Planning and Appeals Board Meeting Agenda
Tuesday, November 14, 2023, 5:30 PM
Public Safety Complex, Municipal Court Room
701 Queen City Parkway, Gainesville, GA 30501

CALL TO ORDER

MINUTES

A. Minutes of October 10, 2023

OLD BUSINESS

NEW BUSINESS

A. Annexation

1) Request from **Heliodora Galeas De Bonilla** to annex a 0.11± acre tract located on the east side of Harrison Drive, northeast of Old Athens Road (a/k/a **1338 Harrison Drive**) and to establish a zoning of Residential-II (R-II).

Ward Number:	Three
Tax Parcel Number(s):	00-142-001-004
Request:	Existing single-family home

B. Zoning Amendment

1) Request from **Weekley Homes, LLC** to amend an existing Planned Unit Development (P-U-D) zoning on a 120.98± acres tract located on the northwest side of McEver Road, west of the intersection of McEver Road and Gould Drive (a/k/a **0 and 1300 Gould Drive, SW**).

Ward Number:	Four
Tax Parcel Number(s):	08-016-002-001A; 08-017-000-001
Request:	Mixed-use development

MISCELLANEOUS

ADJOURNMENT

CITY OF GAINESVILLE

Planning and Appeals Board
Agenda Request

Item Created:	October 17, 2023
Date Submitted:	October 24, 2023
Final Approval Date:	October 24, 2023
Presenter:	Matt Tate, Community & Economic Development Dept Deputy Director
Item of Business:	Minutes of October 10, 2023
Meeting Date:	November 14, 2023

Purpose of Request:
The purpose of this request is to allow the Planning and Appeals Board to approve the minutes from the referenced meeting.

Facts & Issues / History & Background:
The draft minutes were reviewed by the Office and Records Coordinator and the Community & Economic Development Deputy Director.

Department Recommendation:

Department Director:
Rusty Ligon

If funding is involved, are funds approved within the current budget? No

Amount Requested: **Sources of Funds:**

Finance Comments:

Administrative Comments:

Attachments:
1. 2023-10-10 PAB DRAFT minutes

GAINESVILLE PLANNING AND APPEALS BOARD
DRAFT MINUTES OF MEETING
OCTOBER 10, 2023

CALL TO ORDER Chairman Carter at 5:30 p.m.

Members Present: Chairman Doug Carter, Vice-Chair Jane Fleming and Board Members Eddie Martin, Rich White, Ryan Thompson and Rick Young

Members Absent: Board Member Kelvin Simmons

Staff Present: Community & Economic Director Rusty Ligon, Community & Economic Deputy Director Matt Tate and Recording Secretary Gwen Fleming

Others Present: Council Member Barbara Brooks

MINUTES OF SEPTEMBER 12, 2023

There was a motion to approve the minutes as presented.

Motion made by Board Member Thompson
Motion seconded by Board Member White
Vote – 6 favor, 1 absent (Simmons)

OLD BUSINESS

NEW BUSINESS

A. <u>Annexation Requests</u>

1) Request from **BDC Gainesville, LLC** to annex a 50.711± acres tract located southeast of the intersection of Athens Highway and Monroe Drive, having road frontage on Athens Highway and Monroe Drive (a/k/a **2544 Monroe Drive and 1570 Athens Highway**) and to establish a zoning of Heavy Industrial (H-I), with a special use**.**
   Ward Number: Three
   Tax Parcel Number(s): 15-032-000-013
   Request: Enclosed anaerobic digestion facility (Bioenergy Center)

Staff Presentation: Deputy Director Matt Tate gave the following staff presentation:

The applicant is proposing to annex a 50.711± acres property with a zoning of Heavy Industrial (H-I) zoning and a special use for an enclosed anaerobic digestion facility (Bioenergy Center). The property is currently zoned Planned Industrial Development (P-I-D) in Hall County and was approved in 2012 as an open construction and demolition (C&D) solid waste inert landfill, but was never developed as such. The property is contiguous to the city limits to the south and west and the property is located within the Gateway Corridor Overlay Zone along Athens Highway. The property is heavily wooded with sloping topography and contains two tributaries from Allen Creek which will limit the developable area toward the center of the site. Adjacent uses include the U.S. Post Office, Waffle House restaurant, Copart-Atlanta North, WM-RTS Landfill, GWAR Landfill and Steel Tech Industries.

The purpose of the proposed enclosed anaerobic digestion facility (Bioenergy Center) is to transform feedstock consisting of various food production sources from area poultry and

agricultural industries into Biogas which is further treated on-site to produce renewable natural gas. As well, a secondary digestate-compost like product without the odor is also created that can be land applied or mixed to create nutrient rich top soils.

The proposed facility operates 365 days a year and 24 hours a day with 17 approximately employees working across 2 shifts. There are approximately 27 to 31 trucks carrying organic feedstock consisting of mostly liquid feedstock in tanker trucks of which 6 to 7 of the truck loads will carry solid feedstock in tarped dump trucks. Most of the feedstock deliveries are from 5 a.m. until 4 p.m. Access is proposed from a single driveway off of Monroe Drive.

The facility will include numerous structures including solids and liquids truck bay/building, odor control building, wastewater treatment building, 4 smaller pre-treatment tanks, 4 large digester tanks, gas filtration skid, soil amendment building, dry detention pond, maintenance and an administrative building.

The Future Development Map for the City of Gainesville places the property within the *Industrial* land use category. The Character Area map for the City of Gainesville places the subject property within the *Economic Development Gateways* character area which supports industrial, manufacturing, research and development uses.

The Planning Division staff is recommending **conditional approval** of this annexation request with Heavy Industrial (H-I) zoning with a special use based on the Comprehensive Plan and the adjacent mixture of uses.

Applicant Presentation: Bradley Dunkel, Rochester & Associates, 425 Oak Street, stated he represents BDC and the parent company Bioenergy Devco. He said the facility takes food processing waste, converts into renewable energy into soil amendments to be used in a variety of uses. He mentioned there have been concerns of odor generated from the facility but there will be no outside storage of any raw materials and will be delivered in a tank or covered truck, the liquid form will be piped directly into the digesters. Mr. Dunkel stated the solid product enters an enclosed building with negative air pressure with no air escaping and odor would be minimal if any. He said feed stock is a treated byproduct of primarily the food processing energy and explained that a poultry plant or other facility processes their waste then that product would go to a land application disposal but being land applied the liquid or solid byproduct could affect the lake by runoff due to the amount of nutrients but this would eliminate that concern and is considered a green alternative. Mr. Dunkel said eighty percent is liquid form and therefore pumped directly into the facility. He said all feed stock ingredients are registered with the State as materials suitable for land application disposal. Mr. Dunkel stated the other concern was the number of trucks on the road but they are already on road and going to longer distances to dispose of the materials. He stated the environmental result of the process is a digestate that becomes a soil amendment product and a biogas that becomes a renewable natural gas source that is put back into the gas line system. He stated there is a letter from the Georgia Department of Agriculture in support of the facility. Mr. Dunkel then explained using overhead maps showing limits of disturbance along with the site being screened and remote from surrounding uses and explained a 3D rendering of site. He said in attendance were two representatives from Bioenergy Devco along with local environmental consultant Warren Howell and Chris Riley helping on the state level regulatory process if there were any additional questions.

FAVOR: None

OPPOSE: Jennifer Knight, 2719 Water View Circle, was not really opposed but stated it sounds like good facility but was concerned about gases exploding or tanks catching fire and the radius of it. She also asked about the creeks being protected including the water system along with questions about the product being dispersed on site. Ms. Knight also expressed concern regarding the hazards of the gases and if the process doesn't work as it should.

Chris Riley, 1660 Palmour Drive, stated he would answer the questions from Ms. Knight. He said it is a non-pressured gas/non-pressured system with no risk. Mr. Riley said there is a requirement by the State that the applicant must receive the Clean Air Permit in addition to a Waste Water Treatment Permit. He stated the flume will be mandated and required which falls under the State's Clean Air Permit. He stated should the applicant receive local zoning and approval it would then flow to the State EPD for a Clean Air Permit for the air scrubbers that would control any odors that might escape in addition to the flume and gas. Mr. Riley said any disturbance to the creek is required by the State to go through a Permit of Disturbance in addition to Army Corp of Engineers for a 404 Permit from the Savannah district office in order to cross the tributaries. He explained once this is done it must be proved to the federal government and state that there are cautions in place not to disturb the tributaries and any what-if situation moving forward. He stated there are required tests ongoing by the Corp of Engineers along with onsite monitoring. Mr. Riley then explained how the product is dispersed stating inside the tank are living organisms (bugs) which breaks down the product into three byproducts which are natural gas, water and solid waste which an additive is added to it for mulch. He said there should be no odors at all.

Board Member Young asked Mr. Riley if the gas would be injected on site at a Liberty controlled natural gas pipe and he answered yes and it would not be tanked out and the gas must be compressed in order for Liberty to accept it at the expense of the applicant.

Board Member Thompson asked Mr. Riley if there had ever been explosion or leak with this type of facility and he answered not to his knowledge. He stated it originated in Europe operating there for years and then opened one in Maryland with Tyson Foods. Mr. Riley stated there are two anaerobic digesters in Georgia operating by the city of Columbus and Gwinnett County both sewage treatment facilities but the one in Gainesville will be the first private feed stock site in Georgia.

Board Member Young asked Mr. Riley about the truck traffic capacity at the facilities and the process for it now. He stated it is being built and permitted to be maxed out. Mr. Riley said it will be a solution to ongoing problem of being able to disperse the byproduct from food processing. The process currently goes to east and southeast Georgia approximately 100 miles one way with a single truck to disperse the product.

Vice-Chair Fleming asked if this would be good for Georgia and economic development, to handle our own waste and the agency that would oversee this process. Mr. Riley explained that with the blessing of the poultry industry with more people moving into the area it is a way to sustain and maintain the poultry industry and allow it to continue to grow being good neighbors of something that is now land applied and placed into a controlled environment and be used for betterment of renewable resources. Mr. Riley stated there are two state agencies, (Department of Agriculture and the Environmental Protection Division) that have joint regulation authority over the soil amendment product.

Will Crumley, 2577 Monroe Drive, M&R Rental, stated he is not opposed but concerned about the number of trucks, the recourse for it and with the condition of the roads being able to handle a large number of truck traffic.

Deputy Director Tate stated the facility is being built to be maxed out and there is a proposed zoning condition that limits to what is being proposed. He said if the applicant wanted to increase the size of the facility, then it would require a public hearing process first. Mr. Tate stated that 27 to 31 truck trips per day did not meet the threshold of a traffic study requirement but will still require coordination with Public Works for access and some level of coordination with GDOT.

Mr. Riley added that it is built to capacity and can't expand any more. He said the topography makes it cost prohibited to expand outward and will be the first one in state that will be a proven scientific model that works and would have to expand elsewhere with Gainesville being the model.

Chairman Carter stated Mr. Riley had communicated with Mr. Tate regarding the conditions being tweaked and the language being changed and wanted to acknowledge the Board received them in writing and would consider the amendments to the conditions. Chairman Carter asked Mr. Tate to share his thoughts concerning the changes to the conditions.

Deputy Director Tate stated there are currently eleven proposed conditions by staff and five of them have been amended for clarification purposes. He said conditions 3, 4, 6, 8 and 9 have proposed changes and staff is in agreement.

There was a motion to recommend conditional approval of the annexation request for an enclosed anaerobic digestion facility (Bioenergy Center) and establish zoning as Heavy Industrial (H-I) with a special use with the following amended (3, 4, 6, 8 and 9) conditions:

<u>Conditions</u>

1. **The development standards within the narrative, site plan and photographs submitted with the applicant's annexation application shall be made part of the zoning ordinance, and shall be subject to the approval of the Community and Economic Development Director.**
2. **The use of the subject property shall be restricted to the proposed enclosed Anaerobic Digestion Facility (Bioenergy Center). Any different use shall require a public hearing before the Gainesville Planning and Appeals Board and Gainesville City Council.**
3. **The size of the proposed Anaerobic Digestion Facility (Bioenergy Center) shall be in general conformance to what is shown on the site plan submitted with this annexation application. Any deviations shall be subject to the approval of the Community and Economic Development Director.**
4. **All offloading of solid feedstock shall be indoors. Any odors emitted from the offloading shall be sealed, treated and contained within a negative air pressure building. Liquid feedstock and soil amendment loadout shall be covered with minimal, if any expected odors, mitigated by best management practices, consistent with industry standards.**
5. **The proposed use shall conform with the City's industrial discharge permit requirements, as well as, submittal and approval of a detailed odor control plan per the approval of the Gainesville Department of Water Resources.**

6. **The exterior walls of all buildings, accessory buildings, silos and tanks shall be forest green in color. This shall not include roofs or membranes. Any deviations shall be subject to the approval of the Community and Economic Development Director.**

7. **The subject property shall be limited to one (1) monument sign fronting Monroe Drive, not to exceed 10-feet in height, 64 square feet in size, with internal or indirect lighting. Building signs shall be permitted as regulated within the Gainesville Unified Land Development Code. An electronic message board / changeable copy sign shall not be permitted for the subject property.**

8. **The existing, healthy trees located on the subject property, and not within the proposed limits of construction, shall be retained and incorporated into the design of the site improvements where possible, and shall be protected throughout construction of any required and/or proposed improvements.**

9. **A minimum 100-foot wide undisturbed buffer shall be required within the boundary of the subject property with the exception of the proposed driveway on Monroe Drive. A reduction of undisturbed buffer shall be permitted along the US 129 Right-of-Way where shown on the attached site plan. Any further reduction of the undisturbed buffer area shall be subject to the approval of the Community and Economic Development Director.**

10. **The proposed entrance on Monroe Drive shall be professionally landscaped and maintained. The design of the landscaped entrance shall require review and approval from the Community and Economic Development Director.**

11. **All access shall be limited to Monroe Drive shall be submitted for review by the Gainesville Public Works Director and Hall County Community Development & Infrastructure Department, and approval of said design shall be required prior to issuance of a building permit. All required access/traffic/sidewalk improvements associated with the proposed development shall be at the full expense of the developer/property owner.**

    Motion made by Board Member Martin
    Motion seconded by Board Member Young
    Vote – 6 favor, 1 absent (Simmons)

2) Request from the **Gainesville Housing Authority** to annex a 2.031± acres tract located on the west side of Harrison Drive, east of Lanier Parkway (I-985) (a/k/a **1368 Harrison Drive**) and to establish a zoning of Residential-II (R-II)**.**
   Ward Number: Three
   Tax Parcel Number(s): 01-142-001-002 (Part)
   Request: Low-income multi-family housing

Staff Presentation: Deputy Director Matt Tate gave the following staff presentation:

The applicant is proposing to annex a 2.031± acres tract with Residential-II (R-II) zoning. The subject property is currently zoned R-II within unincorporated Hall County and is located within the North Oconee Water Supply Watershed Protection Overlay Zone. The adjacent uses include New Life Missionary Church, Harrison Square Apartments an Abandoned American Legion #328 building and single-family homes in the county.

The property is part of a larger 17.54± acres assemblage of properties that were conditionally approved in 2003 and 2004 for a maximum of up to 160 low-income housing apartment units. The property to be annexed will clean up a portion of the city boundary allowing all of the proposed apartment buildings to be located within the city limits but the development is for only 120 multi-family units.

In partnership with the Gainesville Housing Authority (GHA), the property will be developed by The Paces Foundation who is seeking low-income housing tax credits through DCA to develop the property. As part of the GHA - Rental Assistance Demonstration (RAD) conversion, the development will help relocate 100 existing public housing units with the remaining 20 units being Low Income Housing Tax Credit Units. Amenities will include a club house with meeting space, computer room, Wi-Fi hotspot, workout and yoga studio, picnic area, covered pavilion with BBQ area and playground. Access will be from Harrison Drive and approximately 220 parking spaces will be provided. The proposed Harrison Village Apartments will consist of five, 3-story apartment buildings and a club house constructed with a mixture of brick and cementitious exterior materials.

The property is located within the *Multi-family* future land use category and within the *Economic Development Gateways* Character Area which support multi-family residential, commercial, general mixed-use, industrial, limited, parks and recreation, public and institutional uses.

The Planning Division staff is recommending **conditional approval** of this annexation request with **Residential-II (R-II)** zoning based on the Comprehensive Plan and the adjacent and nearby residential uses.

For consistency, the following **19** zoning conditions are the same as placed on the adjacent properties during 2003 and 2004.

Applicant Presentation: Beth Brown, 750 Pearl Nix Parkway, Gainesville Housing Authority, stated the Gainesville Housing Authority owns all land and will become the sole owner of property five years after construction once through stabilization. Mrs. Brown stated she will be glad to answer any questions.

FAVOR: None

OPPOSE: None

There was a motion to recommend conditional approval of the annexation request for low-income multi-family housing and establish zoning as Residential-II (R-II) with the following conditions:

<u>Conditions</u>

1. **A 75-foot undisturbed buffer shall be maintained between the development and the existing Biscayne Subdivision.**
2. **No unit shall be less than 900 square feet.**
3. **The entire development shall be limited to 9 du/ac.**

4. **At a minimum, 40% of the exterior siding must be masonry or stone on all four sides of each structure. The remaining exterior surfaces shall be cement type siding such as Hardie board.**
5. **Roof type shall be 25 year, architectural-type asphalt shingles.**
6. **Entry landscape shall include lighted signage in conformance with R-II standards and contain annual planting beds.**
7. **The site will have continuous perimeter fencing.**
8. **Parking shall be porous type asphalt paving.**
9. **All units shall be sprinklered for fire suppression, units to include visual and audio fire alarms.**
10. **Ten percent of the units are to be fully disabled accessible; including hearing, sight and mobility impaired accessibility.**
11. **The property shall have a minimum 2,500 square foot community center/office building to include a technology/computer center, fitness center, community meeting room, support service office, management office, maintenance office, shop and storage areas.**
12. **Development shall contain a swimming pool with bath house/changing room and outdoor gathering/party area.**
13. **Development shall contain a playground for children, tot lot for toddlers, sport court for teenagers/adults, walking trail and picnic area with covered tables.**
14. **Landscaping shall be natural and drought tolerant.**
15. **HVAC system will exceed Georgia Energy Code requirements.**
16. **Windows shall be thermal pane, low UV penetration windows.**
17. **Onsite laundry, washer-dryer hook-ups shall be provided for each unit.**
18. **Trash compacter for tenant garbage shall be provided.**
19. **Development shall comply with all other conditions of the Georgia Department of Community Affairs Office of Affordable Housing's manual governing development.**

Motion made by Vice-Chair Fleming
Motion seconded by Board Member Martin
Vote – 6 favor, 1 absent (Simmons)

Tanya Jackson, 4421 Prestwick Drive, Oakwood, stated she was concerned about the affect to adjoining properties, was confused and did not understand the map. Chairman Carter explained the project was approved in 2003 and the request was for a strip of land for clean-up and suggested to meet with staff to review the layout of the plans.

B. Rezoning Request

1) Request from **Greg Loyd** to rezone a 0.397± acre tract located at the southwest side of the intersection of High Street and Dixie Street (a/k/a **812 Dixie Street)** from General Business (G-B) to Residential-II (R-II)**.**
   Ward Number: Three
   Tax Parcel Number(s): 01-033-002-001
   Request: Four condominium units

Staff Presentation: Deputy Director Matt Tate gave the following staff presentation:

The applicant is to rezone the 0.397± acre property from General Business (G-B) to Residential-II (R-II) for two residential duplexes, for a total of 4 residential condominium units. The surrounding uses include a mixture of residential and nonresidential uses. The property is located within the Midtown Overlay Zone which allows residential condominiums by right regardless of the underlying zoning district.

The applicant is proposing to downzone the property from G-B to R-II to better conform with the surrounding zonings which also allows for a better design under the R-II zoning design standards. Access for each unit is proposed from Dixie Street and each unit will have surface level parking. Each unit is 2-story in height consisting of 3 bedrooms, 2 ½ baths, large open living area, kitchen and dining area. The anticipated construction time is 6 months upon approval.

The property is located within the *Downtown Mixed-Use* future land use category and the *Central Core Character Area* which supports single-family residential, multi-family residential and a mixture of uses.

The Planning Division staff is recommending **conditional approval** of this rezoning request with **Residential-II (R-II)** zoning, based on the Comprehensive Plan and the adjacent residential land uses.

Applicant Presentation: Priscilla Loyd Freeman, 3733 Cherokee Ford, stated she will be speaking for father, Greg Loyd. She stated they are in agreement with Mr. Tate and are glad to answer any questions.

FAVOR: Daniell Carrillo, 4610 Whiporwill Road, stated he is representing Oscar Carrillo, owner of Carrillo Properties, believes the zoning would be best zoned Residential due to surrounding areas and is in agreement with the staff.

Vice-Chair Fleming asked if the units will be rented sold fee simple. Mr. Carrillo stated the plans are to sell the condominiums.

OPPOSE: None

There was a motion to recommend conditional approval to rezone the subject property for four condominium units from General Business (G-B) to Residential-II (R-II) with the following conditions:

Conditions

1. **The use of the property shall be limited to four (4) detached single-family residential condominiums.**

2. **Each condominium unit shall contain a minimum heated floor space area of 1,800 square feet.**

3. **The architecture and overall design of the proposed single-family residential condominiums shall be consistent with the attached narrative, site plan, condominium renderings and floor plans, and shall be subject to the approval of the Community and Economic Development Director.**

4. **The front yards along Dixie Street and High Street and shall be sodded with grass. In addition, there shall be a minimum of one, 3-inch caliper size hardwood tree per condominium unit.**

5. **All access point design for the subject property shall require review and approval by the Gainesville Public Works Department Director. All required access/traffic/sidewalk improvements associated with the proposed development shall be at the full expense of the developer/property owner.**

6. **An updated as-built survey/plat showing all improvements to the property shall be required upon an occupancy permit being issued for the last condominium unit.**

Motion made by Board Member Thompson
Motion seconded by Board Member Young
Vote – 6 favor, 1 absent (Simmons)

RECOGNITION

Chairman Carter announced the resignation of Board Member Rich White and stated it would be his last meeting with the Planning and Appeals Board. He also expressed appreciation for many years of service with the Board and mentioned the years of banking and community volunteering. Board Member White stated he prefers not to drive at night and has enjoyed working with such great and knowledgeable staff and board members over the years.

ADJOURNMENT

There was a motion to adjourn the meeting at 6:19 p.m.

Motion made by Board Member Young
Motion seconded by Board Member Thompson
Vote – 6 favor, 1 absent (Simmons)

Respectfully submitted,

_____
Doug Carter, Chairman

_____
Gwen Fleming, Recording Secretary

CITY OF GAINESVILLE

Planning and Appeals Board
Agenda Request

Item Created:	October 17, 2023
Date Submitted:	October 24, 2023
Final Approval Date:	October 25, 2023
Presenter:	Matt Tate, Community & Economic Development Dept Deputy Director
Item of Business:	Request from **Heliodora Galeas De Bonilla** to annex a 0.11± acre tract located on the east side of Harrison Drive, northeast of Old Athens Road (a/k/a **1338 Harrison Drive**) and to establish a zoning of Residential-II (R-II).
Meeting Date:	November 14, 2023

Purpose of Request:
The applicant is proposing to annex a 0.11± acre property with a zoning of Residential-II (R-II) for an existing single-family home for sewer. The property is currently zoned Residential-II (R-II) in Hall County and contains a 1,360 square foot single-family home built in 1940. The existing private septic system is failing and the applicant desires to tie onto sewer which is available on Harrison Drive. There are no other proposed changes to the property.

The adjacent properties include single-family homes in the county and the Harrison Square Apartments which are located within the city of Gainesville.

Facts & Issues / History & Background:

Department Recommendation:
Planning staff recommended approval of this request. See the Staff Recommendation report for details.

Department Director:
Rusty Ligon

If funding is involved, are funds approved within the current budget? No

Amount Requested: **Sources of Funds:**

Finance Comments:

Administrative Comments:

Attachments:
1. Staff Recommendation Report
2. Location Maps
3. Narrative
4. Plat
5. Photos

GAINESVILLE PLANNING and APPEALS BOARD
STAFF RECOMMENDATION

Applicant and Property Owner .....Heliodora Galeas De Bonilla

Location .....1338 Harrison Drive

Request.....Annex, with R-II zoning

Total Acres .....0.11± acre

Ward.....Three

Proposed Use.....Existing single-family home with access to sewer

Planning Division Staff Recommendation.....**Approval**

Date .....November 14, 2023

- ***Applicant's Proposal and Background Information***

The applicant is proposing to annex a 0.11± acre property with a zoning of Residential-II (R-II) for an existing single-family home for sewer. The property is currently zoned Residential-II (R-II) in Hall County and contains a 1,360 square foot single-family home built in 1940. The existing private septic system is failing and the applicant desires to tie onto sewer which is available on Harrison Drive. There are no other proposed changes to the property. The adjacent properties include single-family homes in the county and the Harrison Square Apartments which are located within the city of Gainesville.

The property is located within the North Oconee Reservoir Watershed Protection District and the adjacent and nearby uses include single-family homes, apartments, commercial and industry.

- ***Adjacent Land Use and Zoning***

Location	Use	Zoning
North	Single-family home	Residential-II (R-II) -County
South	Single-family home	Residential-II (R-II) -County
East	Single-family home	Residential-II (R-II) -County
West	Harrison Square Apartments	Residential-II (R-II) -City

- ***Other Departmental Comments***

There were no departmental comments for this request.

- ***Zoning History***

The following zoning actions have taken place in the immediate area during the last ten years:

2019- A request by the Gainesville Housing Authority to annex and establish Residential-II (R-II) zoning a 2.031± acres property located at 1368 Harrison Drive was approved with conditions for low-income multi-family housing.

2022 – A request by West Ridge Storage, LLC to rezone a 3.69± acres tract located at 891 West Ridge Road, SE from Regional Business (R-B) to Light Industrial (L-I) for climate controlled self-storage was approved with conditions.

2019- A request by Karl Chambers and David Reddicks to annex and establish Residential-II (R-II) zoning a 0.49± acre property located at 1026 Athens Street was approved with conditions for a residential duplex.

2018 – A request by KRM 2016 LLC to rezone a 0.855 ± acre tract located at 827, 831 and 851 Athens Street SE from Residential-II (R-II) and Heavy Industrial (H-I) to Residential-II (R-II) for five residential duplexes was approved with conditions.

2015- A request by Luciano Garcia to annex a 0.15± with a zoning of Residential II (R-II) of located at 1306 Brown Street was approved for sewer for an existing single-family home.

- ***Staff Analysis***

(1) Is the proposed use suitable in view of the zoning and development of adjacent and nearby property?

The surrounding uses include property within the city and county which includes a mixture of housing types such as single-family homes and apartments. The purpose of the request is to connect sewer which is located adjacent to the subject property.

(2) Will the proposed use adversely affect the existing use or usability of adjacent or nearby property?

The existing single-family home is comparable in size and will function similarly as the adjacent single-family homes. The lot is small in size but is similar to other lots within the city limits served by public sewer.

(3) Is the proposed use compatible with the purpose and intent of the Comprehensive Plan?

The Future Development Map for the City of Gainesville places the subject property within the *Multi-Family Residential* category which includes areas containing or planned for single-family attached or or multi-family housing at densities at a minimum of four dwelling units per acre.

According to the Character Area map for the City of Gainesville, the subject property is located within the *Suburban Neighborhood* Character Area. The vision for this area is to preserve older, stable residential subdivisions and encourage newer projects with smaller lot sizes, pedestrian infrastructure, and buildings patterned after traditional local housing, possibly containing a small neighborhood-serving “village center”. Neighborhood-scale businesses are prioritized that can serve local residents. Future population growth should be balanced between new development and infill areas. Housing choices should be diverse to support a range of household incomes, lifestyles, sizes and types, but consist mostly of single-family detached lots.

Land uses allowed in the *Suburban Neighborhood Character Area* include parks and recreation, single-family residential, limited multi-family residential, limited general mixed-use, limited commercial (retail and office), public and institutional.

(4) Are there substantial reasons why the property cannot or should not be used as currently zoned?

The property could remain in the county under its current zoning of Residential II (R-II) and remain a single-family home. The property is contiguous to the city limits and desires to utilize City sewer

service which requires the property to be annexed. Abandoning the failed private septic system will improve the environmental impacts.

(5) Will the proposed use cause an excessive or burdensome use of public facilities or services, including but not limited to streets, schools, water or sewer utilities, and police or fire protection?

The change from county jurisdiction to city jurisdiction should not substantially affect public facilities or services.

There is sufficient water and sewer capacity that can serve the property. The Gainesville Fire and Police Departments currently respond to adjacent and nearby properties and Gainesville Fire Station #1 is approximately 2.1 miles from the subject property. The existing single-family residential home should have minimal impact on existing roads.

Given the scale of the request (1 home), minimal impacts to the City school system are anticipated as school bus service is currently provided within the immediate area.

(6) Is the proposed use supported by new or changing conditions not anticipated by the Comprehensive Plan or reflected in the existing zoning on the property or surrounding properties?

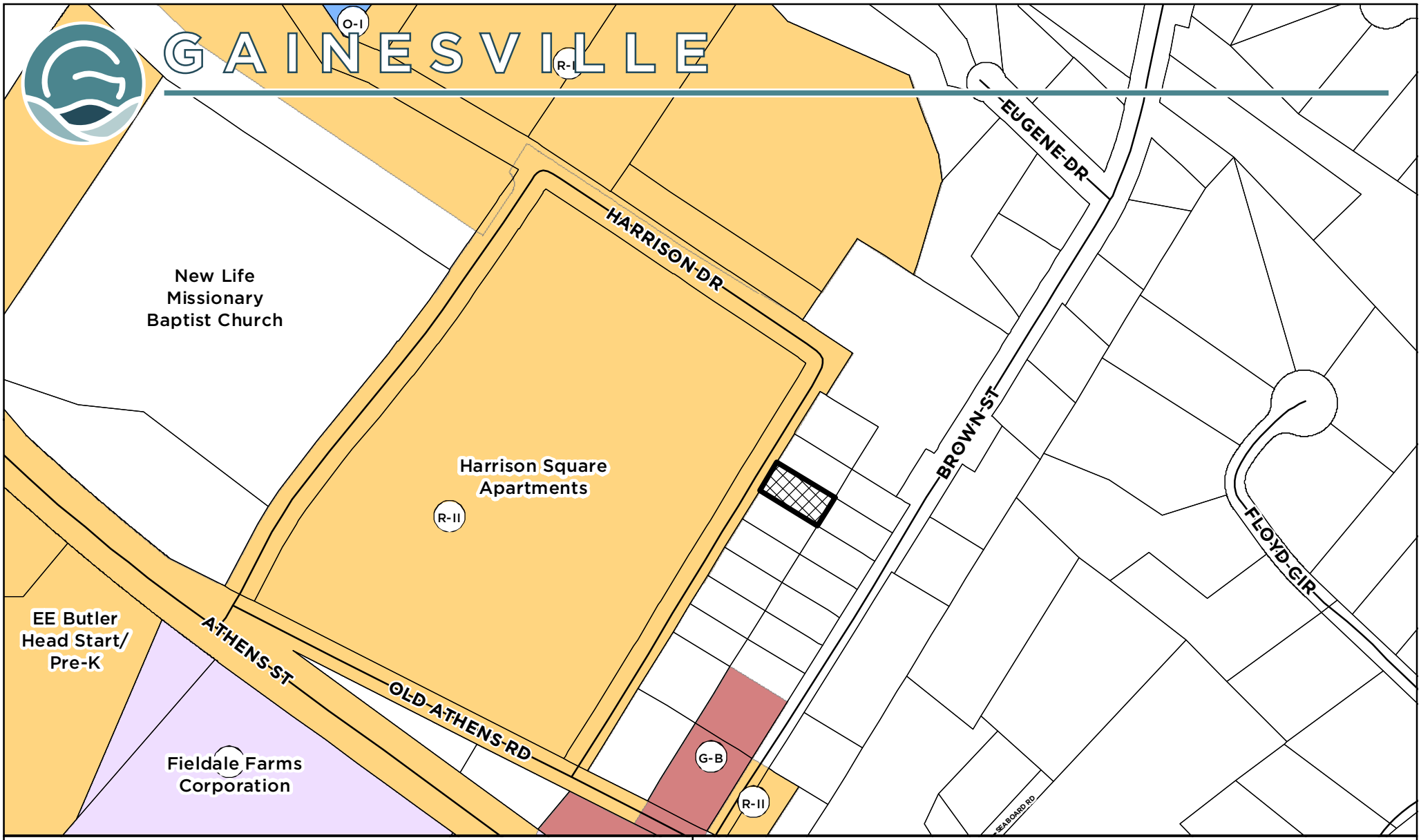
It is staff's opinion the residential use is consistent with the adjacent single-family homes. While the property could be combined with adjacent property for multi-family purposes, the expected uses will most likely remain single-family in nature.

(7) Does the proposed use reflect a reasonable balance between the promotion of the public health, safety, morality, or general welfare and the right to unrestricted use of property?

Based on the subject property's proximity to city limits and other residential properties, the proposed annexation request appears to promote a reasonable balance between the promotion of the public health, safety, morality, or general welfare, and the right to unrestricted use of property.

- ***Staff Recommendation***

The Planning Division staff is recommending **approval** of this annexation request with **Residential-II (R-II)** zoning, based on the Comprehensive Land Use Plan and the adjacent residential land uses.



Applicant: **HELIODORA GALEAS DE BONILLA**

ANNEXATION REQUEST

Request:
Annex +/- 0.11 AC tract and establish zoning as Residential-II (R-II) for a single family home.

Subject Property Address:
1338 Harrison Dr.

Tax Parcel:
00-142-001-004

Subject Property

Meeting Date: 11/14/2023

Map Prepared: 10/04/2023

0 100 200 300 400 Feet

SCALE: 1 " = 200 '

N W E S

Applicant: **HELIODORA GALEAS DE BONILLA**

ANNEXATION REQUEST

Request:
Annex +/- 0.11 AC tract and establish zoning as Residential-II (R-II) for a single family home.

Subject Property Address:	Tax Parcel:
1338 Harrison Dr.	00-142-001-004

Subject Property

Aerial from 2021

Meeting Date: 11/14/2023

Map Prepared: 10/04/2023

0 100 200 300 400 Feet

SCALE: 1 " = 200 '

N W E S

1338 Harrison Drive Narrative

I would like to annex my 0.11± acre property with Residential-II (R-II) zoning. The property is currently zoned Residential-II (R-II) in Hall County and contains a single-family home with access on Harrison Drive. The existing septic system is failing and I am needing to tie onto City sewer which is located on Harrison Drive. There are no other proposed changes to the property at this time. Thank you for your consideration.

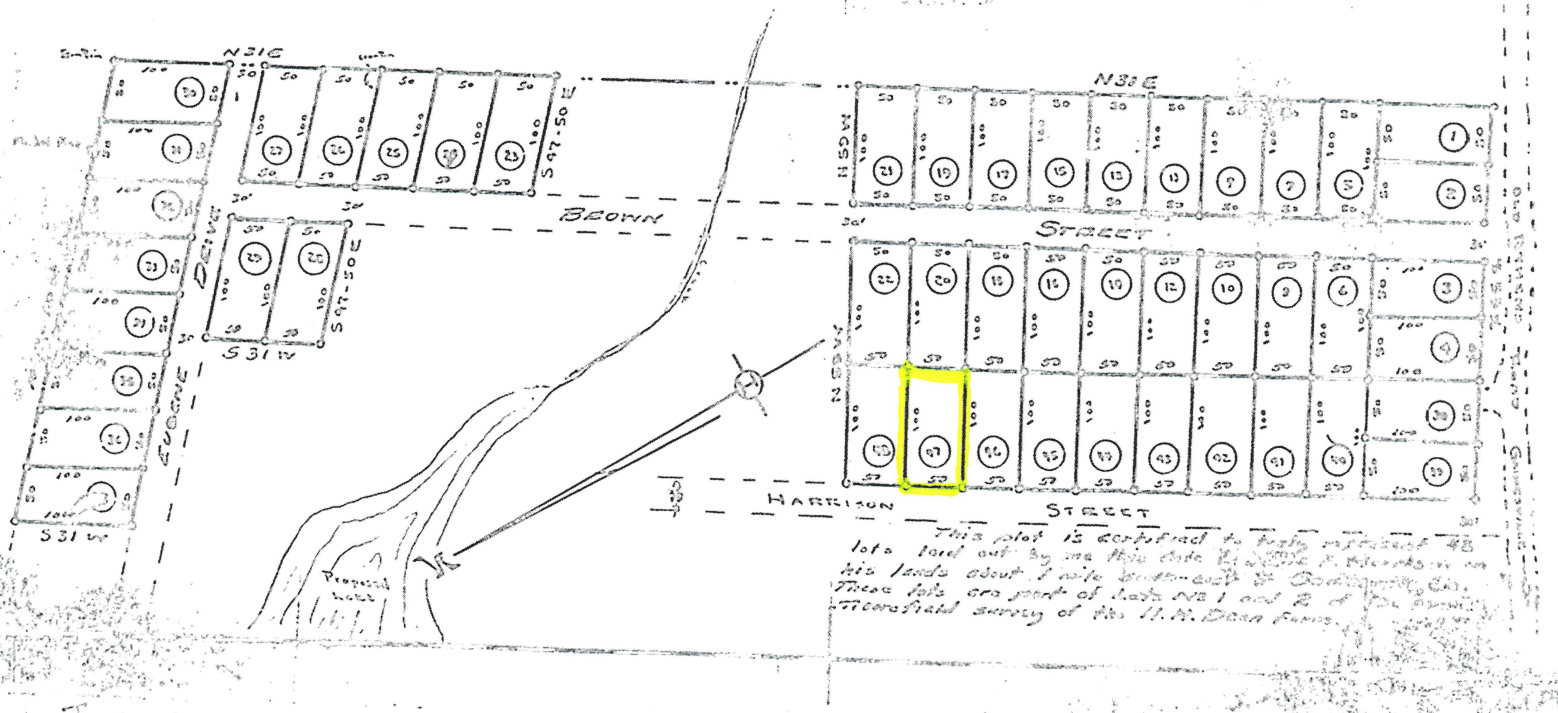
PLAT No 2

SUB-DIVISION OF LAND OF DOR. F. HARRISON

HALL COUNTY, GEORGIA

SCALE: 1 inch = 100 feet
DATE: August 26, 1949

GA. REG. LAND SURVEYOR 245



This plat is certified to be a correct map of 48 lots laid out by me this date [illegible] on his lands about 1 mile northeast of Gainesville, Ga. These lots are part of lots No 1 and 2 of the Greenfield survey of the H. N. Dean farm.

Recorded July 16, 1951

R. W. Smith, Clerk

CITY OF GAINESVILLE

Planning and Appeals Board Agenda Request

Item Created:	October 17, 2023
Date Submitted:	October 24, 2023
Final Approval Date:	October 25, 2023
Presenter:	Matt Tate, Community & Economic Development Dept Deputy Director
Item of Business:	Request from **Weekley Homes, LLC** to amend an existing Planned Unit Development (P-U-D) zoning on a 120.98± acres tract located on the northwest side of McEver Road, west of the intersection of McEver Road and Gould Drive (a/k/a **0 and 1300 Gould Drive, SW**).
Meeting Date:	November 14, 2023

Purpose of Request:
The proposed P-U-D zoning amendment is for a mixed-use development to be called Lanier Landing. The development will contain a total of 507 active adult residential units. Specifically, the units will consist of 147 single-family detached lots, 40 paired villas and 320 condominiums. The heated floor space of the single-family detached units and the paired villa units will be a minimum of 1,400 s.f. The condominium buildings will not exceed five/six stories. Amenities include clubhouses, resort-style swimming pool, lawns, pocket parks, pickleball courts, private boat docking and dry boat storage. A single access road is proposed from McEver Road which will be privately maintained and gated, as well as all interior roads. It is anticipated the project will be built-out over a period of 48 to 60 months.

The property consists of two tracts which touch Lake Lanier and are located within the Gateway Corridor Overlay Zone. An existing powerline easement traverses the larger tract and the property contains three tributaries. The adjacent properties include Societal CDMO, Inc. pharmaceutical company, Waters Edge subdivision, Cresswind subdivision, Pemmican Point subdivision, Midgard Self Storage and single-family homes in the County.

The subject property was approved in 1982 for a conference center and scientific retreat complex not to exceed 55,000 s.f. consisting of 64 guest rooms, auditorium, cafeteria, conference rooms, 3 swimming pools, 3 tennis courts, eight horse stables and a single-family caretaker residence and an unspecified number of private villas. The property has remained undeveloped.

Facts & Issues / History & Background:

Department Recommendation:
Planning staff recommended denial of this request. See the Staff Recommendation report for details.

Department Director:
Rusty Ligon

If funding is involved, are funds approved within the current budget? No

Amount Requested: **Sources of Funds:**

Finance Comments:

Administrative Comments:

Attachments:

1. Staff Recommendation Report
2. Location Maps
3. Narrative
4. Survey
5. Land Use Plan
6. Open Space Plan
7. Regional Activity Map
8. Project Detail Booklet
9. DRI Review Findings
10. David Weekley Homes Traffic Impact Study - 06-12-2023

GAINESVILLE PLANNING and APPEALS BOARD
STAFF RECOMMENDATION

Applicant.....Weekley Homes, LLC
Property Owner.....Societal CDMO Gainesville, LLC
Location.....0 and 1300 Gould Drive, SW
Request.....Amend P-U-D zoning
Size.....120.98± acres
Ward.....Four
Proposed Use.....Mixed-use development
Planning Division Staff Recommendation.....**Denial**
Date.....November 14, 2023

- ***Applicant's Proposal***

The proposal is for a mixed-use residential development consisting of 507 age restricted, active adult residential units known as "Lanier Landing". The proposed development is comprised of 147 single-family detached lots, 40 paired (duplex) villas and 320 attached condominiums at an overall density of 4.19 du/ac. It is anticipated the project will be built out over a period of 48 to 60 months over four phases. The first two phases will include infrastructure, roads, stormwater facilities, detached lots, paired villa lots and amenities. The last two phases include attached condominiums and walking trails. Phasing may overlap to include portions of the overall site as the detached homes and paired villas are being constructed.

The general design standards for each type of residential use are as follows:

Use	# of Units	Lot Size (Min)	Lot Widths	Unit Size (Min Heated Sq. Ft.)			Height (Stories)	Setbacks (Min)		
								Front	Side	Rear
Detached Homes	147	6,000 s.f.	50', 60', 80'	1,400			1 – 1 ½	20'	5'	15'
Paired Villas	40	6,000 s.f.	50', 60', 80'	1,400			1 – 1 ½	20'	5'	15'
Attached Condos	320	N/A	N/A	1-Bed	2-Bed	3-Bed	5 – 6	20'	10'	15'
				950	1,200	1,450				

The development includes 38.79± acres of open green space which consists of approximately 32% of the total acreage. The open space areas will include amenities, extensive walking paths, passive or active recreation and undisturbed areas. Part of the open space is to include a 50-foot wide perimeter buffer adjacent to the Waters Edge Subdivision and the Societal CDMO pharmaceutical property. Amenities include clubhouses, resort style swimming pool, lawns, pocket parks, pickleball courts, private boat docking and dry boat storage. A multi-slip dock is proposed within the cove between the subject property and the Cresswind at Lake Lanier subdivision which has not been approved by the Corps of Engineers.

Access to the site includes a single road from McEver Road which will be gated. The access road and all interior roads will be privately maintained. Minimum 4 foot wide sidewalks are proposed on at least one side of each residential road.

- ***Existing and Background Information***

The property consists of two parcels which have approximately 2 miles of property frontage along Lake Lanier. The larger of the two tracts fronts McEver Road for a distance 1,040± feet and is located within the Gateway Corridor Overlay Zone. The property is heavily wooded and contains three tributaries that flow into Lake Lanier as well as a Georgia powerline easement that traverses part of the property.

The property was rezoned in 1982 for a conference center and scientific retreat complex not to exceed 55,000 square feet in size, consisting of 64 guest rooms, auditorium, cafeteria, conference rooms, 3 swimming pools, 3 tennis courts, eight horse stables and a single-family caretaker residence and an unspecified number of private villas. The uses were intended to compliment the adjacent Elan Pharmaceutical (now Societal CDMO Pharmaceutical Company), but were never developed.

- ***Adjacent Land Use and Zoning***

Location	Use	Zoning
North	Pemmican Point Subdivision	Vacation Cottage (V-C) -County
South	Midgard Self Storage; Walmart Neighborhood Market center; Single-family home; Encounter Church	General Business (G-B) -City Regional Business (R-B) -City Agricultural Residential-III (AR-III) -County Residential-I (R-I) -County
East	Societal CDMO Pharmaceutical; Waters Edge Subdivision	Regional Business (R-B) -City Residential-I (R-I) -City
West	Cresswind at Lake Lanier; Mill Ridge Landing Subdivision	Planned Unit Development (PUD) -City Residential-I (R-I) -County

- ***Other Departmental Comments***

The Gainesville Fire Department states that all roads must be constructed to City standards not to exceed 10% grade for the fire apparatus road. Road widths could be subject to change as needed.

The request will require coordination with the Georgia Department of Transportation (GDOT). A driveway permt will be required for access on SR 53/ McEver Road.

The proposed development required a Development of Regional Impact (DRI #4011) study to be performed by the Georgia Mountains Regional Commission (GMRC). According to the study, the GMRC recommends that City work with the Gainesville Hall Metropolitan Planning Organization (GHMPO) and the Georgia Department of Transportation (GDOT) to review the proposed configuration of access and possible impacts to McEver Road and the intersection of McEver Road and Browns Bridge Road. The GMRC recommends that the optimal performance level for McEver Road would preclude the need of a traffic signal at the entrance to the proposed development. In addition, best environmental practices are encouraged regarding stormwater management upon compliance with State and local regulations.

There were no other departmental comments for the request.

- ***Traffic Study Summary***

A traffic impact study (TIS) was originally conducted for this development on June 12, 2023 for a development consisting of 29,750 square feet of commercial space and 591 residential units consisting of 38-single-family detached homes, 138 attached townhomes and 415 apartments that were not age restricted. The studied intersections included McEver Road at Browns Bridge Road (signalized); McEver Road and Midgard Self Storage Driveway/ Site driveway; McEver

Road at Gould Drive / Waters Edge Drive; and McEver Road at Spring Road/ Pemmican Run (signalized). Turning movement counts were collected on Wednesday, March 08, 2023. All turning movement counts were recorded during the AM and PM peak hours between 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM, respectively. The below table represents the anticipated project trip generation

	Total Trips	Inbound Trips	Outbound Trips
Daily	5,841	2,920	2,921
AM	318	84	234
PM	726	426	300

The results of future traffic operations analysis indicate that the signalized intersection of McEver Road and Browns Bridge Road will operate at LOS "E" (Poor) in the PM peak both in "No-Build" and "Build" conditions. Some of the stop controlled side street approaches will operate at levels-of-service of "F" (Very Poor) in both AM and PM peaks hours especially the northbound and southbound driveway approaches including the Gould Drive/ Waters Edge Road intersection at McEver Road and particularly at the Midgard Storage Driveway/ Site Driveway intersection experiencing long delays of over 300 seconds in the PM peak hour. However, the side street traffic volumes do not seem to meet warrants for installation of a traffic signal.

The following improvements are recommended and are limited to the site driveway on McEver Road which is aligned with the Midgard Self Storage driveway.

1. One entering and two exiting lanes at the site driveway.
2. Raised island for exiting right-turn lane at the site driveway.
3. Stop-sign controlled on the driveway approach with McEver Road remaining free flow.
4. Request removal of the existing "No U-Turn" sign at median and provide a Left-Turn Lane.
5. Right-Turn Lane for entering traffic at the site driveway.
6. Provide / Confirm adequate sight distance per AASHTO standards.
7. Perform Intersection Control Evaluation with Signal Warrant Analysis.

- ***Zoning History***

The following zoning actions have taken place in the immediate area during the last ten years:

2023 – A request by QuikTrip Corporation C/O Eric Bikas to amend a 2.86± acres tract located at 2925 Browns Bridge Road, SW zoned Planned Unit Development (P-U-D) was conditionally approved for a QuikTrip convenience store/gas station.

2023 - A request by Loan Donuts Holdings, LLC to rezone a 1.063± acres tract located at 2895 Browns Bridge Road, SW from Residential-I-A (R-I-A) Office and Institutional (O-I) to Neighborhood Business (N-B) was approved for a Dunkin Donuts restaurant.

2022 – A request by Jeff Arkema for a special use on a 1.77± acres tract located at 2888 Browns Bridge Road, SW was approved with conditional Office and Institutional (O-I) zoning for an automotive styling center.

2022 – A request by McKinley Homes US, LLC, for a special use on a 7.74± acres tract located at 2920 Florence Drive was approved with conditional Office and Institutional (O-I) zoning for 70 residential townhomes.

2021 – A request by Tidal Wave Auto Spa to amend a 7.76± acres tract located at 1440 McEver Road zoned Planned Unit Development (P-U-D) was conditionally approved for an express car was facility.

2021 - A request by Adventures Real Estate, LLC to rezone a 17.028± acres tract located at 2520 Browns Bridge Road from Residential-I-A (R-I-A) to General Business (G-B) was conditionally approved for an automotive related facility.

2021 – A request by Pamela Eagar to annex a 0.15± acre tract located at 2834 Browns Bridge Road with a zoning of General Business (G-B) was conditionally approved for no proposed use.

2020 – A request by CenterPoint Integrated Solutions to annex a 7.81± acres tract located at 2602 Browns Bridge Road with a zoning of General Business (G-B) was conditionally approved for a CarMax Auto Superstore.

2020 – A request by Gainesville City Board of Education to rezone a 16.67± acres tract located at 1263 and 1279 McEver Road, SW from Residential-I (R-I) to Office and Institutional (O-I) was conditionally approved for a new middle school.

2020 – A request by Gainesville City Board of Education to annex a 5.931± acres tract located at 2550 and 2560 Gould Drive with Office and Institutional (O-I) zoning with a special use was conditionally approved for a new middle school and existing single-family home.

2020 – A request by Mauricio Ortega to annex a 0.51± acre tract located at 23 Cherrywood Drive with Residential-I (R-I) zoning was approved for sewer for a single-family home.

2018 – A request by Tyler Land Holdings to amend a 2.98± acres tract located at 1209 and 1229 Hillside Gardens Lane zoned Planned Unit Development (P-U-D) was conditionally approved for a boat sales dealership.

2017 – A request by Pro Building Systems to annex a 0.516± acre tract located at 2431 S Smith Road was approved with conditional General Business (G-B) zoning for an auto collision center.

2017 – A request by Manor Lake Development, LLC for a special use on a 9.24± acres tract located at 2900 McEver Road was approved with conditional Office and Institutional (O-I) zoning for an assisted living facility.

2015 – A request by the Roman Catholic Archdiocese of Atlanta to amend a 14.233± acres tract located at 2436 S. Smith Road and zoned Planned Unit Development (P-U-D) was conditionally approved for a church.

2015 – A request by the Roman Catholic Archdiocese of Atlanta to amend and rezone a 4.899± acres tract located at 0 S Smith Road from Residential-I (R-I) to Planned Unit Development (P-U-D) was conditionally approved for a church.

2013 – A request by Foote & Miller Properties, LLC to annex a 2.72± acres tract located at 2420 Browns Bridge Road was approved with General Business (G-B) zoning for sewer for an existing auto dealership.

- ***Staff Analysis***

(1) Is the proposed use suitable in view of the zoning and development of adjacent and nearby property?

The property has remained a greenfield tract located at the western edge of the city limits next to Lake Lanier. Over 40 years ago the property was approved for a conference center to compliment the adjacent Elan Pharmaceutical (now Societal CDMO Pharmaceutical Company). Since that time, development along McEver Road extension from Browns Bridge Road and

Dawsonville Highway has consisted of a mixture of single-family and multi-family residential, institutional and limited commercial uses. The adjacent properties are zoned Residential-I (R-I), Vacation Cottage (V-C), Agriculture Residential-III (AR-III), Regional Business (R-B), General Business (G-B) and Planned Unit Development (P-U-D).

The adjacent Waters Edge, Cresswind at Lake Lanier and Pemmican Point subdivision are the most impacted by the proposal. While residential development is suitable for the subject property, it appears the proposal is inconsistent with the average density of the adjacent and nearby residential development fronting Lake Lanier.

Subdivision	Lots/Units	Total Acres	Residential Density
Beechwood Estates (City)	72	36.7±	1.96 du/ac
Cresswind at Lake Lanier (City)	950 (per zoning)	469.2±	2.02 du/ac
Lake Society-Ahaluna Drive (City)	770 (per zoning)	208.8	3.69 du/ac
Lost River Cove (City)	540 Condos (per zoning) 60 SF Lots (per zoning)	78.2±	7.67 du/ac
Mill Ridge Landing (County)	31	23.8±	1.32 du/ac
Pemmican Point (County)	17	19.6±	0.87 du/ac
Waters Edge (City)	90	52.8±	1.7 du/ac
Average Density			**2.75 du/ac**

(2) Will the proposed use adversely affect the existing use or usability of adjacent or nearby property?

The proposed development does not propose direct access to the adjacent properties. Additional traffic and turning movements will be generated by the proposal on McEver Road. The recommended improvements stated in the traffic study should help, but additional delays are anticipated at the side street approaches on McEver Road that are not signalized. The proposed height of the 5 to 6 story condominiums will visually impact the Waters Edge, Cresswind at Lake Lanier and Pemmican Point residential neighborhoods and would be uncharacteristic with the adjacent and nearby properties. In light of the adjacent development and topography of the property, it appears reducing the number of proposed units as well as the height of the proposed residential condominiums is reasonable. Potential environmental impacts to Lake Lanier are always a concern with lake side development. Stormwater measures and best management practices will be required for the development to protect the natural resources.

(3) Is the proposed use compatible with the purpose and intent of the Comprehensive Plan?

The Future Development Map for the City of Gainesville places the property within the *Parks, Recreation & Conservation* land use category which includes areas containing or planned for parks and recreation facilities, permanently designated open space, or conservation areas including buffers along waterways and other environmental features. The land use description has not changed for 40+ years due to the property having a site specific zoning for a conference retreat center with passive and active green space.

According to the Character Area map for the City of Gainesville, the subject property is located within the *Suburban Neighborhood* Character Area. The vision for this area is to preserve older, stable residential subdivisions and encourage newer projects with smaller lot sizes, pedestrian infrastructure, and buildings patterned after traditional local housing, possibly containing a small neighborhood-serving “village center”. Neighborhood-scale businesses are prioritized that can serve local residents. Future population growth should be balanced between new development and infill areas. Housing choices should be diverse to support a range of household incomes, lifestyles, sizes and types, but consist mostly of single-family detached lots.

Land uses allowed in the *Suburban Neighborhood Character Area* include parks and recreation, single-family residential, limited multi-family residential, limited general mixed-use, limited commercial (retail and office), public and institutional.

It is staff's opinion that the proposed development would be more consistent with the *Suburban Neighborhood Character Area* if proposed at a lower density consisting of mostly single-family detached lots.

(4) Are there substantial reasons why the property cannot or should not be used as currently zoned?

The subject property is currently zoned P-U-D for a conference center and scientific retreat complex not to exceed 55,000 square feet in size, consisting of 64 guest rooms, auditorium, cafeteria, conference rooms, 3 swimming pools, 3 tennis courts, eight horse stables and a single-family caretaker residence and an unspecified number of private villas. A different use requires the P-U-D zoning to be amended or the property to be rezoned entirely. The proposed P-U-D amendment is a site-specific zoning that assures the developer will adhere to the proposed development quality and standards as presented by the applicant and any associated zoning conditions.

(5) Will the proposed use cause an excessive or burdensome use of public facilities or services, including but not limited to streets, schools, water or sewer utilities, and police or fire protection?

City water and sewer is available and capacity is sufficient to serve the proposed development.

Existing public safety services currently respond to the adjacent properties. Gainesville Fire Station #4 is located off of Memorial Park Drive which is approximately 2.2± miles from the subject property. Hall County Fire Station #4 is 0.8 mile south of the property off of McEver Road.

According to the Institute of Transportation Engineers (ITE) Trip Generation Handbook (9th Edition), the proposed age restricted detached homes, paired villas and condominiums will generate a combined 1,789 weekday trips (50% entering, 50% exiting), 176 A.M. peak hour trips (43% entering, 57% exiting), and 176 P.M. peak hour trips (56% entering, 44% exiting).

The traffic impact study was based on a more intense proposal that included a total of 591 residential units and 29,750 square feet of commercial space. The current proposal is an age-restricted community consisting of 507 residential units and no commercial space. Site distance appears to be sufficient for the proposed McEver Road access but coordination will be required with GDOT for necessary improvements which are identified in the Traffic Study. The results of the future traffic operations analysis indicate that the studied non-signalized intersections at McEver Road will operate with significant delays.

The proposed use is designed as an age-restricted community which should have minimal to no impact on the Gainesville City School System. The applicant estimates the development will have less than 25 resident school age children.

(6) Is the proposed use supported by new or changing conditions not anticipated by the Comprehensive Plan or reflected in the existing zoning on the property or surrounding properties?

Properties fronting McEver Road include a mixture of residential and commercial due to the nearby Dawsonville Highway and Browns Bridge Road commercial corridors. Properties fronting Lake Lanier have remained mostly single-family residential in nature at lower densities. The mixture of residential housing proposed may be suitable with a reduction in density and reducing the height of the proposed condominiums to no more than 3 stories.

(7) Does the proposed use reflect a reasonable balance between the promotion of the public health, safety, morality, or general welfare and the right to unrestricted use of property?

Based on the Comprehensive Plan and the adjacent single-family detached residential uses, it appears the proposal as presented does not reflect a reasonable balance between the promotion of the public health, safety, morality, or general welfare and the right to unrestricted use of property, with the recommended zoning conditions.

- ***Decisions Involving Constitutional Challenges***

The applicant has filed a constitutional objection with this zoning amendment request. In addition to the above Staff Analysis, the governing body shall pay particular attention to the following criteria in relation to this zoning amendment request:

(1) Existing uses and zoning of the subject and nearby property;

(2) The extent to which property values are diminished by the particular zoning restrictions;

(3) The extent to which the destruction of property values, if any, promotes the health, safety, morals or general welfare of the public;

(4) The relative gain to the public, as compared to the hardship, if any, imposed upon the individual property owner;

(5) The suitability of subject property for zoned purposes;

(6) The length of time the property, if vacant, has been vacant as zoned considered in the context of land development in the areas and the vicinity of the property.

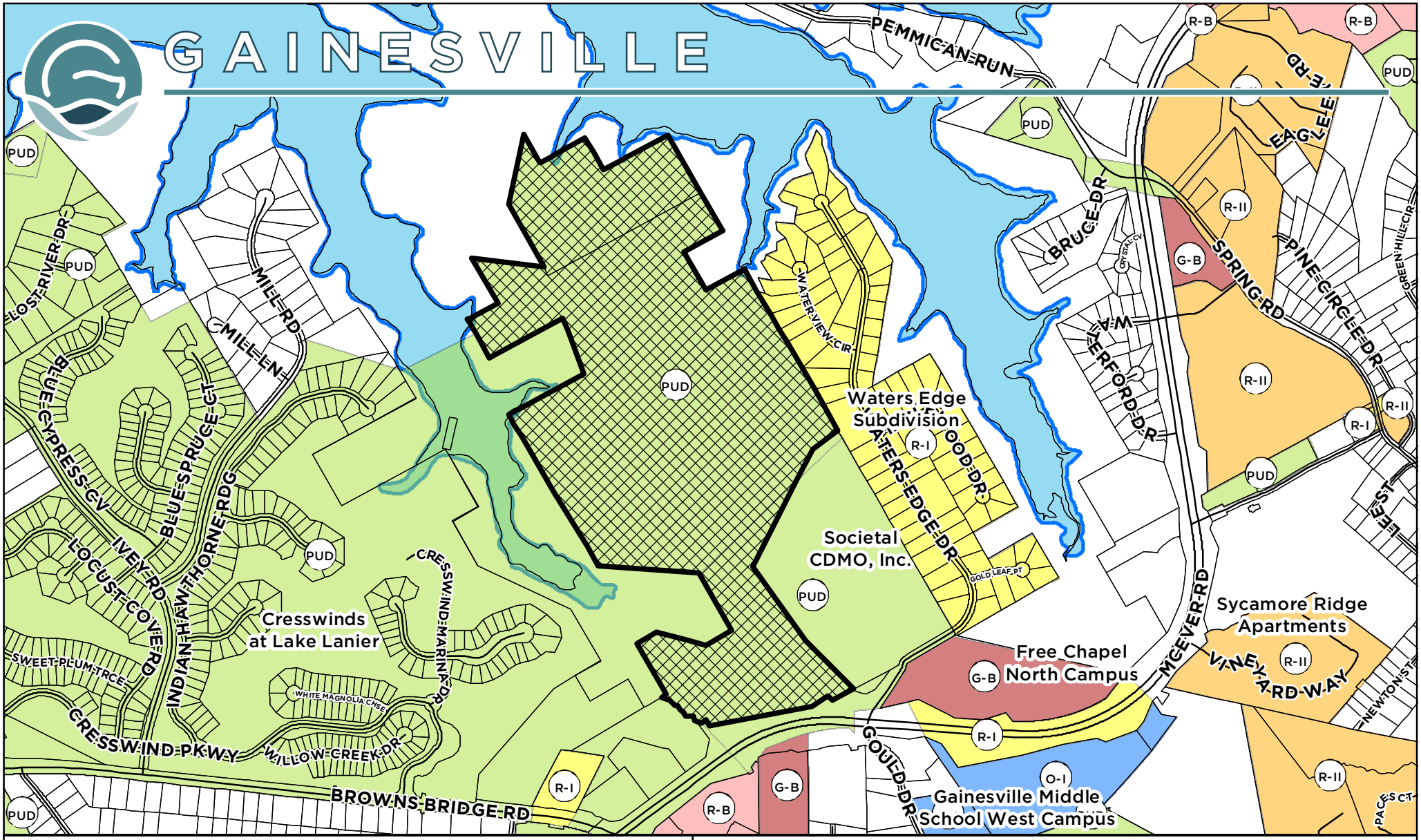
- ***Staff Recommendation***

The Planning Division staff is recommending **denial** of this Planned Unit Development (P-U-D) zoning amendment request, based on the Comprehensive Plan and the adjacent and nearby residential uses. However, if consideration is given to approve this request, Staff would recommend the following zoning conditions.

Conditions

1. **The development standards within the applicant's narrative, concept plans, zoning booklet and architectural renderings shall be made part of the zoning ordinance, and shall be subject to the Community Development Director approval. Any zoning conditions adopted as part of this zoning ordinance that conflict with these documents shall take precedence over the applicant's development standards.**
2. **The proposal shall not to exceed 333 age-restricted units (2.75 du/ac). The unit mix shall allow for no more than 100 condominium units and 40 paired villas. The number of detached residential homes shall not be limited so as the total number of all residential units combined do not exceed 333 age-restricted units.**
3. **The development shall comply with applicable U. S. Department of Housing and Urban Development (HUD) rules for age-restricted communities. The organization established for the management of the development shall comply with HUD rules for verification of occupancy and shall maintain procedures for routinely determining the occupancy of each unit. Such procedures may be part of a normal leasing or purchasing agreement and must provide for regular updates as required by HUD.**

4. **A mandatory Homeowners Association (HOA) or multiple associations shall be required for the proposed development providing for the financial management, architectural controls, enforcement of community standards and management of all common areas. Any modifications or new construction within the community must be approved by the Architectural Review Board. The Board will be established and operated by the developer until such time the powers are transferred to the HOA(s). A covenant shall be required to be recorded for the proposed development stating that no more than 20% of the total residential units may be rented between all condominiums, detached and attached residential products.**
5. **The condominium buildings shall not exceed 3 stories in height as measured from the lowest elevation.**
6. **The proposed 50-foot wide perimeter buffer adjacent to the Waters Edge subdivision shall be remain undisturbed. A mixture of evergreen Cryptomeria, Arborvitae and Eastern Red Cedar trees shall be planted along the western edge of the perimeter buffer adjacent to the proposed single-family detached lots. The minimum height of the trees shall be 10 feet. The location, spacing, size and type of trees planted shall be subject to the approval of the Community and Economic Development Department Director.**
7. **The right-of-way fronting McEver Road shall be landscaped and maintained subject to the approval of the Community & Economic Development Director.**
8. **All access point design for the subject property shall require review and approval by the Gainesville Public Works Department Director and the Georgia Department of Transportation (GDOT). All required access/traffic/sidewalk improvements associated with the proposed development or any additional improvements identified within the Traffic Impact Study shall be at the full expense of the developer/property owner.**
9. **All proposed roads shall meet City standards. Sidewalks shall be provided on both sides of all roads and drive aisles/parking areas at a minimum width of 5-feet. The sidewalks shall extend and connect to the existing sidewalk network on McEver Road.**
10. **All service areas, loading areas, ground or roof top HVAC equipment shall be screened from view from all adjacent uses, roads and Lake Lanier.**
11. **Outdoor lighting used in this development shall be of non-spill design and placed in a manner so as to minimize direct visibility by the adjacent properties.**
12. **A uniform sign plan shall be required for the proposed development subject to the approval of the Community and Economic Development Department Director.**



Applicant: **WEEKLEY HOMES, LLC.**

ZONING AMENDMENT REQUEST

Request:
Amend Planned Unit Development (P-U-D) zoning conditions on +/- 120.98 AC tract for a mixed-use development

Subject Property Address:
1300 Gould Drive
0 Gould Drive

Tax Parcel:
08-016-002-001A
08-017-000-001

Subject Property

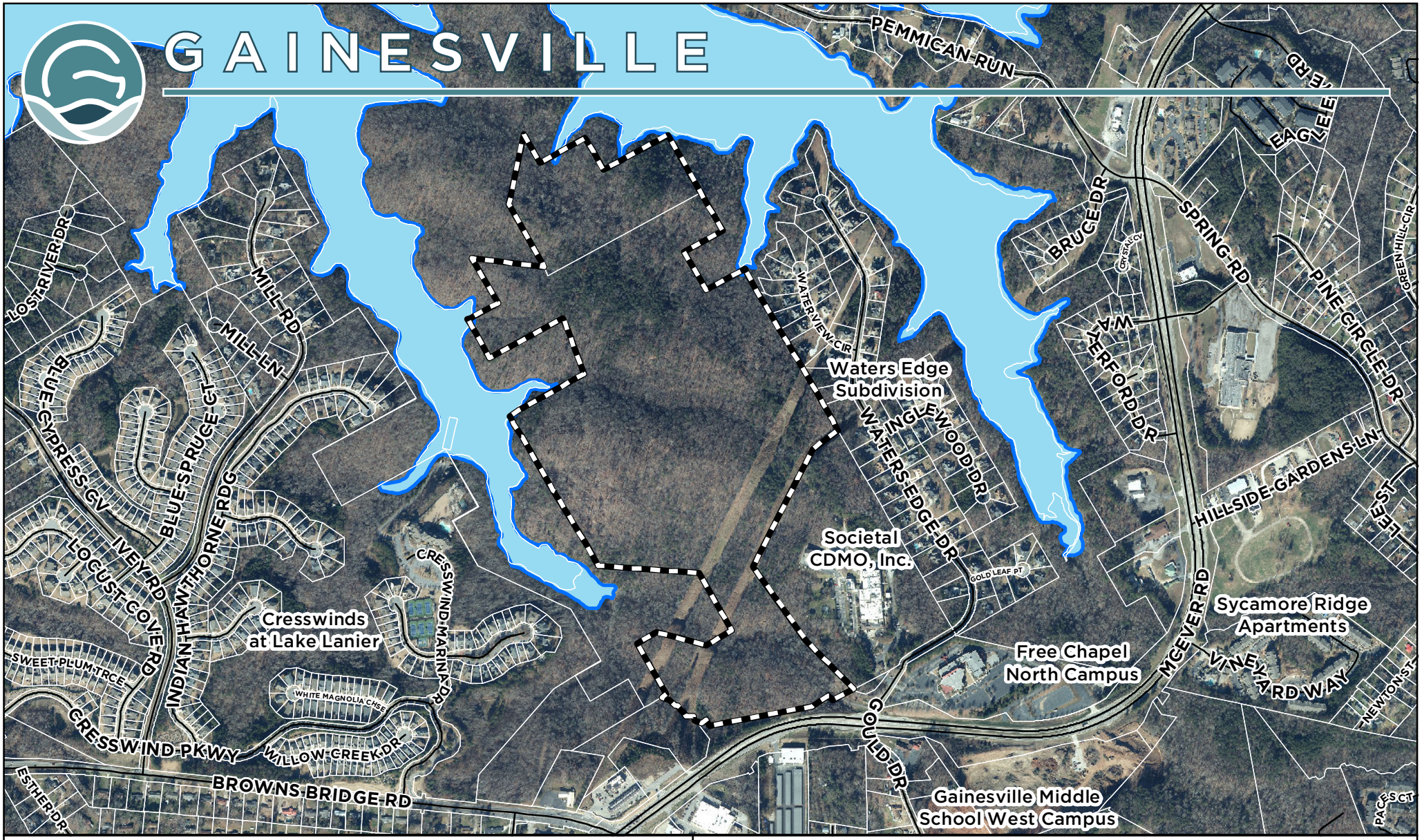
Meeting Date: 11/14/2023

Map Prepared: 10/16/2023

0 450 900 1,350 1,800 Feet

SCALE: 1 " = 900 '

N W E S



Applicant: **WEEKLEY HOMES, LLC.**

ZONING AMENDMENT REQUEST

Request:
Amend Planned Unit Development (P-U-D) zoning conditions on +/- 120.98 AC tract for a mixed-use development

Subject Property Address:
1300 Gould Drive
0 Gould Drive

Tax Parcel:
08-016-002-001A
08-017-000-001

Subject Property

Aerial from 2021

Meeting Date: 11/14/2023

Map Prepared: 10/16/2023

0 450 900 1,350 1,800 Feet

SCALE: 1 " = 900 '

N W E S

Miles Hansford, LLC
ATTORNEYS AT LAW

202 Tribble Gap Road · Suite 200 · Cumming, GA 30040
178 S Main Street · Suite 310 · Alpharetta, GA 30009
Phone 770.781.4100

MilesHansford.com

J. Ethan Underwood
eunderwood@MilesHansford.com

REVISED 2023-10-11

NARRATIVE REPORT, LAND USES AND DEVELOPMENT SUMMARY, IMPROVEMENT REQUIREMENTS COMPARISON, AND COMMUNITY BENEFIT STATEMENT FOR ZONING APPLICATION

Applicant:	**Weekley Homes, LLC**
Subject Property:	**120.98 Acres Designated as Hall County Tax Parcel(s): 08016 002001A & 08017 000001**
Current Zoning:	**PUD – Planned Unit Development**
Proposed Zoning:	**PUD – Planned Unit Development**
Proposed Use:	**Mixed Use Development consisting of:** • **147 Single-Family Detached Dwellings** • **40 Single-Family Attached (Paired Villas)** • **320 Multi-Family Dwellings (Condominiums)** • **Amenity Areas, clubhouse(s), and private docks & boat storage**
Application:	**Rezoning & Zoning Amendment**
ROW Access:	**McEver Road**
Governing Jurisdiction:	**City of Gainesville**

This statement is intended to comply with the application procedures established by The City of Gainesville, GA for submittal of applications for annexation as required by the City of Gainesville Unified Land Development Code (the "ULDC"), City of Gainesville Public Hearing Application Requirements, and other City of Gainesville Ordinances and Standards and is intended to serve as the Narrative Report required by the ULDC. As part of this Narrative Report, the Applicant asserts the statements contained in the Application for Zoning Actions package, submitted herewith incorporated herein by reference, and as may be amended (the "Application"), describing justification for the requested zoning and for any request of variances, in any, as if such were fully stated herein.

The Applicant proposes to zone a total of 120.98 acres located within the City of Gainesville.

I. Land Uses and Development Summary

The Applicant proposes to develop the Proposed Use on the Subject Property, consisting of the following:

- **147 Single-Family Detached Dwellings**
- **40 Single-Family Attached (Paired Villas)**
- **320 Multi-Family Dwellings (Condominiums)**
- **Amenity Areas, clubhouse(s), private docks, and boat storage**

***The Applicant reserves the right to combine the amenity clubhouses into a single structure.**

***The Applicant also reserves the right to convert the condominium units into Single-Family Detached or Single-Family Attached units. The Applicant intends to construct condominiums but if it determines the market is more favorable for Single-Family Detached or Single-Family Attached units, the Applicant reserves its ability to build such within the Condominium Zone in keeping with the size and design of those housing types provided for in the Conceptual Master Plan. Any conversion of condominium units to Single-Family Detached or Single-Family Attached units would not allow for an increase in the aggregate number units beyond a maximum of 507 units.**

The Subject Property is located on a peninsula on Lake Sidney Lanier, which it shares along its eastern boundary with residential dwellings in Waters Edge Subdivision (Zoned R-I). To the Subject Property's west is Cresswind Subdivision (zoned PUD) and Mill Ridge Landing Subdivision (zoned V-C in unincorporated Hall County).

The Proposed Use is consistent with the intent of the Comprehensive Plan. The Subject Property is located in the Suburban Neighborhoods Character Area of the Gainesville 2040 Comprehensive Plan, which states, "The vision for these areas is to preserve older, stable residential subdivisions and encourage newer projects with smaller lot sizes, pedestrian infrastructure to promote connectivity, and buildings patterned after the more traditional homes near the center of the city, and contain a small neighborhood-serving 'village center.'" 2040 Comp. Plan, p. 198. Appropriate land uses and development types in this Character Area are:

- Parks and recreation;
- Single-family residential;
- Limited multi-family residential;
- Limited general mixed-use;
- Limited commercial (retail and office)

The Proposed Use will facilitate all of these uses and development types utilizing the PUD zoning district, which is listed as an appropriate zoning district under the 2040 Comprehensive Plan. *Id.* At 201 .

Thought the Subject Property is designated as "Park Conservation Recreation" on the Future Land Use Map, it is currently zoned PUD and contains a pharmaceutical manufacturing facility adjacent to the portion of that tract that is subject to this Application. **The Governing Jurisdiction has no plan or intention to acquire the property as a public park.** To accomplish the Proposed Use, the Applicant proposes to amend the existing PUD zoning.

A. Zoning and Land Use

The Applicant proposed to amend the Current Zoning, which is PUD. The Applicant proposes to subject the Subject Property to the land uses and performance standards depicted on the Concept Plan and the Conceptual Master Plan, submitted concurrently with the Application and incorporated herein by reference.

B. Proposed Construction Phasing Schedule

Construction will occur over approximately 60 months. Upon issuance of Land Disturbance Permit, the Applicant anticipates the project will be developed within 12 months thereafter, and houses to be constructed over the following 36 months.

The Applicant estimates there will be on average **1.8 occupants per unit**. Assuming this to be the case, the Applicant expects the population of the new development to be as follows:

Projected Subdivision Population			
Year	New Houses	Total New Households	Population of New Homes
1	0	0	0
2	126	126	227
3	127	253	456
4	127	380	684
5	127	507	913

C. Traffic Impact Analysis

The Applicant also submits with this Narrative Report, and incorporates herein, a Trip Generation Report and Traffic Study Network Determination.

Permanent access to the development will be from the ROW Access. All of the development's interior streets and driveways will be publicly-owned and maintained. However, such interior streets may be privately-owned and/or gated, at the election of the property owner.

Traffic generated from the development will be minimal and the entrance will be at a location where sight distance is sufficient. All curb cuts shall be coordinated and approved by the City of Gainesville and GDOT and acceleration and deceleration lanes will be installed as required. All streets within the development will be constructed to conform to standard requirements. Parking will be provided onsite as required by the ULDC.

D. School System

The Table below estimates the number of school children expected to be generated by the project, based upon the ratio of the estimated number of school children in the Governing Jurisdiction (8,022) to the estimated number of households in the Governing Jurisdiction (14,619), then multiplying the quotient by the number of residential units in the Proposed Use. This factor is calculated to be 0.55 students per household.

Projected Student Population Impact: After calculating the first year add that amount to each year thereafter	
Year	Total
1	0
2	70
3	140
4	209
5	279

The numbers above are a planning factor used to project total student population and plan the need for new school facilities. However, the actual number of students who live in the proposed development may be more or less than the factor above, because the method of calculation uses a total number households citywide, with some households containing more than the average number of children and others comprised of zero children. **As this development will be an active adult community, it is estimated this development will have less than 25 resident school age children.**

E. Utilities

With regard to public utilities, water, sanitary sewer, electricity, and cable are available to the site. The development's water and sewer needs will be served by the City of Gainesville. The Applicant will install underground utility lines within the development to serve the project on an as-needed basis.

F. Environmental Impact

The project should also have a minimal impact on the environment. There should be no impact on air quality. Drainage, soil erosion, and sedimentation controls will be extensively utilized on the site after obtaining all required approvals from the Soil Conservation Service and the City of Gainesville. Best management practices will be utilized to protect natural resources. The Applicant will submit plans detailing the development for approval by all applicable and appropriate governmental agencies, based on conformity with subdivision and zoning requirements, as well as other applicable ordinances, statutes, and regulations.

II. Improvement Requirements Comparison

	City Standards	Proposed Standards
ROW Widths	50 feet	50 feet
Pavement Widths	24 feet	24 feet
Sidewalk Width	4 feet	4 feet
Sidewalk Location	Both sides of each residential street.	At least 1 side of each residential street.

III. Community Benefit Statement

The community will benefit from the Proposed Use, which will provide high quality housing, improved fire service, and recreational benefits to the community. The Proposed Use will have little impact on school attendance, as most age-target units will not house school-aged children. Residents of age-target housing also tend to drive less and, when they do, they drive during off-peak hours, thereby lessening the impact on community traffic.

The Proposed Use will provide quality architectural designs, and extend utility services to areas currently unserved by water and sewer. The access design will mitigate the potential traffic impact to Gould Drive.

CONCLUSION

Approval of the Application will be in the best interest of the City. The Applicant respectfully requests that the Application, as requested by the Applicant, be approved. The Applicant also reserves the right to amend this statement and the Application by supplementing further responses and documents.

RESERVED FOR PLAT FILING

CLOSURE STATEMENT

THE FIELD DATA UPON WHICH THIS PLAT IS BASED HAS AN ANGULAR ERROR OF 2 SECONDS PER ANGLE POINT AND A PRECISION RATIO OF 1 IN 73,072. IT HAS BEEN ADJUSTED USING THE COMPASS RULE.

THE DATA SHOWN ON THIS PLAT HAS A CLOSURE PRECISION RATIO OF 1 IN 1,274,992.

GENERAL NOTES

EQUIPMENT USED TO OBTAIN THESE MEASUREMENTS WAS A TRIMBLE S3 TOTAL STATION.

BEARINGS ARE CALCULATED FROM ANGLES TURNED FROM A SINGLE GRID BASELINE.

THE DATUM FOR THIS SITE WAS ESTABLISHED UTILIZING GLOBAL POSITIONING SYSTEMS AND BASED ON POSITIONAL VALUES FOR THE VIRTUAL REFERENCE STATION NETWORK DEVELOPED BY eGPS SOLUTIONS. THE HORIZONTAL REFERENCE FRAME IS NORTH AMERICAN DATUM OF 1983(HARN)-STATE PLANE COORDINATE SYSTEM OF GEORGIA-WEST ZONE. THE VERTICAL REFERENCE FRAME IS NORTH AMERICAN VERTICAL DATUM OF 1988. ANY DIRECTIONS OR DIMENSIONS SHOWN ARE A RECTANGULAR, GROUND LEVEL PROJECTION OF THE STATE PLANE COORDINATE SYSTEM.

DATE OF INITIAL FIELD WORK: 07.14.2022
DATE OF SUBSEQUENT SITE INSPECTION: 10.21.2022

ALL IRON PINS SET ARE 1/2" REBARS CAPPED WITH "GUNNIN LSF 1033" UNLESS OTHERWISE NOTED.

BY GRAPHIC PLOTTING ONLY, PORTIONS OF THIS SITE ARE SHOWN TO BE WITHIN THE LIMITS OF A 100 YR. FLOOD HAZARD AREA, LABELED AS "ZONE A", AS PER F.I.R.M. HALL COUNTY, GEORGIA AND INCORPORATED AREAS, COMMUNITY PANEL NUMBER(S) 13139C0170G AND 13139C0186G, DATED 4/4/2018.

THE SURVEY AND PLAT SHOWN HEREON IS NOT INTENDED FOR USE OR RELIANCE BY ANY PARTIES OR ENTITIES NOT SPECIFICALLY LISTED IN THE TITLE. UNAUTHORIZED THIRD PARTIES SHALL INDEMNIFY AND HOLD GUNNIN LAND SURVEYING, LLC HARMLESS AGAINST ANY AND ALL LIABILITY FOR ANY LOSS ARISING OUT OF, OR RELATED TO, RELIANCE BY ANY THIRD PARTY ON ANY WORK PERFORMED THEREUNDER, OR THE CONTENTS OF THE SURVEY.

ABOVE GROUND UTILITY LOCATIONS WERE OBTAINED FROM FIELD OBSERVATIONS. UNDERGROUND UTILITIES WERE NOT LOCATED AS PART OF THIS SURVEY. THE INFORMATION SHOWN ON THIS DRAWING CONCERNING UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE OWNER, ARCHITECT, CONTRACTOR AND THEIR AGENTS ARE RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO THE ACTUAL SIZE, TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

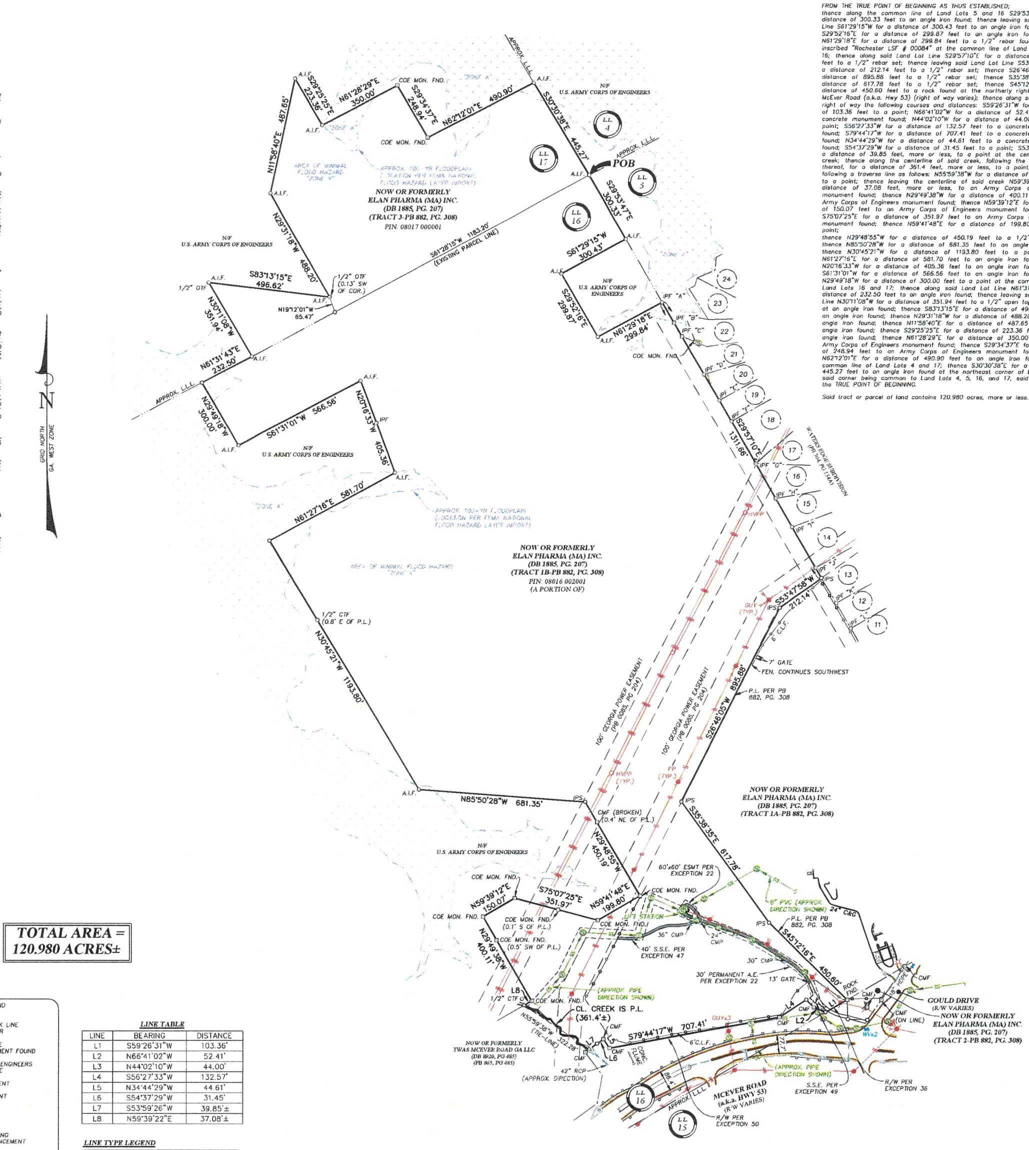
SOME IMPROVEMENTS WITHIN SITE SUCH AS INTERIOR FENCES, BUILDINGS, CREEKS, WETLANDS, AND UTILITIES MAY NOT BE SHOWN AS PART OF THIS SURVEY.

SANITARY SEWER PIPES SHOWN HEREON PER HALL COUNTY GEOGRAPHIC INFORMATION SYSTEMS. LOCATION OF SAID PIPES ARE CONSIDERED TO BE APPROXIMATE AND DO NOT CONSTITUE AS AN AS-BUILT SURVEY.

SITE ADDRESS IS LISTED AS:
GOULD DRIVE
GAINESVILLE, GA 30504

THE CURRENT PARCEL IDENTIFICATION NUMBER(S) ARE 08016 002001(A PORTION OF) & 08017 000001.

THERE WAS NO EVIDENCE OF RECENT SUBSTANTIAL EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS OBSERVED (ON THE SURVEYED TRACTS) IN THE PROCESS OF CONDUCTING THE FIELDWORK. (TABLE A, ITEM 16)



TOTAL AREA = 120.980 ACRES±

SYMBOL LEGEND

1/2" REBAR FOUND
1/2" REBAR SET
RIGHT-OF-WAY MONUMENT FOUND
ADJOINING LOT NUMBER
LOT NUMBER
LAND LOT NUMBER
AIR CONDITIONING UNIT
BENCHMARK
BOLLARD
HANDICAP PARKING SPOT
SIGN
MANHOLE - UNKNOWN TYPE
HANDHOLE
CABLE TV BOX
CABLE TV MANHOLE
CABLE TV PEDESTAL
ELECTRIC BOX
ELECTRIC MANHOLE
ELECTRIC METER
ELECTRIC PEDESTAL
GUY WIRE AND ANCHOR
GUY POLE
LIGHT POLE (LP)
POWER POLE (PP)
SERVICE POLE
HIGH VOLTAGE POWER POLE (HVPP)
TRANSFORMER
GAS MANHOLE
GAS VALVE
GAS METER
SANITARY SEWER CLEAN OUT
SANITARY SEWER MANHOLE
STORM SEWER CLEAN OUT
DOUBLE WING CATCH BASIN
SINGLE WING CATCH BASIN
CURB INLET
DROP INLET
FLARED END SECTION
HEADWALL
JUNCTION BOX
WEIR INLET
YARD INLET
TELEPHONE BOX
TELEPHONE MANHOLE
TELEPHONE PEDESTAL
PEDESTRIAN SIGNAL POLE
TRAFFIC SIGNAL BOX
TRAFFIC SIGNAL POLE
FIRE DEPARTMENT CONNECTION
FIRE HYDRANT
IRRIGATION CONTROL VALVE
POST INDICATOR VALVE
WATER MANHOLE
WATER METER
WATER VALVE
WATER VAULT
TREE

ABBREVIATIONS

A.I.F.	ANGLE IRON FOUND
BC	BACK OF CURB
BL	BUILDING LINE
BSL	BUILDING SETBACK LINE
C&G	CURB AND GUTTER
C.L.	CENTERLINE
C.L.F.	CHAIN LINK FENCE
CMF	CONCRETE MONUMENT FOUND
CONC.	CONCRETE
COE	ARMY CORPS OF ENGINEERS
CTP	CRIMPED TOP PIPE
DB	DEED BOOK
D.E.	DRAINAGE EASEMENT
EX.	EXISTING
EP	EDGE OF PAVEMENT
FEN.	FENCE
L.L.L.	LAND LOT LINE
OTP	OPEN TOP PIPE
PB	PLAT BOOK
PG.	PAGE
POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
PROP.	PROPOSED
R/W	RIGHT OF WAY
SS	SANITARY SEWER
S.S.E.	SANITARY SEWER EASEMENT
P.L.	PROPERTY LINE
SSMH	SANITARY SEWER MANHOLE
U.E.	UTILITY EASEMENT
CI	CURB INLET
DI	DROP INLET
DWCB	DOUBLE WING CATCH BASIN
FES	FLARED END SECTION
HW	HEADWALL
JB	JUNCTION BOX
OCS	OUTLET CONTROL STRUCTURE
SWCB	SINGLE WING CATCH BASIN
WI	WEIR INLET
YI	YARD INLET
CMP	CORRUGATED METAL PIPE
DIP	DUCTILE IRON PIPE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
PVC	POLYVINYL CHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE

LINE TABLE

LINE	BEARING	DISTANCE
L1	S59°26'31"W	103.36'
L2	N66°41'02"W	52.41'
L3	N44°02'10"W	44.00'
L4	S56°27'33"W	132.57'
L5	N34°44'29"W	44.61'
L6	S54°37'29"W	31.45'
L7	S53°59'26"W	39.85'±
L8	N59°39'22"E	37.08'±

LINE TYPE LEGEND

ADJOINING PROPERTY LINE
RIGHT-OF-WAY CENTERLINE
CREEK CENTERLINE
LAND LOT LINE
METAL FENCE
WIRE FENCE
WOOD FENCE
GUARDRAIL
RAILROAD TRACK
OVERHEAD UTILITY LINE
UNDERGROUND CABLE TV LINE
UNDERGROUND ELECTRIC LINE
UNDERGROUND FIBER OPTIC LINE
UNDERGROUND GAS PIPE
UNDERGROUND SANITARY SEWER PIPE
UNDERGROUND STORM SEWER PIPE
UNDERGROUND STREET LIGHTING LINE
UNDERGROUND TELEPHONE LINE
TRAFFIC LINE
UNDERGROUND WATER PIPE

1" = 200'
SCALE IN FEET

WRITTEN DESCRIPTION

All that tract or parcel of land lying and being in Land Lots 16 and 17 of the 8th District, City of Gainesville, Hall County, Georgia, and being more particularly described as follows:

TO FIND THE TRUE POINT OF BEGINNING, COMMENCE at an angle iron found at the northeast corner of Land Lot 16, said corner being common to Land Lots 4, 5, 16, and 17, said point being the TRUE POINT OF BEGINNING.

FROM THE TRUE POINT OF BEGINNING AS THUS ESTABLISHED;
thence along the common line of Land Lots 5 and 16 S29°53'47"E for a distance of 300.33 feet to an angle iron found; thence leaving said Land Lot Line S61°29'15"W for a distance of 300.43 feet to an angle iron found; thence S29°52'16"E for a distance of 299.87 feet to an angle iron found; thence N61°29'18"E for a distance of 299.84 feet to a 1/2" rebar found with cap inscribed "Rochester LSF # 00084" at the common line of Land Lots 5 and 16; thence along said Land Lot Line S29°57'10"E for a distance of 1311.66 feet to a 1/2" rebar set; thence leaving said Land Lot Line S53°47'58"W for a distance of 212.14 feet to a 1/2" rebar set; thence S26°46'05"W for a distance of 895.88 feet to a 1/2" rebar set; thence S35°38'35"E for a distance of 617.78 feet to a 1/2" rebar set; thence S45°12'16"E for a distance of 450.60 feet to a rock found at the northerly right of way of McEver Road (a.k.a. Hwy 53) (right of way varies); thence along said northerly right of way the following courses and distances: S59°26'31"W for a distance of 103.36 feet to a point; N66°41'02"W for a distance of 52.41 feet to a concrete monument found; N44°02'10"W for a distance of 44.00 feet to a point; S56°27'33"W for a distance of 132.57 feet to a concrete monument found; S79°44'17"W for a distance of 707.41 feet to a concrete monument found; N34°44'29"W for a distance of 44.61 feet to a concrete monument found; S54°37'29"W for a distance of 31.45 feet to a point; S53°59'26"W for a distance of 39.85 feet, more or less, to a point at the centerline of a creek; thence along the centerline of said creek, following the meanderings thereof, for a distance of 361.4 feet, more or less, to a point, said creek following a traverse line as follows: N55°59'38"W for a distance of 322.28 feet to a point; thence leaving the centerline of said creek N59°39'22"E for a distance of 37.08 feet, more or less, to an Army Corps of Engineers monument found; thence N29°49'38"W for a distance of 400.11 feet to an Army Corps of Engineers monument found; thence N59°39'12"E for a distance of 150.07 feet to an Army Corps of Engineers monument found; thence S75°07'25"E for a distance of 351.97 feet to an Army Corps of Engineers monument found; thence N59°41'48"E for a distance of 199.80 feet to a point;
thence N29°48'55"W for a distance of 450.19 feet to a 1/2" rebar set; thence N85°50'28"W for a distance of 681.35 feet to an angle iron found; thence N30°45'21"W for a distance of 1193.80 feet to a point; thence N61°27'16"E for a distance of 581.70 feet to an angle iron found; thence N20°16'33"W for a distance of 405.36 feet to an angle iron found; thence S61°31'01"W for a distance of 566.56 feet to an angle iron found; thence N29°49'18"W for a distance of 300.00 feet to a point at the common line of Land Lots 16 and 17; thence along said Land Lot Line N61°31'43"E for a distance of 232.50 feet to an angle iron found; thence leaving said Land Lot Line N30°11'08"W for a distance of 351.94 feet to a 1/2" open top pipe found at an angle iron found; thence S83°13'15"E for a distance of 496.62 feet to an angle iron found; thence N29°31'18"W for a distance of 488.20 feet to an angle iron found; thence N11°58'40"E for a distance of 487.65 feet to an angle iron found; thence S29°25'25"E for a distance of 223.36 feet to a an angle iron found; thence N61°28'29"E for a distance of 350.00 feet to an Army Corps of Engineers monument found; thence S29°34'37"E for a distance of 248.94 feet to an Army Corps of Engineers monument found; thence N62°12'01"E for a distance of 490.90 feet to an angle iron found at the common line of Land Lots 4 and 17; thence S30°30'38"E for a distance of 445.27 feet to an angle iron found at the northeast corner of Land Lot 16, said corner being common to Land Lots 4, 5, 16, and 17, said point being the TRUE POINT OF BEGINNING.

Said tract or parcel of land contains 120.980 acres, more or less.

TITLE EXCEPTIONS

THE FOLLOWING EXCEPTIONS ARE LISTED IN SCHEDULE B, PART II OF THE COMMITMENT FOR TITLE INSURANCE ISSUED BY CHICAGO TITLE INSURANCE COMPANY (COMMITMENT NUMBER GA-CM-22-0099-COM(V5)), EFFECTIVE DATE OF AUGUST 10, 2022.

9. All matters shown on plat recorded in Plat Book 69, Page 25, Hall County, Georgia Records.

10. All matters shown on plat recorded in Plat Book 69, Page 26, aforesaid Records.

11. All matters shown on plat recorded in Plat Book 69, Page 178, aforesaid Records.

12. All matters shown on plat recorded in Plat Book 69, Page 179, aforesaid Records.

13. All matters shown on plat recorded in Plat Book 69, Page 180, aforesaid Records.

14. All matters shown on plat recorded in Plat Book 69, Page 181, aforesaid Records.

15. All matters shown on plat recorded in Plat Book 69, Page 182, aforesaid Records.

16. All matters shown on plat recorded in Plat Book 69, Page 183, aforesaid Records.

17. All matters shown on plat recorded in Plat Book 69, Page 184, aforesaid Records.

18. All matters shown on plat recorded in Plat Book 72, Page 84, aforesaid Records.

19. All matters shown on plat recorded in Plat Book 85, Page 204, aforesaid Records.

20. All matters shown on plat recorded in Plat Book 85, Page 206, aforesaid Records.

21. All matters shown on plat recorded in Plat Book 85, Page 254, aforesaid Records.

22. All matters shown on plat recorded in Plat Book 87, Page 212-A, aforesaid Records.

23. All matters shown on plat recorded in Plat Book 307, Page 165-A, aforesaid Records.

24. Easement from T. M. Gould to Georgia Power Company, dated October 24, 1911, filed for record March 30, 1912, recorded in Deed Book 23, Page 519, aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; DESCRIPTION TOO VAGUE TO DETERMINE LOCATION)

25. Easement from John R. Mooney to Georgia Power Company, dated May 29, 1911, filed for record April 6, 1912, recorded in Deed Book 23, Page 532, aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; DESCRIPTION TOO VAGUE TO DETERMINE LOCATION)

26. Easement for Right of Way from T. M. Gould to Georgia Power Company, dated April 19, 1927, filed for record April 25, 1927, recorded in Deed Book 52, Page 104, aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; DESCRIPTION TOO VAGUE TO DETERMINE LOCATION)

27. Easement from T. N. Gould to Commissioners of Roads & Revenues, Hall County, dated March 13, 1937, filed for record May 17, 1937, recorded in Deed Book 75, Page 157, aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; NOT PLOTTABLE)

28. Easement from T. N. Gould to Commissioners of Roads & Revenues, Hall County, dated March 13, 1937, filed for record May 17, 1937, recorded in Deed Book 75, Page 158, aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; NOT PLOTTABLE)

29. Easement from T. M. Gould to Georgia Power Company, dated May 21, 1937, filed for record June 15, 1937, recorded in Deed Book 75, Page 309, aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; DESCRIPTION TOO VAGUE TO DETERMINE LOCATION)

30. Easement from Mrs. L. J. Stringer to Georgia Power Company, dated May 24, 1937, filed for record June 15, 1937, recorded in Deed Book 75, Page 314, aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; DESCRIPTION TOO VAGUE TO DETERMINE LOCATION)

31. Easement from J. S. Gould to Georgia Power Company, dated July 29, 1948, filed for record August 6, 1948, recorded in Deed Book 113, Page 538, aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; DESCRIPTION TOO VAGUE TO DETERMINE LOCATION)

32. Option for Right of Way from J. S. Gould to Georgia Power Company, a corporation, dated May 26, 1955, filed for record June 21, 1955, recorded in Deed Book 151, Page 491, aforesaid Records. (As of Property 1, 2 and 3) (AFFECTS SUBJECT PROPERTY; NOT PLOTTABLE)

33. Easement for Right of Way from J. S. Gould to Georgia Power Company, a corporation, dated August 11, 1955, filed for record August 31, 1955 at 8:00 a.m., recorded in Deed Book 152, Page 585, aforesaid Records. (AFFECTS SUBJECT PROPERTY; NOT PLOTTABLE)

34. Easement contained Judgment on the Declaration of Taking United States of America Vs. 553.05 Acres of land more or less, situate in Hall County, State of Georgia and Roy M. Crain, Et al., dated December 12, 1955, recorded in Deed Book 160, Page 1, aforesaid Records. (DOES NOT AFFECT SUBJECT PROPERTY)

35. Easement contained Judgment on the Declaration of Taking United States of America Vs. Fred Strikes, Et al., dated April 16, 1956, recorded in Deed Book 165, Page 131, aforesaid Records. (DOES NOT AFFECT SUBJECT PROPERTY)

36. Right of Way Deed from Donald Whitmire and Tim Whitmire to the Department of Transportation, dated September 20, 1977, filed for record January 27, 1978 at 2:00 p.m. at 2:00 p.m., recorded in Deed Book 650, Page 232, aforesaid Records. (ESTABLISHED RIGHT OF WAY ALONG A PORTION OF FRONTAGE; MOSTLY CONTAINED WITHIN CURRENT RIGHT OF WAY)

TITLE EXCEPTIONS (CONTINUED)

37. Right of Way Deed from as one of the heirs of the Kate A. Gould Estate, Frances Elizabeth Hall to the Department of Transportation, dated March 16, 1978, filed for record March 20, 1978 at 10:30 a.m., recorded in Deed Book 653, Page 574, aforesaid Records. (DOES NOT AFFECT SUBJECT PROPERTY)

38. Right of Way Deed from as one of the heirs of the Kate A. Gould Estate, E. P. Atchison to the Department of Transportation, dated March 16, 1978, filed for record March 20, 1978 at 10:30 a.m., recorded in Deed Book 653, Page 576, aforesaid Records. (DOES NOT AFFECT SUBJECT PROPERTY)

39. Right of Way Deed from as one of the heirs of the Kate A. Gould Estate, Jacqueline C. O'Kelley to the Department of Transportation, dated March 3, 1978, filed for record March 20, 1978 at 10:30 a.m., recorded in Deed Book 653, Page 578, aforesaid Records. (DOES NOT AFFECT SUBJECT PROPERTY)

40. Right of Way Deed from as one of the heirs of the Kate A. Gould Estate, Nannette C. Teeter to the Department of Transportation, dated March 16, 1978, filed for record March 20, 1978 at 10:30 a.m., recorded in Deed Book 653, Page 580, aforesaid Records. (DOES NOT AFFECT SUBJECT PROPERTY)

41. Right of Way Deed from as one of the heirs of the Kate A. Gould Estate, D.P. Atchison to the Department of Transportation, dated March 16, 1978, filed for record March 20, 1978 at 10:30 a.m., recorded in Deed Book 653, Page 582, aforesaid Records. (DOES NOT AFFECT SUBJECT PROPERTY)

42. Right of Way Deed from as one of the heirs of the Kate A. Gould Estate, Martha G. Hawes to the Department of Transportation, dated March 16, 1978, filed for record March 20, 1978 at 10:30 a.m., recorded in Deed Book 653, Page 584, aforesaid Records. (DOES NOT AFFECT SUBJECT PROPERTY)

43. Right of Way Deed from as one of the heirs of the Kate A. Gould Estate, Joe P. Covington to the Department of Transportation, dated March 16, 1978, filed for record March 20, 1978 at 10:30 a.m., recorded in Deed Book 653, Page 586, aforesaid Records. (DOES NOT AFFECT SUBJECT PROPERTY)

44. Right of Way Easement from Elan (Leon Clark) to the Southern Bell Telephone and Telegraph Company, dated October 12, 1982, filed for record October 21, 1982 at 3:43 p.m., recorded in Deed Book 778, Page 632, aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; DESCRIPTION TOO VAGUE TO DETERMINE LOCATION)

45. Easement from Dr. Alan F. Taylor to Georgia Power Company, dated April 15, 1983, filed for record April 19, 1983 at 9:00 a.m., recorded in Deed Book 794, Page 551, aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; DESCRIPTION TOO VAGUE TO DETERMINE LOCATION)

46. Easement and Boundary Line Agreement by and between Elan Pharmaceutical Research Corporation, a Georgia corporation and Pittman Crown & Bridge Laboratory, Inc., a Georgia corporation, dated December 22, 1983, filed for record December 23, 1983 at 10:09 a.m., recorded in Deed Book 822, Page 6, aforesaid Records. (DOES NOT AFFECT SUBJECT PROPERTY)

47. Easement from Elan Pharmaceutical Research Corp. to the City of Gainesville, Georgia, dated September 27, 1991, filed for record October 9, 1991 at 2:40 p.m., recorded in Deed Book 1659, Page 257, aforesaid Records. (AFFECTS SUBJECT PROPERTY; AS PLOTTED)

48. Right of Way Deed from Elan Pharma, (MA), Inc. to the Department of Transportation, dated August 4, 1993, filed for record April 4, 1993 at 4:09 p.m., recorded in Deed Book 2007, Page 229, aforesaid Records. (DOES NOT AFFECT SUBJECT PROPERTY; CONTAINED WITHIN CURRENT RIGHT OF WAY)

49. Easement from Elan Pharma, Inc. to the City of Gainesville, Georgia, dated January 28, 1994, filed for record April 27, 1994 at 2:25 p.m., recorded in Deed Book 2175, Page 165, aforesaid Records. (AFFECTS SUBJECT PROPERTY; AS PLOTTED)

50. Right of Way Deed from Elan Pharma, (MA), Inc., a Massachusetts corporation to Georgia Department of Transportation, dated February 13, 2002, filed for record April 5, 2002 at 4:05 p.m., recorded in Deed Book 4165, Page 645, aforesaid Records. (PERTAINS TO EXISTING RIGHT OF WAY OF MCEVER ROAD aka Hwy 53; LIMITED ACCESS RESERVATION MAY AFFECT SUBJECT PROPERTY)

51. Easement from Elan Holdings, Inc. f/k/a Elan Pharma (MA), Inc. to Georgia Power Company, dated November 15, 2002, filed for record December 17, 2002 at 11:45 a.m., recorded in Deed Book 4407, Page 331, aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; DESCRIPTION TOO VAGUE TO DETERMINE LOCATION)

52. Easement for Anchors Guy Poles and Wires from Elan Holdings, Inc. f/k/a Elan Pharma (MA), Inc. to Georgia Power Company, dated March 3, 2003, filed for record March 25, 2003 at 11:35 a.m., recorded in Deed Book 4506, Page 572, aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; DESCRIPTION TOO VAGUE TO DETERMINE LOCATION)

MONUMENTS OF NOTE

MONUMENT	DESCRIPTION
IPF "A"	CAP WITH INSCRIPTION "ROCHESTER LSF#00084"
IPF "B"	ARMY CORPS OF ENGINEERS BRASS DISK (0.14' NORTHEAST OF PL)
IPF "C"	ARMY CORPS OF ENGINEERS BRASS DISK (0.11' NORTHEAST OF PL)
IPF "D"	1/2" REBAR FOUND (0.29' SOUTHWEST OF PL)
IPF "E"	1/2" REBAR FOUND (0.08' SOUTHWEST OF PL)
IPF "F	1/2" REBAR FOUND (0.11' SOUTHWEST OF PL)
IPF "G	1/2" REBAR FOUND (0.31' SOUTHWEST OF PL)
IPF "H	3/4" IRON ROD FOUND (0.07' NORTHEAST OF PL)
IPF "I"	3/4" IRON ROD FOUND (BENT) (0.25' NORTHEAST OF PL)
IPF "J"	3/4" REBAR FOUND (0.20' NORTHEAST OF PL)
IPF "K"	1/2" REBAR FOUND (ON LINE)
IPF "L"	3/4" REBAR FOUND (0.09' SOUTHWEST OF PL)

ALTA/ NSPS CERTIFICATION

TO: WEEKLEY HOMES, LLC AND CHICAGO TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 8, 13 AND 16 TABLE A THEREOF.

THE FIELD WORK WAS COMPLETED ON DECEMBER 3, 2021. A SUBSEQUENT SITE INSPECTION WAS COMPLETED ON OCTOBER 21, 2022.

DATE OF PLAT: NOVEMBER 10, 2022.

JESSE R. GUNNIN, GA RLS NO. 3079 — DATE 11.10.22

SURVEYOR'S CERTIFICATE (STATE OF GEORGIA)

THIS PLAT IS A RETRACEMENT OF AN EXISTING PARCEL OR PARCELS OF LAND AND DOES NOT SUBDIVIDE OR CREATE A NEW PARCEL OR MAKE ANY CHANGES TO ANY REAL PROPERTY BOUNDARIES. THE RECORDING INFORMATION OF THE DOCUMENTS, MAPS, PLATS, OR OTHER INSTRUMENTS WHICH CREATED THE PARCEL OR PARCELS ARE STATED HEREON. RECORDATION OF THIS PLAT DOES NOT IMPLY APPROVAL OF ANY LOCAL JURISDICTION, AVAILABILITY OF PERMITS, COMPLIANCE WITH LOCAL REGULATIONS OR REQUIREMENTS, OR SUITABILITY FOR ANY USE OR PURPOSE OF THE LAND. FURTHERMORE, THE UNDERSIGNED LAND SURVEYOR CERTIFIES THAT THIS PLAT COMPLIES WITH THE MINIMUM TECHNICAL STANDARDS FOR PROPERTY SURVEYS IN GEORGIA AS SET FORTH IN THE RULES AND REGULATIONS OF THE GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS AND AS SET FORTH IN O.C.G.A. SECTION 15-6-67.

JESSE R. GUNNIN, GA RLS NO. 3079 — DATE 11.10.22

REVISION | DATE

ALTA/NSPS LAND TITLE SURVEY FOR: WEEKLEY HOMES, LLC AND CHICAGO TITLE INSURANCE COMPANY

LOCATED IN LAND LOTS 16 & 17
8th DISTRICT
CITY OF GAINESVILLE
HALL COUNTY, GEORGIA
NOVEMBER 10, 2022

GUNNIN SURVEY

DRAWN BY: JZC
CHECKED BY: JRG

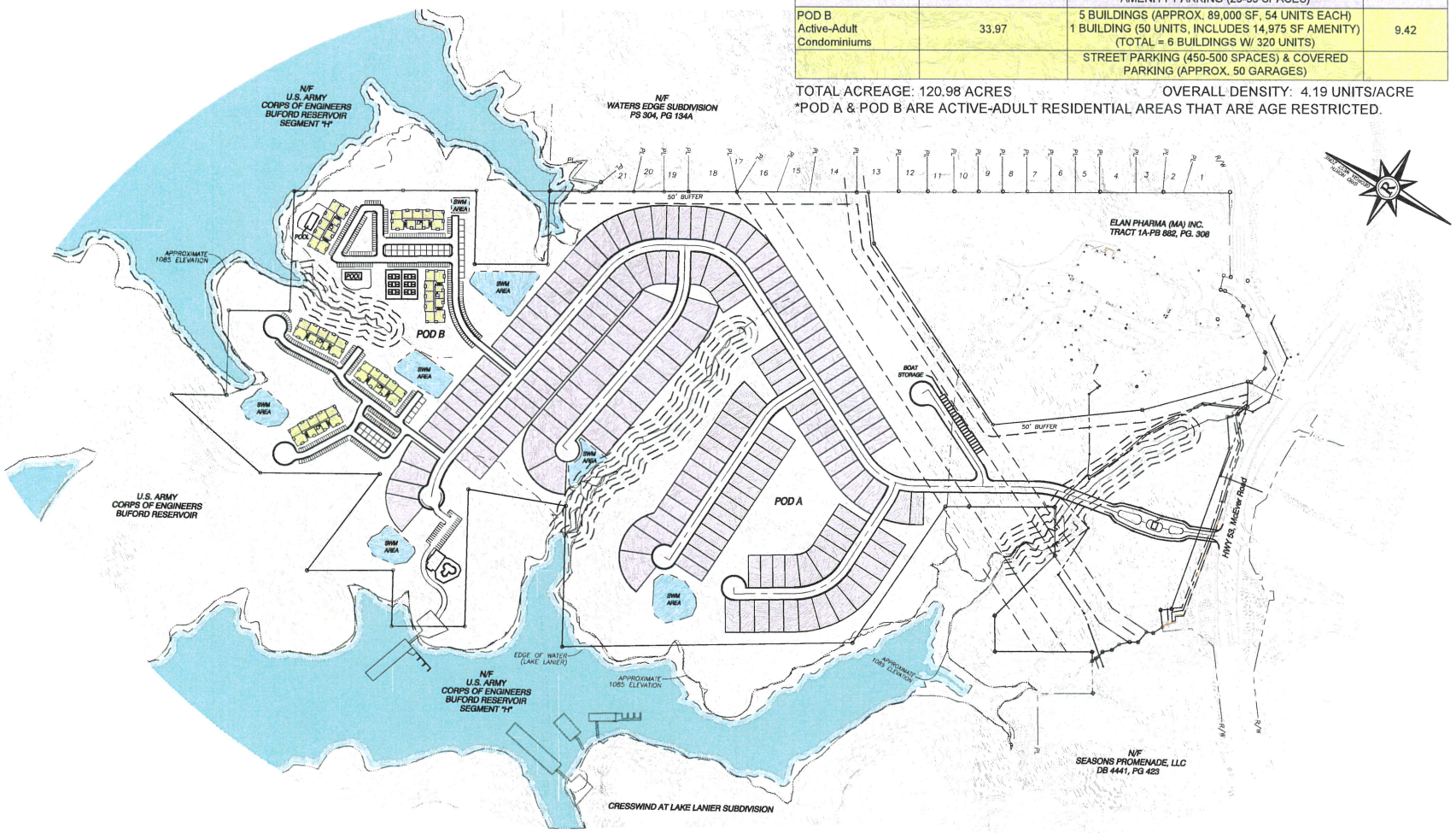
PROJECT NO. 22036

SHEET 1 OF 1

LANIER LANDING LAND USE PLAN			
POD	AREA (ACRES)	FEATURES	UNIT DENSITY (UNITS/ACRE)
POD A Active-Adult Homes	87.01	50' LOTS (105 UNITS)	2.15
		60' LOTS (42 UNITS)	
		80' LOTS (20 LOTS W/ PAIRED VILLAS = 40 UNITS) (TOTAL = 187 UNITS)	
		AMENITY CLUBHOUSE (APPROX. 7,800 SF), PRIVATE DOCKS (APPROX. 8,600 SF) & BOAT STORAGE	
		AMENITY PARKING (25-35 SPACES)	
POD B Active-Adult Condominiums	33.97	5 BUILDINGS (APPROX. 89,000 SF, 54 UNITS EACH) 1 BUILDING (50 UNITS, INCLUDES 14,975 SF AMENITY) (TOTAL = 6 BUILDINGS W/ 320 UNITS)	9.42
		STREET PARKING (450-500 SPACES) & COVERED PARKING (APPROX. 50 GARAGES)	

TOTAL ACREAGE: 120.98 ACRES OVERALL DENSITY: 4.19 UNITS/ACRE

*POD A & POD B ARE ACTIVE-ADULT RESIDENTIAL AREAS THAT ARE AGE RESTRICTED.



Rochester | DCCM

Rochester & Associates, LLC
425 Oak Street, Gainesville, GA 30501
770.718.0800 p | www.rochesterassoc.com

LAND USE PLAN
FOR
LANIER LANDING
GOULD DRIVE TRACT
LOCATED IN
LAND LOTS 16 & 17, 8th DISTRICT
CITY OF GAINESVILLE
HALL COUNTY, GEORGIA

NO.	DATE	DESCRIPTION
		REVISIONS

ANY CHANGES OR ALTERATIONS MADE TO THIS DOCUMENT WITHOUT PRIOR NOTICE TO THE WRITTEN APPROVAL OF ROCHESTER & ASSOCIATES, LLC, WILL BE THE SOLE RESPONSIBILITY OF ANY LIABILITY ASSOCIATED WITH THE PROJECT. ROCHESTER & ASSOCIATES, LLC, WILL ALSO BE VERIFICATION OF ANY CHANGES.

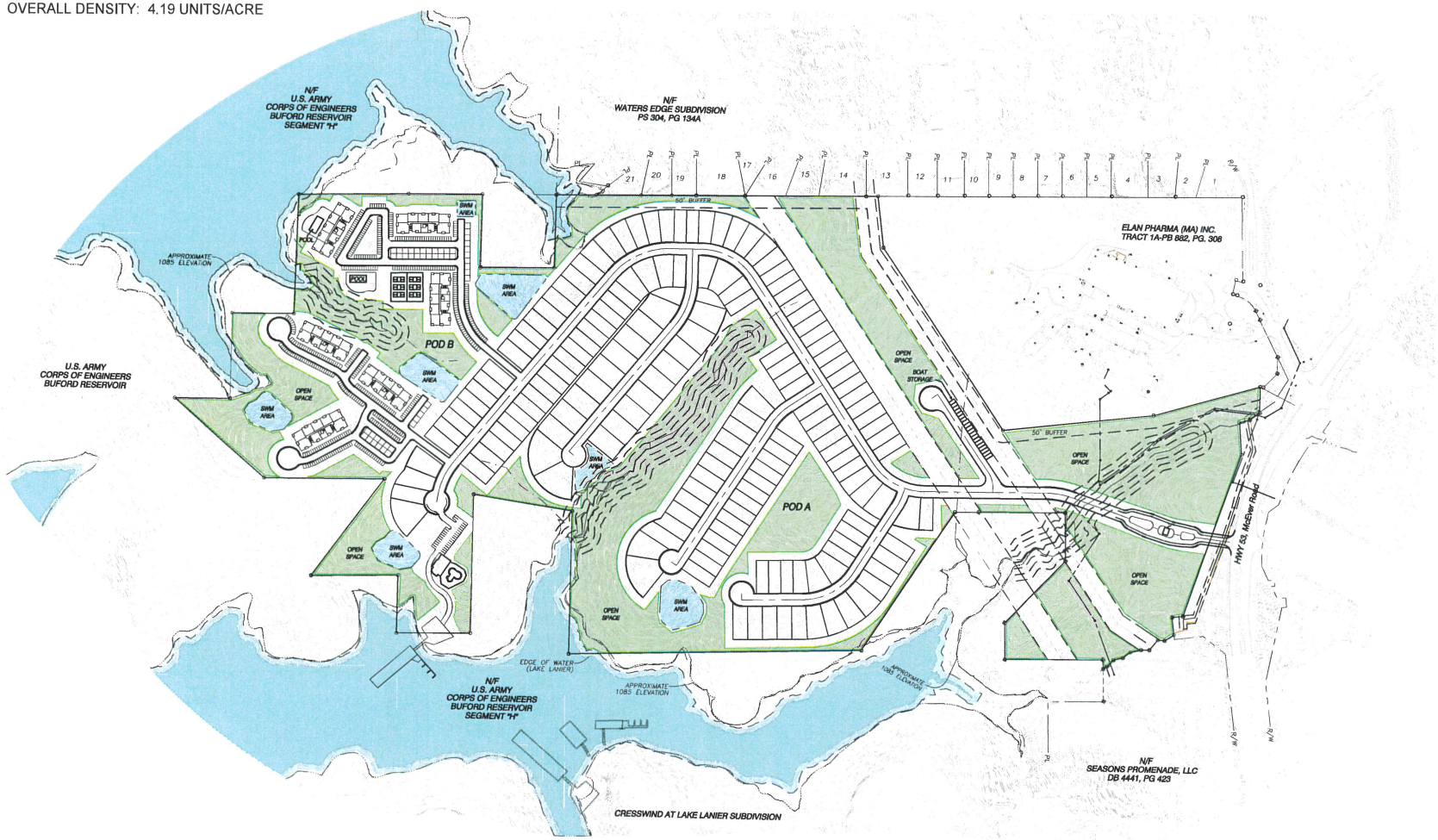
GRAPHIC SCALE
100' 0' 200' 400'

SHEET 1 OF 1

DATE: 09/29/2023
SCALE: 1"=200'
JOB NO. G20123.04
DWG NO. G20123.04
DRAWN BY: JJP / ABJ

LANIER LANDING OPEN SPACE PLAN	
POD	AREA (ACRES)
POD A Single-Family Detached	31.73
POD B Condominiums	7.06
TOTAL OPEN SPACE	38.79 (32% OF TOTAL ACREAGE)

TOTAL ACREAGE: 120.98 ACRES
OVERALL DENSITY: 4.19 UNITS/ACRE



Rochester | DCCM
Rochester & Associates, LLC
425 Oak Street NW | Gainesville, GA 30501
770.718.0800 p | www.rochesterassoc.com

OPEN SPACE PLAN
FOR:
LANIER LANDING
GOULD DRIVE TRACT
LOCATED IN:
LAND LOTS 16 & 17, 8th DISTRICT
CITY OF GAINESVILLE
HALL COUNTY, GEORGIA

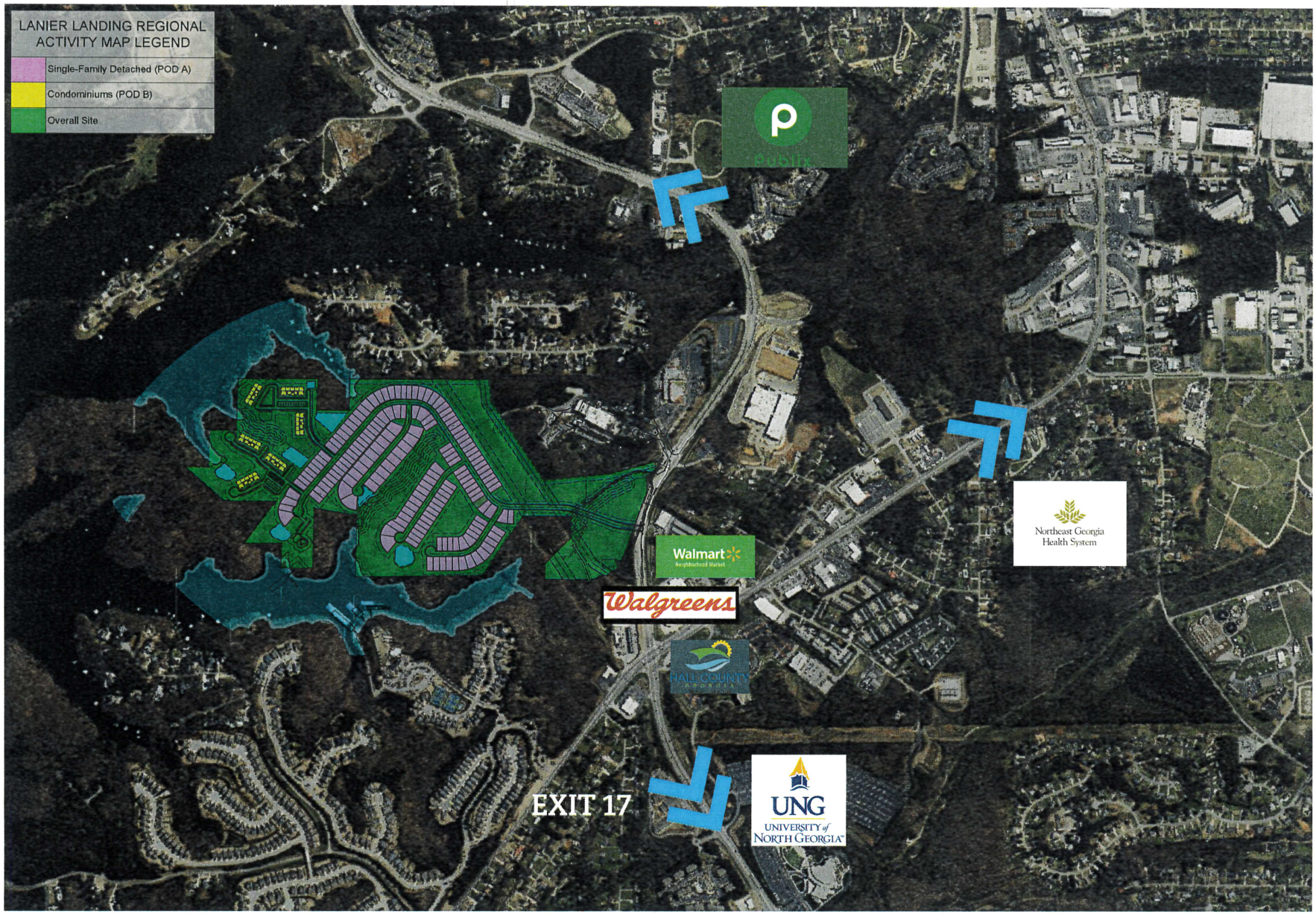
NO.	DATE	DESCRIPTION
		REVISIONS

ANY CHANGES OR ALTERATIONS MADE TO THIS DOCUMENT WITHOUT THE WRITTEN APPROVAL OF ROCHESTER & ASSOCIATES, LLC, WILL BE THE SOLE RESPONSIBILITY AND LIABILITY ASSOCIATED WITH THE PROJECT. ROCHESTER & ASSOCIATES, LLC, IS FREE FOR VERIFICATION OF ANY CHANGES.

GRAPHIC SCALE
1.00" 0" 20.0' 40.0'

SHEET 1 OF 1

DATE: 08/29/2023
SCALE: 1"=200'
JOB NO. G20120-4.DWH
DWG NO. G20120-4.DWG
DRAWN BY: JDF / ABJ



Rochester | DCCM

Rochester & Associates, LLC
428 Crown Point Circle, Suite 100
770.718.0800 p | www.rochesterassoc.com

REGIONAL ACTIVITY MAP
FOR
LANIER LANDING
GOULD DRIVE TRACT
LAND LOTS 16 & 17, 8th DISTRICT
CITY OF GAINESVILLE
HALL COUNTY, GEORGIA

NO.	DATE	DESCRIPTION

REVISIONS

ANY CHANGES OR ALTERATIONS MADE TO THIS DOCUMENT WITHOUT PRIOR WRITTEN APPROVAL OF ROCHESTER & ASSOCIATES, LLC, WILL NULLIFY ANY LIABILITY ASSOCIATED WITH THIS PROJECT. ROCHESTER & ASSOCIATES, LLC, HAS NO VERIFICATION OF ANY CHANGES.

GRAPHIC SCALE
100' 0' 200' 400'

SHEET 1 OF 1

DATE: 09/28/2023
SCALE: 1"=200'
JOB NO. G201204.DWH
DWG. NO. G201204-RA
DRAWN BY: JDF / ABJ

A PLANNED UNIT DEVELOPMENT

Gainesville, Georgia
October 25th, 2023

LANIER LANDING

David Weekley Homes
5775 Glenridge Dr, Building B,
Suite 210, Atlanta, GA 30328

LANIER LANDING

CONCEPTUAL MASTER PLAN

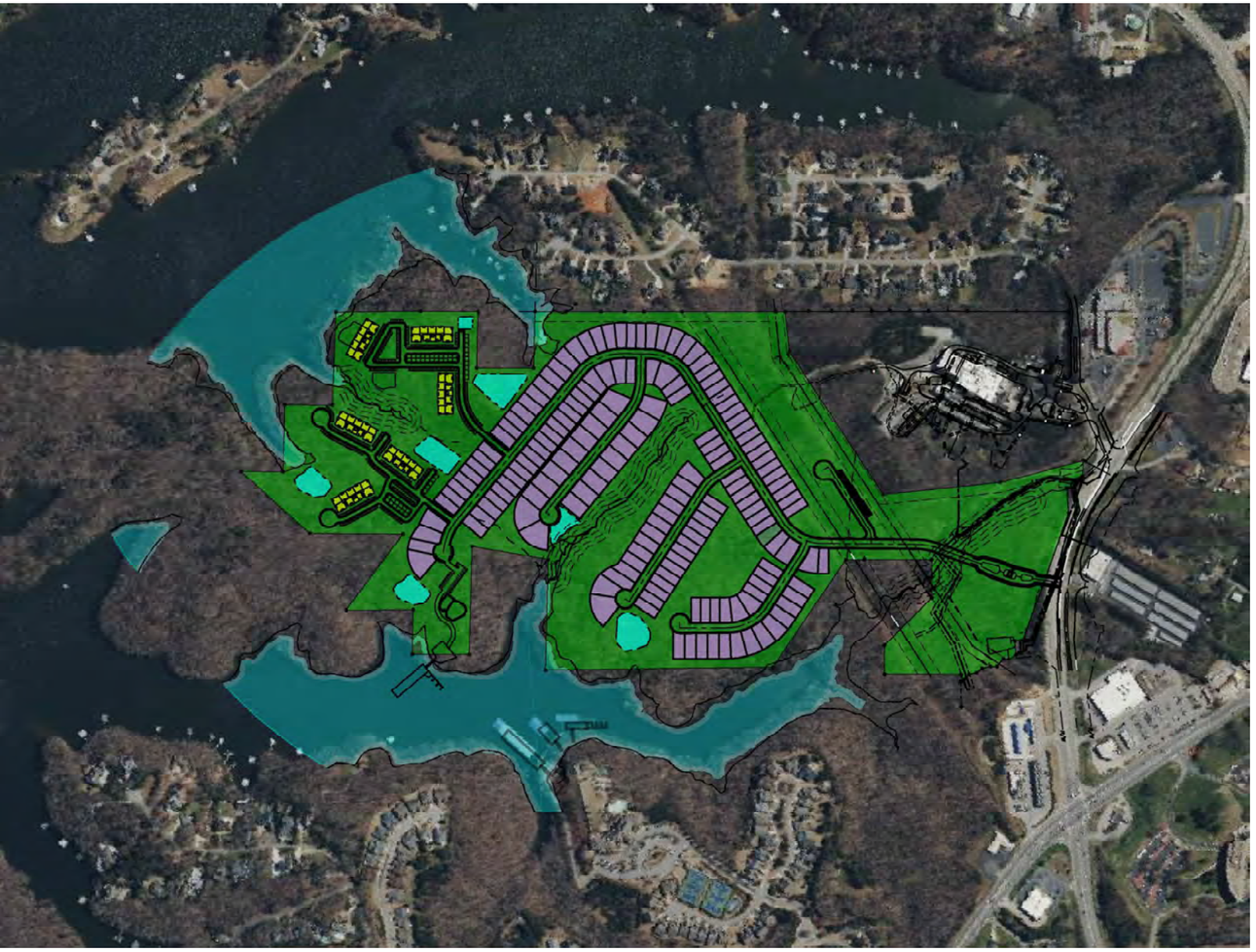


TABLE OF CONTENTS

FOR LANIER LANDING

Page 4 PROJECT OVERVIEW
6 DEVELOPER'S STORY
8 LOCATION
10 CHARACTER
12 STREET SYSTEM
14 OPEN SPACE
16 AMENITIES
18 RESIDENTIAL PRODUCTS
20 ACTIVE-ADULT ATTACHED & DETACHED
22 ACTIVE-ADULT CONDOMINIUMS
24 SITE DEVELOPMENT
26 COMMUNITY STANDARDS
30 ZONING REQUEST
32 MAPS & SURVEYS
34-42 ALTA Boundary Survey
Land Use Plan
Proposed Open Space Plan

PROJECT OVERVIEW

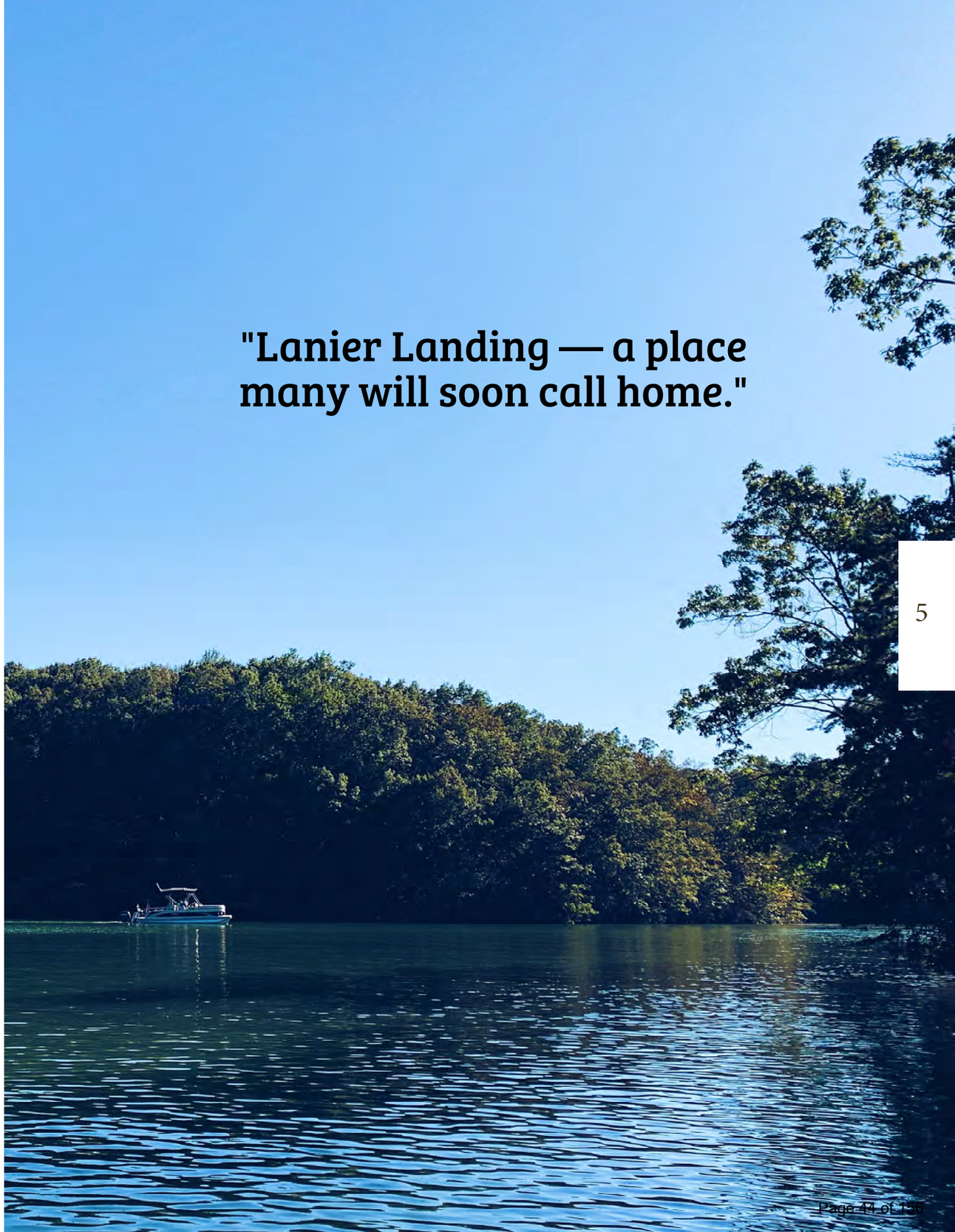
OF LANIER LANDING

Lanier Landing is a master planned community consisting of approximately 507 homes / units on approximately 120.98 acres with an overall density of approximately 4.19 units per acre. The development will contain active-adult, single-family attached and detached homes, as well as, active-adult condominiums. These will be separated into various sub-communities or pods, Pod A and Pod B. This variety of housing types is intended to encompass different price points and accommodate the varying lifestyles of our active-adult residents. This community is gated with two amenities dedicated to their respective pod, building a sense pride and privacy. Interactions between the residents of one pod and another are promoted by walking trails across the development. The communities' focal points will be their dedicated amenity clubhouses with resort-style swimming, boating, and various wellness activities.

The development will foster a love of Lake Lanier and their community through a walking trail system, pocket parks and amenity features which are all designed to create a unique identity and character for their pod and Lanier Landing as a whole.

Large areas of open space with landscaping incorporating existing, mature vegetation are integrated into the master plan to showcase the property's natural beauty. A significant number of homes within each pod will adjoin these open spaces on the ridge lines of the property thereby allowing residents to enjoy the natural landscape and views of Lake Lanier on the horizon.

In essence, Lanier Landing connotes a sense of arrival at a special place on the gentle, sloping shores of Lake Lanier in the foothills of the North Georgia mountains — a place many will soon call home.



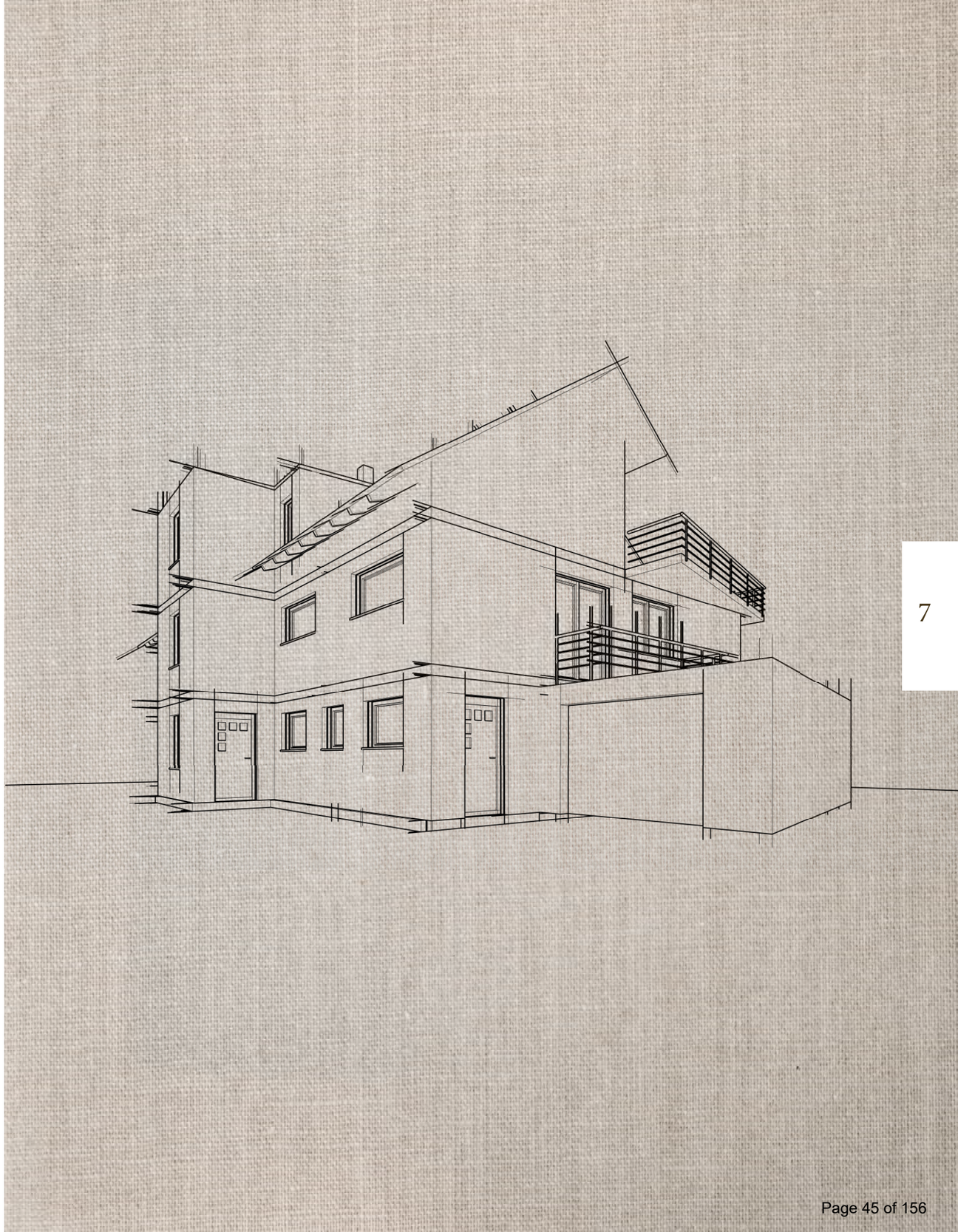
DEVELOPER'S STORY

OF LANIER LANDING

David Weekley Homes (DWH) began in 1976 in Houston, Texas, and has grown to become one of the largest privately held home builders in America, spanning across 13 states and 19 cities with more than 100,000 homes sold. The company has extensive home building experience and a strong dedication to quality homes and quality service as proven by their selection as the National Builder of the Year in 1990 and in 2013. This accomplishment is bolstered by their repeated identification as one of the best companies to work for and their incredible customer service. They are conservative financially, never biting off more than they can chew, to ensure their ability to continually create and complete quality developments across the country.

With over 40 years of experience, they have learned how to push the envelope of home design with a rich array of options for aesthetics and finishings while still prioritizing efficiency in construction, blurring the line between custom homes and production homes. They aim for complete customer satisfaction and pride in their homes, so quality work and dedication is a top priority.

DWH's current principals are David Weekley, John Johnson, Chris Weekley, Ladd Fargo, and Joe Rentfro. David Weekley is the founder and chairman of DWH, having built the company from the ground up at the age of 23. John Johnson is the CEO, previously working for other large scale home builders, he has been instrumental in the company's expansion, a guiding force behind its introduction of modern product lines, and has also helped the company achieve record-setting customer satisfaction scores. Chris Weekley is president at DWH and he leverages his expertise in innovation and developer relationships to effectively position the company for growth and expansion. Ladd Fargo is the Chief Operating Officer (COO) with nearly 30 years of home building experience, and he oversees all division operations for DWH. His Co-COO, Joe Rentfro, works together with Fargo, prioritizing operational efficiency while maintaining DWH's brand promise of quality and satisfaction.



LOCATION

OF LANIER LANDING

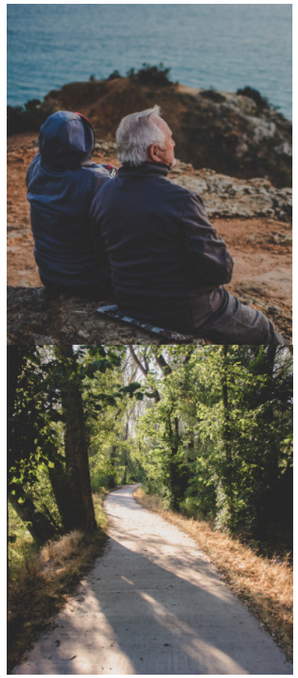
The future Lanier Landing community is located less than 4 miles (3.9 miles) southwest of the City of Gainesville square and 5 miles north of I–985 at Exit 17. Primary access to the property will be from McEver Road near the intersection of Browns Bridge Road and McEver Road. The property is surrounded by a variety of developed residential and commercial properties but is separated on three sides by Lake Lanier.

Lanier Landing will straddle shoreline property of the lake that the Corp of Engineers owns and maintains. Several unnamed streams exist on the property and will be preserved along with much of their associated mature tree canopy. There is an easement for power lines that has contributed to some clearing of the canopy running northeast from the southwestern corner of the development. Approximately 1,000 lf of the property fronts to McEver Road while the majority of the other boundaries of the property front to the Corp of Engineer's property, and by proxy, the shorelines of Lake Lanier.

A small retail area, anchored by a Walmart Neighborhood Market and a Walgreen's, exists just outside the proposed entrance of Lanier Landing. A larger retail area, anchored by a Publix Supermarket and various shops and restaurants, is just 1.8 miles north on McEver Road. The Hall County Government Complex is just 0.5 mile southwest on Browns Bridge Road. North Georgia Health System's main campus is located approximately 5 miles south via Jesse Jewell Parkway. The Gainesville campus of the University of North Georgia is located 4.5 miles south via McEver Road, just before I–985 Exit 17.

CHARACTER

OF LANIER LANDING



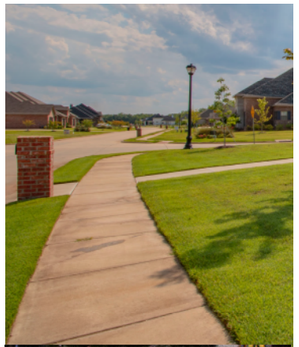
The Lanier Landing community has been carefully planned to foster a positive union between the beauty of Lake Lanier and a healthy lifestyle for all residents. Development will be concentrated primarily along ridge lines to maximize residents' views of Lake Lanier and the mountains with majority of land adjacent to streams left untouched. The general theme of the community is planned to be of a grounded nature.

Lanier Landing is planned to contain a variety of housing types that are age-restricted: active-adult detached homes, attached homes (paired villas), and condominiums.

A key feature of Lanier Landing will be its walking paths that will connect the community to the open space on the property. The community design will foster connectivity between residents, nature and the amenities while strengthening the pride and privacy of each individual residential pod. Additional planned amenities could include private lake access and docking for small boats so that residents can take full advantage of the lake at their doorsteps. Small pocket parks, intentional landscaping spaces and a winding sidewalk will further promote the cohesiveness of the community.

STREET SYSTEM

OF LANIER LANDING



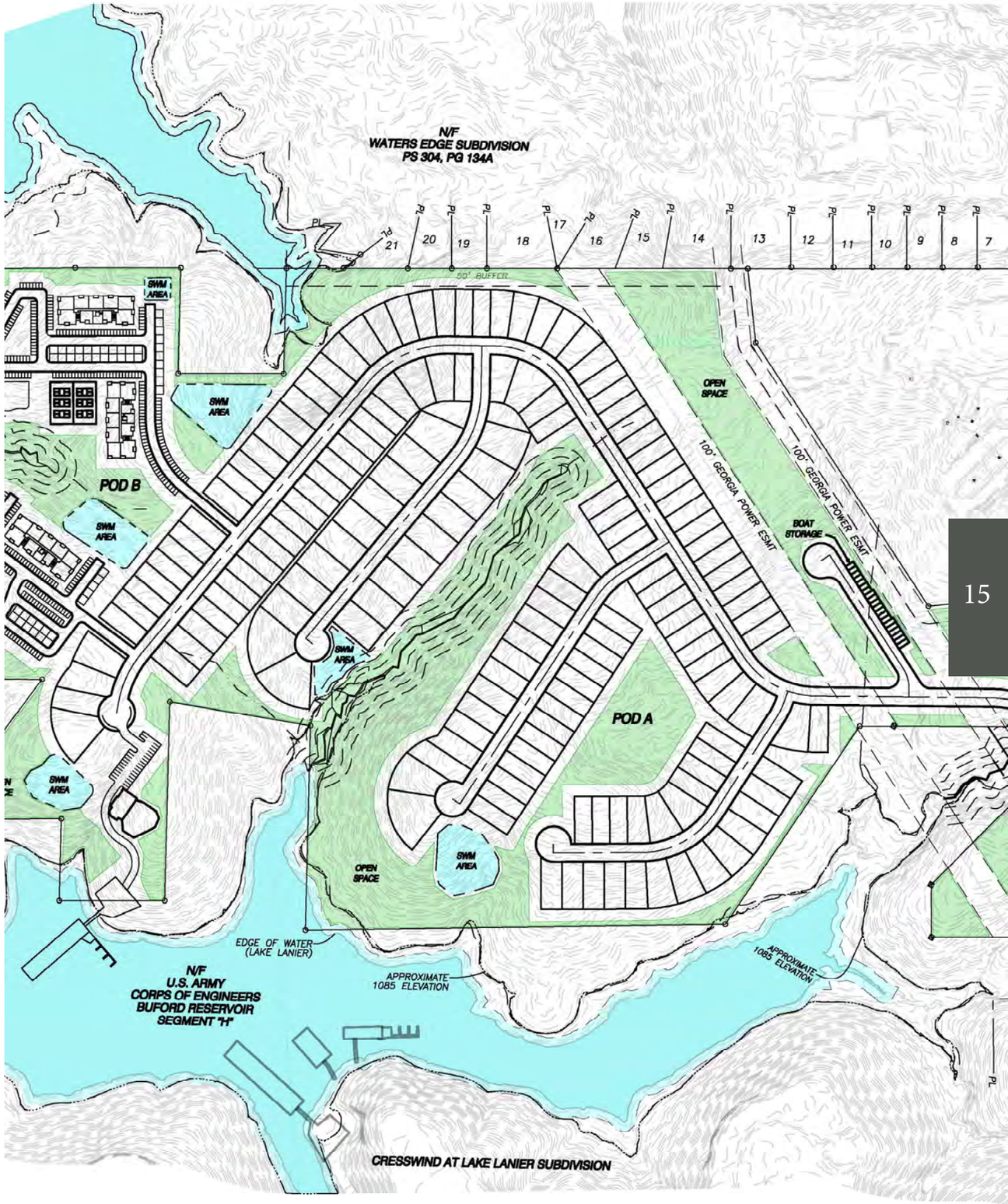
The primary entrance to Lanier Landing is proposed approximately 0.24 miles northeast of the intersection of Browns Bridge Road and McEver Road. The entrance is positioned at a curb cut along McEver Road, which is a four-lane divided highway with concrete medians. Lanier Landing will be a gated community with private roadways: a primary parkway and smaller, subsidiary streets through each residential pod. The primary entrance is the only way to enter or exit Lanier Landing, so the primary parkway will be built to sustain the traffic of the all residents coming and going. A second entrance to Lanier Landing is not anticipated; however, if review by the fire marshal dictates that another entrance is required, one accessing the development from Gould Drive will be added. The primary roadway will become privately maintained at the expiration of the required maintenance periods. All streets will be constructed to the City of Gainesville standards and will include sidewalks, streetlights and crosswalks where indicated. For the primary parkway, a 4' sidewalk is proposed on the southeastern side of the roadway (only one side with sidewalk) to promote walking and connectivity while limiting the potential hazard of pedestrians along the main parkway. Multi-use paths or walking trails may be constructed of concrete or asphalt.

OPEN SPACE

OF LANIER LANDING

At approximately 38.79 acres (32% of total acreage), the open space that meanders throughout the development will be directly accessible to each residential pod. The open space will include areas for amenities, extensive walking paths and passive or active recreation. However, the rest of the open space will be left undisturbed to protect the natural beauty of the site as well as environmentally sensitive areas. The development team believes this element adds tremendous value to the overall development.

Lanier Landing is being developed with healthy lifestyle experiences in mind; with lots of open spaces, an extensive network of walking paths, as well as, natural water amenities. Pocket parks will be located throughout the community,potentially connected via walking paths. One pocket park may include benches and an arboretum while another may have a swing set and yet another may simply have a community lawn or nature observation deck. These areas will serve as the focal points for different areas of the community and will further foster the community's love of the lake and community.



AMENITIES

OF LANIER LANDING

Amenities are planned in both the central, single-family portion of the property and in the condominium portion of the property with additional satellite amenities planned throughout the project.

These dedicated amenities, parking, and the parkway are designed to be pedestrian-friendly with vehicular traffic programmed for slower speeds through Lanier Landing. Bicycle racks, multi-use paths and walking trails are ways the development may promote non-vehicular trips to each of the amenity centers. This will encourage the residents to become more acquainted with the grandeur of Lanier Landing and with their neighbors in the community.

Satellite amenities of a smaller scale may be added to other areas of each pod based on future needs and market demand. These satellite amenities could range from small open space areas to picnic and hammock areas to cabanas adjacent to pool areas. Private lake access and docking for small boats is proposed on the southern shore of the development, as well as, boat storage just off the primary parkway.

The walking paths' (those proposed and for any added after-the-fact), steepness and design, along with the other amenity features, promote social interaction between residents of Lanier Landing and promote healthy lifestyle habits.

The individual elements of these amenities as noted below may be phased in relation to future needs and market demand.

Active-Adult Condominium

Clubhouse
Resort-Style Pool
Lawns & Pocket Parks
Pickleball courts
A Mail Kiosk

Active Adult Detached & Attached

Clubhouse
Resort-Style Pool
Lawns & Pocket Parks
Private docking & Boat storage
A Mail Kiosk

RESIDENTIAL PRODUCTS

OF LANIER LANDING

LANIER LANDING

ACTIVE-ADULT SINGLE-FAMILY ATTACHED & DETACHED

The community's development plan has created a balance of residential product choices that will accommodate multiple lifestyle desires. Emphasis has been placed on preserving as many areas of natural beauty as economically possible, thereby creating natural separation of sub-communities and promoting the use of the walking paths to explore the property.

Traditional, single-family, active-adult lots are proposed for the central sub-community of Lanier Landing in Pod A. A variety of active-adult home options are proposed to correspond with differing desires in lifestyle for potential active-adult residents, seeking out a place to call home and occasionally entertain family (mostly restricted to those 55 years of age and older). These options include 50' and 60' lots with detached style homes and 80' lots with attached, paired villas. There will not be any traditional two-story homes, rather, the potential layouts include ranch-style homes with bonus / secondary space over the garage or in a basement area. Full basements are not intended, but may become a part of the proposed layouts due to existing topography.

Lot standards are indicated below:

Active-Adult Attached & Detached	50', 60', 80' Lots
Lot Width	50', 60', 80'
Minimum lot size	50' x 120'
Minimum Front Setback	20'
Minimum Side Setback	5'
Minimum Rear Setback	15'
Minimum Building Separation	10'
Minimum heated SF per Home	1,400 SF

*Total number of Attached & Detached units is approximately 187.

LANIER LANDING

ACTIVE-ADULT CONDOMINIUMS

The Condominiums proposed in Pod B will be built with convenience, amazing views, and healthy living in mind. These condos are also active-adult residences with age restrictions. The products will be low rise condominium buildings. Each residence will have access to street / covered parking and will have at least 1BA; the 2BR/3BR residences could have 2BA. The dedicated amenity of this pod will be geared towards the active-adult residents, with an emphasis on amazing views, relaxation and healthy living. These amenities typically include a clubhouse, a resort-style pool, fitness equipment and outdoor amenities such as pickleball and parks.

*The total number of multi-family units is approx. 320.

Condominium building standards are indicated below:

Active-Adult Condominiums	
Front Setback	20'
Side Setback	10'
Rear Setback	15'
Building Separation	20'
Maximum Stories	5/6
Maximum Height	75'/90'
Minimum heated SF per Home	950 (1BR) 1200 (2BR) 1450 (3BR)

SITE DEVELOPMENT

OF LANIER LANDING

Monumentation & Signage

The gateway to Lanier Landing is located just after the intersection of McEver Road and Browns Bridge Road. This entrance acts as the main visual link to the project and announces the development. As such a critical part of Lanier Landing's initial impression, the project gateway will include landscape and hardscape features, signage, monumentation, and lighting to establish a sense of place and an arrival point. The gated entrance will define Lanier Landing, reflecting the architectural and landscape style of the development. Additional signage within the development will contain identification of the amenities and residential areas.

Secondary Identification

Signage and monumentation elements may be placed throughout the development and should be similar in style to the major project identification, just smaller in scale. These may be placed on the interior streets of Lanier Landing identifying one of the sub-communities in the development (different residential pods). Minor information signs may also be used to guide visitors to various amenities and points of interest within Lanier Landing. The information signs might include event listings and other pertinent information relevant to the community.

Landscaping

Together with the infrastructure design, the proper planning and design of outdoor spaces is critical in fostering the desired atmosphere of Lanier Landing. The overall landscape concept for this area plays a crucial role in unifying Lanier Landing and is intended to ensure that residences and related improvements are in cohesion with existing scenic beauty and natural conditions. The development must respect the area's natural setting and include new plantings that harmonize with the existing environment and the landscape character of the region. A consistent landscape that responds to aesthetic concerns and helps establish a positive image within the development for years to come must be established.

COMMUNITY STANDARDS

OF LANIER LANDING

Maintenance & Ownership of Streets and Open Spaces

All the streets, including those within individual pods or phases, are intended to be built to the standards of the City of Gainesville. The Parkway will be gated for limited access and privately maintained; therefore, the subsidiary streets within the development shall also be privately maintained. No roads will be dedicated to the City of Gainesville for maintenance because they are all gated or otherwise access-limited. All interior open spaces and common elements will be deeded to the Master Homeowners Association for maintenance and operation.

Water & Sewer Utilities

The City of Gainesville will provide water and sewer service to Lanier Landing. The availability of services has been verified with the City of Gainesville. Sanitary Sewer utilities will be a combination of gravity sewer lines and low pressure sewer systems. A low pressure sewer system will be proposed only in areas where topography does not allow for a gravity sewer connection to the existing City of Gainesville sanitary sewer system.

Homeowners Association

A mandatory Homeowners Association (HOA) or multiple associations will be formed for Lanier Landing or portions thereof. The HOA(s) will maintain and manage all common areas of the development, including financial management, architectural controls, and enforcement of community standards. The Condominiums will be separate from the overall HOA (or have their own) but they will contribute to certain common element maintenance across the development (as will the active-adult attached & detached residents). Any modifications or new construction within the community must be approved by an Architectural Review Board. The Board will be established and operated by the Developer until such time as the powers are transferred to the HOA(s). A covenant will be recorded for Lanier Landing dictating that no more than 20% of the total residential units may be rented (between all condominiums, detached, and attached home products).

Model Homes & Prairie Homes

Prior to approval of any phased Final Plat, the City of Gainesville will issue a maximum of 10 model home permits and 10 prairie home permits. Once final platting has been approved for the outstanding prairie home permits, the City of Gainesville will issue additional prairie home permits, not to exceed 20 at any given time. This time period allows the Developer to accelerate their production schedule and reduce the time frame necessary to complete a house and close a sale. In a development of this magnitude, the City of Gainesville recognizes the carrying cost of land acquisition, infrastructure and overhead requires an expedited delivery schedule to meet project objectives and ensure the ongoing success and vitality of the project.

Model home and prairie home permits will not be issued until access to the lot is provided in the form of a hard surface (crusher run) and fire protection is established within 500 feet of the lot in the form or a 1500-gallon tank fitted to City of Gainesville Fire Department specifications. The applicant/property owner agrees to indemnify the City of Gainesville against any claim of loss that may result from the early issuance of these type of permits.

Model Home and Prairie Home shall be defined as follows:

Prairie Home - *A concept used by Developers to allow for home construction starts (building permit issuance) prior to Final Plat recording. Prairie Home permits will not be granted temporary certificates of occupancy or permanent certificates of occupancy until approval of the final plat for the phase of development in which they are located.*

Model Home - *A concept used by Developers to allow for home construction starts in order to model building types, floor plans, interior finishes, etc. to potential buyers. Model home permits will be granted a temporary certificate of occupancy (provided adequate restroom facilities have been completed) prior to final plat that will restrict the use of the structure to a sales center and furniture staging. Habitation will not be allowed in model homes until a permanent certificate of occupancy has been issued. Permanent certificate of occupancy will not be issued until approval of the final plat for the phase of development in which they are located.*

Drainage & Stormwater Management

All of Lanier Landing lies adjacent to Lake Lanier and its unnamed tributary streams. Highest elevations are in the southeastern corner of the property with multiple peaks throughout it creating ridge lines and valleys; therefore, water generally flows from the central area of the development down through the streams in the valleys to the southwest and northeast into Lake Lanier. Stormwater management facilities are planned at suitable locations to reduce the amount of direct discharge into Lake Lanier. It is understood that Lake Lanier will serve as the primary detention facility for the development.

Uses

Land development for residential housing is dynamic because of the need to concurrently predict and respond to the local real estate market and national economic and demographic trends.

Approval of the Lanier Landing Master Plan is intended to approve approximately 507 units as the maximum number of units for the development. Housing product types may be moved, combined, or reconfigured without limit within the development, provided the maximum number of units is not exceeded and the overall change will not increase impact to the public school system or roadways at peak hours or increase the points of connection.

Uses of a traditional, single-family residence for owner occupancy are intended to include both attached and detached forms of housing in this development, with the homes restricted to persons 55 years of age or older (our active-adult residents). This intention is also extended to the Active-adult condominiums; however, there will be a covenant in place allowing up to 20% of the total residential units (units of all types in Lanier Landing) to be rented. Maximum height of buildings would be limited to five/six stories, and parking would be 2 vehicles per unit including covered garages (as well as on-site street parking).

Uses and standards described in the plan anticipate and describe active-adult attached, detached and condominium construction. If the use and/or form of housing for a particular phase is not specifically described or detailed in the plan, such a use or form may be approved administratively by staff based on the existing approved standards of the City of Gainesville for such a form of construction on similar sites elsewhere in the incorporated areas of the city.

Phasing

Phase 1 - The Developer intends to construct Lanier Landing Parkway and some of the secondary detention by realigning and paving as a road to access and serve approximately 147 active-adult detached lots, 40 active-adult attached lots , and 320 active-adult condominium units.

In addition, a portion of the lots in Pods A & B may be included within Phase 1, and the amenities will be started during Phase 1 (with a completion no later than the completion of Phase 2).

Phase 2 - The Developer intends to complete amenities and develop additional portions of the property, to serve 147 active-adult detached and 40 active-adult attached lots.

Phase 3 - The Developer intends to develop additional portions of the property, to serve 320 active-adult condominium units.

Phase 4 & Future Phases - Phasing is generally sequential but may overlap. Lots of various sizes and ownership types may be under development concurrently in multiple portions of the overall site. The Developer intends to complete the network of walking trails connecting the different phases and develop additional lots as demand warrants.

Phasing is generally sequential, but may overlap. Lots of various sizes and ownership types may be under development concurrently in multiple portions of the overall site.

ZONING REQUEST

OF LANIER LANDING

The current zoning was approved in May 2005 as "1300 Gould Drive SW". The chart below shows the primary differences in the two plans:

Comparison to Current Zoning Plan

Version	Current Plan	Proposed Plan
Name	1300 Gould Drive SW	Lanier Landing
Acreage	49.40+/-	120.98
Active-Adult Detached Units	N/A	147
Active-Adult Attached Units	N/A	40
Active-Adult Condominiums	N/A	320
Total Residential	N/A	507
Overall Density	N/A	4.19 Units/Acre
Open Space	N/A	38.79 Acres
Commercial	N/A	N/A

This request includes:

- Amend the existing zoning approval as detailed in the application, zoning narrative and conceptual site plan.

LANIER LANDING

MAPS & SURVEYS

OF LANIER LANDING

ALTA Boundary Survey
Land Use Plan
Proposed Open Space Plan

LANIER LANDING

MAPS & SURVEYS

LANIER LANDING

ALTA Boundary Survey

See next page

LANIER LANDING

RESERVED FOR PLAT FILING

CLOSURE STATEMENT

THE FIELD DATA UPON WHICH THIS PLAT IS BASED HAS AN ANGULAR ERROR OF 2 SECONDS PER ANGLE POINT AND A PRECISION RATIO OF 1 IN 23,022. IT HAS BEEN ADJUSTED USING THE COMPASS RULE.

THE DATA SHOWN ON THIS PLAT HAS A CLOSURE PRECISION RATIO OF 1 IN 1,274,992.

GENERAL NOTES

EQUIPMENT USED TO OBTAIN THESE MEASUREMENTS WAS A TRIMBLE S5 TOTAL STATION.

BEARINGS ARE CALCULATED FROM ANGLES TURNED FROM A SINGLE GRID BASELINE.

THE DATUM FOR THIS SITE WAS ESTABLISHED UTILIZING GLOBAL POSITIONING SYSTEMS AND BASED ON POSITIONAL VALUES FOR THE VIRTUAL REFERENCE STATION NETWORK DEVELOPED BY eGPS SOLUTIONS. THE HORIZONTAL REFERENCE FRAME IS NORTH AMERICAN DATUM OF 1983(NA2011)-STATE PLANE COORDINATE SYSTEM OF GEORGIA-WEST ZONE. THE VERTICAL REFERENCE FRAME IS NORTH AMERICAN VERTICAL DATUM OF 1988. ANY DIRECTIONS OR DIMENSIONS SHOWN ARE A RECTANGULAR, GROUND LEVEL PROJECTION OF THE STATE PLANE COORDINATE SYSTEM.

DATE OF INITIAL FIELD WORK: 12.14.2022
DATE OF SUBSEQUENT SITE INSPECTION: 10.21.2022

ALL IRON PINS SET ARE 1/2" REBARS CAPPED WITH "GUNNIN LSF 1032" UNLESS OTHERWISE NOTED.

BY GRAPHIC PLOTTING ONLY, PORTIONS OF THIS SITE ARE SHOWN TO BE WITHIN THE LIMITS OF A 100 YR. FLOOD HAZARD AREA, LABELED AS "ZONE A", AS PER F.E.M.A. HALL COUNTY, GEORGIA AND INCORPORATED AREAS COMMUNITY PANEL NUMBER(S) 13139C0170G AND 13139C0180G, DATED 4/4/2018.

THE SURVEY AND PLAT SHOWN HEREON IS NOT INTENDED FOR USE OR RELIANCE BY ANY PARTIES OR ENTITIES NOT SPECIFICALLY LISTED IN THE TITLE. UNAUTHORIZED THIRD PARTIES SHALL INDEMNIFY AND HOLD GUNNIN LAND SURVEYING, LLC HARMLESS AGAINST ANY AND ALL LIABILITY FOR ANY LOSS ARISING OUT OF, OR RELATED TO, RELIANCE BY ANY THIRD PARTY ON ANY WORK PERFORMED THEREUNDER, OR THE CONTENTS OF THE SURVEY.

ABOVE GROUND UTILITY LOCATIONS WERE OBTAINED FROM FIELD OBSERVATIONS. UNDERGROUND UTILITIES WERE NOT LOCATED AS PART OF THIS SURVEY. THE INFORMATION SHOWN ON THIS DRAWING CONCERNING UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE OWNER, ARCHITECT, CONTRACTOR AND THEIR AGENTS ARE RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO THE ACTUAL SIZE, TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

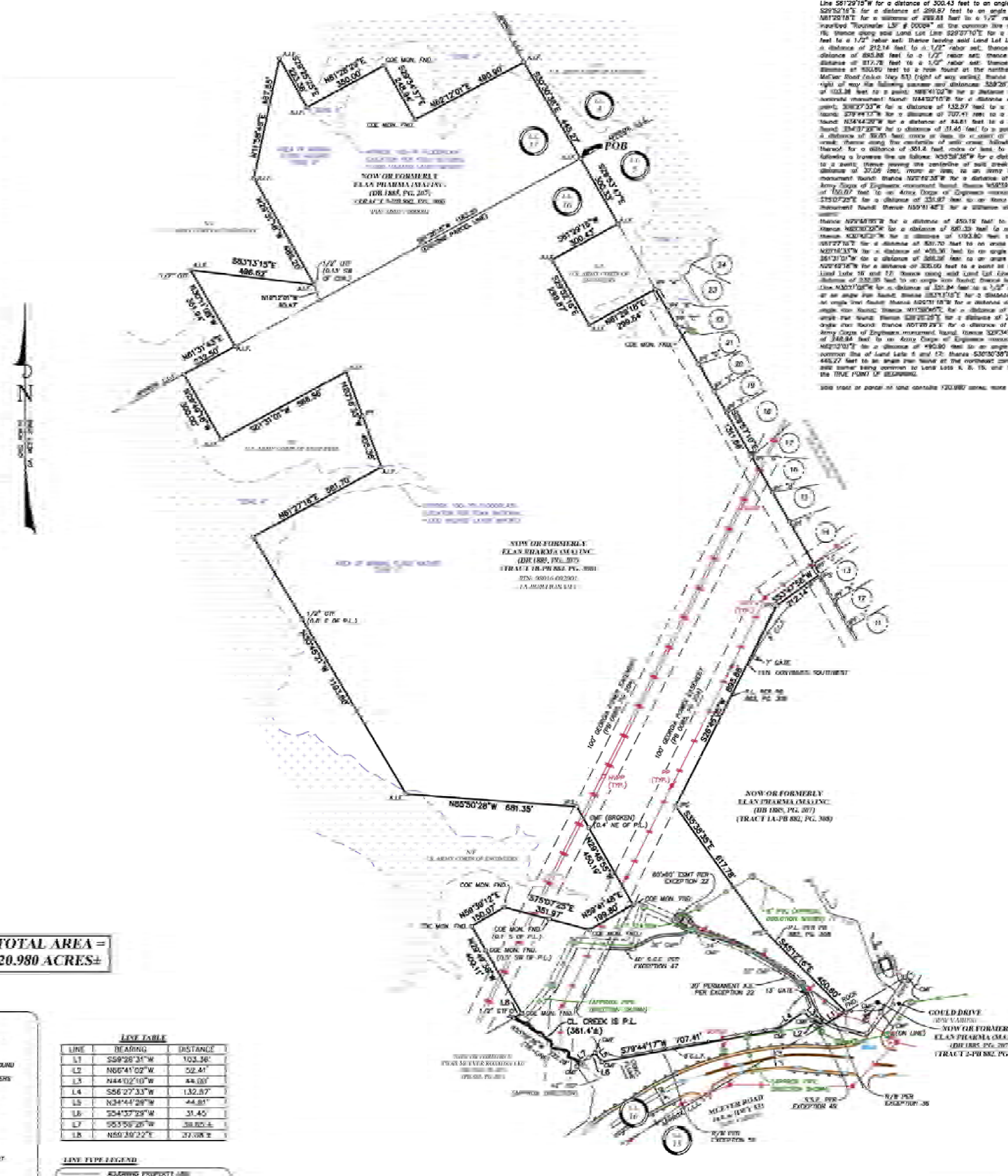
SOME IMPROVEMENTS WITHIN SITE SUCH AS INTERIOR FENCES, BUILDINGS, CREEKS, WETLANDS AND UTILITIES MAY NOT BE SHOWN AS PART OF THIS SURVEY.

SANITARY SEWER PIPES SHOWN HEREON PER HALL COUNTY GEOGRAPHIC INFORMATION SYSTEMS. LOCATION OF SAID PIPES ARE CONSIDERED TO BE APPROXIMATE AND DO NOT CONSTITUTE AS AN AS-BUILT SURVEY.

SITE ADDRESS IS LISTED AS:
GOULD DRIVE
GAINESVILLE, GA 30504

THE CURRENT PARCEL IDENTIFICATION NUMBER(S) ARE 08016 002001(A PORTION OF) & 08017 000001.

THERE WAS NO EVIDENCE OF RECENT SUBSTANTIAL EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS OBSERVED (ON THE SURVEYED TRACTS) IN THE PROCESS OF CONDUCTING THE FIELDWORK. (TABLE A, ITEM 16)



WRITTEN DESCRIPTION

All that tract or parcel of land lying and being in Land Lots 16 and 17 of the 8th District, City of Gainesville, Hall County, Georgia, and being more particularly described as follows:

TO FIND THE TRUE POINT OF BEGINNING, COMMENCE at an angle iron found at the northeast corner of Land Lot 16, said corner being common to Land Lots 4, 5, 16, and 17, said point being the TRUE POINT OF BEGINNING.

FROM THE TRUE POINT OF BEGINNING AS THUS ESTABLISHED; thence along the common line of Land Lots 5 and 16 S29°53'47"E for a distance of 300.33 feet to an angle iron found; thence leaving said Land Lot Line S61°29'15"W for a distance of 300.43 feet to an angle iron found; thence S29°52'16"E for a distance of 299.87 feet to an angle iron found; thence N61°29'18"E for a distance of 299.54 feet to a 1/2" rebar found with cap inscribed "Rochester LSF # 00084" at the common line of Land Lots 5 and 16; thence along said Land Lot Line S29°37'10"E for a distance of 1311.66 feet to a 1/2" rebar set; thence leaving said Land Lot Line S53°47'58"W for a distance of 212.14 feet to a 1/2" rebar set; thence S26°40'05"W for a distance of 895.86 feet to a 1/2" rebar set; thence S35°38'35"E for a distance of 617.78 feet to a 1/2" rebar set; thence S45°12'15"E for a distance of 450.60 feet to a rock found at the northerly right of way of McEver Road (a.k.a. Hwy 53) (right of way varies); thence along said northerly right of way the following courses and distances: S59°26'31"W for a distance of 103.36 feet to a point; N66°41'02"W for a distance of 52.41 feet to a concrete monument found; N44°02'10"W for a distance of 44.00 feet to a point; S56°27'33"W for a distance of 132.57 feet to a concrete monument found; S79°44'17"W for a distance of 707.41 feet to a concrete monument found; N34°44'29"W for a distance of 44.81 feet to a concrete monument found; S54°37'29"W for a distance of 31.45 feet to a point; S53°59'26"W for a distance of 39.85 feet, more or less, to a point at the centerline of a creek; thence along the centerline of said creek, following the meanderings thereof, for a distance of 381.4 feet, more or less, to a point, said creek following a traverse line as follows: N55°58'38"W for a distance of 322.25 feet to a point; thence leaving the centerline of said creek N59°39'22"E for a distance of 37.08 feet, more or less, to an Army Corps of Engineers monument found; thence N29°49'38"W for a distance of 400.11 feet to an Army Corps of Engineers monument found; thence N59°39'12"E for a distance of 150.07 feet to an Army Corps of Engineers monument found; thence S75°07'25"E for a distance of 351.97 feet to an Army Corps of Engineers monument found; thence N59°41'48"E for a distance of 199.80 feet to a point;

thence N29°46'55"W for a distance of 450.19 feet to a 1/2" rebar set; thence N85°50'28"W for a distance of 681.35 feet to an angle iron found; thence N30°43'21"W for a distance of 1193.80 feet to a point; thence N61°27'16"E for a distance of 581.70 feet to an angle iron found; thence N30°18'35"W for a distance of 405.36 feet to an angle iron found; thence S61°31'01"W for a distance of 588.56 feet to an angle iron found; thence N29°49'16"W for a distance of 305.00 feet to a point at the common line of Land Lots 16 and 17; thence along said Land Lot Line N61°31'43"E for a distance of 332.50 feet to an angle iron found; thence leaving said Land Lot Line N30°11'08"W for a distance of 351.84 feet to a 1/2" open top pipe found at an angle iron found; thence S53°13'15"E for a distance of 486.62 feet to an angle iron found; thence N29°31'18"W for a distance of 388.00 feet to an angle iron found; thence N11°58'45"E for a distance of 487.85 feet to an angle iron found; thence S28°25'25"E for a distance of 223.36 feet to an angle iron found; thence N61°28'29"E for a distance of 350.00 feet to an Army Corps of Engineers monument found; thence S29°34'37"E for a distance of 248.84 feet to an Army Corps of Engineers monument found; thence N62°12'01"E for a distance of 490.90 feet to an angle iron found at the common line of Land Lots 4 and 17; thence S30°30'38"E for a distance of 445.27 feet to an angle iron found at the northeast corner of Land Lot 16, said corner being common to Land Lots 4, 5, 16, and 17, said point being the TRUE POINT OF BEGINNING.

Said tract or parcel of land contains 120.980 acres, more or less.

TITLE EXCEPTIONS

THE FOLLOWING EXCEPTIONS ARE LISTED IN SCHEDULE B, PART II OF THE COMMITMENT FOR TITLE INSURANCE ISSUED BY CHICAGO TITLE INSURANCE COMPANY (COMMITMENT NUMBER GA-CM-22-0099-COM(V5)), EFFECTIVE DATE OF AUGUST 10, 2022.

9. All matters shown on plat recorded in Plat Book 69, Page 25, Hall County, Georgia Records.

10. All matters shown on plat recorded in Plat Book 69, Page 26, aforesaid Records.

11. All matters shown on plat recorded in Plat Book 69, Page 178, aforesaid Records.

12. All matters shown on plat recorded in Plat Book 69, Page 179, aforesaid Records.

13. All matters shown on plat recorded in Plat Book 69, Page 180, aforesaid Records.

14. All matters shown on plat recorded in Plat Book 69, Page 181, aforesaid Records.

15. All matters shown on plat recorded in Plat Book 69, Page 182, aforesaid Records.

16. All matters shown on plat recorded in Plat Book 69, Page 183, aforesaid Records.

17. All matters shown on plat recorded in Plat Book 69, Page 184, aforesaid Records.

18. All matters shown on plat recorded in Plat Book 72, Page 84, aforesaid Records.

19. All matters shown on plat recorded in Plat Book 85, Page 204, aforesaid Records.

20. All matters shown on plat recorded in Plat Book 85, Page 205, aforesaid Records.

21. All matters shown on plat recorded in Plat Book 85, Page 256, aforesaid Records.

22. All matters shown on plat recorded in Plat Book 87, Page 212-A, aforesaid Records.

23. All matters shown on plat recorded in Plat Book 307, Page 193-A, aforesaid Records.

24. Easement from T. M. Gould to Georgia Power Company, dated October 24, 1911, filed for record March 30, 1912, recorded in Deed Book 23, Page 219, aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; DESCRIPTION TOO VAGUE TO DETERMINE LOCATION)

25. Easement from John R. Mooney to Georgia Power Company, dated May 23, 1911, filed for record April 6, 1912, recorded in Deed Book 23, Page 532, aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; DESCRIPTION TOO VAGUE TO DETERMINE LOCATION)

26. Easement for Right of Way from T. M. Gould to Georgia Power Company, dated April 19, 1927, filed for record April 25, 1927, recorded in Deed Book 52, Page 104, aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; DESCRIPTION TOO VAGUE TO DETERMINE LOCATION)

27. Easement from T. M. Gould to Commissioners of Roads & Revenues, Hall County, dated March 13, 1937, filed for record May 17, 1937, recorded in Deed Book 75, Page 157, aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; NOT PLOTTABLE)

28. Easement from T. M. Gould to Commissioners of Roads & Revenues, Hall County, dated March 13, 1937, filed for record May 17, 1937, recorded in Deed Book 75, Page 158, aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; NOT PLOTTABLE)

29. Easement from T. M. Gould to Georgia Power Company, dated May 21, 1937, filed for record June 15, 1937, recorded in Deed Book 75, Page 308, aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; DESCRIPTION TOO VAGUE TO DETERMINE LOCATION)

30. Easement from Mrs. L. J. Stringer to Georgia Power Company, dated May 24, 1937, filed for record June 15, 1937, recorded in Deed Book 75, Page 3[illegible], aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; DESCRIPTION TOO VAGUE TO DETERMINE LOCATION)

31. Easement from J. S. Gould to Georgia Power Company, dated July 23, 1946, filed for record August 6, 1946, recorded in Deed Book 113, Page 5[illegible], aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; DESCRIPTION TOO VAGUE TO DETERMINE LOCATION)

32. Option for Right of Way from J. S. Gould to Georgia Power Company, a corporation, dated May 26, 1955, filed for record June 21, 1955, recorded in Deed Book 151, Page 481, aforesaid Records. (As of Property 1, 2 and 3) (AFFECTS SUBJECT PROPERTY; NOT PLOTTABLE)

33. Easement for Right of Way from J. S. Gould to Georgia Power Company, a corporation, dated August 11, 1955, filed for record August 31, 1955 at 8:00 a.m., recorded in Deed Book 152, Page 586, aforesaid Records. (AFFECTS SUBJECT PROPERTY; NOT PLOTTABLE)

34. Easement contained Judgment on the Declaration of Taking United States of America vs. 553.85 Acres of land more or less, situate in Hall County, State of Georgia and Roy M. Gross, et al., dated December 12, 1955, recorded in Deed Book 160, Page 1, aforesaid Records. (DOES NOT AFFECT SUBJECT PROPERTY)

35. Easement contained Judgment on the Declaration of Taking United States of America vs. First Dollars, et al., dated April 16, 1956, recorded in Deed Book 165, Page 131, aforesaid Records. (DOES NOT AFFECT SUBJECT PROPERTY)

36. Right of Way Deed from Joseph Willmon and Tim Willmon to the Department of Transportation, dated September 20, 1977, filed for record January 27, 1978 at 2:00 p.m. at 3:00 p.m., recorded in Deed Book 652, Page 232, aforesaid Records. (ESTABLISHED RIGHT OF WAY ALONG A PORTION OF FRONTAGE; MOSTLY CONTAINED WITHIN CURRENT RIGHT OF WAY)

TITLE EXCEPTIONS (CONTINUED)

37. Right of Way Deed from as one of the heirs of the Kate A. Gould Estate, Frances Elizabeth Hall to the Department of Transportation, dated March 16, 1978, filed for record March 20, 1978 at 10:30 a.m., recorded in Deed Book 653, Page 574, aforesaid Records. (DOES NOT AFFECT SUBJECT PROPERTY)

38. Right of Way Deed from as one of the heirs of the Kate A. Gould Estate, E. P. Atchison to the Department of Transportation, dated March 16, 1978, filed for record March 20, 1978 at 10:30 a.m., recorded in Deed Book 653, Page 576, aforesaid Records. (DOES NOT AFFECT SUBJECT PROPERTY)

39. Right of Way Deed from as one of the heirs of the Kate A. Gould Estate, Jacqueline C. O'Kelley to the Department of Transportation, dated March 3, 1978, filed for record March 20, 1978 at 10:30 a.m., recorded in Deed Book 653, Page 578, aforesaid Records. (DOES NOT AFFECT SUBJECT PROPERTY)

40. Right of Way Deed from as one of the heirs of the Kate A. Gould Estate, Nannelle C. Tanner to the Department of Transportation, dated March 16, 1978, filed for record March 20, 1978 at 10:30 a.m., recorded in Deed Book 653, Page 580, aforesaid Records. (DOES NOT AFFECT SUBJECT PROPERTY)

41. Right of Way Deed from as one of the heirs of the Kate A. Gould Estate, S.H. Atchison to the Department of Transportation, dated March 15, 1978, filed for record March 20, 1978 at 10:30 a.m., recorded in Deed Book 653, Page 582, aforesaid Records. (DOES NOT AFFECT SUBJECT PROPERTY)

42. Right of Way Deed from as one of the heirs of the Kate A. Gould Estate, Martha G. Hines to the Department of Transportation, dated March 15, 1978, filed for record March 20, 1978 at 10:30 a.m., recorded in Deed Book 653, Page 584, aforesaid Records. (DOES NOT AFFECT SUBJECT PROPERTY)

43. Right of Way Deed from as one of the heirs of the Kate A. Gould Estate, Joe P. Covington to the Department of Transportation, dated March 16, 1978, filed for record March 20, 1978 at 10:30 a.m., recorded in Deed Book 653, Page 586, aforesaid Records. (DOES NOT AFFECT SUBJECT PROPERTY)

44. Right of Way Easement from Elan (Leon Ware) to the Southern Bell Telephone and Telegraph Company, dated October 13, 1980, filed for record October 21, 1980 at 3:45 p.m., recorded in Deed Book 775, Page 5[illegible], aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; DESCRIPTION TOO VAGUE TO DETERMINE LOCATION)

45. Easement from Dr. Alan F. Tyler to Georgia Power Company, dated April 15, 1983, filed for record April 19, 1983 at 9:00 a.m., recorded in Deed Book 765, Page 551, aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; DESCRIPTION TOO VAGUE TO DETERMINE LOCATION)

46. Easement and Boundary Line Agreement by and between Elan Pharmaceutical Research Corporation, a Georgia corporation and Pittman Green & Griggs Laboratory, Inc., a Georgia corporation, dated December 22, 1983, filed for record December 23, 1983 at 10:09 a.m., recorded in Deed Book 833, Page 6, aforesaid Records. (DOES NOT AFFECT SUBJECT PROPERTY)

47. Easement from Elan Pharmaceutical Research Corp. to the City of Gainesville, Georgia, dated September 27, 1991, filed for record October 9, 1991 at 2:40 p.m., recorded in Deed Book 1639, Page 237, aforesaid Records. (AFFECTS SUBJECT PROPERTY, AS PLOTTED)

48. Right of Way Deed from Elan Pharma (MA), Inc. to the Department of Transportation, dated August 4, 1993, filed for record April 4, 1993 at 4:59 p.m., recorded in Deed Book 2007, Page 229, aforesaid Records. (DOES NOT AFFECT SUBJECT PROPERTY; CONTAINED WITHIN CURRENT RIGHT OF WAY)

49. Easement from Elan Pharma, Inc. to the City of Gainesville, Georgia, dated January 26, 1994, filed for record April 27, 1994 at 2:28 p.m., recorded in Deed Book 2175, Page 155, aforesaid Records. (AFFECTS SUBJECT PROPERTY, AS PLOTTED)

50. Right of Way Deed from Elan Pharma (MA), Inc., a Massachusetts corporation to Georgia Department of Transportation, dated February 14, 2002, filed for record April 5, 2002 at 4:05 p.m., recorded in Deed Book 4185, Page 545, aforesaid Records. (PERTAINS TO EXISTING RIGHT OF WAY OF MCEVER ROAD aka Hwy 53. LIMITED ACCESS RESERVATION MAY AFFECT SUBJECT PROPERTY)

51. Easement from Elan Holdings, Inc. f/k/a Elan Pharma (MA), Inc. to Georgia Power Company, dated November 15, 2002, filed for record December 17, 2002 at 11:48 a.m., recorded in Deed Book 4407, Page 331, aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; DESCRIPTION TOO VAGUE TO DETERMINE LOCATION)

52. Easement for Anchors Guy Poles and Wires from Elan Holdings, Inc. f/k/a Elan Pharma (MA), Inc. to Georgia Power Company, dated March 3, 2003, filed for record March 25, 2003 at 11:35 a.m., recorded in Deed Book 4506, Page 572, aforesaid Records. (MAY AFFECT SUBJECT PROPERTY; DESCRIPTION TOO VAGUE TO DETERMINE LOCATION)

SYMBOL LEGEND

- 1/2" REBAR FOUND
- 1/2" REBAR SET
- RIGHT-OF-WAY MONUMENT FOUND
- ADJOINING LOT NUMBER
- LOT NUMBER
- LAND LOT NUMBER
- AIR CONDITIONING UNIT
- BENCHMARK
- BOLLARD
- HANDICAP PARKING SPOT
- SIGN
- MANHOLE - UNKNOWN TYPE
- HANDHOLE
- CABLE TV BOX
- CABLE TV MANHOLE
- CABLE TV PEDESTAL
- ELECTRIC BOX
- ELECTRIC MANHOLE
- ELECTRIC METER
- ELECTRIC PEDESTAL
- GUY WIRE AND ANCHOR
- GUY POLE
- LIGHT POLE (LP)
- POWER POLE (PP)
- SERVICE POLE
- HIGH VOLTAGE POWER POLE (HVPP)
- TRANSFORMER
- GAS MANHOLE
- GAS VALVE
- GAS METER
- SANITARY SEWER CLEAN OUT
- SANITARY SEWER MANHOLE
- STORM SEWER CLEAN OUT
- DOUBLE WING CATCH BASIN
- SINGLE WING CATCH BASIN
- CURB INLET
- DROP INLET
- FLARED END SECTION
- HEADWALL
- JUNCTION BOX
- WEIR INLET
- YARD INLET
- TELEPHONE BOX
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- PEDESTRIAN SIGNAL POLE
- TRAFFIC SIGNAL BOX
- TRAFFIC SIGNAL POLE
- FIRE DEPARTMENT CONNECTION
- FIRE HYDRANT
- IRRIGATION CONTROL VALVE
- POST INDICATOR VALVE
- WATER MANHOLE
- WATER METER
- WATER VALVE
- WATER VAULT
- TREE

TOTAL AREA = 120.980 ACRES±

ABBREVIATIONS

A.I.F.	ANGLE IRON FOUND
BC	BACK OF CURB
BL	BUILDING LINE
BSL	BUILDING SETBACK LINE
C&G	CURB AND GUTTER
C.L.	CENTERLINE
C.L.F.	CHAIN LINK FENCE
CMF	CONCRETE MONUMENT FOUND
CONC.	CONCRETE
COE	ARMY CORPS OF ENGINEERS
CTP	CRIMPED TOP PIPE
DB	DEED BOOK
D.E.	DRAINAGE EASEMENT
EX.	EXISTING
EP	EDGE OF PAVEMENT
FEN.	FENCE
L.L.L.	LAND LOT LINE
O.T.P.	OPEN TOP PIPE
PB	PLAT BOOK
PG.	PAGE
POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
PROP	PROPOSED
R/W	RIGHT OF WAY
SS	SANITARY SEWER
S.S.E.	SANITARY SEWER EASEMENT
P.L.	PROPERTY LINE
SSMH	SANITARY SEWER MANHOLE
U.E.	UTILITY EASEMENT
CI	CURB INLET
DI	DROP INLET
DWCB	DOUBLE WING CATCH BASIN
FES	FLARED END SECTION
HW	HEADWALL
JB	JUNCTION BOX
OCS	OUTLET CONTROL STRUCTURE
SWCB	SINGLE WING CATCH BASIN
WI	WEIR INLET
YI	YARD INLET
CMP	CORRUGATED METAL PIPE
DIP	DUCTILE IRON PIPE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
PVC	POLYVINYL CHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE

LINE TABLE

LINE	BEARING	DISTANCE
L1	S59°26'31"W	103.36'
L2	N66°41'02"W	52.41'
L3	N44°02'10"W	44.00'
L4	S56°27'33"W	132.57'
L5	N34°44'29"W	44.81'
L6	S54°37'29"W	31.45'
L7	S53°59'26"W	39.85'±
L8	N59°39'22"E	37.08'±

LINE TYPE LEGEND

- ADJOINING PROPERTY LINE
- RIGHT-OF-WAY CENTERLINE
- CREEK CENTERLINE
- LAND LOT LINE
- METAL FENCE
- WIRE FENCE
- WOOD FENCE
- GUARDRAIL
- RAILROAD TRACK
- OVERHEAD UTILITY LINE
- UNDERGROUND CABLE TV LINE
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND FIBER OPTIC LINE
- UNDERGROUND GAS PIPE
- UNDERGROUND SANITARY SEWER PIPE
- UNDERGROUND STORM SEWER PIPE
- UNDERGROUND STREET LIGHTING LINE
- UNDERGROUND TELEPHONE LINE
- UNDERGROUND TRAFFIC LINE
- UNDERGROUND WATER PIPE

200 0 200 300
1" = 100'
SCALE IN FEET

MONUMENTS OF NOTE

MONUMENT	DESCRIPTION
PF "A"	CAP WITH INSCRIPTION "ROCHESTER LSF000084"
PF "B"	ARMY CORPS OF ENGINEERS BRASS DISK (0.14' NORTHEAST OF PL)
PF "C"	ARMY CORPS OF ENGINEERS BRASS DISK (0.11' NORTHEAST OF PL)
PF "D"	1/2" REBAR FOUND (0.28' SOUTHWEST OF PL)
PF "E"	1/2" REBAR FOUND (0.08' SOUTHWEST OF PL)
PF "F"	1/2" REBAR FOUND (0.11' SOUTHWEST OF PL)
PF "G"	1/2" REBAR FOUND (0.31' SOUTHWEST OF PL)
PF "H"	3/4" IRON ROD FOUND (0.07' NORTHEAST OF PL)
PF "I"	3/4" IRON ROD FOUND (BENT) (0.25' NORTHEAST OF PL)
PF "J"	3/4" REBAR FOUND (0.20' NORTHEAST OF PL)
PF "K"	1/2" REBAR FOUND (ON LINE)
PF "L"	3/4" REBAR FOUND (0.08' SOUTHWEST OF PL)

ALTA/NSPS CERTIFICATION

TO: WEEKLEY HOMES, LLC AND CHICAGO TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 8, 13 AND 16 OF TABLE A THEREOF.

THE FIELD WORK WAS COMPLETED ON DECEMBER 3, 2021. A SUBSEQUENT SITE INSPECTION WAS COMPLETED ON OCTOBER 21, 2022.

DATE OF PLAT: NOVEMBER 10, 2022

JESSE R. GUNNIN, GA RLS NO. [illegible] 11.10.22
DATE

SURVEYOR'S CERTIFICATE (STATE OF GEORGIA)

THIS PLAT IS A RETRACEMENT OF AN EXISTING PARCEL OR PARCELS OF LAND AND DOES NOT SUBDIVIDE OR CREATE A NEW PARCEL OR MAKE ANY CHANGES TO ANY REAL PROPERTY BOUNDARIES. THE RECORDING INFORMATION OF THE DOCUMENTS, MAPS, PLATS, OR OTHER INSTRUMENTS WHICH CREATED THE PARCEL OR PARCELS ARE STATED HEREON. RECORDATION OF THIS PLAT DOES NOT IMPLY APPROVAL OF ANY LOCAL JURISDICTION, AVAILABILITY OF PERMITS, COMPLIANCE WITH LOCAL REGULATIONS OR REQUIREMENTS, OR SUITABILITY FOR ANY USE OR PURPOSE OF THE LAND. FURTHERMORE, THE UNDERSIGNED LAND SURVEYOR CERTIFIES THAT THIS PLAT COMPLIES WITH THE MINIMUM TECHNICAL STANDARDS FOR PROPERTY SURVEYS IN GEORGIA AS SET FORTH IN THE RULES AND REGULATIONS OF THE GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS AND AS SET FORTH IN O.C.G.A. SECTION 15-6-67.

JESSE R. GUNNIN, GA RLS NO. [illegible] 11.10.22
DATE

ALTA/NSPS LAND TITLE SURVEY FOR:
WEEKLEY HOMES, LLC AND CHICAGO TITLE INSURANCE COMPANY
LOCATED IN LAND LOTS 16 & 17
8th DISTRICT
CITY OF GAINESVILLE
HALL COUNTY, GEORGIA
NOVEMBER 10, 2022

REVISIONS
DATE

GUNNIN SURVEY

DRAWN BY: JZC
CHECKED BY: JRG
PROJECT NO. 22036
SHEET 1 OF 1

FILENAME: 22036 Gould Drive 1300 Gould Weekley ALTA.dwg PLOT DATE: 11.10.2022

36

LANIER LANDING

MAPS & SURVEYS

Land Use Plan

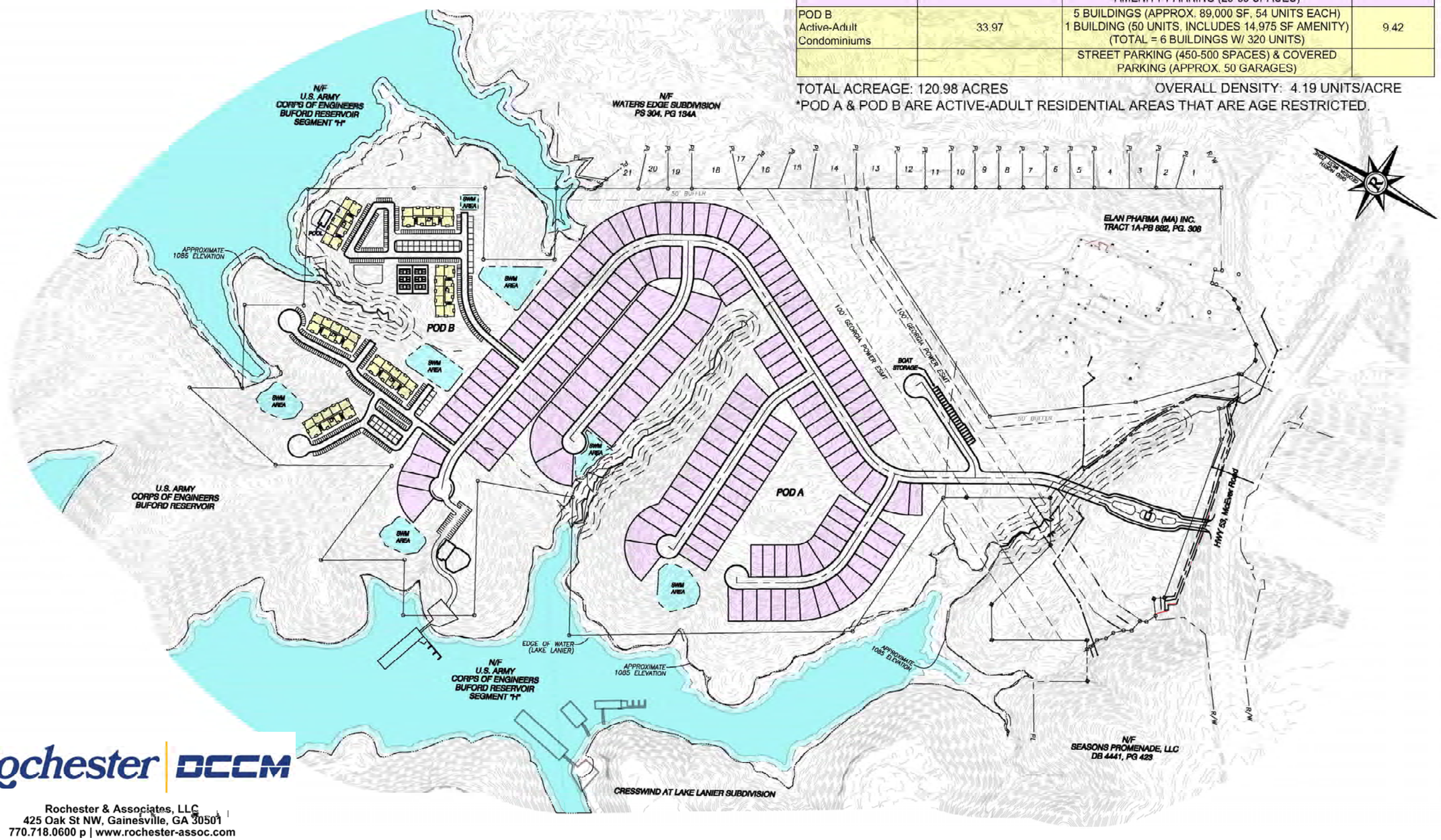
See next page

LANIER LANDING

LANIER LANDING LAND USE PLAN			
POD	AREA (ACRES)	FEATURES	UNIT DENSITY (UNITS/ACRE)
POD A Active-Adult Homes	87.01	50' LOTS (105 UNITS)	2.15
		60' LOTS (42 UNITS)	
		80' LOTS (20 LOTS W/ PAIRED VILLAS = 40 UNITS) (TOTAL = 187 UNITS)	
		AMENITY CLUBHOUSE (APPROX. 5,000 SF), PRIVATE DOCKS (APPROX. 8,600 SF) & BOAT STORAGE	
		AMENITY PARKING (25-35 SPACES)	
POD B Active-Adult Condominiums	33.97	5 BUILDINGS (APPROX. 89,000 SF, 54 UNITS EACH) 1 BUILDING (50 UNITS, INCLUDES 14,975 SF AMENITY) (TOTAL = 6 BUILDINGS W/ 320 UNITS)	9.42
		STREET PARKING (450-500 SPACES) & COVERED PARKING (APPROX. 50 GARAGES)	

TOTAL ACREAGE: 120.98 ACRES OVERALL DENSITY: 4.19 UNITS/ACRE

*POD A & POD B ARE ACTIVE-ADULT RESIDENTIAL AREAS THAT ARE AGE RESTRICTED.



Rochester | DCCM

Rochester & Associates, LLC
425 Oak St NW, Gainesville, GA 30501
770.718.0600 p | www.rochester-assoc.com

MAPS & SURVEYS

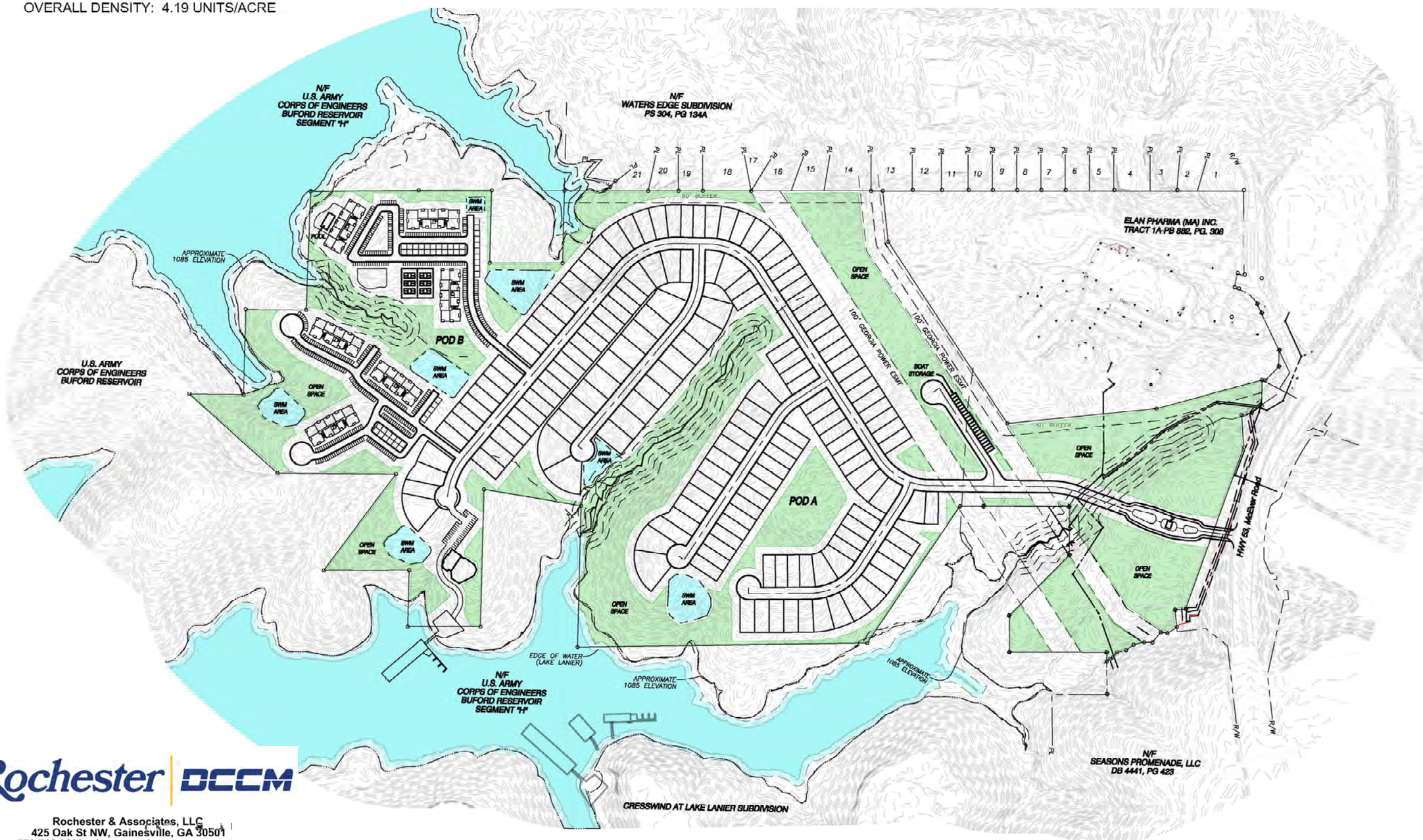
LANIER LANDING

Proposed Open Space Plan

See next page

LANIER LANDING OPEN SPACE PLAN	
POD	AREA (ACRES)
POD A Active-Adult Homes	31.73
POD B Condominiums	7.06
TOTAL OPEN SPACE	38.79 (32% OF TOTAL ACREAGE)

TOTAL ACREAGE: 120.98 ACRES
OVERALL DENSITY: 4.19 UNITS/ACRE



Rochester | DCCM

Rochester & Associates, LLC
425 Oak St NW, Gainesville, GA 30501
770.718.0600 p | www.rochester-assoc.com

Stock Images obtained from the following photographers:

Ameen Fahmy
Courtney Smith
Janosh Lino
Annie Spratt
David Schultz
Jenn Wood
Blake Wheeler
Eric Ward
Katarzyna Grabowska
Brandon
Carson Ignacio
Brosa Mario
Sabri Tuzcu
Ronnie George
Skyler Smith
Venti Views
Toa Heftiba
Todd Quackenbush

Georgia Mountains Regional Commission

DRI Review Findings

TO: Matt Tate, Deputy Director
City of Gainesville Community and Economic Development
Other Interested Parties

FROM: Adam Hazell, AICP, Planning Director

DATE: September 11, 2023

SUBJECT: DRI Project Review, City of Gainesville

PROJECT: **DRI-4011**, Lanier Landing

The Georgia Mountains Regional Commission (GMRC) has completed the review of the project identified above. Based on comments received and staff analysis of this project, conducted in accordance with the Georgia Department of Community Affair's Procedures for the Review of Developments of Regional Impact, the GMRC recommends *the City work with the GHMPO and GDOT to review the proposed configuration of access and possible impacts to McEver Road and the intersection of McEver and Browns Bridge. The GMRC further recommends that the optimal performance level for McEver would preclude the need of a traffic signal at the entrance to the proposed development.* Please note that this finding is advisory only and assumes the project will proceed as presented to the GMRC and will comply with all applicable local, State and federal rules and regulations.

Copies of the staff review, any comments from interested stakeholders and any recommendations have been included with this memo. They should be considered and addressed by the local government in its final determination and review/permitting procedures for the finding to remain as stated.

P.O. Box 1720 • Gainesville, Georgia 30503 • Phone (770)538-2626 • FAX (770)538-2625

Georgia Mountains Regional Commission

DRI #4011, Lanier Landing
STATEMENT OF FINDING

Based on the information provided, comments received, a review of the local comprehensive plan and prevailing DRI review criteria, the GMRC staff analysis recommends *the City work with the GHMPO and GDOT to review the proposed configuration of access and possible impacts to McEver Road and the intersection of McEver and Browns Bridge. The GMRC further recommends that the optimal performance level for McEver would preclude the need of a traffic signal at the entrance to the proposed development*. This finding assumes the project will proceed as presented to the GMRC and only if the project complies with all applicable local, State and federal rules and regulations and if the following advisory comments and recommendations are considered and addressed.

Summary of Staff Review

- The proposed project is a mixed-use development consisting of 38 Townhomes, 138 Single-Family Detached Dwellings with a 6,700 sf Clubhouse, 415 Multi-Family Dwellings with a 6,700 sf Clubhouse, and a 29,750 sf Commercial Retail/Office/Restaurant element.

- The development is located on a peninsula along the eastern shoreline of Lake Lanier, covering a total of approximately 120 acres. The site is along the developing McEver Road corridor that features a variety of residential, commercial, and institutional uses. It is presumed the corridor will see additional development where land is available in the coming years as Hall County "builds out." The area has access to full utilities, with sufficient capacity to serve this development. ***No regional concerns regarding utilities.***

- Due to the site being a peninsula, access is entirely dependent on a single access point off McEver Road. The access would be aligned with an existing median break servicing the private driveway for a self-storage facility across the street, to enable left turn entries and exits. According to the traffic analysis provided, vehicle trips generated will amount to peak hour flows of 318 (AM) and 726 (PM). Total daily trips would register around 6,400. The analysis recommends modest improvements at the new intersection point to access the development, but implies a traffic signal analysis may be warranted in the future.

  The traffic analysis notes the nearest major intersection of McEver Road and Browns Bridge Road, which would receive a significant portion of the load from this development, is expected to regress to level of service "E" with or without the development, with some side street approaches reaching an "F." McEver Road is already a major point of congestion during peak commuting hours, with

P.O. Box 1720 • Gainesville, Georgia 30503 • Phone (770)538-2626 • FAX (770)538-2625

the Gainesville-Hall MPO recently completing a study focused on relieving the congestion.

The access point to the proposed development is within 1,200' of the McEver/ Browns Bridge intersection, a distance considered problematic for multiple signals under optimal traffic conditions, and certainly under sub-optimal conditions. Maintaining the free flow of McEver is considered crucial to the traffic along this critical arterial road, especially as future loading is expected to increase. Such background conditions imply the proposed access point should be addressed as unsuitable for a future signal or point for increased congestion. This is critical given the proposed project is reliant on the sole access point, meaning all traffic would flow through that intersection. Under normal conditions the GMRC recommends at least two access points for any residential project exceeding 100 units. Exacerbating the potential issues for the site access is the inclusion of dining at the front of the intersection, potentially causing hazards and congestion as residents compete with retail traffic at the narrow bottleneck.

Regarding the interior connectivity, it is understood the configuration of the peninsula, with the myriad of coves and topographic changes, limits the options for distribution of streets and development. Provisions for sidewalks or trails within the project would facilitate pedestrian access to amenity areas and possibly to the proposed commercial components.

The GMRC recommends the City work with the GHMPO and GDOT to review the proposed configuration of access and possible impacts to McEver Road and the intersection of McEver and Browns Bridge. The GMRC recommends that the optimal performance level for McEver would preclude the need of a traffic signal at the entrance to the proposed development.

- The project is located adjacent to, and will drain into, Lake Lanier, with significant frontage and proposals for lake access. Lake Lanier is among the state's premier recreation destinations and has multiple raw water intakes for serving the metro Atlanta region. Portions of the proposed project are located within the FEMA mapped flood plain. According to the application, the project *"will utilize a combination of vegetative buffers, water quality and channel protection ponds and runoff reduction techniques (as feasible) to mitigate any increased stormwater runoff from the project area. The low percentage of impervious area should further decrease the project's impacts."*

  The development has made a point of mostly maintaining buffers from drainage paths and limiting roadways and impervious surfaces. The prevailing topography will necessitate extra care to ensure proper filtration of runoff. As a WaterFirst

community and among the communities with permit access to the lake, Gainesville has a vested interest in maintaining the quality of Lanier and is considered experienced in prescribing best practices to mitigate runoff. It is suggested the City ensure there is a long-term plan in place to manage detention ponds and prevent accumulation of silt that degrades their integrity.

Assuming compliance with State and local regulations, no regional concerns regarding environmental protection. However, best environmental practices are encouraged regarding stormwater management.

CONSISTENCY REVIEW	
Is the proposed DRI compliant with …	**Comment**
The GMRC Regional Plan?	Generally speaking. Review of transportation access is recommended.
Other State or regional plans for the area?	Yes, though the City should consult the GHMPO to ensure the impacts of the development are in line with transportation plans for that area.
Applicable Service Delivery Agreements and/or land use management measures?	Yes
Projected capacity for utilities and services?	Yes
Are there any potential inter-jurisdictional conflicts identified by the GMRC?	No significant or standing conflict identified by staff.

Outside Comments Received
(Copies of full comments can be found as submitted attached to this report.)

- NA

DEVELOPMENT OF REGIONAL IMPACT

TRAFFIC STUDY
FOR
MIXED-USE DEVELOPMENT AT 1300 GOULD DRIVE

CITY OF GAINESVILLE, GEORGIA

Prepared for:

Weekley Homes, LLC.
5775 Glenridge Drive
Lakeside B, Suite 210
Atlanta, GA 30328

Prepared By:

A&R Engineering Inc.
2160 Kingston Court, Suite O
Marietta, GA 30067
Tel: (770) 690-9255 Fax: (770) 690-9210
www.areng.com

June 12, 2023
A & R Project # 23-032

EXECUTIVE SUMMARY

Traffic impacts were evaluated for the proposed mixed-use development located at 1300 Gould Drive near SR 53 (McEver Road) in the City of Gainesville, Georgia. The development will consist of:

- Single-Family Attached Housing – 38 Units
- Single-Family Detached Housing – 138 Units
- Multifamily Housing (Mid-Rise) – 415 Units
- Fast Casual Restaurants – 29,750 Square feet

The development proposes one full access driveway on SR 53 (McEver Road) aligned with Midgard Self Storage Driveway.

Existing and future operations during the AM peak hour (7:00 AM – 9:00 AM) and PM peak hour (4:00 PM – 6:00 PM) before and after completion of the project were analysed at the following intersections:

1. SR 53 (McEver Road) at SR 369 (Browns Bridge Road)
2. SR 53 (McEver Road) at Midgard Self Storage Driveway / Site Driveway
3. SR 53 (McEver Road) at Gould Drive / Waters Edge Road
4. SR 53 (Highway 53 / McEver Road at Spring Road / Pemmican Run

The results of future traffic operations analysis indicate that the signalized intersection of SR 53 and SR 369 will operate at LOS "E" in the PM peak both in "No-Build" and "Build" conditions. Some of the stop-controlled side street approaches will operate at levels-of-service of "F" in both AM and PM peaks hours especially the northbound and southbound driveway approaches at SR 53 at intersection 2 will experience long delays of over 300 seconds in the PM peak hour. The side street traffic volumes do not seem to meet warrants for installation of a traffic signal. No other improvement will improve the delays. We are therefore not recommending any other improvements. However, we recommend that a full signal warrant analysis be performed when the project is operational and evaluate if a traffic signal is warranted at that time.

In existing conditions, there is a "No U-Turn" sign on SR 53 eastbound approach at the existing median break at proposed driveway location. A request needs to be made to GDOT to remove the "No U-Turn" sign and permit a left-turn lane for traffic entering the site.

The following access configuration is recommended for the proposed site driveway intersections.

- <u>Site Driveway 1: Full access driveway on SR 53 aligned with Midgard Self Storage Driveway</u>
    - One entering and two exiting lanes.
    - Raised island for exiting right-turn lane.
    - Stop-sign controlled on the driveway approach with SR 53 remaining free flow.
    - Request removal of the existing "No U-Turn" sign and provide a Left-Turn Lane.
    - Right-Turn Lane for entering traffic.
    - Provide / Confirm adequate sight distance per AASHTO standards.

Perform Intersection Control Evaluation with Signal Warrant Analysis

TABLE OF CONTENTS

Item **Page**

1.0 Introduction 1
2.0 Existing Facilities / Conditions 4
2.1 Roadway Facilities 4
2.1.1 SR 53 (McEver Road) 4
2.1.2 SR 369 (Browns Bridge Road) 4
2.1.3 Gould Drive 4
2.1.4 Waters Edge Road 4
2.1.5 Spring Road 4
2.1.6 Pemmican Run 4
3.0 Study Methodology 5
3.1 Unsignalized Intersections 5
3.2 Signalized Intersections 6
4.0 Existing 2023 Traffic Analysis 7
4.1 Existing Traffic Volumes 7
4.2 Existing Traffic Operations 10
5.0 Proposed Development 11
5.1 Trip Generation 13
5.2 Trip Distribution 13
6.0 Future 2026 Traffic Analysis 15
6.1 Future “No-Build” Conditions 15
6.1.1 Annual Traffic Growth 15
6.2 Future “Build” Conditions 15
6.3 Auxiliary Lane Analysis 18
6.3.1 Left Turn Lane Analysis 18
6.3.2 Deceleration Turn Lane Analysis 18
6.4 Future Traffic Operations 19
7.0 Conclusions and Recommendations 21
7.1 Recommendation for Site Access Configuration 21
Appendix

LIST OF TABLES

Item **Page**

Table 1 – Level-of-service Criteria for Unsignalized Intersections 5
Table 2 – Level-of-service Criteria for Signalized Intersections 6
Table 3 – Existing Intersection Operations 10
Table 4 – Trip Generation 13
Table 5 – GDOT Requirements for Left Turn Lanes 18
Table 6 – GDOT Requirements for Deceleration Lanes 18
Table 7 – Future Intersection Operations 19

LIST OF FIGURES

Item **Page**

Figure 1 – Location Map 3
Figure 2 – Existing Weekday Peak Hour Volumes 8
Figure 3 – Existing Traffic Control and Lane Geometry 9
Figure 4 – Site Plan 12
Figure 5 – Trip Distribution and Site Generated Peak Hour Volumes 14
Figure 6 – Future (No-Build) Peak Hour Volumes 16
Figure 7 – Future (Build) Peak Hour Volumes 17
Figure 8 – Future Traffic Control and Lane Geometry 20

1.0 INTRODUCTION

The purpose of this study is to determine the traffic impact from the proposed mixed-use development located at 1300 Gould Drive in City of Gainesville, Georgia. The traffic analysis includes evaluation of the current operations and future conditions with the traffic generated by the development. The proposed development will consist of:

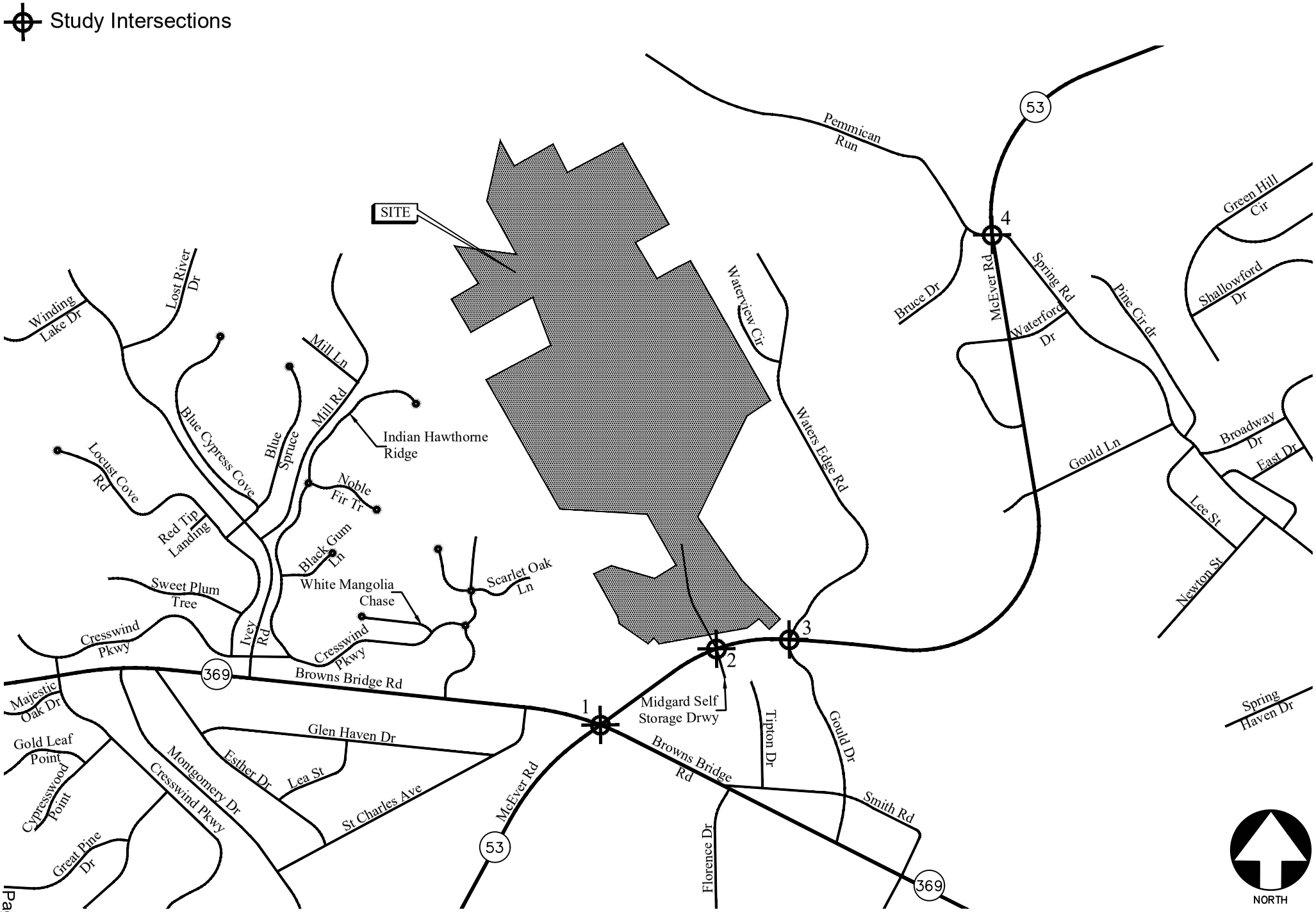
- Single-Family Attached Housing – 38 Units
- Single-Family Detached Housing – 138 Units
- Multifamily Housing (Mid-Rise) – 415 Units
- 3 Fast Casual Restaurants – 29,750 Square feet

The development proposes one full access driveway on SR 53 (McEver Road) aligned with Midgard Self Storage Driveway.

The AM and PM peak hours have been analyzed in this study. In addition to the site access points, this study includes the evaluation of traffic operations at the intersections of:

- SR 53 (McEver Road) at SR 369 (Browns Bridge Road)
- SR 53 (McEver Road) at Midgard Self Storage Driveway
- SR 53 (McEver Road) at Gould Drive / Waters Edge Road
- SR 53 (Highway 53 / McEver Road at Spring Road / Pemmican Run

Recommendations to improve traffic operations have been identified as appropriate and are discussed in detail in the following sections of the report. The location of the development and the surrounding roadway network is shown in Figure 1.



LOCATION MAP

FIGURE 1

A&R Engineering Inc.

2.0 EXISTING FACILITIES / CONDITIONS

2.1 Roadway Facilities

The following is a brief description of each of the roadway facilities located in proximity to the site:

2.1.1 SR 53 (McEver Road)

SR 53 (McEver Road) is a north-south, four-lane, median-divided roadway with a posted speed limit of 45 mph in the vicinity of the site. Georgia Department of Transportation (GDOT) traffic counts (Station ID's 139-0276 &139-0274) indicate that the daily traffic volume on SR 53 (McEver Road) in 2021 was 21,600 and 24,900 vehicles per day to the south and north of Waters Edge Road. GDOT classifies SR 53 (McEver Road) as a Principal Arterial - Other (Urban) roadway.

2.1.2 SR 369 (Browns Bridge Road)

SR 369 (Browns Bridge Road) is an east-west, four-lane including a two-way left-turn lane towards east of SR 53 and two-lane undivided roadway to the west of SR 53 and posted with a speed limit of 45 mph in the vicinity of the site. GDOT traffic counts (Station ID - 139-0431) indicate that the daily traffic volume on SR 369 (Browns Bridge Road) in 2021 was 20,900 vehicles per day to the east of SR 53. GDOT classifies SR 369 (Browns Bridge Road) as a Minor Arterial (Urban) roadway.

2.1.3 Gould Drive

Gould Drive is a north-south, two-lane, undivided roadway and posted with a speed limit of 30 mph in the vicinity of the site.

2.1.4 Waters Edge Road

Waters Edge Road is a north-south, two-lane roadway and posted with a speed limit of 30 mph in the vicinity of the site.

2.1.5 Spring Road

Spring Road is an east-west, two-lane, undivided roadway with a posted speed limit of 30 mph in the vicinity of the site. GDOT traffic counts (Station ID - 139-0718) indicate that the daily traffic volume on Spring Road in 2021 was 4,550 vehicles per day to the north of Bennett Circle. GDOT classifies Spring Road as a Major Collector (Urban) roadway.

2.1.6 Pemmican Run

Pemmican Run is an east-west, two-lane, undivided roadway. GDOT traffic counts (Station ID - 139-8033) indicate that the daily traffic volume on Spring Road in 2021 was 200 vehicles per day to the north-west of Bruce Drive. GDOT classifies Pemmican Run as a Major Collector (Urban) roadway.

3.0 STUDY METHODOLOGY

In this study, the methodology used for evaluating traffic operations at each of the subject intersections is based on the criteria set forth in the Transportation Research Board's Highway Capacity Manual, 6th edition (HCM 6). Synchro software, which utilizes the HCM methodology, was used for the analysis. The following is a description of the methodology employed for the analysis of unsignalized and signalized intersections.

3.1 Unsignalized Intersections

For unsignalized intersections controlled by a stop sign on minor streets, the level-of-service (LOS) for motor vehicles with controlled movements is determined by the computed control delay according to the thresholds stated in Table 1 below. LOS is determined for each minor street movement (or shared movement), as well as major street left turns. LOS is not defined for the intersection as a whole or for major street approaches. The LOS of any controlled movement which experiences a volume to capacity ratio greater than 1 is designated as "F" regardless of the control delay.

Control delay for unsignalized intersections includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Several factors affect the control delay for unsignalized intersections, such as the availability and distribution of gaps in the conflicting traffic stream, critical gaps, and follow-up time for a vehicle in the queue.

Level-of-service is assigned a letter designation from "A" through "F". Level-of-service "A" indicates excellent operations with little delay to motorists, while level-of-service "F" exists when there are insufficient gaps of acceptable size to allow vehicles on the side street to cross the main road without experiencing long delays.

TABLE 1 – LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

Control Delay (sec/vehicle)	LOS by Volume-to-Capacity Ratio*	
	v/c ≤ 1.0	**v/c > 1.0**
≤ 10	A	F
> 10 and ≤ 15	B	F
> 15 and ≤ 25	C	F
> 25 and ≤ 35	D	F
> 35 and ≤ 50	E	F
> 50	F	F

*The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection.

Source: Highway Capacity Manual, 6th edition, Exhibit 20-2 *LOS Criteria: Motorized Vehicle Mode*

3.2 Signalized Intersections

According to HCM procedures, LOS can be calculated for the entire intersection, each intersection approach, and each lane group. HCM uses control delay alone to characterize LOS for the entire intersection or an approach. Control delay per vehicle is composed of initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Both control delay and volume-to-capacity ratio are used to characterize LOS for a lane group. A volume-to-capacity ratio of 1.0 or more for a lane group indicates failure from capacity perspective. Therefore, such a lane group is assigned LOS F regardless of the amount of control delay.

Table 2 below summarizes the LOS criteria from HCM for motorized vehicles at signalized intersection.

Table 2 – Level-of-service Criteria for Signalized Intersections

Control Delay (sec/vehicle) *	**LOS for Lane Group by Volume-to-Capacity Ratio***	
	v/c ≤ 1.0	**v/c > 1.0**
≤ 10	A	F
> 10 and ≤ 20	B	F
> 20 and ≤ 35	C	F
> 35 and ≤ 55	D	F
> 55 and ≤ 80	E	F
> 80	F	F

*For approach-based and intersection wide assessments, LOS is defined solely by control delay

Source: Highway Capacity Manual, 6th edition, Exhibit 19-8 *LOS Criteria: Motorized Vehicle Mode*

LOS A is typically assigned when the volume-to-capacity (v/c) ratio is low and either progression is exceptionally favorable, or the cycle length is very short. LOS B is typically assigned when the v/c ratio is low and either progression is highly favorable, or the cycle length is short. However, more vehicles are stopped than with LOS A. LOS C is typically assigned when progression is favorable, or the cycle length is moderate. Individual *cycle failures* (one or more queued vehicles are not able to depart because of insufficient capacity during the cycle) may begin to appear at this level. Many vehicles still pass through the intersection without stopping, but the number of vehicles stopping is significant. LOS D is typically assigned when the v/c ratio is high and either progression is ineffective, or the cycle length is long. There are many vehicle-stops and individual cycle failures are noticeable. LOS E is typically assigned when the v/c ratio is high, progression is very poor, the cycle length is long, and individual cycle failures are frequent. LOS F is typically assigned when the v/c ratio is very high, progression is very poor, the cycle length is long, and most cycles fail to clear the queue.

4.0 EXISTING 2023 TRAFFIC ANALYSIS

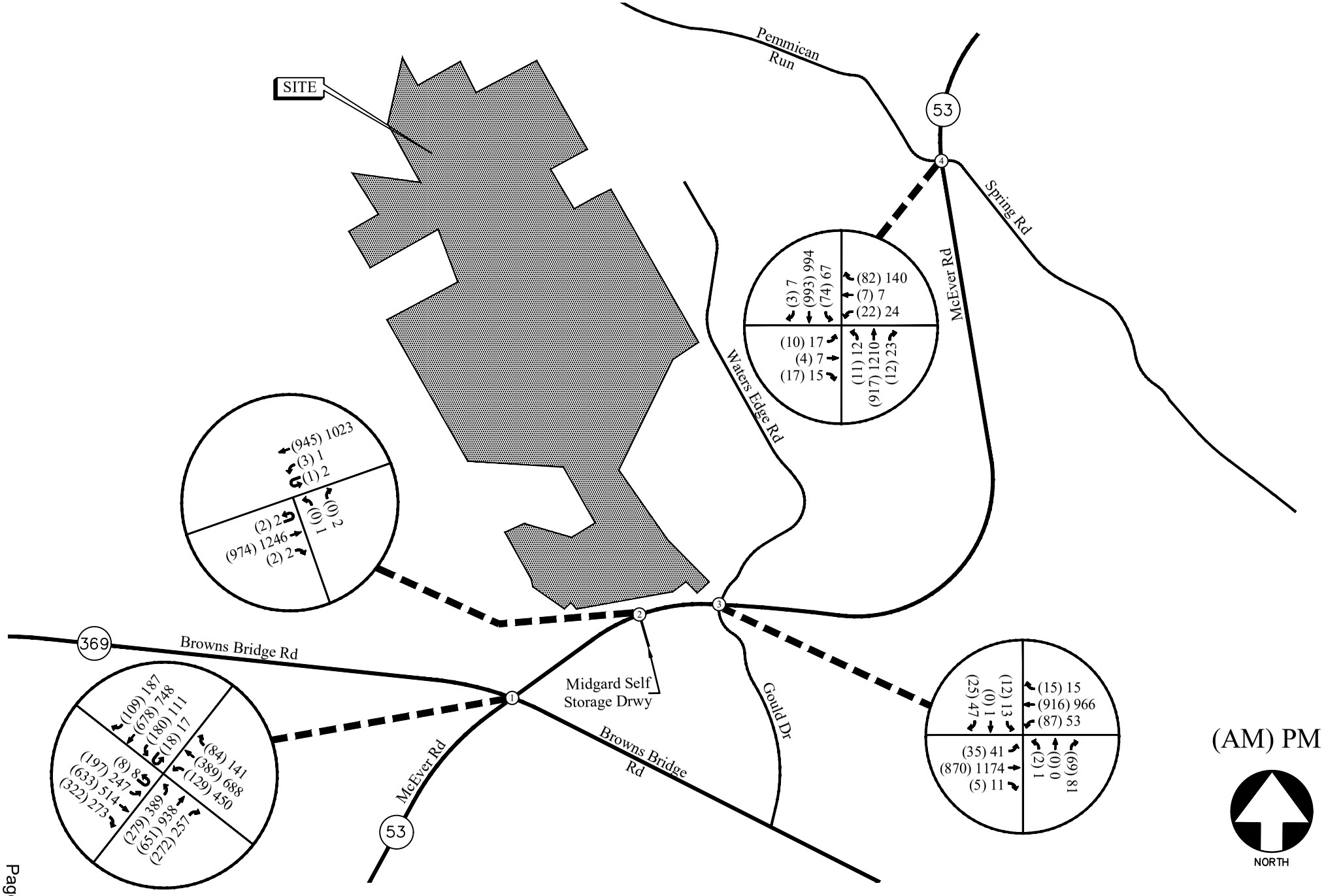
4.1 Existing Traffic Volumes

Existing traffic counts were obtained at the following study intersections:

- SR 53 (McEver Road) at SR 369 (Browns Bridge Road)
- SR 53 (McEver Road) at Midgard Self Storage Driveway
- SR 53 (McEver Road) at Gould Drive / Waters Edge Road
- SR 53 (Highway 53 / McEver Road at Spring Road / Pemmican Run

Turning movement counts were collected on Wednesday, March 08, 2023. All turning movement counts were recorded during the AM and PM peak hours between 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM, respectively. The four consecutive 15-minute interval volumes that summed to produce the highest volume at the intersections were then determined. These volumes make up the peak hour traffic volumes for the intersections counted and are shown in Figure 2.

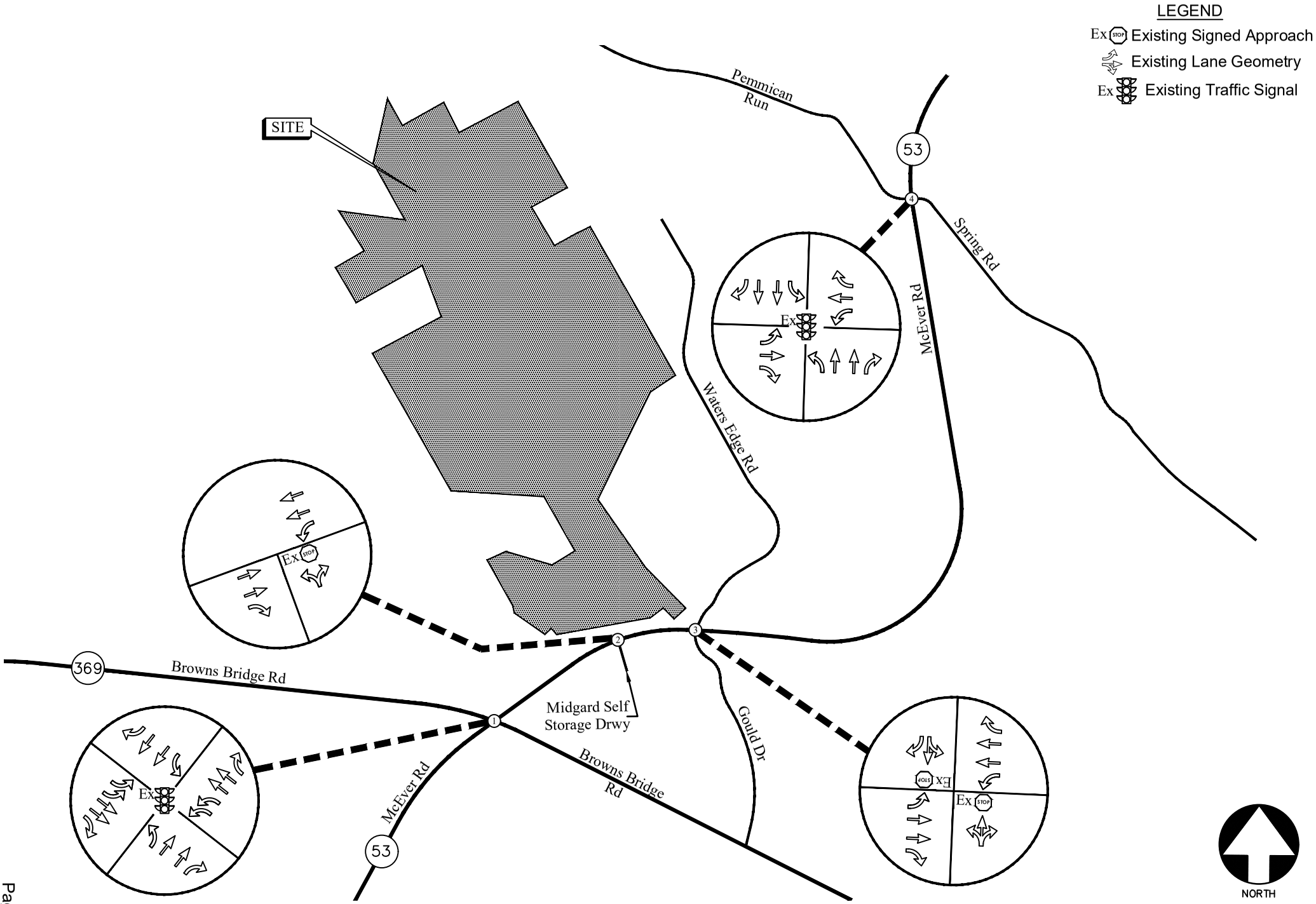
The existing traffic control and lane geometry for the intersections are shown in Figure 3.



EXISTING WEEKDAY PEAK-HOUR VOLUMES

FIGURE 2

A&R Engineering Inc.



EXISTING TRAFFIC CONTROL AND LANE GEOMETRY

FIGURE 3

A&R Engineering Inc.

4.2 Existing Traffic Operations

Existing 2023 traffic operations were analyzed at the study intersections in accordance with the HCM methodology. The results of the analyses are shown in Table 3.

Table 3 – Existing Intersection Operations

	Intersection	Traffic Control	LOS (Delay)	
			AM Peak Hour	PM Peak Hour
1	**SR 53 (McEver Road) at SR 369 (Browns Bridge Road)**	Signalized	**D (39.9)**	**D (52.6)**
	-Eastbound Approach		E (61.2)	E (69.6)
	-Westbound Approach		D (54.4)	E (66.6)
	-Northbound Approach		C (24.8)	D (38.1)
	-Southbound Approach		C (27.1)	D (41.5)
2	**SR 53 (McEver Road) at Midgard Self Storage Driveway**	Stop Controlled on NB Approach		
	-Westbound Left		B (12.6)	C (21.0)
	-Northbound Approach		A (0.0)	E (35.1)
3	**SR 53 (McEver Road) at Gould Drive / Waters Edge Road**	Stop Controlled on NB and SB Approaches		
	-Eastbound Left		B (10.7)	B (10.8)
	-Westbound Left		B (10.9)	B (12.5)
	-Northbound Approach		C (15.6)	C (17.6)
	-Southbound Approach		F (50.3)	F (53.7)
4	**SR 53 (Highway 53 / McEver Road at Spring Road / Pemmican Run**	Signalized	**B (11.8)**	**B (14.9)**
	-Eastbound Approach		D (52.9)	D (47.8)
	-Westbound Approach		E (60.7)	E (59.3)
	-Northbound Approach		A (9.0)	B (12.3)
	-Southbound Approach		A (7.9)	A (9.6)

The results of existing traffic operations analysis indicate that the signalized intersections are operating at overall LOS "D" or better in both AM and PM peak hours. Some stop-controlled approaches at un-signalized intersections are operating at levels-of-service "E" or "F" AM and/or both AM and PM peak hours. It is not uncommon for stop-control approaches at arterial roadways to experience longer delays due to the wait times to turn left on main roadways.

5.0 PROPOSED DEVELOPMENT

The development will consist of:

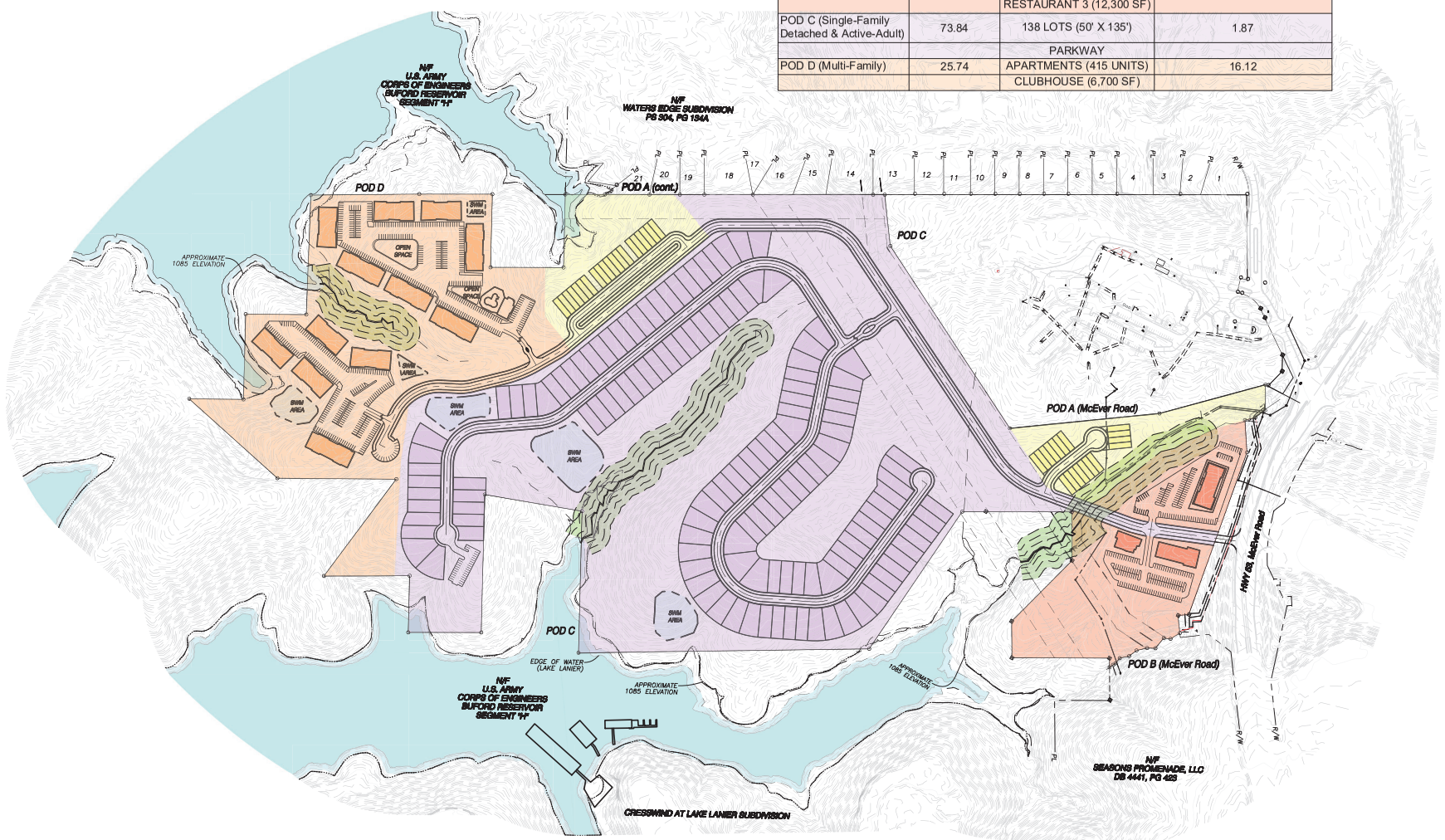
- Single-Family Attached Housing – 38 Units
- Single-Family Detached Housing – 138 Units
- Multifamily Housing (Mid-Rise) – 415 Units
- Fast Casual Restaurants – 29,750 Square feet

The development proposes one full access driveway on SR 53 (McEver Road) aligned with Midgard Self Storage Driveway.

A site plan is shown in Figure 4.

TOTAL ACREAGE: 120.97 ACRES
OVERALL DENSITY: 4.89 UNITS/ACRE
PARKING LOTS: 5 (4 LARGE)

GOULD DRIVE TRACT CONCEPT SITE PLAN			
POD	AREA (ACRES)	FEATURES	UNIT DENSITY (UNITS/ACRE)
POD A (McEver Road, Single-Family Attached)	10.50	TOWNHOMES (38 UNITS)	3.58
POD B (McEver Road)	10.99	RESTAURANT 1 (11,350 SF)	
		RESTAURANT 2 (6,100 SF)	
		RESTAURANT 3 (12,300 SF)	
POD C (Single-Family Detached & Active-Adult)	73.84	138 LOTS (50' X 135')	1.87
		PARKWAY	
POD D (Multi-Family)	25.74	APARTMENTS (415 UNITS)	16.12
		CLUBHOUSE (6,700 SF)	



Rochester & Associates, LLC
425 Oak St NW, Gainesville, GA 30501
770.718.0600 p | www.rochester-assoc.com

LAND USE PLAN
FOR:
GOULD DRIVE TRACT
LOCATED IN
LAND LOTS 16 & 17, 8th DISTRICT
CITY OF GAINESVILLE
HALL COUNTY, GEORGIA

ANY CHANGES OR ALTERATIONS MADE TO THESE CONSTRUCTION DRAWINGS WITHOUT THE WRITTEN CONSENT OF ROCHESTER & ASSOC. DO(N) VOID(S) THE SEAL SHOWN HEREON AND ARE PROHIBITED BY LAW. ALL REPRODUCTIONS OF ORIGINAL DRAWINGS ARE KEPT ON FILE FOR VERIFICATION OF ANY CHANGES.

GRAPHIC SCALE
100' 0' 200' 400'

NO.	DATE	DESCRIPTION

REVISIONS

SHEET 1 OF 1

DATE: 5/16/2023
SCALE: 1"=200'
JOB NO. G201204.DWH
DWG NO. G201204-DWH
DRAWN BY: ABU

5.1 Trip Generation

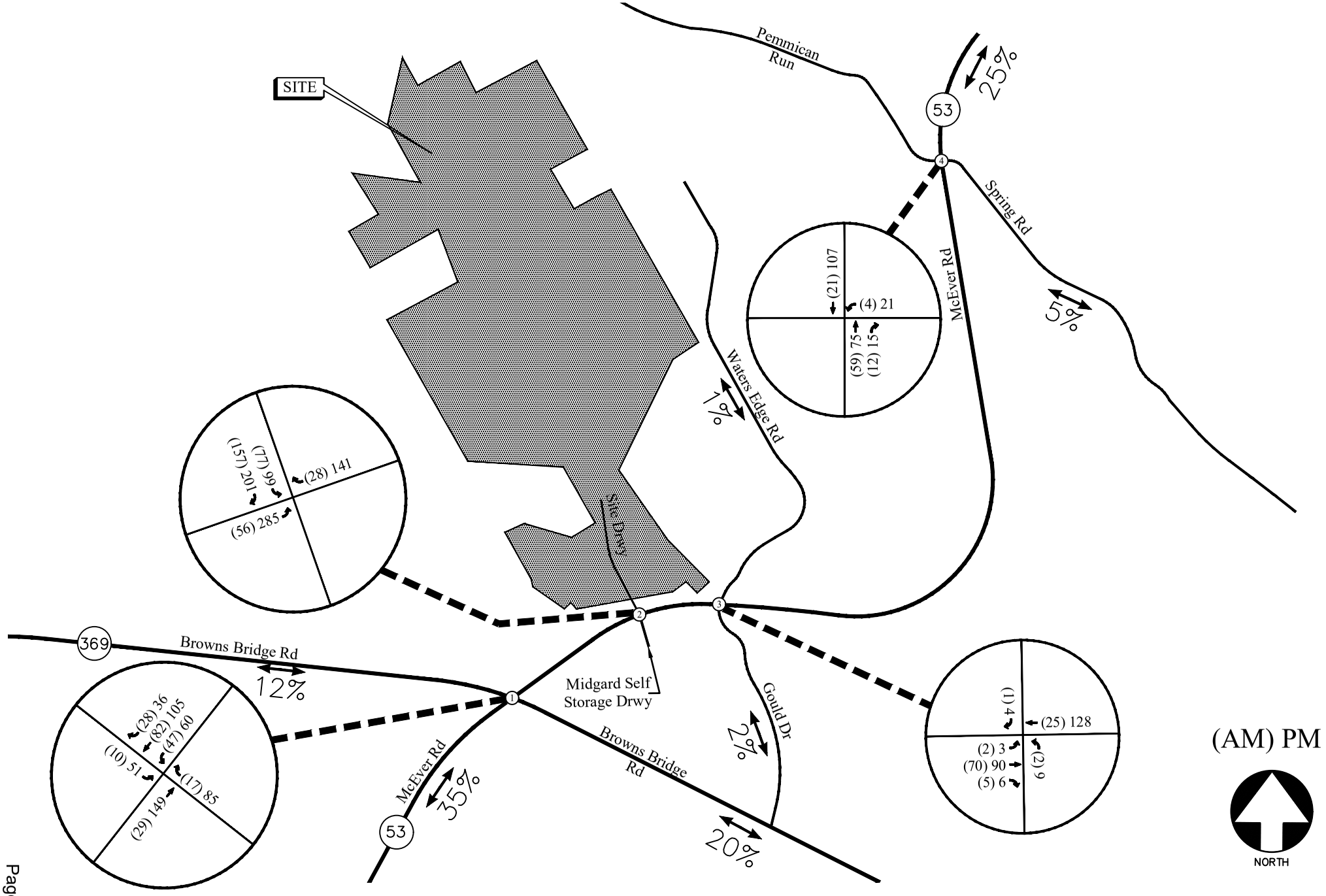
Trip generation estimates for the project were based on the rates and equations published in the 11th edition of the Institute of Transportation Engineers (ITE) Trip Generation report. This reference contains traffic volume count data collected at similar facilities nationwide. The trip generation was based on the following ITE Land Uses: *Land Use 210 – Single-Family Detached Housing, Land Use 215 – Single-Family Attached Housing, Land Use 221 – Multifamily Housing (Mid-Rise) and Land Use 930 – Fast Casual Restaurant.* The calculated total trip generation for the proposed development is shown in Table 4.

Table 4 – Trip Generation

Land Use	Size	AM Peak Hour			PM Peak Hour			24 Hour
		Enter	Exit	Total	Enter	Exit	Total	Two-way
ITE 215 – Single-Family Attached Housing	38 Units	4	10	14	11	8	19	239
Mixed-Use Reduction		0	0	0	-2	-2	-4	-20
ITE 210 – Single-Family Detached Housing	138 Units	25	75	100	85	50	135	1,357
Mixed-Use Reduction		-1	-1	-2	-11	-10	-21	-111
ITE 221 – Multifamily Housing (Mid-Rise)	415 Units	39	132	171	99	63	162	1,933
Mixed-Use Reduction		-2	-1	-3	-15	-14	-29	-158
ITE 930 – Fast Casual Restaurant	29,750 SF	21	22	43	285	233	518	2,890
Mixed-Use Reduction		-2	-3	-5	-26	-28	-54	-289
Total Trips (without Reductions)		**89**	**239**	**328**	**480**	**354**	**834**	**6,419**
New External Trips (with Reductions)		**84**	**234**	**318**	**426**	**300**	**726**	**5,841**

5.2 Trip Distribution

The trip distribution describes how traffic arrives and departs from the site. An overall trip distribution was developed for the site based on a review of the existing travel patterns in the area and the locations of major roadways and highways that will serve the development. The site-generated peak hour traffic volumes, shown in Table 4, were assigned to the study area intersections based on this distribution. The outer-leg distribution and AM and PM peak hour new traffic generated by the site are shown in Figure 5.



TRIP DISTRIBUTION AND SITE-GENERATED WEEKDAY PEAK HOUR VOLUMES

FIGURE 5

A&R Engineering Inc.

6.0 FUTURE 2026 TRAFFIC ANALYSIS

The future 2026 traffic operations are analyzed for the "Build" and "No-Build" conditions.

6.1 Future "No-Build" Conditions

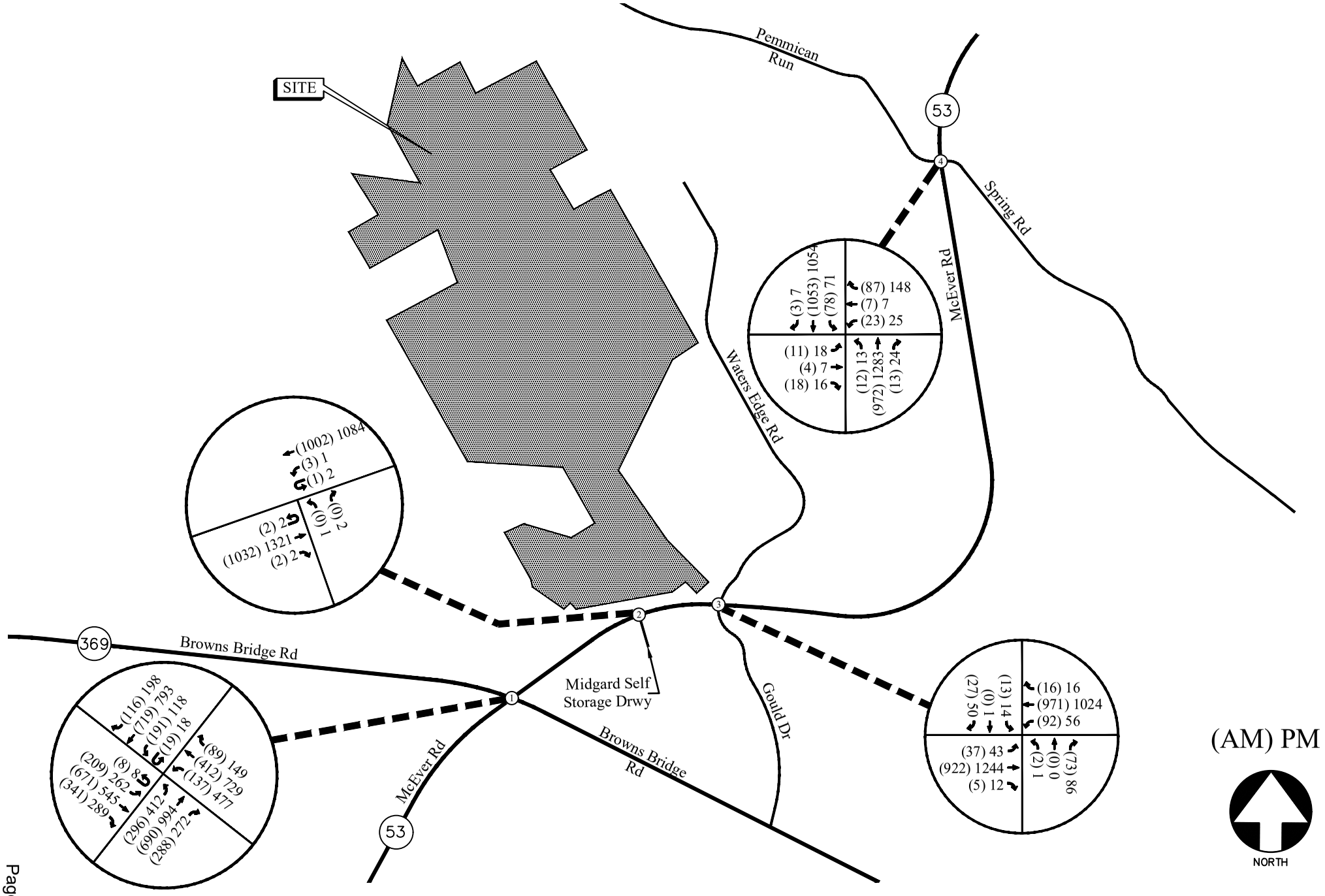
The "No-Build" (or background) conditions provide an assessment of how traffic will operate in the study horizon year without the study site being developed as proposed, with projected increases in through traffic volumes due to normal annual growth. The Future "No-Build" volumes consist of the existing traffic volumes (Figure 2) plus increases for annual growth of through traffic.

6.1.1 Annual Traffic Growth

In order to evaluate future traffic operations in this area, a projection of normal traffic growth was applied to the existing volumes. The Georgia Department of Transportation recorded average daily traffic volumes at several locations in the vicinity of the site. Reviewing the growth over the last three years revealed growth of approximately 2% in the area. This growth factor was applied to the existing traffic volumes between collector and arterial roadways to estimate the future year traffic volumes prior to the addition of site-generated traffic. The resulting Future "No-Build" volumes on the roadway are shown in Figure 6.

6.2 Future "Build" Conditions

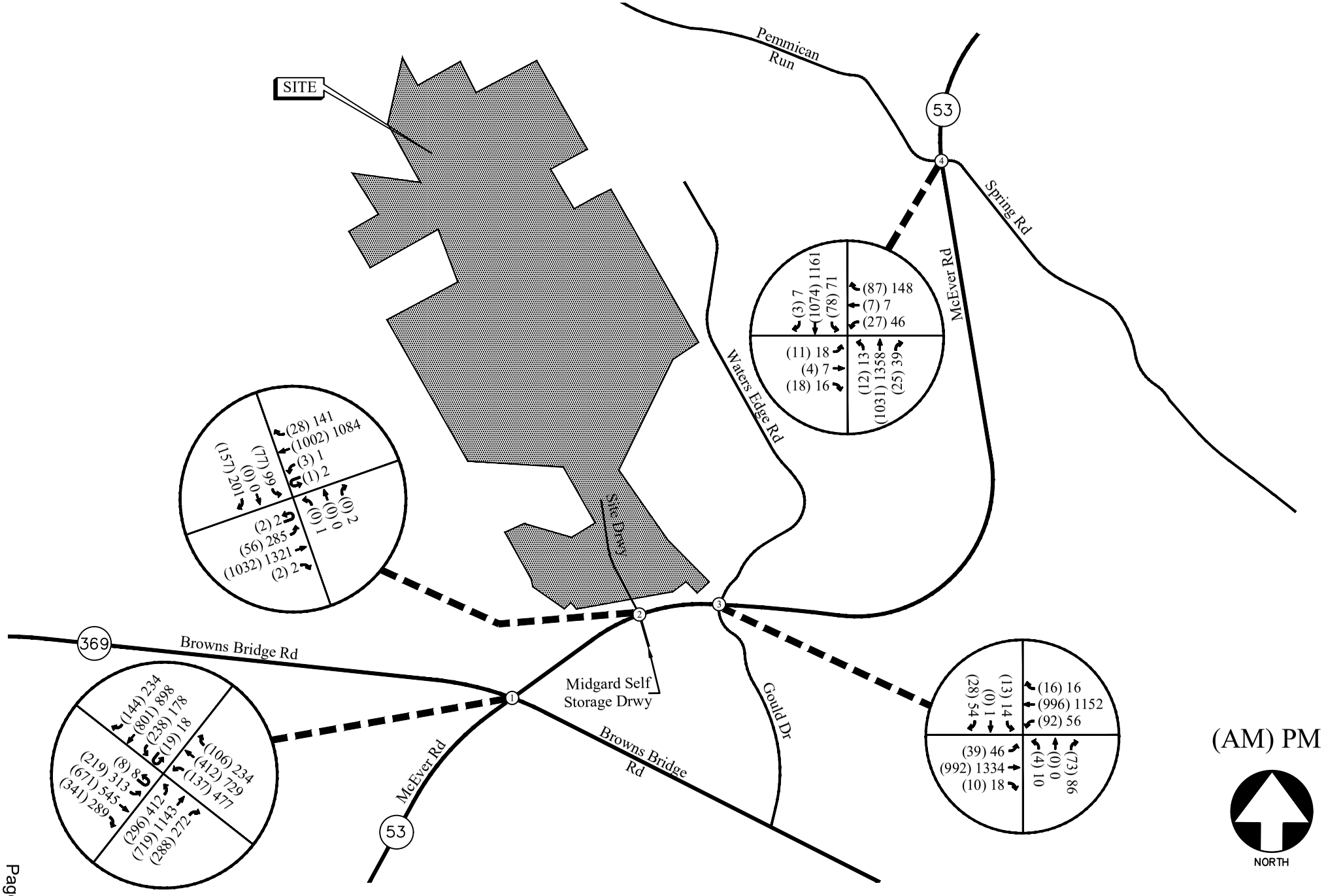
The "Build" or development conditions include the estimated background traffic from the "No-Build" conditions plus the added traffic from the proposed development. In order to evaluate future traffic operations in this area, the additional traffic volumes from the site (Figure 5) were added to base traffic volumes (Figure 6) to calculate the future traffic volumes after the construction of the development. These total future "Build" traffic volumes are shown in Figure 7.



FUTURE (NO-BUILD) WEEKDAY PEAK HOUR VOLUMES

FIGURE 6

A&R Engineering Inc.



FUTURE (BUILD) WEEKDAY PEAK HOUR VOLUMES

FIGURE 7

A&R Engineering Inc.

6.3 Auxiliary Lane Analysis

Included below are analyses for left-turn lanes and deceleration lanes for all site driveways per GDOT standards. The analyses below are based off the trip distribution included in Section 5.2. According to the trip distribution, the 24-hour two-way volume entering and exiting the site is 5,841 vehicles.

6.3.1 Left Turn Lane Analysis

For two lane roadways with AADT's greater than 10,000 vehicles and a posted speed limit of 45 mph, the daily site generated traffic left-turn movements threshold to warrant a left-turn lane is 250 left-turning vehicles a day. The projected left-turn volumes per day for each driveway is included below.

TABLE 5 – GDOT REQUIREMENTS FOR LEFT TURN LANES

Intersection	Left turn traffic (% total entering)	Left-turn Volume (vehicles/day)	Roadway Speed/ # lanes / ADT	GDOT Threshold (vehicles/ day)	Warrants met?
SR 53 at Midgard Driveway / Site Driveway	67%	**1957** (total trips) ÷ 2 × 0.67 = (5841) ÷ 2 x 0.67 = 1957	45 mph / 4-Lane / > 10,000	250	Yes

A left turn lane is warranted at the site driveway. There is a "No U-Turn" sign in existing conditions. A request to allow U-turn movement needs to be made and a left-turn lane needs to be installed.

6.3.2 Deceleration Turn Lane Analysis

For two lane roadways with AADT's greater than 10,000 vehicles and a posted speed limit of 45 mph, the daily site generated traffic right-turn movements threshold to warrant a deceleration lane is 75 right turning vehicles a day. The projected right-turn volumes per day for each driveway is included below.

TABLE 6 – GDOT REQUIREMENTS FOR DECELERATION LANES

Intersection	Right-turn traffic (% total entering)	Right-turn Volume (vehicles/day)	Roadway Speed/ # lanes / ADT	GDOT Threshold (vehicles/day)	Warrants met?
SR 53 at Midgard Driveway / Site Driveway	33%	**964** (total trips) ÷ 2 × 0.33 = (5841) ÷ 2 x 0.33 = 964	45 mph / 4-Lane / > 10,000	75	Yes

A deceleration lane is warranted at the site driveway.

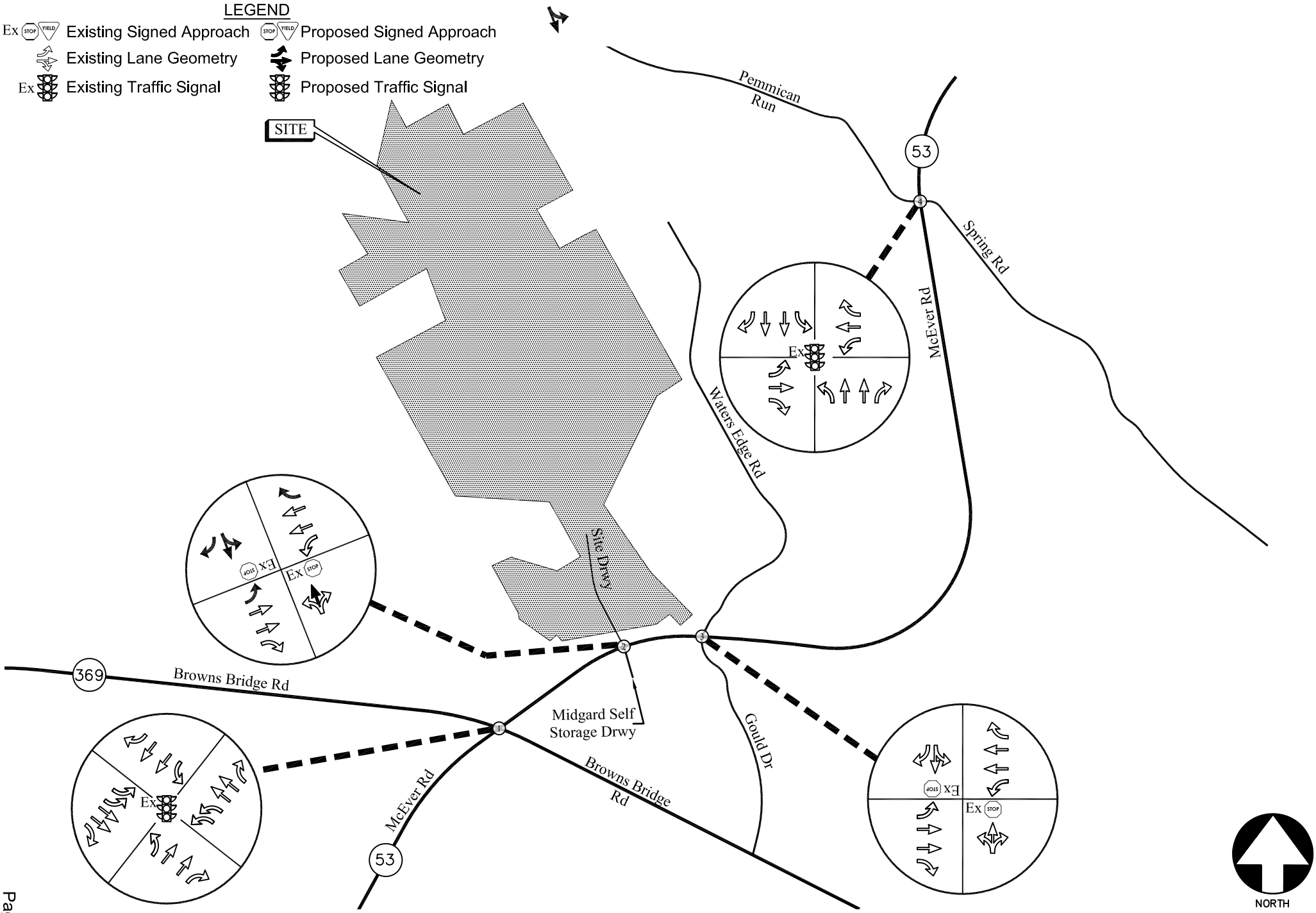
6.4 Future Traffic Operations

The future "No-Build" and "Build" traffic operations were analysed using the volumes in Figure 6 and Figure 7, respectively. The results of the future traffic operations analysis are shown below in Table 7. Recommendations on traffic control and lane geometry are shown in Figure 8.

Table 7 – Future Intersection Operations

Intersection		LOS (Delay)			
		No-Build		Build	
		AM Peak	PM Peak	AM Peak	PM Peak
1	**SR 53 (McEver Road) at SR 369 (Browns Bridge Road)**	**D (42.2)**	**E 58.8)**	**D (43.9)**	**E (64.9)**
	-Eastbound Approach	E (62.6)	E (69.0)	E (65.8)	E (69.0)
	-Westbound Approach	D (54.8)	E (69.8)	D (54.9)	E (71.2)
	-Northbound Approach	C (28.2)	D (48.2)	C (31.3)	E (58.9)
	-Southbound Approach	C (30.1)	D (51.5)	C (31.7)	E (63.4)
2	**SR 53 (McEver Road) at Midgard Self Storage Driveway / Site Driveway**				
	-Eastbound Left	-	-	B (12.2)	C (21.2)
	-Westbound Left	B (13.3)	C (23.0)	B (12.9)	B (12.7)
	-Northbound Approach	A (0.0)	E (40.8)	A (65.2)	F (*)
	-Southbound Approach	-	-	F (159.9)	F (*)
3	**SR 53 (McEver Road) at Gould Drive / Waters Edge Road**				
	-Eastbound Left	B (11.0)	B (11.2)	B (11.2)	B (12.1)
	-Westbound Left	B (11.4)	B (13.1)	B (11.7)	B (14.0)
	-Northbound Approach	C (16.7)	C (19.2)	C (22.9)	F (116.3)
	-Southbound Approach	F (64.5)	F (75.9)	F (77.0)	F (111.2)
4	**SR 53 (Highway 53 / McEver Road at Spring Road / Pemmican Run**	**B (12.4)**	**B (15.7)**	**B (12.6)**	**B (16.3)**
	-Eastbound Approach	D (52.2)	D (47.1)	E (52.5)	D (48.1)
	-Westbound Approach	E (60.4)	E (58.9)	E (60.0)	E (57.7)
	-Northbound Approach	A (9.6)	B (13.4)	A (10.0)	B (14.1)
	-Southbound Approach	A (8.6)	A (10.4)	A (8.7)	B (11.0)

The results of future traffic operations analysis indicate that the signalized intersection of SR 53 and SR 369 will operate at LOS "E" in the PM peak both in "No-Build" and "Build" conditions. Some of the stop-controlled side street approaches will operate at levels-of-service of "F" in both AM and PM peaks hours especially the northbound and southbound driveway approaches at SR 53 at intersection 2 will experience long delays of over 300 seconds in the PM peak hour. The side street traffic volumes do not seem to meet warrants for installation of a traffic signal. No other improvement will improve the delays. We are therefore not recommending any other improvements. However, we recommend that a full signal warrant analysis be performed when the project is operational and evaluate if a traffic signal is warranted at that time.



FUTURE TRAFFIC CONTROL AND LANE GEOMETRY

FIGURE 8

A&R Engineering Inc.

7.0 CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study is to determine the traffic impact from the proposed mixed-use development located at 1300 Gould Drive near SR 53 (McEver Road) in City of Gainesville, Hall County, Georgia. The proposed development will consist of:

- Single-Family Attached Housing – 38 Units
- Single-Family Detached Housing – 138 Units
- Multifamily Housing (Mid-Rise) – 415 Units
- Fast Casual Restaurant – 29,750 Square feet (11,350+6,100+12,300)

The development proposes one full access driveway on SR 53 (McEver Road) aligning with Midgard Self Storage Driveway.

Existing and future operations after completion of the project were analyzed at the intersections of:

- SR 53 (McEver Road) at SR 369 (Browns Bridge Road)
- SR 53 (McEver Road) at Midgard Self Storage Driveway / Site Driveway
- SR 53 (McEver Road) at Gould Drive / Waters Edge Road
- SR 53 (Highway 53 / McEver Road at Spring Road / Pemmican Run

The analysis included the evaluation of Future operations for "No-Build" and "Build" conditions.

The results of future traffic operations analysis indicate that the signalized intersection of SR 53 and SR 369 will operate at LOS "E" in the PM peak both in "No-Build" and "Build" conditions. Some of the stop-controlled side street approaches will operate at levels-of-service of "F" in both AM and PM peaks hours especially the northbound and southbound driveway approaches at SR 53 at intersection 2 will experience long delays of over 300 seconds in the PM peak hour. The side street traffic volumes do not seem to meet warrants for installation of a traffic signal. No other improvement will improve the delays. We are therefore not recommending any other improvements. However, we recommend that a full signal warrant analysis be performed when the project is operational and evaluate if a traffic signal is warranted at that time. In existing conditions, there is a "No U-Turn" sign on SR 53 eastbound approach at the existing median break at proposed driveway location. A request needs to be made to GDOT to remove the "No U-Turn" sign and permit a left-turn lane for traffic entering the site.

7.1 Recommendation for Site Access Configuration

The following access configuration is recommended for the proposed site driveway intersections.

- <u>Site Driveway 1: Full access driveway on SR 53 aligned with Midgard Self Storage Driveway</u>
    - One entering and two exiting lanes.
    - Raised island for exiting right-turn lane.
    - Stop-sign controlled on the driveway approach with SR 53 remaining free flow.
    - Request removal of the existing "No U-Turn" sign and provide a Left-Turn Lane.
    - Right-Turn Lane for entering traffic.
    - Provide / Confirm adequate sight distance per AASHTO standards.
    - Perform Intersection Control Evaluation with Signal Warrant Analysis

Appendix

Existing Intersection Traffic Counts .....
Linear Regression of Daily Traffic.....
Existing Intersection Analysis.....
Future “No-Build” Intersection Analysis .....
Future “Build” Intersection Analysis.....
Traffic Volume Worksheets .....

EXISTING INTERSECTION TRAFFIC COUNTS

A & R Engineering, Inc.

2160 Kingston Court Suite 'O'
Marietta, GA 30067

TMC Data
SR 53 @ Self Storage Driveway
7-9 am | 4-6 pm

File Name : 20230054
Site Code : 20230056
Start Date : 03-08-2023
Page No : 1

Groups Printed- Cars, Buses & Trucks

	Self Storage Drwy Northbound				Southbound				SR 54 Eastbound					SR 54 Westbound					
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	118	0	0	118	0	194	0	0	194	312
07:15 AM	0	0	0	0	0	0	0	0	0	194	0	0	194	0	209	0	0	209	403
07:30 AM	0	0	0	0	0	0	0	0	0	265	0	1	266	1	282	0	0	283	549
07:45 AM	0	0	0	0	0	0	0	0	0	282	1	0	283	0	266	0	1	267	550
Total	0	0	0	0	0	0	0	0	0	859	1	1	861	1	951	0	1	953	1814
08:00 AM	0	0	0	0	0	0	0	0	0	227	0	1	228	1	182	0	0	183	411
08:15 AM	0	0	0	0	0	0	0	0	0	200	1	0	201	1	215	0	0	216	417
08:30 AM	0	0	0	0	0	0	0	0	0	210	2	0	212	0	210	0	0	210	422
08:45 AM	2	0	1	3	0	0	0	0	0	211	0	0	211	2	194	0	0	196	410
Total	2	0	1	3	0	0	0	0	0	848	3	1	852	4	801	0	0	805	1660
09:00 AM	0	0	0	0	0	0	0	0	0	234	2	0	236	0	146	0	0	146	382
09:15 AM	2	0	2	4	0	0	0	0	0	191	2	0	193	1	149	0	0	150	347
09:30 AM	2	0	0	2	0	0	0	0	0	189	0	0	189	0	182	0	1	183	374
09:45 AM	0	0	1	1	0	0	0	0	0	228	2	0	230	1	167	0	0	168	399
Total	4	0	3	7	0	0	0	0	0	842	6	0	848	2	644	0	1	647	1502
10:00 AM	0	0	0	0	0	0	0	0	0	179	0	0	179	0	159	0	0	159	338
10:15 AM	1	0	0	1	0	0	0	0	0	194	0	0	194	1	143	0	0	144	339
10:30 AM	1	0	1	2	0	0	0	0	0	182	1	1	184	0	142	0	0	142	328
10:45 AM	0	0	1	1	0	0	0	0	0	218	0	0	218	0	171	0	1	172	391
Total	2	0	2	4	0	0	0	0	0	773	1	1	775	1	615	0	1	617	1396
11:00 AM	1	0	0	1	0	0	0	0	0	188	1	0	189	0	155	0	0	155	345
11:15 AM	0	0	2	2	0	0	0	0	0	164	2	0	166	0	175	0	0	175	343
11:30 AM	0	0	0	0	0	0	0	0	0	214	2	1	217	0	156	0	0	156	373
11:45 AM	0	0	0	0	0	0	0	0	0	214	0	0	214	1	160	0	0	161	375
Total	1	0	2	3	0	0	0	0	0	780	5	1	786	1	646	0	0	647	1436
12:00 PM	0	0	0	0	0	0	0	0	0	219	0	0	219	0	163	0	0	163	382
12:15 PM	0	0	1	1	0	0	0	0	0	228	1	0	229	1	208	0	0	209	439
12:30 PM	0	0	0	0	0	0	0	0	0	202	1	0	203	0	198	0	0	198	401
12:45 PM	2	0	2	4	0	0	0	0	0	225	0	1	226	2	199	0	0	201	431
Total	2	0	3	5	0	0	0	0	0	874	2	1	877	3	768	0	0	771	1653
01:00 PM	0	0	1	1	0	0	0	0	0	253	3	0	256	0	223	0	1	224	481
01:15 PM	2	0	0	2	0	0	0	0	0	210	1	0	211	0	199	0	0	199	412
01:30 PM	0	0	1	1	0	0	0	0	0	215	3	0	218	0	211	0	0	211	430
01:45 PM	1	0	1	2	0	0	0	0	0	190	0	0	190	0	190	0	0	190	382
Total	3	0	3	6	0	0	0	0	0	868	7	0	875	0	823	0	1	824	1705
02:00 PM	0	0	1	1	0	0	0	0	0	234	0	1	235	1	189	0	0	190	426
02:15 PM	0	0	0	0	0	0	0	0	0	245	0	0	245	0	216	0	0	216	461
02:30 PM	0	0	0	0	0	0	0	0	0	230	0	0	230	1	240	0	1	242	472
02:45 PM	1	0	0	1	0	0	0	0	0	291	1	1	293	1	238	0	0	239	533
Total	1	0	1	2	0	0	0	0	0	1000	1	2	1003	3	883	0	1	887	1892
03:00 PM	0	0	0	0	0	0	0	0	0	259	0	0	259	0	272	0	0	272	531
03:15 PM	1	0	1	2	0	0	0	0	0	238	0	0	238	1	278	0	0	279	519
03:30 PM	0	0	0	0	0	0	0	0	0	261	1	0	262	0	236	0	0	236	498
03:45 PM	0	0	0	0	0	0	0	0	0	309	1	1	311	0	243	0	1	244	555
Total	1	0	1	2	0	0	0	0	0	1067	2	1	1070	1	1029	0	1	1031	2103
04:00 PM	0	0	0	0	0	0	0	0	0	268	2	0	270	3	284	0	0	287	557
04:15 PM	1	0	2	3	0	0	0	0	0	306	0	0	306	1	228	0	0	229	538
04:30 PM	1	0	1	2	0	0	0	0	0	271	1	0	272	0	255	0	0	255	529

A & R Engineering, Inc.

2160 Kingston Court Suite 'O'
Marietta, GA 30067

TMC Data
SR 53 @ Self Storage Driveway
7-9 am | 4-6 pm

File Name : 20230054
Site Code : 20230056
Start Date : 03-08-2023
Page No : 2

Groups Printed- Cars, Buses & Trucks

	Self Storage Drwy Northbound				Southbound				SR 54 Eastbound					SR 54 Westbound					
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
04:45 PM	0	0	0	0	0	0	0	0	0	302	0	1	303	0	245	0	0	245	548
Total	2	0	3	5	0	0	0	0	0	1147	3	1	1151	4	1012	0	0	1016	2172
05:00 PM	1	0	0	1	0	0	0	0	0	346	1	0	347	0	288	0	0	288	636
05:15 PM	0	0	1	1	0	0	0	0	0	307	1	0	308	0	245	0	2	247	556
05:30 PM	0	0	1	1	0	0	0	0	0	291	0	1	292	1	245	0	0	246	539
05:45 PM	0	0	0	0	0	0	0	0	0	304	0	0	304	1	239	0	0	240	544
Total	1	0	2	3	0	0	0	0	0	1248	2	1	1251	2	1017	0	2	1021	2275
06:00 PM	0	0	1	1	0	0	0	0	0	271	0	0	271	1	242	0	0	243	515
06:15 PM	1	0	0	1	0	0	0	0	0	232	0	0	232	1	213	0	0	214	447
06:30 PM	0	0	0	0	0	0	0	0	0	209	0	0	209	0	164	0	0	164	373
06:45 PM	0	0	0	0	0	0	0	0	0	237	0	0	237	0	201	0	0	201	438
Total	1	0	1	2	0	0	0	0	0	949	0	0	949	2	820	0	0	822	1773
Grand Total	20	0	22	42	0	0	0	0	0	11255	33	10	11298	24	10009	0	8	10041	21381
Apprch %	47.6	0	52.4		0	0	0		0	99.6	0.3	0.1		0.2	99.7	0	0.1		
Total %	0.1	0	0.1	0.2	0	0	0	0	0	52.6	0.2	0	52.8	0.1	46.8	0	0	47	

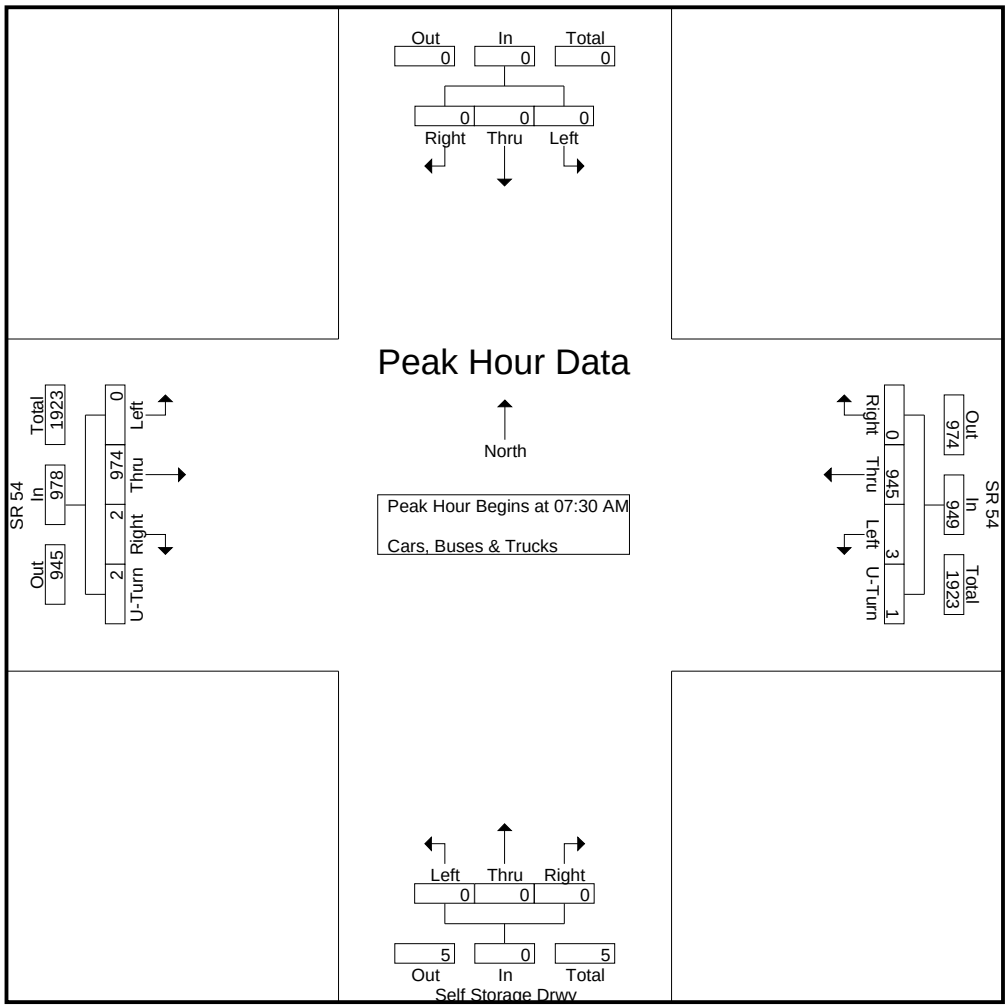
A & R Engineering, Inc.

2160 Kingston Court Suite 'O'
Marietta, GA 30067

TMC Data
SR 53 @ Self Storage Driveway
7-9 am | 4-6 pm

File Name : 20230054
Site Code : 20230056
Start Date : 03-08-2023
Page No : 3

	Self Storage Drwy Northbound				Southbound				SR 54 Eastbound					SR 54 Westbound					
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 07:30 AM																			
07:30 AM	0	0	0	0	0	0	0	0	0	265	0	**1**	266	**1**	**282**	0	0	**283**	549
07:45 AM	0	0	0	0	0	0	0	0	0	**282**	**1**	0	**283**	0	266	0	**1**	267	**550**
08:00 AM	0	0	0	0	0	0	0	0	0	227	0	1	228	1	182	0	0	183	411
08:15 AM	0	0	0	0	0	0	0	0	0	200	1	0	201	1	215	0	0	216	417
Total Volume	0	0	0	0	0	0	0	0	0	974	2	2	978	3	945	0	1	949	1927
% App. Total	0	0	0		0	0	0		0	99.6	0.2	0.2		0.3	99.6	0	0.1		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.863	.500	.500	.864	.750	.838	.000	.250	.838	.876



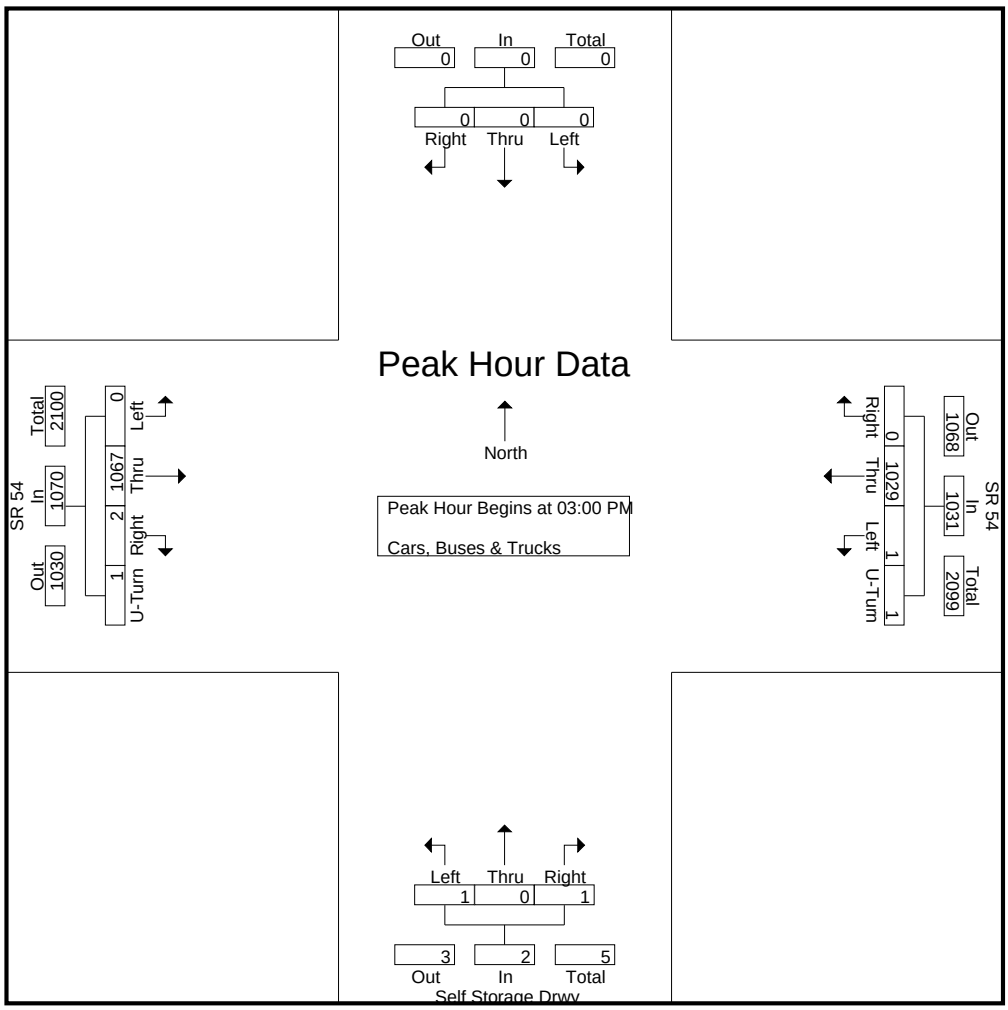
A & R Engineering, Inc.

2160 Kingston Court Suite 'O'
Marietta, GA 30067

TMC Data
SR 53 @ Self Storage Driveway
7-9 am | 4-6 pm

File Name : 20230054
Site Code : 20230056
Start Date : 03-08-2023
Page No : 4

	Self Storage Drwy Northbound				Southbound				SR 54 Eastbound					SR 54 Westbound					
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 03:00 PM																			
03:00 PM	0	0	0	0	0	0	0	0	0	259	0	0	259	0	272	0	0	272	531
03:15 PM	**1**	0	**1**	**2**	0	0	0	0	0	238	0	0	238	**1**	**278**	0	0	**279**	519
03:30 PM	0	0	0	0	0	0	0	0	0	261	**1**	0	262	0	236	0	0	236	498
03:45 PM	0	0	0	0	0	0	0	0	0	**309**	1	**1**	**311**	0	243	0	**1**	244	**555**
Total Volume	1	0	1	2	0	0	0	0	0	1067	2	1	1070	1	1029	0	1	1031	2103
% App. Total	50	0	50		0	0	0		0	99.7	0.2	0.1		0.1	99.8	0	0.1		
PHF	.250	.000	.250	.250	.000	.000	.000	.000	.000	.863	.500	.250	.860	.250	.925	.000	.250	.924	.947



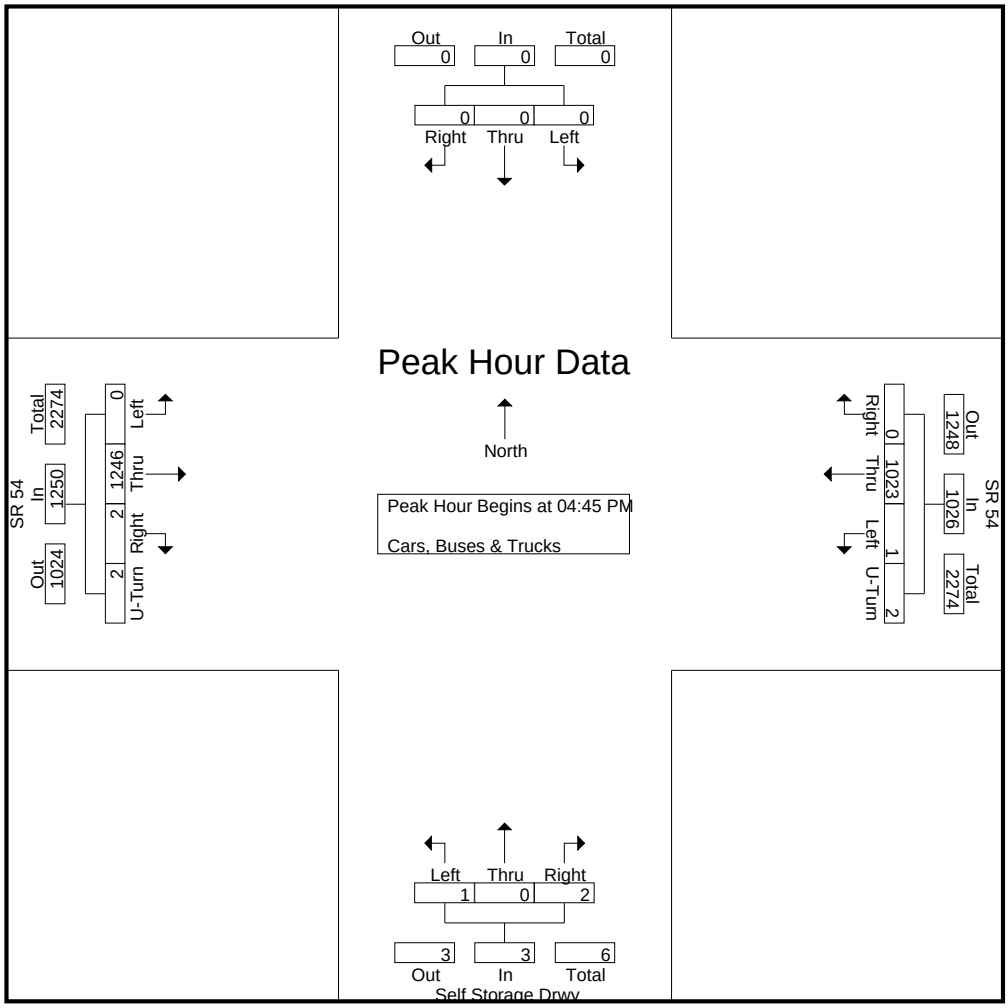
A & R Engineering, Inc.

2160 Kingston Court Suite 'O'
Marietta, GA 30067

TMC Data
SR 53 @ Self Storage Driveway
7-9 am | 4-6 pm

File Name : 20230054
Site Code : 20230056
Start Date : 03-08-2023
Page No : 5

	Self Storage Drwy Northbound				Southbound				SR 54 Eastbound					SR 54 Westbound					
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 04:45 PM																			
04:45 PM	0	0	0	0	0	0	0	0	0	302	0	**1**	303	0	245	0	0	245	548
05:00 PM	**1**	0	0	**1**	0	0	0	0	0	**346**	**1**	0	**347**	0	**288**	0	0	**288**	**636**
05:15 PM	0	0	**1**	1	0	0	0	0	0	307	1	0	308	0	245	0	**2**	247	556
05:30 PM	0	0	1	1	0	0	0	0	0	291	0	1	292	**1**	245	0	0	246	539
Total Volume	1	0	2	3	0	0	0	0	0	1246	2	2	1250	1	1023	0	2	1026	2279
% App. Total	33.3	0	66.7		0	0	0		0	99.7	0.2	0.2		0.1	99.7	0	0.2		
PHF	.250	.000	.500	.750	.000	.000	.000	.000	.000	.900	.500	.500	.901	.250	.888	.000	.250	.891	.896



A & R Engineering, Inc.

2160 Kingston Court Suite 'O'
Marietta, GA 30067

TMC Data
SR 53 @ Gould Dr-Water Edge Rd
7-9 am | 4-6 pm

File Name : 20230053
Site Code : 20230053
Start Date : 03-08-2023
Page No : 1

Groups Printed- Cars, Buses & Trucks

	Gould Dr Northbound				Waters Edge Dr Southbound				SR 53 Eastbound				SR 53 Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	10	10	4	1	3	8	11	119	10	140	14	190	4	208	366
07:15 AM	2	0	19	21	2	0	8	10	4	195	5	204	30	235	6	271	506
07:30 AM	0	0	21	21	3	0	6	9	10	235	0	245	19	259	2	280	555
07:45 AM	0	0	19	19	5	0	8	13	11	242	0	253	24	219	2	245	530
Total	2	0	69	71	14	1	25	40	36	791	15	842	87	903	14	1004	1957
08:00 AM	0	0	10	10	2	0	3	5	10	198	0	208	14	203	5	222	445
08:15 AM	0	1	8	9	3	2	7	12	11	186	2	199	12	214	2	228	448
08:30 AM	0	1	9	10	3	0	3	6	11	187	0	198	15	171	4	190	404
08:45 AM	0	1	10	11	2	1	9	12	18	200	1	219	3	157	7	167	409
Total	0	3	37	40	10	3	22	35	50	771	3	824	44	745	18	807	1706
*** BREAK ***																	
04:00 PM	3	1	15	19	0	0	12	12	11	261	5	277	8	256	1	265	573
04:15 PM	0	0	12	12	6	0	14	20	8	313	1	322	8	216	4	228	582
04:30 PM	0	0	15	15	7	2	12	21	4	267	2	273	8	223	2	233	542
04:45 PM	1	0	23	24	1	0	7	8	7	287	2	296	19	263	4	286	614
Total	4	1	65	70	14	2	45	61	30	1128	10	1168	43	958	11	1012	2311
05:00 PM	0	0	21	21	7	1	19	27	11	318	2	331	10	241	4	255	634
05:15 PM	0	0	19	19	2	0	16	18	6	290	4	300	12	226	5	243	580
05:30 PM	0	0	18	18	3	0	5	8	17	279	3	299	12	236	2	250	575
05:45 PM	0	0	13	13	0	0	6	6	12	268	2	282	7	229	2	238	539
Total	0	0	71	71	12	1	46	59	46	1155	11	1212	41	932	13	986	2328
Grand Total	6	4	242	252	50	7	138	195	162	3845	39	4046	215	3538	56	3809	8302
Apprch %	2.4	1.6	96		25.6	3.6	70.8		4	95	1		5.6	92.9	1.5		
Total %	0.1	0	2.9	3	0.6	0.1	1.7	2.3	2	46.3	0.5	48.7	2.6	42.6	0.7	45.9	

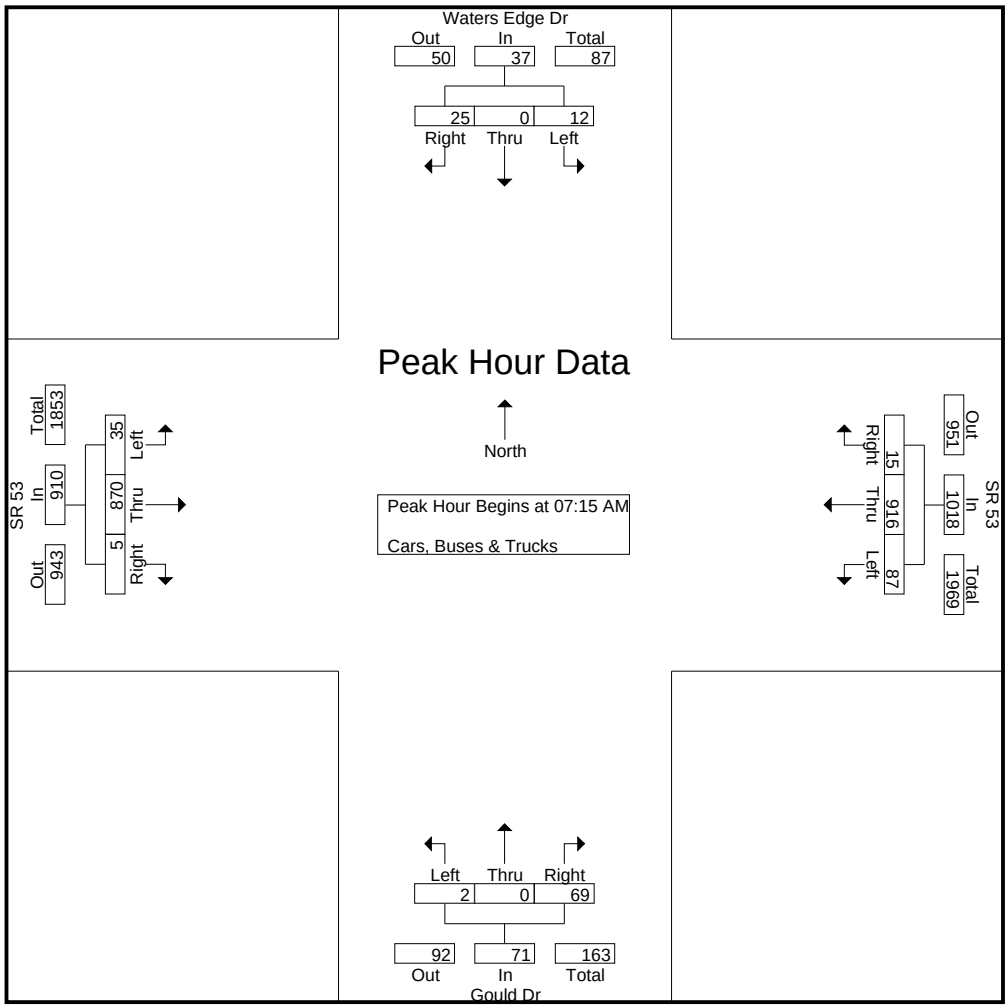
A & R Engineering, Inc.

2160 Kingston Court Suite 'O'
Marietta, GA 30067

TMC Data
SR 53 @ Gould Dr-Water Edge Rd
7-9 am | 4-6 pm

File Name : 20230053
Site Code : 20230053
Start Date : 03-08-2023
Page No : 2

	Gould Dr Northbound				Waters Edge Dr Southbound				SR 53 Eastbound				SR 53 Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**2**	0	19	**21**	2	0	**8**	10	4	195	**5**	204	**30**	235	**6**	271	506
07:30 AM	0	0	**21**	21	3	0	6	9	10	235	0	245	19	**259**	2	**280**	**555**
07:45 AM	0	0	19	19	**5**	0	8	**13**	**11**	**242**	0	**253**	24	219	2	245	530
08:00 AM	0	0	10	10	2	0	3	5	10	198	0	208	14	203	5	222	445
Total Volume	2	0	69	71	12	0	25	37	35	870	5	910	87	916	15	1018	2036
% App. Total	2.8	0	97.2		32.4	0	67.6		3.8	95.6	0.5		8.5	90	1.5		
PHF	.250	.000	.821	.845	.600	.000	.781	.712	.795	.899	.250	.899	.725	.884	.625	.909	.917



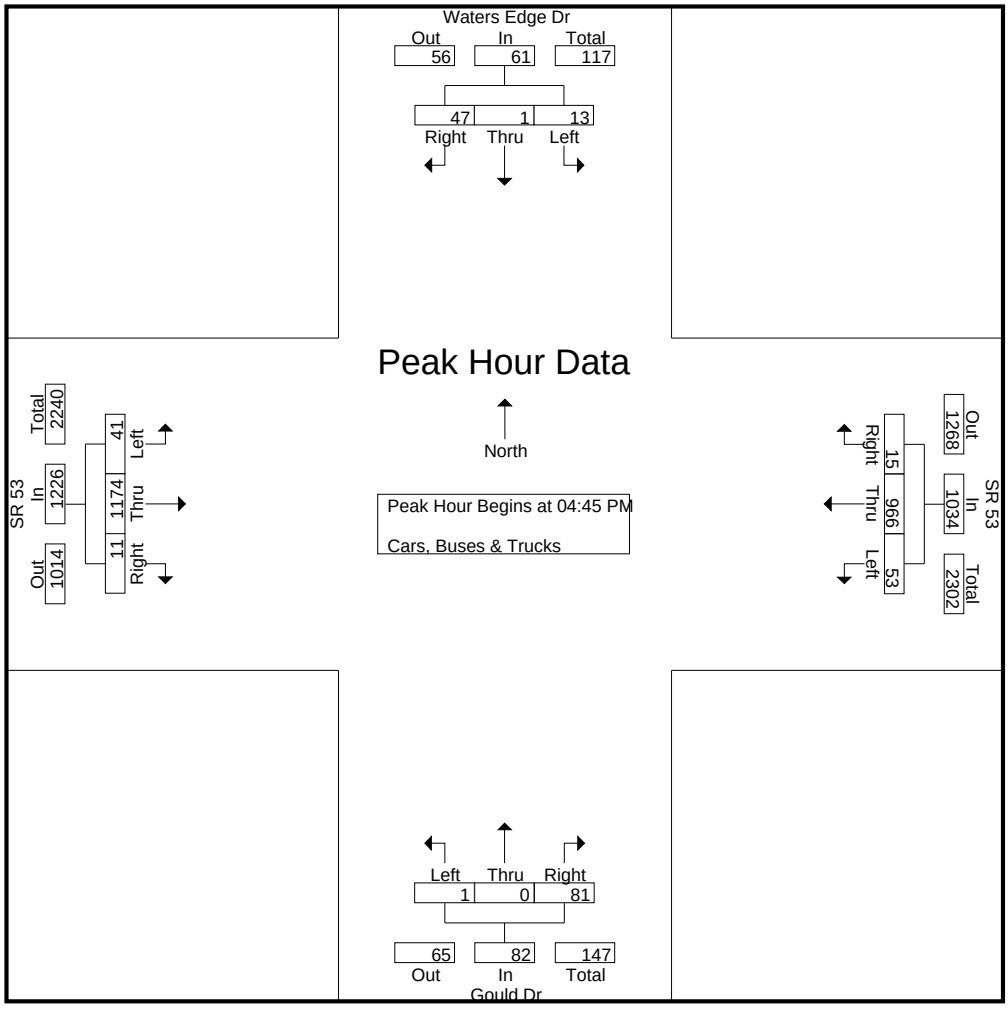
A & R Engineering, Inc.

2160 Kingston Court Suite 'O'
Marietta, GA 30067

TMC Data
SR 53 @ Gould Dr-Water Edge Rd
7-9 am | 4-6 pm

File Name : 20230053
Site Code : 20230053
Start Date : 03-08-2023
Page No : 3

	Gould Dr Northbound				Waters Edge Dr Southbound				SR 53 Eastbound				SR 53 Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**1**	0	**23**	**24**	1	0	7	8	7	287	2	296	**19**	**263**	4	**286**	614
05:00 PM	0	0	21	21	**7**	**1**	**19**	**27**	11	**318**	2	**331**	10	241	4	255	**634**
05:15 PM	0	0	19	19	2	0	16	18	6	290	**4**	300	12	226	**5**	243	580
05:30 PM	0	0	18	18	3	0	5	8	**17**	279	3	299	12	236	2	250	575
Total Volume	1	0	81	82	13	1	47	61	41	1174	11	1226	53	966	15	1034	2403
% App. Total	1.2	0	98.8		21.3	1.6	77		3.3	95.8	0.9		5.1	93.4	1.5		
PHF	.250	.000	.880	.854	.464	.250	.618	.565	.603	.923	.688	.926	.697	.918	.750	.904	.948



A & R Engineering, Inc.

2160 Kingston Court Suite 'O'
Marietta, GA 30067

TMC Data
SR 53 @ Spring Rd - Pemmican Rd
7-9 am | 4-6 pm

File Name : 20230055
Site Code : 20230055
Start Date : 03-08-2023
Page No : 1

Groups Printed- Cars, Buses & Trucks

	SR 53 Northbound				SR 53 Southbound				Pemmican Run Eastbound				Spring Rd Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	82	3	87	20	191	0	211	0	1	1	2	7	2	9	18	318
07:15 AM	4	134	6	144	15	255	0	270	3	1	2	6	10	3	11	24	444
07:30 AM	3	218	4	225	17	267	0	284	3	0	3	6	9	1	22	32	547
07:45 AM	2	261	3	266	16	293	0	309	2	2	5	9	3	2	28	33	617
Total	11	695	16	722	68	1006	0	1074	8	4	11	23	29	8	70	107	1926
08:00 AM	2	226	4	232	26	208	0	234	3	0	7	10	4	3	17	24	500
08:15 AM	4	212	1	217	15	225	3	243	2	2	2	6	6	1	15	22	488
08:30 AM	1	199	2	202	11	210	1	222	3	1	3	7	4	0	9	13	444
08:45 AM	1	182	3	186	8	212	0	220	1	0	2	3	4	1	24	29	438
Total	8	819	10	837	60	855	4	919	9	3	14	26	18	5	65	88	1870
*** BREAK ***																	
04:00 PM	3	267	6	276	22	251	6	279	5	0	7	12	11	2	34	47	614
04:15 PM	6	281	2	289	14	223	2	239	7	2	4	13	8	2	31	41	582
04:30 PM	1	267	1	269	18	229	2	249	3	1	1	5	6	2	28	36	559
04:45 PM	4	305	2	311	17	272	3	292	4	0	6	10	4	1	31	36	649
Total	14	1120	11	1145	71	975	13	1059	19	3	18	40	29	7	124	160	2404
05:00 PM	4	317	10	331	14	238	0	252	5	1	2	8	7	1	41	49	640
05:15 PM	1	313	2	316	14	246	3	263	1	3	5	9	10	5	32	47	635
05:30 PM	3	275	9	287	22	238	1	261	7	3	2	12	3	0	36	39	599
05:45 PM	1	253	3	257	24	224	1	249	2	2	3	7	6	1	28	35	548
Total	9	1158	24	1191	74	946	5	1025	15	9	12	36	26	7	137	170	2422
Grand Total	42	3792	61	3895	273	3782	22	4077	51	19	55	125	102	27	396	525	8622
Apprch %	1.1	97.4	1.6		6.7	92.8	0.5		40.8	15.2	44		19.4	5.1	75.4		
Total %	0.5	44	0.7	45.2	3.2	43.9	0.3	47.3	0.6	0.2	0.6	1.4	1.2	0.3	4.6	6.1	

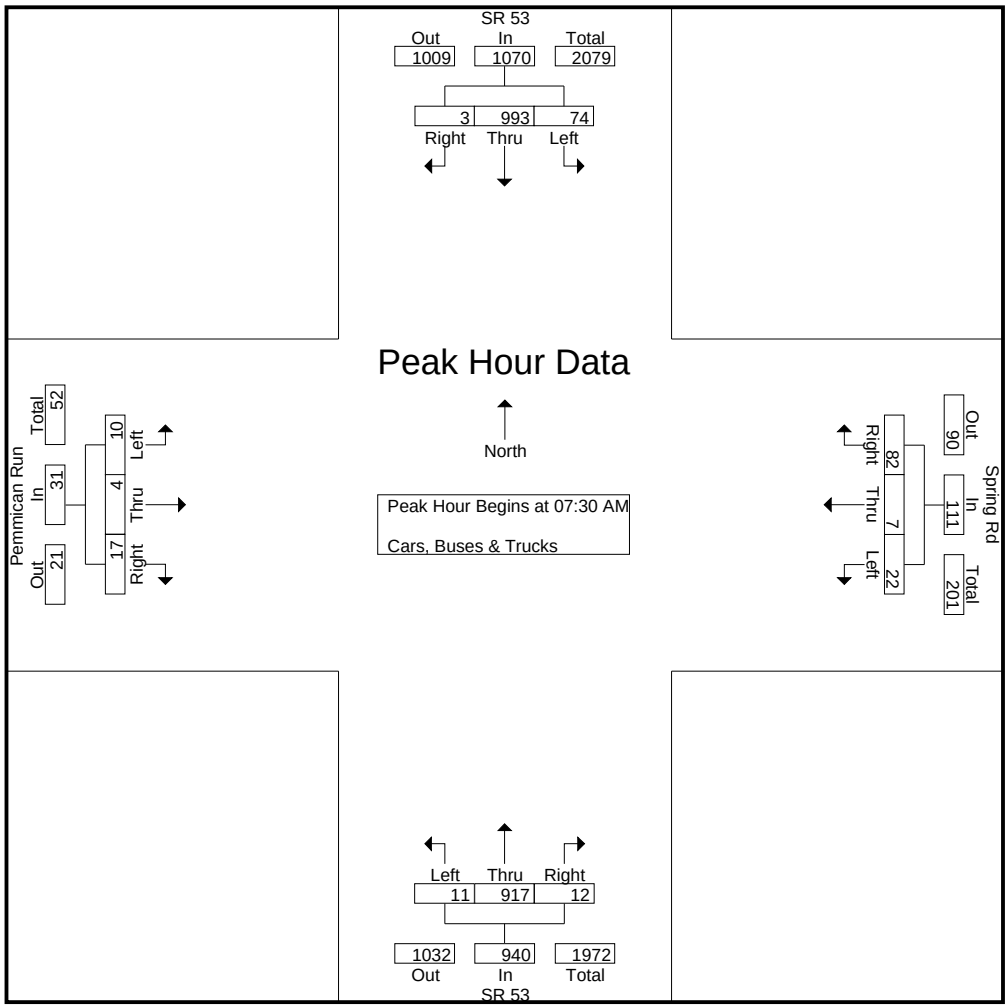
A & R Engineering, Inc.

2160 Kingston Court Suite 'O'
Marietta, GA 30067

TMC Data
SR 53 @ Spring Rd - Pemmican Rd
7-9 am | 4-6 pm

File Name : 20230055
Site Code : 20230055
Start Date : 03-08-2023
Page No : 2

	SR 53 Northbound				SR 53 Southbound				Pemmican Run Eastbound				Spring Rd Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	3	218	**4**	225	17	267	0	284	**3**	0	3	6	**9**	1	22	32	547
07:45 AM	2	**261**	3	**266**	16	**293**	0	**309**	2	**2**	5	9	3	2	**28**	**33**	**617**
08:00 AM	2	226	4	232	**26**	208	0	234	3	0	**7**	**10**	4	**3**	17	24	500
08:15 AM	**4**	212	1	217	15	225	**3**	243	2	2	2	6	6	1	15	22	488
Total Volume	11	917	12	940	74	993	3	1070	10	4	17	31	22	7	82	111	2152
% App. Total	1.2	97.6	1.3		6.9	92.8	0.3		32.3	12.9	54.8		19.8	6.3	73.9		
PHF	.688	.878	.750	.883	.712	.847	.250	.866	.833	.500	.607	.775	.611	.583	.732	.841	.872



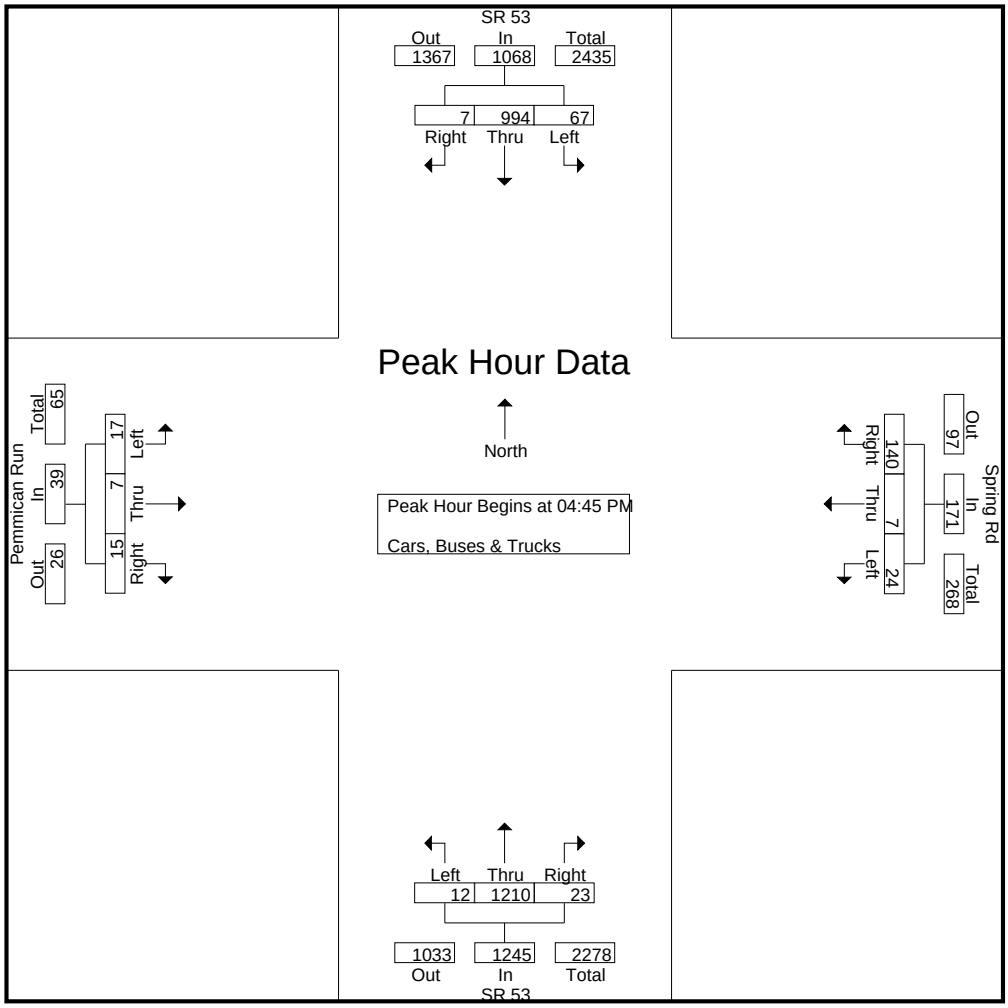
A & R Engineering, Inc.

2160 Kingston Court Suite 'O'
Marietta, GA 30067

TMC Data
SR 53 @ Spring Rd - Pemmican Rd
7-9 am | 4-6 pm

File Name : 20230055
Site Code : 20230055
Start Date : 03-08-2023
Page No : 3

	SR 53 Northbound				SR 53 Southbound				Pemmican Run Eastbound				Spring Rd Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**4**	305	2	311	17	**272**	**3**	**292**	4	0	**6**	10	4	1	31	36	**649**
05:00 PM	4	**317**	**10**	**331**	14	238	0	252	5	1	2	8	7	1	**41**	**49**	640
05:15 PM	1	313	2	316	14	246	3	263	1	**3**	5	9	**10**	**5**	32	47	635
05:30 PM	3	275	9	287	**22**	238	1	261	**7**	3	2	**12**	3	0	36	39	599
Total Volume	12	1210	23	1245	67	994	7	1068	17	7	15	39	24	7	140	171	2523
% App. Total	1	97.2	1.8		6.3	93.1	0.7		43.6	17.9	38.5		14	4.1	81.9		
PHF	.750	.954	.575	.940	.761	.914	.583	.914	.607	.583	.625	.813	.600	.350	.854	.872	.972



A & R Engineering, Inc.

2160 Kingston Court Suite 'O'
Marietta, GA 30067

TMC Data
SR 53 @ SR 369 (Browns Bridge Rd)
7-9 am | 4-6 pm

File Name : 20230056
Site Code : 20230056
Start Date : 03-08-2023
Page No : 1

Groups Printed- Cars, Buses & Trucks

	SR 53 Northbound				SR 53 Southbound					SR 369 (Browns Bridge Rd) Eastbound					SR 369 (Browns Bridge Rd) Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	60	90	48	198	26	125	21	2	174	20	81	55	0	156	25	94	8	127	655
07:15 AM	60	110	53	223	38	135	35	3	211	38	127	73	2	240	36	107	11	154	828
07:30 AM	69	174	57	300	31	187	28	6	252	45	177	85	4	311	43	114	16	173	1036
07:45 AM	69	177	86	332	47	210	26	2	285	66	184	80	1	331	24	104	23	151	1099
Total	258	551	244	1053	142	657	110	13	922	169	569	293	7	1038	128	419	58	605	3618
08:00 AM	81	175	65	321	52	144	22	7	225	48	132	78	2	260	25	68	14	107	913
08:15 AM	60	125	64	249	50	137	33	3	223	38	140	79	1	258	37	103	31	171	901
08:30 AM	84	168	53	305	40	136	32	2	210	47	154	74	1	276	42	85	18	145	936
08:45 AM	63	151	60	274	37	136	25	0	198	41	132	68	0	241	35	86	23	144	857
Total	288	619	242	1149	179	553	112	12	856	174	558	299	4	1035	139	342	86	567	3607
*** BREAK ***																			
04:00 PM	74	175	51	300	31	149	40	7	227	48	117	55	0	220	101	121	20	242	989
04:15 PM	101	235	41	377	40	191	47	2	280	48	117	56	0	221	57	112	44	213	1091
04:30 PM	93	197	37	327	33	163	38	8	242	86	124	73	1	284	87	139	27	253	1106
04:45 PM	94	214	47	355	23	194	48	7	272	64	129	66	1	260	93	142	36	271	1158
Total	362	821	176	1359	127	697	173	24	1021	246	487	250	2	985	338	514	127	979	4344
05:00 PM	100	222	51	373	31	165	54	6	256	64	120	64	2	250	94	190	38	322	1201
05:15 PM	84	204	73	361	19	214	44	1	278	75	127	73	2	277	130	186	41	357	1273
05:30 PM	94	267	63	424	36	220	47	3	306	50	122	70	3	245	127	163	36	326	1301
05:45 PM	111	245	70	426	25	149	42	7	223	58	145	66	1	270	99	149	26	274	1193
Total	389	938	257	1584	111	748	187	17	1063	247	514	273	8	1042	450	688	141	1279	4968
Grand Total	1297	2929	919	5145	559	2655	582	66	3862	836	2128	1115	21	4100	1055	1963	412	3430	16537
Apprch %	25.2	56.9	17.9		14.5	68.7	15.1	1.7		20.4	51.9	27.2	0.5		30.8	57.2	12		
Total %	7.8	17.7	5.6	31.1	3.4	16.1	3.5	0.4	23.4	5.1	12.9	6.7	0.1	24.8	6.4	11.9	2.5	20.7	

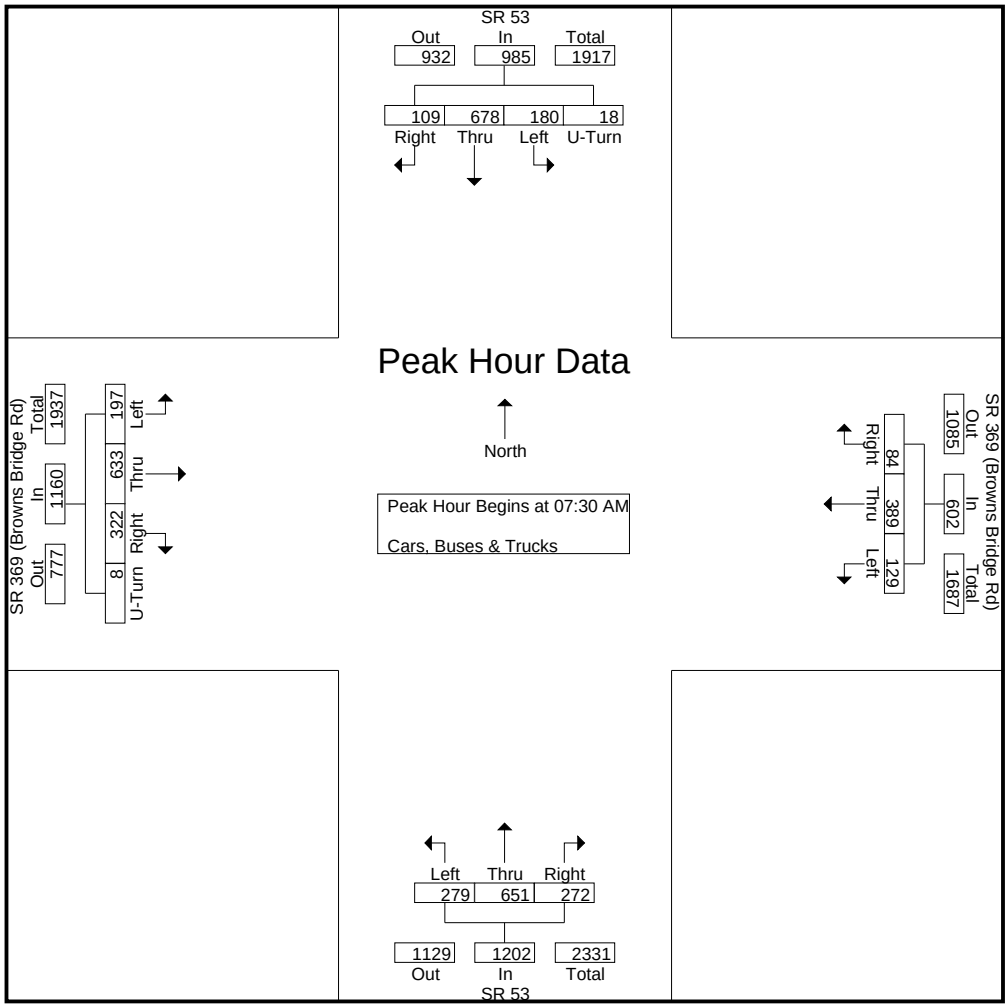
A & R Engineering, Inc.

2160 Kingston Court Suite 'O'
Marietta, GA 30067

TMC Data
SR 53 @ SR 369 (Browns Bridge Rd)
7-9 am | 4-6 pm

File Name : 20230056
Site Code : 20230056
Start Date : 03-08-2023
Page No : 2

	SR 53 Northbound				SR 53 Southbound					SR 369 (Browns Bridge Rd) Eastbound					SR 369 (Browns Bridge Rd) Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 07:30 AM																			
07:30 AM	69	174	57	300	31	187	28	6	252	45	177	**85**	**4**	311	**43**	**114**	16	**173**	1036
07:45 AM	69	**177**	**86**	**332**	47	**210**	26	2	**285**	**66**	**184**	80	1	**331**	24	104	23	151	**1099**
08:00 AM	**81**	175	65	321	**52**	144	22	**7**	225	48	132	78	2	260	25	68	14	107	913
08:15 AM	60	125	64	249	50	137	**33**	3	223	38	140	79	1	258	37	103	**31**	171	901
Total Volume	279	651	272	1202	180	678	109	18	985	197	633	322	8	1160	129	389	84	602	3949
% App. Total	23.2	54.2	22.6		18.3	68.8	11.1	1.8		17	54.6	27.8	0.7		21.4	64.6	14		
PHF	.861	.919	.791	.905	.865	.807	.826	.643	.864	.746	.860	.947	.500	.876	.750	.853	.677	.870	.898



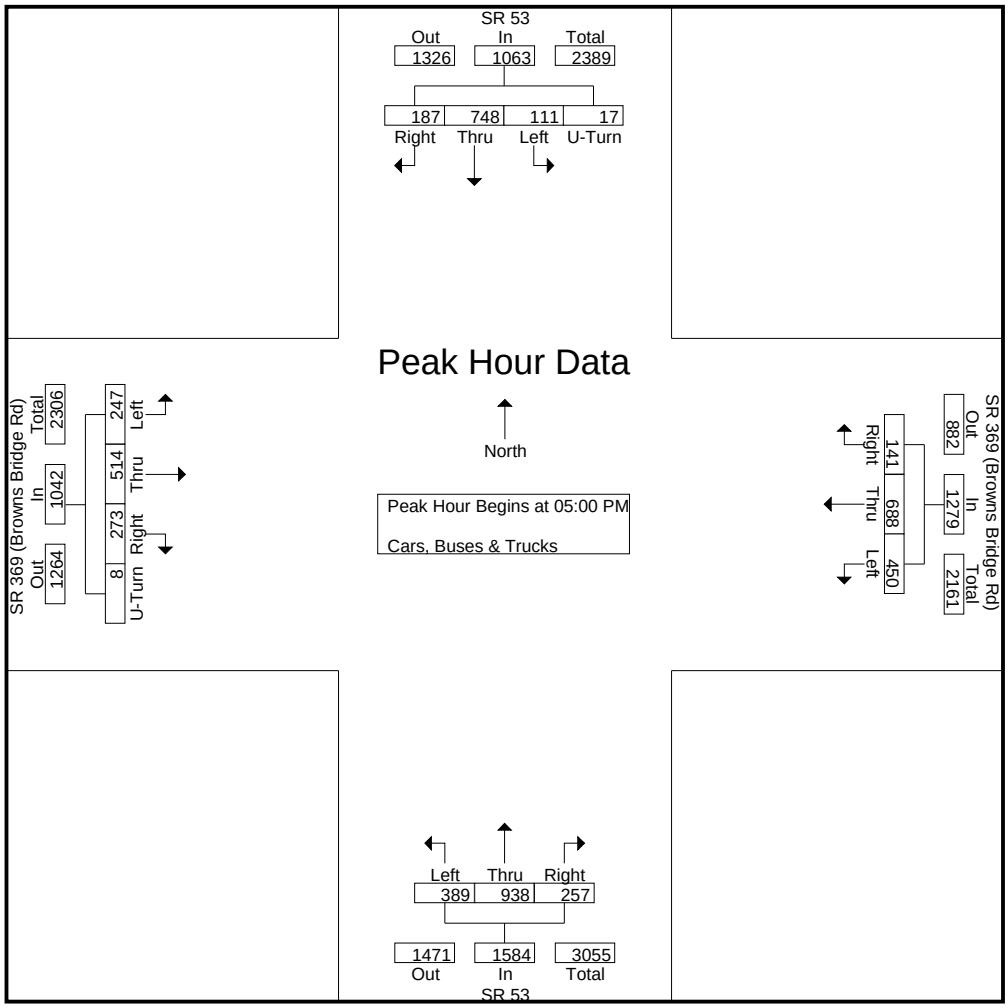
A & R Engineering, Inc.

2160 Kingston Court Suite 'O'
Marietta, GA 30067

TMC Data
SR 53 @ SR 369 (Browns Bridge Rd)
7-9 am | 4-6 pm

File Name : 20230056
Site Code : 20230056
Start Date : 03-08-2023
Page No : 3

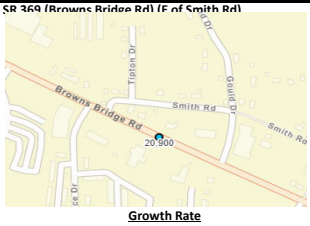
	SR 53 Northbound				SR 53 Southbound					SR 369 (Browns Bridge Rd) Eastbound					SR 369 (Browns Bridge Rd) Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 05:00 PM																			
05:00 PM	100	222	51	373	31	165	**54**	6	256	64	120	64	2	250	94	**190**	38	322	1201
05:15 PM	84	204	**73**	361	19	214	44	1	278	**75**	127	**73**	2	**277**	**130**	186	**41**	**357**	1273
05:30 PM	94	**267**	63	424	**36**	**220**	47	3	**306**	50	122	70	**3**	245	127	163	36	326	**1301**
05:45 PM	**111**	245	70	**426**	25	149	42	**7**	223	58	**145**	66	1	270	99	149	26	274	1193
Total Volume	389	938	257	1584	111	748	187	17	1063	247	514	273	8	1042	450	688	141	1279	4968
% App. Total	24.6	59.2	16.2		10.4	70.4	17.6	1.6		23.7	49.3	26.2	0.8		35.2	53.8	11		
PHF	.876	.878	.880	.930	.771	.850	.866	.607	.868	.823	.886	.935	.667	.940	.865	.905	.860	.896	.955

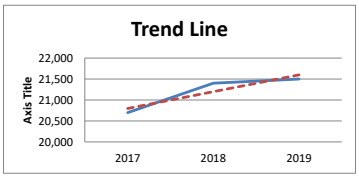


LINEAR REGRESSION OF DAILY TRAFFIC

Location	Growth Rate	R Squared	Station ID	Route	2017	2018	2019
SR 369 (Browns Bridge Rd) (E of	1.9%	0.84	139-0431	00036900	20,700	21,400	21,500
Hilton Dr (S of Atlas Cir)	1.8%	1.00	139-8210	00080907	4,250	4,320	4,400
Browns Bridge Ave (S of Crow Ln	2.1%	0.96	139-8039	00036200	720	730	750
Mountain View Rd (S of Holiday	1.5%	0.96	139-0775	00043400	970	990	1,000
Atlanta Hwy (W of Hospital Dr)	1.8%	0.92	139-0187	00001300	11,000	11,300	11,400
Weighted Average	**1.8%**	0.91	Sum of Count Stations =		37,640	38,740	39,050

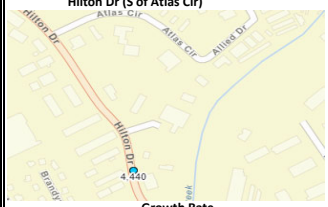
Location	Traffic Counter	RCLINK	2017	2018	2019
SR 369 (Browns Bridge Rd) (E of Smith Rd)	139-0431	00036900	20,700	21,400	21,500

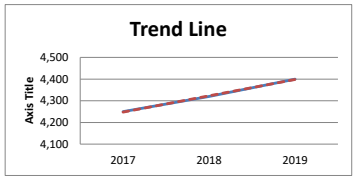




Growth Rate	1.9%	Intercept	-786,000	Slope	400.00
Trend Line			20,800	21,200	21,600

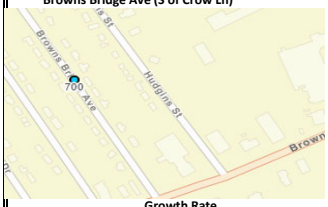
Location	Traffic Counter	RCLINK	2017	2018	2019
Hilton Dr (S of Atlas Cir)	139-8210	00080907	4,250	4,320	4,400

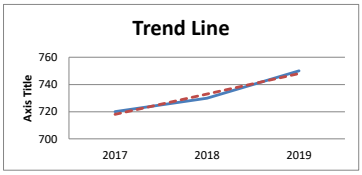




Growth Rate	1.8%	Intercept	-147,027	Slope	75.00
Trend Line			4,248	4,323	4,398

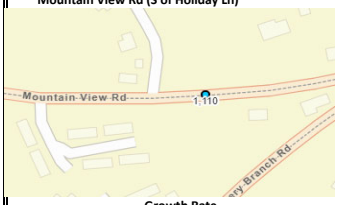
Location	Traffic Counter	RCLINK	2017	2018	2019
Browns Bridge Ave (S of Crow Ln)	139-8039	00036200	720	730	750

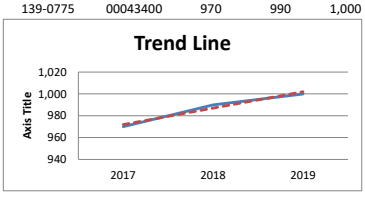




Growth Rate	2.1%	Intercept	-29,537	Slope	15.00
Trend Line			718	733	748

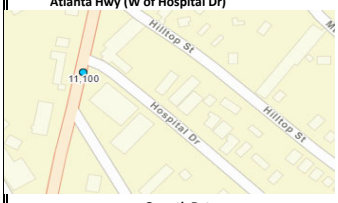
Location	Traffic Counter	RCLINK	2017	2018	2019
Mountain View Rd (S of Holiday Ln)	139-0775	00043400	970	990	1,000

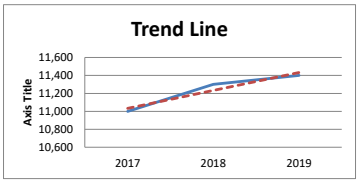




Growth Rate	1.5%	Intercept	-29,283	Slope	15.00
Trend Line			972	987	1,002

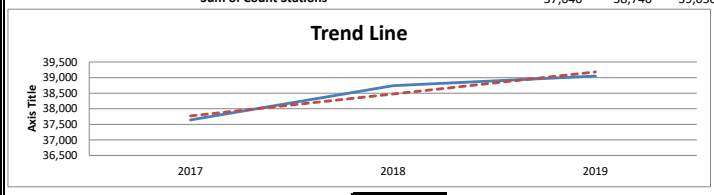
Location	Traffic Counter	RCLINK	2017	2018	2019
Atlanta Hwy (W of Hospital Dr)	139-0187	00001300	11,000	11,300	11,400





Growth Rate	1.8%	Intercept	-392,367	Slope	200.00
Trend Line			11,033	11,233	11,433

Weighted Average	2017	2018	2019
Sum of Count Stations	37,640	38,740	39,050



Growth Rate	1.8%	Intercept	-1,384,213	Slope	705.00
Trend Line			37,772	38,477	39,182

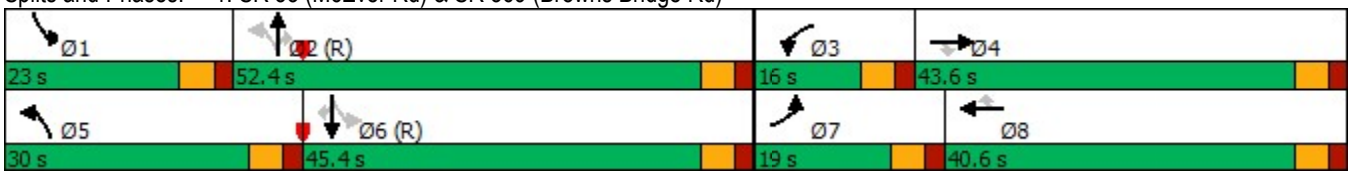
EXISTING INTERSECTION ANALYSIS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	633	322	129	389	84	279	651	272	198	678	109
Future Volume (vph)	205	633	322	129	389	84	279	651	272	198	678	109
Lane Group Flow (vph)	228	703	358	143	432	93	310	723	302	220	753	121
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	40.5	40.5	15.0	40.5	40.5	15.0	42.5	42.5	15.0	42.5	42.5
Total Split (s)	19.0	43.6	43.6	16.0	40.6	40.6	30.0	52.4	52.4	23.0	45.4	45.4
Total Split (%)	14.1%	32.3%	32.3%	11.9%	30.1%	30.1%	22.2%	38.8%	38.8%	17.0%	33.6%	33.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.72	0.81	0.56	0.59	0.54	0.20	0.78	0.52	0.38	0.58	0.61	0.18
Control Delay	73.0	54.8	9.0	70.7	47.7	1.2	33.1	33.7	5.8	24.1	39.6	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.0	54.8	9.0	70.7	47.7	1.2	33.1	33.7	5.8	24.1	39.6	2.9
Queue Length 50th (ft)	105	315	17	65	182	0	153	266	10	102	304	0
Queue Length 95th (ft)	152	381	106	104	232	3	253	355	80	162	404	26
Internal Link Dist (ft)		873			467			547			1177	
Turn Bay Length (ft)	330		225	275		280	525		230	210		220
Base Capacity (vph)	333	970	673	259	893	513	447	1379	787	414	1244	655
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.72	0.53	0.55	0.48	0.18	0.69	0.52	0.38	0.53	0.61	0.18

Intersection Summary

Cycle Length: 135
Actuated Cycle Length: 135
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 1: SR 53 (McEver Rd) & SR 369 (Browns Bridge Rd)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	633	322	129	389	84	279	651	272	198	678	109
Future Volume (veh/h)	205	633	322	129	389	84	279	651	272	198	678	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	228	703	0	143	432	0	310	723	0	220	753	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	279	807		192	718		446	1598		432	1494	
Arrive On Green	0.08	0.23	0.00	0.06	0.21	0.00	0.12	0.46	0.00	0.09	0.43	0.00
Sat Flow, veh/h	3374	3469	1547	3374	3469	1547	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	228	703	0	143	432	0	310	723	0	220	753	0
Grp Sat Flow(s),veh/h/ln	1687	1735	1547	1687	1735	1547	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	9.0	26.3	0.0	5.6	15.2	0.0	13.1	19.2	0.0	9.4	21.3	0.0
Cycle Q Clear(g_c), s	9.0	26.3	0.0	5.6	15.2	0.0	13.1	19.2	0.0	9.4	21.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	279	807		192	718		446	1598		432	1494	
V/C Ratio(X)	0.82	0.87		0.74	0.60		0.70	0.45		0.51	0.50	
Avail Cap(c_a), veh/h	337	979		262	902		558	1598		506	1494	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	60.9	49.9	0.0	62.7	48.5	0.0	19.7	24.8	0.0	19.2	27.9	0.0
Incr Delay (d2), s/veh	12.4	7.5	0.0	7.3	0.8	0.0	2.7	0.9	0.0	0.9	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	11.9	0.0	2.6	6.5	0.0	5.3	7.8	0.0	3.8	8.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.3	57.3	0.0	70.0	49.3	0.0	22.5	25.7	0.0	20.2	29.2	0.0
LnGrp LOS	E	E		E	D		C	C		C	C	
Approach Vol, veh/h		931			575			1033			973	
Approach Delay, s/veh		61.2			54.4			24.8			27.1	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.2	67.7	13.2	36.9	21.3	63.6	16.7	33.4
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	17.5	46.9	10.5	38.1	24.5	39.9	13.5	35.1
Max Q Clear Time (g_c+I1), s	11.4	21.2	7.6	28.3	15.1	23.3	11.0	17.2
Green Ext Time (p_c), s	0.3	9.0	0.1	3.1	0.6	7.4	0.2	2.4

Intersection Summary	
HCM 6th Ctrl Delay	39.9
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations								
Traffic Vol, veh/h	2	974	2	1	3	945	0	0
Future Vol, veh/h	2	974	2	1	3	945	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	-	-	150	-	190	-	0	-
Veh in Median Storage, #	-	0	-	-	-	0	0	-
Grade, %	-	0	-	-	-	0	0	-
Peak Hour Factor	92	88	88	92	88	88	88	88
Heavy Vehicles, %	2	5	5	2	5	5	2	2
Mvmt Flow	2	1107	2	1	3	1074	0	0

Major/Minor	Major1			Major2			Minor1	
Conflicting Flow All	1074	0	0	1107	1109	0	1656	554
Stage 1	-	-	-	-	-	-	1111	-
Stage 2	-	-	-	-	-	-	545	-
Critical Hdwy	6.44	-	-	6.44	4.2	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.84	-
Follow-up Hdwy	2.52	-	-	2.52	2.25	-	3.52	3.32
Pot Cap-1 Maneuver	298	-	-	283	608	-	89	476
Stage 1	-	-	-	-	-	-	277	-
Stage 2	-	-	-	-	-	-	545	-
Platoon blocked, %		-	-			-		
Mov Cap-1 Maneuver	298	-	-	476	476	-	87	476
Mov Cap-2 Maneuver	-	-	-	-	-	-	87	-
Stage 1	-	-	-	-	-	-	272	-
Stage 2	-	-	-	-	-	-	541	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	476	-
HCM Lane V/C Ratio	-	-	-	0.009	-
HCM Control Delay (s)	0	-	-	12.6	-
HCM Lane LOS	A	-	-	B	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	870	5	87	916	15	2	0	69	12	0	25
Future Vol, veh/h	35	870	5	87	916	15	2	0	69	12	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	320	-	180	310	-	200	-	-	-	-	-	115
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5	2	2	2	2	2	2
Mvmt Flow	38	946	5	95	996	16	2	0	75	13	0	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	996	0	0	951	0	0	1710	2208	473	1735	2213	498
Stage 1	-	-	-	-	-	-	1022	1022	-	1186	1186	-
Stage 2	-	-	-	-	-	-	688	1186	-	549	1027	-
Critical Hdwy	4.2	-	-	4.2	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.25	-	-	2.25	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	672	-	-	700	-	-	59	44	538	56	43	518
Stage 1	-	-	-	-	-	-	253	312	-	200	260	-
Stage 2	-	-	-	-	-	-	403	260	-	488	310	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	672	-	-	700	-	-	48	36	538	41	35	518
Mov Cap-2 Maneuver	-	-	-	-	-	-	48	36	-	41	35	-
Stage 1	-	-	-	-	-	-	239	294	-	189	225	-
Stage 2	-	-	-	-	-	-	330	225	-	396	292	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.9	15.6	50.3
HCM LOS			C	F

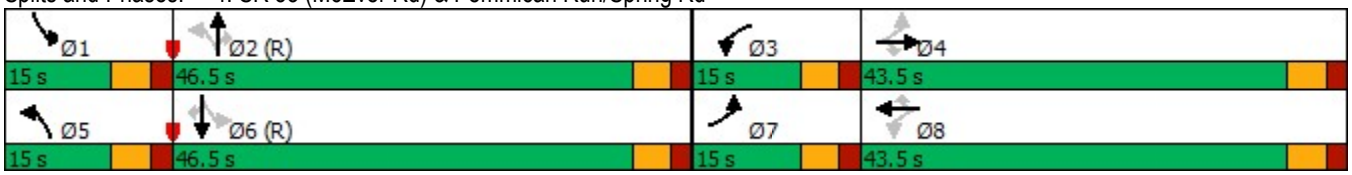
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	418	672	-	-	700	-	-	41	518
HCM Lane V/C Ratio	0.185	0.057	-	-	0.135	-	-	0.318	0.052
HCM Control Delay (s)	15.6	10.7	-	-	10.9	-	-	129.4	12.3
HCM Lane LOS	C	B	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	0.7	0.2	-	-	0.5	-	-	1.1	0.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	4	17	22	7	82	11	917	12	74	993	3
Future Volume (vph)	10	4	17	22	7	82	11	917	12	74	993	3
Lane Group Flow (vph)	11	5	20	25	8	94	13	1054	14	85	1141	3
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	40.5	40.5	15.0	43.5	43.5	15.0	33.5	33.5	15.0	33.5	33.5
Total Split (s)	15.0	43.5	43.5	15.0	43.5	43.5	15.0	46.5	46.5	15.0	46.5	46.5
Total Split (%)	12.5%	36.3%	36.3%	12.5%	36.3%	36.3%	12.5%	38.8%	38.8%	12.5%	38.8%	38.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.08	0.05	0.10	0.16	0.04	0.35	0.04	0.44	0.01	0.22	0.44	0.00
Control Delay	43.5	55.0	1.0	45.7	48.4	8.1	4.6	10.6	0.0	5.1	8.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.5	55.0	1.0	45.7	48.4	8.1	4.6	10.6	0.0	5.1	8.0	0.0
Queue Length 50th (ft)	8	4	0	17	6	0	2	214	0	15	153	0
Queue Length 95th (ft)	25	17	0	42	22	26	8	293	0	31	287	0
Internal Link Dist (ft)		674			538			2513			854	
Turn Bay Length (ft)	103		90	60		80	400		220	290		380
Base Capacity (vph)	184	589	585	186	589	585	407	2388	1106	412	2581	1185
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.01	0.03	0.13	0.01	0.16	0.03	0.44	0.01	0.21	0.44	0.00

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated

Splits and Phases: 4: SR 53 (McEver Rd) & Pemmican Run/Spring Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	4	17	22	7	82	11	917	12	74	993	3
Future Volume (veh/h)	10	4	17	22	7	82	11	917	12	74	993	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	11	5	20	25	8	94	13	1054	0	85	1141	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	5	5	5
Cap, veh/h	168	124	105	190	144	122	360	2386		416	2471	
Arrive On Green	0.01	0.07	0.07	0.02	0.08	0.08	0.01	0.69	0.00	0.04	0.71	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	11	5	20	25	8	94	13	1054	0	85	1141	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	0.7	0.3	1.4	1.6	0.5	7.0	0.3	16.4	0.0	1.7	16.9	0.0
Cycle Q Clear(g_c), s	0.7	0.3	1.4	1.6	0.5	7.0	0.3	16.4	0.0	1.7	16.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	168	124	105	190	144	122	360	2386		416	2471	
V/C Ratio(X)	0.07	0.04	0.19	0.13	0.06	0.77	0.04	0.44		0.20	0.46	
Avail Cap(c_a), veh/h	287	592	502	289	592	502	473	2386		486	2471	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	51.2	52.5	53.0	50.4	51.3	54.3	6.2	8.4	0.0	6.0	7.4	0.0
Incr Delay (d2), s/veh	0.2	0.1	0.9	0.3	0.2	9.8	0.0	0.6	0.0	0.2	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	0.6	0.7	0.2	3.1	0.1	5.4	0.0	0.5	5.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.4	52.6	53.9	50.7	51.5	64.1	6.2	9.0	0.0	6.3	8.0	0.0
LnGrp LOS	D	D	D	D	D	E	A	A		A	A	
Approach Vol, veh/h		36			127			1067			1226	
Approach Delay, s/veh		52.9			60.7			9.0			7.9	
Approach LOS		D			E			A			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	88.0	8.3	13.4	7.3	91.0	7.0	14.7
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	9.5	41.0	9.5	38.0	9.5	41.0	9.5	38.0
Max Q Clear Time (g_c+I1), s	3.7	18.4	3.6	3.4	2.3	18.9	2.7	9.0
Green Ext Time (p_c), s	0.1	12.6	0.0	0.1	0.0	13.4	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	11.8
HCM 6th LOS	B

Notes

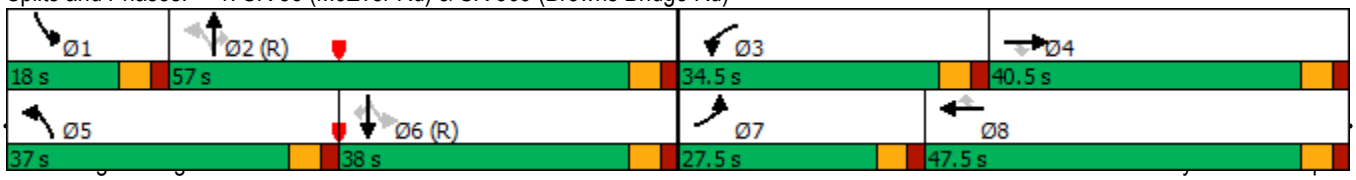
Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	255	514	273	450	688	141	389	938	257	128	748	187
Future Volume (vph)	255	514	273	450	688	141	389	938	257	128	748	187
Lane Group Flow (vph)	268	541	287	474	724	148	409	987	271	135	787	197
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	40.5	40.5	15.0	40.5	40.5	15.0	42.5	42.5	15.0	42.5	42.5
Total Split (s)	27.5	40.5	40.5	34.5	47.5	47.5	37.0	57.0	57.0	18.0	38.0	38.0
Total Split (%)	18.3%	27.0%	27.0%	23.0%	31.7%	31.7%	24.7%	38.0%	38.0%	12.0%	25.3%	25.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.70	0.79	0.54	0.83	0.82	0.29	0.91	0.70	0.37	0.57	0.92	0.38
Control Delay	73.4	65.6	8.8	72.9	61.1	7.3	67.0	42.1	12.4	34.7	72.1	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.4	65.6	8.8	72.9	61.1	7.3	67.0	42.1	12.4	34.7	72.1	11.2
Queue Length 50th (ft)	137	277	0	241	364	0	347	445	54	71	~460	16
Queue Length 95th (ft)	183	335	83	303	435	56	#617	581	143	126	#598	90
Internal Link Dist (ft)		873			467			547			1177	
Turn Bay Length (ft)	330		225	275		280	525		230	210		220
Base Capacity (vph)	489	802	578	644	969	540	451	1401	738	253	851	514
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.67	0.50	0.74	0.75	0.27	0.91	0.70	0.37	0.53	0.92	0.38

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: SR 53 (McEver Rd) & SR 369 (Browns Bridge Rd)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	255	514	273	450	688	141	389	938	257	128	748	187
Future Volume (veh/h)	255	514	273	450	688	141	389	938	257	128	748	187
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	268	541	0	474	724	0	409	987	0	135	787	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	321	626		531	843		441	1569		288	1220	
Arrive On Green	0.10	0.18	0.00	0.16	0.24	0.00	0.16	0.45	0.00	0.06	0.35	0.00
Sat Flow, veh/h	3374	3469	1547	3374	3469	1547	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	268	541	0	474	724	0	409	987	0	135	787	0
Grp Sat Flow(s),veh/h/ln	1687	1735	1547	1687	1735	1547	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	11.7	22.7	0.0	20.7	30.0	0.0	21.7	32.7	0.0	7.4	28.5	0.0
Cycle Q Clear(g_c), s	11.7	22.7	0.0	20.7	30.0	0.0	21.7	32.7	0.0	7.4	28.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	321	626		531	843		441	1569		288	1220	
V/C Ratio(X)	0.84	0.86		0.89	0.86		0.93	0.63		0.47	0.65	
Avail Cap(c_a), veh/h	495	809		652	971		522	1569		324	1220	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	66.7	59.7	0.0	61.9	54.3	0.0	28.6	31.4	0.0	29.2	40.8	0.0
Incr Delay (d2), s/veh	7.3	7.8	0.0	12.7	7.0	0.0	21.0	1.9	0.0	1.2	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	10.5	0.0	9.6	13.6	0.0	11.1	13.7	0.0	3.1	12.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.0	67.4	0.0	74.6	61.4	0.0	49.6	33.4	0.0	30.4	43.4	0.0
LnGrp LOS	E	E		E	E		D	C		C	D	
Approach Vol, veh/h		809			1198			1396			922	
Approach Delay, s/veh		69.6			66.6			38.1			41.5	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.9	73.4	29.1	32.6	30.1	58.2	19.8	41.9
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	12.5	51.5	29.0	35.0	31.5	32.5	22.0	42.0
Max Q Clear Time (g_c+I1), s	9.4	34.7	22.7	24.7	23.7	30.5	13.7	32.0
Green Ext Time (p_c), s	0.1	9.7	1.0	2.4	0.8	1.3	0.6	3.2

Intersection Summary	
HCM 6th Ctrl Delay	52.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.1

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations								
Traffic Vol, veh/h	2	1246	2	2	1	1023	1	2
Future Vol, veh/h	2	1246	2	2	1	1023	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	-	-	150	-	190	-	0	-
Veh in Median Storage, #	-	0	-	-	-	0	0	-
Grade, %	-	0	-	-	-	0	0	-
Peak Hour Factor	92	90	90	92	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5	2	2
Mvmt Flow	2	1384	2	2	1	1137	1	2

Major/Minor	Major1			Major2			Minor1	
Conflicting Flow All	1137	0	0	1384	1386	0	1963	692
Stage 1	-	-	-	-	-	-	1388	-
Stage 2	-	-	-	-	-	-	575	-
Critical Hdwy	6.5	-	-	6.5	4.2	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.84	-
Follow-up Hdwy	2.55	-	-	2.55	2.25	-	3.52	3.32
Pot Cap-1 Maneuver	264	-	-	182	475	-	55	386
Stage 1	-	-	-	-	-	-	197	-
Stage 2	-	-	-	-	-	-	526	-
Platoon blocked, %		-	-			-		
Mov Cap-1 Maneuver	264	-	-	229	229	-	52	386
Mov Cap-2 Maneuver	-	-	-	-	-	-	52	-
Stage 1	-	-	-	-	-	-	190	-
Stage 2	-	-	-	-	-	-	519	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	35.1
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	123	-	-	229	-
HCM Lane V/C Ratio	0.027	-	-	0.014	-
HCM Control Delay (s)	35.1	-	-	21	-
HCM Lane LOS	E	-	-	C	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	41	1174	11	53	966	15	1	0	81	13	1	47
Future Vol, veh/h	41	1174	11	53	966	15	1	0	81	13	1	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	320	-	180	310	-	200	-	-	-	-	-	115
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	5	5	5	5	5	5	2	2	2	2	2	2
Mvmt Flow	43	1236	12	56	1017	16	1	0	85	14	1	49

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1017	0	0	1248	0	0	1943	2451	618	1833	2463	509
Stage 1	-	-	-	-	-	-	1322	1322	-	1129	1129	-
Stage 2	-	-	-	-	-	-	621	1129	-	704	1334	-
Critical Hdwy	4.2	-	-	4.2	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.25	-	-	2.25	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	660	-	-	537	-	-	39	31	432	47	30	509
Stage 1	-	-	-	-	-	-	165	224	-	217	277	-
Stage 2	-	-	-	-	-	-	442	277	-	394	221	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	660	-	-	537	-	-	30	26	432	33	25	509
Mov Cap-2 Maneuver	-	-	-	-	-	-	30	26	-	33	25	-
Stage 1	-	-	-	-	-	-	154	209	-	203	248	-
Stage 2	-	-	-	-	-	-	356	248	-	296	207	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.6	17.6	53.7
HCM LOS			C	F

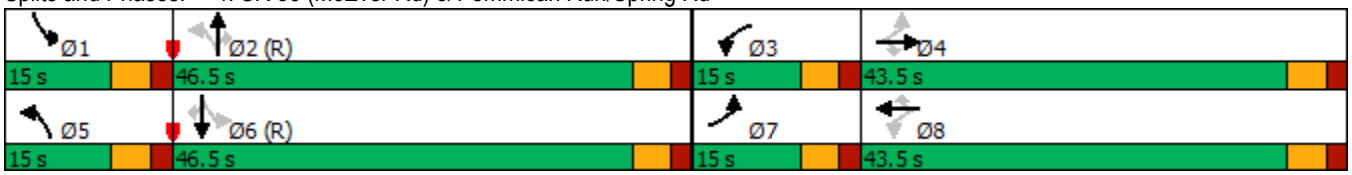
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	371	660	-	-	537	-	-	32	509
HCM Lane V/C Ratio	0.233	0.065	-	-	0.104	-	-	0.461	0.097
HCM Control Delay (s)	17.6	10.8	-	-	12.5	-	-	191.2	12.8
HCM Lane LOS	C	B	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	0.9	0.2	-	-	0.3	-	-	1.5	0.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	7	15	24	7	140	12	1210	23	67	994	7
Future Volume (vph)	17	7	15	24	7	140	12	1210	23	67	994	7
Lane Group Flow (vph)	18	7	15	25	7	144	12	1247	24	69	1025	7
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	40.5	40.5	15.0	43.5	43.5	15.0	33.5	33.5	15.0	33.5	33.5
Total Split (s)	15.0	43.5	43.5	15.0	43.5	43.5	15.0	46.5	46.5	15.0	46.5	46.5
Total Split (%)	12.5%	36.3%	36.3%	12.5%	36.3%	36.3%	12.5%	38.8%	38.8%	12.5%	38.8%	38.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.11	0.06	0.07	0.15	0.04	0.54	0.03	0.52	0.02	0.22	0.40	0.01
Control Delay	42.4	52.1	0.6	43.3	49.7	16.2	5.3	12.2	0.0	6.1	8.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.4	52.1	0.6	43.3	49.7	16.2	5.3	12.2	0.0	6.1	8.4	0.0
Queue Length 50th (ft)	13	5	0	17	5	0	2	266	0	12	131	0
Queue Length 95th (ft)	33	21	0	42	21	64	9	422	0	32	293	0
Internal Link Dist (ft)		674			538			2513			854	
Turn Bay Length (ft)	103		90	60		80	400		220	290		380
Base Capacity (vph)	200	589	585	199	589	599	447	2378	1102	343	2544	1170
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.01	0.03	0.13	0.01	0.24	0.03	0.52	0.02	0.20	0.40	0.01

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated

Splits and Phases: 4: SR 53 (McEver Rd) & Pemmican Run/Spring Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	7	15	24	7	140	12	1210	23	67	994	7
Future Volume (veh/h)	17	7	15	24	7	140	12	1210	23	67	994	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	18	7	15	25	7	144	12	1247	0	69	1025	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	5	5	5
Cap, veh/h	223	196	166	243	205	174	373	2258		323	2341	
Arrive On Green	0.02	0.10	0.10	0.02	0.11	0.11	0.01	0.65	0.00	0.04	0.67	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	18	7	15	25	7	144	12	1247	0	69	1025	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	1.1	0.4	1.0	1.5	0.4	10.7	0.3	23.5	0.0	1.5	16.4	0.0
Cycle Q Clear(g_c), s	1.1	0.4	1.0	1.5	0.4	10.7	0.3	23.5	0.0	1.5	16.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	223	196	166	243	205	174	373	2258		323	2341	
V/C Ratio(X)	0.08	0.04	0.09	0.10	0.03	0.83	0.03	0.55		0.21	0.44	
Avail Cap(c_a), veh/h	330	592	502	342	592	502	487	2258		396	2341	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	46.6	48.3	48.6	46.2	47.8	52.3	7.6	11.4	0.0	8.8	9.0	0.0
Incr Delay (d2), s/veh	0.2	0.1	0.2	0.2	0.1	9.7	0.0	1.0	0.0	0.3	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.2	0.4	0.7	0.2	4.7	0.1	8.2	0.0	0.5	5.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.7	48.3	48.8	46.4	47.8	62.0	7.6	12.4	0.0	9.1	9.6	0.0
LnGrp LOS	D	D	D	D	D	E	A	B		A	A	
Approach Vol, veh/h		40			176			1259			1094	
Approach Delay, s/veh		47.8			59.3			12.3			9.6	
Approach LOS		D			E			B			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	83.6	8.3	18.1	7.1	86.5	7.8	18.6
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	9.5	41.0	9.5	38.0	9.5	41.0	9.5	38.0
Max Q Clear Time (g_c+I1), s	3.5	25.5	3.5	3.0	2.3	18.4	3.1	12.7
Green Ext Time (p_c), s	0.1	11.1	0.0	0.1	0.0	12.3	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	14.9
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

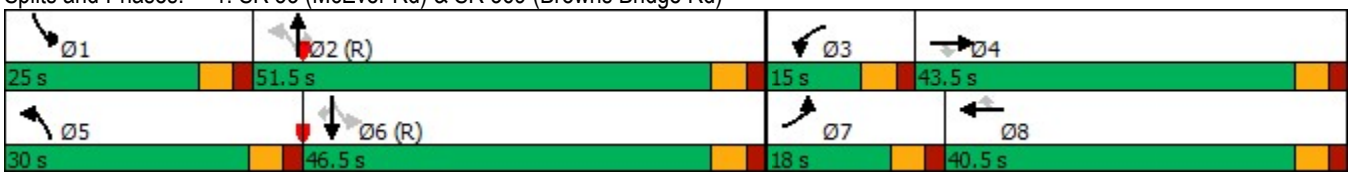
FUTURE "NO-BUILD" INTERSECTION ANALYSIS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	217	671	341	137	412	89	296	690	288	210	719	116
Future Volume (vph)	217	671	341	137	412	89	296	690	288	210	719	116
Lane Group Flow (vph)	241	746	379	152	458	99	329	767	320	233	799	129
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	40.5	40.5	15.0	40.5	40.5	15.0	42.5	42.5	15.0	42.5	42.5
Total Split (s)	18.0	43.5	43.5	15.0	40.5	40.5	30.0	51.5	51.5	25.0	46.5	46.5
Total Split (%)	13.3%	32.2%	32.2%	11.1%	30.0%	30.0%	22.2%	38.1%	38.1%	18.5%	34.4%	34.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.80	0.83	0.59	0.67	0.56	0.22	0.84	0.57	0.42	0.64	0.67	0.21
Control Delay	79.5	55.8	10.7	76.1	47.6	6.8	42.2	35.3	8.2	26.3	42.2	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.5	55.8	10.7	76.1	47.6	6.8	42.2	35.3	8.2	26.3	42.2	9.3
Queue Length 50th (ft)	112	332	34	70	190	0	177	293	31	112	346	12
Queue Length 95th (ft)	#177	409	134	110	247	40	#327	385	115	169	430	62
Internal Link Dist (ft)		873			467			547			1177	
Turn Bay Length (ft)	330		225	275		280	525		230	210		220
Base Capacity (vph)	308	967	670	234	891	479	425	1350	766	416	1195	607
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.77	0.57	0.65	0.51	0.21	0.77	0.57	0.42	0.56	0.67	0.21

Intersection Summary

Cycle Length: 135
Actuated Cycle Length: 135
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: SR 53 (McEver Rd) & SR 369 (Browns Bridge Rd)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	217	671	341	137	412	89	296	690	288	210	719	116
Future Volume (veh/h)	217	671	341	137	412	89	296	690	288	210	719	116
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	241	746	0	152	458	0	329	767	0	233	799	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	289	844		201	753		426	1525		410	1414	
Arrive On Green	0.09	0.24	0.00	0.06	0.22	0.00	0.13	0.44	0.00	0.09	0.41	0.00
Sat Flow, veh/h	3374	3469	1547	3374	3469	1547	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	241	746	0	152	458	0	329	767	0	233	799	0
Grp Sat Flow(s),veh/h/ln	1687	1735	1547	1687	1735	1547	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	9.5	28.0	0.0	6.0	16.1	0.0	14.5	21.5	0.0	10.4	23.9	0.0
Cycle Q Clear(g_c), s	9.5	28.0	0.0	6.0	16.1	0.0	14.5	21.5	0.0	10.4	23.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	289	844		201	753		426	1525		410	1414	
V/C Ratio(X)	0.83	0.88		0.76	0.61		0.77	0.50		0.57	0.57	
Avail Cap(c_a), veh/h	312	977		237	899		522	1525		497	1414	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	60.8	49.2	0.0	62.5	47.7	0.0	22.1	27.2	0.0	21.0	30.8	0.0
Incr Delay (d2), s/veh	16.4	8.7	0.0	11.1	0.9	0.0	5.7	1.2	0.0	1.2	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	12.8	0.0	2.8	6.9	0.0	6.2	8.8	0.0	4.2	10.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.1	57.9	0.0	73.6	48.5	0.0	27.8	28.4	0.0	22.2	32.4	0.0
LnGrp LOS	E	E		E	D		C	C		C	C	
Approach Vol, veh/h		987			610			1096			1032	
Approach Delay, s/veh		62.6			54.8			28.2			30.1	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.3	64.9	13.5	38.4	22.6	60.5	17.1	34.8
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	19.5	46.0	9.5	38.0	24.5	41.0	12.5	35.0
Max Q Clear Time (g_c+I1), s	12.4	23.5	8.0	30.0	16.5	25.9	11.5	18.1
Green Ext Time (p_c), s	0.4	9.0	0.1	2.9	0.6	7.4	0.1	2.5

Intersection Summary	
HCM 6th Ctrl Delay	42.2
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations								
Traffic Vol, veh/h	2	1032	2	1	3	1002	0	0
Future Vol, veh/h	2	1032	2	1	3	1002	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	-	-	150	-	190	-	0	-
Veh in Median Storage, #	-	0	-	-	-	0	0	-
Grade, %	-	0	-	-	-	0	0	-
Peak Hour Factor	92	88	88	92	88	88	88	88
Heavy Vehicles, %	5	5	5	5	5	2	2	2
Mvmt Flow	2	1173	2	1	3	1139	0	0

Major/Minor	Major1			Major2			Minor1	
Conflicting Flow All	1139	0	0	1173	1175	0	1755	587
Stage 1	-	-	-	-	-	-	1177	-
Stage 2	-	-	-	-	-	-	578	-
Critical Hdwy	6.5	-	-	6.5	4.2	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.84	-
Follow-up Hdwy	2.55	-	-	2.55	2.25	-	3.52	3.32
Pot Cap-1 Maneuver	263	-	-	250	573	-	76	453
Stage 1	-	-	-	-	-	-	255	-
Stage 2	-	-	-	-	-	-	524	-
Platoon blocked, %		-	-			-		
Mov Cap-1 Maneuver	263	-	-	437	437	-	74	453
Mov Cap-2 Maneuver	-	-	-	-	-	-	74	-
Stage 1	-	-	-	-	-	-	249	-
Stage 2	-	-	-	-	-	-	519	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	437	-
HCM Lane V/C Ratio	-	-	-	0.01	-
HCM Control Delay (s)	0	-	-	13.3	-
HCM Lane LOS	A	-	-	B	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	37	922	5	92	971	16	2	0	73	13	0	27
Future Vol, veh/h	37	922	5	92	971	16	2	0	73	13	0	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	320	-	180	310	-	200	-	-	-	-	-	115
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	2	2	2	2	2	2	2
Mvmt Flow	40	1002	5	100	1055	17	2	0	79	14	0	29

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1055	0	0	1007	0	0	1810	2337	501	1836	2342	528
Stage 1	-	-	-	-	-	-	1082	1082	-	1255	1255	-
Stage 2	-	-	-	-	-	-	728	1255	-	581	1087	-
Critical Hdwy	4.2	-	-	4.2	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.25	-	-	2.25	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	638	-	-	666	-	-	49	36	515	47	36	495
Stage 1	-	-	-	-	-	-	232	292	-	182	241	-
Stage 2	-	-	-	-	-	-	381	241	-	467	290	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	638	-	-	666	-	-	39	29	515	34	29	495
Mov Cap-2 Maneuver	-	-	-	-	-	-	39	29	-	34	29	-
Stage 1	-	-	-	-	-	-	217	274	-	171	205	-
Stage 2	-	-	-	-	-	-	305	205	-	370	272	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	1	16.7	64.5
HCM LOS			C	F

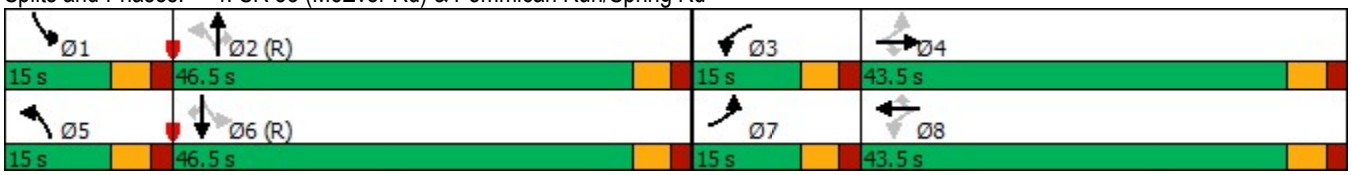
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	389	638	-	-	666	-	-	34	495
HCM Lane V/C Ratio	0.21	0.063	-	-	0.15	-	-	0.416	0.059
HCM Control Delay (s)	16.7	11	-	-	11.4	-	-	172	12.7
HCM Lane LOS	C	B	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	0.8	0.2	-	-	0.5	-	-	1.4	0.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	4	18	23	7	87	12	972	13	78	1053	3
Future Volume (vph)	11	4	18	23	7	87	12	972	13	78	1053	3
Lane Group Flow (vph)	13	5	21	26	8	100	14	1117	15	90	1210	3
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	40.5	40.5	15.0	43.5	43.5	15.0	33.5	33.5	15.0	33.5	33.5
Total Split (s)	15.0	43.5	43.5	15.0	43.5	43.5	15.0	46.5	46.5	15.0	46.5	46.5
Total Split (%)	12.5%	36.3%	36.3%	12.5%	36.3%	36.3%	12.5%	38.8%	38.8%	12.5%	38.8%	38.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.09	0.05	0.10	0.16	0.06	0.42	0.04	0.48	0.01	0.25	0.47	0.00
Control Delay	43.6	54.5	1.1	45.5	51.7	11.0	4.8	11.7	0.0	5.5	8.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.6	54.5	1.1	45.5	51.7	11.0	4.8	11.7	0.0	5.5	8.4	0.0
Queue Length 50th (ft)	9	4	0	18	6	0	2	231	0	16	167	0
Queue Length 95th (ft)	26	17	0	43	22	33	9	327	0	33	320	0
Internal Link Dist (ft)		674			538			2513			854	
Turn Bay Length (ft)	103		90	60		80	400		220	290		380
Base Capacity (vph)	186	589	585	188	589	585	387	2317	1076	386	2575	1216
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.01	0.04	0.14	0.01	0.17	0.04	0.48	0.01	0.23	0.47	0.00

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated

Splits and Phases: 4: SR 53 (McEver Rd) & Pemmican Run/Spring Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	4	18	23	7	87	12	972	13	78	1053	3
Future Volume (veh/h)	11	4	18	23	7	87	12	972	13	78	1053	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1826	1826	1826	1826	1826	1870
Adj Flow Rate, veh/h	13	5	21	26	8	100	14	1117	0	90	1210	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	5	5	2
Cap, veh/h	178	134	113	199	151	128	334	2364		390	2448	
Arrive On Green	0.01	0.07	0.07	0.02	0.08	0.08	0.02	0.68	0.00	0.04	0.71	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1739	3469	1547	1739	3469	1585
Grp Volume(v), veh/h	13	5	21	26	8	100	14	1117	0	90	1210	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1739	1735	1547	1739	1735	1585
Q Serve(g_s), s	0.8	0.3	1.5	1.6	0.5	7.4	0.3	18.2	0.0	1.8	18.9	0.0
Cycle Q Clear(g_c), s	0.8	0.3	1.5	1.6	0.5	7.4	0.3	18.2	0.0	1.8	18.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	178	134	113	199	151	128	334	2364		390	2448	
V/C Ratio(X)	0.07	0.04	0.19	0.13	0.05	0.78	0.04	0.47		0.23	0.49	
Avail Cap(c_a), veh/h	293	592	502	297	592	502	445	2364		459	2448	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	50.5	51.9	52.4	49.8	50.9	54.1	6.7	9.0	0.0	6.6	8.0	0.0
Incr Delay (d2), s/veh	0.2	0.1	0.8	0.3	0.1	9.7	0.1	0.7	0.0	0.3	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.1	0.6	0.7	0.2	3.3	0.1	6.0	0.0	0.6	6.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.7	52.0	53.2	50.1	51.0	63.8	6.7	9.7	0.0	6.9	8.7	0.0
LnGrp LOS	D	D	D	D	D	E	A	A		A	A	
Approach Vol, veh/h		39			134			1131			1300	
Approach Delay, s/veh		52.2			60.4			9.6			8.6	
Approach LOS		D			E			A			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	87.3	8.4	14.1	7.4	90.2	7.3	15.2
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	9.5	41.0	9.5	38.0	9.5	41.0	9.5	38.0
Max Q Clear Time (g_c+I1), s	3.8	20.2	3.6	3.5	2.3	20.9	2.8	9.4
Green Ext Time (p_c), s	0.1	12.6	0.0	0.1	0.0	13.2	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	12.4
HCM 6th LOS	B

Notes

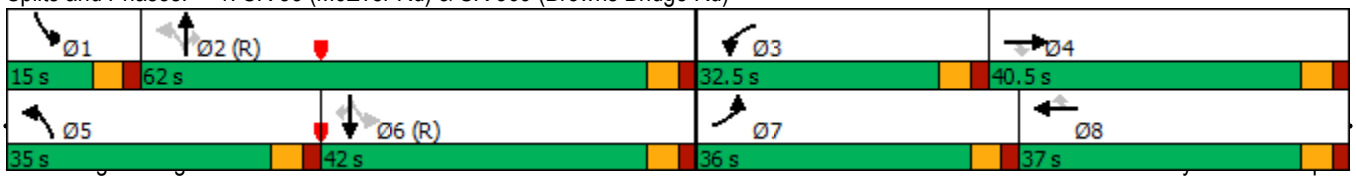
Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	270	545	289	477	729	149	412	994	272	136	793	198
Future Volume (vph)	270	545	289	477	729	149	412	994	272	136	793	198
Lane Group Flow (vph)	284	574	304	502	767	157	434	1046	286	143	835	208
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	40.5	40.5	15.0	40.5	40.5	15.0	42.5	42.5	15.0	42.5	42.5
Total Split (s)	36.0	40.5	40.5	32.5	37.0	37.0	35.0	62.0	62.0	15.0	42.0	42.0
Total Split (%)	24.0%	27.0%	27.0%	21.7%	24.7%	24.7%	23.3%	41.3%	41.3%	10.0%	28.0%	28.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.71	0.70	0.51	0.88	0.77	0.29	1.11	0.80	0.41	0.79	1.00	0.43
Control Delay	73.0	57.8	7.9	78.0	55.4	10.2	119.5	47.5	12.3	57.9	86.9	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.0	57.8	7.9	78.0	55.4	10.2	119.5	47.5	12.3	57.9	86.9	18.8
Queue Length 50th (ft)	145	285	0	257	375	13	~457	500	60	82	451	54
Queue Length 95th (ft)	192	357	86	#342	478	76	#688	594	142	#187	#602	136
Internal Link Dist (ft)		873			467			547			1177	
Turn Bay Length (ft)	330		225	275		280	525		230	210		220
Base Capacity (vph)	678	819	597	600	992	542	392	1301	705	181	836	481
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.70	0.51	0.84	0.77	0.29	1.11	0.80	0.41	0.79	1.00	0.43

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: SR 53 (McEver Rd) & SR 369 (Browns Bridge Rd)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	545	289	477	729	149	412	994	272	136	793	198
Future Volume (veh/h)	270	545	289	477	729	149	412	994	272	136	793	198
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	284	574	0	502	767	0	434	1046	0	143	835	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	342	657		552	873		443	1516		260	1053	
Arrive On Green	0.10	0.19	0.00	0.16	0.25	0.00	0.20	0.44	0.00	0.06	0.30	0.00
Sat Flow, veh/h	3374	3469	1547	3374	3469	1547	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	284	574	0	502	767	0	434	1046	0	143	835	0
Grp Sat Flow(s),veh/h/ln	1687	1735	1547	1687	1735	1547	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	12.4	24.1	0.0	21.9	31.9	0.0	28.4	36.5	0.0	8.5	33.1	0.0
Cycle Q Clear(g_c), s	12.4	24.1	0.0	21.9	31.9	0.0	28.4	36.5	0.0	8.5	33.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	342	657		552	873		443	1516		260	1053	
V/C Ratio(X)	0.83	0.87		0.91	0.88		0.98	0.69		0.55	0.79	
Avail Cap(c_a), veh/h	686	809		607	873		443	1516		260	1053	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	66.1	59.0	0.0	61.6	53.9	0.0	38.7	34.0	0.0	34.0	47.9	0.0
Incr Delay (d2), s/veh	5.2	8.9	0.0	16.9	10.2	0.0	37.2	2.6	0.0	2.4	6.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	11.2	0.0	10.5	14.8	0.0	16.2	15.4	0.0	3.7	14.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.3	67.9	0.0	78.5	64.1	0.0	75.9	36.6	0.0	36.4	54.0	0.0
LnGrp LOS	E	E		E	E		E	D		D	D	
Approach Vol, veh/h		858			1269			1480			978	
Approach Delay, s/veh		69.0			69.8			48.2			51.5	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	71.0	30.0	33.9	35.0	51.0	20.7	43.2
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	9.5	56.5	27.0	35.0	29.5	36.5	30.5	31.5
Max Q Clear Time (g_c+I1), s	10.5	38.5	23.9	26.1	30.4	35.1	14.4	33.9
Green Ext Time (p_c), s	0.0	10.8	0.6	2.3	0.0	1.0	0.8	0.0

Intersection Summary	
HCM 6th Ctrl Delay	58.8
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.1

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations								
Traffic Vol, veh/h	2	1321	2	2	1	1084	1	2
Future Vol, veh/h	2	1321	2	2	1	1084	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	-	-	150	-	190	-	0	-
Veh in Median Storage, #	-	0	-	-	-	0	0	-
Grade, %	-	0	-	-	-	0	0	-
Peak Hour Factor	92	90	90	92	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	2	2	2
Mvmt Flow	2	1468	2	2	1	1204	1	2

Major/Minor	Major1			Major2			Minor1	
Conflicting Flow All	1204	0	0	1468	1470	0	2080	734
Stage 1	-	-	-	-	-	-	1472	-
Stage 2	-	-	-	-	-	-	608	-
Critical Hdwy	6.5	-	-	6.5	4.2	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.84	-
Follow-up Hdwy	2.55	-	-	2.55	2.25	-	3.52	3.32
Pot Cap-1 Maneuver	239	-	-	160	440	-	46	363
Stage 1	-	-	-	-	-	-	177	-
Stage 2	-	-	-	-	-	-	506	-
Platoon blocked, %		-	-			-		
Mov Cap-1 Maneuver	239	-	-	203	203	-	43	363
Mov Cap-2 Maneuver	-	-	-	-	-	-	43	-
Stage 1	-	-	-	-	-	-	169	-
Stage 2	-	-	-	-	-	-	498	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	40.8
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	104	-	-	203	-
HCM Lane V/C Ratio	0.032	-	-	0.016	-
HCM Control Delay (s)	40.8	-	-	23	-
HCM Lane LOS	E	-	-	C	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	43	1244	12	56	1024	16	1	0	86	14	1	50
Future Vol, veh/h	43	1244	12	56	1024	16	1	0	86	14	1	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	320	-	180	310	-	200	-	-	-	-	-	115
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	5	5	5	5	5	2	2	2	2	2	2	2
Mvmt Flow	45	1309	13	59	1078	17	1	0	91	15	1	53

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1078	0	0	1322	0	0	2057	2595	655	1941	2608	539
Stage 1	-	-	-	-	-	-	1399	1399	-	1196	1196	-
Stage 2	-	-	-	-	-	-	658	1196	-	745	1412	-
Critical Hdwy	4.2	-	-	4.2	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.25	-	-	2.25	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	625	-	-	503	-	-	32	25	409	39	24	487
Stage 1	-	-	-	-	-	-	148	206	-	198	258	-
Stage 2	-	-	-	-	-	-	420	258	-	372	203	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	625	-	-	503	-	-	24	20	409	26	20	487
Mov Cap-2 Maneuver	-	-	-	-	-	-	24	20	-	26	20	-
Stage 1	-	-	-	-	-	-	137	191	-	184	228	-
Stage 2	-	-	-	-	-	-	329	228	-	269	188	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.7	19.2	75.9
HCM LOS			C	F

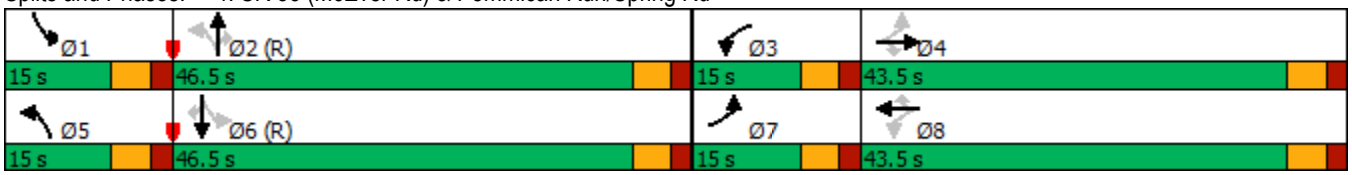
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	345	625	-	-	503	-	-	25	487
HCM Lane V/C Ratio	0.265	0.072	-	-	0.117	-	-	0.632	0.108
HCM Control Delay (s)	19.2	11.2	-	-	13.1	-	-	284.7	13.3
HCM Lane LOS	C	B	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	1	0.2	-	-	0.4	-	-	1.9	0.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	7	16	25	7	148	13	1283	24	71	1054	7
Future Volume (vph)	18	7	16	25	7	148	13	1283	24	71	1054	7
Lane Group Flow (vph)	19	7	16	26	7	153	13	1323	25	73	1087	7
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	40.5	40.5	15.0	43.5	43.5	15.0	33.5	33.5	15.0	33.5	33.5
Total Split (s)	15.0	43.5	43.5	15.0	43.5	43.5	15.0	46.5	46.5	15.0	46.5	46.5
Total Split (%)	12.5%	36.3%	36.3%	12.5%	36.3%	36.3%	12.5%	38.8%	38.8%	12.5%	38.8%	38.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.12	0.06	0.07	0.15	0.04	0.55	0.03	0.56	0.02	0.25	0.43	0.01
Control Delay	42.3	52.0	0.7	43.2	49.4	16.1	5.4	13.0	0.0	6.6	8.8	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.3	52.0	0.7	43.2	49.4	16.1	5.4	13.0	0.0	6.6	8.8	0.0
Queue Length 50th (ft)	13	5	0	18	5	0	2	294	0	13	142	0
Queue Length 95th (ft)	34	21	0	43	21	66	10	471	0	33	321	0
Internal Link Dist (ft)		674			538			2513			854	
Turn Bay Length (ft)	103		90	60		80	400		220	290		380
Base Capacity (vph)	201	589	585	199	589	605	422	2370	1098	319	2540	1168
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.01	0.03	0.13	0.01	0.25	0.03	0.56	0.02	0.23	0.43	0.01

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated

Splits and Phases: 4: SR 53 (McEver Rd) & Pemmican Run/Spring Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	7	16	25	7	148	13	1283	24	71	1054	7
Future Volume (veh/h)	18	7	16	25	7	148	13	1283	24	71	1054	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	19	7	16	26	7	153	13	1323	0	73	1087	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	5	5	5
Cap, veh/h	231	207	175	252	216	183	347	2234		298	2315	
Arrive On Green	0.02	0.11	0.11	0.02	0.12	0.12	0.01	0.64	0.00	0.04	0.67	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	19	7	16	26	7	153	13	1323	0	73	1087	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	1.1	0.4	1.1	1.5	0.4	11.3	0.3	26.3	0.0	1.7	18.2	0.0
Cycle Q Clear(g_c), s	1.1	0.4	1.1	1.5	0.4	11.3	0.3	26.3	0.0	1.7	18.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	231	207	175	252	216	183	347	2234		298	2315	
V/C Ratio(X)	0.08	0.03	0.09	0.10	0.03	0.84	0.04	0.59		0.25	0.47	
Avail Cap(c_a), veh/h	337	592	502	350	592	502	459	2234		369	2315	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	45.9	47.6	47.9	45.6	47.1	52.0	8.1	12.3	0.0	9.9	9.7	0.0
Incr Delay (d2), s/veh	0.2	0.1	0.2	0.2	0.1	9.7	0.0	1.2	0.0	0.4	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.2	0.4	0.7	0.2	5.0	0.1	9.3	0.0	0.6	6.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.0	47.7	48.2	45.8	47.2	61.7	8.1	13.5	0.0	10.3	10.4	0.0
LnGrp LOS	D	D	D	D	D	E	A	B		B	B	
Approach Vol, veh/h		42			186			1336			1160	
Approach Delay, s/veh		47.1			58.9			13.4			10.4	
Approach LOS		D			E			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	82.8	8.4	18.8	7.3	85.6	7.8	19.3
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	9.5	41.0	9.5	38.0	9.5	41.0	9.5	38.0
Max Q Clear Time (g_c+I1), s	3.7	28.3	3.5	3.1	2.3	20.2	3.1	13.3
Green Ext Time (p_c), s	0.1	9.8	0.0	0.1	0.0	12.3	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	15.7
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

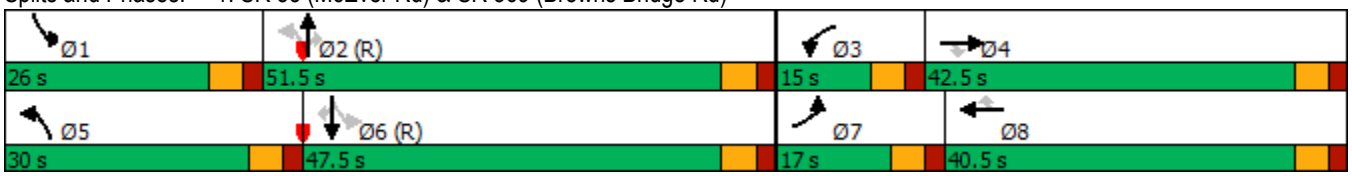
FUTURE "BUILD" INTERSECTION ANALYSIS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	227	671	341	137	412	106	296	719	288	257	801	144
Future Volume (vph)	227	671	341	137	412	106	296	719	288	257	801	144
Lane Group Flow (vph)	252	746	379	152	458	118	329	799	320	286	890	160
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	40.5	40.5	15.0	40.5	40.5	15.0	42.5	42.5	15.0	42.5	42.5
Total Split (s)	17.0	42.5	42.5	15.0	40.5	40.5	30.0	51.5	51.5	26.0	47.5	47.5
Total Split (%)	12.6%	31.5%	31.5%	11.1%	30.0%	30.0%	22.2%	38.1%	38.1%	19.3%	35.2%	35.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.89	0.84	0.59	0.67	0.55	0.26	0.88	0.61	0.44	0.77	0.75	0.26
Control Delay	91.9	57.0	10.8	76.1	47.2	8.0	53.3	37.5	10.7	34.1	45.3	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	91.9	57.0	10.8	76.1	47.2	8.0	53.3	37.5	10.7	34.1	45.3	10.5
Queue Length 50th (ft)	119	333	32	70	188	0	208	322	49	141	396	23
Queue Length 95th (ft)	#201	414	133	110	247	51	#377	405	138	223	485	79
Internal Link Dist (ft)		873			467			547			1177	
Turn Bay Length (ft)	330		225	275		280	525		230	210		220
Base Capacity (vph)	284	942	662	234	891	486	397	1302	732	407	1180	625
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.79	0.57	0.65	0.51	0.24	0.83	0.61	0.44	0.70	0.75	0.26

Intersection Summary

Cycle Length: 135
Actuated Cycle Length: 135
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: SR 53 (McEver Rd) & SR 369 (Browns Bridge Rd)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	227	671	341	137	412	106	296	719	288	257	801	144
Future Volume (veh/h)	227	671	341	137	412	106	296	719	288	257	801	144
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1870
Adj Flow Rate, veh/h	252	746	0	152	458	0	329	799	0	286	890	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	2
Cap, veh/h	287	839		201	750		400	1469		415	1416	
Arrive On Green	0.09	0.24	0.00	0.06	0.22	0.00	0.13	0.42	0.00	0.11	0.41	0.00
Sat Flow, veh/h	3374	3469	1547	3374	3469	1547	1739	3469	1547	1739	3469	1585
Grp Volume(v), veh/h	252	746	0	152	458	0	329	799	0	286	890	0
Grp Sat Flow(s),veh/h/ln	1687	1735	1547	1687	1735	1547	1739	1735	1547	1739	1735	1585
Q Serve(g_s), s	10.0	28.0	0.0	6.0	16.1	0.0	14.6	23.3	0.0	12.7	27.6	0.0
Cycle Q Clear(g_c), s	10.0	28.0	0.0	6.0	16.1	0.0	14.6	23.3	0.0	12.7	27.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	287	839		201	750		400	1469		415	1416	
V/C Ratio(X)	0.88	0.89		0.76	0.61		0.82	0.54		0.69	0.63	
Avail Cap(c_a), veh/h	287	951		237	899		493	1469		484	1416	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	61.1	49.4	0.0	62.5	47.8	0.0	24.0	29.2	0.0	21.5	31.8	0.0
Incr Delay (d2), s/veh	24.9	9.6	0.0	11.1	0.9	0.0	9.0	1.5	0.0	3.4	2.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	12.9	0.0	2.8	6.9	0.0	6.6	9.7	0.0	5.3	11.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.9	59.0	0.0	73.6	48.6	0.0	33.0	30.6	0.0	24.9	33.9	0.0
LnGrp LOS	F	E		E	D		C	C		C	C	
Approach Vol, veh/h		998			610			1128			1176	
Approach Delay, s/veh		65.8			54.9			31.3			31.7	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.7	62.7	13.5	38.2	22.7	60.6	17.0	34.7
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	20.5	46.0	9.5	37.0	24.5	42.0	11.5	35.0
Max Q Clear Time (g_c+I1), s	14.7	25.3	8.0	30.0	16.6	29.6	12.0	18.1
Green Ext Time (p_c), s	0.4	9.0	0.1	2.6	0.6	7.1	0.0	2.5

Intersection Summary	
HCM 6th Ctrl Delay	43.9
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	16.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	58	1032	2	4	1002	28	2	0	2	77	0	157
Future Vol, veh/h	58	1032	2	4	1002	28	2	0	2	77	0	157
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	235	-	150	190	-	175	-	-	-	-	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	5	5	5	5	5	5	2	2	2	2	2	2
Mvmt Flow	61	1086	2	4	1055	29	2	0	2	81	0	165

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1084	0	0	1088	0	0	1744	2300	543	1728	2273	528
Stage 1	-	-	-	-	-	-	1208	1208	-	1063	1063	-
Stage 2	-	-	-	-	-	-	536	1092	-	665	1210	-
Critical Hdwy	4.2	-	-	4.2	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.25	-	-	2.25	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	622	-	-	620	-	-	55	38	484	~ 57	40	495
Stage 1	-	-	-	-	-	-	194	254	-	238	298	-
Stage 2	-	-	-	-	-	-	496	289	-	416	254	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	622	-	-	620	-	-	34	34	484	~ 52	36	495
Mov Cap-2 Maneuver	-	-	-	-	-	-	34	34	-	~ 52	36	-
Stage 1	-	-	-	-	-	-	175	229	-	215	296	-
Stage 2	-	-	-	-	-	-	328	287	-	374	229	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	65.2	159.9
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	64	622	-	-	620	-	-	52	495
HCM Lane V/C Ratio	0.066	0.098	-	-	0.007	-	-	1.559	0.334
HCM Control Delay (s)	65.2	11.4	-	-	10.8	-	-	$ 453.6	15.9
HCM Lane LOS	F	B	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	0.2	0.3	-	-	0	-	-	7.6	1.5

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	992	10	92	996	16	4	0	73	13	0	28
Future Vol, veh/h	39	992	10	92	996	16	4	0	73	13	0	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	320	-	180	310	-	200	-	-	-	-	-	115
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5	2	2	2	2	2	2
Mvmt Flow	42	1078	11	100	1083	17	4	0	79	14	0	30

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1083	0	0	1089	0	0	1904	2445	539	1906	2456	542
Stage 1	-	-	-	-	-	-	1162	1162	-	1283	1283	-
Stage 2	-	-	-	-	-	-	742	1283	-	623	1173	-
Critical Hdwy	4.2	-	-	4.2	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.25	-	-	2.25	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	622	-	-	619	-	-	42	31	487	42	30	485
Stage 1	-	-	-	-	-	-	207	267	-	175	234	-
Stage 2	-	-	-	-	-	-	374	234	-	440	264	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	622	-	-	619	-	-	33	24	487	29	23	485
Mov Cap-2 Maneuver	-	-	-	-	-	-	33	24	-	29	23	-
Stage 1	-	-	-	-	-	-	193	249	-	163	196	-
Stage 2	-	-	-	-	-	-	294	196	-	343	246	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	1	22.9	77
HCM LOS			C	F

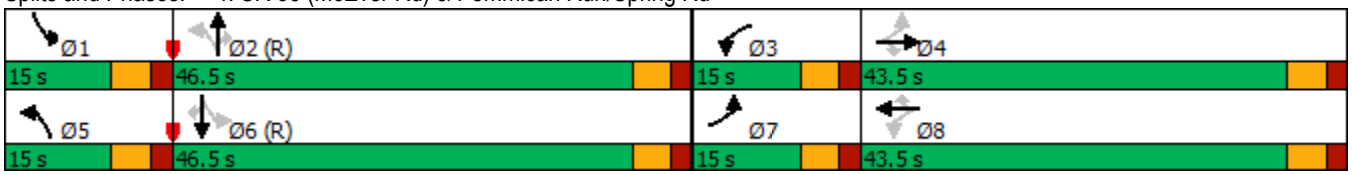
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	284	622	-	-	619	-	-	29	485
HCM Lane V/C Ratio	0.295	0.068	-	-	0.162	-	-	0.487	0.063
HCM Control Delay (s)	22.9	11.2	-	-	11.9	-	-	215.1	12.9
HCM Lane LOS	C	B	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	1.2	0.2	-	-	0.6	-	-	1.6	0.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	4	18	27	7	87	12	1031	25	78	1074	3
Future Volume (vph)	11	4	18	27	7	87	12	1031	25	78	1074	3
Lane Group Flow (vph)	13	5	21	31	8	100	14	1185	29	90	1234	3
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	40.5	40.5	15.0	43.5	43.5	15.0	33.5	33.5	15.0	33.5	33.5
Total Split (s)	15.0	43.5	43.5	15.0	43.5	43.5	15.0	46.5	46.5	15.0	46.5	46.5
Total Split (%)	12.5%	36.3%	36.3%	12.5%	36.3%	36.3%	12.5%	38.8%	38.8%	12.5%	38.8%	38.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.09	0.05	0.11	0.19	0.05	0.42	0.04	0.51	0.03	0.26	0.48	0.00
Control Delay	43.5	54.8	1.1	46.1	51.6	10.9	4.9	12.2	0.0	5.8	8.6	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.5	54.8	1.1	46.1	51.6	10.9	4.9	12.2	0.0	5.8	8.6	0.0
Queue Length 50th (ft)	9	4	0	22	6	0	2	253	0	16	175	0
Queue Length 95th (ft)	26	17	0	48	22	33	9	355	0	33	329	0
Internal Link Dist (ft)		674			538			2513			854	
Turn Bay Length (ft)	103		90	60		80	400		220	290		380
Base Capacity (vph)	185	589	585	188	589	585	378	2315	1076	363	2571	1215
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.01	0.04	0.16	0.01	0.17	0.04	0.51	0.03	0.25	0.48	0.00

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated

Splits and Phases: 4: SR 53 (McEver Rd) & Pemmican Run/Spring Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	4	18	27	7	87	12	1031	25	78	1074	3
Future Volume (veh/h)	11	4	18	27	7	87	12	1031	25	78	1074	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1826	1826	1826	1826	1826	1870
Adj Flow Rate, veh/h	13	5	21	31	8	100	14	1185	0	90	1234	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	5	5	2
Cap, veh/h	175	129	109	200	152	129	326	2364		367	2447	
Arrive On Green	0.01	0.07	0.07	0.03	0.08	0.08	0.02	0.68	0.00	0.04	0.71	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1739	3469	1547	1739	3469	1585
Grp Volume(v), veh/h	13	5	21	31	8	100	14	1185	0	90	1234	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1739	1735	1547	1739	1735	1585
Q Serve(g_s), s	0.8	0.3	1.5	1.9	0.5	7.4	0.3	19.8	0.0	1.8	19.5	0.0
Cycle Q Clear(g_c), s	0.8	0.3	1.5	1.9	0.5	7.4	0.3	19.8	0.0	1.8	19.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	175	129	109	200	152	129	326	2364		367	2447	
V/C Ratio(X)	0.07	0.04	0.19	0.16	0.05	0.78	0.04	0.50		0.25	0.50	
Avail Cap(c_a), veh/h	290	592	502	293	592	502	437	2364		436	2447	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	50.8	52.2	52.7	49.9	50.9	54.1	6.7	9.3	0.0	7.0	8.1	0.0
Incr Delay (d2), s/veh	0.2	0.1	0.8	0.4	0.1	9.7	0.1	0.8	0.0	0.3	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.1	0.6	0.9	0.2	3.3	0.1	6.6	0.0	0.6	6.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.9	52.3	53.6	50.3	51.0	63.8	6.8	10.0	0.0	7.3	8.8	0.0
LnGrp LOS	D	D	D	D	D	E	A	B		A	A	
Approach Vol, veh/h		39			139			1199			1324	
Approach Delay, s/veh		52.5			60.0			10.0			8.7	
Approach LOS		D			E			A			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	87.3	8.7	13.8	7.4	90.1	7.3	15.2
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	9.5	41.0	9.5	38.0	9.5	41.0	9.5	38.0
Max Q Clear Time (g_c+I1), s	3.8	21.8	3.9	3.5	2.3	21.5	2.8	9.4
Green Ext Time (p_c), s	0.1	12.6	0.0	0.1	0.0	13.2	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	12.6
HCM 6th LOS	B

Notes

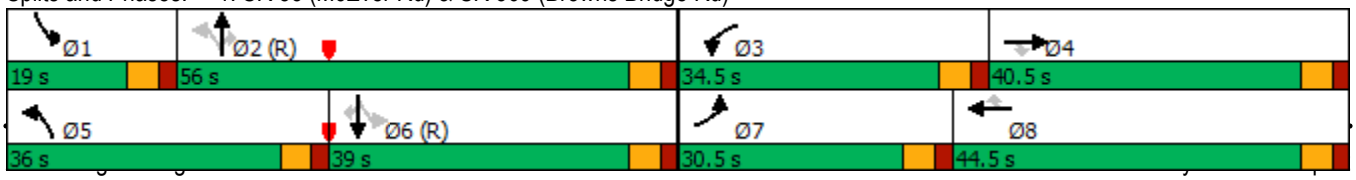
Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	321	545	289	477	729	234	412	1143	272	196	898	234
Future Volume (vph)	321	545	289	477	729	234	412	1143	272	196	898	234
Lane Group Flow (vph)	334	568	301	497	759	244	429	1191	283	204	935	244
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	40.5	40.5	15.0	40.5	40.5	15.0	42.5	42.5	15.0	42.5	42.5
Total Split (s)	30.5	40.5	40.5	34.5	44.5	44.5	36.0	56.0	56.0	19.0	39.0	39.0
Total Split (%)	20.3%	27.0%	27.0%	23.0%	29.7%	29.7%	24.0%	37.3%	37.3%	12.7%	26.0%	26.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.75	0.78	0.53	0.85	0.87	0.45	0.93	0.98	0.44	0.84	1.22	0.54
Control Delay	72.8	63.4	8.5	74.2	65.0	12.1	69.8	70.2	18.2	69.5	158.2	24.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.8	63.4	8.5	74.2	65.0	12.1	69.8	70.2	18.2	69.5	158.2	24.9
Queue Length 50th (ft)	171	286	0	253	383	32	385	~680	92	151	~612	87
Queue Length 95th (ft)	220	353	85	319	474	115	#663	#825	184	#341	#754	184
Internal Link Dist (ft)		873			467			547			1177	
Turn Bay Length (ft)	330		225	275		280	525		230	210		220
Base Capacity (vph)	555	802	589	644	912	557	463	1211	645	242	767	456
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.71	0.51	0.77	0.83	0.44	0.93	0.98	0.44	0.84	1.22	0.54

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: SR 53 (McEver Rd) & SR 369 (Browns Bridge Rd)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	321	545	289	477	729	234	412	1143	272	196	898	234
Future Volume (veh/h)	321	545	289	477	729	234	412	1143	272	196	898	234
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	334	568	0	497	759	0	429	1191	0	204	935	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	390	665		553	833		421	1414		250	1021	
Arrive On Green	0.12	0.19	0.00	0.16	0.24	0.00	0.20	0.41	0.00	0.09	0.29	0.00
Sat Flow, veh/h	3374	3469	1547	3374	3469	1547	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	334	568	0	497	759	0	429	1191	0	204	935	0
Grp Sat Flow(s),veh/h/ln	1687	1735	1547	1687	1735	1547	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	14.6	23.7	0.0	21.7	31.9	0.0	30.5	46.4	0.0	12.3	39.1	0.0
Cycle Q Clear(g_c), s	14.6	23.7	0.0	21.7	31.9	0.0	30.5	46.4	0.0	12.3	39.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	390	665		553	833		421	1414		250	1021	
V/C Ratio(X)	0.86	0.85		0.90	0.91		1.02	0.84		0.82	0.92	
Avail Cap(c_a), veh/h	562	809		652	902		421	1414		250	1021	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	65.1	58.6	0.0	61.5	55.4	0.0	45.4	40.1	0.0	37.1	51.1	0.0
Incr Delay (d2), s/veh	8.9	7.5	0.0	13.9	12.6	0.0	48.4	6.2	0.0	18.8	14.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	10.9	0.0	10.2	15.1	0.0	21.3	20.4	0.0	6.4	18.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.0	66.1	0.0	75.4	68.1	0.0	93.8	46.3	0.0	55.9	65.1	0.0
LnGrp LOS	E	E		E	E		F	D		E	E	
Approach Vol, veh/h		902			1256			1620			1139	
Approach Delay, s/veh		69.0			71.0			58.9			63.4	
Approach LOS		E			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	66.7	30.1	34.3	36.0	49.7	22.8	41.5
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	13.5	50.5	29.0	35.0	30.5	33.5	25.0	39.0
Max Q Clear Time (g_c+I1), s	14.3	48.4	23.7	25.7	32.5	41.1	16.6	33.9
Green Ext Time (p_c), s	0.0	1.7	0.9	2.3	0.0	0.0	0.7	2.1

Intersection Summary	
HCM 6th Ctrl Delay	64.9
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	202.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	287	1321	2	3	1084	141	1	0	2	99	0	201
Future Vol, veh/h	287	1321	2	3	1084	141	1	0	2	99	0	201
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	235	-	150	190	-	175	-	-	-	-	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	5	5	5	5	5	5	2	2	2	2	2	2
Mvmt Flow	302	1391	2	3	1141	148	1	0	2	104	0	212

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1289	0	0	1393	0	0	2572	3290	696	2447	3144	571
Stage 1	-	-	-	-	-	-	1995	1995	-	1147	1147	-
Stage 2	-	-	-	-	-	-	577	1295	-	1300	1997	-
Critical Hdwy	4.2	-	-	4.2	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.25	-	-	2.25	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	518	-	-	472	-	-	13	9	384	~ 16	11	464
Stage 1	-	-	-	-	-	-	62	104	-	212	272	-
Stage 2	-	-	-	-	-	-	469	231	-	170	104	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	518	-	-	472	-	-	4	4	384	~ 8	5	464
Mov Cap-2 Maneuver	-	-	-	-	-	-	4	4	-	~ 8	5	-
Stage 1	-	-	-	-	-	-	26	43	-	~ 88	270	-
Stage 2	-	-	-	-	-	-	254	230	-	~ 70	43	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.8	0	$ 390.2	$ 2097.3
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	12	518	-	-	472	-	-	8	464
HCM Lane V/C Ratio	0.263	0.583	-	-	0.007	-	-	13.026	0.456
HCM Control Delay (s)	$ 390.2	21.2	-	-	12.7	-	-	$ 6316.8	19.1
HCM Lane LOS	F	C	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	0.7	3.7	-	-	0	-	-	14.7	2.3

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	7.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	46	1334	18	56	1152	16	10	0	86	14	1	54
Future Vol, veh/h	46	1334	18	56	1152	16	10	0	86	14	1	54
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	320	-	180	310	-	200	-	-	-	-	-	115
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	5	5	5	5	5	2	2	2	2	2	2	2
Mvmt Flow	48	1404	19	59	1213	17	11	0	91	15	1	57

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1213	0	0	1423	0	0	2225	2831	702	2129	2850	607
Stage 1	-	-	-	-	-	-	1500	1500	-	1331	1331	-
Stage 2	-	-	-	-	-	-	725	1331	-	798	1519	-
Critical Hdwy	4.2	-	-	4.2	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.25	-	-	2.25	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	554	-	-	459	-	-	24	17	381	28	17	439
Stage 1	-	-	-	-	-	-	128	184	-	163	222	-
Stage 2	-	-	-	-	-	-	383	222	-	346	180	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	554	-	-	459	-	-	17	14	381	18	14	439
Mov Cap-2 Maneuver	-	-	-	-	-	-	17	14	-	18	14	-
Stage 1	-	-	-	-	-	-	117	168	-	149	193	-
Stage 2	-	-	-	-	-	-	289	193	-	241	164	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.6	116.3	111.2
HCM LOS			F	F

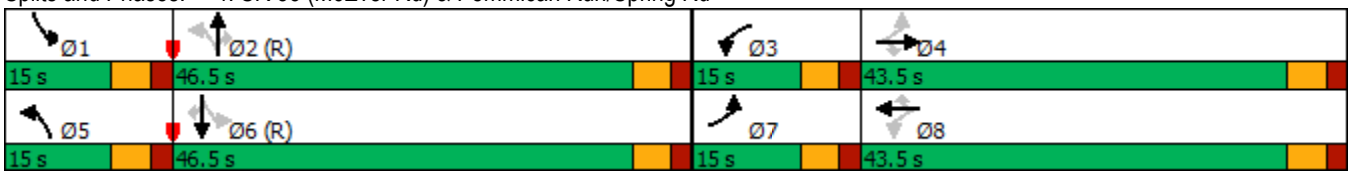
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	118	554	-	-	459	-	-	18	439
HCM Lane V/C Ratio	0.856	0.087	-	-	0.128	-	-	0.877	0.129
HCM Control Delay (s)	116.3	12.1	-	-	14	-	-	$ 459.7	14.4
HCM Lane LOS	F	B	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	5.2	0.3	-	-	0.4	-	-	2.3	0.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	7	16	46	7	148	13	1358	39	71	1161	7
Future Volume (vph)	18	7	16	46	7	148	13	1358	39	71	1161	7
Lane Group Flow (vph)	19	7	16	47	7	153	13	1400	40	73	1197	7
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.0	40.5	40.5	15.0	43.5	43.5	15.0	33.5	33.5	15.0	33.5	33.5
Total Split (s)	15.0	43.5	43.5	15.0	43.5	43.5	15.0	46.5	46.5	15.0	46.5	46.5
Total Split (%)	12.5%	36.3%	36.3%	12.5%	36.3%	36.3%	12.5%	38.8%	38.8%	12.5%	38.8%	38.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.12	0.06	0.08	0.28	0.04	0.54	0.04	0.59	0.04	0.27	0.47	0.01
Control Delay	42.2	52.9	0.7	46.3	49.3	15.6	5.5	13.9	0.1	7.2	9.5	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.2	52.9	0.7	46.3	49.3	15.6	5.5	13.9	0.1	7.2	9.5	0.0
Queue Length 50th (ft)	13	5	0	33	5	0	2	334	0	14	174	0
Queue Length 95th (ft)	34	21	0	66	21	66	10	515	0	33	370	0
Internal Link Dist (ft)		674			538			2513			854	
Turn Bay Length (ft)	103		90	60		80	400		220	290		380
Base Capacity (vph)	196	589	585	188	589	605	379	2354	1092	296	2525	1162
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.01	0.03	0.25	0.01	0.25	0.03	0.59	0.04	0.25	0.47	0.01

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated

Splits and Phases: 4: SR 53 (McEver Rd) & Pemmican Run/Spring Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	7	16	46	7	148	13	1358	39	71	1161	7
Future Volume (veh/h)	18	7	16	46	7	148	13	1358	39	71	1161	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	19	7	16	47	7	153	13	1400	0	73	1197	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	5	5	5
Cap, veh/h	220	191	162	256	216	183	310	2233		278	2314	
Arrive On Green	0.02	0.10	0.10	0.03	0.12	0.12	0.01	0.64	0.00	0.04	0.67	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	19	7	16	47	7	153	13	1400	0	73	1197	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	1.1	0.4	1.1	2.8	0.4	11.3	0.3	28.9	0.0	1.7	21.0	0.0
Cycle Q Clear(g_c), s	1.1	0.4	1.1	2.8	0.4	11.3	0.3	28.9	0.0	1.7	21.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	191	162	256	216	183	310	2233		278	2314	
V/C Ratio(X)	0.09	0.04	0.10	0.18	0.03	0.84	0.04	0.63		0.26	0.52	
Avail Cap(c_a), veh/h	326	592	502	338	592	502	422	2233		349	2314	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	46.8	48.6	48.9	46.1	47.1	52.0	8.5	12.8	0.0	10.7	10.2	0.0
Incr Delay (d2), s/veh	0.2	0.1	0.3	0.3	0.1	9.6	0.1	1.3	0.0	0.5	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.2	0.4	1.3	0.2	5.0	0.1	10.2	0.0	0.6	7.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.0	48.7	49.2	46.5	47.2	61.6	8.5	14.1	0.0	11.2	11.0	0.0
LnGrp LOS	D	D	D	D	D	E	A	B		B	B	
Approach Vol, veh/h		42			207			1413			1270	
Approach Delay, s/veh		48.1			57.7			14.1			11.0	
Approach LOS		D			E			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	82.8	9.5	17.7	7.3	85.6	7.8	19.3
Change Period (Y+Rc), s	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Max Green Setting (Gmax), s	9.5	41.0	9.5	38.0	9.5	41.0	9.5	38.0
Max Q Clear Time (g_c+I1), s	3.7	30.9	4.8	3.1	2.3	23.0	3.1	13.3
Green Ext Time (p_c), s	0.1	8.3	0.0	0.1	0.0	12.1	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	16.3
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

TRAFFIC VOLUME WORKSHEETS

23-032 - Mixed-Use Development at 1300 Gould Drive, Gainesville, GA
Traffic Volumes

A&R Engineering
June 2023

1. SR 53 @ SR 369

A.M. Peak Hour

	SR 53 (Highway 53 / McEver Road) **Northbound**					SR 53 (Highway 53 / McEver Road) **Southbound**					SR 369 (Browns Bridge Road) **Eastbound**					SR 369 (Browns Bridge Road) **Westbound**				
Condition	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2023 Traffic Counts:	0	279	651	272	1202	18	180	678	109	985	8	197	633	322	1160	0	129	389	84	602
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2026 Volumes:	0	296	690	288	1274	19	191	719	116	1045	8	209	671	341	1229	0	137	412	89	638
Total New Trips:	0	0	29	0	29	0	47	82	28	157	0	10	0	0	10	0	0	0	17	17
Future 2026 Traffic Volumes:	0	296	719	288	1303	19	238	801	144	1202	8	219	671	341	1239	0	137	412	106	655

P.M. Peak Hour

	SR 53 (Highway 53 / McEver Road) **Northbound**					SR 53 (Highway 53 / McEver Road) **Southbound**					SR 369 (Browns Bridge Road) **Eastbound**					SR 369 (Browns Bridge Road) **Westbound**				
Condition	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2023 Traffic Counts:	0	389	938	257	1584	17	111	748	187	1063	8	247	514	273	1042	0	450	688	141	1279
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2026 Volumes:	0	412	994	272	1678	18	118	793	198	1127	8	262	545	289	1104	0	477	729	149	1355
Total New Trips:	0	0	149	0	149	0	60	105	36	201	0	51	0	0	51	0	0	0	85	85
Future 2026 Traffic Volumes:	0	412	1143	272	1827	18	178	898	234	1328	8	313	545	289	1155	0	477	729	234	1440

23-032 - Mixed-Use Development at 1300 Gould Drive, Gainesville, GA
Traffic Volumes

A&R Engineering
June 2023

2. SR 53 @ MidgardDrwy-SiteDrwy

A.M. Peak Hour

	Midgard Self Storage Driveway **Northbound**					Site Driveway **Southbound**					SR 53 (Highway 53 / McEver Road) **Eastbound**					SR 53 (Highway 53 / McEver Road) **Westbound**				
Condition	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2023 Traffic Counts:	0	0	0	0	0	0	0	0	0	0	2	0	974	2	978	1	3	945	0	949
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2026 Volumes:	0	0	0	0	0	0	0	0	0	0	2	0	1032	2	1036	1	3	1002	0	1006
Total New Trips:	0	0	0	0	0	0	77	0	157	234	0	56	0	0	56	0	0	0	28	28
Future 2026 Traffic Volumes:	0	0	0	0	0	0	77	0	157	234	2	56	1032	2	1092	1	3	1002	28	1034

P.M. Peak Hour

	Midgard Self Storage Driveway **Northbound**					Site Driveway **Southbound**					SR 53 (Highway 53 / McEver Road) **Eastbound**					SR 53 (Highway 53 / McEver Road) **Westbound**				
Condition	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2023 Traffic Counts:	0	1	0	2	3	0	0	0	0	0	2	0	1246	2	1250	2	1	1023	0	1026
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2026 Volumes:	0	1	0	2	3	0	0	0	0	0	2	0	1321	2	1325	2	1	1084	0	1087
Total New Trips:	0	0	0	0	0	0	99	0	201	300	0	285	0	0	285	0	0	0	141	141
Future 2026 Traffic Volumes:	0	1	0	2	3	0	99	0	201	300	2	285	1321	2	1610	2	1	1084	141	1228

23-032 - Mixed-Use Development at 1300 Gould Drive, Gainesville, GA
Traffic Volumes

A&R Engineering
June 2023

3.SR 53 @ GouldDr-WatersEdgeRd

A.M. Peak Hour

	Waters Edge Drive **Northbound**					Gould Drive **Southbound**					SR 53 (Highway 53 / McEver Road) **Eastbound**					SR 53 (Highway 53 / McEver Road) **Westbound**				
Condition	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2023 Traffic Counts:	0	2	0	69	71	0	12	0	25	37	0	35	870	5	910	0	87	916	15	1018
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2026 Volumes:	0	2	0	73	75	0	13	0	27	40	0	37	922	5	964	0	92	971	16	1079
Total New Trips:	0	2	0	0	2	0	0	0	1	1	0	2	70	5	77	0	0	25	0	25
Future 2026 Traffic Volumes:	0	4	0	73	77	0	13	0	28	41	0	39	992	10	1041	0	92	996	16	1104

P.M. Peak Hour

	Waters Edge Drive **Northbound**					Gould Drive **Southbound**					SR 53 (Highway 53 / McEver Road) **Eastbound**					SR 53 (Highway 53 / McEver Road) **Westbound**				
Condition	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2023 Traffic Counts:	0	1	0	81	82	0	13	1	47	61	0	41	1174	11	1226	0	53	966	15	1034
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2026 Volumes:	0	1	0	86	87	0	14	1	50	65	0	43	1244	12	1299	0	56	1024	16	1096
Total New Trips:	0	9	0	0	9	0	0	0	4	4	0	3	90	6	99	0	0	128	0	128
Future 2026 Traffic Volumes:	0	10	0	86	96	0	14	1	54	69	0	46	1334	18	1398	0	56	1152	16	1224

23-032 - Mixed-Use Development at 1300 Gould Drive, Gainesville, GA
Traffic Volumes

A&R Engineering
June 2023

4.SR 53 @ Spring Rd-PemmicanRun

A.M. Peak Hour

	SR 53 (Highway 53 / McEver Road) **Northbound**					SR 53 (Highway 53 / McEver Road) **Southbound**					Spring Road **Eastbound**					Pemmican Run **Westbound**				
Condition	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2023 Traffic Counts:	0	11	917	12	940	0	74	993	3	1070	0	10	4	17	31	0	22	7	82	111
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2026 Volumes:	0	12	972	13	997	0	78	1053	3	1134	0	11	4	18	33	0	23	7	87	117
Total New Trips:	0	0	59	12	71	0	0	21	0	21	0	0	0	0	0	0	4	0	0	4
Future 2026 Traffic Volumes:	0	12	1031	25	1068	0	78	1074	3	1155	0	11	4	18	33	0	27	7	87	121

P.M. Peak Hour

	SR 53 (Highway 53 / McEver Road) **Northbound**					SR 53 (Highway 53 / McEver Road) **Southbound**					Spring Road **Eastbound**					Pemmican Run **Westbound**				
Condition	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot	U	L	T	R	Tot
Existing 2023 Traffic Counts:	0	12	1210	23	1245	0	67	994	7	1068	0	17	7	15	39	0	24	7	140	171
Growth Factor (%):	2	2	2	2		2	2	2	2		2	2	2	2		2	2	2	2	
No-Build 2026 Volumes:	0	13	1283	24	1320	0	71	1054	7	1132	0	18	7	16	41	0	25	7	148	180
Total New Trips:	0	0	75	15	90	0	0	107	0	107	0	0	0	0	0	0	21	0	0	21
Future 2026 Traffic Volumes:	0	13	1358	39	1410	0	71	1161	7	1239	0	18	7	16	41	0	46	7	148	201