



PL(P) 20-12 & PL(Z)-20-24

City of Greensboro Planning Department Zoning Staff Report and Plan Amendment Evaluation

City Council Hearing Date: October 20, 2020

GENERAL INFORMATION

APPLICANT	Bob Dunston, Charter Development Company, LLC, on behalf of Robert W. Mccuiston, Denise R. Mccuiston and Michele V. Mccuiston.
HEARING TYPE	Annexation and Original Zoning Requests
REQUEST	County AG (Agricultural) to City R-5 (Residential Single Family - 5)
CONDITIONS	N/A
LOCATION	2126 and 2146 Scott Road
PARCEL ID NUMBER(S)	7887053534 and 7887160026
PUBLIC NOTIFICATION	The notification area for this public hearing was 600 feet (Chapter 30-4-1.4 of the Land Development Ordinance requires notification of the owner of that parcel of land and the owners of all parcels of land adjoining and contiguous to that parcel of land as shown on the County tax listing). 45 notices were mailed to those property owners in the mailing area.
TRACT SIZE	47.76 acres
TOPOGRAPHY	Slopes downwards toward the back of the property.
VEGETATION	Wooded

SITE DATA

Existing Use		Undeveloped
	Adjacent Zoning	Adjacent Land Uses
N	County RS-30 (Single-family Residential)	Undeveloped land and Single-family dwellings
E	County AG (Agricultural)	Undeveloped land and Single-family dwellings
W	County AG (Agricultural)	Undeveloped land and Single-family dwellings

S City CD-RM-12 (Conditional District – Residential Multi-family – 12) and City CD-R-5 (Conditional District – Residential Single-family – 5) Undeveloped land and Single-family dwellings

Zoning History

Case #	Date	Request Summary
N/A	N/A	The subject property is not currently located in the City's jurisdiction.

ZONING DISTRICT STANDARDS**Existing District Summaries**

Zoning District Designation:	Existing County AG	Requested City R-5
Max. Density:	1 dwellings per acre	Up to 5 dwellings per acre
Typical Uses	Accommodates uses of an agricultural nature, including farm residences and farm tenant housing. It also accommodates scattered non-farm residences on large tracts of land.	Typical uses in the R-5 district include single family residential of up to 5 dwelling units per acre.

**These regulations may not reflect all requirements for all situations; see the City of Greensboro Land Development Ordinance for all applicable regulations for site requirements for this zoning district.*

SPECIAL INFORMATION**Overlay District Ordinance/Historic Preservation**

The subject site is not located within an overlay zoning district.

The subject site is not:

- Located in a City of Greensboro Historic District or Heritage Community
- Designated as a Guilford County Landmark Property
- Recognized as a State of North Carolina Historic Site
- Listed in the National Register of Historic Places
- Located in a National Register Historic District

Environmental/Soils

Water Supply Site drains to Middle Reedy Fork Creek, Non-Watersupply Watershed Watershed

Floodplains >2000

Streams Non-Blue Line stream features onsite must be identified. Blue Line and Non-Blue Line streams onsite will have a 50ft stream buffer measured from top of bank on each side. No new BUA is allowed within the entire 50ft stream buffer.

Other: If >1acre is disturbed and the BUA is increase, site must meet current Phase 2 Stormwater requirements, water quality and water quantity control must be addressed. State and Corps permits are required for any stream crossing or wetland disturbance.

Utilities (Availability)

Water and Sewer will need to be extended by the developer.

Airport Overlay District & Noise Cone

n/a

Landscaping & Tree Conservation Requirements

There are no Landscaping or Tree Conservation requirements for single-family residential.

Transportation

Street Classification: Scott Road – Collector Street.
Summit Avenue – Minor Thoroughfare.

Site Access: All access(s) must be designed and constructed to the City of Greensboro standards.

Traffic Counts: None Available.

Trip Generation: 24 hour = 1,600, AM Peak hour = 929, PM Peak hour = 671.

Sidewalks: Sidewalks are a requirement of the Development Ordinance. 5' sidewalk with a 5' grass strip is required along both sides of thoroughfares. 5' sidewalk with a 3' grass strip is required along one side (at a minimum, collectors may require sidewalk on both sides) of all other street types. Sidewalk does not exist along the frontage of this property.

Transit in Vicinity: No.

Traffic Impact Study: Yes, required per TIS Ordinance. Please see the end of this staff report
(TIS) for the Executive Summary of this TIS.

Street Connectivity: N/A.

Other: N/A.

IMPACT/POLICY ANALYSIS**Land Use Compatibility**

The proposed **City R-5 (Residential, Single Family – 5 du/ac)** zoning district would allow land uses that are compatible with the general character of the area.

GSO 2040 Comprehensive Plan Policies

The GSO 2040 Future Land Use Map designates this location as **Residential**. The requested **City R-5 (Residential, Single Family – 5 du/ac)** zoning district would allow uses that are generally consistent with the **Residential** Future Land Use designation. The GSO 2040 Future Built Form Map designates the subject site as **Urban General**. The Growth Tiers Map designates the subject site as being within **Growth Tier 1**.

GSO 2040 Written Policies

Filling In Our Framework - How we arrange our land uses for where we live, work, attend school, shop and enjoy our free time can create a more vibrant and livable Greensboro.

Goal A - Greensboro is recognized and admired for its attractive, walkable and compact mixed-use activity centers where people live, work and enjoy life.

Strategy 1 - Encourage higher density, mixed-use, walkable infill development.

Creating Great Places - Creating interesting and attractive places and vibrant public spaces in neighborhoods, across Greensboro, in downtown and with our historic resources.

Goal A - Greensboro's citywide network of unique neighborhoods offer residents of all walks of life a variety of quality housing choices.

Strategy 2 - Meet housing needs and desires with a sufficient and diverse supply of housing products, prices and locations.

Becoming Car Optional - Expand quality transportation options beyond cars and maintain an efficient transportation system that allows people and goods to travel throughout Greensboro.

Goal A - Greensboro has unrivaled pedestrian, biking, transit and road networks that provide safe, comfortable, and convenient transportation options.

Strategy 2 - Encourage new development that is compatible with the intended use of the adjacent roadway.

Goal B - Everyone loves our interconnected green spaces, which provide recreation and transportation opportunities, promote active living, and protect our natural environment.

Strategy 1 - Expand the greenway network to connect all parts of the city as a key element of the transportation system.

Prioritizing Sustainability - Greensboro has a strong leadership role in environmental stewardship, social equity, and a resilient economy

Goal A - Greensboro advances environmental stewardship, taking care of our natural resources and the natural systems that support all living things.

Strategy 1 - Promote resilient, efficient and environmentally beneficial patterns of land use.

Goal B - Greensboro embraces social equity, ensuring all residents benefit from fair and just treatment in the distribution of public services and have a voice in governance.

Strategy 3 - Promote a just, ethical, and respectful community.

Goal C - Greensboro builds economic resilience, expanding the local economy's ability to withstand and adjust to disruptions and changes at the regional, national and global scales.

Strategy 1 - Consider the impact that growth and development patterns and infrastructure investments have on the City's fiscal health.

Building Community Connections - Greensboro is unique and memorable based on our quality of life, culture, arts and places and the ties that bind us together as a community.

Goal E - Everyone does their part to maintain stable, attractive, and healthy places to live and raise families.

Strategy 1 - Build upon successful community initiatives to improve housing conditions while encouraging community involvement and participation.

Growing Economic Competitiveness - Greensboro will build a prosperous, resilient economy that creates equitable opportunities to succeed.

Goal C - Investment in cutting edge communications technology enhances the quality of life for all residents and helps businesses thrive.

Strategy 1 - Encourage fiber-ready infrastructure to reduce the need for costly future upfits, increase property values and promote economic growth.

Goal E - Greensboro promotes homegrown businesses, supports entrepreneurship, cultivates industry leaders, and welcomes major corporations and institutions.

Strategy 2 - Provide entrepreneurs at all stages of the business life cycle with connections to education, financing, and other resources and assets that support their growth.

GSO 2040 Map Policies

Future Land Use Map

Residential: Includes both single-and multi-family residential. Other uses should generally be in the scale of a Neighborhood or a Community Center as described in the Future Built Form Map on page 69, in a form that is appropriate to the character of the area. Many residential areas include commercial corridors, and future development along these corridors should be oriented to the corridor to avoid negative impacts to adjacent residences.

Future Built Form Map

Urban General should reflect these characteristics:

1. Setbacks, building orientation, building materials, height, and scale of residential buildings are considered within the existing neighborhood context.
2. New housing helps increase the range of choice, supply, and adds additional appropriately-scaled density with: Missing Middle housing; mid-rise multi-family; and high-rise multi-family in Activity Centers and along Mixed-Use Corridors.
3. Transitions between neighborhoods and different land uses provide continuity in scale, density, intensity with adjacent uses.
4. Cut-through traffic is minimized.
5. New freestanding or expanded business areas are created within or adjoining an existing Activity Center or as part of creating a new Activity Center.
6. Exterior building materials are durable, sustainable, and contribute positively to the character of the public realm.
7. The size and impact of surface parking lots is minimized through landscaping, screening, narrow curb-cuts, and use of glare-free, no-spill lighting.
8. New sidewalks contribute to the completion of a sidewalk network.

Growth Tiers Map

Growth Tier 1: This is the area where the City is currently able to provide all City services including water and sewer service based on the location of existing infrastructure such as roads, fire stations, and water and sewer pipes. Before connecting to water or sewer service, property located within Growth Tier 1 will be annexed into the City. All projects that connect to City water and sewer will be required to comply with the City's Comprehensive Plan and land development regulations.

CONFORMITY WITH OTHER PLANS**City Plans*****Sustainability Action Plan*****Element 1) Transportation and Land Use:**

Policy 1) Encourage increased density, a mix of land uses and more integrated links between transportation and land use through changes to Greensboro's Comprehensive Plan, Development Ordinance and other related plans.

Element 2) Green Jobs and Buildings:

Policy 3) Develop a coordinated City program to provide technical support, energy audits and education and outreach to increase energy efficiency and conservation in commercial and residential buildings.

Policy 4) Use a combination of code changes, incentives, partnerships and education to promote green building in Greensboro.

Policy 6) Promote more efficient use of water through education, partnerships and pilot projects.

Element 3) Waste Reduction and Recycling:

Policy 7) Employ a combination of expanded recycling infrastructure, regulations and incentives to increase Greensboro's solid waste diversion and recycling rates.

Element 6) Education and Outreach:

Policy 11) Provide technical support, awards and recognition to individuals and organizations furthering Greensboro's energy and sustainability efforts.

Other Plans

n/a

STAFF ANALYSIS AND RECOMMENDATION**Community Outreach**

Applicant is strongly encouraged to discuss this proposed rezoning and development with owners of surrounding properties.

Staff Annexation Analysis

The subject property is currently in the County. On September 1, 2020 the Zoning Commission assumed responsibility for reviewing annexation petitions and making a recommendation to City Council regarding the annexations. Upon submittal of a valid annexation petition Planning staff forwards annexation requests to City services providers. These service providers include Water Resources (water and sewer), Fire Marshal's Office, Police Department, and Solid Waste (trash and recycling services). Each service provider stated that infrastructure is in place to provide City

services to this location. The Technical Review Committee also recommended approval of this annexation request at its June 5, 2020 meeting. This property is located within the Tier 1 Growth Area (2013-2019) on the Growth Strategy map in the Comprehensive Plan. It is the City of Greensboro's policy to annex properties within Growth Tier 1 pending approval of the original zoning.

Staff Original Zoning Analysis

The subject property is 47.76 acres and is currently undeveloped land. North of the request contains undeveloped land and single-family residences, zoned County RS-30. East and west of the request are undeveloped land and single-family dwellings, zoned County AG. South of the request contains undeveloped land and Single-family dwellings, zoned City CD-RM-12 and City CD-R-5.

The Comprehensive Plan's Future Land Use Map currently designates this property as being Residential. The Residential designation includes both single-and multi-family residential. Other uses should generally be in the scale of a Neighborhood or a Community Center as described in the Future Built Form Map, in a form that is appropriate to the character of the area. Many residential areas include commercial corridors, and future development along these corridors should be oriented to the corridor to avoid negative impacts to adjacent residences.

The Comprehensive Plan's Future Built Form Map currently designates this property as Urban General. Applicable characteristics of the Urban General classification include, but are not limited the following:

1. Setbacks, building orientation, building materials, height, and scale of residential buildings are considered within the existing neighborhood context.
2. New housing helps increase the range of choice, supply, and adds additional appropriately-scaled density with: Missing Middle housing; mid-rise multi-family; and high-rise multi-family in Activity Centers and along Mixed-Use Corridors.
3. Transitions between neighborhoods and different land uses provide continuity in scale, density, intensity with adjacent uses.
6. Exterior building materials are durable, sustainable, and contribute positively to the character of the public realm.
7. The size and impact of surface parking lots is minimized through landscaping, screening, narrow curb-cuts, and use of glare-free, no-spill lighting.
8. New sidewalks contribute to the completion of a sidewalk network.

The proposed R-5 zoning district is primarily intended to accommodate low-density single-family detached residential development of up to 5 dwelling units per acre. Additionally, some limited non-residential uses such as schools and places of religious assembly are also permitted in the R-5 zoning district. The proposed rezoning request supports both the Comprehensive Plan's Creating Great Places goal to expand Greensboro's citywide network of unique neighborhoods offering residents of all walks of life a variety of quality housing choices and the Building Community Connections goal to maintain stable, attractive, and healthy places to live and raise families.

This request is consistent with the intent and purpose of the zoning code, the Comprehensive Plan (GSO 2040) and is generally compatible with the existing development and trend in the surrounding area.

Staff Recommendation

Staff recommends **approval** of the requested **City R-5 (Residential Single-family - 5)** zoning districts.

Traffic Impact Analysis

EXECUTIVE SUMMARY

National Heritage Academies is proposing to construct a new charter school along the south side of Scott Road between Lees Chapel Road and Summit Avenue in the City of Greensboro, North Carolina. The proposed Summit Creek Academy, operated by National Heritage Academies, will offer Kindergarten through 8th grade upon full build out of the school, which is expected for the fall of 2024 school year. It is expected that the school would open with Kindergarten through 5th grade and a maximum of 520 students in the fall of 2021. The school will add a grade each year until full build out of the school with a maximum of 772 students for the fall of 2024 school year.

The report analyzes and presents the traffic impacts that the proposed school will have on the following intersections in the project study area:

- Summit Avenue & Scott Road
- Summit Avenue & Hicone Road
- Lees Chapel Road & Scott Road
- Lees Chapel Road & Hillcroft Road
- Lees Chapel Road & Brightwood School Road

In addition to the above five intersections, the proposed school driveways to Scott Road were also analyzed under future build conditions.

The above mentioned intersections were analyzed for the morning school peak (7:00-9:00AM) and afternoon school peak (2:00-4:00PM) for the following conditions:

- Existing 2020 Conditions
- Future 2024 No Build Conditions
- Future 2024 Build Conditions

Pre-submittal meetings were held with the City of Greensboro to discuss the basic requirements and parameters for the traffic impact study. Based on those meetings, a memorandum of understanding (MOU) that summarizes the traffic impact study methodology was prepared and submitted to the North Carolina Department of Transportation (NCDOT) and Greensboro Department of Transportation (GDOT) for agency approval.

Existing 2020 Conditions

Based on the intersection counts, the morning peak hour was found to occur between the hour of 7:15 and 8:15 a.m. for the study area intersections while the school afternoon peak hour was found to occur

between the hour of 3:00 p.m. and 4:00 p.m. for the study area intersections. These hours were selected for analysis of existing and future year conditions.

The capacity analyses revealed that all of the study area intersection approaches are operating at acceptable levels of service during both the morning and school afternoon peak hours. All approaches are operating at a level of service B or better. Although the levels of service and delays were found to be acceptable, it should be noted that during our field observations, significant queuing was observed for the westbound and southbound approaches at the Summit Avenue and Hicone Road intersection during the morning peak hour. Queues observed on these two approaches reached 16 vehicles on the westbound approach and approximately 18 vehicles on the southbound approach. Since these approaches are both single-lane, one left-turn movement waiting for a gap in traffic to proceed holds up all other movements, therefore creating the extensive queues. The SimTraffic maximum queue for existing conditions during the morning peak hour provided very similar results to our observations. The SimTraffic maximum queue for the westbound approach was 452 feet while the southbound approach was 311 feet.

In addition, large trucks have a hard time making the westbound to northbound right turn. These trucks are using adjacent property and turning into opposing southbound traffic to make this right turn movement.

Future 2024 No Build Conditions

An evaluation of traffic impacts associated with the proposed school relies on an understanding of the future traffic conditions in the study area without development of the proposed school. Background traffic for the 2024 analysis year is expected to come from background traffic growth expected to occur on the street network between 2020 and 2024 and adding any approved developments in the area. A growth rate of 2.5% per year, which was agreed upon by NCDOT and GDOT, was utilized over the four- year study period. Based on our meeting with the City of Greensboro and the approved MOU, no approved developments were identified in or near the project area.

Future traffic volumes were developed for the future 2024 no build scenario based on the background traffic growth only. A 2.5% per year growth rate was used in the development of future 2024 traffic conditions. The growth rate was applied to the existing volumes through the study area to achieve 2024 traffic volumes. Each of the study area intersections were evaluated with the future 2024 no build traffic volumes to determine the future intersection operations without the proposed school project. The capacity analyses were conducted for existing geometric conditions and traffic control, and future 2024 no build traffic volumes (without the proposed school). The future 2024 no build capacity analyses revealed that all study area intersections and movements will continue to operate at an acceptable level of service during the weekday morning and weekday afternoon peak hours. All approaches are expected to operate at a level of service B or better.

Future 2024 Build Conditions

The projected traffic impacts for the school were determined based on the analysis of future year 2024 traffic volumes with full occupancy of the proposed school. The on-site school layout has been designed to provide maximum storage on-site for drop-off and pick-up operations in order to not impede traffic along Scott Road. It has been designed for full build out of the school at 772 students. The Municipal & School Transportation Assistance (MSTA) student calculator was used to estimate the average and high demand queue lengths required for on-site traffic circulation and queuing at full build out. It was found that the NCDOT MSTA calculator requires an average of 3,284 feet of on-site queuing with a high demand length of 4,269 feet. The current site plan provides a queue of approximately 4,355 feet through the site.

Two one-way driveways are proposed to provide access to the school from Scott Road. The school driveways are proposed to consist of two inbound lanes and two outbound lanes. The proposed inbound driveway configuration will utilize an island to channelize the left and right turn movements into the site so they can enter simultaneously and reduce the back-up on the adjacent street system. The inbound driveway is proposed to be located along the western property line with the outbound driveway currently proposed along the eastern property line, approximately 460 feet from the inbound driveway (centerline to centerline).

New trips expected to be generated by the proposed school were estimated based on the NCDOT's *MSTA School Traffic Calculator*, which provides morning arrival and afternoon dismissal trips based on the breakdown students and staff size. Per the NCDOT MSTA, this calculator is intended to provide a conservative estimate of the traffic generated, on an average school day, based on the maximum build out of the school student population. The MSTA School Traffic Calculator estimates the school will generate a total of 929 and 671 vehicle trips during the morning and afternoon peak hours, respectively. The average daily trips expected to be generated by the proposed school at full build-out of 772 students and with 65 staff is 1,600 vehicles per day.

A proposed institutional use is not typically associated with pass-by trip making or internal trip sharing and therefore has not been accounted for in the trip generation estimates presented in this analysis and report. However, parents headed into and out of the City of Greensboro along Summit Avenue or Lees Chapel Road may likely drop-off and pick-up their child on their way to/from work, which would be considered pass-by traffic. This scenario adds site generated traffic volumes to the driveways and to Scott Road but does not add additional traffic to the remaining study area intersections. The estimated trip generation in this report does not account for pass-by trips, therefore providing a worst-case scenario for the adjacent road network.

Projected site generated traffic volumes for the proposed school were added to the future 2024 no build traffic volumes to yield the Future 2024 Build Conditions. The GDOT Driveway Manual and NCDOT Policy on Street and Driveway Access to North Carolina Highways were utilized to determine if left and right turn lanes are warranted along Scott Road for ingress into the school. Based on the City's warrant tables for left turns, it was found that a westbound left turn lane is warranted along Scott Road at the site entrance drive. Based on the NCDOT Manual and projected traffic volumes at the access, it was determined that the storage length for this left turn movement should be 200 feet. Based on the City's

warrant tables for right turns, it was found that an eastbound right turn lane is not warranted along Scott Road at the site entrance drive. However, due to the proposed channelized right turn movement into the school and the need to reduce the left-turn queue along Scott Road, a right turn lane along Scott Road is recommended. Based on the NCDOT Manual and projected traffic volumes at the access, it was determined that the storage length for this right turn movement should be 125 feet.

The results of the impact assessment analyses indicate that all the approaches at the study area intersections will continue to operate at acceptable levels of service during both the morning and afternoon school peak hours with the exception of two intersections: Summit Avenue and Scott Road intersection and Summit Avenue and Hicone Road intersection. Both of these intersections will have approaches that operate at unacceptable levels of service during the morning peak hour only. During the afternoon peak hour, the levels of service at these two intersections are expected to operate at acceptable levels of service.

The proposed school driveways are expected to operate acceptably with levels of service at a C or better with the exception of the left-turn exit from the school to Scott Road during the morning peak hour only. This exiting movement is expected to operate at a level of service F during the morning peak hour and a level of service C during the afternoon peak hour. It is common for unsignalized side-street left-turn movements to operate poorly during peak hours. During the morning peak hour, a high westbound entering school traffic volume will proceed past the exit to enter the school site which makes it more difficult for exiting traffic from the school to turn left and enter the traffic stream along Scott Road. As long as the on-site queue is not expected to back-up into the school drop-off/pick-up area, no mitigation should be required for this exiting movement as it will not create any issues or back-ups along Scott Road. Parents may also choose to take the path of least resistance. If the left-turn exit lane is backed up when the parent is leaving the drop-off area, they can choose to turn right onto Scott Road instead. The right-turn exit to Scott Road is expected to operate at a level of service C during both peak hours and can accommodate additional exiting traffic if parents choose to shift to turn right instead of left onto Scott Road.

Future 2024 Build Conditions with Mitigation

The eastbound Scott Road approach to Summit Avenue and the westbound Hicone Road approach to Summit Avenue will both see a significant increase in delay with the proposed school during the morning peak hour. Increases in delay at these approaches during the afternoon peak hour are expected as well but will remain minimal and are expected to operate at levels of service D or better.

The eastbound Scott Road approach to Summit Avenue is expected to operate at a level of service F with a delay of 214.9 seconds. This approach has one lane for all movements which results in excessive delays and queuing. It is recommended that this eastbound approach be widened to accommodate separate left and right turn lanes. This approach is still expected to operate at a level of service E with the widening of the eastbound approach. In order to meet the City's level of service D requirements, a southbound right turn lane along Summit Avenue should be constructed in addition to the eastbound approach improvements.

The westbound Hicone Road approach to Summit Avenue is expected to operate at a level of service F during the morning peak hour with a delay of 250.2 seconds. The delay expected for this approach and the expected queues are excessive. As mentioned under existing conditions, significant queuing was observed for the westbound and southbound approaches at the Summit Avenue and Hicone Road intersection during the morning peak hour. Queues observed on these two approaches under existing conditions reached 16 vehicles on the westbound approach and approximately 18 vehicles on the southbound approach. Since these approaches are both single-lane, one left-turn movement waiting for a gap in traffic to proceed holds up all other movements, therefore creating the extensive queues. It is recommended that the westbound Hicone Road approach be widened to a two-lane approach to accommodate a westbound right turn lane. This improvement alone is not adequate to completely mitigate the excessive delays and queuing. The southbound Summit Avenue approach should also be widened to accommodate a separate left-turn lane. In addition, the traffic signal will require modifications/improvements that include an advanced protected southbound left turn with a westbound right turn overlap.

Highway capacity analyses were again conducted for 2024 projected build traffic volumes with the recommended improvements. The results of the mitigated impact assessment analyses indicate that with the improvements recommended, all of the approaches will operate at acceptable levels of service.

The proposed school exit to Scott Road is expected to operate at a level of service F during the morning peak hour. Since the on-site queue is not expected to back-up into the school drop-off/pick-up area, no mitigation should be required for this exiting movement as it will not create any issues or back-ups along Scott Road. On-site queue lengths were examined for the proposed school exit to Scott Road in order to ensure that it is not expected to queue into the school loading area. Based on the SimTraffic queueing analysis, the maximum queue during the morning peak hour for the northbound left turn movement is expected to be 369 feet and 268 feet for the northbound right turn movement. During the afternoon peak hour, the northbound left turn movement is expected to have a maximum queue of 180 feet and 136 feet for the right turn movement. The school has two exit lanes from the drop-off/pick-up area to Scott Road. The total distance of the exit lanes prior to the parking lot is 537 feet with another 205 feet to the drop-off/pick-up area. This exit length will accommodate the on-site queue without impacting the loading area operations or creating an entering back-up onto Scott Road.

Summary

The capacity analysis results for the future 2024 build scenario with the proposed school reveal that improvements at two of the study area intersections will be needed upon full build out of the school in order to mitigate the traffic impacts caused by adding the school traffic. The improvements that will be required include the following:

- Construction of a 125-foot eastbound right turn lane along Scott Road at the proposed school entrance.
- Construction of a 200-foot westbound left turn lane along Scott Road at the proposed school entrance.

- Construction of a two-lane eastbound approach along Scott Road to Summit Avenue to include separate left and right turn lanes. The two-lane approach should be constructed back to Rudd Station Road to accommodate the expected queues.
- Construction of a 125-foot southbound right turn lane along Summit Avenue at Scott Road.
- Construction of a two-lane westbound approach along Hicone Road to Summit Avenue to include a shared through/left-turn lane and a separate right-turn lane. The westbound right-turn lane should have a storage length of 275 feet.
- Construction of a two-lane southbound approach along Summit Avenue to Hicone Road to include an exclusive left-turn lane and a shared through/right turn lane. The southbound left- turn lane should have a storage length of 250 feet.
- Traffic signal modifications at the intersection of Summit Avenue and Hicone Road to provide an advanced protected southbound left-turn phase with a westbound right-turn overlap.