VISTA AT INTERPARK
FEASIBILITY STUDY

PREPARED FOR
Vista at Interpark, LP

Prepared By:

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VISTA AT INTERPARK
FEASIBILITY STUDY

EXECUTIVE SUMMARY

Vickrey and Associates, Inc. (V&A) has completed its civil site development due diligence that is standard for an apartment complex development. This report discusses the site investigation performed as it relates to zoning, subdivision platting, site access, utilities, fire prevention, building permit, topography, drainage and detention, and floodplain issues. This report does not address environmental issues related to the site. An environmental site assessment has been received and is pending review. V&A has communicated with the following agencies and their department via phone conversations, emails, web pages, letters, or in person:

- City of San Antonio Development Services Dept.
- San Antonio Water System
- CPS Energy
- AT&T
- Charter Communications (pending)
- Bexar County Appraisal District (BCAD)
- United States Fish & Wildlife Service (USFWS)

Development concerns that have been researched within this due diligence report are that the subject 1.973-acre tract is currently partially platted and will be required to be replatted into one lot. The replat application has been submitted to the City of San Antonio. The current zoning of C-3 and I-1 will be required to be rezoned MF-33 to comply with the proposed multi-family development. The rezoning application has been submitted to the City of San Antonio. While rezoning the San Antonio International
Airport Vicinity Land Use Plan will need to be amended. During the rezoning process the proposed zoning will be presented at both the zoning commission and planning commission to comply with both requirements. This area is not in a mandatory detention area. The current site plan in Attachment 5 complies with materially adhere to all applicable zoning with approved new zoning, site development, and building code ordinances besides the landscape buffer requirements. A variance will need to be requested to minimize the buffer requirement. Tree Canopy mitigation will be needed to comply with the City of San Antonio 2010 Tree Ordinance due to size and number of existing trees onsite. From the tree survey provided there are two heritage trees that will either need to be preserved or mitigated. A 14-foot G,E,T,CA easement along the east side property within our property boundary will be requested. A variance will have to be requested to not provide this easement. Because of the transmission lines that run along Interpark Drive, the proximity to Wurzbach parkway, and the property to the south being service from another direction we are confidant the variance will be accepted. Currently, the site does not have electrical power running adjacent to the property so there will need to be coordination with CPS to extend power to the site. The estimated cost of extending electricity to the site is $264,000. Additionally, a proposed site utility layout will need to be determined so that appropriate easements and associated costs can be established.

SITE SUMMARY

The subject tract is located at the southwest corner of U.S. Highway 281 and Interpark Blvd (Attachment A) within the City of San Antonio in Bexar County. The proposed 64-unit apartment complex will be contained within the block made up of 2 existing parcels totaling 1.973 acres. The property has approximately 270 linear feet of frontage on the frontage road of US 281 and 265 linear feet of frontage on Interpark Blvd.
This site is currently undeveloped, but there is an existing abandoned private driveway that dissects the property from the north east to south east corner that will need to be demolished. There is an underground stormwater curb inlet at the corner of Interpark Blvd. and US 281. There is sidewalk running along both Interpark Blvd. and US 281. The BCAD Property ID Number is 49851 and 49872 (Attachment B).

The topography of the property has grades of 2.5% to 6%, with a high point located along south property line property and stormwater flows generally north towards Interpark Blvd. The site currently does have existing trees and a tree mitigation will be required to meet the 25% canopy cover as required by the 2010 tree ordinance in the City’s UDC. Surrounding the property are commercial developments along the west and south side is a church and church parking. The north side is a former big box store and to the east is freeway.

**Millage Rates for all Taxing Jurisdictions**

Below is a list of the rates for all taxing entities for this property:

- BEXAR CO RD & FLOOD – 0.023668 %
- SA RIVER AUTH – 0.018580 %
- ALAMO COM COLLEGE – 0.149150 %
- UNIV HEALTH SYSTEM – 0.276235 %
- BEXAR COUNTY – 0.277429 %
- CITY OF SAN ANTONIO – 0.55827 %
- North East ISD – 1.29 %
ZONING RESTRICTIONS

This site is currently zoned C-3 and I-1 (Attachment J). The property will need to be rezoned to MF-33 to comply with the proposed development. The re-zoning application has been submitted to the City of San Antonio. The proposed development of a 64-unit apartment complex will be allowed in this zoning district (a density of 33 units per area).

San Antonio International Airport Vicinity Land Use Plan

The 1.973 – acre tract is within the San Antonio International Airport Vicinity Land Use Plan. The purpose of the plan is the enhance aircraft safety, ensure safety of people, minimize effects of aircraft noise, and balance land development within traffic patterns of the airport. One requirement of the community plan is to have the plan amended when rezoning the property.

Multi-Family-33 Zone-Zoning Restrictions

There is a 20-ft front setback maximum, a 5-foot minimum side setback, and a 10-foot minimum rear setback associated with the MF-33 zoning classification. Building setbacks and buffers will comply with Sec. 35-310.01 of the current CoSA UDC. Additional setbacks may apply on deed restrictions, restrictive covenants, or additional fire or building code requirements. Owner imposed construction setbacks or construction easements should be considered where a minimal setback is being considered.

Airport Hazard Overlay District- Zoning Restrictions

The 1.973-acre tract is included in the Airport Hazard Overlay District (AHOD). The Airport Hazard Overlay District limits the size of structures or trees within the vicinity of an airport to a height of 200 feet or less (Attachment L).
SUBDIVISION REQUIREMENTS

A subdivision plat will need to be prepared and recorded before the City of San Antonio will issue a building permit. The plat application has been submitted to the City of San Antonio. This document must be recorded before the City of San Antonio will issue a Certificate of Occupancy, but the platting process can be done concurrently with the building permit review process. The City’s fees for a one-lot plat would amount to approximately $2,500.

During the platting process, the City of San Antonio requires a portion of the property to be reserved for parkland dedication of 1 acre per 114 units in accordance with Section 35-503 of the Unified Development Code. This would require a dedication of 0.56 acres. This acreage can be met by various methods outlined in Attachment M or a fee-in-lieu-of land dedication may be paid (Attachment M). The fee-in-lieu-of dedication is calculated by (Area of Required Dedication x Value of Land) + ($250 X Number of dwelling units) = Fee Payment or a max of $50,000.

DEVELOPMENT ORDINANCES

The development ordinances for project in San Antonio can be found in the City of San Antonio Unified Development Code (UDC): https://municode.com/library/tx/san_antonio/codes/unified_development_code. This includes ordinances on zoning, tree preservation, stormwater management, parking, and transportation.

BUILDING CODES AND DESIGN REQUIREMENTS

The city is reviewing updates but currently have adopted:

- 2018 International Building Code
- 2018 Chapter 10, Building – Related Codes (COSA)
• 2018 International Residential Code for One and Two-Family Dwellings
• 2018 International Fire Code
• 2018 Chapter 11, International Fire Code with local amendments
• 2018 International Mechanical Code
• 2018 International Plumbing Code
• 2018 International Existing Building Code
• 2018 International Fuel Gas Code
• 2018 International Energy Conservation Code
• 2017 National Electric Code

FIRE CODE REQUIREMENTS

The development is subject to the 2018 International Fire Code (IFC) with local amendments. With the assumption that the apartment building will have an approved automatic sprinkler system, the COSA Code of Ordinance allows for all portions of the building to be a maximum distance of 200 feet away from the fire apparatus road. The maximum distance from hydrants to all exterior portions of all the apartment buildings is 750 feet as the hose lays. Based on the current site plan and fire hydrant locations the development is within compliance.

PARKING AND TRAVELWAY REQUIREMENTS

Per the UDC, the minimum number of parking spots shall be 1.5 spaces per unit (96) and the maximum shall be 2.0 spaces per unit (128). The total number currently proposed is 97 spots falling within the range of COSA’s requirements. The Americans with Disabilities Act (ADA) will require that 4 of the spaces be handicapped spots with 1 of them being van accessible. The current site plan meets the ADA requirements. Of the other spots, 30% of the total parking spaces can be compact spaces with minimum
dimensions of 8’x16’. Bicycle spaces will also be required for this development at a rate of 10% of the number of parking spaces based on the preliminary lot layout or 10 spaces (Attachment O).

**TREES/LANDSCAPING**

The proposed development will be required to comply with the City of San Antonio’s 2010 Tree Preservation Ordinance (Attachment K). Multi-family developments are required to preserve 40% of the existing total diameter inches excluding the street rights-of-way and easements. A minimum of 25% of the existing diameter inches must be preserved, the remaining 15% can be mitigated to meet the 40% preservation requirements. Heritage trees are required to be preserved 100% or pay a fee in lieu of preserving. Multi-family sites are also required to provide a minimum of 25% final tree canopy cover. With the location of trees on this property, planting additional trees may be required to meet the 25% canopy cover.

**UTILITIES**

The water and sewer availability letter has been received from SAWS (Attachment F). A calculation of the Equivalent Dwelling Units (EDU) used to calculate sewer and water impact fees can be found in Attachment R. The calculations show that there are 38 EDUs for water and 33 EDUs for sewer. Since there are less than 50 EDUs for this development, a Utility Service Agreement (USA) will not be required. Both the water line and sewer are located in Interpark Blvd. ROW, the water line is not within the pavement. The sewer line has a manhole within the pavement; therefore, street excavation street trenching will be required to tie into the existing mains. Based on preliminary assessment of Interpark Blvd., only the trench will be required to be repaved. A pavement condition index can be requested for COSA to confirm the extent of repaving.
Sewer

Based on San Antonio Water System (SAWS) sanitary sewer maps (Attachment E) there is an existing 8-inch gravity sewer main line on the northside of the property within Interpark Blvd. Additionally, the sanitary sewer main is between 6 and 9 feet in depth. Upon preliminary calculations, the depth of the current sewer and the slope of the existing land should allow for enough slope in the future sewer layout. The proposed sewer tie-in location for the development will need to be confirmed by SAWS though their cursory review. An estimated cost of the sewer line connection from the property line to the manhole in Interpark Blvd. is $3,000.

The site is located within SAWS middle sewer service area and lies within the Panther Creek Salado Creek-San Antonio River watershed. The impact fees for this area are $2,664 per EDU and SAWS calculates 0.5 EDUs per unit for multi-family. This proposed development will have 64 units or 32 EDUs and 1 EDU for the office for a total of 33 EDU's. The SAWS impact fees for sewer will be approximately $87,912.

Water

Based on the maps (Attachment D) received by SAWS, there is an 8-inch water main located to the north and east of the property along the south side of Interpark Blvd. and west side of US 281. Per SAWS’s letter of ability commercial properties require a 12-inch or greater sized main be provided ensure adequate fire flow and domestic demand. However, SAWS does allow for service to be provided from an 8-inch water main with proof of adequate fire low and domestic demand from a fire flow test. A fire flow test is required for building permitting. It is recommended the developer to acquire a fire flow test prior to permitting to confirm fire flow and domestic demand.

Based on the current site plan, there are 64 units or 32 EDUs, and 1 EDU for the office. There will also be an assumed 1.5-inch irrigation meter equivalent to 5 EDUs. A landscape architect can determine the
appropriate irrigation meter size at the time of design. The total EDUs of water for the proposed development is 38 EDUs. The project is within SAWS pressure zone 5, the impact fees are $4,749 per EDU. The SAWS impact fees for water will be approximately $180,462.

Electric, Gas, Telephone

The electric and gas availability letter has been received from CPS (Attachment G). Based on the CPS letter, the proposed development can be served by CPS Energy's electric and gas under the provisions of CPS’s current Supply Line Extension Policies contingent on the appropriate easements, rights-of-way, and permits being obtained and/or provided. Based on a review of existing overhead power lines, the transmission line, acquisition of easements from third parties we recommend working with CPS to extend the overhead line along the north side of Interpark Blvd. to the point in which the development needs power to enter the site. At that point drop the lines underground and cross Interpark Blvd. and up into the site to the proposed transformer location. The CPS electrical extension is estimated at $264,000.

AT&T has indicated that the subject property is within the service area and the service arrangement will be subject to later discussions and agreements between the developer and AT&T (Attachment H).

Charter Spectrum Communications has indicated they have existing coax and/or fiber located at Interpark Blvd. and US 281 (Attachment I).

SITE INGRESS AND EGRESS REQUIREMENTS

The 1.973-acres has approximately 390 linear feet of frontage on Interpark Blvd., and 290 linear feet of frontage on the access road of US 281. Traffic counts have been obtained for Interpark Blvd. and West Ave. from the City of San Antonio and has been attached to the end of this report (Attachment Q).
There will be a driveway from Interpark Blvd. that will be permitted though the City of San Antonio with a required minimum throat depth of 40 feet, a minimum width of 24 feet and the maximum of 30 feet, curb return radii of 25 feet, and 125 feet from the intersection of Interpark Blvd. and US 281. There is also a proposed driveway on US 281 with the same requirements as the other driveway. The development will be allowed 1 driveway per 200 feet of frontage and the driveways may not be closer than 50 feet apart (Sec. 35-506 (r)(3) – Attachment P). The current site plan in Attachment S meets the minimum requirements for a driveway from the City of San Antonio.

PERMITTING

The 1.973-acre tract is currently composed of 1 unplatted lot and 1 platted lot and will be replatted to combine all parcels into one lot. This project will need driveway permits from the City of San Antonio. Utility plans will need to be submitted to SAWS for all water and sanitary sewer permitting. A site plan must be submitted by the architect at the time of rezoning and it must include all requirements in UDC Sec 35-343 (m)(2) (Attachment J). The following are the permits needed:

- Address Permit
- Building Permit
- Site Permit
- Electric Permit
- Fire Permit
- MS4 (SWPPP) Permit
- Irrigation Permit
- Landscape Permit
- Plumbing Permit
• SAWS Permit
• Tree Permit

WATER QUALITY/DRAINAGE

According to FEMA Firm Map 48029C0265G, the 1.973-acre tract is not located within the 1% AC (100-year) floodplain. This site is not within the Edwards Aquifer Recharge Zone or Contribution Zone; therefore, a water quality submittal or permanent water quality structure will not be required by the Texas Commission of Environmental Quality (TCEQ).

Since less than five acres will be disturbed during construction, a Storm Water Pollution Prevention Plan (SWPPP) will need to be prepared and implemented as well, the Texas Pollutant Discharge Elimination System (TPDES) General Permit will need to be posted at the site. The purpose of this SWPPP is to identify potential onsite pollutants and specify practices which will minimize the extent of these pollutants being discharged from the site. TCEQ has been given authority to administer and oversee the implementation of this process.

The topography of the property has grades of 2.5% to 6% point located along south property line property and stormwater flows generally north towards Interpark Blvd. This area is not in the mandatory detention area, therefore, onsite stormwater detention is not required. Site drainage will be directed toward a curb inlet at the corner of Interpark Blvd. and US 281, and a curb inlet located on the north side of Interpark Blvd. west of the intersection with US 281.
OVERVIEW OF PROCESS, TIMING, AND COSTS

Overview of Entitlement and Site Development Permitting Process and Associated Timing

This site will need a minor subdivision plat submitted to the City of San Antonio. The plat review and approval process takes approximately 6 months from initial submittal to final recordation. A building permit will not be issued for the development until the plat is recorded; however, the plat and building permit reviews can occur concurrently.

Building Permitting and Process and Timing

It is recommended that the developer schedule a preliminary plan review meeting with the City prior to beginning the design process to clarify design and permitting requirements. Once the design documents are completed, a complete building permit application will be submitted to the City of San Antonio Development Services Department and then be distributed internally for review by the required City departments (Address, Building, Drainage, Electric, Fire, Historical, Irrigation, Landscape, Mechanical, Plumbing, SAWS, Sidewalk, TIA, Traffic, Tree, and Zoning). These departments will then issue comments and/or approvals. Once all departments have approved the plans and the plat is recorded, a building permit will be issued. The process typically takes approximately four months.

Cost Itemization of all Anticipated Fees (Anticipated Impact, Site Development Permit, Building Permit, and Other Required Fees)

Below is an estimate of the required fees associated with the development of the 64-unit, 1.973-acre apartment complex:

- SAWS Water Impact Fee: $180,462
- SAWS Sewer Impact Fee: $87,912
• COSA Minor Plat Fee: $2,500
• Rezoning Fee $3,650
• COSA Preliminary Plan Review Meeting Fee: $500 (assuming one-hour meeting with reviewers from five departments)
• COSA Building Permit Fee: TBD

CONCLUSION

In conclusion, there are several civil related factors that must be addressed in order to develop the project. These items are summarized below and must be taken into consideration to efficiently develop the site as desired:

1. The site will be required to be rezoned Additionally, a part of rezoning the site also needs to amend The San Antonio International Airport Vicinity Land Use Plan (application submitted).
2. The site will require a subdivision plat (application submitted).
3. Tree canopy and Heritage tree mitigation will need to be performed.
4. Parkland Fee in Lieu of Fee will need to be paid.
5. Layout of utilities so that easements and estimated costs can be established.
6. Locations of existing utilities easements and easements need to be verified.
7. The site is within the service area of CPS but, services will have to be extended to the site.
8. A variance will need to be requested to minimize the buffer requirement.
9. A variance will need to be requested to not supply a 14-foot G,E,T,CA easement along the east sides of the property within our property boundary.
Any person signing this Report acknowledges that the Department may publish the full report on the Department’s website, release the report in response to a request for public information and make other use of the report as authorized by law.
EXHIBIT A

AERIAL MAP
EXHIBIT B

BEXAR COUNTY APPRAISAL DISTRICT (BCAD) MAP
EXHIBIT C

FEMA FLOODPLAIN MAP
This map complies with FEMA’s standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA’s basemap accuracy standards. The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/7/2020 at 6:02:01 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.
EXHIBIT D

WATER BLOCK MAP
EXHIBIT E

SANITARY SEWER BLOCK MAP
EXHIBIT F

LETTER OF AVAILABILITY FOR
WATER AND SANITARY SEWER SERVICES
Ms. Kelly Gillespie

Re: US Hwy 281 N and Interpark Blvd Availability of SAWS’ Infrastructure

Ms. Gillespie:

This is in response to your request for the availability of water and wastewater service to the above referenced property. The location of the tract is within the City of San Antonio city limits, inside SAWS’ Water CCN, and inside SAWS’ Sewer CCN.

The San Antonio Water System (SAWS) strives to provide quality, reliable service to its customers at a reasonable cost. Rates are kept low, in part, by having new customers pay for all costs associated with extending service to them. SAWS Board of Trustees Growth Strategy states “we will work to ensure that growth is self-funding”. Per SAWS Utility Service Regulations Sections 3.1, 5.1, 6.1, 7.1, and 7.3, new customers are expected to pay for the infrastructure needed to serve their property and pay impact fees to SAWS to pay for general benefit facilities such as overall additional storage tanks, water supplies, pump, or treatment facilities required to serve the new customers. Please note that the water supply impact fees increased on June 1, 2019. It is not SAWS’ practice to construct main or service connections to a new customer. Such construction would need to be arranged and paid for by the customer through a professional engineer (if a public main extension is required) and authorized contractor. Costs of surveying, engineering design, materials, construction, and impact fees should be considered before the customer proceeds with construction of their proposed mains or services.

WATER

Water Supply to the tract will be from Pressure Zone 5 which has a static gradient of 994 ft. The approximate maximum elevation of the tract is 808 feet & 81 PSI and the approximate minimum elevation of the tract is 798 feet & 85 PSI. There is an existing 8-inch water main along the south side of Interpark Blvd. and an existing 8-inch water main along the west side of US Hwy 281 N. Water mains in the vicinity of the property are shown on the attached location map. If commercial uses are proposed, the San Antonio Water System requires a 12-inch or greater sized main to provide adequate fire flow and domestic demand.

Costs and commitment requirements for providing water service may include additional on-site mains and service connection fees. Payment is required of all applicable fees in effect at the time of plat recordation or the latest date allowable by law. This includes current impact fees based on connection point and number of EDU’s of capacity requested. Presently, one water EDU = 290 gallons per day of average daily flow. Current impact fees are shown in the table below.
RECYCLE WATER

In some locations it may be feasible to make use of SAWS recycled water. SAWS has established 73 miles of recycled water pipelines through the city of San Antonio. Recycled water is non-potable and ideal for irrigation, commercial, manufacturing and industrial uses. Recycled water is cost-effective, environmentally responsible and not affected by mandatory curtailment during drought conditions. For more information please call (210) 233-3673 or email Pablo.Martinez@saws.org Pablo Martinez at San Antonio Water System.

WASTEWATER

The Tract is situated within SAWS’ sewer service area and lies within the Panther Spring Creek-Salado Creek Watershed. There is an existing 8-inch gravity sewer main along the centerline of Interpark Blvd. Wastewater mains in the vicinity of the property are shown on the attached location map. If the developer chooses to extend the nearest sewer main to the proposed site, he/she must do so at his cost. Connections to mains require the developer to acquire an easement for the main extension if necessary. All tie-ins into the San Antonio Water System’s collection system must be based on fieldwork and in conformance with the San Antonio Water System Utility Service Regulations, which became effective on August 9, 2016. Current impact fees are shown in the table below.

<table>
<thead>
<tr>
<th>Wastewater Impact Fee Area</th>
<th>Collection</th>
<th>Treatment</th>
<th>Total Wastewater Impact Fees (per 1 EDU)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle</td>
<td>$2,013</td>
<td>$651</td>
<td>$2,664</td>
</tr>
</tbody>
</table>

The Developer will be responsible for any additional sanitary wastewater main extensions (on-site and/or off-site), right-of-way and easement acquisitions (if needed), private wastewater service laterals required to serve the property, lift stations and force main systems, lift station upgrades and lift station maintenance fees (per lift station), along with payment of all applicable fees in effect at time of plat recordation or the latest date allowable by law. This includes current impact fees based on connection point and number of EDU’s of capacity requested. Presently, one wastewater EDU = 200 gallons per day of average daily flow.

This letter does not constitute a commitment to capacity by the SAWS to provide water and/or wastewater service to the subject property. The actual availability of water and/or wastewater...
service to the property will be dependent upon the site specific requirements such as site elevation, pressure requirements, estimated demand and discharge, and the infrastructure requirements as set forth in the USR. The consulting engineer should assess the site-specific requirements in accordance with the USR regulations prior to requesting connection to SAWS’ infrastructure. In some cases a Utility Service Agreement may be necessary, for more information please refer to the SAWS Guide to Development [http://www.saws.org/business_center/developer/newdevel/](http://www.saws.org/business_center/developer/newdevel/) for a detailed guideline regarding the process for obtaining water/and or wastewater services.

Should additional information be needed please contact me at email: Richard.McWhirter@saws.org

Sincerely,

Richard McWhirter
San Antonio Water System

Attachments
1. Water Utility Map
2. Wastewater Utility Map
EXHIBIT G

LETTER OF AVAILABILITY FOR GAS AND ELECTRIC SERVICES
2/10/2020

Vickrey & Associates
Attn:  Kelly Gillespie
12940 County Pakway
San Antonio, TX 78216

Re: Letter of Availability (Electric and Gas)

Proposed Development:  281 and Interpark Blvd

To Whom It May Concern:

Please accept this letter as confirmation that the proposed development listed above can be served by CPS Energy’s electric and gas distribution systems under the provisions of our current Supply Line Extension Policies contingent on the appropriate easements, rights-of-way, and permits being obtained and/or provided.

Since the specific plans indicating how the property will be developed have not yet been submitted, CPS Energy cannot estimate the cost for providing the electric and gas service within the identified tract of property.  A cost estimate for the provision of these utility services may be requested once plans depicting the types of development and configurations are submitted to CPS Energy for review.

This letter is not intended as a certification that CPS Energy has reviewed subdivision plans or plats nor approval of any submitted plans or plats.  The applicable governmental entity’s procedure for plat approval may require that utility plans be reviewed by CPS Energy prior to submittal to those applicable governmental entities.

If you should have any questions or concerns regarding this Letter of Availability, please contact our office at (210) 353-4050.

Sincerely,

Jenna Keylich
Customer Service Supervisor
Customer Engineering Department
EXHIBIT H

LETTER OF AVAILABILITY FOR
TELECOMMUNICATION SERVICES
February 12, 2020

Vance Weynand
Vickrey & Associates, Inc.
12940 Country Parkway
San Antonio, TX 78216

RE: Vista at Interpark, US 281 and Interpark Blvd, San Antonio, Texas

Dear Mr. Weynand:

This letter is in response to your request for information on the availability of service at Vista at Interpark, US 281 and Interpark Blvd, San Antonio, Texas by AT&T. This letter acknowledges that Vista at Interpark, US 281 and Interpark Blvd, San Antonio, Texas is located in an area served by AT&T. Any service arrangements for Vista at Interpark, US 281 and Interpark Blvd, San Antonio, Texas will be subject to later discussions and agreements between the developer and AT&T. Please be advised that this letter is not a commitment by AT&T to provide service to Vista at Interpark, US 281 and Interpark Blvd, San Antonio, Texas.

Please contact the AT&T OSP Design Engineer for this service area, Clint Norton, with any project specific inquiries. He can be reached at (210) 729-8401.

Thank you for contacting AT&T.

Sincerely,

[Signature]

for
Philip Austin
Civic Coordinator
EXHIBIT I

LETTER OF AVAILABILITY CHARTER/SPECTRUM
2/6/2020

Kelly Gillespie
Vickrey & Associates, Inc.
12940 Country Parkway
San Antonio, TX 78216

SUBJECT: Will Serve – Interpark and US 281

In concern of Charter facilities at the property located Interpark and US 281, San Antonio, TX, Charter has existing coax and/or fiber facilities near this location that may provide a possible point-of-connection for available services in the future.

Services for any Commercial or Multi-Family Parcels will be available dependent upon the right-of-entry agreement and entry routing for the respective buildings, as determined by contract. Contact our Commercial Business Class Sales department, at (866) 519-1263 to facilitate a request for new commercial service, or your local MDU Sales Department for all residential services. In addition to initiating your request, they can also provide specifics regarding costs and other details associated with obtaining our services in this area at the appropriate point in time.

For future reference, please send all utility coordination, abandonments, encroachments, plat signatures, or serviceability requests, or notices of relocation to ForceRelos@kinetic-eng.com. Please share this information with whoever needs these services.

Sincerely,

Zackary H.P. Marcum
EXHIBIT J

ZONING REQUIREMENTS
EXHIBIT K

TREE PRESERVATION
(e) **Final Tree Canopy Cover.** The intent of this subsection is to promote tree canopy coverage in the city and the ETJ. The development of any property shall meet the final canopy percent requirements as described below based on the land use and can be accomplished by maximizing the preservation of trees through a tree survey method or tree stand delineation alternative and by tree planting (if necessary) or payment into the mitigation fund.

(1) **Standards.** Developments of all sites must provide a minimum final tree canopy cover as listed below for the entire gross project area outside of the regulatory floodplain.

- **A.** Minimum final tree canopy coverage shall be provided at the percentages indicated below:
  - i. Single-family residential thirty-eight (38) percent;
  - ii. Multi-family and nonresidential twenty-five (25) percent;
  - iii. CRAG area fifteen (15) percent;

- **B.** The final tree canopy requirements shall be accomplished after meeting all preservation requirements and other planting requirements as set forth in this chapter;

- **C.** When the final tree canopy is required at platting, the city arborist may allow the applicant to defer the minimum tree canopy cover requirements as follows:
  - a) To the building permit phase of the development if inside of city limits; or
  - b) To the building phase in ETJ with plans depicting final canopy cover of preserved trees and newly planted trees and the method to assure that the requirements will be met before the issuance of a building permit (sections 35-B123, 35-B125, 35-B107, 35-477, 35-476) (note: per
subsection 35-523(f)(3) Table 523-1B, when using the tree stand delineation option, tree save areas must be designated as such when the area is platted; or  
c) With a guarantee of performance executed and filed with the City of San Antonio.  
The city arborist shall determine the probable maximum amount of tree mitigation required (measured in dollars) that may be attributable to the development.

(f) Minimum Tree Preservation Requirements. To comply with the minimum final tree canopy cover requirements of subsection (e) an applicant shall elect either to perform a tree survey to identify trees for preservation in accordance with the provisions of this subsection below or to conduct a tree stand delineation as an alternative to the tree survey technique.

(1) Protected Tree Designations. The significant or heritage tree designations establish a threshold trunk size, measured in diameter at breast height (DBH), for various tree species for purposes of applying the requirements of this chapter. A significant or heritage tree is defined by DBH as set forth below. Multi-trunk trees are to be measured with the largest trunk counting for full DBH inches plus fifty (50) percent of the DBH sum of the additional trunks, if the tree is classified as significant. (Tree species listed below shall have at least one (1) trunk greater than five (5) inches for small tree species and at least one (1) trunk greater than ten (10) inches for large tree species to be considered significant). The value of the largest trunk is the value given to the small tree species listed below.

A. Significant Trees. A significant tree means a tree of six (6) inches or greater DBH for all tree species except the following species are significant with at least one (1) trunk being equal or greater than the respective size (DBH):

i. Ashe Juniper (Juniperus ashei) - ten (10) inch DBH;
ii. huisache (Acacia farnesiana) - ten (10) inch DBH;
iii. Mesquite (Prosopis glandulosa) - ten (10) inch DBH;
iv. Arizona Ash (Fraxinus Velutina) - ten (10) inch DBH;
v. Hackberry (Celtis spp.) - ten (10) inch DBH;
vi. Texas persimmon (Diospyros texana) - five (5) inch DBH;
vii. Texas redbud (var. texensis) - five (5) inch DBH;
viii. Texas Mountain laurel (Sophora secundiflora) - five (5) inch DBH;
ix. Condalia (Condalia hookeri) - five (5) inch DBH;
x. Possum haw (Ilex decidua - in floodplain only) - five (5) inch DBH;
xi. Hawthorne (crataegus texana) - five (5) inch.

B. Heritage Trees. A heritage tree means a tree of twenty-four (24) inches or greater DBH for all tree species except the following species are heritage with at least one (1) trunk being twelve (12) inches or greater DBH (the value of the twelve (12) inches or greater trunk is the value given to these small tree species):

i. Texas persimmon (Diospyros texana);
ii. Texas redbud (var. texensis);
iii. Texas Mountain laurel (Sophora secundiflora);
iv. Condalia (Condalia hookeri);
v. Possum haw (Ilex decidua - in floodplain only);
vi. Hawthorne (crataegus texana).

C. Non-native Trees. Non-native invasive tree species are not protected and will be omitted from the tree survey. Non-native invasive tree species means the following tree species:

i. Chinese Pistache (Pistacia chinesis);
ii. Chinaberry (Melia azedarach);
iii. Chinese Tallow (Sapium sebiferum);
iv. Tree of Heaven (Ailanthus altissima);
v. Salt Cedar (Tamarix species).
vi. Japanese Ligustrum (Ligustrum japonicum).
vi. Japanese Ligustrum (Ligustrum japonicum);
vii. Nandina (Nandina domestica);
viii. Paper Mulberry (Broussonetia papyrifera).

(2) Tree Survey Methodology.

A. Standards. Table 523-1A establishes the minimum percentage of all diameter inches of significant or heritage trees or tree stand delineation canopy area that must be preserved or mitigated. In environmentally sensitive areas, the minimum percentage shall include the understory of the preserved trees. For all development projects, applicants may elect to preserve trees at the MDP, platting or permitting stage; if an applicant elects to preserve trees at the MDP or platting stage, this method must be used throughout completion of the project.

<table>
<thead>
<tr>
<th>Significant Trees</th>
<th>Single-Family Dwellings</th>
<th>Multi-family and Nonresidential Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>6&quot; DBH or greater</td>
<td>35% within each platted lot, excluding street right-of-way and easements. Plus each builder on a single-family dwelling lot shall also be required to plant two (2) one and one-half (1.5) inch caliper new trees, which trees shall generally be native, large canopy trees.</td>
<td>40% within the entire site excluding the street rights-of-way and easements; or for athletic fields, 25% of the entire site to be developed as such.</td>
</tr>
<tr>
<td>Significant Trees under 6&quot; DBH</td>
<td>35% within each platted lot, excluding the street right-of-way and easements or 35% of the number of total count of all such trees.</td>
<td>40% within the entire site, excluding street rights-of-way, and easements; or 40% of the number of total count of all such trees; or for athletic fields, 25% of the entire site to be developed as such.</td>
</tr>
<tr>
<td>Heritage Trees</td>
<td>100% within each platted lot</td>
<td>100% within the entire site.</td>
</tr>
<tr>
<td>100-year floodplain(s)</td>
<td>80% of all the trees within the floodplain, which shall not apply toward preservation requirements on the remainder of the lot.</td>
<td>80% of the trees within the floodplain, which shall not apply toward preservation requirements on the remainder of the site.</td>
</tr>
</tbody>
</table>
B. **Calculation of Preservation Ratios.** All percentages relating to preservation stated within this section shall be based on the initial tree survey. Any subsequent re-development of property must minimally preserve the applicable percentage of the total diameter inches of protected trees as indicated by the initial tree survey. To receive preservation credit in environmentally sensitive areas when using the tree survey or tree canopy method, the canopy area can be converted into diameter inches utilizing the following formula based on the dominant tree species in the area(s). Canopy area divided by shade value (Appendix E) equals number of trees, times the radius of the shade value area which will equal the diameter inches present in the environmentally sensitive area.

\[
\text{Formula:} \\
\text{Diameter (inches) = Number of Trees} \times \text{Radius} \\
\text{Number of trees} = \text{Canopy Area (sq-ft)/Shade Value (sq-ft/tree)} \\
\text{Radius} = \text{Square Root}(\text{Shade Value Area} \div 3.14)
\]

*Commentary: the value is based upon the one feet tree canopy radius to one inch trunk diameter relationship.*

(3) **Tree Stand Delineation Alternative.** Mitigation trees will be as set forth in the standards of table 523-2 using the shade value in Appendix E.

A. **Standards.** As an alternative to a tree survey, a tree stand delineation may be used to meet the preservation requirements (see submittal requirements section 35-B125). In order to utilize this provision the site must have area(s) of tree canopy; however, the presence of understory is not required except in environmentally sensitive areas where the minimum percentage shall include the understory of the preserved trees. The application of this provision will be based on the total tree canopy of a site or project outside the 100-year floodplain and environmentally sensitive areas, with no exclusions for rights-of-way or easements. A tree stand delineation shall meet the following standards:

| Environmentally Sensitive Areas | 80% of all the trees within the environmentally sensitive area including easements and rights-of-way. Such areas shall apply toward preservation on the remainder of the site. |
| Mitigation Maximum | Up to 80% of significant and heritage trees may be mitigated rather than preserved. |

| Minimum Preservation Requirements | Other Requirements |
| Table 523-1B | |
EXHIBIT L

AIRPORT HAZARD OVERLAY DISTRICT
Sec. 35-331. - "AHOD" Airport Hazard Overlay District.

STATEMENT OF PURPOSE

This division is adopted pursuant to the authority conferred by V.T.C.A. Local Government Code Ch. 241. It is hereby found that an airport hazard endangers the lives and property of the users of San Antonio International Airport, Stinson Municipal Airport, Kelly Air Force Base, Randolph Air Force Base and of the occupants of land in the vicinity thereof, and also, if of the obstruction type, such hazard reduces the size of the area available for the landing, taking-off and maneuvering of aircraft, thus tending to destroy or impair the utility of these airports and the public investment therein. Accordingly, it is declared:

- That the creation or establishment of an airport hazard is a public nuisance and an injury to the communities served by these airports;
- That it is necessary, in the interest of the public health, public safety and general welfare that the creation or establishment of airport hazards be prevented; and
- That the prevention of these hazards should be accompanied, to the extent legally possible, by the exercise of the police power without compensation.

(a) Development Standards.

(1) Future Uses. Within any airport hazard area which is within, or extends into, the controlled area of these regulations, no material change in the use of land and no structure or tree shall be erected, altered, planted or otherwise established at a height greater than two hundred (200) feet above the ground or above a 100 to 1 (100:1) slope from the nearest point of the nearest runway of any airport unless a permit therefor shall have been applied for and granted. Applications for permits shall be made to the department of planning and development services upon a form supplied for this purpose, and by submitting a map of sufficient accuracy and detail to allow an accurate determination of compliance with this division. No permit for a use inconsistent with this division shall be granted unless a variance has been approved in accordance with subsection (a)(4) of this section. Nothing in the foregoing shall be construed as permitting or intending to permit any construction, alteration or growth of any structure or tree in excess of the height limits established by this division.

(2) Existing Uses. No permit shall be granted that would allow the establishment or creation of an airport hazard or permit a nonconforming use, structure or tree to be made or become higher or become a greater hazard to air navigation than it was on the effective date of the ordinance from which this division is
derived or any amendments thereto, or than it is when the application for a permit is made. Except as indicated, all applications for such a permit shall be granted.

3) **Nonconforming Structures, Natural Growths and Land Uses.** A permit shall be required before any nonconforming structure, natural growth or land use in the airport hazard area may be altered, repaired, rebuilt, replaced, replanted or relocated. No permit shall be granted that would allow a nonconforming structure, natural growth or land use to be made or become higher, or become a greater hazard to air navigation than it was. Whenever the department of planning and development services or administrative agency outside of the City of San Antonio determines that a nonconforming land use has been abandoned or more than eighty (80) percent torn down, damaged, physically deteriorated or decayed, no permit shall be granted that would allow same to be replaced, repaired or re-established unless in full compliance with the height and use restrictions of this division.

4) **Variances.** Any person desiring to erect or increase the height of any structure or permit any natural growth or use his property, not in accordance with the regulations prescribed in this division, shall apply to the board of adjustment for a variance from such regulations. Such variances shall be allowed where it is found that a literal application or enforcement of the regulations would result in practical difficulty or unnecessary hardship, and the relief granted would not be contrary to the public interest but will do substantial justice and be in accordance with the spirit of this division. Applications for such action by the board of adjustment shall be made to the director of planning and development services if inside the City of San Antonio, or the director of planning and development services if in the city's extraterritorial jurisdiction.

5) **Federal Notification.** Within any airport hazard area, any person who proposes any construction, alteration or tree growth meeting the following criteria shall give notice to the regional office of the Federal Aviation Administration if and as required by Part 77 of the Federal Aviation Regulations, titled "Objects Affecting Navigable Airspace":

- Any construction or alteration of more than two hundred (200) feet in height above the ground level at its site.

- Any construction or alteration of greater height than an imaginary surface extending upward and outward at any one (1) of the following slopes: (a) for International and Stinson, a slope of 100 to 1 (100:1) for a horizontal distance of
twenty thousand (20,000) feet from the nearest point of the nearest runway; and (b) for military airports, a slope of 50 to 1 (50:1) for a horizontal distance of ten thousand (10,000) feet from the nearest point of the nearest runway.

Also, any person who proposes to construct, alter, activate or deactivate a civil or joint use, civil/military, airport shall likewise give notice to the Federal Aviation Administration as required by Part 157 of the Federal Aviation Regulations titled "notice of construction, alteration, activation, and deactivation of airports." If a request for a permit or variance is made from any action falling under any of the stated federal notice requirements, final action on the requested permit or variance may, at the discretion of the administrative agency or of the board of adjustment, be deferred until a final determination has been issued by the Federal Aviation Administration. However, in no event shall the requirements of this division be subordinate to a determination of the Federal Aviation Administration.

(6) **Marking and Lighting.** Any permit or variance granted may require the owner of the structure or natural growth in question to install, operate and maintain thereon, at his own expense, such markers and lights as may be necessary to indicate to flyers the presence of an airport hazard. Any lights required under this paragraph shall be engineered and designed for the intended purpose by a recognized manufacturer, and it shall be the responsibility of the owner or any subsequent owner to see that the lights are properly installed and maintained so as to be functioning during darkness and all periods of low visibility, independently of the functioning of other lighting in or on the structure or growth.

(b) **Height-Limiting Imaginary Surfaces, International and Stinson.** The height restrictions for structures and growths in the airport hazard areas are specified by means of imaginary planes or surfaces in the airspace above the airport hazard areas. Within the controlled area of this section, such surfaces are hereby established in the airspace surrounding each airport protected by this division to define the limit above which any projection of a structure or tree would be considered an airport hazard and thus be prohibited except as otherwise provided by this division. The surfaces are illustrated on the airport hazard zoning maps, which are adopted and made a part of this division, by means of elevation contour lines in a manner similar to the use of topographic contour lines to illustrate the variations in the elevation of natural terrain. Their geometric description is as follows:

(1) **Primary Surface.** The primary surface is centered longitudinally and laterally
about the runway, the ends extending two hundred (200) feet beyond the runway ends. The elevation of any point on the primary surface is the same as the nearest point on the runway centerline between the runway ends. The width of the primary surface varies according to the existing or planned classification of usage of the most critical end of the individual runways as follows per Part 77 of the Federal Aviation Regulations:

A.  San Antonio International Airport:

<table>
<thead>
<tr>
<th>Runway</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>12&quot;R-3&quot;0L,</td>
<td>one thousand (1,000) feet</td>
</tr>
<tr>
<td>12L-30R,</td>
<td>one thousand (1,000) feet</td>
</tr>
<tr>
<td>3-21,</td>
<td>one thousand (1,000) feet</td>
</tr>
</tbody>
</table>

B.  Stinson Municipal Airport:

<table>
<thead>
<tr>
<th>Runway</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>9-27,</td>
<td>one thousand (1,000) feet</td>
</tr>
<tr>
<td>14-32,</td>
<td>five hundred (500) feet</td>
</tr>
</tbody>
</table>

(2)  **Approach Surface.** The approach surface is an inclined plane, longitudinally centered on the extended runway centerline, which begins at the end of the primary surface, at the same width and elevation, and extends outward and upward at a specific horizontal to vertical slope, at a specific uniform rate of increase in width and for a specific distance as follows:

A.  San Antonio International Airport:

Runways 3, 12R, 12, 21, and 30L: 50 to 1 (50:1) slope for first ten thousand (10,000) feet, thence to a 40 to 1 (4:1) slope at an ultimate distance of fifty thousand (50,000) feet, at which the width is sixteen thousand (16,000) feet.

Runway 30R: 20 to 1 (20:1) slope for a distance of five thousand (5,000) feet, at which the width is one thousand five hundred (1,500) feet.
B. Stinson Municipal Airport:

Runway 27: 50 to 1 (50:1) slope for first ten thousand (10,000) feet, thence at a 40 to 1 (40:1) slope to an ultimate distance of fifty thousand (50,000) feet, at which the width is sixteen thousand (16,000) feet.

Runway 32: 20 to 1 (20:1) slope for a distance of five thousand (5,000) feet, at which the width is two thousand (2,000) feet.

Runways 9 and 14: 20 to 1 (20:1) slope for a distance of five thousand (5,000) feet, at which the width is one thousand two hundred fifty (1,250) feet.

(3) **Transitional Surface.** These surfaces extend outward and upward to a slope of 7 to 1 (7:1) from the longitudinal edges of the primary surfaces and approach surfaces, measured at right angles to the runway centerline and centerline extended. These surfaces connect the primary and approach surfaces with the other surfaces described in this section, including other transitional surfaces. Beyond the outer periphery of the conical surfaces, the transitional surfaces extend a maximum horizontal distance of five thousand (5,000) feet from the longitudinal edges of the precision approach surfaces, measured at right angles to the extended runway centerline.

(4) **Horizontal Surface.** The horizontal surface is a horizontal plane one hundred fifty (150) feet above the established airport elevation, nine hundred fifty-nine (959) feet above mean sea level for San Antonio International; seven hundred twenty-seven (727) feet above mean sea level for Stinson Airport. The perimeter of the horizontal surface is constructed by swinging arcs of ten thousand (10,000) feet radius from the center of each end of the primary surfaces of Runways 3-21, 12"R-3"0L and 12L-30R at San Antonio International Airport and Runway 9-27 at Stinson Municipal Airport. The adjacent arcs are then connected by tangent lines.

(5) **Conical Surface.** The conical surface extends outward and upward to a slope of 20 to 1 (20:1) from the periphery of arid at the same elevation as the horizontal surface. It extends for a horizontal distance of four thousand (4,000) feet, to a height of three hundred fifty (350) feet above established airport elevation.

(6) **Kelly Air Force Base and Randolph Air Force Base.** In addition to the above described imaginary surfaces, the imaginary surfaces of Kelly Air Force Base and Randolph Air Force Base described by Section 77.28 of Part 77 of the Federal Aviation Regulations, and which extend into the corporate limits of the city, shall be enforceable under these regulations within the corporate limits.

(c) **Height Restrictions.**
(1) Except as otherwise provided in this article, no structure or natural growth shall be erected, altered, increased in height, allowed to grow or maintained in an airport hazard area in excess of the height of the imaginary surface above the structure or natural growth.

(2) Where more than one (1) imaginary surface or the imaginary surfaces of more than one (1) airport exist in the same area, the more restrictive limitation shall prevail.

(3) In addition to the height restrictions imposed by the imaginary surfaces, no structure or natural growth shall be erected, altered, increased in height, allowed to grow or maintained in an airport hazard area at such height as would result in the alteration of any flight procedure established by federal aviation authorities.

(4) If tall construction cranes or other equipment will be used which are higher than a structure or growth which is being erected under a permit granted pursuant to this article, the operator of the cranes or equipment may be required, at the discretion of the authorities in charge of the airport affected, to maintain coordination with air traffic control personnel to keep them informed of his work schedule, to keep the equipment in a lowered position to the maximum extent possible, and to install appropriate hazard marking and/or lighting on the top extremity of the equipment.

(5) Nothing in this division shall be construed as prohibiting the construction or maintenance of any structure, or growth of any tree to a height up to twenty (20) feet above the surface of the land.

(6) If the imaginary surface boundaries established above are less restrictive for a specific instance than those specified in the Federal Aviation Regulation Part 77, "Objects Affecting Navigable Airspace" as amended, or any subsequent Federal Aviation Agency criteria, then the criteria shall, in effect, be a part of these regulations and shall be the applicable restriction hereunder.

(d) **Use Restrictions.** Notwithstanding any other provisions of this division no use may be made of land within the airport hazard area in such manner as to:

(1) Create electrical or visual interference with any electronic facility or instrumentation, wherever located within the airport hazard area, including but not limited to, radio transmitters and receivers, radar installations, landing and navigational aids and weather instruments where such facilities are used in connection with the landing, taking-off and maneuvering of aircraft;

(2) Make it difficult for flyers to distinguish between airport lights and others;

(3) Result in glare in the eyes of flyers using the airport;
(4) Impair visibility in the vicinity of the airport;

(5) Cause physical objects of any nature to penetrate, however briefly, the air space above the imaginary surfaces established in this article, such objects including, but not limited to kites, balloons, projectiles, rockets, model aircraft, derricks and cranes, unless a special temporary permit be obtained from the authorities in charge of the affected airport;

(6) Establish or alter privately owned flying fields, strips or heliports, unless found not to be objectionable after a special aeronautical study by federal aviation authorities;

(7) Create bird strike hazards;

(8) Otherwise endanger the landing, taking-off, or maneuvering of aircraft.

(e) Nonconforming Uses.

(1) Not Retroactive. The regulations prescribed in this division shall not be construed to require changes in land use or the removal, lowering, or other change or alteration of any structure or natural growth in previous lawful existence, but not conforming to the effective date of the ordinance from which this division is derived, or otherwise interfere with the continuance of any previously lawful nonconforming use. Nothing contained in this division shall require any change in the construction, alteration or intended use of any structure, the construction or alteration of which was begun prior to the effective date of the ordinance from which this division is derived, is diligently prosecuted, and would have otherwise been in legal existence upon completion.

(2) Marking and Lighting. Notwithstanding the preceding provision of this section, the owner of any nonconforming structure or natural growth is hereby required to permit the installation, operation and maintenance thereon of such markers and lights as shall be deemed necessary to indicate to the operators of aircraft in the vicinity of the airport the presence of such flight hazards. Such markers and lights shall be installed, operated and maintained at the expense of the airport desiring such marking and lighting.

(f) Administrative Agency (Inside City Limits). The department of planning and development services of the city is hereby designated as the administrative agency charged with the administration and enforcement of this division. As such, it shall establish administrative procedures for requiring, accepting and subsequently approving or denying applications for airport zoning permits, in accordance with subsection (a) of this section. In this regard, the department of planning and development services will withhold any other permits normally issued under its jurisdiction which would allow construction or erection to proceed on any structure
which would be in violation of these regulations. The administrative agency shall not have, or exercise any of the powers or duties, which are delegated to the board of adjustment under V.T.C.A. Local Government Code Ch. 241.

(g) **Board of Adjustment.** The board of adjustment of the city is hereby designated to be the board of adjustment for this division, to have and exercise the powers set forth in V.T.C.A. Local Government Code Ch. 241.

(h) **Appeals.** Any person aggrieved or taxpayer affected by any decision of the administrative agency made in its administration of this division, or any governing body of a political subdivision, which is of the opinion that a decision of such an administrative agency is an improper application of airport hazard zoning regulations may appeal to the board of adjustment under the provisions of V.T.C.A. Local Government Code Ch. 241.

(i) **Judicial Review (Inside City Limits).** Any person aggrieved or taxpayer affected by any decision of the board of adjustment which is of the opinion that a decision of the board of adjustment is illegal, may present to a court of record a verified petition setting forth that the decision is illegal, in whole or in part, and specifying the grounds of illegality as provided in V.T.C.A. Local Government Code Ch. 241. Such petition shall be presented to the court within ten (10) days after the decision is filed in the office of the board.

(j) **Conflicting Regulations.** In the event of conflict between any airport zoning regulations adopted hereunder and any other regulations applicable to the same area, whether the conflict be with respect to the height of structures or trees, the use of land or any other matter, and whether such other regulations were adopted by the city or by some other political subdivision, the more stringent limitation or requirement shall govern and prevail.

(k) **Imaginary Surfaces (Kelly and Randolph Air Force Bases).** The following airport imaginary surfaces are hereby created and establish the limit above which any projection of a structure, natural growth or object constitutes an airport hazard under these regulations:

1. **Primary Surface.** The primary surface is centered longitudinally and laterally about each runway. It extends two hundred (200) feet beyond each end of the runway in a horizontal plane at the same elevation as the associated runway end, except at military airports, where primary surface length is the same as the runway length. Between the ends of the runway it has a uniform gradient as established by the runway and elevations. The width varies as follows:
   A. Instrument runways, municipally-owned airports, one thousand (1,000) feet.
   B. Non-instrument runways, municipally owned airports, five hundred (500) feet.
feet.

C. Runway 15-22, Kelly Air Force Base: two thousand (2,000) feet.

D. Runway 14-32, Kelly Air Force Base, and all runways, Randolph Air Force Base: one thousand five hundred (1,500) feet.

(2) **Approach-Departure Surface.**

A. The approach-departure surface begins at the end of the primary surface, except at military airports where it begins two hundred (200) feet beyond the primary surface, and is centered about the runway centerline extended. From a width equal to that of the primary surface it extends outward and upward and increases uniformly in width as follows:

B. For instrument runways at municipally owned airports, the approach-departure surface extends outward from the primary surface at a distance of fifty thousand (50,000) feet, at which point it is sixteen thousand (16,000) feet wide. It extends upward at a slope of 50 to 1 (50:1) to a distance of ten thousand (10,000) feet from primary surface, thence at a slope of 40 to 1 (40:1) thereafter.

C. For non-instrument runways at municipally-owned airports, the approach departure surface extends outward from the primary surface a distance of ten thousand (10,000) feet, at which point it is two thousand five hundred (2,500) feet wide. It extends upward at a slope of 40 to 1 (40:1).

D. For military airports, the approach-departure surface begins two hundred (200) feet beyond the primary surface and thereafter extends outward a distance of fifty thousand (50,000) feet, at which point it is sixteen thousand (16,000) feet wide. It extends upward at a slope of 50 to 1 (50:1) until it reaches an elevation five hundred (500) feet above the established airport elevation, then it continues horizontally to its outer end.

(3) **Transitional Surface.** The transitional surface extends outward and upward at right angles to the runway centerline at a slope of 7 to 1 (7:1) until it intersects the horizontal or conical surface, except that transitional surfaces for those portions of ILS approach surfaces that project through and beyond the limits of the conical surface, extend a distance of five thousand (5,000) feet measured horizontally from the edges of those portions of the approach surfaces and at right angles to the runway centerline. For military airports, the transitional surface does not apply for the horizontal portion of the approach-departure surface.

(4) **Inner Horizontal Surface.** The inner horizontal surface is a horizontal plane at a height of one hundred fifty (150) feet above the established airport elevation. Its outer edge is determined by scribing an arc with a radius of seven thousand
five hundred (7,500) feet above a point on the centerline at the end of all runways and interconnecting these arcs with tangents.

(5) **Conical Surface.** The conical surface extends outward and upward from the outer edge of the inner horizontal surface at a slope of 20 to 1 (20:1) for a horizontal distance of seven thousand (7,000) feet to a height of five hundred (500) feet above the established airport elevation.

(6) **Outer Horizontal Surface.** The outer horizontal surface is a horizontal plane which extends from the outer edge of the conical surface a distance of thirty thousand (30,000) feet at a height five hundred (500) feet above the established airport elevation.

(7) **Airport Zoning Maps.** The attached airport zoning maps are hereby adopted and supersede all prior airport zoning maps. The imaginary surface boundaries are shown on these maps by aerial contours.

(Ord. No. 98697 § 1, 5 and 6)
EXHIBIT M

PARKLAND REQUIREMENTS
(3) The provisions of this section do not apply to:

A. A proposed subdivision located within:
   1. An infill development zone,
   2. Form based zoning district (FBZD), or
   3. In the CRAG area, as defined, for a development that includes a designation and rehabilitation of an eligible historic landmark not previously designated; or
   4. When a non-residential use is proposed (examples include: public or private schools, assisted living facilities, nursing homes, churches, "D" - downtown district, and ROW).

B. A proposed subdivision located within a planning area which has a surplus of improved neighborhood parks/open space, as designated in the parks system plan unless the surplus has been eliminated by the subsequent approval of residential dwelling units within the planning area, as measured by the level of service standard established in Table 503-1, column (B).

(b) Required Parkland.

(1) Required parkland shall be reserved for any development in the development areas set forth in column "A" of Table 503-1, below, based upon the number of dwelling units in the proposed development corresponding to the development areas as set forth in column "B" in Table 503-1 hereto.

<table>
<thead>
<tr>
<th>(A)</th>
<th>(B) Required Parkland (Acres per Dwelling)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type and Location of Development Projects</td>
<td></td>
</tr>
<tr>
<td>In the city - &quot;RE&quot;, &quot;R-20&quot;, &quot;NP-15&quot;, &quot;NP-10&quot;, &quot;NP-8&quot;, &quot;R-6&quot;, &quot;RM-6&quot;, &quot;R-5&quot;, &quot;RM-5&quot;, &quot;R-4&quot;, &quot;R-3&quot;, &quot;RM-4&quot;, &quot;MH&quot;, TND, &quot;PUD&quot;, &quot;DR&quot;</td>
<td>1 per 70</td>
</tr>
<tr>
<td>In the city - &quot;MF-18&quot;, &quot;MF-25&quot;, &quot;MF-33&quot;, &quot;MF-40&quot;, &quot;MF-50&quot; and &quot;MF-65&quot;</td>
<td>1 per 114</td>
</tr>
<tr>
<td>In the ETJ - Single-family developments</td>
<td>1 per 70</td>
</tr>
<tr>
<td>In the ETJ - Multi-family developments</td>
<td>1 per 114</td>
</tr>
</tbody>
</table>

* The required acreage shall be rounded to the nearest one-tenth (e.g., 150 residential single-family dwelling units x [1/70] = 2.1 acres)

(2) The applicant may dedicate any trail specifically delineated in the parks and recreation system plan (adopted January 1999) to the public. Any trail dedicated pursuant to this subsection will count towards meeting the required active parks and open space requirements of Table 503-1. The trails shall be maintained in accordance with subsection (f) (Preservation Parkland) of this section.

(3) The types of parkland that may be provided to satisfy the requirements of this chapter are described in subsection (c) of this chapter.

(4) If maintained as a private park, the required parkland shall be provided as common area for the use of all residents/occupants of the proposed development.

(5) The following areas shall not be considered parkland pursuant to this subsection:

A. Areas covered by buildings, parking lots, or other impervious surfaces accessible to automobiles provided, however, that not more than fifty (50) percent of a parking area accessory to, and reserved
miles, then areas within four (4) miles of the periphery of the proposed subdivision or development may be considered for the acquisition and development of public parkland and/or construction of improvements to existing public parkland within such periphery.

(7) There is hereby established a special fund for the deposit of all fees collected under this subsection (g), which fund shall be known as the park acquisition and development fund. Within the fund all fees paid shall be earmarked for expenditure on acquisition of land for a public park and/or park improvements in a public park generally located within the distance described in subsection (6) above. All fees in lieu of parkland dedication paid must be expended within ten (10) years from the date of receipt for park facilities benefiting the residential subdivision or dwelling unit for which the fees are paid. Fees shall be considered expended if they are spent for acquisition or development respectively, of public parks located within the distance described in subsection (6) above for which the fees were paid within the ten-year period. If fees are not expended within such period, the then-current owner shall be entitled to a refund of the principal deposited by the applicant in such fund, together with accrued interest. The owner must request such refund in writing within three hundred sixty-five (365) days of entitlement or such right shall be waived. Interest accruing to the park acquisition or development fund shall be expended on public parkland acquisition and/or for public park improvements, respectively.

(h) Credit for Park Facilities.

(1) Where parkland is provided in a proposed residential subdivision, credit may be given to the applicant where the following requirements are met:

A. The parkland shall be maintained as provided in subsection (f) of this section. The ultimate owner of the parkland shall be responsible for raising all monies required for operations, maintenance, or physical improvements to the parks and/or open space through annual dues, special assessments, or similar arrangements.

B. One (1) copy of the sealed site plan and sealed construction documents for the proposed park shall be submitted to the appropriate plan review personnel within the parks and recreation department during the development review phase.

(2) The acreage required for dedication pursuant to Table 503-1 above may alternately be reduced by providing park facilities as outlined in Table 503-4 below. Credit shall be given toward the minimum land dedication requirement (see subsection (b) of this section) at the rate specified in column (C) of Table 503-4. Improvements for credit must meet all federal, state and local regulations and guidelines and be compliant with the Americans with Disabilities Act.

<table>
<thead>
<tr>
<th>Table 503-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Park Facilities Credit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(A) Criteria List</th>
<th>(B) Design Criteria</th>
<th>(C) Credit Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Playground</td>
<td>See subsection (3), below.</td>
<td>1.25</td>
</tr>
<tr>
<td>Picnic Area</td>
<td>Picnic areas shall have a minimum area of 2,500 square feet and contain two (2) picnic units. A picnic unit is defined as a concrete, metal, or approved material picnic table, two (2) benches, and a cooking grill all permanently anchored to the slab. For every three (3) acres of parkland required, credit for one (1) picnic area may be awarded.</td>
<td>0.25</td>
</tr>
<tr>
<td>Category</td>
<td>Description</td>
<td>Credit</td>
</tr>
<tr>
<td>--------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Athletic Courts</td>
<td>The court slab shall have a slope not exceeding two (2) percent and shall be constructed of concrete or approved substitute. A basketball court must be a minimum of fifty (50) feet by forty (40) feet, with two (2) metal goals, nets, backboards, and poles at each end. A tennis court must be a minimum of sixty (60) feet by one hundred twenty (125) feet, with net and metal posts. A volleyball court must be a minimum of thirty (30) feet by sixty (60) feet, with net and metal posts, and the court must be constructed with either sodded Bermuda grass or a twelve (12) inch course of washed masonry sand or silica sand. If the park dedication requirement exceeds five (5) acres, then an additional three-fourths ¾ acre credit may be awarded for a second athletic court.</td>
<td>.75</td>
</tr>
<tr>
<td>Open Play Areas</td>
<td>An open play area shall include a minimum area of 20,000 square feet. The areas shall be unobstructed by trees, shrubs, or utilities, with a slope not to exceed five (5) percent. Common Bermuda or approved substitute grass shall be established in these areas. Maximum of one (1) open play area for every five (5) acres of parkland dedication.</td>
<td>1.00</td>
</tr>
<tr>
<td>Swimming Pool</td>
<td>Minimum 500 square feet of water surface, with adjacent deck and lawn areas. A maximum of one and one-half (1½) acres credit may be awarded. A swimming pool may not count towards more than fifty (50) percent of the parkland dedication requirement.</td>
<td>0.3 acres per five hundred (500) square feet of surface area</td>
</tr>
<tr>
<td>Recreation Center Building</td>
<td>The building shall be in habitable condition and shall have a minimum one thousand (1,000) square feet of gross floor area. The covenants and restrictions of the homeowners’ association shall restrict the building for use as a recreational and/or meeting area for use by all residents of the subdivision. Architectural design shall conform to the restrictive covenants recorded for the subdivision. Credit shall be awarded for only one (1) building. A recreation building may not count towards more than fifty (50) percent of the parkland dedication requirement.</td>
<td>.50 for 1,000—1,500 square feet; 1.00 for over 1,500 square feet.</td>
</tr>
<tr>
<td>Recreation Community Gardening</td>
<td>Community gardens shall have a minimum area of ten thousand (10,000) square feet with a slope not exceeding two (2) percent. Maximum of one (1) community garden for every five (5) acres of parkland dedication requirement.</td>
<td>0.25</td>
</tr>
<tr>
<td>Pavilion/Gazebo</td>
<td>Pavilions must be constructed with galvanized metal roofing or, an approved substitute and posts constructed of wood, metal, stone, or an approved substitute, and shall be a minimum of twenty (20) feet in width by twenty (20) feet in length. Gazebos may be constructed of either wood, metal, or approved substitute, and shall be a minimum of one hundred (100) square feet in size. Architectural design for overhead structures shall conform to the restrictive covenants recorded for the subdivision. Maximum of one (1) overhead structure for every five (5) acres of parkland dedication requirement.</td>
<td>0.25</td>
</tr>
<tr>
<td>Outdoor Gymnasium Facilities</td>
<td>Outdoor Gym must meet minimum dimensions of forty (40) feet in width by forty (40) feet in length (or 1,600 square feet), and consist of at least six (6) stations constructed of metal or an approved substitute material. Stations must be secured as recommended by the manufacturer. A maximum of 1.0 acres credit may be awarded.</td>
<td>1.0</td>
</tr>
<tr>
<td>Fitness, Jogging or Walking Trails</td>
<td>Trails shall have a minimum length of one-quarter (¼) mile. Trails shall be constructed of crushed granite, concrete, or asphalt, with a minimum thickness of four (4) inches, a minimum width of eight (8) feet, and shall be sloped to drain. A maximum of two and one-fourth (2¼) acres credit may be awarded for trails.</td>
<td>1.50 for first quarter (¼) mile length; .75 for an additional quarter (¼) mile length</td>
</tr>
</tbody>
</table>

(3) Specifications for playgrounds as set forth in Table 503-4 shall conform to the following minimum requirements:

A. Playground is to be of commercial standards. The parks and recreation department will provide a list of potential vendors.

B. The playground area shall have a slope not exceeding two (2) percent.

C. Playgrounds are to include equipment for two (2) distinct play abilities and may be located in the same or in separate areas,
   i. One (1) area designed for ages two (2) through five (5) years old with a minimum of six (6) activities, and a
   ii. Second area designed for ages five (5) through twelve (12) years old with a minimum of twelve (12) activities.

D. Playgrounds must meet all federal, state, and local regulations and guidelines and be compliant with the Americans with Disabilities Act, as well as guidelines set up by CPAC and NPSI.

E. The following items shall be provided: at least two (2) park benches, one (1) trash receptacle, and an open shelter.

F. Playground equipment shall be located no closer than twenty-five (25) feet from a park boundary.
EXHIBIT N

FIRE REQUIREMENTS
APPENDIX D

FIRE APPARATUS ACCESS ROADS

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

SECTION D101
GENERAL

D101.1 Scope. Fire apparatus access roads shall be in accordance with this appendix and all other applicable requirements of the International Fire Code.

SECTION D102
REQUIRED ACCESS

D102.1 Access and loading. Facilities, buildings or portions of buildings hereafter constructed shall be accessible to fire department apparatus by way of an approved fire apparatus access road with an asphalt, concrete or other approved driving surface capable of supporting the imposed load of fire apparatus weighing at least 75,000 pounds (34 050 kg).

SECTION D103
MINIMUM SPECIFICATIONS

D103.1 Access road width with a hydrant. Where a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26 feet (7925 mm), exclusive of shoulders (see Figure D103.1).

D103.2 Grade. Fire apparatus access roads shall not exceed 10 percent in grade.

Exception: Grades steeper than 10 percent as approved by the fire chief.

D103.3 Turning radius. The minimum turning radius shall be determined by the fire code official.

D103.4 Dead ends. Dead-end fire apparatus access roads in excess of 150 feet (45 720 mm) shall be provided with width and turnaround provisions in accordance with Table D103.4.

<table>
<thead>
<tr>
<th>LENGTH (feet)</th>
<th>WIDTH (feet)</th>
<th>TURNAROUNDS REQUIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-150</td>
<td>20</td>
<td>None required</td>
</tr>
<tr>
<td>151-500</td>
<td>20</td>
<td>120-foot Hammerhead, 60-foot “Y” or 96-foot diameter cul-de-sac in accordance with Figure D103.1</td>
</tr>
<tr>
<td>501-750</td>
<td>26</td>
<td>120-foot Hammerhead, 60-foot “Y” or 96-foot diameter cul-de-sac in accordance with Figure D103.1</td>
</tr>
<tr>
<td>Over 750</td>
<td>Special approval required</td>
<td></td>
</tr>
</tbody>
</table>

For SI: 1 foot = 304.8 mm.

FIGURE D103.1
DEAD-END FIRE APPARATUS ACCESS ROAD TURNAROUND
7. Location of all fire hydrants (existing and proposed). This shall include the direction and the distance to all hydrants on the site plan, but within one thousand feet of the building to be protected.

8. Size (diameter and length) and locations of all fire main piping (proposed and existing). The pressure class and type of new pipe to be installed shall be identified.

9. The location, type, and size of backflow prevention devices, where installed.

10. Number of lanes, including turning lanes, of all adjacent streets and the location of medians as applicable.

11. Location of all automatic sprinkler and standpipe risers.

12. Location of Fire Department connection(s).

13. Size, type, and location of valves including post indicator valve (if they are located in a pit), control room automatic sprinkler system shut-off, etc.

14. Other water supplies.

15. Where required, type of protection from collision that may cause physical damage to fire protection equipment.

Section 503.1.1 Buildings and facilities is amended to read as follows:

503.1.1 Buildings and facilities. Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet (45 720 mm) of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility. In sprinklered Group R-2 apartment houses, the distance may be measured through open breezeways having a minimum clear width of six feet.

Exceptions:

1. The fire code official is authorized to increase the dimension of 150 feet (45 720 mm) where any of the following conditions occur:
   a. The building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3. The dimension shall be increased from 150 feet to 200 feet. This increase shall not be applicable to Groups H and I Occupancies, buildings with occupancies having High-Piled Combustible Storage and high-rise buildings.
   b. Fire apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades or other similar conditions, and an approved alternative means of fire protection is provided.
   c. There are not more than two Group R-3 or Group U occupancies.
   d. The building is a non-combustible Group 5-2 open parking garage meeting the requirements of the 2015 International Building Code Section 406.3, with or without a sprinkler system. The increase shall be allowed to be up to 200 feet.

2. Where approved by the fire code official, fire apparatus access roads shall be permitted to be exempted or modified for solar photovoltaic power generation facilities.

Section 503.1.1 Buildings and facilities is amended by adding Section 503.1.1.1 Access from adjacent lot as follows:

503.1.1.1 Access from adjacent lot. Where fire apparatus access roads for a building or buildings are provided from an adjacent lot, a fire lane easement or ingress/egress easement is required to be recorded on the adjacent lot’s plat that is providing the common access. The adjacent lot’s plat is to clearly show the easement graphically.
Exception: In lieu of the graphical easement, a note may be placed on the plat that, at a minimum, states, the following: "Ingress and egress shall be provided between all adjacent lots for adequate fire department vehicle access per the City of San Antonio Fire Code. The cross access shall not be blocked nor may this note be taken off the plat without written permission from the City of San Antonio Director of Development Services and the San Antonio Fire Department Fire Marshal."

Section 503.2.1 Dimensions is amended by adding Sections 503.2.1.1 Divided Entrance to Property and 503.2.1.2 Mountable Curbs to read as follows:

503.2.1.1 Divided Entrance to Property. When guard houses, security stations, median, landscape islands or other similar use obstructions are so located as to create a one-way and partially obstruct the entrance(s) to a property or fire lane(s) in any location, such one-way(s) shall be a minimum of fourteen feet clear on each side of the obstruction. This minimum requirement is only applicable at the point(s) of obstruction and is not permitted along required Aerial Apparatus Access Roads, Fire Apparatus Access Roads adjacent to fire hydrants or fire department connections or at any location where a Fire Apparatus Vehicle is expected to be positioned for the duration of the fire event. Turning radii shall be permitted in Section 503.2.4.

503.2.1.2 Mountable Curbs. Mountable curbs are permitted when approved by the Fire Marshal.

Section 503.2.3 Surface is amended by adding a second paragraph to read as follows:

503.2.3 Surface. Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide all-weather driving capabilities.

Drivable grass surfaces, or other alternative drivable surfaces, are permitted when approved by the Fire Marshal or his designee and in accordance with all of the following conditions:

1. Sealed documents indicating compliance with the provisions of 503.2.3 shall be submitted by a registered design professional for review.
2. The drivable grass surface, or alternative drivable surface, shall not be used as the primary access to the site.
3. The surface shall be capable of supporting the imposed load of fire apparatus weighing at least 75,000 pounds.
4. Blue traffic reflectors shall be provided on each side of the surface every 20 feet to clearly mark its boundaries. Vegetation on and surrounding the surface shall be maintained such that said reflectors are visible at all times.
5. Sod is not permitted to be placed over the drivable base.
6. If the surface proposed is to be used as the aerial apparatus access road for the facility, concrete curbing, or other approved edging, shall be installed along both sides of the portion to be used as such for enhanced lateral stability.
7. If sand or other free-flowing fill is used as a main structural component for the surface, concrete curbing or other approved edging shall be installed along both sides of the surface for material containment.
8. The surface shall be maintained in proper working order at all times when utilized as a required fire lane. Should the surface become damaged or fall into disrepair, the Fire Marshal or his designee shall be authorized to require the repair and re-certification of said surface.

Section 503.2.4 Turning radius is amended by adding a second paragraph to read as follows:

503.2.4 Turning radius. The required turning radius of a fire apparatus access road shall be determined by the fire code official.

The turning radii of a fire apparatus access roadway shall require a minimum of 50 feet outside radius and a minimum of 25 feet clear distance to the inside radius on all turns in excess of 30 degrees.
Section 503.2.5 Dead Ends is amended to read as follows:

503.2.5 Dead Ends. Dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with approved provisions for the turning around of fire apparatus. Turn arounds approved by the Fire Marshal or as permitted by Appendix D are acceptable.

Exception: Where the building is equipped throughout with an approved sprinkler system in accordance with Section 903.3.1.1, 903.3.1.2, or 903.3.1.3, the maximum length of dead-end fire apparatus access roads shall be increased to 200 feet. This increase shall not be applicable to Groups H and I Occupancies, buildings with occupancies having High-Piled Combustible Storage and high-rise buildings. This increase shall apply to all non-combustible Group S-2 open parking garages meeting the requirements of the 2015 International Building Code Section 406.3, with or without a sprinkler system.

Section 503.2.7 Grade is amended to read as follows:

503.2.7 Grade. The gradient for a fire apparatus access road shall not exceed 12%.

Section 503.3 Marking is amended to read as follows:

503.3 Marking. Upon the designation of a fire lane pursuant to this ordinance, the Fire Marshal shall give notice of such designation to the owner of such designated premise, directing the owner to cause signs to be posted at the expense of the owner at designated locations stating: "Fire Lane - No Parking at any Time City Ord. 54547." Such signs shall be of standard size and color, of standard lettering and mounting, conforming to specifications established by the Director of Public Works. In addition to the signs, the owners of such designated premises at their option, or, if so directed by the Fire Marshal, shall paint all fire lane curbs red with white-stenciled letters stating "Fire Lane, No Parking." Lettering for the curbs shall use 4 inch lettering with a distance of not more than 40 feet between wording. It shall be unlawful to park any vehicle other than an authorized emergency vehicle in a designated fire lane when such signs are in place or such red curbing exists. In areas where the fire lane may not be clearly defined, the Fire Marshal may require a four inch red stripe be painted that defines the boundaries of the fire lane.

Section 503.4.1 Traffic calming devices is hereby deleted.

Section 503.6 Security gates is hereby amended by adding the following language and adding a new Section 503.6.1 Direction of Swing to read as follows:

503.6 Security gates. The installation of security gates across a fire apparatus access road shall be approved by the fire chief. Where security gates are installed, they shall have an approved means of emergency operation to include a fire department specific key switch, lock, or box. Upon loss of power to electric gate operators, a secondary power source or clearly marked and identified manual release shall be provided. The security gates and the emergency operation shall be maintained operational at all times. Electric gate operators, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200.

503.6.1 Direction of Swing. Security gates installed across a Fire Apparatus Access Road shall swing in the direction of travel towards the building or open horizontally to avoid backing up of Fire Apparatus and to allow for an expedited response.

SECTION 503 FIRE APPARATUS ACCESS ROADS is amended by adding Sections 503.7 Fire Marshal Authority to Designate Fire Lanes, 503.8 Summons to be Issued for Parking Violation, 503.9 Removal of Vehicle by Property Owner, 503.10 Removal of Vehicle by Fire Chief, and 503.11 Abandonment of Fire Lane to read as follows:
507.4 Water supply test. Adequacy of the water supply shall be determined by an approved flow test that is conducted on the fire hydrants nearest the project site unless otherwise approved by the Code Official. The flow test shall be as follows:

1. The flow test shall have been conducted no more than 12 months prior to the date of construction document submittal to the City of San Antonio.
2. The flow test shall be conducted in accordance with the 2010 edition of NFPA 291, Recommended Practice for Fire Flow Testing and Marking of Hydrants, and any other applicable local, state, or national standards and/or requirements.
3. The flow test results shall be submitted with the construction documents in accordance with the COSA standard fire flow test format.
4. If the water supply piping is not yet constructed, hydraulic calculations for the proposed piping design shall be submitted. The calculations shall be based on the flow test conducted on the fire hydrants nearest the project site and shall verify that the piping design provides the minimum require fire flow at no less than 25 psi residual. Upon completion of construction and prior to final certificate of occupancy, a flow test shall be conducted to verify the results of the calculations.

Section 507.5.1 Where Required is amended to read as follows:

507.5.1 Where Required. Public and/or private fire hydrants are required to be installed where one or more of the following conditions exist:

1. Existing fire hydrants do not meet the required fire hydrant location and spacing criteria defined in Section 507.5.1.1, 507.5.1.2, or Appendix C.
2. The complexity of the project justifies their installation as determined by the Fire Marshal.

Section 507.5.1.1 Hydrant for standpipe systems is deleted and replaced with Section 507.5.1.1 Fire Hydrant Location and Spacing for Non-Single Family Developments:

507.5.1.1 Fire Hydrant Location and Spacing for Non-Single Family Developments. Sufficient fire hydrants shall be considered to be provided for a building when:

1. Not more than 500 feet of hose will be required to reach from a fire hydrant to all exterior portions of the first floor of the structures in question; and
   Exception: Where the building is equipped throughout with an approved sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2, or 903.3.1.3, the maximum distance from hydrants to all exterior portions of the building shall be increased to 750 feet as the hose lays. This increase shall not be applicable to Groups H and I Occupancies, buildings with occupancies having High-Piled Combustible Storage and high-rise buildings. This increase shall apply to all non-combustible Group S-2 open parking garages meeting the requirements of the 2012 International Building Code, Section 406.3, with or without a sprinkler system.

2. All fire hydrants required as prescribed by Appendix C shall be within 500 feet of a point on the building being protected and said distance is measured per the hose lay criteria in Section 507.5.1.2.
   Exception: Where the building is equipped throughout with an approved sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2, or 903.3.1.3, the maximum distance from hydrants to a point on the building shall be increased to 750 feet as the hose lays. This increase shall not be applicable to Groups H and I Occupancies, buildings with occupancies having High-Piled Combustible Storage and high-rise buildings. This increase shall apply to all non-combustible Group S-2 open parking garages meeting the requirements of the 2012 International Building Code Section 406.3, with or without a sprinkler system.

Section 507.5.1 Where required is amended by adding Section 507.5.1.2 Fire Hydrant Location and Spacing:

507.5.1.2 Fire Hydrant Location and Spacing. Fire hydrants shall be located and spaced per the following criteria:
EXHIBIT O

PARKING REQUIREMENTS
Any adjustment authorized by the board of adjustment shall apply only to the use in the original certificate of occupancy.

(8) Bicycle Parking Spaces. Bicycle spaces shall, at a minimum, equal ten (10) percent of the number of the minimum required vehicle spaces required for a given use, but no more than twenty four (24) shall be required. Bicycle parking may be short or long term in nature, and shall not create any obstruction to public walkways, bus stops and/or entrances and exits to buildings.

(9) Bicycle spaces shall be provided in the “D” downtown zoning district and all “IDZ” infill development districts at a minimum rate equal to twenty-five (25) percent of the minimum required vehicle spaces for the proposed use as if the proposed use were in a nonresidential zoning district requiring minimum off-street parking. Bicycle spaces shall include bicycle racks or bicycle lockers which shall not obstruct pedestrian traffic in accordance with subsection (l).

(10) Multi-family recycling facilities. The minimum parking requirement may be reduced in order to provide adequate space for a recycling facility in accordance with chapter 14 of the City Code. In such cases the recycling facility shall be screened in accordance with subsection 35-511(c).

(c) Storage in Front and Side Yards. There shall be no parking or storage of vehicles (other than noncommercial off-street parking), or storage or display of any merchandise or materials of any kind in any front yard as required by this chapter in any residential zoning district and/or property or in any side yard or rear yard which abuts any residential zoning district and/or property unless permitted specifically by Table 311-2 Nonresidential Uses and complies fully with all screening, buffering and landscape provisions of this chapter.

<table>
<thead>
<tr>
<th>Permitted Use</th>
<th>Minimum Vehicle Spaces</th>
<th>Maximum Vehicle Spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCESSORY USES (SUPPLEMENTAL TO THE RESIDENTIAL USE)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>ASSISTED LIVING, BOARDING HOME, OR COMMUNITY HOME WITH 6 OR FEWER RESIDENTS</td>
<td>0.3 per resident</td>
<td>1 per resident</td>
</tr>
<tr>
<td>ASSISTED LIVING, BOARDING HOME, OR COMMUNITY HOME WITH 7 OR MORE RESIDENTS</td>
<td>0.3 per resident plus 1 space for each employee</td>
<td>1 per resident plus 1 space for each employee</td>
</tr>
<tr>
<td>ATHLETIC FIELDS (NONCOMMERCIAL AND SUPPLEMENTAL TO THE RESIDENTIAL USE)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>AUTOMOBILE NONCOMMERCIAL PARKING (Board of Adjustment)</td>
<td>1.5 per unit</td>
<td>2 per unit</td>
</tr>
<tr>
<td>BED and BREAKFAST</td>
<td>0.3 per room</td>
<td>1 per room</td>
</tr>
<tr>
<td>CEMETERY or MAUSOLEUM</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>CHILD - CARE INSTITUTION (BASIC)</td>
<td>1 per 375 sf GFA</td>
<td>1.5 per 375 sf GFA</td>
</tr>
<tr>
<td>CHURCH, TEMPLE, MOSQUE</td>
<td>1 per 8 seats</td>
<td>1 per 1.5 seats</td>
</tr>
<tr>
<td>DAY CARE CENTER (commercial or non-profit)</td>
<td>1 per 375 sf GFA</td>
<td>1.5 per 375 sf GFA</td>
</tr>
<tr>
<td>DWELLING - 1 FAMILY (Attached or townhouse) cluster parking allowed</td>
<td>1 per unit</td>
<td>N/A</td>
</tr>
<tr>
<td>DWELLING - 1 FAMILY (Detached) cluster parking allowed</td>
<td>1 per unit</td>
<td>N/A</td>
</tr>
<tr>
<td>DWELLING - 2 FAMILY cluster parking allowed</td>
<td>1 per unit</td>
<td>2 per unit</td>
</tr>
<tr>
<td>DWELLING - 3 FAMILY cluster parking allowed</td>
<td>1.5 per unit</td>
<td>2 per unit</td>
</tr>
<tr>
<td>DWELLING - 4 FAMILY cluster parking allowed</td>
<td>1.5 per unit</td>
<td>2 per unit</td>
</tr>
<tr>
<td>DWELLING - ACCESSORY (Carriage houses, Granny flats, Echo homes) cluster parking allowed</td>
<td>1 per unit</td>
<td>N/A</td>
</tr>
<tr>
<td>DWELLING - COLLEGE FRATERNITY (off Campus)</td>
<td>1 per 2 beds</td>
<td>1 per bed</td>
</tr>
<tr>
<td>DWELLING - School dormitories or housing (off Campus)</td>
<td>1 per 2 beds</td>
<td>1 per bed</td>
</tr>
<tr>
<td>DWELLING - HUD-CODE MANUFACTURED HOMES (residential) cluster parking allowed</td>
<td>1 per unit</td>
<td>N/A</td>
</tr>
<tr>
<td>DWELLING - MULTI-FAMILY (25 units maximum)</td>
<td>1.5 per unit</td>
<td>2 per unit</td>
</tr>
<tr>
<td>DWELLING - MULTI-FAMILY (30 units maximum)</td>
<td>1.5 per unit</td>
<td>2 per unit</td>
</tr>
<tr>
<td>RECREATION</td>
<td>ATHLETIC FIELDS - noncommercial</td>
<td>1 per 6 seats or 1 per 30 sf GFA if no permanent seats</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>--------------------------------</td>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td>RECREATION</td>
<td>ATHLETIC FIELDS - commercial</td>
<td>1 per 6 seats or 1 per 30 sf GFA if no permanent seats</td>
</tr>
<tr>
<td>RECREATION</td>
<td>BOWLING ALLEY</td>
<td>2 per lane</td>
</tr>
<tr>
<td>RECREATION</td>
<td>GOLF COURSE - private (see residential use table)</td>
<td>N/A</td>
</tr>
<tr>
<td>RECREATION</td>
<td>GOLF COURSE - publicly owned</td>
<td>N/A</td>
</tr>
<tr>
<td>RECREATION</td>
<td>GOLF DRIVING RANGE</td>
<td>1 per 6 seats or 1 per 30 sf GFA if no permanent seats</td>
</tr>
<tr>
<td>RECREATION</td>
<td>RECREATIONAL FACILITY - private community wide</td>
<td>1.5 per 1,000 sf GFA</td>
</tr>
<tr>
<td>RECREATION</td>
<td>RECREATIONAL FACILITY - private neighborhood</td>
<td>1.5 per 1,000 sf GFA</td>
</tr>
<tr>
<td>RECREATION</td>
<td>RECREATIONAL FACILITY - public community wide</td>
<td>1.5 per 1,000 sf GFA</td>
</tr>
<tr>
<td>RECREATION</td>
<td>RECREATIONAL FACILITY - public neighborhood</td>
<td>1.5 per 1,000 sf GFA</td>
</tr>
<tr>
<td>RECREATION</td>
<td>RIFLE AND PISTOL RANGE - indoor</td>
<td>1 per 6 seats or 1 per 30 sf GFA if no permanent seats</td>
</tr>
<tr>
<td>RECREATION</td>
<td>RIFLE AND PISTOL RANGE - outdoor permitted</td>
<td>1 per 6 seats or 1 per 30 sf GFA if no permanent seats</td>
</tr>
</tbody>
</table>
and except as provided in subsection (b). Stall depth shall be based upon the angle of parking, as set forth in column (B) of Table 526-1. The minimum width of access aisles internal to a parking lot or structure shall be as prescribed in column (C) of Table 526-1.

(2) **Compact Vehicles.** Up to thirty (30) percent of the required parking spaces may be designated for use by compact vehicles with minimum dimensions of eight (8) feet in width and sixteen (16) feet in length. Compact vehicle parking areas shall be identified by individually marking each parking space surface with lettering a minimum of six (6) inches in size.

<table>
<thead>
<tr>
<th>(A) Parking Angle</th>
<th>(B) Stall Depth</th>
<th>(C) Aisle Width</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Car-to-Wall Stalls</td>
<td>Interlocking Stalls</td>
</tr>
<tr>
<td>30°</td>
<td>17</td>
<td>13</td>
</tr>
<tr>
<td>45°</td>
<td>19</td>
<td>16</td>
</tr>
<tr>
<td>60°</td>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td>75°</td>
<td>20</td>
<td>19</td>
</tr>
<tr>
<td>90°</td>
<td>18</td>
<td>18</td>
</tr>
</tbody>
</table>

* Parking Angles permitted by City of San Antonio.

Rules of Interpretation for Table 526-1:

A. The aisle is the traveled path through a parking facility which provides access to one (1) or two (2) parking vehicles.

B. Stall length refers to the length of the parking stall measured perpendicular to the angle of parking. Stall depth is the projected vehicle length from the wall measured perpendicular to the aisle.

[Reference: Weant and Levinson, Parking (Eno Foundation, 1990).]

(3) **Location.** Except as otherwise permitted under a cooperative parking plan, off-street parking facilities shall be located on the lots on which the use or structure for which they are provided is located.

(4) **Turnarounds.** All parking areas containing three (3) or more parking spaces shall include a turnaround which is designed and located so that vehicles can enter and exit the parking area without backing onto a public right-of-way.

(f) **Construction and Maintenance.** Off-street parking facilities shall be constructed, maintained and operated in accordance with the following specifications:

1. **Drainage and Surfacing.** Areas shall be properly graded for drainage, surfaced with concrete, asphaltic concrete, or asphalt and maintained in good condition free of weeds, dust, trash and debris.
(2) **Wheel Guards.** Boundary or perimeter areas shall be provided with wheel guards, bumper guards or continuity devices that no part of parked vehicles will extend beyond the property line of the parking area. One (1) wheel stop end of each parking space.

(3) **Protective Screen Fencing.** Areas shall be provided with protective screen fencing so that occupants of adjacent structures are not unreasonably disturbed by the movement of vehicles either during the day or night.

(4) **Lighting.** Facilities shall be arranged so that the source of light is concealed from public view and from adjacent residential properties and does not interfere with traffic.

(5) **Entrances and Exits.** Facilities shall be provided with entrances and exits consistent with the requirements of subsection 35-506(r) of this chapter.

(6) **Prohibition of Other Uses.** Facilities shall not be used for the sale, repair, dismantling, or servicing of any vehicle, equipment, materials, or supplies.

(7) **Limitation on Size of Vehicles.** In residential districts facilities shall be used only by vehicles up to three-fourths (¾) ton.

(8) **Vehicle Barrier Requirements.** In order to minimize damage to errant vehicles and their occupants, vehicle barrier systems not less than two (2) feet nine (9) inches high shall be placed at the end of parking spaces and along driveways leading to or from surface parking lots where the slope drop off from the end of the parking space or driveway edge meets all of the following conditions:
   
   A. Distance to the edge of the drop off is seven (7) feet or less.
   B. The drop off depth exceeds two (2) feet.
   C. The slope is steeper than 1:1.

   Where the slope is between 1:1 and 1:3, then a concrete wheel stop or six-inch high concrete curb will be required at the end of the parking space or along the driveway edge.

(9) **Vehicle Barrier Design.** Vehicle barrier systems shall be designed to resist a single load of six thousand (6,000) pounds applied horizontally in any direction to the barrier system.

(g) **Sharing Off-Street Parking Facilities - Cooperative Parking Plan.** Pursuant to the following procedure, either part of all of the required off-street parking facilities may be located on a site other than the one (1) occupied by the use or structure requiring such facilities.

(1) **Cooperative Parking Plan.** Two (2) or more uses may share the same off-street parking facilities and each use may be considered as having provided such shared space individually. Such shared parking space, however, shall not be considered as having been provided individually unless the schedules of operation of all such uses are such that none of the uses sharing the facilities require the off-street parking facilities at the same time. This arrangement for sharing of off-street parking facilities shall be known as a cooperative parking plan. Cooperative parking shall be obtained within six hundred (600) feet of the property requiring the additional parking for all permitted uses in Table 526-3b "Parking in Nonresidential Use Districts." This maximum distance shall be measured from the property line to the driveway of the shared parking lot. This shared parking lot shall meet the requirements for a non-commercial parking lot listed in subsection 35-526(f).

(2) **Application For Approval of Cooperative Parking Plan.** An application for approval of a cooperative parking plan shall be filed with the director of planning and development services by the owner of the entire land area to be included within the cooperative parking plan, the owner or owners of all structures then existing on such land area, and all parties having a legal interest in such land area and structures. Sufficient evidence to establish the status of applicants as owners of parties in interest shall be provided. The application shall include plans showing the location of the uses or structures for which off-street...
EXHIBIT P

DRIVEWAY REQUIREMENTS
utility layouts are required as part of a plat, the location and extent of sidewalks within the subdivision shall be shown on the utility layout and shall be subject to the approval of the director of development services in consultation with the director of transportation and capital improvements and the utility agencies. In the ETJ, all sidewalk along a publicly maintained street or a street proposed to be publicly maintained must be contained within the ROW.

(8) **Drain Crossings.** Pedestrian double rails shall be required on both sides of all sidewalk drain crossings.

(9) **Alignment.** Sidewalks shall be constructed so as to align vertically and horizontally with adjoining sidewalks.

(10) **Grade.** Sidewalks shall be constructed so as to align vertically and horizontally with adjoining sidewalks.

(11) **Sidewalks on Private Streets.** Sidewalks on private streets shall meet the same criteria as for public streets.

Sidewalks shall be included in the same lot as the private streets or within an access easement designated on the plat if located on private lots. Deed restrictions shall be required to ensure that sidewalks remain unobstructed.

(r)

**Access and Driveways.**

(1) **Applicability.** The provisions of this section shall apply to all driveways. A lot which is a part of an approved plat which does not otherwise limit access and which was approved by the city and filed for record as of the effective date of this section, and which does not have sufficient frontage to meet the driveway approach spacing requirements in this section, shall be allowed one (1) driveway approach.

(2) **Single-Family Residential Subdivisions.**

A. **Frontage and Access Off a Collector or Major Thoroughfare.** Residential lots having direct access on a collector or major thoroughfare may be platted only if:

1. All lots are greater than one (1) acre in size, have a minimum lot frontage of one hundred (100) feet and provide for permanent vehicular turnaround on the lot to prevent backing onto the roadway. A note shall be on the plat stating a permanent vehicular turnaround shall be provided on each lot to prevent a vehicle from backing onto the roadway.

2. Access points which would permit vehicular access to lots less than one (1) acre in size from the thoroughfare or collector may be allowed if a marginal access street or easement to serve two (2) or more lots spaced a minimum of two hundred (200) feet apart or two hundred (200) feet from an existing driveway or street is constructed. The marginal access street or easement shall be designed to permit entry to the roadway without requiring a motorist to execute a backing maneuver. Marginal access streets or easements shall be included on the subdivision plat and shall be constructed or bonded in accordance with section 35-437 before recordation of the plat.

B. **Marginal Access Streets.** Where the subdivider furnishes a marginal access street on the subdivision side of an existing, improved primary or secondary arterial, the subdivider shall not be required to furnish any pavement, curbs, or sidewalks for the primary or secondary arterial. (see also: subsection 35-506(q)(5))

C. A residential lot shall be located a minimum of forty (40) feet from an arterial right-of-way.

(3) **Commercial, Industrial and Medium or High Density Residential Developments.** Lots proposed for commercial, industrial and multi-family residential developments in the ETJ or in the "MF," "NC," "O," "C," "I-1," or "I-2" zoning districts may have vehicular access from a thoroughfare or collector. However, the number of access points permitted will be based on the following criteria and following the driveway spacing requirements in subsection (7) below, if applicable.

A. For lots with less than two hundred (200) feet of unrestricted frontage, one (1) access point may be permitted;

B. For lots with two hundred (200) feet or more of unrestricted frontage, one (1) access point for every two hundred (200) feet of unrestricted frontage may be permitted.

C. All lots proposed for commercial development in the ETJ or in "NC," "O," and "C" zoning districts with less than four hundred (400) feet fronting an arterial street shall provide for shared cross access with adjacent lots fronting the arterial, by means of platted common access easement across the lot or recorded deed covenant providing common access across the lot with adjacent lot(s).

(4) **Additional Access Points.** The director of development services (or the Texas Department of Transportation, or county authority, if appropriate) is authorized to permit additional access points under the following conditions:

(A) The additional land; and access points are necessary to ensure the property owner beneficial use of the land;
services (or by the Texas Department of Transportation or county authority, if appropriate) at such time as a site plan is reviewed prior to the issuance of a building permit. The location shall be based on the following criteria:

(A) The location shall minimize conflicts with vehicle turning movements;
(B) The location shall be located as far as practicable from intersections; and
(C) The location shall be not less than fifty (50) feet from another driveway location.

If this standard is not possible, based upon the frontage of the property, the location shall be directed as far as practicable from the other driveway locations. Driveways along an arterial within four hundred (400) feet of a major intersection, such as the intersection of two (2) arterial streets or the intersection of a collector and an arterial street, may be restricted to right turn movements.

(D) Not located within an auxiliary lane.

(6) Driveway Throat or Vehicle Storage Length. For purposes of this subsection, "throat length" means the length of extending from the entry into the site at the property line, to the first conflict or intersection with a parking aisle. Vehicle storage length means the length of a driveway, service lane, bay, or other passageway for motor vehicles which is designed to minimize queuing onto surrounding streets. Throat length shall be designed in accordance with the anticipated storage length for entering and exiting vehicles to prevent vehicles from backing into the flow of traffic on the public street or causing unsafe conflicts with on-site circulation. Throat length and vehicle storage length shall not be less than the standards set forth in Table 506-7 unless approved by the director of development services. These measures generally are acceptable for the principal and secondary access to a property and are not intended for minor driveways such as residential driveways serving less than four (4) homes, or a commercial/industrial driveway with less than four hundred (400) ADT, or forty (40) average peak hour volume of vehicles, not located on a major roadway (see note under Table 506-7) or thoroughfare. The throat length may be reduced to no less than twenty (20) feet measured from the outside of the right-of-way by the director of development services by administrative exception. Throat lengths of less than twenty (20) feet from the outside of the right-of-way may be only be approved in accordance with section 35-482.

Table 506-7
Minimum Driveway Throat Lengths for Collectors and Arterials*

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Throat Length or Vehicle Storage Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shopping Centers &gt; 200,000 GLA or nonresidential developments &gt; 400 PHT per driveway</td>
<td>Throat length two hundred (200) feet or as required by the TIA</td>
</tr>
<tr>
<td>Nonresidential development between 200 and 400 PHT per driveway</td>
<td>Throat length seventy-five (75) feet or as required by the TIA</td>
</tr>
<tr>
<td>Nonresidential development less than 200 PHT per driveway or other major driveways not otherwise enumerated in this table</td>
<td>Throat length forty-foot minimum</td>
</tr>
<tr>
<td>Residential subdivision entryway (Private, gated entries)</td>
<td>Poisson distributed probability model at a ninety-five (95) percent confidence level. In addition, the subdivider shall provide for vehicle turnaround capability based on the single unit design vehicle as provided in the AASHTO Green Book, or latest revision thereof. The minimum entryway vehicle storage length shall be forty (40) feet measured from the call box to the public right-of-way. See Figure 506-11</td>
</tr>
</tbody>
</table>
EXHIBIT Q

TRAFFIC COUNTS
<table>
<thead>
<tr>
<th>Major Street</th>
<th>Location</th>
<th>Cross Street</th>
<th>Direction</th>
<th>Date Counted</th>
<th>Volume</th>
<th>85% Speed</th>
<th>Trucks</th>
<th>Street Width</th>
<th>Speed</th>
<th>Lanes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingram Rd</td>
<td>S of Waters Edge</td>
<td>NB</td>
<td>2/4/2016</td>
<td>5423</td>
<td></td>
<td>60</td>
<td>35</td>
<td>Four Lane Undivided</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ingram Rd</td>
<td>S of Lakeside</td>
<td>NB</td>
<td>2/4/2016</td>
<td>8376</td>
<td></td>
<td>60</td>
<td>35</td>
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</tr>
<tr>
<td>Ingram Rd</td>
<td>N of Waters Edge</td>
<td>SB</td>
<td>2/8/2016</td>
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<td></td>
<td>45</td>
<td>35</td>
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<td>Inspiration</td>
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<td>EB</td>
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<tr>
<td>Inspiration</td>
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<td>EB</td>
<td>5/21/2018</td>
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<td>WB</td>
<td>5/21/2018</td>
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<td>SB</td>
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<td>2409</td>
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<td>35</td>
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<tr>
<td>Iowa</td>
<td>E of Hackberry</td>
<td>WB</td>
<td>1/8/2015</td>
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<tr>
<td>Iowa</td>
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<td></td>
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</tbody>
</table>
EXHIBIT R

EDU CALCULATIONS
San Antonio Water System  
Infrastructure Planning Equivalent Dwelling Unit (EDU) Calculation Sheet  

Subdivision Name: Vista at Interpark  
Plat I.D. #  

The estimated Average Sewer Flows or Equivalent Dwelling Units that are shown on the SAWS Infrastructure Planning Application for Subdivision Plat Review has been calculated by one of the following methods:  

X Equivalent Dwelling Units (EDU) calculation sheet.  

- Engineering Study using actual consumption data from similar facilities based on twelve month data also submitted for review.  
- Calculate estimated sewer discharge utilizing accepted SAWS referenced material.  
- Unknown land use will be calculated at four (4) EDU’s per acre.  

SAWS has established recommended guidelines to be employed for future discharge calculations which are shown next to the referenced facility. The numbers shown, for each type of development, are based on flow rate table measurements from TCEQ regulations, ASCE Manuals on Engineering Practice, EPA Technology Transfer Manuals, Uniform Plumbing Code fixture unit count and other Wastewater Engineering texts. All applicants will use these guidelines to calculate average daily flows or EDU’s.  

SAWS will accept sewage flow calculations for any proposed development which is derived through an engineering study of actual measured sewer flows for similar facilities in lieu of the above criteria to determine the total estimated average daily flow or EDU’s for the proposed development. The undersigned acknowledges that these EDU calculations represent the intended use of the plat.  

Types of Development: Identify all types of development that will be part of the proposed project and complete the related information listed for each to calculate as Estimated Average Daily Flow (EADF) or Equivalent Dwelling Units (EDU’s). Note: One (1) EDU equals 200 gallons per day as average sewage flow and 290 gallons per day for average water flow. (Circle type of units used - EADF or EDU’s)  

Single Family Homes  
Number of Students Number of Faculty & Staff  
Office, 0.5 EDU  
64 x 0.5 = 32 EDU  

Apartments  
X Duplexes  
Townhouses  
Condominiums  
(0.5 EDU/Unit) Total Number of Units = 64  
EDU or EDU’s = 32  

Schools: Elementary [(5 gal/student)]  
Middle [(8 gals/student)]  
High School [(10 gal/student)]  
University/College/Other [(10gal/student)]  

Number of Students Outside Number of Faculty & Staff  
EDU or EDU’s =  

Hotel  
(100 gal/room)  
Motel  
(50 gal/room)  
Number of Rooms  
Number of Staff  
Swimming Pool  
EDU or EDU’s =  

Hospital  
(250 gal/bed)  
Nursing Home  
(100 gal/bed)  
Number of Beds  
Number of Staff  
EDU or EDU’s =  

Commercial  
X Industrial  

type of Product  
Water Consumption  
Effluent Discharged  
Number of Employees  
Number of Fixtures  
EDU or EDU’s =  

(Contak SAWS Wastewater Compliance Division if a portion of the flow is industrial wastewater. Phone 233-3557)  

Office Building  
[(0.035 gal/sf) Building Square Footage  
Number of employees  
EDU or EDU’s =  

Storage  
[(Climate Control (1 EDU)]  
[Office Space less than 2,500 Sq. Ft. (1 EDU)]  
EDU or EDU’s =  

Warehouse Building  
Office Space Sq. Ft.  
(0.07 gal/sf) Storage Space Sq. Ft.  
(0.007 gal/sf)  
Number of Employees  
(25 gal/employee)  
EDU or EDU’s =  

Medical Building  
[(1.5 gal/room) Building Square Footage  
Number of employees  
EDU or EDU’s =  

Restaurant  
Cafeteria  
(20 gal/meal)  
Number of Seats  
Business Hours  
EDU or EDU’s =  

Fast Food  
[(5 EDU’s per facility)] Type of Food Served  
EDU or EDU’s =  

Health Club  
[X] Recreational Facility  
TDBBE Building Square Footage  
Customers per day  
Swimming Pool Size  
Number of Restrooms  
Number of Showers  
EDU or EDU’s =  

Department Store/Retail Store  
[(0.07 gal/sf) Type of Store  
Building Square Footage  
Number of Customers  
(5 gpd/customer)  
Number of Employees  
(25 gpd/employee)  
Number of Customers per day  
(5 gpd/customer)  
EDU or EDU’s =  

Grocery Store  
Food Store  
Convenience Stores  
[(TDBBE Building Square Footage  
Number of Employees  
Business Hours  
Number of Customer Fuel Service  
EDU or EDU’s =  

Laundries  
Number of Machines  
(200 gal/machine)  
Business Hours  
EDU or EDU’s =  

Churches  
Auditoriums  
Seating Capacity  
(5 gal/seat)  
Number Rest Rooms  
Number of Fixtures  
EDU or EDU’s =  

Car Wash  
TDBBE  
Number of Bays  
(1.5 EDU’s per Bay)  
Number Cars per Day  
EDU or EDU’s =  

Automated Car Wash  
TDBBE  
Gall per wash  
Effluent discharged per wash  
Number Cars per Day  
(Specifications Required)  
EDU or EDU’s =  

Service stations  
[(1 EDU Gas Station)]  
[2 EDU’s Grocery/Takeout Food]  
15 EDU’s Car Wash  
EDU or EDU’s =  

Theatre  
(1.5 gal/seat)  
Number of seats  
Number of Employees  
EDU or EDU’s =  

Other Type of Development  
Proposed Land Use  
Building Square Footage  
Number of Employees  
EDU or EDU’s =  

Number of Customers  
Number of seats  
Number of Fixtures  
Business Hours  
EDU or EDU’s =  

Calculation Work Space: (Please type or print in ink). Calculation sheet must be signed and sealed by a Professional Engineer if other form of calculation not shown on this sheet is utilized.  

Domestic Water  
64 x 0.5 = 32 EDU  
Office = 1EDU  
1.5 inch irrigation = 5 EDU  
TOTAL = 38  
Sanitary Sewer  
64 x 0.5 = 32  
Office = 1  
TOTAL = 33  

Additional Information:  

If additional space is needed add a separate sheet, on letterhead, and attach it to this sheet at time of submittal. This form must be completely filled out and submitted with an original signature. No other form will be accepted.
Preliminary site plan prepared by the civil engineer materially adheres to all applicable zoning, site development, and building code ordinances.
EXHIBIT T

SURVEY