp meters, lane use control signals, and traffic signals. Its newest feature includes Active Traffic Management (ATM) and is employed throughout the I-15 corridor. All ITS devices report to a central system through software and communications systems including the fiber optic and microwave network.

The next frontier of TSM and ITS innovation will likely be closely developed in close consultation with entities like NDOT and RTC/FAST. As the City develops connected corridors and prepares for the advent of connected autonomous transportation, more applications for Vehicle to Vehicle and Vehicle to Infrastructure may require investment. Other systems within the universe of the Internet of Things (IoT) may also require technology development; because of the unknown costs, rapid advancement, and evolution of these and other TSM/ITS systems, a short-term wait-and-see approach may initially be required until stakeholders, and other jurisdictions determine the correct measures necessary on a regional basis.

**TO FURTHER MITIGATE AIR QUALITY AND GREENHOUSE GAS EMISSIONS, TRANSPORTATION ELECTRIFICATION MUST BECOME EMBEDDED INTO DEVELOPMENT**

Over the past decade, transportation electrification has seen tremendous advancements for personal electric vehicles, freight, and vehicle fleets. Direct benefits of electric vehicles for consumers include reductions of emissions and reduced cost and demand for fuel. However, a critical link to the development of the electric vehicle and plug-in hybrid electric vehicle market is the development of the infrastructure necessary to sustain these vehicles. While market share is still slowly growing, industry estimates the electric and plug-in hybrid electric vehicle adoption rate to increase to approximately 33% market share by 2035.

The City has been at the forefront for electric vehicles and infrastructure. In 2009, it was awarded funding through a Congressional appropriation for a Plug-in Hybrid Electric Vehicle Demonstration Program, allowing the City to be the first Nevada municipality to purchase and test electric and plug-in hybrid electric fleet vehicles and make an initial deployment of associated electric vehicle charging infrastructure.

While the City required its own charging station infrastructure for its vehicles, widespread electric vehicle adoption has necessitated the rollout of new infrastructure for charging access in the community as well. As a result, the City chose to make its procured charging station infrastructure publically available. Due to the installation of more than 2 megawatts of solar covered parking, additional conduit was made available to add electric vehicle infrastructure. Community centers were selected as they had the most public traffic and had the greatest chance for use.

Since the completion of the Demonstration Program, Nevada’s electric vehicle market has continued to flourish. There is now a network of more than 200 publically accessible electric vehicle charging station locations throughout Southern Nevada, of all types, including Levels I, II, and DC-fast charge. There has also been continued support by both the public and private sector:

- Nearly all resorts within Downtown Las Vegas and on the Las Vegas Strip have EV charging infrastructure at their properties.

- Deployment of charging as a part of the State’s Nevada Electric Highway (I-11) linking Las Vegas to Reno with EV charging stations; and the I-15 Alternative Fuel Corridors between the California stateline at Primm and the Arizona stateline at Mesquite;
- NV Energy, the state’s investor owned utility, proactively deployed a time of use electric vehicle retail rate allowing customers to pay a discounted rate if they charge the vehicle during the utility’s off-peak hours.

Further development of electric vehicle charging infrastructure and network refinement will provide a critical link supporting broader adoption of electric vehicles that improves recognition and support for these vehicles, reduces mobile emissions, and enables and fosters additional car-sharing programs. Additional public investment for electric vehicle infrastructure must be a future focus for both new residents and visitors. Electrification can be expanded further by incentivizing in-home charging in new developments, developing incentives for purchasing electric vehicles, expanding charging infrastructure beyond the urban core, and exploring electric fleets for government and private sector transportation services.

**QUICKLY CHANGING AND NEWLY EMERGING TECHNOLOGIES WILL REQUIRE THE MONITORING AND GOVERNANCE OF SOCIETAL, CYBER, AND NETWORK SECURITY**

Rolling out new technologies are only useful if citizens are prepared to interact with them, and the city of Las Vegas is prepared to govern these technologies. The City of Las Vegas will need to ensure that its digitalization efforts are deployed in line with training initiatives, information campaigns, and the governance of new technologies, especially as electrification efforts transition to autonomous and robotics-based operations. The City will need to ensure that coordination is maintained between its Technology Office, NV Energy, and the City’s Department of Transportation; considering the depth of coordination needed, the city should consider implementing a Department of Innovation or a Department of Mobility to ensure its economic development is coordinated inline with smart city development.

Cities are already seeing an eruption of technologies coming online, and with various impacts on their economic development. Electric vehicles, for instance, have been

noted for their potential to decrease transportation emissions, but also have been noted as potentially having a negative impact on the grid if the utility grid below charging stations are not prepared for their roll-out. The coordination between NV Energy, UNLV, and the City of Las Vegas its initial Innovation District pilot points to the importance of coordination between digital aims, particularly as autonomous vehicles and drones come online. Both of these technologies have equally been noted for their potential in reducing traffic congestion, but in increasing free-time individuals. Imagine a future where one does not need to drive to get to work, but instead, can simply use a car that is able to drive itself to work; similarly to trains, autonomous vehicles can be used to transport groups of individuals, especially in areas where access to buses and/or trains is difficult. Drones have also been noted as equally exciting for the potential to deliver goods and services in difficult to access areas. Both types of technologies may have the opportunity to really disrupt Las Vegas residents in a positive way.

However, these technologies may be equally devastating as beneficial if deep attention to skill-set and understanding of the function of these systems are not coordinated neatly.

Both types of technologies require a deep understanding of technical systems, and need to be directly developed in line with security measures that ensure they function appropriately. As exciting it is to imagine a future where one does not need to drive themselves to work, it is equally frightening to image a future when the car you are traveling in becomes operated by a malicious individual.

Technical training, security monitoring, and grid coordination are core to making sure that these systems result in positive lifestyle changes for Las Vegas residents.



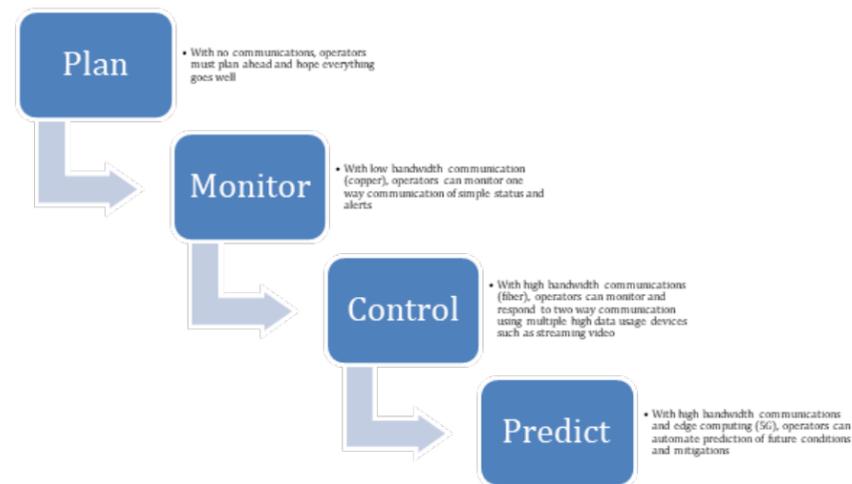
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**MAJOR PROJECT**

**WHY DO WE NEED A CITYWIDE FIBER NETWORK?**

Smart Cities believe in supporting its residents and improving quality of life by using data and connectivity. It is estimated that the number of connected devices in the world has grown by over five times in just over 10 years. This trend is expected to continue to grow exponentially over the next 30 years. There is value in the intentional collection of data to better understand trends and behaviors that promote adaptation. However, to implement these smart systems, real-world infrastructure is needed to collect and transmit this data.

The ability to monitor, control and predict operations of IoT, mobility and public safety devices in realtime is directly connected to the data infrastructure, such as fiber and 5G, which is available at the location of the device.



**IMPLEMENTATION STRATEGIES**

- Construct a citywide fiber-optic network and infrastructure network
- Offer franchise agreements for franchisees to utilize City infrastructure for the purposes of “Smart City”
- Continue to invest in smart infrastructure and specific IoT projects that improve City operations and service delivery, including:
  - Arterial and intersection-based ITS, including traffic signals, fiber optics, and Dedicated Short Range Communications (DSRC)
  - IoT sensors to provide historical and near-real time information for informed planning and decision making
  - WiFi and broadband applications at all municipal buildings and facilities
  - Building controls and management systems
  - Smart metering for wastewater treatment and sewer operations
  - V2x (Vehicle to anything) infrastructure
- Complete and formally launch the Advanced Mobility Center and other innovation areas, including in the Nu Wav Kaiv planning area along the I-11, where opportunities to leverage light manufacturing and aerospace, UAV, autonomous technologies, and supportive military or defense activities can exist.
- Support the deployment of Connected and Autonomous Vehicles.
  - Conduct a study or specific plan on the opportunities, challenges, benefits, and threats of Connected and Autonomous Vehicles.
  - Evaluate emerging mobility models such as microtransit and on-demand services to identify options that would best serve the city in the future.
- To further enable the development of electric vehicle charging infrastructure:
  - Invest in publicly accessible EV-charging infrastructure, including DC-fast charge, as part of the Nevada Electric Highway (including within in the northwestern Nu Wav Kaiv district along the I-11) and as part of the Interstate 15 Alternative Fueled Vehicles corridor.
  - Develop (or collaborate to develop) incentives for in-home charging, EV purchasing, and fleet electrification
  - Adopt amendments to the LVMC Title 19, Unified Development Code, to create an incentive program for electric vehicle parking and charging stations where off-street parking is required that reduces required parking
  - Explicitly permit charging stations as an allowable accessory use.
  - Incorporate electric vehicle charging capability (station ready) for a determined capacity of total vehicle parking capacity at all newly constructed City buildings and facilities.
  - Work with NV Energy to assess the expansion of existing electric vehicle infrastructure to ensure facilities have capability to handle charging load, be able to meet the demand for increased accessibility of electric vehicles.
  - Adopt Design Standards and Minimum Requirements for municipal and private installations:
    - » Approve general design standards for electric vehicle charging
    - » Instructions, regulations, and warnings
    - » Signage and striping
    - » Additional requirements and standards shall be developed for handicapped/ADA accessible EV charging station spaces and loading.
    - » Charging station specifications and procurement standards for City charging units should consider products that are capable of charging users for power or other pay-per-use features, national network connections and RFID cards.

EQUITABLE	RESILIENT	HEALTHY	LIVABLE	INNOVATIVE
Develop training programs and continue partnering with CCSD and UNLV to ensure Las Vegas students and residents have access to the skills and resources needed for digitalized jobs. 	The advancement of smart networks will share data and information to increase efficient use of resources. 	Smart infrastructure roll-out can be used with smart platforms and information systems to inform healthy lifestyle choices for Las Vegas residents. 	Investment in smart infrastructure will enable the development of practical applications that can be used to improve life for residents. 	New, rapidly evolving innovations have the potential to transform land uses, means of transportation, and enhance economic development efforts. 

# || RESOURCE CONSERVATION



## GOALS

- A. Support efficient water management, reduce water consumption, and enact stronger water conservation strategies to minimize consumptive use
- B. Prioritize the use of renewable energy sources and improve energy efficiency.
- C. Reduce waste consumption and target net-zero municipal solid waste produced in the community.
- D. Mitigate and reduce municipal and community greenhouse gas emissions.

4-48

LAS VEGAS MASTER PLAN

4-49

04. SYSTEMS & SERVICES

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SUPPORT EFFICIENT WATER MANAGEMENT, REDUCE WATER CONSUMPTION, AND ENACT STRONGER WATER CONSERVATION STRATEGIES TO MINIMIZE CONSUMPTIVE WATER USE

Water is critical to the City’s ability to serve existing and future residents and for economic development opportunities through 2050. Southern Nevada is recognized as an industry leader in water resources management with connections to many stakeholders, both in Southern Nevada and among the states and nations that share the Colorado River. Although Southern Nevada has been successful in managing its resources to date, expanded effort, collaboration and innovation are necessary to meet community conservation and water use goals. Currently, residents, businesses, and visitors consume approximately 110 gallons per person, per day.

Since 1991, the Southern Nevada Water Authority (SNWA) has served as the region’s water wholesaler. SNWA manages regional water resources through the Water Resource Plan and a regional Conservation Plan, protects Lake Mead’s water quality, and provides regional water treatment, infrastructure, and conservation programs for Las Vegas residents and businesses. Water drawn from Lake Mead through three intake structures is pumped to two water treatment facilities and distributed to four public water purveyors in the region. The system is capable of treating and transmitting at least 900 million gallons per day, ensuring uninterrupted service to the growing community. The City of Las Vegas is primarily served by the Las Vegas Valley Water District (LVVWD), a member agency of SNWA. LVVWD treats and delivers water to city residents and businesses through the Southern Nevada Water System.

The SNWA maintains and updates a Water Resource Plan for the community, which reflects a diverse approach for meeting projected demands, including achieving the SNWA’s water conservation goal. Achieving this goal will necessitate changes from past development patterns and additional water conservation measures to meet projected water demands, including the City’s projected population increase of approximately 308,000 residents.

Beyond the SNWA, there are many state and federal partners responsible for oversight of Southern Nevada’s water resources and water quality.



- The U.S. Bureau of Reclamation manages water resources and facilities in the Western United States, including Lake Mead, Hoover Dam, and other reservoirs and infrastructure on the Colorado River.
- The Colorado River Commission of Nevada (CRC) is the State agency responsible for acquiring and managing Nevada’s share of water resources from the Colorado River.
- Nevada Division of Water Resources (DWR) and the State Engineer help permit, conserve, protect, and manage in-state surface and groundwater resources, water rights, and monitor well use.
- The Nevada Department of Environmental Protection (NDEP) oversees water quality for drinking water, discharges into the sanitary sewer system, and water pollution prevention and control through state-level permitting, enforcement and compliance with the National Pollutant Discharge Elimination System (NPDES) permit for the Municipal Separate Storm Sewer System (known as MS4).

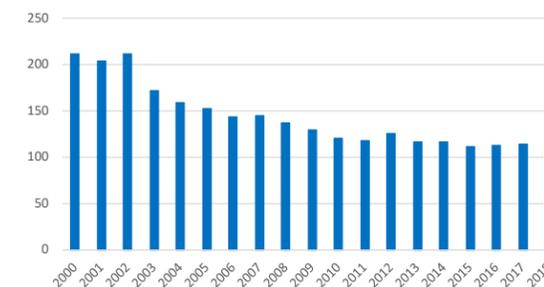
Water uses in the region are characterized as “consumptive” and “non-consumptive.” Consumptive uses, such as landscape irrigation, water-based cooling systems, and evaporation, are lost to the atmosphere and comprise 60 percent of all water demand. Conversely, non-consumptive

use occurs indoors. Both wastewater and stormwater leave the Las Vegas Valley through the Las Vegas Wash. Through both direct and indirect reuse, Southern Nevada recycles 99 percent of its wastewater and receives “Return-Flow Credits” that account for roughly 40 percent of the water used in Southern Nevada, making it the second largest resource of the region’s water resource portfolio. On average, 44 million gallons of wastewater are collected every day through the City’s 1,800 mile-long sanitary sewer system. This water is treated at plants operated by the City’s Public Works Department. A small fraction of the highly-treated effluent is directly reused as recycled water for secondary consumptive uses, but most is indirectly reused by returning Colorado River water to Lake Mead, allowing the community to reuse every gallon it returns. Through direct and indirect reuse, Southern Nevada recycles nearly all water used indoors, making water reuse the second largest resource in the region’s portfolio.

The City of Las Vegas has long been a vital partner in Southern Nevada’s water conservation efforts by supporting SNWA’s regional management efforts through the adoption of policies, drought restrictions and development standards. The City, itself, has reduced its annual municipal water demand 2.25 billion gallons over the past decade. The City also plays a vital role in the regulation of utilities, wastewater collection and treatment, stormwater management, and implementation of the regional conservation plan.

As a continuation of its previous efforts, the City must continue to lead by example, advancing water efficiency measures to reduce water consumption, lower costs, and ensure a safe, and reliable water supply for the future.

GALLONS PER PERSON, PER DAY (GPCD)



Source: SNWA



SEE ALSO:  
SNWA Water Resources Plan  
SNWA Conservation Plan

OUTCOMES

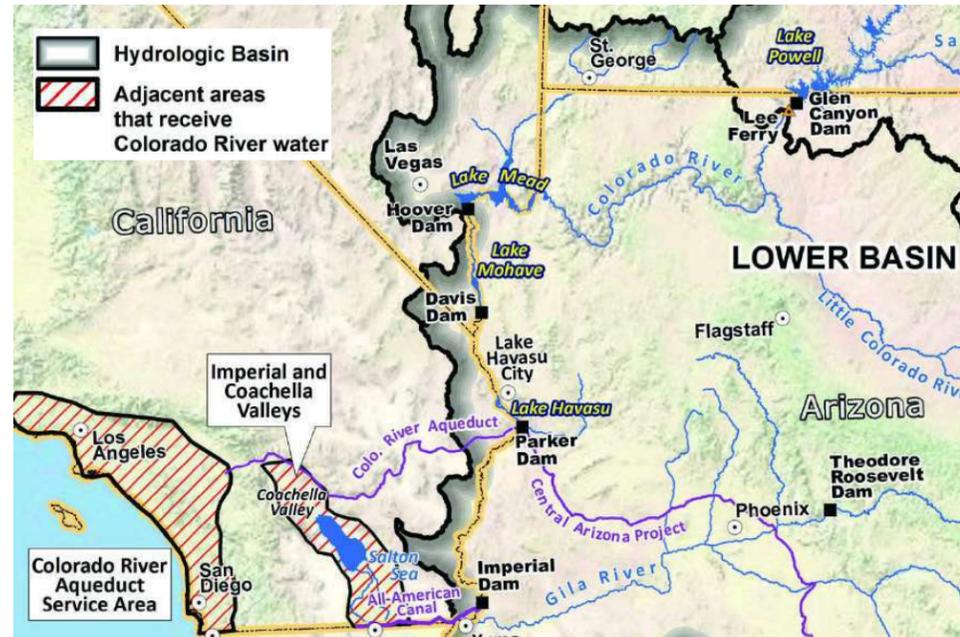


- Community water consumption will be reduced to 105 GPCD by 2035 and 90 GPCD by 2050, consistent with SNWA’s Water Resource Plan
- CLV municipal operations shall reduce total water consumption 2% annually, covering the sectors of buildings and facilities, park and landscaping, and wastewater treatment
- LVVWD incurs no violation of Safe Drinking Water Act/EPA drinking water rules for chemical and microbial contaminants and turbidity
- The City remains in compliance with its NPDES permit with no violations of Clean Water Act effluent and reporting guidelines for all treated wastewater
- The City incurs no major NPDES violations on its MS4 permit for stormwater quality

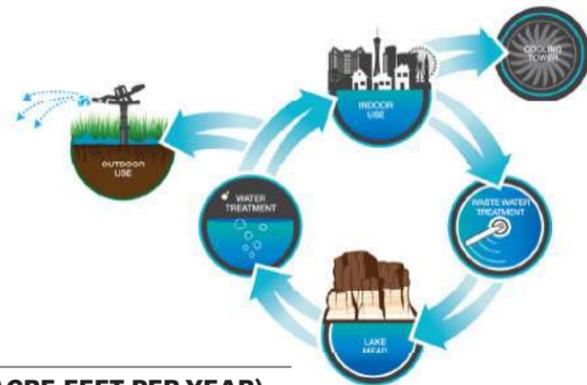
KEY ACTIONS



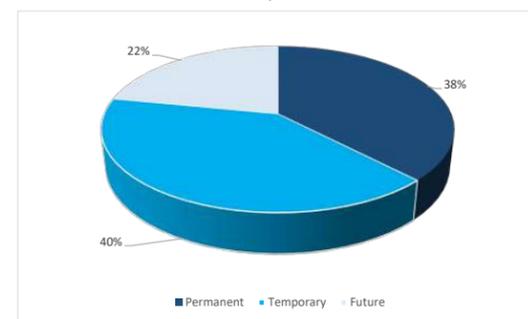
- Collaborate with SNWA on updates to the Water Resources and Conservation Plans, specifically as it relates to development trends and projections, land use, and conservation best-practices.
- Engage LVVWD and/or SNWA to develop programs and participate in the development design review processes to ensure projects meet or exceed minimum expectations for water efficiency.
- Ensure a continued commitment to water efficiency and water reduction for municipal operations.
- Collaborate to clean up sensitive areas that flow to Lake Mead to prevent stormwater pollution, and comply with the NPDES MS4 permit.
- Manage, maintain, and upgrade water and wastewater treatment infrastructure to reduce leaks in the system and eliminate contamination, ensuring clean water returns to Lake Mead for return-flow credits.



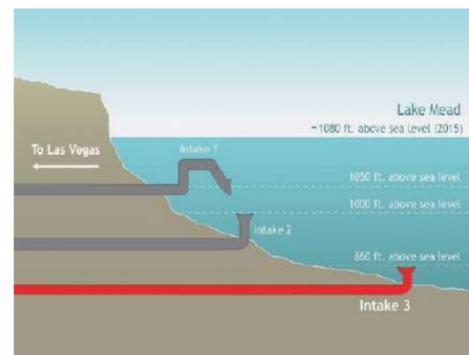
Southern Nevada Water System



**WATER PORTFOLIO (ACRE-FEET PER YEAR)**



Source: SNWA



**NINETY PERCENT OF ALL WATER DELIVERED IN SOUTHERN NEVADA COMES FROM THE COLORADO RIVER**

The “Law of the River” – a collection of agreements among the seven Colorado River Basin states and Mexico governs the allocation of water rights. Nevada is allocated 300,000 acre-feet per year (AFY), or about 98 billion gallons of consumptive use from the river - less than 2% of the total 16.5 million acre-feet allocated. Despite this small slice of the Colorado River, being adopted at a time when Southern Nevada was sparsely populated and when water flows were not representative of drought conditions, Southern Nevada has continuously innovated and thrived. Since 2002, aggressive conservation efforts have allowed the region to serve more than 730,000 additional residents while using 35 billion gallons less Colorado River water.

Although the SNWA Water Resource Plan contains a range of demand and supply scenarios, the plan relies on additional water efficiency gains across all scenarios. New development in Southern Nevada must be significantly more water efficient than existing development. Through negotiations with other Basin States, other rules, laws, and interim guidelines have been adopted that address water allocations during periods of shortage. As a region, Southern Nevada used 244,000 AFY in 2018. After each update, SNWA’s Water Resource Plans ensure water demand throughout the region is met by managing supplies and accounting for changing climatic conditions within the Colorado River Basin.

- Permanent: As of 2020, approximately 365,000 AFY
  - Colorado River – 300,000 AFY: Nevada’s allocation of Colorado River water flows representing 90 percent of Southern Nevada’s water supply used almost entirely for municipal and industrial purposes.
  - Groundwater – 46,961 AFY: LVVWD has more than 40,000 acre feet of senior rights, stored as a “banked” future reserve through artificially injected recharge.
- Temporary: As of 2020, approximately 1.97 million acre-feet / 390,000 AFY: These resources, including water banking and intentionally created surpluses, are flexible arrangements with other states that can

be used to meet potential short-term gaps in supply or demand, including as a bridge resource as other future resources are developed.

- Future: Includes desalination, transfers and exchanges. Each of these resources would only be utilized in the event water demand and climatic conditions warrant their development. Each have their own economic costs and legal constraints.

**SNWA AND THE LAS VEGAS VALLEY WATER DISTRICT PROVIDE CUSTOMERS WITH HIGH QUALITY WATER IN COMPLIANCE WITH SAFE DRINKING WATER STANDARDS**

Water drawn from Lake Mead is treated at SNWA’s world-class water treatment facilities, which include multiple stages of filtration and disinfection. Each year, SNWA scientists collect more than 50,000 water samples and conduct more than 300,000 analyses to ensure Southern Nevada’s drinking water meets or surpasses state and federal standards. As Lake Mead’s water level declines due to drought the cost and complexity of drinking water treatment increases. The City must be proactive in its stormwater pollution prevention and wastewater treatment efforts by enforcing the MS4 permit to ensure protection of water quality within the reservoir.

**THE COLORADO RIVER BASIN IS SUBJECT TO DROUGHT, AMONG THE TOP ENVIRONMENTAL THREATS LAS VEGAS MUST CONFRONT AND ADAPT TO**

Since 2000, the Colorado River Basin has experienced diminished flows and shrinking reservoir storage. This is a result of drought and changing climatic conditions that result in higher temperatures, changing continental weather patterns, and more variable precipitation that has impacted water elevations at lakes Powell and Mead, the river system’s two largest storage reservoirs.

Climate change projections show reduced Colorado River flows and greater water demands for outdoor irrigation and cooling. Southern Nevada must continue to proactively plan for drought conditions and climate change. The SNWA Water Resource Plan anticipates the potential of continued and even worsening drought and climate, but demonstrates sufficient water supplies to meet projected demands through 2050, provided the community achieves water

efficiency targets and continues to maintain and develop a diverse water resource portfolio.

This plan considered SNWA's Water Resource Plan, which includes a range of future water demand and supply scenarios with impacts from drought and climate change. Under all the scenarios, achieving the water conservation goal is necessary to meet future demands, and as a result, this plan includes a commitment to aggressive water conservation. The climate change with conservation scenario assumes future water use at about 100 GPCD by 2035 and about 90 GPCD by 2050.

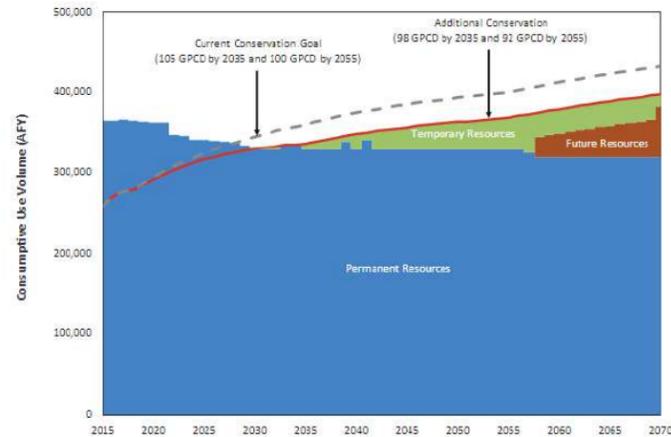
**CONTINUED DROUGHT ON THE COLORADO RIVER MAY REDUCE THE REGION'S ALLOCATION**

Lake Mead is the nation's largest reservoir, at 247 square miles when full, having a total capacity of 29.7 million acre-feet, and having a maximum designed water surface elevation at Hoover Dam of 1,220 feet, capable of storing

8.5 trillion gallons of water. As elevations fall, water levels will be below SNWA's three intakes. At elevation 895, Lake Mead would reach deadpool, with Colorado River Water no longer being able to pass Hoover Dam.

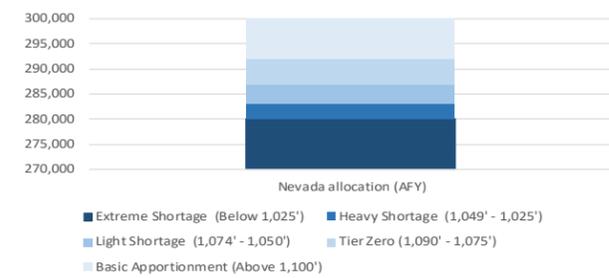
Sustaining operational water levels in Lake Mead is essential to the system's ability to continue to supply Colorado River water to California, Arizona and Mexico. As such, agreements have been forged among the Bureau of Reclamation, Colorado River basin states, water users and Mexico to reduce their allocations under certain lake level conditions and ensure continued operations. These "shortage" agreements have the potential to further shrink Southern Nevada's available supplies.

As of 2020, Lake Mead's elevation was falling and stood at elevation 1,090 at Hoover Dam, representing a decline of 130 feet and standing at 40% of total capacity. While water left in Lake Mead by the Tier Zero cutbacks, which were initiated in 2019, can only be recovered once the lake's elevation increases to 1,100 feet.



*Climate Change Hydrology, with additional conservation; while this model will change annually, this represents SNWA's current snapshot*

**DROUGHT SHORTAGE ELEVATION CUTS**



Source: SNWA

In addition to the mandatory reductions, the SNWA signed with other basin states entered into the Lower Basin Drought Contingency Plan, an agreement requiring the Lower Basin states to make additional efforts to reduce Lake Mead's projected decline and further risks of allocation cuts.

**SOUTHERN NEVADA'S WATER USE STRATEGIES OF REGULATION, PRICING, INCENTIVES, AND EDUCATION HAVE MADE IT A RECOGNIZED LEADER**

Of all metered water consumption, the residential sector accounts for approximately 60% of all consumptive use. Single-family residential accounts for the vast majority of this consumption; at a typical home, 80% of use is for outdoor irrigation. Because of this, the majority of conservation efforts have been directed at this sector. Since 1991, SNWA has managed one of the most progressive and comprehensive water programs and is detailed in its 2019 Conservation Plan:

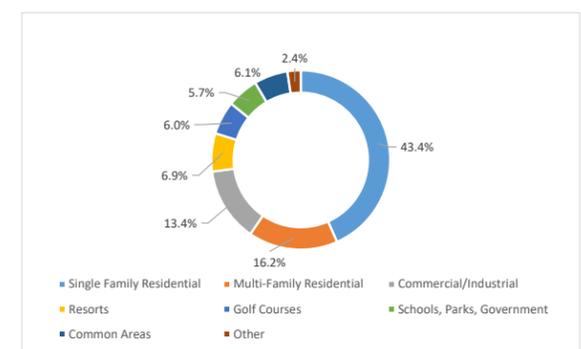
- **Regulation:** The City, along with its neighboring jurisdictions, maintains development standards limiting the use of turf restrictions, to reduce irrigated turf. This was the most productive conservation, cutting the consumptive water demand of new homes and businesses by more than half. LVMC also includes regulations to eliminate and reduce excess water use, as well as establish landscaping standards. They also establish standards for irrigating times of day, days of week, and seasonal watering restrictions.
- **Water Pricing:** SNWA's member agencies utilize increasing-block tiered rate structures that charge higher rates as consumption increases, creating financial incentive for property owners and encourage water conservation.
- **Incentive Programs:** SNWA has invested more than \$250 million to incentivize the conversion of ornamental lawns with drip irrigated plantings. As of 2020, this program has replaced more than 196 million square feet of lawn grass, saving an estimated 11 billion gallons annually and more than 140 billion gallons cumulatively. Other programs subsidize adoption of new water efficiency technologies for homes and businesses.

- **Education:** SNWA and the City partner to provide information to water users, including educational classes, online resources, school programs, advertising campaigns, and numerous other avenues to engage the community and help residents understand efficient use of water in the desert.

**TO MEET SNWA'S PROJECTED CLIMATE AND DEMAND SCENARIOS, THIS PLAN'S LAND USE STRATEGY CAN LEAD TO GREATER WATER EFFICIENCY**

Given current gallons per person, per day (GPCD), housing composition, and population, the average per housing water consumption is approximately 307 gallons per unit per day. Under this plan's new TOD place types, a wider range of housing, especially multi-family type units would be created. The key feature with these units is that they are within buildings and structures that are not so tall to require evaporative cooling or a cooling tower and can capitalize on highly-accessible outdoor spaces, rather than each unit having its own dedicated outdoor space. SNWA data show multi-family units in buildings four stories or less have the greatest per capita water efficiency. Applied citywide with existing housing stock, SNWA's overall water conservation objectives and targets are attainable, especially if employed within other jurisdictions. Additionally, the City must also similarly strengthen and reform LVMC Title 14 and Title 19 Unified Development Code to ensure overall regional conservation goals are met and water demand reduced.

**METERED WATER CONSUMPTION (2019)**



Source: SNWA

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CURRENT WATER CONSUMPTION (gallons per day by total acreage)					
PLANNING AREA	Attached Residential	Commercial	Industrial	Multi-Family Residential	Single-Family Residential
Angel Park	271,172	808,374	0	1,674,142	4,285,457
Centennial Hills	120,999	891,591	5,538	744,755	4,936,060
Charleston	416,836	2,008,287	203,083	1,964,821	5,693,627
Downtown	404,024	901	251,923	859,842	724,415
Downtown South	180,648	370,256	331	104,020	1,296,883
East Las Vegas	521,319	559,555	101,912	1,319,032	3,343,097
West Las Vegas	169,060	109,591	30,644	408,857	1,145,916
Kyle Canyon	0	5,023	17,914	66,633	1,221,080
La Madre Foothills	0	76,326	238,235	192,722	1,992,873
Lone Mountain	227,430	389,381	7,036	795,321	3,632,092
Twin Lakes	691,437	1,528,394	25,909	2,659,558	5,494,486
Nu Wav Kaiv	0	0	0	0	0
Rancho	94,868	757,117	25,005	379,770	4,962,440
Summerlin North	691,884	866,073	4,547	1,267,266	7,024,876
Summerlin West	691,884	19,150	0	99,173	2,228,950
Tule Springs	0	123,678	0	0	3,634,503
<b>Total consumption:</b>	<b>4,481,562</b>	<b>8,513,697</b>	<b>912,077</b>	<b>12,535,913</b>	<b>51,616,755</b>

RESIDENTIAL BUILDING TYPE	HOUSING UNITS	LAND ACRES	YEARLY USE (1,000 GALLONS)	GPCD
Multi-Family, 1-floor	5,599	326	441,710	93.0
Multi-Family, 2-floor	76,594	3,214	6,015,886	88.1
Multi-Family, 3-floor	11,472	387	763,516	86.0
Multi-Family, 4-floor	2,743	53	165,243	76.6
Multi-Family, 5+ floor	5,531	79	422,825	175.4
SFR (aggregate)	294,413	43,808	40,488,848	143.4
SFR Units/Acre: 0.5	125	492	120,287	1,152.3
SFR Units/Acre: 2	12,006	5,786	4,317,771	372.7
SFR Units/Acre: 5	18,571	3,764	3,322,578	191.1
SFR Units/Acre: 8	31,149	3,893	3,706,575	122.8
SFR Units/Acre: 10	27,905	2,791	2,778,274	102.4
SFR Units/Acre: 12	19,702	1,576	1,768,082	92.5
SFR Units/Acre: 14+	28,217	1,378	2,195,610	82.7

Historically, single family homes are the most water-intensive dwelling units due to their low density and expansive irrigated landscaping. Furthermore, low density development increases the amount of infrastructure required to serve each resident. With each additional mile of distribution pipe comes greater potential for system losses due to leaks. An analysis conducted by LVVWD found ten single family detached homes could be supported on an acre of land with just 13 percent more water than if five such homes were built on the same parcel, while supporting more than twice as many residents. Higher density in multi-family housing has similarly beneficial effects. The Placebuild tool uses historic data associated with specific residential housing types and land uses to assess average daily gallons of water used per housing unit, per day, based on the specific mix of use types.

Source: Placebuild tool, SNWA, LVVWD

**IMPLEMENTATION STRATEGIES**

- Collaborate with SNWA on updates to the Water Resources and Conservation Plans, specifically as it relates to development trends and projections, land use, and conservation best-practices.
- Engage LVVWD and/or SNWA to develop programs and participate in the development design review processes to ensure projects meet or exceed minimum expectations for water efficiency, which may include but is not limited to:
  - Offer comprehensive programs for low-income or multifamily households.
  - Partner to design, advertise, and/or implement a low-income program that goes beyond direct-install indoor or outdoor drip systems
  - A tree and landscaping incentive program to replace sick, dying, non-native, or non-adaptive trees with xeriscaping, water efficient, drought tolerant species
  - Required community benchmarking, rating, and water use, either for all buildings.
  - Make applicable corresponding water conservation code changes to LVMC Title 14 and LVMC Title 19 Unified Development Code that go beyond those currently adopted and provide additional requirements and scrutiny during the approval process
    - Include LVVWD staff on development application to assess water use
    - Reduction or elimination of variances, waivers, or exceptions governing landscaping, use of turf
    - Adoption of specific low-impact development standards
- Additional scrutiny on water features
- Mandatory prohibitions and stricter standards for approval for any turf
- Approvals for limited use and application of rainwater harvesting and cisterns, to be used to supplement water needs for personal gardens or existing landscaping
- Required water actions to improve building efficiency, including:
  - Point of sale water audit requirement
  - Energy efficiency provisions in rental properties
- Enable the City's Code Enforcement division to provide additional fines for water waste
- Ensure a continued commitment to water efficiency and water reduction for municipal operations:
  - Installing and maintaining artificial turf for the majority of new athletic and sports fields
  - Revising design standards for public buildings and facilities to ensure xeriscaping and proper use of species
  - Non-functional turf at City parks or private parks, or schools
  - Further eliminating or reducing non-functional turf
  - Conducting water audits and leak detection to determine any system losses
- Work with public agencies, non-profits, and members of the public to clean up sensitive areas that flow to Lake Mead, including the Las Vegas Wash and its tributaries, to prevent stormwater pollution, and comply with the NPDES MS4 permit.
- Manage, maintain, and upgrade water and wastewater treatment infrastructure to reduce leaks in the system and eliminate contamination, ensuring clean water returns to Lake Mead for return-flow credits.

EQUITABLE	RESILIENT	HEALTHY	LIVABLE	INNOVATIVE
Higher density housing will optimize water resource and infrastructure use, reducing long-term costs for both new and existing residents.	Proactive planning will ensure water scarcity will not impact the quality of life, environment or economy.	Water is essential to human health and a healthy, living environment, and resources should be used wisely.	Focusing on enhancing parks rather than individual "yards" will prevent excessive water consumption, and increase quality of life.	Smart metering will enable both customers and water agencies provide feedback on usage patterns and swiftly identifying leaks.
				

## II.B CONSERVATION: ENERGY

✓ NRS 278.160.1(a)(1)

### PRIORITIZE THE USE OF RENEWABLE ENERGY SOURCES AND IMPROVE ENERGY EFFICIENCY

The City of Las Vegas is a leader in clean energy, investing more than \$70 million in renewable energy and energy efficiency upgrades over the past decade. The City has also been equally invested in constructing, LEED certified green buildings as well as sustainable transportation by committing to utilizing clean fuels and electrifying its vehicle fleet. As technology changes quickly, it is important for Las Vegas to continuously monitor and update its infrastructure coordination plans directly alongside the utility to ensure a reliable grid.

Both the public and private sector entities play important roles in ensuring the reliable and sustainable delivery of energy, such as:

- The City of Las Vegas (and the Southern Nevada region as a whole) are largely served by the state's two primary investor owned utilities: NV Energy for electricity and Southwest Gas for natural gas. Both generate, procure, transmit, and safely distribute energy for the City's consumers; The City Council is empowered to provide utilities by franchise and has done so for both
- The City regulates the placement of power plants, energy systems, substations, and utility infrastructure across the City through zoning regulations.
- Both gas and electric utilities are subject to oversight and regulation by the Public Utilities Commission of Nevada (PUCN) to ensure compliance with state laws, analyses of utility rates, safety checks of utility operations, and resolution of consumer complaints.
- The Nevada Governor's Office of Energy (NGOE) oversees statewide energy policy and energy programs.

The transition to cleaner energy sources will yield numerous benefits, including potential for economic development, cleaner air, reduced costs, and reduced greenhouse gas emissions, yet the transition to a low-carbon future requires coordination in utility planning.



#### OUTCOMES



- 80% of region's energy consumption at residential and commercial buildings is reduced through energy efficiency measures by 2050
- 50% of both municipal and community energy supply is from renewable sources by 2030, consistent with the Nevada RPS; and 100% by 2050
- Municipal operations shall reduce total energy consumption 2% annually, covering the sectors of buildings and facilities, streetlighting, and wastewater treatment

#### KEY ACTIONS



- Continue leading municipal clean energy efforts
- Expand community renewable energy, energy conservation, storage, and green building efforts
- Study, determine the feasibility, and/or implement City energy programs in partnership with the region's utilities
- Electrify transportation by developing a robust EV charging network



The City has constructed more than 6 megawatts of solar covered parking at forty City facilities, parks, fire stations, and community centers. The Water Pollution Control Facility's solar plant provides clean power for energy intensive wastewater treatment operations, in addition to methane from anaerobic digestion and a 4 megawatt allocation of hydropower from Hoover Dam. Since 2017, 100 percent of municipal operations have been powered by clean energy through Renewable Energy Agreements with NV Energy.

### NEVADA'S ENERGY PORTFOLIO MUST CONTINUE TO DIVERSIFY AND TRANSITION TO CLEANER ENERGY SOURCES

In order for buildings and homes to become more sustainable, Nevada's energy portfolio must continue to diversify and transition to cleaner energy sources at an increased pace. The state's Renewable Portfolio Standard currently require 50% of NV Energy's retail sales to come from renewables by 2030, yet there are currently 12 gigawatts of installed electric capacity in Nevada's portfolio. The majority of electricity supplies (4,600 megawatts) come from natural gas fired power plants. In order for buildings and homes to decarbonize, the City of Las Vegas and NV Energy must incentivize residents, commercial buildings, and industry members to utilize solar where possible; power-purchase agreements and public-private partnerships will be made to ensure equitable roll-out of resources.

Conventional hydropower is one of Nevada's largest renewable resources, stemming from the Hoover Dam. More than half of the power produced there goes to the state of California and Southern California cities; about a quarter goes to Arizona; the remainder goes to Nevada, (237 MW) for customers in Las Vegas. While hydropower is a clean source of energy and is mostly reliable, hydropower

generation is susceptible to changing climatic conditions; lower lake elevations can have a dramatic effect on power production which is likely to cause a problem in the future.

With the shutdown of both Reid Gardner in Moapa and Navajo Generating Station near Page, AZ, coal-fired electricity has been completely phased out of NV Energy's southern Nevada portfolio in accordance with Senate Bill 123 (2013) Legislative Session, which required the reduction of 800 MW of coal-generated electricity in Nevada. Natural gas is primary resource for Nevada used for power generation and heating, with more than 4,300 MW of capacity in Southern Nevada for generation, including for "peak" cooling load conditions during the summer.

Southern Nevada has some of the highest solar potential in the country that can be taken advantage of by solar photovoltaic (PV) panels, solar thermal power plants, solar cooling, or solar thermal collectors, yet the renewable portfolio of the area is still below the levels it needs to be for Las Vegas to achieve its goals.

Large-scale solar PV and concentrated solar thermal projects are among the largest in the world in terms of capacity and footprints; further installations by NV energy are required to ensure buildings are able to decarbonize. NV Energy's SolarGenerations rebate program and net-

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energy metering policies have resulted in more than 46,300 rooftop systems being installed in Southern Nevada, with more than 110 megawatts installed in Las Vegas. The falling cost of solar makes it an attractive electricity supply over business as usual; utility-scale plants and rooftop solar businesses and homeowners must be built to ensure a sustainable transition.

The vast majority of the State's RPS requirements are being fulfilled from geothermal power plants located in Northern and Central Nevada. An estimated sixty percent of Nevada's geothermal potential remains untapped. With proper maintenance, geothermal power plants may have operating capacities of up to fifty years. New geothermal energy exploration, however, contains higher risks due to drilling production wells in optimal locations.

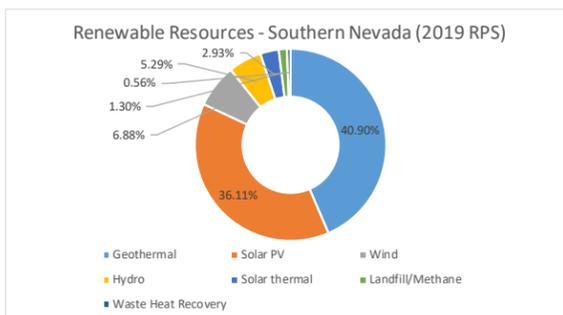
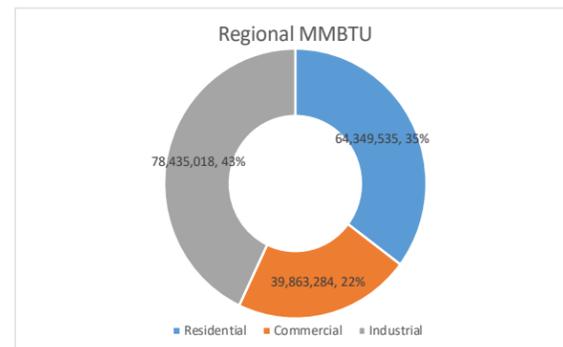
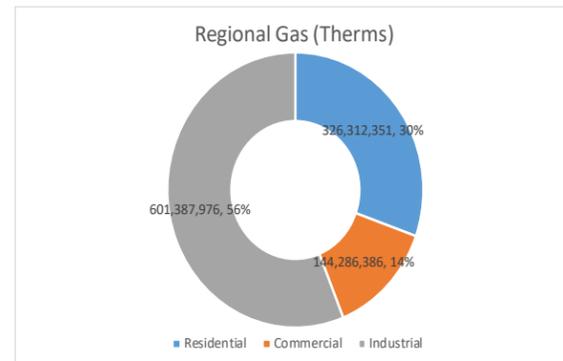
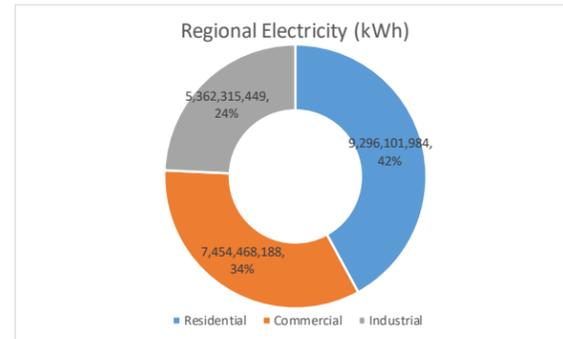
Wind power can supply renewable energy in areas considered to have "Outstanding" resource potential, where sustained annual average wind speeds are approximately 18 miles per hour at a height of about 160 feet. While wind is somewhat predictable in these areas, like solar, it suffers from intermittency issues. While City zoning does permit small wind systems, there are few areas where turbines are viable and cost effective.

Biomass, consisting of food, plant and wood waste, and organic material are the most common feedstocks for energy. Similarly, it produced biogas that can be captured and burned for electricity production. Nevada has four biomass/landfill gas projects, one of which is located at Apex Regional Landfill.

Based on current and future energy demand noted in triennial resource plans submitted to the PUCN, NV Energy estimates approximately 5,850-6,800 MW of peak demand in Southern Nevada by 2038. Furthermore, with an anticipated addition of 308,000 new City residents in 119,000 new dwelling units, it remains imperative to address overall consumption, even if the sources continue to become cleaner, and to support efforts for expanded transmission to resource areas in Northern Nevada.

**COMMIT TO GREEN BUILDING AND ENERGY EFFICIENCY IMPROVEMENTS**

The cheapest kilowatt is the one that is not produced. This will require the improvement in operational efficiencies, code development, provision of programs and incentives,



Source: NV Energy, Southwest Gas, PUCN

and monitoring the consumption of energy for each of the region's major sectors.

Almost two in three Nevada homes use natural gas as their primary heating fuel. Southwest Gas relies on out of state supply piped from resource areas in Wyoming. When heat is available as a by-product of other processes, waste heat energy recovery can be utilized to collect waste heat that would typically be wasted and use it to generate power.

Overall, in-home energy usage has increased dramatically over time. In 2019, the Southern Nevada residential sector consumed 8.9 billion kWh of electricity and 231 million therms of natural gas. The Residential Energy Consumption Survey conducted by the U.S. EIA shows that space heating is no longer the majority of energy used at home. In 1993, appliances, electronics, and lighting consumed twenty-four percent of a home's energy. By 2009, that number increased to almost thirty-five percent due to the increase rechargeable personal electronics and in-home entertainment systems. Personal electronics may have boosted the share of energy consumed within the home, but overall average home energy consumption is actually decreasing and has been over the past thirty years. Newer homes, although typically larger, have energy efficient air conditioning, space heating, and appliances. New Federal, state, and local energy codes have addressed energy consumption through conservation.

Over the past decade, Southern Nevada's building officials adopted more efficient energy codes to ensure that new buildings are built as efficiently as possible, and currently require buildings to be constructed to 2018 International Energy Conservation Code (IECC) standards.

Southern Nevada's commercial sector, consisting of hotels, casinos, retail stores, offices (business and government), restaurants, schools and other similar buildings, consumed 11.3 billion kWh of electricity and 108 million therms of natural gas in 2019. The industrial sector consumed 8.9 billion kWh of electricity and 540 million therms of natural gas during the same period. While total energy use in these sectors has increased in the last decade, the share of energy use in the industrial sector has substantially decreased due in part to efforts to increase building efficiency.

Green certified commercial and industrial building stock surged in Nevada after the 2005 Legislature authorized a 50% abatement of property taxes for green LEED certified

buildings for ten years; while the standard has since been modified, LEED certified buildings in Nevada continue to receive property tax abatements through this program. Considerable resource savings can be achieved under LEED, which also contributes to reduced operating costs over the life of the building.

However, not all market segments, income levels, or building types may be addressed, especially for some low-income and multi-family building types. Existing buildings programs can be utilized to improve lighting insulation, weatherization, and air sealing. Both utilities offer demand side management, energy efficiency, and renewable energy assessment, rebates, and demand side management programs for some homeowners and businesses. The City has offered Commercial Property Assessed Clean Energy (C-PACE) as a strategy to help finance energy efficiency and renewable energy improvements, but is not enabled for residential property.

As energy storage technology improves, new opportunities will develop to pair solar generation with energy demand management, allowing buildings to generate and store solar throughout the day and use stored energy during peak cooling periods and at night. Where possible, the City must address building energy efficiency as technologies and building types continue to evolve, either through direct programs or through partnerships with the utilities.

Although these upgrades have resulted in efficiency gains, true decarbonization will require a more aggressive approach to the energy supplies of these buildings and commit to conservation.

**ENSURE ACCESS TO SAFE, SECURE, RELIABLE AND RESILIENT POWER THAT'S EQUITABLY PRICED**

Both utility companies have maintained good records of safety and monitoring. The electrical grid is particularly notable due to the deployment use of smart meters, which allows the utilities continuous monitoring and to record interruptions within the grid. If and when disruptions do occur, the "smart grid" allows for a faster response to address the outage and restore service. The diversification of the portfolio has also made the electricity much more resilient, and the advent of energy storage, building load management, and other energy innovations when paired with renewables will only further help grid reliability. As the

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respective gas and electrical grids age, both the City and PUCN must continue to regulate the utilities to ensure they are resilient and reliable.

Energy providers must balance supply with demand. While this happens on a daily basis throughout the year, the summer “peak” months pose the most challenging balancing times of the year because of high energy consumption when air conditioning use is at its maximum. During these times of peak demand, energy prices are typically higher. Power plant operators can increase or decrease production to accommodate different load types and profiles. “Peaking” power plants can be started quickly and can respond to fluctuations in demand to meet this power need.

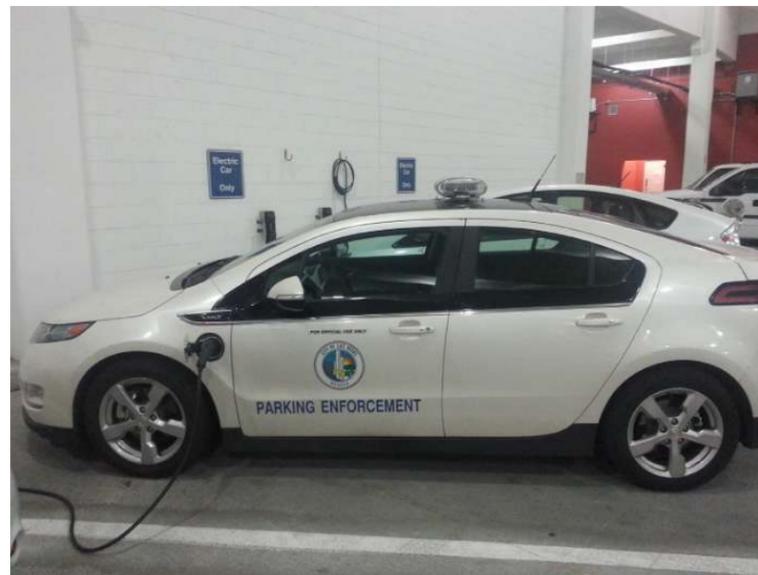
Equally important is the cost of energy, as they can impact residents of all income levels; low-income, minority, and senior households may be particularly susceptible to cost fluctuations. The average rate in Southern Nevada has remained low at 10.68 cents/kWh, lower than the national average of 12.52 cents/kWh; average monthly electric bills statewide are \$116, \$2 more than the national average. Consumers are faced with whatever rates are proposed by the utilities, subject to the review and approval of the PUCN. The City must monitor rate cases for City residents and businesses to ensure the cost of living and cost of doing

business is not adversely impacted by utility costs. It must also work with the utilities or offer programs that can be taken advantage of by the full spectrum of customer and building types.

**ELECTRIFY TRANSPORTATION TO REDUCE FUEL CONSUMPTION AND EMISSIONS**

Finally, transportation energy consumption and the resultant mobile source emissions has been steadily climbing for the past decade. Because the number of trips taken are by cars and annual vehicle miles (AVMT) traveled, have continued to rise, transportation energy consumption must be balanced and electrified. The City was the first public entity in the state to purchase electric (EV) and plug-in hybrid electric (PHEV) fleet vehicles and has invested in EV charging infrastructure at its facilities and garages.

As technology evolves, it is important for Las Vegas to continuously monitor and update its infrastructure alongside the utility to ensure a reliable grid. Parking, freight management, TOD, complete streets, the use of alternative modes and active transportation, carsharing and carpooling, demand side management and transportation electrification will all be important complimentary implementation strategies that have a range of other added benefits.



**IMPLEMENTATION STRATEGIES**

- Continue leading municipal clean energy efforts:
  - Construct new facilities to a minimum LEED Silver standards with solar
  - Integrate interior and exterior energy conservation measures and efficient lighting into Operations and Maintenance management strategies
  - Upgrade City facilities energy efficiency retrofit strategies
  - Benchmark energy and water consumption
  - Install EV charging infrastructure for fleet and/or public use
  - Establish a fuel efficiency requirement for non-electric fleet vehicles and adopt a fleet electrification policy
  - Assess and improve energy efficiency for wastewater treatment operations
- Expand community renewable energy, energy conservation, storage, and green building efforts
  - Monitor gas and electric rates for all customers
  - Amend Title 19 to permit planned or intended district energy or microgrids (allowable islands)
  - Adoption of the latest IECC and ensure Building and Safety staff is dedicated to energy code compliance and enforcement
  - Up-front support for developers and builders for energy code compliance, which may include education prior to permit issuance or application review.
- Study, determine the feasibility, and/or implement City energy conservation programs in partnership with the utilities:
  - Monitor gas and electric rates for all customers
  - Amend Title 19 to permit district energy or microgrids
  - Community solar programs
  - Voluntary PACE program for residential properties
  - Solar, energy storage, and EV ready requirements for residential and/or commercial buildings
  - Required community benchmarking, rating, and energy use, either for all buildings or buildings of certain sizes
  - Required energy actions to improve building performance, including:
    - » Point of sale energy audit requirement
    - » Energy efficiency provisions in rental properties
    - » Retrocommissioning requirements
  - Comprehensive energy savings programs for low-income or multifamily households.
  - Offer comprehensive energy efficiency programs for multifamily customers.
  - Incentivize increased distributed renewable sources and access to clean transportation and EV charging infrastructure among their customers.
  - Support transmission efforts, including Greenlink Nevada, to resource areas in Northern Nevada

EQUITABLE	RESILIENT	HEALTHY	LIVABLE	INNOVATIVE
Ensure utility prices are a fair portion of income.	Diversify the energy portfolio to mitigate and adapt to climate change by installing localized microgrids and other distributed energy resources	Increased renewable integration in the grid and reduced transportation emissions will lead to healthier air.	Low utility costs help keep Las Vegas competitive; improving housing stock can help keep energy affordable	Transportation electrification, energy storage, and green building will help decouple energy from growth.
				

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# II.C CONSERVATION: WASTE

✓ NRS 278.160.1(a)(2)

## REDUCE WASTE CONSUMPTION AND TARGET NET-ZERO MUNICIPAL SOLID WASTE PRODUCED IN THE COMMUNITY

Safe, long-term storage and management of municipal solid waste (MSW) is a critical component of a resilient city. Las Vegas has the opportunity to emerge as a net-zero waste city given its current recycling infrastructure and small, but active market, to address specialty recycling and other special waste streams. Given the projected population increases and number of new households, current waste disposal efforts and trends will only yield an increase in the total diversion rate to 30% by 2050 with current recycling trends and practices. Southern Nevadans must not only dispose of less waste per person per day, it must recycle a greater share of what is disposed of, yielding total average daily disposal rates less than 7.5 lbs.

Apex Regional Landfill, is the largest Class I municipal solid waste landfill by volume in the United States and has an expected lifespan of 200 years, with 300 of 2,200 available acres developed. Apex Landfill currently holds 60 million tons of waste and accepts an average of 6,900 tons of waste per day.

Republic Services of Southern Nevada serves the City of Las Vegas (and much of the region as a whole) under a franchise granted by City Council to provide solid waste and recycling service to City residents, businesses, and for government operations. Waste and recycling is further regulated several important ways:



- The Nevada Division of Environmental Protection (NDEP) oversees solid waste programs throughout Nevada.
- The Southern Nevada Health District (SNHD) serves as the region's Solid Waste Management Authority
- The City regulates Public Health and Safety pursuant to Title 9 of Las Vegas Municipal Code, including nuisances, solid waste, litter, and hazardous materials.

Aside from the City's authority to regulate solid waste and recycling, it has made waste reduction and recycling a priority in its municipal operations through its Sustainability initiative and through the City Council's (R-32-2017). 30,000 cubic yards (yd<sup>3</sup>) from 68,000 yd<sup>3</sup>, and increased its diversion rate to 55%.

### KEY ACTIONS

- Educate the public on proper recycling, determine additional opportunities to increase waste diversion rates, and address special waste streams while ensuring waste costs are kept low.
- Require the provision of single-stream recycling service at multi-family and commercial properties
- Conduct neighborhood clean-ups, ensure public spaces and right-of-way are clean and graffiti free, and sensitive areas of the Mojave Desert are trash-free.
- Continue waste reduction and recycling efforts for municipal operations.

### OUTCOMES

- 80% of the region's waste disposed of by landfill is reduced by 2050 and a recycling rate of at least 40% is achieved
- Eliminate landfill-based emissions by 2050
- CLV municipal operations shall reduce waste stream 2% annually

### SOUTHERN NEVADA HAS HISTORICALLY HAD LOW RATES OF RECYCLING AND WASTE DIVERSION. A NEED FOR STRONGER PROGRAMMING TO REACH ZERO WASTE BY 2050 IS NEEDED

Southern Nevadans (including City of Las Vegas residents) currently dispose of approximately 6 lbs of waste per person per day (1.19 tons per capita), and recycle 1.5 lbs of waste for a total disposal rate of 7.5 lbs. On average, 2.3 million tons of MSW and 1.4 million tons of industrial and special waste are disposed of; 586,000 tons of MSW and 915,000 tons of construction and demolition debris are recycled.

Single-family residences are required to have one pickup per week for trash pickup and single-stream recycling, with bulk items collected every other week. For the City of Las Vegas, it is estimated that approximately 170,000 tons of MSW is collected annually, with a 2019 recycling rate of 19.5%, on par with the regional recycling rate of 19.3%.

### THE CITY AND ITS FRANCHISEE CURRENTLY PROVIDES EFFECTIVE AND EFFICIENT WASTE SERVICES FOR MUNICIPAL WASTE STREAMS AT REASONABLE RATES

Waste disposal rates are nominal – for single family residences, waste collection costs approximately \$16 per month. Tipping fees at Apex are approximately \$32 per ton (2019), well below the national average of \$45 per ton.

### PREVENTING LITTER AND ILLEGAL DUMPING ARE ALSO CRITICAL TO PROTECTING THE NATURAL ENVIRONMENT AROUND LAS VEGAS AND THE CITY'S TOURISM INDUSTRY.

The physical appearance of a community plays an important role on the perception and image of it being livable. Not only are clean streets important for neighborhoods and the residents that live in them, it is important for commercial areas to do business and important for current and future visitors to have a positive impression of public places that are well-kept, clean and safe. Stormwater pollution prevention is also important to prevent waste from entering Lake Mead.



### SEE ALSO:

Nevada Solid Waste Management Plan

### RECYCLABLES MUST BE COLLECTED FROM MULTI-FAMILY AND COMMERCIAL PROPERTIES.

Many multi-family apartment and condominium complexes in Southern Nevada do not have recycling and those that do have low recycling rates; similarly, the provision of commercial recycling is available, but varies based on the types of businesses, tenants, and operations.

### ORGANIC WASTES AND COMPOSTING HAVE POTENTIAL TO INCREASE WASTE DIVERSION RATES.

The lack of regional agriculture limits local market demand for composting. Southern Nevada Water Authority's efforts to limit and reduce turf and other water-intensive landscaping over the past decade have also limited the amount of available yard waste for composting. While the lack of regional agriculture limits local market demand for compost, organics nevertheless represents a sizable share of the total waste stream, which may create a new market for composting and waste byproducts, and various waste-to-energy efforts.

The effects of food waste go beyond reducing pressure on global food supplies and food security issues; uneaten food goes to landfills where it decomposes and produces methane gas. Resorts have been active participants in food waste recovery and diversion and have been nationally recognized for efforts in reducing food waste. Locally, resort diversion efforts have made their way to the local food bank, which has a combined effort of food diversion, rescue, and preparation to food-insecure populations within the region. Additionally, at many resorts, inedible food waste and scraps are diverted for compost and used as animal feed.

Other positive innovative trends in the waste system include the installation of landfill gas capture and energy production at the Apex Landfill and landfill gas flaring at the closed Sunrise Landfill.

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**SMALLER SPECIAL WASTE STREAMS SUCH AS MEDICAL AND ELECTRONIC WASTE POSE SPECIFIC CHALLENGES TO ACHIEVING ZERO WASTE AND MUST BE MANAGED.**

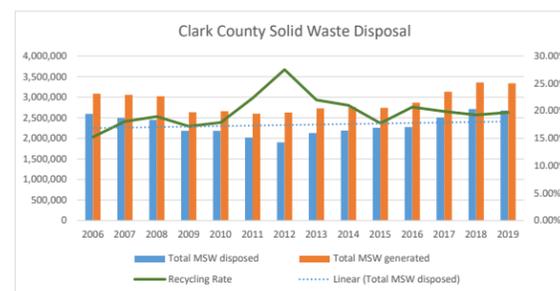
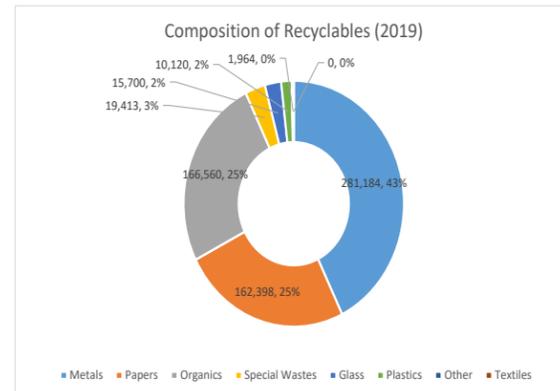
The City, in conjunction with the franchisee and Southern Nevada Health District, must continue to provide special waste stream services, ensure dissemination of information to the general public on the proper disposal of these special waste streams, and work with stakeholders through the development of a regional waste management plan that addresses ways to recycle, repurpose or reduce them. These waste streams may require additional recommendations and further treatment in future updates to the franchise agreement

**GLOBAL COMMODITY AND RECYCLING MARKET CHALLENGES COMPOUND DIFFICULTIES IN DIVERTING WASTE, AND MUST BE MONITORED AND MANAGED.**

Among the greatest is the current challenges of the global and national recycling and commodities market, in which most American recyclables are exported to China and other Pacific Rim countries. These countries have recently stopped accepting recyclables due to high rates of contamination – simply put, cleaner recyclable materials have greater value. It is important to note that market trends and structural changes will continue to occur by 2050 and these trends, as well as both demand and supply-side strategies, must be monitored.

**PUBLIC EDUCATION EFFORTS ARE NEEDED TO ENSURE PROPER WASTE DIVERSION**

According to a report from International City Manager Association, most Americans do not know what to dispose of and what to recycle. Many often dispose of recyclables in large plastic bags that cannot be processed by recycling facilities and do not keep recyclables empty, clean and dry. To help increase rates of recycling and emerge as a net-zero waste city, the City and franchisee must keep the provision of single-stream recycling services for all residents and businesses, and conduct a strong public education campaign on what to recycle and how to recycle.



Source: NDEP, SNHD

**IMPLEMENTATION STRATEGIES**

- Educate the public on proper recycling, determine additional opportunities to increase waste diversion rates, and address special waste streams while ensuring waste costs are kept low.
  - Reconstitute Keep Las Vegas Beautiful program as a part of Keep America Beautiful
  - Establish public education campaigns or focused outreach efforts to inform residents and businesses in achieving waste reduction targets
  - Create incentive programs to reduce waste
  - Establish a targeted waste management program
  - Assess the Republic Services Franchise Agreement for waste collection and provisions of recycling and determine additional opportunities
  - Adopt a specific regional waste management plan to address waste reduction targets that conducts an economic analysis of waste management operations and overall waste streams that ensure tipping fees, rates, and other charges reflect current costs
  - In conjunction with the waste franchisee, develop, implement, and advertise additional special and critical waste stream programs based on market conditions including a composting program, and additional programs for special waste streams
- Require the provision of single-stream recycling service at multi-family and commercial properties
  - Make applicable corresponding code changes to LVMC Title 9.08- Collection of Solid Waste and Recyclables and LVMC Title 19.12- Litter, considering reduction of specific material types, product bans, enforcement mechanisms, and fines that address litter, illegal dumping, graffiti, and harm to the natural and built environment
- Conduct neighborhood clean-ups, ensure public spaces and right-of-way are clean and graffiti free, and sensitive areas of the Mojave Desert are trash-free.
  - Conduct neighborhood and park clean-ups to keep them clean
  - Ensure public spaces and right-of-way are clean, free of graffiti
  - Clean up sensitive areas, such as the Las Vegas Wash and desert areas
- Continue waste reduction and recycling efforts for municipal operations.
  - Provide recycling at all City facilities, parks, and targeted public places for use by City employees and members of the general public
  - Conduct waste stream audits to determine the rate and composition of recyclables
  - Collect and divert special waste streams that arise from unique City operations, including general operations and maintenance, street sweeping, wastewater treatment, public safety and detention
  - Provide general information to all city departments and employees on proper waste and recycling disposal

EQUITABLE	RESILIENT	HEALTHY	LIVABLE	INNOVATIVE
Make recycling programs available to all while keeping rates low for residents and businesses.	Increase diversion rate from landfill through recycling and waste reduction efforts.	Reduced litter and pollution to private property, the desert and to the Las Vegas Wash keeps both natural and built environment healthy.	Ensuring the City is physically clean provides for a more inviting and livable community for residents.	Invest in landfill / biogas renewable energy production to reduce methane gas emissions
				

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## MITIGATE AND REDUCE MUNICIPAL AND COMMUNITY GREENHOUSE GAS EMISSIONS

Recognizing the global impact of climate change caused by greenhouse gas emissions, the Kyoto Protocol established a target of 80% greenhouse gas emissions reductions of all industrialized countries by 2050. Although the United States was not a participant in the Protocol, over 1,000 mayors, including former City of Las Vegas Mayor Oscar Goodman, were signatory to the U.S. Conference of Mayors' Climate Protection Agreement in 2006, committing to meet or exceed the Kyoto targets. Similarly, world leaders formed an agreement at the 2015 Paris Climate Conference to limit the rise in average global temperature to below 2°C. At the time, the U.S. committed to reducing its greenhouse gas emissions by 28% below 2005 levels by 2025.

Carbon dioxide (CO<sub>2</sub>), sulfur hexafluoride (SF<sub>6</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs) are the six gases contributing to climate change. These gases are measured in carbon dioxide equivalent (CO<sub>2</sub>e), the equivalent impact of each different gas in terms of the amount of carbon dioxide that would create the same amount of warming. for different sources:

- Scope 1: Stationary and mobile emissions from direct combustion, including vehicles, utility power generation, and wastewater treatment operations
- Scope 2: Emissions resulting from the purchase of generated electricity or heating
- Scope 3: Indirect emissions from sources related to associated activities, such as air travel, employee commuting, and contracted solid waste.

The City has been a leader in reducing and mitigating its environmental impact and annually discloses its municipal and community greenhouse gas emissions. With substantial investment in clean energy, energy efficiency, and recycling over the past fifteen years, the City's emissions plummeted. Additionally, the City has fulfilled its electrical load requirements through Renewable Energy Agreements with NV Energy beginning in 2017, dramatically reducing emissions from municipal operations. The City is not alone in greenhouse gas emissions inventory and mitigation efforts for each major sector.

The Nevada Division of Environmental Protection (NDEP) has conducted statewide inventories and future projections, including one in 2019, while Clark County has initiated new efforts to mitigate regional emissions. The major emitters and sources within the City and Southern Nevada include:

- Energy generation: Scope 1 and Scope 2 emissions from the generation of electricity from NV Energy power plants, with energy measured in million BTU's (MMBTU) and emissions using regional grid coefficients
- Residential, commercial, and industrial sectors: Scope 2 emissions resulting from the purchase of NV Energy's electricity and natural gas purchased from Southwest Gas for each sector. At a regional scale, municipal and civic energy consumption and emissions is also captured in these totals
- Transportation and mobile emissions: these are a function of vehicle miles traveled (VMT) as reported from NDOT and RTC; also included are total estimated enplanements from McCarran International Airport and daily trains running along Union Pacific tracks
- Waste: landfill based emissions, primarily methane, generated from the decomposition of municipal solid waste at Apex Regional Landfill and the closed Sunrise Landfill

Southern Nevada has negligible emissions from agriculture and land use; because these and other fugitive and Scope 3 sources cannot be easily be tracked, these were excluded. However, through this plan, the City will strive to meet targets through municipal, community, and regional mitigation and reduction actions.

### OUTCOMES



- Achieve carbon neutrality for City of Las Vegas municipal operations by 2050
- 28% of community greenhouse gas emissions are reduced by 2025 and 80% of community greenhouse gas emissions are reduced by 2050 from all major sectors

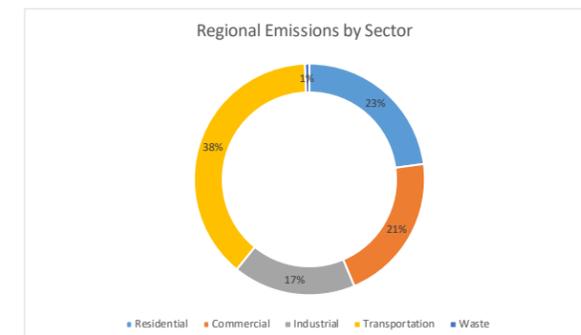
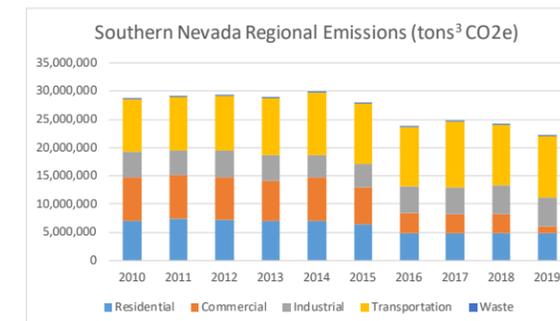
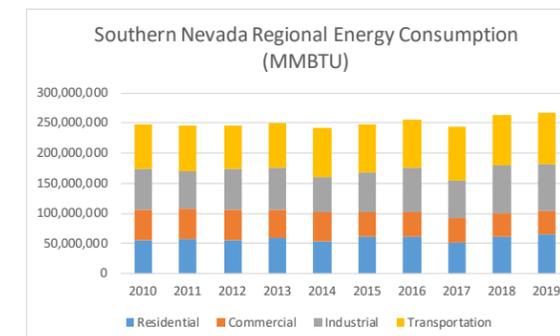


NV Energy has closed, demolished and divested ifrom coal-fired electricity generation, including Fort Mohave in Laughlin (2005), Reid-Gardner in Moapa (2019), and the Navajo Generation Station in Page, AZ (2019). Through legislatively approved emissions reduction and capacity replacement programs, combined with an increasingly stringent renewable portfolio standard, emissions from power generation have been reduced dramatically.

**2006 Municipal Emissions:** 309,000 tons CO<sub>2</sub>e  
**2019 Municipal Emissions:** 20,760 tons CO<sub>2</sub>e

**2019 City of Las Vegas Emissions:** 6.1 million tons CO<sub>2</sub>e  
**2019 City Emissions per capita:** 9.21 lbs. per capita

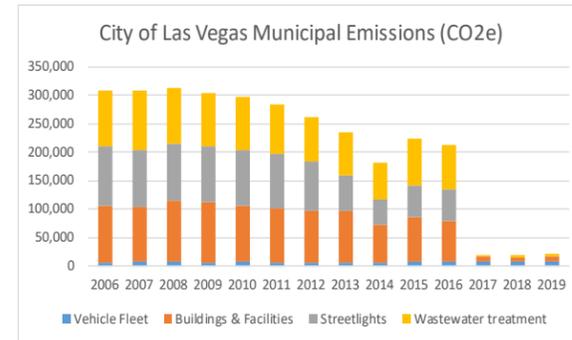
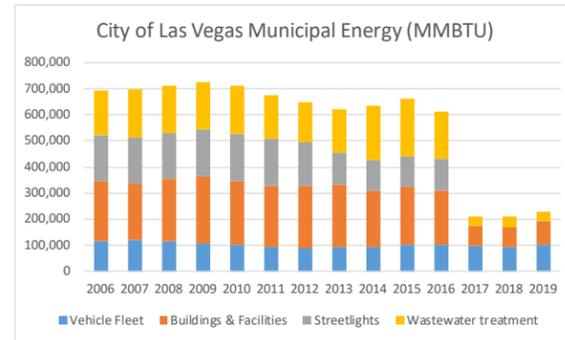
**2005 Regional Emissions:** 28.0 million tons CO<sub>2</sub>e  
**2019 Regional Emissions:** 22.3 million tons CO<sub>2</sub>e



Source: City of Las Vegas 2019 GHG Emissions Inventory

### KEY ACTIONS

- Emerge as a carbon neutral municipality
- Continue implementing community-wide energy efficiency and renewable energy programs for power generation and residential, commercial, and industrial sectors, while increasing waste diversion rates
- Focus efforts to improve transportation-based emissions through vehicle miles traveled (VMT) reduction and modal shifts, transit-oriented development (TOD), infill, and redevelopment, and transportation electrification



Emissions from City operations decreased due to the implementation of Renewable Energy Agreements with NV Energy, replacing the City's retail load with renewable energy from Boulder Solar (Source: CLV 2019-2020 Inventory, CIRIS v2.3, GPC protocol using 4AR GWP factors of IPCC guidelines, BASIC boundary, disclosed to Carbon Disclosure Project).

**THE CITY HAS BEEN SUCCESSFUL AT MITIGATING ITS MUNICIPAL EMISSIONS**

The primary sources of municipal operational emissions are from building and facility energy consumption, streetlighting, and wastewater treatment operations. Because renewable energy has been so heavily invested and because the City has entered into Renewable Energy Agreements with NV Energy to power the entire City's electric load, the City's only major source of stationary emissions are from natural gas consumption for building heating and wastewater treatment. Mobile emissions from the City's vehicle fleet are small, but could be further reduced.

**CLEAN ENERGY EFFORTS HAVE ALREADY RESULTED IN DRAMATIC EMISSIONS REDUCTIONS IN MANY SECTORS**

Over time, the residential, commercial, and industrial buildings sectors have seen dramatically reduced emissions as a result of cleaner power supplied by NV Energy. This is largely attributable to the state's renewable portfolio standard (RPS) and expanded renewable energy use at both the utility scale and for small distributed generation systems. As the RPS increases in stringency, a corresponding reduction in emissions will continue to occur. Concurrently, the retirement of coal fired power plants in Southern Nevada have dramatically altered the energy portfolio, leading to fewer emissions. Overall, future emissions are projected to remain stable, as will emissions from decomposing waste from both landfills, provided this plan's waste diversion and recycling strategies are also employed.

**TRANSPORTATION BASED EMISSIONS CAN BE REDUCED THROUGH TRANSPORTATION ELECTRIFICATION, PUBLIC TRANSIT INVESTMENT, AND LOCATION EFFICIENCY**

Because transportation is the next largest share of emissions, mobile emission mitigation efforts must be the primary focus in the future. Overall, future emissions are projected to remain stable, but making progressive reductions are dependent upon several factors:

- Federal fuel economy standards for passenger vehicles and trucks may change over time. Provided these standards are not relaxed, fuel-economy will likely continue to improve over time.
- Efforts to electrify personal transportation is a function of more electric vehicles being sold in the market as well as the provision and availability of electric vehicle charging infrastructure. Equally important is the need to electrify public transportation, either through electric buses or light rail transit.
- By implementing this plan's strategies for redevelopment, infill, and transit-oriented development and aligning with the RTC's On Board Mobility Plan that includes high capacity transit recommendations, the potential for reducing VMT, traffic congestion, and overall emissions increases. In addition, opportunities for balancing jobs and housing will also increase as more mixed-use place types are located and developed.

**IMPLEMENTATION STRATEGIES**

Many of the following implementation strategies overlap those discussed in other chapters and goals within this plan. Each will yield different levels of emissions reductions from stationary or mobile sources. As new infrastructure is constructed or programs are instituted, the City must collaborate with internal departments, investor-owned utilities, and regional agencies to track and measure reductions resulting from each respective strategy.

- Emerge as a carbon neutral municipality:
  - Conduct annual municipal greenhouse gas emission inventories and address other emission types
  - Continue energy efficiency and solar investments at City buildings and facilities
  - Require public infrastructure consider energy and emissions factors for new or upgraded infrastructure
  - Upgrade remaining streetlights to LED
  - Improve vehicle fleet fuel economy
  - Address additional sustainable purchasing and supply chain opportunities
- Continue implementing community-wide energy efficiency and renewable energy programs for power generation and residential, commercial, and industrial sectors, while increasing waste diversion rates
  - Conduct annual regional and communitywide greenhouse gas emissions inventories
  - Make additional investments in the urban tree canopy
  - Make progressive improvements to building energy codes and standards
  - Institute building performance rating and reporting programs
- Incentivize and install energy efficiency and renewable energy measures in partnership with investor owned utilities
  - Improve the efficiency of waste collection
  - Increase the community recycling and waste diversion rates
  - Landfill waste to energy initiatives
- Focus efforts to improve transportation-based emissions through vehicle miles traveled (VMT) reduction and modal shifts, transit-oriented development (TOD), infill, and redevelopment, and transportation electrification
  - Implement the 2050 Place types Map as described in the General Plan
  - Identify and institute brownfield and greyfield redevelopment projects
  - Increase funding and construct the layered complete street network as part of the City's Master Plan for Streets and Highways
  - Fund the high capacity transit program identified within RTC's On Board Mobility Plan
  - Invest in transportation electrification initiatives including electric vehicle charging infrastructure
  - Fund transportation demand management programs

EQUITABLE	RESILIENT	HEALTHY	LIVABLE	INNOVATIVE
Ensure specific groups are not overburdened by the effects of stationary or mobile emissions.	Coupled with adaptation strategies, current climate mitigation efforts prove the City's resilience to climate challenges	Improvements to increase location efficiency will result in more active transportation choices	Ensuring the City is a leader in mitigating emissions through a variety of community strategies improves the image and perception of the City's sustainability.	New methods and technologies to mitigate mobile and stationary emissions must be explored and pursued
				



## GOALS

- A. Provide equitable access to facilities and services that help meet residents' social needs, maximize their potential for development and enhance community wellbeing.
- B. Ensure healthy outcomes for all members of the community.

# III.A PUBLIC FACILITIES

✓ NRS 278.160.1(e) and NRS 278.165

## PROVIDE EQUITABLE ACCESS TO FACILITIES AND SERVICES THAT HELP MEET RESIDENTS' SOCIAL NEEDS, MAXIMIZE THEIR POTENTIAL FOR DEVELOPMENT, AND ENHANCE COMMUNITY WELL-BEING.



It is critically important that the expenditure of public funds on local infrastructure improvements and public buildings and facilities be closely coordinated to meet the continuing demands of anticipated growth and development throughout the City. Providing high quality municipal services in one of the country's most rapidly growing cities is challenging, especially with limited revenue and unpredictable funding sources. As new communities emerge on the edges of the City, while older mature neighborhoods redevelop and revitalize, balance is needed to plan for public buildings and public infrastructure that provide a broad range of services throughout the City.

One of the primary implementation tools for the 2050 Master Plan is the Capital Improvement Plan (CIP). The CIP is a fiscal and management tool the City uses to prioritize capital projects and allocate resources to fund public buildings and facilities projects to permit the City to govern, transact and conduct official business or operate essential services. NRS 278.0226 requires that the CIP decision making process be linked to the policies outlined within this plan. Each department in the City must coordinate capital improvements and operating and maintenance forecasts and expenditures within their individual budgets with the overall long range planning policies as contained in the 2050 Master Plan.

### KEY ACTIONS

- During future CIP planning, strategically identify priority facility and service needs and resources, whether provided by City, County, regional, state, or Federal providers, including the needs of priority populations and priority planning areas for evaluation to ensure adequate and equitable access to public resources.
- Implement the City's Sewer Facilities Plan to ensure wastewater treatment needs are met, especially in areas anticipated for infill and redevelopment.
- Continue proactive coordination with above ground and underground wet and dry utilities to ensure infrastructure is in place, the development process is smooth, and disturbances to pedestrian, bicycle, and vehicular rights of way are minimized.
- Collaborate with the Las Vegas-Clark County Library District to site and locate additional facilities in underserved and future growth areas.
- Dedicate more places and spaces for the arts.

### OUTCOMES

- To provide equitable access to all public buildings, facilities, and services, ensure that by 2050, 75% of residents live within 2 miles of a recreation or community center, library, or cultural center.
- Maintain a facility service standard of 3.6 City employees (non-public safety) per 1,000 residents and 321 square feet per employee



The City of Las Vegas is a limited services government; while some functions are the responsibility of the City of Las Vegas, a number of other regionally-based functions are delegated by other public agencies.

- Many Federal, state, county, and regional services are located within the core planning areas of Las Vegas, most of which are in or around Downtown Las Vegas
  - Federal government: Federal facilities are located in Downtown's Civic and Business District, however, post offices, Social Security, and Veteran's Affairs offices are scattered throughout Southern Nevada.
  - State of Nevada: includes a wide range of state agencies. Many are located within the Grant Sawyer State Building; other satellite offices, including the DMV, job training, and social welfare offices are located throughout the community.
  - The Regional Justice Center and other Federal and State courthouses: a number of courts are located within Downtown Las Vegas' Civic and Business district
- Las Vegas Municipal Court will relocate after its new building is completed adjacent to City Hall in 2021.
- Las Vegas Metropolitan Police Department has a number of areas commands and community police substations located throughout the City.
- The Southern Nevada Health District maintains offices at its headquarters in the Charleston planning area, as well as community clinics
- Many of Clark County's services are provided and accessible at the Clark County Government Center.
- The Las Vegas-Clark County Library District is a consolidated library district overseen by a ten-member Board of Trustees, including five appointed by the Las Vegas City Council. Funded by property tax levies and governed pursuant to NRS 379, the District serves 25 countywide libraries, including nine within the City.

EQUITABLE	RESILIENT	HEALTHY	LIVABLE	INNOVATIVE
Access to all types of public services and facilities brings residents closer to their government.	Green public buildings and facilities show a commitment to sustainability and reduce the City's energy and operational costs.	The provision of recreational facilities promote community access to mind and body wellness.	Ensuring the adequate provision of utilities, infrastructure, and services are essential to daily life	Co-locate city services within municipal centers in each planning area
				

ATTY FEE MOT - 0324



- The City of Las Vegas provides services, operating 21 departments, providing internal services, public safety, provision of infrastructure, and cultural and recreational amenities.
  - The City's Public Works and the Operations and Maintenance departments are directly responsible for constructing and maintaining the City's public buildings and facilities. They also set standards for the space needs of employees. The City's existing building stock is currently maintained by the Operations and Maintenance Department. Operations and Maintenance is responsible for upkeep of public buildings. In addition, Operations and Maintenance handles custodial services, remodeling, and real estate. The construction of new public buildings within the City is overseen by the Department of Public Works Capital Project Management division, which manages the design and construction of public buildings from pre-planning conceptual design, to project management and construction support.
  - The Public Works Department's Environmental Division and Operations and Maintenance Departments operates and maintains the City's sanitary sewer, wastewater collection and treatment operation.
- Public and Private utility providers, including:
  - The City of Las Vegas is served by two primary investor owned utilities: NV Energy for electricity and Southwest Gas for natural gas, described further in Conservation: Energy.
  - The City of Las Vegas is served by the Las Vegas Valley Water District (LVVWD), which treats and delivers water to city residents and businesses.
  - Stormwater and the region's storm drain and flood control network is planned, funded, and managed by the Clark County Regional Flood Control District (RFCD).
  - Republic Services of Southern Nevada serves the City of Las Vegas (and much of the region as a whole) under a franchise granted by City Council to provide solid waste and recycling service to City residents, businesses, and for government operations.
  - The City franchises telecommunications companies for use of the City's right of way and the provision of service to its residents and visitors. A number of franchises are granted for service in this space, including for Cox Communications and CenturyLink, two of the largest internet, television, and telephone communications providers. Wireless providers are permitted and regulated by the City with respect to infrastructure siting, design, and typical operations.

**THE CITY OF LAS VEGAS IS MEETING ITS CURRENT DEMAND FOR BUILDINGS AND FACILITIES, BUT OTHER SPACE TYPES MAY BE REQUIRED AS THE CITY'S POPULATION GROWS**

The City currently operates more than 100 public buildings, and facilities. These include administrative buildings, cultural facilities, community centers and recreational facilities, public safety, wastewater treatment, warehouses, and other types of buildings. Some of the largest include:

- Las Vegas City Hall, the administrative flagship building and headquarters of the City, housing internal service, development services, and administrative functions, as well as meeting space and offices for the Las Vegas City Council and city management. A new civic center plaza and building would centralize staff and free more space for community use.
- The City has completed a new 138,000 square-foot Municipal Court next to City Hall, vacating current space at the Regional Justice Center.
- One of the hallmarks of a world-class city is the extent of its opportunities for cultural expression. Cultural buildings and facilities, such as art centers, museums, community centers, performing arts spaces, and libraries, play an important role in community life. While the City has made great strides in recent years regarding cultural facilities, the City must continue to expand its cultural role. Each must be available to all citizens of Las Vegas, are designed to bring cultural awareness and pride to the City, and serve as assets so they can be effectively programmed and marketed.
- Nearly 30 different community centers, pools, and recreational facilities are distributed throughout the City.

CITY FACILITIES		
	NUMBER OF FACILITIES	SQUARE FOOTAGE
Administrative	18	611,340
Cultural	9	164,643
Public Safety	28	458,040
Recreational	29	596,587
Warehouses	17	151,419
WPCF	1	679,938
Other	11	163,769
<b>TOTAL</b>	<b>113</b>	<b>2,825,736</b>

- Two service yards (East and West) house many of the City's vehicles, equipment, and repair facilities and contain maintenance, warehousing, and storage facilities.
- The City's wastewater treatment plant.

In order to predict the future needs of administrative and warehousing facilities, it is important to identify the current conditions regarding space needs within the City. To maintain a service standard of 3.6 non-public safety city workers per every 1,000 residents to maintain the level of customer service that the City currently provides, an increase of staff and building space of 300 square feet per employee will be required. As of 2019, there are 1,526 full-time non-public safety employees, and 866 part-time employees located at various facilities throughout the City within 611,340 square feet of administrative building space. (Cultural and Recreational space are considered public use; Public Safety employees accounted for under that respective goal). Based on future population projections, design metrics, and public service standards, the City will need nearly 3,550 full and part time non-public safety employees. However, with the

CITY EMPLOYEES AND FACILITY SPACE			
	2019	2050	DIFFERENCE
Population	675,971	984,738	
# Non P/S Employees (Actual)	2,392		
# Non P/S Employees (Required)	2,433	3,545	1,112
Actual square feet (Administrative)	611,340		
Required square feet (Administrative)	729,900	1,063,500	333,600

recent construction of multiple new public facilities over the past decade, the City should be able to provide enough facility space for its core city services functions, based on employee space needs alone. Public access to city services may warrant construction of additional or future facilities, based on specific need requirements.

When considering the design of new public buildings, the City must demonstrate equitable site selection and environmentally conscientious design. Site selection for new facilities should prioritize access to underserved and vulnerable populations, while also incorporating innovative design and sustainability principals. The City will ensure that any new public buildings built by and for the City are built to a minimum of the United States Green Building Council's (USGBC) LEED-Silver level. Public facilities should have direct access to alternative modes of transportation.

Based on geographic proximities and the lack of facilities in general, the Nu Wav Kaiv, Tule Springs, Lone Mountain, La Madre Foothills and Kyle Canyon, and are the most underserved locations due to lack of facilities. The Southern Nevada Public Lands Management Act, however, can be used to reserve land for future public facility construction in those areas. However, other areas near the urban core may be underserved due to the proximity of a public facility or service.

**ENSURE THAT THE SANITARY SEWER SYSTEM HAS THE CAPACITY TO ACCOMMODATE THE PROJECTED DENSITIES AND POPULATIONS FORECASTED THOUGH 2050**

The City constructs, operates, and maintains the sewer collection system, as well as treating and discharging water back into the Las Vegas Wash for return flow credit. The City's existing service area is approximately 154 square miles. Based on a 2002 interlocal agreement between the City and County, the City provides wastewater collection service to northwestern areas around Lone Mountain outside of existing city limits. With inclusion of future growth areas, service could expand to approximately 173 square miles.

The existing City wastewater collection system is comprised of approximately 1,827 miles of pipeline ranging in diameter from 6-inches to 10 feet. Collected wastewater is directed to the Water Pollution Control Facility located in the east valley. The 140-acre treatment facility has a capacity to treat up to 91 million gallons per day (MGD) and provides for the collection, treatment, and disinfection of wastewater for discharge into the Las Vegas Wash, as well as the collection and disposal of residual solid material. The WPCF utilizes both solar and digester gas from its anaerobic digestion process to power two large combustion engines that power aeration air blowers.

Sewer capacity can be easily calculated for development of vacant land in the suburbs; however, because this plan anticipates higher density infill development within more mature areas of the City, it is difficult to estimate the potential impact on capacity. Redevelopment can overwhelm the sewer system due to aging infrastructure or pipe diameters that were never intended to handle high intensity uses. Higher density and mixed-use infill development often requires upgrades of the existing sewer system at significant cost to the developer or the City. Should a developer be required to upgrade sewer lines, the additional cost could serve as a disincentive. In order to attract viable development into the City's designated TOD place types, it is imperative that the wastewater plan be closely coordinated. The Department of Public Works maintains an up-to-date Wastewater Collection System Master Plan to anticipate future changes in capacity requirements and is proactive in meeting those needs based on metrics such as population forecasts and future land use.



**THE AVAILABILITY OF LIBRARIES ENSURES PUBLIC ACCESS TO INFORMATION AND RESOURCES**

The Las Vegas-Clark County Library District ensures access to reading and information at each of its libraries. They are also an educational and cultural resource for many of the City's children and residents, some of which include theaters, lecture, and concert halls. The District's Library Facilities Master Plan Decision Framework Document was approved in 2019 to assist with capital decision making for the next 20 years. The document is a tool to assess and execute capital investment strategies during a rapidly evolving environment for public libraries. It allows the District to stay abreast of changes in the economy, demographics, consumer behavior, information distribution, technology, physical buildings, and other factors through 2040. The framework found that individual library branches will see population shifts, but their facilities are well distributed in the near and mid-term. Based on these trends and an analysis of the District's footprint, the District has identified several potential future site locations to serve residents.

- Kyle Canyon: within the Skye Canyon master planned community on a City of Las Vegas BLM site (NV-157 Kyle Canyon Road near Nah Gah Kiev Pkwy)
- La Madre Foothills
- Lone Mountain: along the I-215 Beltway.
- East Las Vegas: while a new library opened in 2019 within this area, the District's eastern area still has potential service gaps

**EFFORTS TO COORDINATE WITH A RANGE OF "WET" AND "DRY" UTILITIES HAVE BEEN IMPROVING TO ENSURE ADEQUATE PROVISION OF SERVICE TO RESIDENTS AND BUSINESSES**

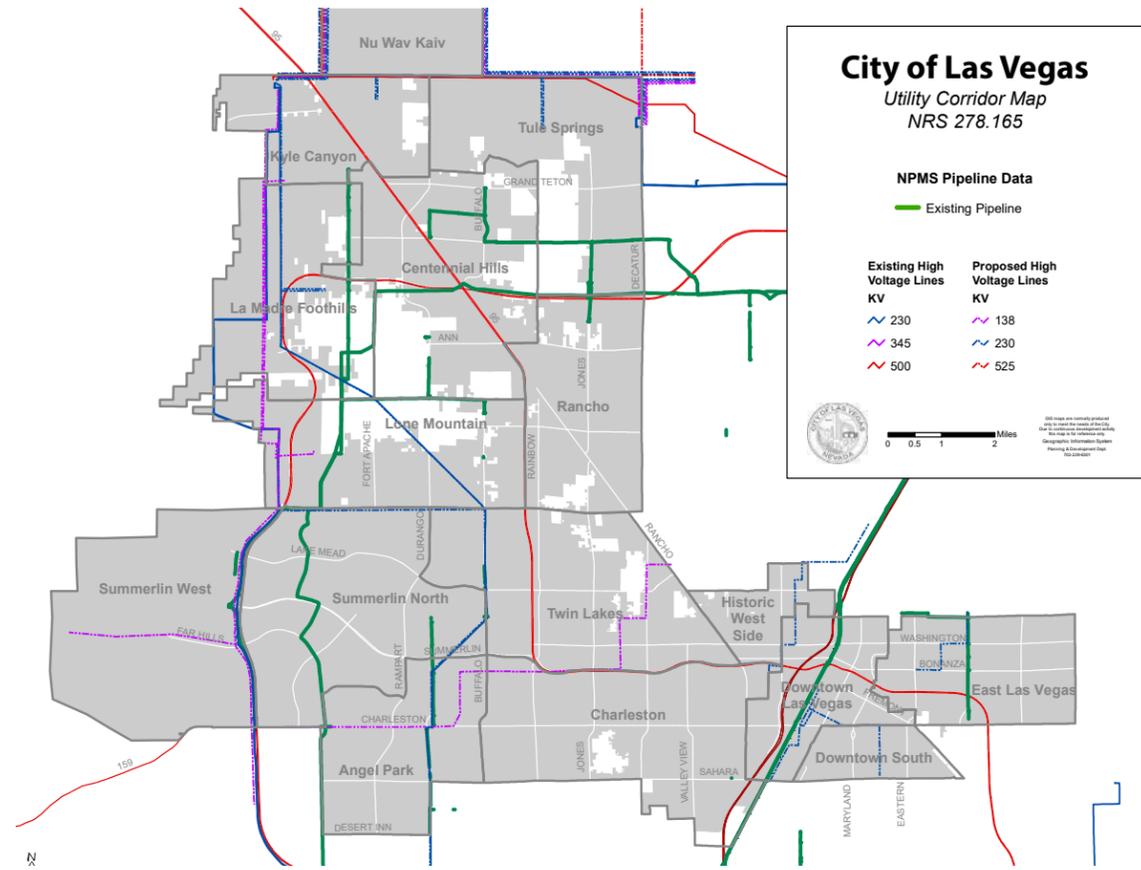
The City coordinates with private utility companies to ensure the adequate provision of electricity, natural gas, water, and telecommunication infrastructure to existing and new development. Through franchise agreements for use of city rights-of way, utilities are typically located underground, in sidewalk or curbside utility boxes, or overhead transmission lines. With the exception of utility transmission line requests of 15,000 volts (15 kV) or larger outside of an established overhead utility corridor, utilities are not required to have a public hearing for approval.

Development coordination is one of the biggest challenges the City faces, as each utility company has specific requirements for the installation of required appurtenances. While many types of utility installations can be located underground, some, such as electric transformers or water backflow preventers, are required by to be located above ground. Aesthetically, these appurtenances are large, unsightly, and conflict with the zoning code provisions that are intended to minimize their impacts. Required equipment clearances often make it impractical to house them within the footprint of a building, which typically results in encroachments into the pedestrian realm. Overhead utilities, especially in core planning areas, pose another challenge. Since the early 2000's, Title 19 has required undergrounding overhead utility lines for safety and aesthetics, but it has proven challenging to implement due to cost and the ability of the requirement to be waived at a public hearing.

While efforts to coordinate utility installations have improve, moving forward, the City must continue to engage in discussions with "wet" and "dry" utility companies to minimize the impacts of their installations. The feasibility of utility consolidation or banking multiple properties from a designated location equipment reduces the current installation clearances must be examined. Discussions should also be had with the development community to emphasize the importance of a site design that takes above ground utilities into consideration prior to the submittal of off-site improvement plans. The zoning code must also be revised to include development standards that take into account the locational provisions of above ground utilities to minimize their impacts.

**ATTY FEE MOT - 0326**



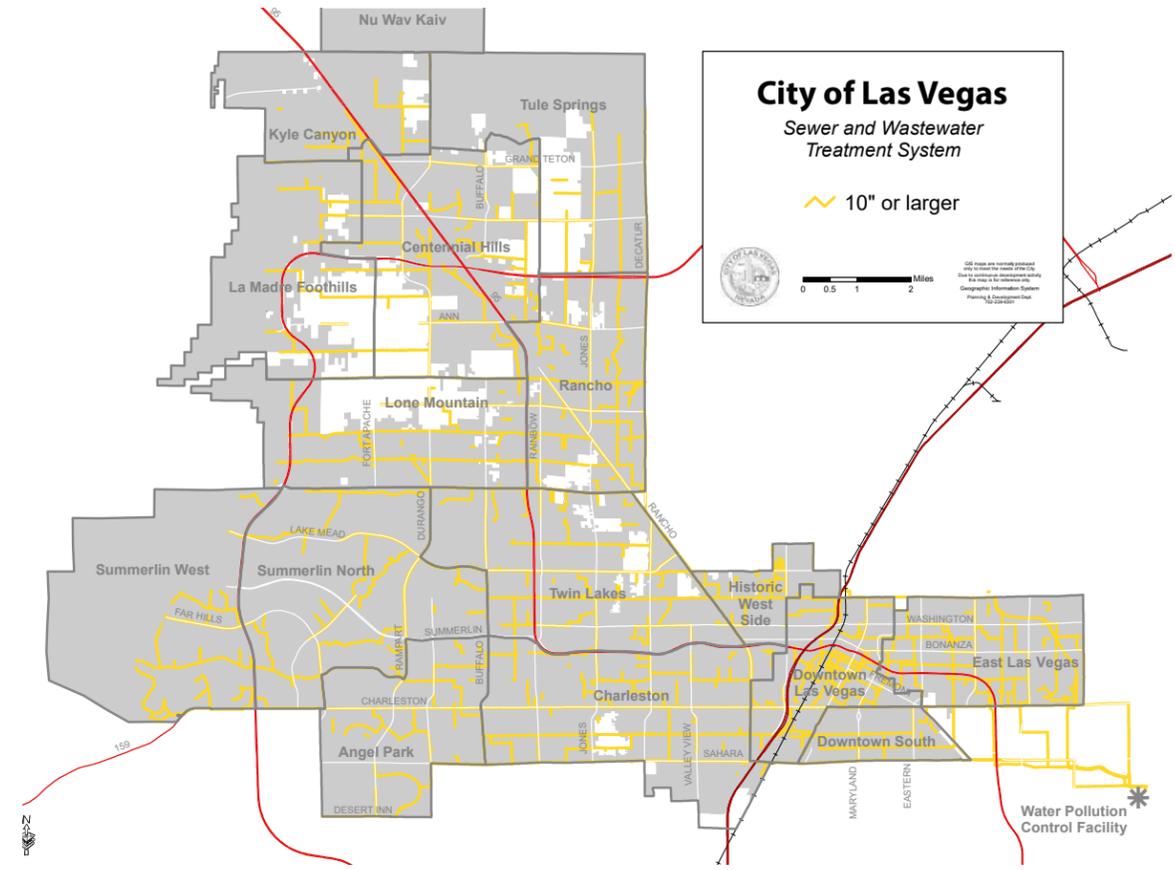


**UTILITY CORRIDORS AND TRANSMISSION PLAN**

Most electric, gas, sewer, and telecommunications infrastructure are located underground within the public right-of-way as buried pipelines and conduit, or are overhead transmission lines. The City has limited oversight on the location of utility transmission lines. It is directed to approve lines located within an established utility corridor administratively, and all others through the approval of a Special Use Permit by the Planning Commission. A utility applicant may appeal the Planning Commission's decision to the Public Utilities Commission of Nevada if the applicant believes that the Commission did not act in a timely manner, or if they feel aggrieved by conditions imposed with the special use permit.

In addition to this statutory requirement, this Master Plan includes the following additional provisions:

- The City will continue to work with investor-owned utilities to eliminate aerial lines by relocating them underground within the city of Las Vegas, especially within Downtown Las Vegas.
- Utility installations within the public right-of-way shall be coordinated during new or street rehabilitation projects.
- Sidewalks, alleys, building entrances, and other public spaces shall be kept clear of electrical, water, and natural gas boxes and infrastructure. Utility boxes and infrastructure shall be located in appropriate areas as depicted in LVMC Title 19 and shall not be placed in a manner that interferes with pedestrian or bicyclist movement.



**WASTEWATER COLLECTION SYSTEM MASTER PLAN**

The Wastewater Collection System Master Plan is separate plan document that identifies capital improvement projects for capacity in the existing sewer system and expansion of sewerage facilities to serve new development. The plan uses an updated model and includes specific projects, estimated costs, and a schedule for implementation. Most programmed CIP projects are upgrades to the Water Pollution Control Facility and for major sewer interceptor lines to accommodate future growth. All costs associated with the sanitation operation, including debt service on bonds, are paid for through service fees and a portion of a sales tax.

This subplan is consistent with this Master Plan, which also support the following additional provisions:

- Abandon septic tanks (Individual Sewage Disposal Systems) and connect property owners to the sewer network, pursuant to SNHD regulations.
- Coordinate and time improvements in conjunction with new large-scale infill and redevelopment projects that are supportive of the land use placetypes contained in Chapter 2.
- Implement improvements to the sanitary sewer system as identified in the Wastewater Collection System Master Plan Update which will increase the capacity to deliver treated wastewater for reclamation (for greywater irrigation uses) or to return it to Lake Mead for return flow credits.

**CULTURAL FACILITIES HELP IMPROVE COMMUNITY WELL-BEING**

Arts and culture are vital for every city. A broad range of arts and cultural resources and activities develop community cohesion, civic participation, self-expression and creativity and revitalization

Southern Nevada has a wealth of cultural opportunities and is home to world class entertainment and performing arts. As the City has grown, cultural offerings have evolved from casino lounge acts to full-scale entertainment productions, fine-art productions to dedicated programs and schools for the arts. The City's cultural scene has blossomed with many new cultural additions within the heart of Las Vegas, including

- The Smith Center for the Performing Arts
- The DISCOVERY Children's Museum
- National Museum of Organized Crime and Law Enforcement
- The Neon Museum

- The Nevada State Museum and Origen Experience at the Las Vegas Springs Preserve
- Community city art and cultural centers offering community galleries, cultural facilities, and theater space.

The City's Office of Cultural Affairs coordinates performances and events, a youth theater, classes and workshops, and dedicates "a Percent for the Arts," a dedicated funding formula from its capital budget for artistic works on public works projects at city facilities and within City rights-of-way. Through these efforts, the City also approves the creation of both permanent and temporary art installations throughout the City. Assisting the office is the Las Vegas Arts Commission, an appointed volunteer advisory board that helps determine projects and overall awareness of the arts.

After the Arts District was formed in Downtown Las Vegas, the City found a new home for artists to collaborate in live-work environments. Intended as an evolving cultural center, the Arts District is an example of a Downtown district that is successfully redeveloping and reinventing the built environment through public investment and

entrepreneurship as envisioned by the Vision 2045 Downtown Las Vegas Masterplan. Further urban design efforts and targeted incentives to develop artistic and cultural endeavors will cement the Arts District as the City's live-work-play destination for creative industry.

To sustain momentum and to secure Las Vegas reputation as a unique hub for cultural activity, the City must continue to invest in its cultural facilities and places. As part of its annual efforts, the City must invest in a robust Municipal Arts Plan that makes further examination into the needs of new cultural facilities and use of right of way space to improve their aesthetics. Ultimately, this sub-plan can help protect, enhance, and further develop Las Vegas' cultural resources and serve to strengthen the region's creative industries.

Among the identified needs and new cultural facilities are:

- The development of a new vision for the City's "Cultural Corridor" within the Cashman District of Downtown Las Vegas. Because this area has a range of existing cultural resources, including the Neon Museum, Natural History Museum, and Las Vegas Mormon Fort state park, it has been historically situated for such uses. However, it also competes with other surrounding uses including state government, economic development efforts at both the former Las Vegas Library and Cashman Center, and contends with high levels of poverty and homelessness. A specific community planning effort must take place to reimagine this district to yield tangible results
- Construction of dedicated fine arts museums, a natural science museum, botanical gardens, and a zoo
- Relocation of the National Atomic History Museum to Downtown Las Vegas
- Relocation and expansion of the Natural History Museum
- Commission and dedicate public art, monuments, and statues
- Municipally operated professional and community-scaled galleries and performing arts centers under the purview of Cultural Affairs to generate revenue
- A League of Resident Theatres recognized theatre
- An open-air or partially enclosed outdoor amphitheater venue for year-round large-scale ticketed performing arts events



Finally, the Office of Cultural Affairs must continue to track participation and attendance at community art fairs, cultural events, festivals, performances and programs to demonstrate community need and communicate financial or logistical support for local arts. Collaboration with private and non-profit groups, as well as programs at UNLV and CCSD, especially the Las Vegas Academy for the Performing Arts in Downtown Las Vegas, will further help develop community pride and the next generation of artists.

**A DAY IN THE LIFE**

**FINDING AN ANSWER TO TRANSIENCE**

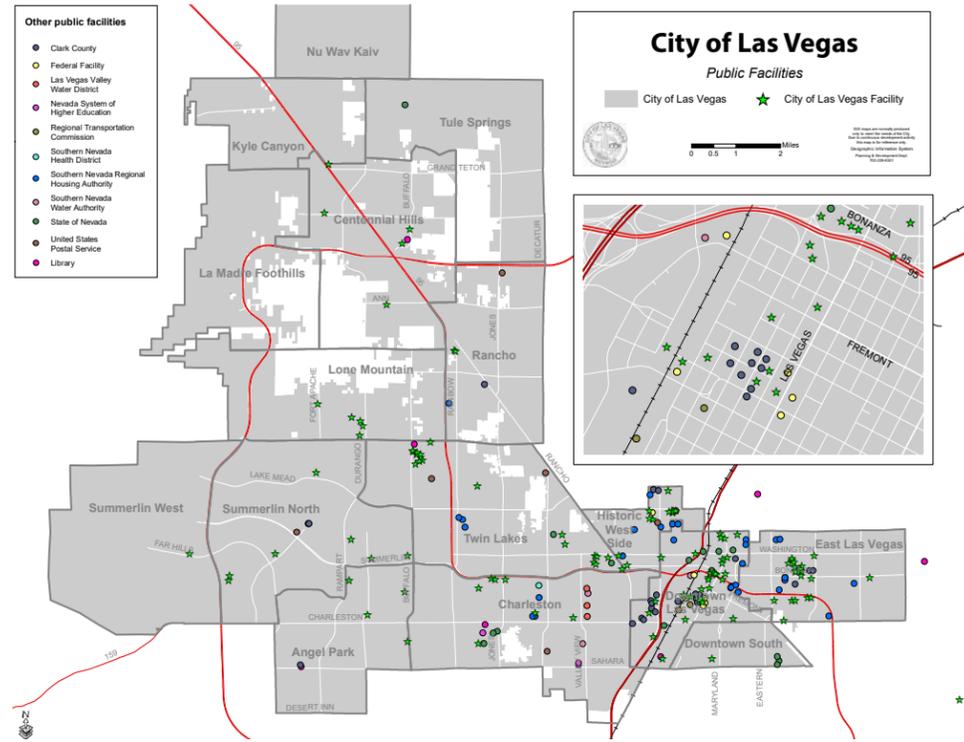
*Aubrey McCall, YMCA Director*

Calling herself "the moving type", Aubrey and her husband had already lived in several other cities by the time they decided to settle and raise their young family in Las Vegas. From the very beginning, they loved the city's "24-hour-town" activities and choices. Today, Aubrey, who runs a Y in one of the city's north-central communities, also appreciates the ready availability of free and low-cost services the city provides. For she and her husband Tom, Las Vegas has always been a city of opportunity. "Here there are a million different directions you can go," she says.

Even so, she adds, Las Vegas struggles with being a transient town. She knows many transplants but comes across few people who were born and raised here. She also knows many who have decided to sell their homes and move on. She sees the city as filled with "pockets of really nice" and "pockets of not nice anymore" and wonders what can be done to keep neighborhoods from going downhill.

When it comes to the public education system, she notes that transiency contributes to a low high school graduation rate, an unwelcome statistic for a system—the state's largest—that must already contend with complex challenges such as continued rapid growth.

Aubrey notes that her own two children have done well in the city's public schools—in part thanks to her own deep involvement. It's in the area of early childhood education that she sees the greatest unmet need. She'd like to see more funding, from the state as well as the city (since kinder care, after all, is a statewide issue) so the city's earliest residences can have the resources they need to make the best possible start.



PLANNING AREA	FACILITY NEEDS BASED ON 2050 POPULATION
Angel Park	Moderate need, due to proximity
Centennial Hills	Adequately served
Charleston	High need, due to lack of proximity, area demographics
Downtown	Adequately served; new Municipal Courthouse to open 2021; new Civic Center needed
Downtown South	Low need due to existing service provision, but warranted based on area demographics
East Las Vegas	Moderate need due to existing service provision, but warranted based on area demographics and proximity
Kyle Canyon	Moderate need, due to long term development build-out and master planned community service provision
La Madre Foothills	Moderate need, due to proximity, long term development build-out, and master planned community service provision
Lone Mountain	Moderate need, due to proximity
Meadows	High need, due to lack of proximity, area demographics
Nu Wav Kaiv	Low need, due to long term development build-out
Rancho	Moderate need, due to proximity
Summerlin North	Adequately served
Summerlin West	Low need, due to long term development build-out and master planned community service provision
Tule Springs	Moderate need, due to proximity
West Las Vegas	Low need due to existing service provision, but warranted based on area demographics

**IMPLEMENTATION STRATEGIES**

- All future public buildings and facilities capital improvements identified in the annual CIP will be assessed for its conformance with the pursuant to NRS 278.0226.
- For each planning area, conduct a community needs assessment to identify priority facility and service needs and resources, whether for City, County, regional, State, or Federal resources, including the needs of priority populations and priority planning areas for evaluation.
  - Plan for future public building needs, including renovation and expansion of existing facilities, land acquisition, and new construction, including a new Civic Center and plaza in Downtown.
  - Evaluate administrative and warehousing space needs to help establish priorities in the annual capital improvement budgeting process.
  - Consider development of satellite administrative offices in areas that provide accessibility to underserved populations.
  - Construct all new City buildings and facilities to meet LEED Silver standards
  - Justify expansion and renovation of public buildings using the City's Office of Architectural Services standards
  - Research and consider land acquisition opportunities, including those through SNPLMA, in advance of programming capital improvements to take advantage of potential opportunities to expand future service delivery.
- Ensure that both newly developed and mature areas of the City contain appropriate public arts and cultural facilities, museums, libraries and other supportive uses:
  - Expand the number and quality of cultural opportunities within the community through capital funding, grants and private-public partnerships.
  - Locate and develop family-oriented arts, cultural, and entertainment facilities and venues in each planning area at locations accessible to all citizens.
  - Actively work with public, non-profit organizations and private interests to develop art galleries, museums, performing arts centers, sports and entertainment arenas, and other cultural facilities.
- Collaborate with the Las Vegas-Clark County Library District and assist with the future construction of libraries within the 2019 Library Facilities Master Plan Decision Framework document.
- Adopt coordinated strategies addressing key issues and concerns pertaining to water reclamation, treatment facilities, sanitary and storm drain systems by implementing the City's Wastewater Collection System Master Plan.
  - Rebuild and replace old and outdated sewer and wastewater treatment infrastructure through capital improvement programs
  - Ensure sewer infrastructure is right-sized in redevelopment areas
  - Develop a program to mitigate sewer construction and connection fees in infill areas
- Continue coordinating with above ground and underground wet and dry utilities:
  - Ensure development standards utilize minimize the visual impacts of required above ground appurtenances.
  - Ensure utility installations within the public right-of-way are made during pavement and utility rehabilitation projects and when new rights-of-way are developed to minimize the impact to motorists, bicyclists, and pedestrians.
  - Develop methods in coordination with utilities to screen or locate utility appurtenances outside of the pedestrian realm, including utility rooms, utilization of alleys, or undergrounding.
  - Codify development standards that take required utility company clearances into account and that require the consideration of above ground utilities prior to entitlement approval
- Dedicate more places and spaces for the arts
  - Construction of partially enclosed or open-air amphitheater for large-scale performing arts
  - Adopt a public arts and cultural facilities plan
  - Incentivize and fund development of new cultural facilities
  - Commission statues, artwork, murals, at City facilities and within public rights of way

ENSURE HEALTHY OUTCOMES FOR ALL MEMBERS OF THE COMMUNITY



Health is a foundational guiding principle of this plan. Throughout public outreach, health care and access to medical services were among the most important priorities and concerns for residents; city residents ranked health care as the second highest priority issue that the City should address over the next 30 years.

These issues may have scored as high as they did because of alarmingly poor public health indicators at the City, community-wide, and state levels, contributing to the designations of Health Profession Shortage Area, a Medically Underserved Area, and Medically Underserved Populations by the US Department of Health and Human Services. A 2019 regional Community Health Needs

Assessment commissioned for the Southern Nevada Health District by Dignity Health identified a number of indicators and areas recommended for improvement, including:

- **Poor personal care indicators:** These indicators, which include behavioral, environmental, and genetic factors, are determinants of personal health. Las Vegas residents typically exhibit concerning conditions, especially for children, women, and seniors.
- **Environmental conditions:** Some environmental conditions contribute to the region’s chronic health concerns, especially with respect to pollution, geography, and socio-economics.
- **Motor vehicle and pedestrian safety:** Preventable deaths and injuries resulting from distracted and impaired driving are far greater than national averages.
- **Violence:** Public safety efforts have led to incremental drops in the violent crime rate. Unfortunately, many residents continue to have had to cope with dangerous situations that may lead to child abuse and different forms of domestic violence.
- **Mental health:** Mental health care is a necessary, but lacking necessity for a region that has ranked near last for both prevalence of mental illness and access to mental health services.
- **Substance abuse:** Las Vegas ranks high for certain types of drug and substance abuse.

- **Overall Access to Care:** Regionally, Southern Nevada has struggled with a low resident-to-doctor ratio as well as wide gaps in health care accessibility, especially for low-income and minority neighborhoods. Health care costs and insurance also inhibits health care access.

Protecting public health and safety are among the City Council’s most important enumerated authorities. While the City hasn’t traditionally been involved in the direct provision of health care, it plays an important role in preventative measures that could cause environmental harm. Specifically, provisions within the City Charter and several titles of LVMC contain preventative public health measures, including:

- The provision to enforce health regulations and the establishment of quarantines
- The ability to treat people suffering alcohol or substance abuse
- The regulation of land use to protect public health safety and welfare
- Nuisance abatement
- Noise and odor control
- Health card requirements for certain business operations
- Animal, pest, and rodent control

As discussed in the Parks goal, the City offers direct activities and amenities for public health and wellness through its Parks and Recreation Department, including community centers with gyms, classes, swimming pools. Park facilities located throughout the City provide open recreational space for activities, sports, and play. The Planning and Public Works Departments have also dedicated hundreds of miles of trails and bicycle facilities to enable active transportation.

Social services are primarily handled as a regional function. The Clark County Social Services Department provides assistance to individuals not otherwise covered by other Federal or State programs, often for seniors and adults without children. The County’s Family Services Department handles foster care and adoptions, and child abuse and protective services.

Titles 38, 39, and 40 of Nevada Revised Statutes contain specific chapters and provisions relating to public welfare, mental health, and public health, respectively. State public health laws govern and mandate actions by individual state departments and agencies, as well as agencies like SNHD, and local government service provision. The State also typically handles service provision that’s passed down from the Federal Government. Programs and services include:

- State boards of licensure and examination for a wide range of medical professions
- The Nevada Department of Health and Human Services, which provides:
  - » Aging and disability services
  - » Child and family services
  - » Health care finances, particularly for Medicare and Medicaid
  - » Public and Behavioral Health
  - » Welfare and support services
  - » Minority health
- The Silver State Health Insurance Exchange, which provides Nevada residents access to Nevada Health Link, the online insurance marketplace in compliance with the Affordable Care Act. Because Nevada elected to expand Medicaid under Governor Brian Sandoval, more Nevadans qualify and have access to coverage.

OUTCOMES



- By 2030, the City increases the number of hospital beds to 25 beds per 10,000 residents and maintains the number of ICU beds above 4 per 10,000 residents
- By 2030, the region increases the number of physicians to above 400 per 100,000 residents
- Personal health indicator trends improve over time
- The number of adults and children with insurance increase to above 95%
- Designated Health Professional Shortage Area designations are removed within the City

KEY ACTIONS



- Adopt a Health-in-all-Policies statement and commit to increased partnerships with the Southern Nevada Health District and health care providers to improve key personal health care indicators
- Complete the build-out of the UNLV School of Medicine and leverage the Las Vegas Medical District to ensure training, recruitment, and retention of doctors and nurses to overcome shortages
- Develop a City-specific Community Health Needs and Public Health System Assessment addressing population health Indicators and health care facilities citywide and their accessibility.

EQUITABLE	RESILIENT	HEALTHY	LIVABLE	INNOVATIVE
Improving health care access for low income and minority neighborhoods, regardless of location, is a vital need for members of the city who need access most. 	As conditions change and the City continues to grow, adapting to new trends and population changes will keep the City at the forefront for health outcomes. 	The City will work to improve physical and mental health outcomes, improve safety, and encourage healthy choices to sustain individuals and families. 	Improved health measures, physical conditions, and access to care are essential for the City and region’s quality of life. 	Investments in public health systems and the UNLV School of Medicine align with economic development efforts. 

**POPULATION HEALTH INDICATORS**

- Children – Obese: 13.7% (Regional - trending up)
- Children – Physical activity / Inactivity: 42.8% / 15.1% (Regional – trending up)
- Children – Tobacco 5.4% (trending down, but smokeless tobacco, vaping use increasing)
- Teen Birth Rate – 21.9 / 1,000 (Regional – Moderate, Above 20.5% US); highest in CLV
- Adults – Obese: 28.2% (CLV - Improved, but trending up – below 30.1% US)
- Adults – Sedentary: 29.9% (CLV - Poor, trending up – above 26.6% US)
- Adults – Diabetes: 11.2% (CLV – Poor, above 10.8% US)
- Adults – High Cholesterol: 32.2% (CLV – Moderate, below 34.1% US)
- Adults – High blood pressure: 31.8% (CLV – Moderate, below 32.4% US)
- Adults – Experienced heart disease: 6.1% (CLV - Moderate, below 6.4% US)
- Adults – Smoking: 20.5% (CLV – poor, trending up – above 16.4% US)
- Adults – Asthma – 10.1% (CLV – poor, trending up – above 9.0% US)
- Adults – Cancer: 6.0% (CLV Moderate, Below 6.8% US)
- Adults – With Disability: 12.2% (Regional – Below 12.6% US)
- Suicide – 19.4 / 100,000 (Regional – Moderate, trending up – Above 13.9% US)
- Adults - Binge drink: 17.9% (CLV - Moderate, trending up - Above 17.0% US)
- Seniors – Hearing difficulty: 14.9% (CLV - above 14.6% US)
- Seniors – disabilities: 36.9% (CLV - above 35.0% US)
- Seniors – Alzheimer’s / Dementia: 10.2% (Regional – Moderate, trending up - Below 10.9% US)
- Life expectancy: 78.8 (Regional – below 79.1 US)
- Leading causes of death:
  - 26.0% other causes
  - 23.0% heart disease
  - 21.3% cancer
  - 5.7% lung

Source: SNHD / Community Health Dashboard

**THE CITY’S OVERALL HEALTH METRICS AND INDICATORS NEED CONSIDERABLE IMPROVEMENT THROUGH INVESTMENTS IN THE HEALTH CARE SYSTEM, A HEALTH IN ALL POLICIES COLLABORATIVE APPROACH, AND THROUGH PROACTIVE PREVENTATIVE EFFORTS TO ADDRESS CURRENT AND FUTURE ACUTE AND CHRONIC CONDITIONS**

Based on recent personal health indicators from the Southern Nevada Health District, residents within the City, and Southern Nevada as a whole, lag behind many state and national averages as determined by the most recent Community Health Needs Assessment. For some groups, overall trends and health metrics indicate the need for renewed action, city leadership, and a “Health in all Policies” collaborative approach. This concept is intended to incorporate health considerations into the decision making process, whether through this plan’s implementation by the City’s departments, or through policy making by the City Council. Public health will ultimately be influenced by individual behaviors, but for areas in which the City has direct control, such as how the physical environment and health care access can be shaped by the City and community stakeholders.

For some of the health indicators that are especially troubling, but controllable or preventable, the City can play a greater role in addressing concerns. Throughout this Master Plan, the chapters and goals covering transportation, contain implementation strategies that affect the built environment and can significantly impact public health. Despite opportunities for active recreation and transportation, or the availability and accessibility of parks, community centers, pools and gyms, obesity, and sedentary lifestyles are prevalent for both adults and children, as are those that report higher incidences of diabetes and asthma. Similarly, as described under the Food goal, the City continues to work to address food deserts and food swamps, fast food outlets are more accessible than healthy food options and full-service grocery stores. The Nevada Clean Indoor Air Act has prohibited smoking and vaping indoors, but committing to strengthen and enforcement of smoking policies that reduce or eliminate secondhand smoke exposure, including at standalone bars, multi-family housing or other common public areas, coupled other smoking prevention and cessation efforts, will help reduce incidences of respiratory disease and cancer. Ultimately, many of these indicators

may come down to individual behavior change, sometimes at the direction of or treatment from medical professionals. If given the tools, resources, or messaging that promote healthy behaviors and residents are linked to existing programs and resources, incidences of increased physical activity levels, improved nutrition, and decreased empty calorie and fat intake will yield an overall Improvement in health outcomes and self-management for people with acute or chronic conditions.

Some environmental conditions contribute to the region’s chronic health concerns, especially asthma and respiratory illnesses. These are borne out of mitigatable issues such as air pollution, land use, and neighborhood characteristics. The City must ultimately reduce the community’s exposure to identified environmental hazards through the protection of environmental quality. To address environmental conditions that contribute to the region’s chronic health concerns, mobile source air pollution must be minimized through the prioritization of higher occupancy vehicles, transit usage, and transportation electrification. Land use itself – where and how housing and transportation systems are located - also play roles in health indicators. A renewed focus on environmental justice is therefore an important approach to mitigate health concerns in planning areas with higher minority populations and rates of poverty. While preserving natural conditions from urbanization will help ensure access to open spaces, the adequate provision of different types of parks and recreational centers will ensure all areas of the city have green space, which is good for both body and mind. A renewed focus on environmental justice is therefore an important approach to mitigate health concerns in planning areas with higher minority populations and rates of poverty.

As discussed in the Transportation Goals, deaths and injuries of motorists and vulnerable road users are far greater than national averages. Bicyclist and pedestrian safety continues to be an ongoing concern, requiring more attention to transportation facility design. Through the construction of the City’s layered complete street network, street design that reduces speeds, eliminates dangerous conditions and roadway movements, and increases visibility, will help improve safety for all road users. Coupled with enforcement of traffic laws and increased penalties for actions that pose a threat to lives, an opportunity exists to improve overall safety and reach the City’s “Vision Zero” goal



Public safety efforts have led to incremental drops in the violent crime rate. Unfortunately, many residents continue to have to cope with dangerous situations that may lead to child abuse and different forms of domestic violence. Though deterrence efforts may be necessary in certain high crime areas, community-oriented policing and public safety efforts, as well as changes to built environment conditions are just as important to reduce violence. Additional work must be made to address mental health and substance abuse, two issues that often establish conditions for physical violence. Because Las Vegas has structured its economy on tourism and entertainment, there are intrinsically higher risks for smoking, alcohol abuse, and drug use abuse. Alcohol use, maternal substance use, and most recently, the epidemic of opioid abuse have each had higher rates among Las Vegas residents.

Unfortunately, funding and availability for mental health services and substance abuse treatment programs is low across Nevada; the state ranks last in the country for a range of mental health metrics, including youth and adult mental health conditions, mental health workforce availability, funding for treatment, and facility availability. To address these difficult challenges, there must be recognition of how each issue and system interacts with each other. Within its powers, the City Council can provide for appropriate policing, whether enforced by the LVMPD or City Marshals, treatment for alcohol and substance abuse, or franchise public health services. The City must also work with the County and other community resources to ensure stronger social service safety nets must to ensure people, especially women and children, do not become victims of violence. Further careful examination of facilities, such as group homes and treatment centers, must also take place to ensure compatability with the communities and neighborhoods they serve.

**ATTY FEE MOT - 0331**



**A DAY IN THE LIFE**

**SMALL CHANGES, BIG OPPORTUNITIES**

*Jenny Hazlitt, Employee of a Non-Profit Providing Resources to Low Income Individuals*

Jenny Hazlitt can tell you stories. Stories about unemployed residents who can't afford the bus fare across town to get to job interviews. Stories about parents who can't apply for—or hold onto—much-needed jobs because they can't find or afford childcare, or because after an extremely time consuming trip across town they get home too late to pick up their child by closing time.

But Jenny is optimistic. She believes the city can make small changes that would open up big opportunities. To receive assistance services in this city, she says, one often must first pay for them—and many simply can't. "How can you end up getting city assistance when you don't even have the money to pay for a birth certificate for your child, or a social security card?"

She'd love to see licensed childcare in at least some low-income apartment complexes. Add to that a 30-day bus pass, say, and an opportunity to receive a voucher for a birth certificate for those for those receiving Medicaid or food stamps.

Jenny envisions a city that makes a bigger effort to reach out to its underserved residents. She points out that Las Vegas has many non-profit resources that most people don't even know about.

Simple marketing and advertising campaigns could make people aware of them—and of town halls where they could have a greater voice in their own quality of life as well as that of Las Vegas as a whole.

To guide areas in which the City plays roles in public health, the City must consider adoption of a health in all policies statement for key decisions and commit to conducting Health Impact Assessments on proposed CIP projects to increase positive health outcomes and minimize adverse impacts. To accomplish this approach, the City must continue working with SNHD and the medical community to monitor health indicators and develop recommendations to strengthen the delivery of health services to improve respective outcomes, especially for strategies that improve physical activity, smoking cessation, and reducing obesity. Development and ongoing update of a Community Health and Public Health System Assessment, specific to the City of Las Vegas that identifies health care competencies, and capacities of essential service providers. Southern Nevada Strong's collaborative approach at a regional level can help the City monitor and improve health services and programs that improve positive health outcomes and expand access to health care.

**LAS VEGAS LACK SUFFICIENT ACCESS TO HEALTH CARE, AND THE NUMBER OF DOCTORS AND NURSES AVAILABLE IS LOW FOR THE CITY AND STATE. UNLV AND THE NEW SCHOOL OF MEDICINE IS ANTICIPATED TO HELP ALLEVIATE SHORTAGES OF HEALTH CARE PROVIDERS**

Regular access to health care, including checkups, screenings, and exams can help find problems before they start or find problems early when treatment is often most effective. With fewer doctors, access is delayed or is done through the emergency room, instead of through a primary care physician, adding to costs not only for the patient, but for those that may truly need emergency care. For a variety of reasons, including the City's rapid population growth, Las Vegas has struggled with low resident-to-doctor and low resident-to-registered nurse ratios, which are well below national averages. Important specialty care populations, including those with physical or cognitive disabilities, maternity, pediatrics, and senior care have also had growing demands on the local health care system. The University of Nevada's 2018 Physician Workforce Report indicates that in Southern Nevada, the greatest need is for general practice doctors, especially for family medicine, internal medicine, pediatrics, and psychiatry. Similarly, the number of RN's and advanced practice registered nurses, while increasing overall, still are desperately needed. To address

these issues and reduce the gaps in access to health care due to the lack of health care jobs, three important steps must be taken by the City, which must assert a leadership role, in partnership with SNHD, UNLV, and the health care community:

**Train and Retain Primary Care Doctors and Nurses -**

Until only recently, Las Vegas was the largest metropolitan area without a complete and dedicated medical school and academic program. The University of Nevada School of Medicine previously fulfilled the need for medical education and provided for residency programs, but the new University of Nevada, Las Vegas (UNLV) program has made tremendous strides since its first students graduated with MD degrees in 2017. Initial reports indicated that the new school would yield \$1.2 billion annual economic impact and add 8,000 new jobs to the region by 2030. The addition of the UNLV School of Medicine complements UNLV's Schools of Dental Medicine, Nursing, Public Health, and Health Sciences. Anchored within the Las Vegas Medical District in Downtown Las Vegas, the School of Medicine will be instrumental to helping fulfilling many acute and chronic public health outcomes, as well as increasing overall health care capacity. While UNLV's School of Medicine has only just begun, the school itself needs additional funding, faculty, and resources for a complete build-out of the school within the Medical District. New facilities, classrooms, labs, and resources must be committed to ensure early success and future results.

The primary objective of UNLV's programs is to educate, train, and ultimately retain new health care workers – especially an increase in the overall number of new graduating doctors from the UNLV School of Medicine and nurses from the School of Nursing. As the school has started, 60 students will graduate a year, later increasing to between 120-180 per year. The city and UNLV can supplement these results with graduates from other programs, including Tuoro University Nevada, the College of Southern Nevada, Nevada State College, and other private and non-profit training programs and schools. In addition, as discussed in the Economy and Workforce Chapter, dedication of a new state college campus tailored to residents within the City will further buoy UNLV's work, especially if targeted and specialized two and four year degrees enhance nursing and medical workforce development capacity.

**Continue Recruitment of Health Care Employees -**

Even though the public sector oversight of health care is essential, much of the health care system's backbone is through the private sector, which employs thousands of the City's health service providers, including hospitals and medical offices, technicians, and administrative professionals. Overall, health care accounts for more than 12% of the region's total jobs. As a targeted economic sector, health care occupations, including registered nurses, general practitioners, and pharmacists are the among the occupations in highest demand. While the health care sector has been a focus for the City, LVGEA, and GOED, a renewed recruitment and attraction effort must take place to not only fill created jobs, but to supplement the existing industry. The City must forge new partnerships with the private sectors to attract these health care workers, as well as attract graduating doctors and nurses from elsewhere. Because of the previously established relationship with the University of Nevada, this should be an important first step as efforts are made to attract people from other states and across the country.

**Dedicate efforts on medical tourism and research-**

Leveraging the City's hospitality industry may be a key effort to attract new health care providers and be a stepping stone to attracting medical research. The City made great advances with the opening of the Cleveland Clinic and establishment of the Lou Ruvo Center for Brain Health in Downtown Las Vegas. As advances are made and the UNLV School of Medicine matures, opportunities for patients to travel, be treated, and recover in Las Vegas may

**MEDICAL PROFESSIONALS**

- Estimated active doctors (MD/DO): 3,845 (Region)
- Estimated active physician assistants: 618 (Region)
- Primary care physicians per 100,000: 108 (NV)
- Primary care physicians per 100,000: 150 (US)
- Doctors per 100,000: 228 (NV)
- Doctors per 100,000: 373 (US)
- Registered Nurses per 100,000: 674 (NV)
- Registered Nurses per 100,000: 854.3 (US)

*Department of Health and Human Services; University of Nevada; Nevada Board of Medical Examiners; Nevada State Board of Nursing; Southern Nevada Health District*

ATTY FEE MOT - 0332