CITY OF HENDERSON

Limited Transition Area Master Plan Overlay and Design Guidelines

Henderson, Nevada

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Limited Transition Area Master Plan Overlay and Design Guidelines

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CHAPTER 1: OVERVIEW

1.1 Introduction

The Limited Transition Area (LTA) is 502 acres of land established through the Omnibus Public Land Management Act of 2009, which was signed by President Obama on March 30, 2009. The Act directs the US Secretary of the Interior to convey the land from the Bureau of Land Management (BLM) to the City of Henderson (herein referred to as "the City"). The Act stipulates that the City may sell, lease, or otherwise convey any portion of the LTA for non-residential development.

The City envisions the LTA will become the premier business and employment center in the Intermountain West. The Intermountain West is a term coined by the Brookings Institution to collectively identify the states of Nevada, Arizona, Colorado, New Mexico, and Utah. Over the previous decade, these states experienced some of the nation's fastest population growth. The LTA will not only serve the residents of the Las Vegas Valley, but will become a hub for business throughout the southwestern U.S. The LTA will create a seamless interface with surrounding communities by integrating balanced and complementary uses.

Landing Strip, Henderson Executive Airport

The vision includes accommodating uses that will ultimately support a high-tech employment and business center. The Brookings Institution's Blueprint for American Prosperity Initiative, "Mountain Megas: America's Newest Metropolitan Places and a Federal Partnership to Help Them Prosper" outlines emerging challenges and opportunities for the region. Among these challenges are limited global air connectivity. As the LTA attracts leading global producer service firms such as information technology, finance, insurance, law, management consulting, media advertising, and accounting, the need for global air travel will increase. The LTA, because of its proximity to the Henderson Executive Airport, will be a model for fostering business development and economic growth and will be the ideal location to conduct related transactions.

Development of the LTA will also support the overall vision for the entire West Henderson area. The plan was developed based on input from City elected officials, staff, and select external stakeholders. Per the enacting legislation, residential uses will not be permitted in the LTA.

1.2 Development of Proposed Uses

The City values the input of its citizens, stakeholders, and elected officials. To that end, City staff conducted interviews and hosted focus group meetings to gauge the needs of the community. The focus group meetings were conducted on May 19, 2009 and included real estate developers, architects, airport, utility and infrastructure interests, and private consultants. The overall consensus was that the LTA should be a high-tech employment center, leveraging the opportunities afforded by the Henderson Executive Airport with the need for a major employment center and associated educational facilities.

LTA Focus Group Meetings

1.3 Location

The LTA is located in T. 23 S., R. 61 E., M.D.M., Sections 10, 14, and 15, City of Henderson, Clark County, Nevada (Figure 1). The City has determined that this land, due to its proximity to significant transportation facilities such as the Henderson Executive Airport, Interstate 15 and St. Rose Parkway, provides an ideal area for development as an employment and business center.

Southern LTA, April 13, 2009

Situated in western Henderson, the LTA is divided into two separate areas: the northern portion contains 150 acres and is located along Via Inspirada, south of Bruner Avenue. The southern portion contains 352.5 acres and is located along Via Inspirada, south of Larson Lane (Figure 2).

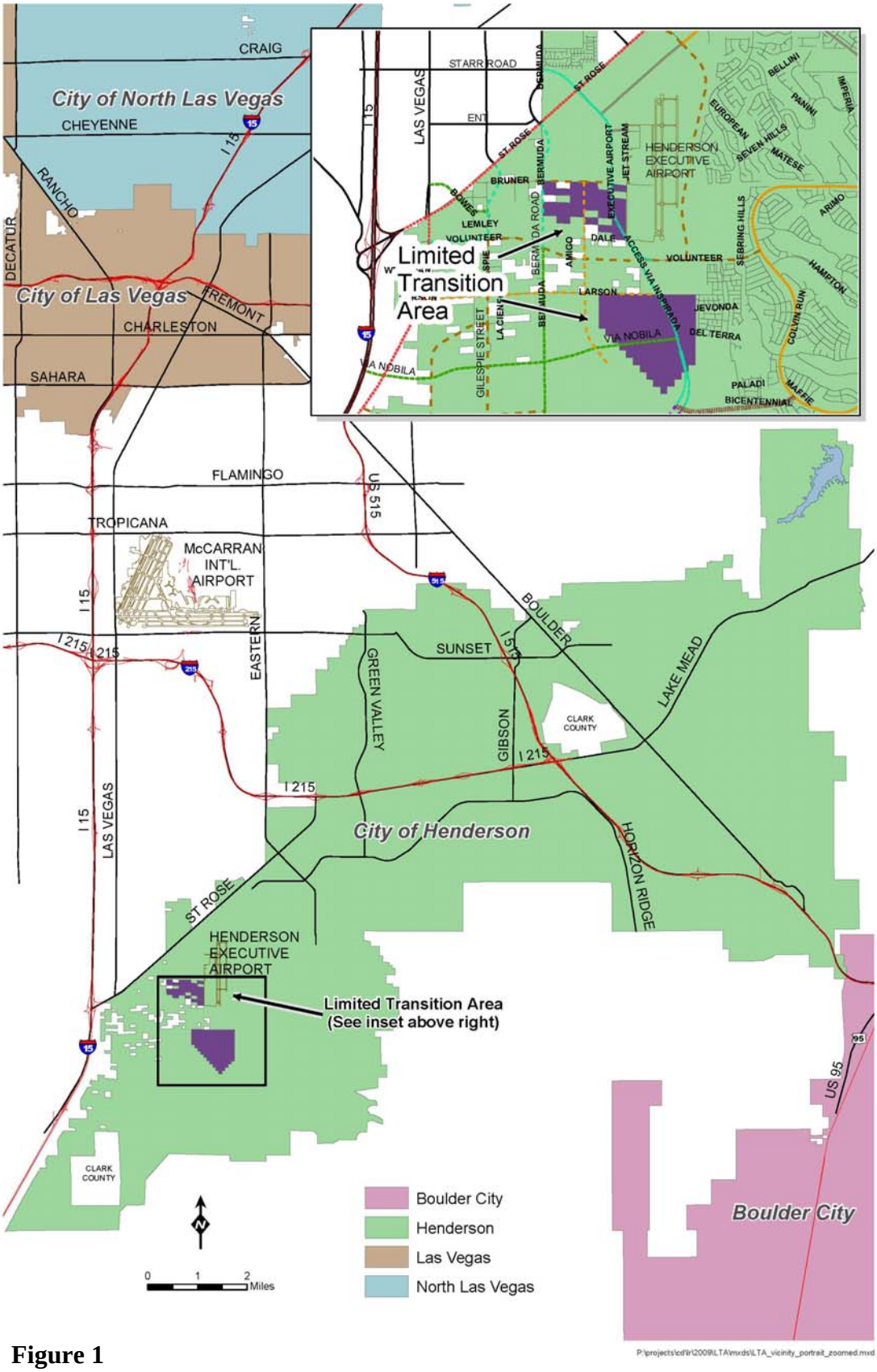
City of North Las Vegas
City of Las Vegas
City of Henderson
Boulder City
CRAIG
CHEYENNE
RANCHO
DECATUR
FREMONT
CHARLESTON
SAHARA
FLAMINGO
TROPICANA
McCARRAN INT'L. AIRPORT
I 15
I 215
EASTERN
LAS VEGAS
GREEN VALLEY
SUNSET
GIBSON
BOULDER
LAKE MEAD
HORIZON RIDGE
US 515
ST ROSE
HENDERSON EXECUTIVE AIRPORT
Limited Transition Area
(See inset above right)
CLARK COUNTY
US 95
STARR ROAD
ENT
BERMUDA
BRUNER
LEMLEY
VOLUNTEER
DALE
AMIGO
LARSON
VIA NOBILA
GILESPIE STREET
JET STREAM
EXECUTIVE AIRPORT
ACCESS VIA INSPIRADA
JEVONDA
DEL TERRA
PALADI
BICENTENNIAL
MALFIE
COLVIN RUN
HAMPTON
ARIMO
SEBRING HILLS
MATESE
SEVEN HILLS
EUROPEAN
PANINI
BELLINI
IMPERIA
Boulder City
Henderson
Las Vegas
North Las Vegas
0 1 2 Miles
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Figure 1

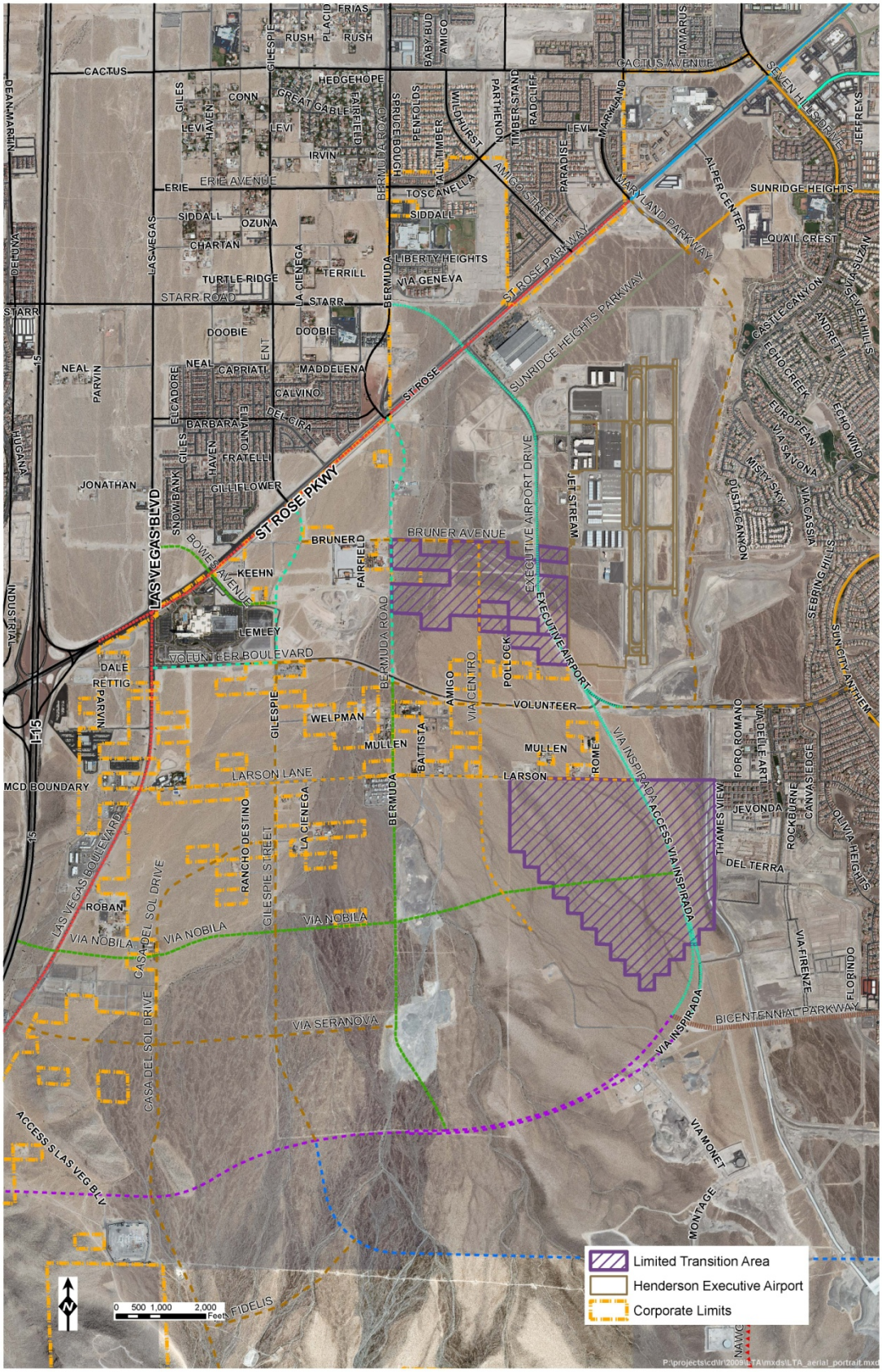

Limited Transition Area
Henderson Executive Airport
Corporate Limits
0 500 1,000 2,000
Feet
CACTUS
CACTUS AVENUE
ERIE AVENUE
STARR ROAD
STARR
ST ROSE PKWY
ST ROSE
LAS VEGAS BLVD
SUNRIDGE HEIGHTS PARKWAY
MARYLAND PARKWAY
BRUNER AVENUE
BRUNER
BOWES AVENUE
VOLUNTEER BOULEVARD
VOLUNTEER
LARSON LANE
LARSON
VIA NOBILA
VIA SERANOVA
VIA INSPIRADA
BICENTENNIAL PARKWAY
EXECUTIVE AIRPORT DRIVE
EXECUTIVE AIRPORT
BERMUDA ROAD
GILESPIE
LA CIENEGA
LAS VEGAS BOULEVARD
CASA DEL SOL DRIVE
RANCHO DESTINO
GILESPIE STREET
ACCESS S LAS VEG BLV
MCD BOUNDARY
I-15
INDUSTRIAL
DEAN MARTIN
HUGANA
JONATHAN
NEAL
PARVIN
DALE
RETTIG
LEMLEY
KEEHN
FAIRFIELD
WELPMAN
MULLEN
BATTISTA
AMIGO
VIA CENTRO
POLLOCK
ROME
ROBAN
VIA MONET
MONTAGE
FIDELIS
THAMES VIEW
JEVONDA
DEL TERRA
ROCKBURNE
CANVASEDGE
FORO ROMANO
VIA DELLE ARTI
OLIVIA HEIGHTS
VIA FIRENZE
FLORINDO
SUNRIDGE HEIGHTS
QUAIL CREST
CASTLE CANYON
ECHO CREEK
EUROPEAN
VIA SAVONA
MISTY SKY
DUSTY CANYON
VIA CASSIA
SEBRING HILLS
SUN CITY ANTHEM
ECHO WIND
ANDRETTI
SEVEN HILLS
SEVEN HILLS DRIVE
JEFFREYS
SUZAN
ALPER CENTER
MARYLAND
TAMARUS
RADCLIFF
TIMBER STAND
PARTHENON
WILDHURST
TALL TIMBER
PENFOLDS
SPRUCEWOOD
HIGHGROVE
BERMUDA PARKWAY
BABY BUD
HEDGEHOPE
GREAT GABLE
FRIAS
PLACID
RUSH
CONN
GILES
HAVEN
LEVI
IRVIN
SIDDALL
OZUNA
CHARTAN
TURTLE RIDGE
TERRILL
TOSCANELLA
LIBERTY HEIGHTS
VIA GENEVA
DOOBIE
CAPRIATI
MADDELENA
CALVINO
DEL CIRA
ELCADORE
BARBARA
FRATELLI
GILLIFLOWER
SNOWBANK
JET STREAM
PARADISE
AMIGO STREET
LAS VEGAS
VANDERBILT
ENT
EMILIANO

Figure 2

CHAPTER 2: A GUIDE FOR FUTURE DEVELOPMENT

2.1 Master Plan Overlay and Design Guidelines

The Limited Transition Area Master Plan Overlay and Design Guidelines will serve as a guide for public and private improvements within the LTA including architecture, types of uses, road networks, landscaping, and goals for sustainability. The Limited Transition Area Master Plan Overlay and Design Guidelines are provided to ensure that development is of the highest standard and will provide a framework for future development.

2.2 Guiding Principles

These Guiding Principles for the LTA were created by City staff and based upon feedback received from external stakeholders and elected officials.

A. The Limited Transition Area will be a model for fostering business development and economic growth and will be the ideal location to conduct related transactions.

   To achieve this guiding principle, the City will:
   - Promote a diverse mix of business uses;
   - Promote the use of public transportation throughout the LTA;
   - Encourage the utilization of sustainable design practices.

B. The Limited Transition Area will become the premier employment and business center in the Intermountain West. The LTA will not only serve the residents of southern Nevada, but will become a hub for business travel throughout the southwestern United States.

   To achieve this guiding principle, the City will:
   - Work to attract businesses that support the overall mission of the Henderson Executive Airport;
   - Work with businesses to foster economic growth and job creation;
   - Continue to partner with the Clark County Department of Aviation to encourage travel through the Henderson Executive Airport and to minimize impacts to surrounding neighborhoods to the maximum extent practicable.

C. There will be a seamless interface between the Limited Transition Area and surrounding communities by integrating balanced and cohesive uses.

   To achieve this guiding principle, the City will:
   - Develop a Master Plan Overlay and Design Guidelines that promote varied, high quality architecture and site design;
   - Promote the establishment of more intense uses away from existing and future residential development;
   - Incorporate drought tolerant landscaping and trails into the overall design.

2.3 Administration / Procedure

To implement the vision for the LTA, the Master Plan Overlay will be included on this development. The Master Plan Overlay follows the process outlined in the Henderson Development Code. The Master Plan Overlay identifies appropriate uses, dimensional standards, and landscape standards for the entire LTA.

Amendments to standards and regulations that affect the overall development of the LTA must be initiated by staff. Site specific development that requires waivers can be initiated by private property owners, developers, or applicants through the design review process. Design Review Applications (DRAs) requesting prescribed standards that deviate from the Henderson Development Code will require approval by the City Council. DRAs requesting architectural review that do not require waivers will be reviewed and approved administratively.

2.4 Title 19 Non-Applicable Standards

When not superseded by the Limited Transition Area Master Plan Overlay and Design Guidelines, Title 19 of the Henderson Development Code shall apply. However the following sections of Title 19 (including any future modifications) are hereby deleted in their entirety and shall not be applicable to the Limited Transition Area Master Plan Overlay and Design Guidelines.

Chapter 19.7.2.B.1: Development and Design Standards
Chapter 19.7.5.B: Development and Design Standards (Site Landscaping)
Chapter 19.7.6.D.2.h: Development and Design Standards (Buffer Width)
Chapter 19.9.14.B.4: Subdivision Design and Improvements

CHAPTER 3: ECONOMIC DEVELOPMENT

A primary goal for the LTA is to expand and implement long-term economic development strategies that position the City as a regional economic leader. The LTA will serve as a major employment center, generating benefits for the City by showcasing balanced land uses and environmental design. Therefore, business recruitment should be carefully planned in concert with the land use planning process to attract the desired types of development. Economic development strategy programs must be carefully coordinated with market conditions. To sustain the long-term economic prosperity of the LTA, the City should implement the following:

- Promote Henderson's business-friendly tax climate as a key factor for attraction, retention, and expansion.
- Attract office users, emerging technology, and high-value businesses to the LTA. Seek to attract at least one large-scale major employer.
- Develop incentives that encourage new development.
- Expand public infrastructure to support future demand in the LTA.
- Initiate retention programs to keep businesses in the LTA.
- Diversify employment opportunities to insulate the City from economic downturns.
- Encourage public and private partnerships to pursue joint ventures between emerging technology-based research and green businesses.

3.1 Northern LTA

Airport supportive uses will generally be located in the northern LTA in close proximity to the Henderson Executive Airport. Successful airport-supportive business parks typically provide services that are both functional and convenient to travelers. Ideally the City would like to create an environment where business travelers have the option to fly into the Henderson Executive Airport, attend meetings, dine, and depart by air all onsite. The northern LTA could also accommodate a corporate campus environment that allows uses such as offices, laboratories, classrooms, and research facilities.

The northern LTA will be the ideal location to host meetings.

3.2 Southern LTA

The southern LTA is ideal for development of a major employment center. It may also include research and development centers or light industrial manufacturing operations. Greenways, sensitive architectural design, and less intensive uses could be included to buffer future development from adjacent residential uses.

The LTA will showcase modern architecture while accommodating high-tech employers.

CHAPTER 4: USE AND DIMENSIONAL STANDARDS

4.1 Land Use (North and South)

The LTA will allow for uses that enhance the functionality of the Henderson Executive Airport and enhance the quality of life in neighboring communities.

The LTA is zoned Industrial Park (IP) as described in Section 19.3.15 of the Henderson Development Code. To this end, the City will support a mix of uses within the LTA that promote a sense of community and economic development. This will be accomplished by incorporating intensities that reflect existing and future market conditions. Uses will be primarily business-oriented with variations in size, location, and product. There will be no residential uses.

As a general rule, more intense uses will be located toward the center of the LTA away from residential areas, while less intensive uses will be located along the borders adjacent to nearby residences.

4.2 Use Regulations

This section outlines uses that deviate from the Henderson Development Code. The regulations that identify uses allowed in the IP zoning district under sections 19.5.4 through 19.5.6 of the Henderson Development Code shall apply unless expressly modified below.

A. Permitted Uses

1. Employment and Training Center, Nonprofit
2. School, Public or Private (College or University)
3. Convention
4. Financial Institution (General)
5. Office (Business and Professional, Medical)
    - Office uses are permitted up to a maximum of 100 percent of each business' leased area.
6. Retail Sales and Services (Pharmacy and Printing Service)
7. Visitor Accommodation (Hotel/Motel)

B. Permitted Subject to Standards

1. Retail Sales and Services (Convenience Markets)
    - Convenience markets will only be allowed on the ground floor of other permitted uses or stand-alone buildings.

C. Conditional Use Permit

1. Airport or Landing Strip
    - Taxiways and related uses including but not limited to aircraft storage, display, repair, assembly, and manufacturing will be allowed.
    - Runways and other uses that could negatively affect the operations of the Henderson Executive Airport are prohibited.

- The conditional use permit shall address aesthetics, architecture, site design, and any other pertinent elements to ensure compatibility with surrounding land uses and Section 2.2 *Guiding Principles*.

2. Cultural Institution
3. Hospital
4. Maintenance and Service Facility
5. Arts and Crafts
6. Banquet Facility
7. Brew Pub / Microbrewery
8. Brewery
9. Commercial Recreation and Entertainment (Limited)
10. Eating and Drinking Establishment, Restaurant with Service Bar and Wine/Lounge
11. Financial Institution (With Drive-Through Service, Check Cashing, Deferred Deposit Service and/or Vehicle Title Loan)
12. Food and Beverage Sales (General)
13. Gaming Establishment (Restricted Gaming)
14. Commercial Laundry (General and Limited)
15. Warehousing and/or Storage Yards (General)
16. Temporary Construction Trailer (Offsite)
17. Catering Service (Free-Standing or Primary Use)
18. Club or Lodge

D. Temporary Uses

1. Temporary Live Entertainment Events
2. Temporary Outdoor Event

E. Accessory Uses

1. School, Public or Private (K-12)
    - Elementary, middle, and high schools will only be permitted as an accessory to a college or university use.
2. Catering Service
    - Catering services allowed accessory to hotels, convention centers, and restaurants.

F. Uses Not Permitted

1. Vehicle/ Equipment Sales and Service (Commercial (Retail) Fueling Centers, Fleet Fueling Service, Smog-Check Station, and Vehicle Storage)

G. Off-Street Parking and Loading Schedules

Parking and loading requirements will remain consistent with sections 19.5 and 19.7.4 of the Henderson Development Code.

CHAPTER 5: INFRASTRUCTURE

5.1. Sewer and Water

Both the northern and southern LTA will require that major backbone utility infrastructure be constructed to service the areas at build-out. Municipal sewer infrastructure has already been planned to serve both the northern and southern portions of the LTA (Figure 3). The projected max-day water demand for the northern and southern LTA are 5.5 mgd and 8.0 mgd respectively (memorandum attached). Additional sewer infrastructure to include sanitary sewer pipelines may be necessary and exact requirements will be determined when specific users have been identified. Based upon a market analysis of the surrounding area, the City anticipates that over 50% of the northern LTA may be occupied by office space with the remaining being occupied by a mix of open space, industrial, commercial, hotel, and public facilities. Additionally, it is anticipated that approximately 80% of the southern LTA may be occupied by office space and light industrial uses. Commercial and public facilities will complement these uses. However, the aforementioned figures are estimates and can be adjusted as necessary as specific users are identified and sited within each portion of the LTA.

Water infrastructure has also been planned and a pump station will be necessary in the immediate vicinity of the LTA.

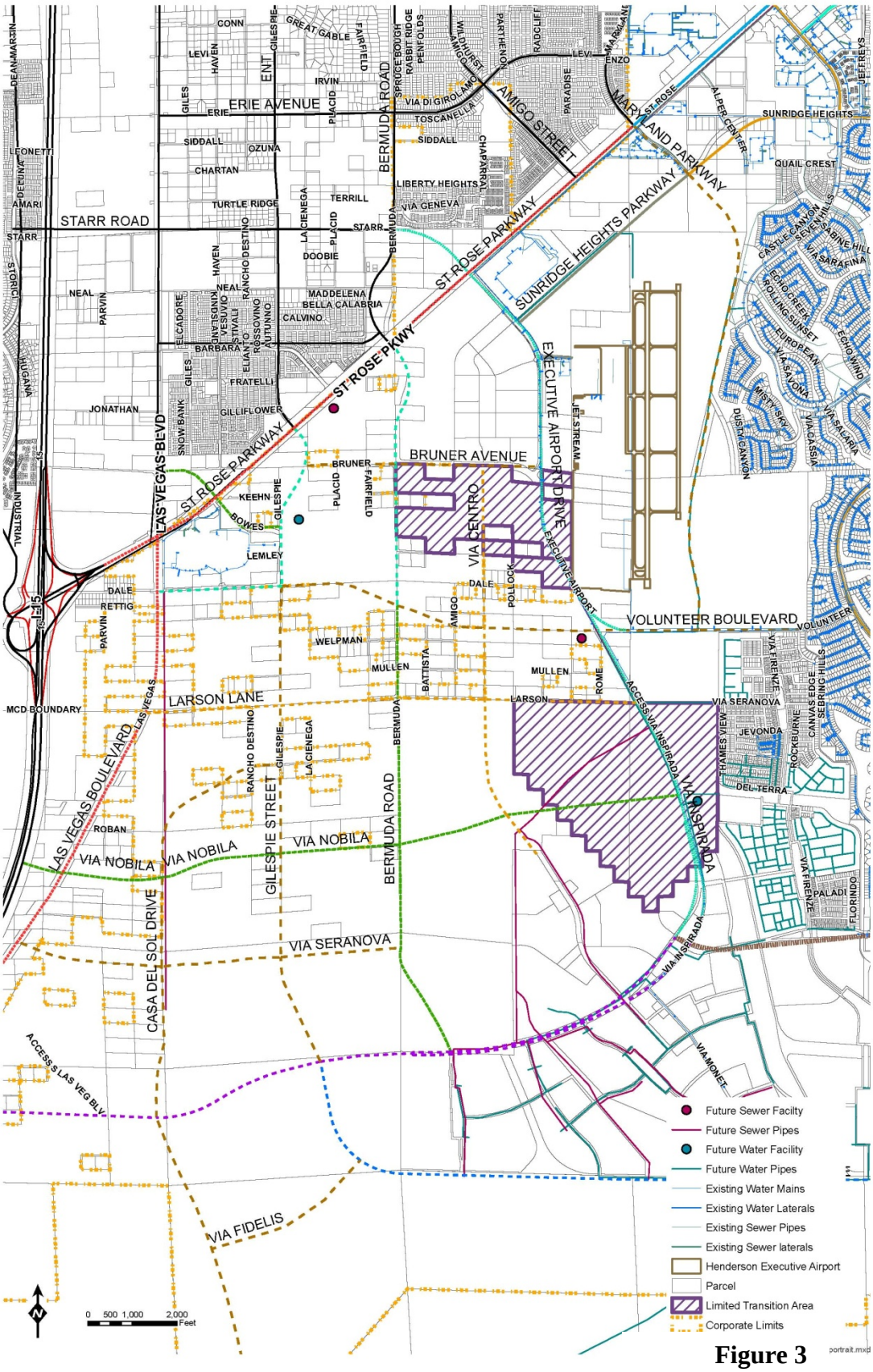
5.2. Drainage

The 100-year Flood Zone crosses portions of both the northern and southern LTA (Figure 4). The flood zone crossing the northeastern corner of the northern LTA has been removed. The flood zone crossing the west portion of the northern LTA will not be removed until future regional flood control facilities are constructed. Portions of the flood zone boundary may be revised in the future. Additionally, an area designated for a greenway may be located in the southern LTA to provide drainage and to buffer the LTA from adjacent residential uses.

5.3. Road Network

Executive Airport Drive, Via Inspirada, and Via Nobila will serve as the main access routes to the LTA (Figure 5). Executive Airport Drive will facilitate access to and from St. Rose Parkway to the north. Access to Interstate 15 is proposed and will be through Via Nobila and Via Inspirada. While connectivity to major transportation corridors is critical to the success of the LTA, the layout of roadways may be dependent on utility infrastructure alignments and will be designed to minimize negative impacts on the surrounding residential areas. Grade separations may be required for taxiways.

Bruner Avenue, Via Centro, and Executive Airport Drive will serve as the arterials for the northern LTA, while Via Inspirada and Via Nobila will do the same for the southern LTA. New businesses will be required to submit development plans specifying the size and location of their operations, and show connections to backbone streets. In the event that new roadways are proposed, they will be designed to accommodate multiple modes of travel in order to promote safety and accessibility for all users. In addition to Via Inspirada, the potential exists for a major street to connect both halves of the LTA. The addition of this street may necessitate an amendment to the Master Street and Highway Plan.


ERIE AVENUE
STARR ROAD
BERMUDA ROAD
AMIGO STREET
MARYLAND PARKWAY
ST ROSE PARKWAY
SUNRIDGE HEIGHTS PARKWAY
BRUNER AVENUE
EXECUTIVE AIRPORT DRIVE
VIA CENTRO
VOLUNTEER BOULEVARD
LARSON LANE
LAS VEGAS BOULEVARD
VIA NOBILA
GILESPIE STREET
VIA SERANOVA
CASA DEL SOL DRIVE
VIA INSPIRADA
VIA FIDELIS
ACCESS LAS VEG BLV
MCD BOUNDARY
Future Sewer Facilty
Future Sewer Pipes
Future Water Facility
Future Water Pipes
Existing Water Mains
Existing Water Laterals
Existing Sewer Pipes
Existing Sewer laterals
Henderson Executive Airport
Parcel
Limited Transition Area
Corporate Limits
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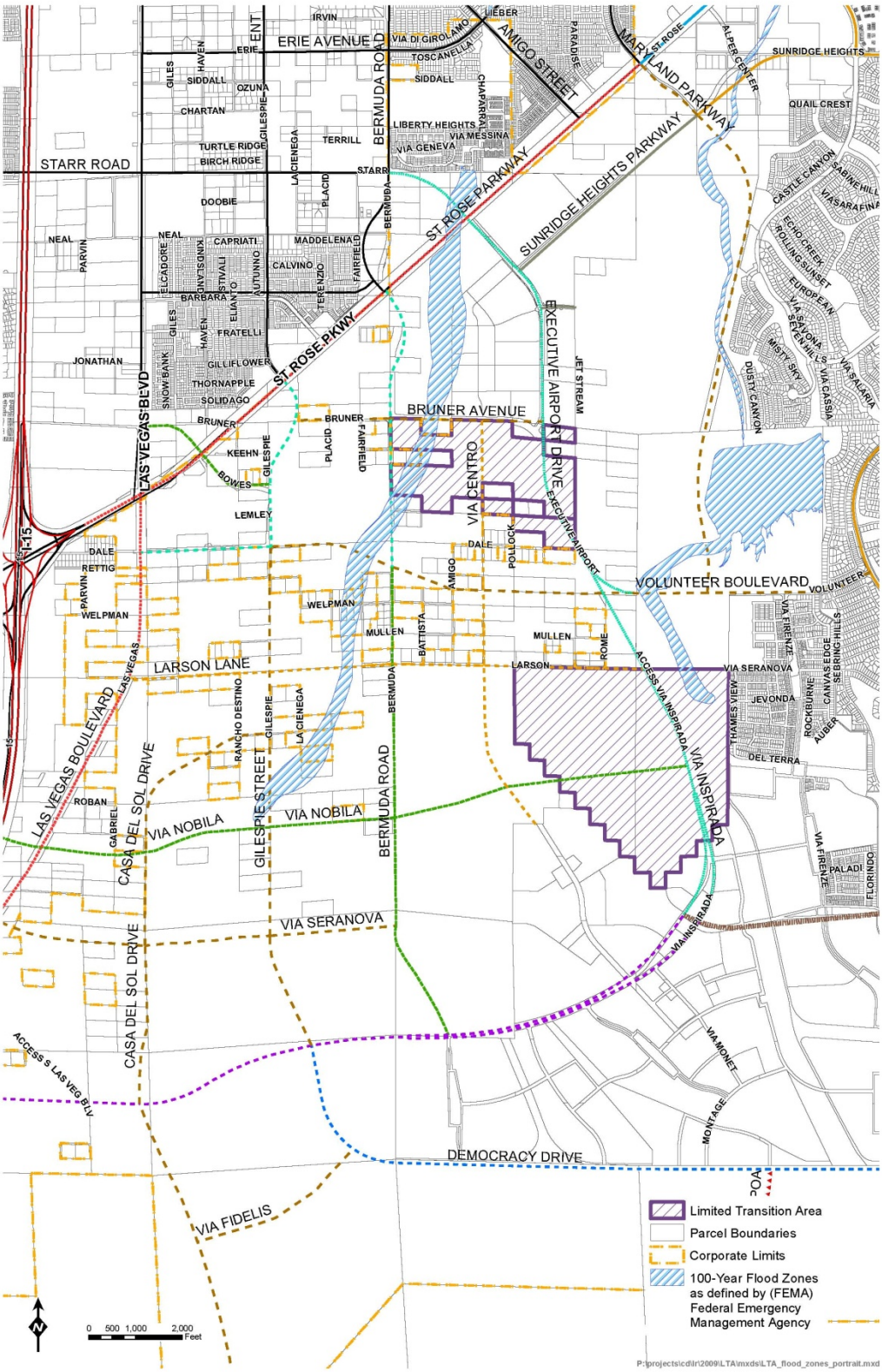
Feet
portrait.mxd

Figure 3


ERIE AVENUE
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AMIGO STREET
MARYLAND PARKWAY
ST ROSE PARKWAY
SUNRIDGE HEIGHTS PARKWAY
ST ROSE PKWY
LAS VEGAS BLVD
BRUNER AVENUE
EXECUTIVE AIRPORT DRIVE
VIA CENTRO
VOLUNTEER BOULEVARD
LARSON LANE
LAS VEGAS BOULEVARD
CASA DEL SOL DRIVE
GILESPIE STREET
VIA NOBILA
VIA SERANOVA
VIA INSPIRADA
DEMOCRACY DRIVE
VIA FIDELIS
I-15
Limited Transition Area
Parcel Boundaries
Corporate Limits
100-Year Flood Zones as defined by (FEMA) Federal Emergency Management Agency
0 500 1,000 2,000 Feet
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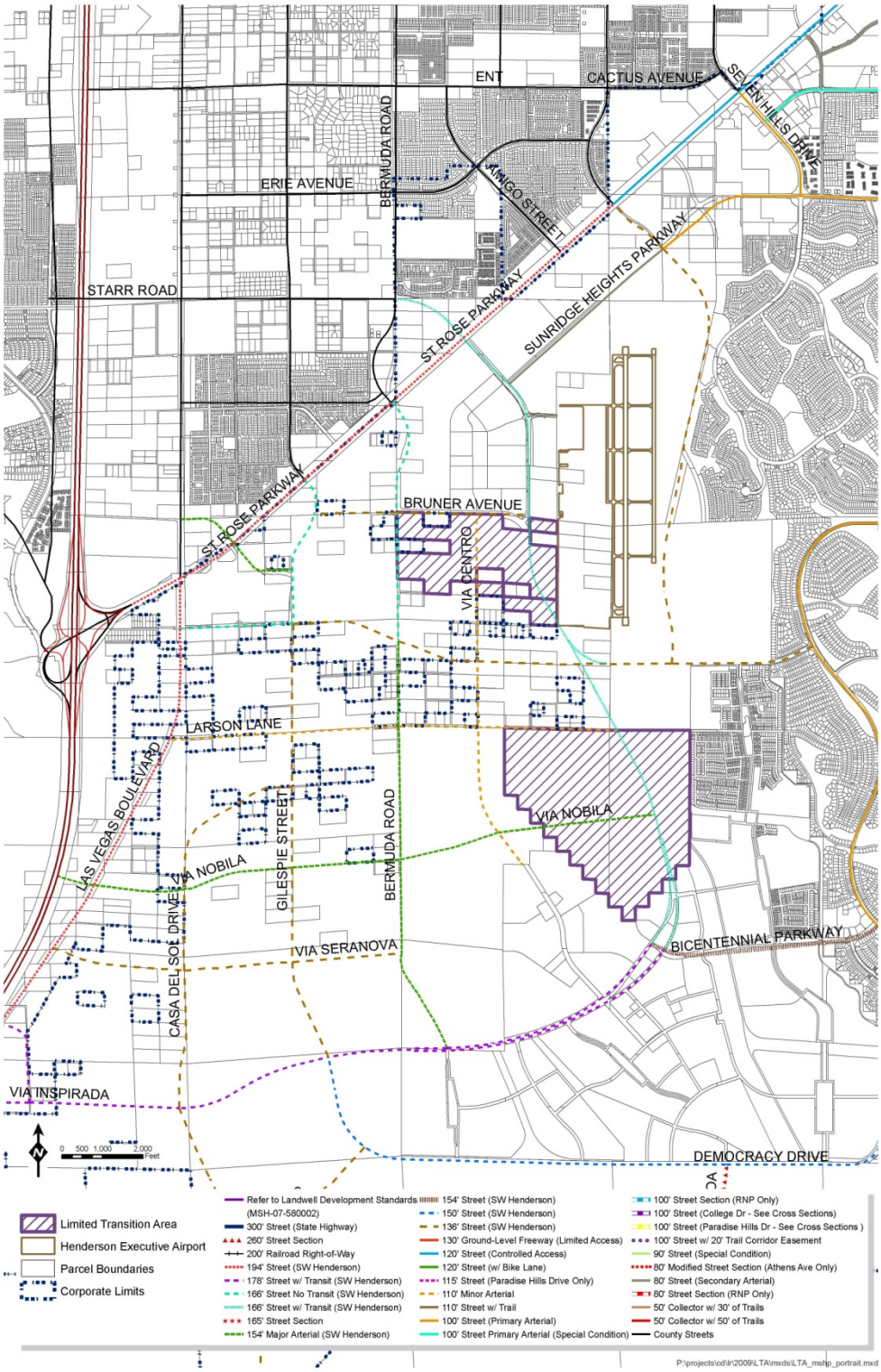
Figure 4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CACTUS AVENUE
SEVEN HILLS DRIVE
BERMUDA ROAD
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AMIGO STREET
STARR ROAD
ST ROSE PARKWAY
SUNRIDGE HEIGHTS PARKWAY
BRUNER AVENUE
VIA DENTRO
LARSON LANE
LAS VEGAS BOULEVARD
GILESPIE STREET
VIA NOBILA
CASA DEL SOL DRIVE
VIA SERANOVA
BICENTENNIAL PARKWAY
VIA INSPIRADA
DEMOCRACY DRIVE
0 500 1,000 2,000 Feet
Limited Transition Area
Henderson Executive Airport
Parcel Boundaries
Corporate Limits
Refer to Landwell Development Standards (MSH-07-580002)
300' Street (State Highway)
260' Street Section
200' Railroad Right-of-Way
194' Street (SW Henderson)
178' Street w/ Transit (SW Henderson)
166' Street No Transit (SW Henderson)
166' Street w/ Transit (SW Henderson)
165' Street Section
154' Major Arterial (SW Henderson)
154' Street (SW Henderson)
150' Street (SW Henderson)
136' Street (SW Henderson)
130' Ground-Level Freeway (Limited Access)
120' Street (Controlled Access)
120' Street (w/ Bike Lane)
115' Street (Paradise Hills Drive Only)
110' Minor Arterial
110' Street w/ Trail
100' Street (Primary Arterial)
100' Street Primary Arterial (Special Condition)
100' Street Section (RNP Only)
100' Street (College Dr - See Cross Sections)
100' Street (Paradise Hills Dr - See Cross Sections)
100' Street w/ 20' Trail Corridor Easement
90' Street (Special Condition)
80' Modified Street Section (Athens Ave Only)
80' Street (Secondary Arterial)
80' Street Section (RNP Only)
50' Collector w/ 30' of Trails
50' Collector w/ 50' of Trails
County Streets
P:\projects\cd\lr\2009\LTA\mxds\LTA_mslp_portrait.mxd

Figure 5

CHAPTER 6: SITE DESIGN AND CHARACTER

6.1. Transit-Ready Areas

Transit-ready development prepares for future transit expansion with neighborhoods and road networks designed for maximum efficiency of all transportation modes. The Regional Transportation Commission (RTC) has identified Via Inspirada and Executive Airport Drive as future rapid transit corridors which will provide the backbone for additional local transit and pedestrian amenities. The LTA will incorporate these amenities as it develops to provide more transportation choices for future commuters and visitors and to reinforce the attraction of high quality office users. In the long-term, the City desires to minimize congestion by reducing the need for single-occupancy commutes to the LTA. To fulfill this desire, each new development will contribute to a connected street system, comfortable and secure walking paths, and transit-supportive amenities. Appropriately scaled architecture with amenities adapted to the climate will also encourage an enhanced pedestrian and vehicular experience.

To ensure that the LTA supports future transit, the City will:

- Encourage pedestrian-friendly development.
- Encourage businesses to take part in the RTC's Club Ride Commuter Services Program and other transportation demand management programs.
- Create mixed-use "hubs" around planned stops with amenities and services for transit users.
- Require that development include adequate lighting and universal accessibility to satisfy transit-user safety concerns.
- Incorporate shade structures into streetscape designs.
- Integrate centrally-located parking facilities that are shared between uses.
- Encourage preferred parking facilities for bicycles, carpool vehicles, and motorcycles.
- Encourage public/ private ventures to improve vehicular accessibility from St. Rose Parkway to the LTA. Such ventures might allow private entities to enter into agreements with the City and the RTC to construct, improve, maintain, and operate public transportation facilities.
- Integrate multi-modal transportation systems within site design.
- Encourage roadway and site design that enhances connectivity between developments.
- Establish connections between the LTA and regional trails.
- Provide open space areas for relaxation and enjoyment.

The LTA will connect to regional trails by incorporating pedestrian-friendly sidewalks into street designs.

6.2. Landscaping

Useable, common open space will be subject to Section 19.7.2 of the Henderson Development Code. Common open space standards shall comply with the standards of the IP district.

Drought-tolerant landscaping will enhance the visual appeal of the LTA.

Landscape buffers shall comply with Section 19.7.5.C.3 of the Henderson Development Code. Subject to approval by the community Development Director, developers may provide the following alternate configuration along street frontages not listed on the Master Streets and Highways Plan: (1.) sidewalks at least 10 feet in width, (2) shade trees planted at 25 feet on center, placed in a minimum 5-foot by 5-foot planting area, and adjacent to the curb covered with a tree grate or decomposed granite that is flush with the adjacent pavement, and (3) the building must be built to the back of the sidewalk with an entrance to the street.

6.3. Pedestrian Amenities

The LTA will be designed in a manner that encourages pedestrian circulation. The design will lend to the LTA being seen as a vibrant place to work. Specifically courtyards, plazas, and pedestrian boulevards will be incorporated to meet this need. Shade structures will be incorporated into all streetscape designs.

The design of the LTA will lend to a vibrant workplace atmosphere.

These amenities will be interconnected by streets, bikeways, and trails for workers and visitors to enjoy. They will have a strong urban presence through streetscape design and urban forms.

6.4. Transitions to Residential

In order to preserve the integrity of the community, landscape buffers will be incorporated into the design of the LTA. Buffers may be of varied concepts, including but not limited to greenways, open space, parks, or other methods to provide an appropriate transition to residential areas. Existing arroyo/drainage features could be preserved as natural features along with the co-location of sensitive architecture and less intensive uses. Preservation of arroyo/drainage features would be dependent upon flow volumes and the location of existing flood structures near the LTA.

Greenways, open space, and parks could serve as buffers to nearby residences.

Development located adjacent to residential uses shall comply with the Residential Compatibility Standards of section 19.7.6.D.6 of the Code.

CHAPTER 7: BUILDING DESIGN AND ARCHITECTURAL STANDARDS

Building within the LTA will be designed in a manner that is creative and unique. Architecture will lend to an attractive and enduring business park setting. Buildings should be sited in a harmonious and complementary manner. Aesthetically, forms should be somewhat consistent while at the same time allowing for variation and diversity. Architectural elements will conform to the Non-Residential Design Standards of Title 19 required throughout the City. However, innovative and attractive designs that deviate from the standards may be approved at the discretion of the Community Development Director. The following guidelines should be considered:

- Buildings will be designed to have a high visual quality as defined by section 19.7.6.D of the Henderson Development Code.
- Overall site layout should be cohesive and minimize adverse physical impacts to nearby residences.
- Buildings may be clustered or located at the periphery of the site and connected with seating areas, walkways, or plazas. As a general rule, more intensive uses should be sited toward the center of the LTA, with less intensive uses located along the periphery and near residential areas.
- Where feasible, clustering of buildings should be used to frame a common courtyard or open area.
- Sustainable design and energy efficient buildings are strongly encouraged.

7.1 Office Buildings

Office buildings, whether used for educational facilities, medical uses, research and development, or general business purposes, will be located throughout the LTA. While no specific design is required, office buildings should relate visually using similar architectural vocabulary and palette of materials. Materials will include, but are not limited to concrete, stone, glass, brick masonry, stucco, and metal panels.

This

Building heights and floor plates will vary (taller buildings will be concentrated toward the center of the LTA or along major thoroughfares), but should be considered in the overall arrangement of structures. Walls should avoid blank expanses by means of variations in height, setbacks, materials, or other methods. All four sides of each structure should be of matching materials and should include elements to provide visual relief. Roof screens designed to hide roof-mounted mechanical equipment can be used in creative ways to articulate rooflines.

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A minimum of six treatments must be selected from section19.7.6.D.3.2 of the Code. Standards will be higher on or near major thoroughfares than in other areas. Final approval will be made by the Community Development Director.

7.2 Flex Warehouse

Flex warehouse structures are typically one-story buildings with large floor plates. The resultant architectural form is characterized by low horizontal architecture which limits the degree to which height and articulation of the roofline can be achieved. The long facades can be broken up through changes in the plane of the elevation and punctuations of varying materials such as glass or metal panels. Building materials may include, but are not limited to concrete, brick masonry, and glass and metal panels. All four sides of each structure should be of matching materials and should include elements to provide visual relief.

This

Not This

7.3 Hotels, Commercial, and Auxiliary Uses

Auxiliary and airport supportive uses could include, but are not limited to hotels, restaurants, transportation rental, meeting space, remote parking, and personal improvement services. Restaurants could be stand-alone or vertically integrated as a ground-floor use and the inclusion of outdoor seating is encouraged. All of these buildings, as well as other commercial uses serving the needs of commuters and visitors, will be designed to complement the overall architectural character of the LTA. Materials shall be similar to the office buildings, including concrete masonry, stucco, pre-cast brick, and glass. Architecture should evoke a modern feel. All four sides of each structure should be of matching materials and should include elements to provide visual relief.

This

Not This

CHAPTER 8: SUSTAINABILITY

As a responsible environmental steward, the City incorporates sustainability into its planning processes. The City adopted a Sustainability Action Plan in 2009 with emphasis on seven broad themes: Energy, Water, Recycling and Waste Reduction, Transportation, Urban Design, Urban Nature, and Environmental Health. With regard to the LTA, the following objectives have been identified to ensure consistency with the Action Plan for future development.

The City will work with future users to encourage sustainability, innovative environmental design, and consistency with the objectives of this Master Plan Overlay and Design Guidelines. Development within the LTA shall achieve sustainable building and site design criteria in accordance with Chapter 19.7.12 of the Henderson Development Code.

A. **Energy:** Encourage on-site renewable energy production; promote the design and construction of energy efficient buildings; reduce air, water, and land pollution from energy consumption; and reduce the heat island effect.

Solar photovoltaic panels are one of several options for sustainable development as provided in the Code.

B. **Water:** Minimize water use in buildings; prevent pollution and erosion from stormwater runoff; and minimize outdoor water use for landscape irrigation.

C. **Recycling and Waste Reduction:** Encourage recycling of commercial products; reduce the amount of waste to be hauled and disposed of in landfills, and promote the reuse of materials.

D. **Transportation:** Encourage alternative modes of transportation such as walking and bicycling through integrated site and infrastructure design; encourage the use of public transit; promote safe and efficient transportation to prevent conflicts and reduce congestion; encourage the use of clean technology for private and fleet vehicles; and design parking facilities and roadway networks to minimize adverse environmental impacts to pedestrians.

E. **Urban Design:** Incorporate the principles of sustainable design into all buildings and pursue Leadership in Environmental Design (LEED) certification; integrate transportation and land use planning to produce a more cohesive development with a distinct identity; and create a high quality business environment that will attract and retain businesses to diversify the local economy.

F. **Urban Nature:** Integrate a variety of appealing and comfortable open spaces within developed areas; provide shade to encourage walking and time spent outdoors; and provide connections to local and regional trails where feasible.

G. **Environmental Health:** Encourage the use of green building practices and materials in the design, construction, or retrofit of buildings; promote the production and use of green products; and reduce negative impacts from buildup and transportation on air quality emissions.

ATTACHMENT

CITY OF HENDERSON
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DEPT. OF UTILITY SERVICES
Dennis B. Porter, P.E., Director
702-267-2500
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Memorandum

TO: Anthony Ventimiglia, P.E., Utility Services Technical Support Manager
City of Henderson LTA Implementation Team

FROM: Donald E. Pelissier, P.E., Utility Services Technical Support Manager

DATE: February 17, 2010

SUBJECT: Utilities Service to LTA

PURPOSE

This memorandum has been prepared to provide a conceptual level plan for providing the required water and sewer infrastructure to serve the Limited Transition Area (LTA) in West Henderson.

WATER SERVICE ANALYSIS

The LTA is comprised of two separate areas: one north of Volunteer Boulevard (LTA North), and one south of Volunteer Boulevard (LTA South) as shown in Figure 1. The approx. 150-acre LTA North is located in the 2630 East pressure zone (PZ) and the approx. 350-acre LTA South is located in the 2760 PZ as shown in Figure 1.

Water Service to LTA North

The projected max-day demand for the entire 2630 PZ East (1,500-acre) is 5.5 mgd. Based on land use assumptions acreages given by Community Development shown in Attachment 1, the projected max-day demand for the 150-acre LTA North is 1.27 mgd.

Startup

The existing PRV # 88 (2760 PZ to 2630 PZ) as shown on Figure 2, located at Volunteer Blvd. and Via Inspirada, currently feeds the 2630 PZ East zone via the 2760 PZ pump station P-19A through the 42-inch water main in Volunteer Blvd. An existing 16-inch 2630 PZ main connected to the 42-inch water main runs through the eastern border of LTA North. This pipeline is currently capable of providing max day, peak hour, and maximum expected fire flows of 6,000 gpm for the proposed land use types expected in LTA North. The LTA North currently has some backbone transmission utility infrastructure in place, but no distribution infrastructure. It is anticipated that no new large backbone infrastructure will be necessary for startup of the LTA North area.

The estimated water infrastructure cost for startup of the LTA North is $0.00 (See Table 1).

Build-out

In the future, PRV #88 will have to be taken out of service when the max day demands in Inspirada cause P-19A to reach its capacity. Therefore, in order to serve 2630 East including LTA North, the following infrastructure is planned for build-out conditions as shown in Figure 2:

- A 25 mgd 2630 PZ Bermuda Pump Station (Bermuda PS; CIP # W-159) to be located at Gilespie Street and Keehn Avenue
- 3,000 feet of 42-inch Bermuda PS discharge pipeline to be located primarily in Bermuda Rd.
- 5,500 feet of new 42-inch main (CIP # W-160) to be installed in Via Inspirada and to be connected to the existing 42-inch 2630 PZ Volunteer Blvd. main
- A new 2.5 MG 2630 PZ reservoir designated R-35

It would be very difficult to estimate a precise timeframe when the above-mentioned PRV abandonment and infrastructure would be required because of the high degree of uncertainty in the economy, development, and housing starts. However, it may be reasonable to assume that these infrastructure changes would be needed no earlier than 2015.

The estimated water infrastructure cost for build-out of the LTA North is $18,230,000.00 (See Table 1).

The Bermuda PS is planned to serve not only R-35, but also additional areas in 2630 "West" (see Figure 2). Therefore, if 2630 PZ East (LTA North) and R-35 are developed and constructed prior to 2630 PZ West infrastructure, a refunding agreement may be established to recoup some of the LTA costs associated with constructing the Bermuda PS. Additionally, there is a strong possibility that the Bermuda PS will be constructed in phases with additional pumps added after initial construction as development requires.

Water Service to LTA South

The projected max-day demand for the entire 2760 PZ (350-acre) is 8.0 mgd. Based on land use assumptions shown in Attachment 1, the projected max-day demand for the 350-acre LTA South is 2.47 mgd.

Startup

Construction of approximately 3,600 feet of a 16-inch 2760 PZ distribution pipeline would be required for startup of LTA and would be placed in a location determined by the development.

The estimated water infrastructure cost for startup of the LTA South is $600,000.00 (See Table 1).

Build-out

In order to serve 2760 PZ including LTA South, the following infrastructure is planned for build-out conditions as shown in Figure 2:

- A 16-inch 2760 PZ distribution pipeline
- A 25 mgd 2630 PZ Bermuda Pump Station (Bermuda PS; CIP # W-159) to be located at Gilespie Street and Keehn Avenue
- 3,000-ft of 42-inch Bermuda PS discharge pipeline to be located primarily in Bermuda Rd.
- A 17 mgd 2760 PZ PS designated P-35 & 800-ft of 36-inch discharge pipe
- A 2.5 MG 2760 PZ reservoir designated R-36A to be located on the existing R-36 site.

The Bermuda PS is needed to serve LTA south because the capacity of P-19A will be fully utilized in the future to supply the eastern portions of the 2760 PZ, making it necessary for future developments in this part of the 2760 PZ to be served via the Bermuda PS and P-35.

Cost estimates for the construction of both startup and build-out water infrastructure are shown in Table 1. The total LTA North and LTA South water service estimated costs is $37,730,000.00. Estimated costs for these facilities are currently identified as developer funded in the DUS' CIP.

SANITARY SEWER SERVICE ANALYSIS

As of 2008, a new St. Rose Parkway sewer interceptor was installed as part of the Inspirada and West Henderson projected developments. A 42-inch diameter sewer pipeline was installed at the point where it would intercept wastewater flows from both the LTA areas as shown in Figure 3. The sewer interceptor was oversized to accommodate the drainage basin and the projected future growth from West Henderson including LTA North and LTA South areas.

Sanitary Sewer Service to LTA North

Currently, there exists parallel 21-inch and 24-inch sewer mains in Volunteer Boulevard/Executive Airport Drive. The existing 21-inch sewer main was installed in 1998 to accommodate sewage flows from the Del Webb – Anthem developments. The existing 24-inch sewer main was installed in 2006 to accommodate sewage flows for the Inspirada development. Volunteer Blvd. splits the eastern portion of LTA North area and has the capacity to accommodate any future sewage flows proposed from the eastern side of Volunteer Blvd and all the sewage flows immediately downstream of LTA North as shown in Figure 3. The capacity of

the combined sewers is 22 mgd. (Design Memorandum for the Executive Airport Drive/Volunteer Blvd Sanitary Sewer, VTN, January 2006). Approximately 1.0 mgd was originally planned for the LTA.

With the installation depth of the existing sewer mains and the existing slope of the natural grade on the west side of Volunteer Blvd., only a small portion (about 400-foot along the west side of the street right-of-way) of the LTA North area can directly connect into the sewer mains in Volunteer Blvd. A new 8-inch sewer main is required to be constructed within the Street A alignment and will connect to the existing 24-inch sewer main located in Executive Airport Drive/Volunteer Blvd. This new sewer main should extend south to the western portion of the LTA North area and will accommodate the remaining projected sewage flows.

Construction of approximately 4,000 feet of an 8-inch sanitary sewer pipeline would be required for startup of LTA North as shown in Figure 3.

The estimated sanitary sewer infrastructure cost for startup of the LTA North is $305,250.00 (See Table 1).

Sanitary Sewer Service to LTA South

A new 27-inch sewer main is required to be constructed and extended south in the Via Inspirada Street alignment from the existing 24-inch sewer main installed in Volunteer Blvd. The proposed 27-inch sewer main in the Via Inspirada Street alignment will accommodate projected sewer flows from the "LTA South" area and the proposed Inspirada South development.

- 3,000 feet of new 27-inch diameter sewer main installed in the Via Inspirada Street alignment connected to the existing 24-inch sewer main located in Volunteer Blvd.
- 2,900 feet of new 27-inch diameter sewer main installed that extends from Via Inspirada, southwesterly thru the LTA South area.

Construction of approximately 5,900 feet of a 27-inch sanitary sewer pipeline would be required for "startup" of LTA South as shown in Figure 3.

The estimated sanitary sewer infrastructure cost for startup of the LTA South is $1,701,500.00 (See Table 1).

Cost estimates for the construction of the sanitary sewer infrastructure are shown in Table 1. The total LTA North and LTA South sanitary sewer service estimated cost is $2,006,750.00. Estimated costs for these facilities are currently identified as developer funded in the DUS' CIP.

CONCLUSION

Both the LTA North and South areas will require that some large backbone utility infrastructure be constructed to service the areas at build-out at the estimated cost of $39,800,000.00. This

large backbone infrastructure will consist of water pumping station, water reservoirs, water transmission pipelines and sanitary sewer mains. The magnitude of the future backbone utility infrastructure is highly dependent on the future approved land use plans and the results of future Utility Master Plans developed for the areas. Any infrastructure constructed in these areas has the potential to be part of a future special refunding agreement between the developer and the Department of Utility Services. Special refunding will allow the non-proportional cost of design and construction advanced by the original developer to be repaid to them as future customers connect to the infrastructure.

Startup costs for the LTA North and South areas are reasonably low at an estimated $2,600,000.00. This startup infrastructure consists of a distribution water main in the South area and sewer mains in both areas. The estimates provided in this memo are highly speculative and will need to be revised by future Engineer's estimates based on the future Utility Master Plans. I t should be noted that the developable areas of both the LTA North and South are restricted by topographical, geographical and water supply availability at the time of development.

DEP:CJE:mes
Attachments

cc: Dennis Fritz, P.E., Manager of Technical Services

ATTACHMENT 1

DUS - LTA
10/28/2009
Water Demand and Wastewater Flow Projections

Limited Transition Area North (150 acres)

Land Use	Percent	Acres	Water Demand, mgd		Wastewater Flow, mgd	
			Max Day (1)	Peak Hr (2)	Avg Day (3)	Peak Hr (4)
Open Space	10.0	15.0	0.00	0.00	0.00	0.00
Public	3.3	5.0	0.02	0.03	0.00	0.02
Office	63.3	95.0	0.97	1.65	0.19	0.58
Commercial	6.7	10.0	0.10	0.17	0.02	0.08
Industrial	10.0	15.0	0.08	0.13	0.02	0.06
Hotel	6.7	10.0	0.10	0.17	0.10	0.31
Total	100.0	150.0	1.27	2.16	0.33	1.05

Limited Transition Area South (350 acres)

Land Use	Percent	Acres	Water Demand, mgd		Wastewater Flow, mgd	
			Max Day (1)	Peak Hr (2)	Avg Day (3)	Peak Hr (4)
Open Space	10.0	35.0	0.00	0.00	0.00	0.00
Public	1.4	4.9	0.02	0.03	0.00	0.02
Office	42.9	150.2	1.54	2.61	0.30	0.88
Commercial	5.7	20.0	0.20	0.35	0.04	0.14
Industrial	40.0	140.0	0.72	1.22	0.14	0.44
Hotel	0.0	0.0	0.00	0.00	0.08	0.25
Total	100.0	350.0	2.47	4.20	0.56	1.74

Total Limited Transition Area (500 acres)

Land Use	Percent	Acres	Water Demand, mgd		Wastewater Flow, mgd	
			Max Day (1)	Peak Hr (2)	Avg Day (3)	Peak Hr (4)
Open Space	10.0	50.0	0.00	0.00	0.00	0.00
Public	2.0	9.9	0.04	0.06	0.01	0.04
Office	49.0	245.1	2.51	4.26	0.49	1.37
Commercial	6.0	30.0	0.31	0.52	0.06	0.21
Industrial	31.0	155.0	0.79	1.35	0.16	0.49
Hotel	2.0	10.0	0.10	0.17	0.10	0.31
Total	100.0	500.0	3.74	6.36	0.81	2.42

Notes:

1) Maximum day demands are based on unit use rates from the Water System Master Plan Update, except for industrial land use, for which the unit use rate is assumed to be half that of commercial land use.

2) Peak hour demands are 1.7 times maximum day demands.

3) Commercial land use is 2,000 gpd per acre. Public and industrial land uses are 1,000 gpd per acre. Casino is commercial overlayed with a 500-room hotel (0.6 ERU per room).

4) Peak hourly flow assumes the ASCE peaking factor (PHF[mgd]=2.6186 x ADF[mgd]^0.9044).