



# AARON G. KEIL, PE, LC

## Career Summary:

Aaron brings over 10 years of lighting experience, primarily from his time in electrical distribution and being a lighting manufacturer's representative. In addition, he is an instructor for Lighting Analysts AGi32 software. Aaron has completed a wide range of lighting projects in his career, including residential, commercial, industrial, educational, healthcare, sports lighting, agricultural, government, and roadway projects. The roles in those projects have included initial site visits, client scope meetings, photometric plans, product selection and submittals, ROI reports, utility rate case analysis, sales, and project management.

## Contact Information:

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## Education:

- ◆ B.S. Architectural Engineering -Electrical Systems Specialty – Milwaukee School of Engineering, 2012

## Professional Engineering Licenses:

- ◆ Wisconsin #101352-6
- ◆ Georgia #PE054335

## Professional Societies:

- ◆ IES Roadway Lighting Committee

## Software Proficiencies:

- ◆ AGi32
- ◆ Photometric Toolbox
- ◆ Microsoft Office

## Project Summary:

**Project Manager City of Union City, GA Gateway Park Lighting and Cameras.** Union City is developing a new Gateway Park adjacent to the intersection of SR 92 at SR 14, which requires a new parking lot, decorative sign and pavilion lighting, in addition to security cameras to provide visibility to the Union City police department throughout project site. Wi-Skies was brought in after the plans were awarded to the Contractor to re-design all the lighting and electrical systems. Careful coordination with ongoing construction activities and concurrent design with an adjacent GDOT project is imperative to the success of delivering this project. Aaron oversees the development of lighting and electrical deliverables.

**Project Manager for Florida DOT D1 On-Call Lighting and Traffic Signal Design Services.** Wi-Skies is a sub on a Districtwide master contract with Florida DOT District 1, where we provide a variety of high-level activities including providing estimates and design reviews as necessary. We are charged with developing program level scopes of work and quantities for various lighting and traffic signal improvements throughout the District, including re-surfacing projects which will address various safety issues related to lighting and traffic operations. To date, Wi-Skies has reviewed and estimated over 55 intersections and 30 miles of roadway improvements across the district. Aaron oversees the creation of all traffic signal and lighting scope deliverables at each project site.

**Senior Lighting Designer for SR 365 at Howard Rd Roundabouts (GDOT)** A new bridge is being constructed over SR 365 to eliminate a high-speed intersection, which is expected to have a significant traffic increase due to the construction of Lanier Technical College adjacent to the intersection. This new bridge is bookended by roundabouts, all of which Wi-Skies is responsible for lighting. Each of these roundabouts requires full lighting, including both horizontal illuminance calculations for the roundabout area, but also vertical illuminance calculations along each of the crosswalks. The bridge requires decorative lighting to light signage on the columns and decorative metal panels on the northside of the bridge. Aaron oversees the decorative bridge lighting design and incorporating the design into the plan set.

**Interstate Lighting Retrofit using Carbon Reduction Program Funding for Georgia DOT.** GDOT Management wanted to retrofit and repair approximately fifty miles of existing lighting along the interstate system within the I-285 Atlanta perimeter ahead of the World Cup arrival in the summer of 2026. The Department identified and utilized available funding from the federal carbon reduction program (CRP) initiative to deliver this seemingly impossible task in less than a year and a half. The timeframe included development of full plans, specifications and estimates for fourteen total projects which were competitively bid and awarded to comply with federal funding requirements. Starting in October of 2024, each of the fourteen projects had to be developed in extremely short order to ensure they were competitively bid, awarded, procured, installed and operational before May 2026 to meet the World Cup deadline. This required an incredible amount of effort and coordination with over a dozen GDOT Offices to ensure the delivery schedule was met. All plan development was done in accordance with all GDOT and FHWA requirements, including coordination and approval schedule, all construction delivery requirements had to be fulfilled, including final field plan review (FFPR), approval from all offices, including FHWA, and Construction Bidding Administration (CBA) and Let date timelines.

All fourteen projects required a full electrical survey to determine the condition and power source of each luminaire and circuit along each corridor. The survey results were used to establish accurate quantities and ensure adequate funding was provided within each of the individual projects' budget, while not exceeding the overall available CRP funding. As much of the system was in disrepair, this required a lot of cable replacement as well as replacement of each of the service points to ensure all lights were metered. Each project was designed to meet current IES/ANSI lighting requirements whenever possible without creating environmental, ROW or constructability issues with variances granted when necessary.



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Wi-Skies is also responsible for construction oversight of all projects to address the myriad of RFI's and construction issues with all fourteen projects. These projects are concurrent to many other large-scale projects, such as repaving all fifty miles of the same stretches of the same interstate system and a fiber installation project, all with competing lane closures. We are also responsible for providing as-built drawings for all work completed, including final wiring schematics for each service point throughout the interstate system, as this information did not previously exist, but is necessary for any future maintenance or proposed project.

Aaron was the senior lighting designer assigned to all of the tunnels that were a part of the Carbon Reduction Program. He created a 3D model for each of them to complete a full daytime and nighttime analysis for each within AGi32. After completing the photometric design, Aaron also completed the electrical drawings by coordinating with existing utilities, sizing equipment, performing voltage drop calculations, and preparing details for the plan set.

**(PI0020952) Senior Lighting Designer for I-75/85 at Capitol Ave and Memorial Dr Tunnel Lighting Retrofit.** Located immediately north of the I-20 interchange, this 0.35 mile long segment of I-75/85 is the most heavily traveled roadway in Atlanta. The tunnel has six northbound lanes, six southbound lanes, and five ramp lanes running under it. Due to the tunnel's overall width, length, relatively short height, and only outside wall-mounted luminaires, rear-end accidents and traffic backups are common in this area. A 3D model of the entire tunnel was generated using actual tunnel entrance and exit portal height measurements and aerial imagery. A daytime analysis was done within AGi32 to determine how much natural daylight penetrated within the tunnel. From this information, Wi-Skies developed an experimental solution to provide minimal lighting only where necessary rather than current IES/ANSI recommendations. The lighting design took into consideration a variety of budgetary and constructability concerns and developed custom overhead installation assemblies braced between existing concrete beams directly over traffic without drilling the existing concrete beams anywhere. Since only three lanes of traffic could be shut down at any time for either construction or maintenance, Wi-Skies had to limit the design to place lights only over the three inside and outside lanes only. Despite the many design challenges, the proposed design delivered a much more effective lighting solution within the tunnel despite reducing the overall luminaire count by almost half.

**(PI0020953) Senior Lighting Designer for I-75/85 at Baker St and Piedmont Ave and I-75/85 at McGill Blvd and Courtland St Tunnel Lighting Retrofit.** These two independently unique partially divided tunnels cover 0.209 miles of some of the busiest sections of roadway in Atlanta. The Baker and Piedmont tunnel includes six northbound lanes, six southbound lanes, two merging northbound on-ramp lanes, and two southbound off-ramp lanes. The Courtland and McGill tunnel covers seven northbound lanes and seven southbound lanes. Due to the tunnel's overall width, length, relatively short height, and only outside wall-mounted luminaires, rear-end accidents and traffic backups are common in this area. A 3D model of the entire tunnel was generated using actual tunnel entrance and exit portal height measurements and aerial imagery. A daytime analysis was done within AGi32 to determine how much natural daylight penetrated within the tunnel. From this information, Wi-Skies developed an experimental solution to provide minimal lighting only where necessary rather than current IES/ANSI recommendations. The lighting design took into consideration a variety of budgetary and constructability concerns and developed custom overhead installation assemblies braced between existing concrete beams directly over traffic without drilling the existing concrete beams anywhere. Since only three lanes of traffic could be shut down at any time for either construction or maintenance, Wi-Skies had to limit the design to place lights only over the three inside and outside lanes only. Despite the many design challenges, the proposed design delivered a much more effective lighting solution within the tunnel while greatly reducing the overall luminaire count.

**(PI0021192) Senior Lighting Designer for Buford Spring Connector Tunnel.** This 435' long tunnel is a braided ramp from the SR13 Buford Connector SB ramp passing under the I-85 mainline to I-85 SB. A 3D model of the entire tunnel was generated using actual tunnel entrance and exit portal height measurements and aerial imagery. AGi32 was used to perform daylighting analysis to determine the amount of natural daylight penetration within the tunnel. It was not surprising that this box culvert tunnel required supplemental daytime lighting and nighttime lighting within it due to the overall poor natural daylight that penetrates within it. A minimalistic approach was taken to provide new lighting within the tunnel by placing new lights along each of the wall sides to light the single lane. Given the nature of the tunnel and limitations of the scope, the existing embedded conduit and junction boxes were re-used in the retrofit, but everything surface mounted was removed. As the existing system was operational and the tunnel was so dark, Wi-Skies worked diligently with the contractor to ensure a hybrid of the existing and proposed lighting system remained operational throughout the construction process.

**(PI0020000) Senior Lighting Designer for I-75 at Windy Hill Tunnel.** The I-75 northbound exit ramp to Windy Hill Rd creates a 615' culvert style tunnel as it passes under a number of ramps, including four entrance ramps from I-285. A 3D model of the entire tunnel was generated using real tunnel entrance and exit portal height measurements and aerial imagery to create an AGi32 daytime model. Being a long culvert tunnel, it requires both daytime lighting and nighttime lighting. However, due to the existing infrastructure, placement of the new luminaires had to remain on both walls of the culvert tunnel so as to not reduce the overhead clearance within the tunnel. Despite these challenges, there was an increase in overall photometric performance while reducing the overall luminaire count within the tunnel.

**(P#0020764) Senior Lighting Designer for I-75 at NB and SB Cumberland Braided Ramp Tunnels.** These dual tunnels cover the I-285 movements to I-75 just north of Cumberland Ave. The Northbound tunnel ramp connects I-75 NB to I-285 east by spanning under the Cumberland entrance ramp to I-75 northbound and is 490' long. The southbound tunnel connects the I-285 westbound movement to I-75 southbound by spanning under the four-lane exit ramp to Cumberland Ave. A 3D model of both tunnels was generated using real tunnel entrance and exit portal height measurements and aerial imagery. AGi32 was used to perform

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daylighting analysis with real location data. Unsurprisingly, both tunnels modeled were very dark within them and required supplemental daytime lighting and nighttime lighting. The LED retrofit design provided a much more efficient design while delivering better overall lighting within the tunnels.

**Senior Lighting Designer for Euharlee at Stiles Roundabout Lighting (Cherokee County, GA).** An existing three-legged rural intersection was converted into a four-legged roundabout, including a new extension of Stiles Rd north of the roundabout. To save cost, approach lighting on some of the legs was recommended for removal where adequate visibility would be present to drivers approaching that leg from an AASHTO safe stopping distance. As the area is also littered with many large trees and distribution lines which have minimum clearance requirements, light pole placement was limited. Aaron was responsible for the lighting on this project, including photometric calculations, quantities, voltage drop calculations and plans.

**Senior Lighting Designer for Shoal Creek at SR 136 Roundabout (GDOT).** Shoal Creek Rd was being straightened, which meant the existing three-legged intersection had to be removed and replaced by a new roundabout further down the road at the new intersection location. At this location, there are existing overhead distribution lines and an existing service point that required coordination. Aaron was responsible for the lighting on this project, including photometric calculations, quantities, voltage drop calculations and plans.

**Senior Lighting Designer for SR 316 at Dials Mill Extension / Dials Mill Rd Interchange in Oconee County, GA (GDOT).** This approximately 1.6-mile-long project was a corridor improvement of SR 316 and re-alignment of the Dials Mill Extension. A grade-separated interchange was designed to improve safety, traffic flow, and mobility along SR 316 as part of a larger transformation initiative along the heavily traveled SR 316 corridor between Atlanta and Athens. The new interchange included roundabouts at each of the ramp terminals. The crosswalks were located further down the ramp than usual which created a bit more of a challenge to meet uniformity requirements within the roundabout while also maximizing the vertical illuminance at the crosswalks. Also, the lighting at the compact interchange roundabouts would enhance the safety and visibility where speeds transition quickly from highway to local traffic levels. Aaron was responsible for the lighting on this project, including photometric calculations, quantities, voltage drop calculations and plans.

**Electrical Engineer for Roosevelt Highway Lighting and Traffic Signal Design** As part of a beautification and safety update project, the City of Union City, GA installed sidewalks and pedestrian lighting along Roosevelt Highway (US 29), which is the main roadway through the City. The new lighting is along both sides of the 2.1 mile long corridor from Beverly Engram Parkway to Highpoint Rd and on one side from Highpoint Rd to Stonewell Tell Rd, as the other side is not yet developed. Wi-Skies worked diligently with the City to choose a pole and luminaire which would both adequately and cost effectively light the sidewalk along the corridor, but also not present a glare concern to the drivers along Roosevelt Highway. In addition to providing full photometric calculations and lighting plans for the City to bid, Wi-Skies also developed plans for a new traffic signal to be installed at the intersection of Roosevelt Highway and Dixie Lake Rd. Plans were also developed to modify the existing traffic signal at the Highpoint Rd intersection to accommodate a new dedicated right turn lane. To limit clutter in the quadrant where the service point supplied power to the traffic signal at Dixie Lake and the adjacent lighting, a detail was developed to combine the meters, disconnects, and lighting controller on one pole. Aaron was responsible for the power calculations associated with adding decorative lighting outlets to each pole location along the corridor and incorporating the information into the final plan set.

**Senior Lighting Designer for Johns Creek Parkway at Lakefield Dr Roundabout Lighting (City of Johns Creek, GA)** This quick response project involved the replacement of an existing intersection with a new roundabout to reduce the severity and frequency of crashes at the busy intersection. Aaron was responsible for the photometric calculations, performing voltage drop calculations and developing plans. This included the evaluation of the existing lighting along both intersecting roads, as well as tying into the existing electrical systems.

**Senior Lighting Designer for Effingham County Roundabouts Lighting Design** Effingham County, GA developed plans for eight total roundabouts throughout a business development area. These roundabouts would increase travel speeds through the area, as well as decrease the seriousness of traffic accidents at some of the intersections. Each of the eight roundabout sites required lighting, both within the roundabout circle, but also at each crosswalk, along each approach leg, in accordance with IES standards. Aaron was responsible for the lighting and electrical design for one of the roundabout lighting designs including photometric calculations, coordinating service point locations, performing voltage drop calculations and developing plans.

**Senior Lighting Designer for Citrus Grove Phase 2 Lighting – FDOT.** A new 0.8-mile-long segment of Citrus Grove Rd was being constructed within the City of Minneola, FL to connect Grassy Lake Rd and a previous segment of Citrus Grove Rd. This new corridor has a shared use path on either side of the roadway, which also required lighting. Aesthetic requirements for the project required the use of over one hundred post-tops and bollards to light the roadway and shared use paths. Photometric calculations were conducted in accordance with the FDOT Greenbook requirements, which led to the use of 3000K post luminaires mounted at 30' along the roadway and in the median and 3000K, 3.5' tall bollards along the multi-use path. Aaron performed the photometric calculations, coordinated the service point locations, performed the voltage drop calculations and developed both the LDAR and lighting plans.

**Senior Lighting Designer for Hooks St at Emil Jahna Rd Roundabout Lighting – Florida DOT** Hooks Rd underwent a 1.5-mile-long extension in the City of Clermont, FL, which intersects with Emil Jahna Rd. at a new roundabout that subsequently will be lit. There is existing decorative post top lighting along the median of Emil Jahna Rd, much of which will remain in place, except for those impacted by the construction of the new roundabout. The new lighting was designed in accordance with the FDOT Greenbook, utilizing 3000K luminaires and a 35' mounting height at the roundabout. Aaron performed the photometric calculations, coordinated the service point locations, performed the voltage drop calculations and developed both the LDAR and lighting plans.

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**Senior Lighting Designer for City of Albany Lighting at Traffic Signal Upgrades.** The City of Albany, GA was upgrading sixteen intersections throughout their downtown corridor as part of a traffic enhancement and beautification project. As part of this work, lighting was installed on the traffic signal poles, for which Wi-Skies was responsible. Additionally, they are installing decorative lighting along the corridor of several downtown blocks that needed to be coordinated with. Given the luminaire locations were dictated by the traffic signal locations (by MUTCD), the challenge was meeting intersection lighting requirements with these limitations. It was Wi-Skies responsibility to provide luminaires to maximize the lighting delivered to where it needed to be within the intersection while also meeting the aesthetic objectives of the project. Aaron was responsible for the photometric design and leading the development and delivery of the final lighting plans.

**Senior Lighting Designer for US 278 Covington Hwy for the City of Covington, GA.** The City of Covington, GA was adding approximately a half mile of continuous decorative lighting along US 278. This project fell between two new roundabouts; one being installed at the I-20 interchange and another at SR 81. The intersection at West St in the middle of the project scope was being reconfigured into a new high-T design. Along both sides of the road there is either a shared-use path setback from the highway or sidewalk next to the roadway that needed to be lit. Part of Wi-Skies' task was to coordinate with the adjacent roundabout projects and a previously installed city beautification project along the Pace St. corridor, approximately a quarter mile from this project scope. Aaron was responsible for all lighting plans, including the calculations.

**Senior Lighting Designer for Heart of Iowa Nature Trail Pedestrian Tunnel (IADOT)** IADOT was widening I-35 near Huxley, IA and replacing the overpass bridges over the Heart of Iowa Nature Trail (HOINT). Instead of installing new bridges, a new 238' long pedestrian tunnel was being constructed, and I-35 was being paved over the top. Wi-Skies was tasked with providing new lighting for the tunnel to meet both daytime and nighttime lighting requirements. Aaron was responsible for all the lighting plans, specifying the luminaires and installation methods, and the AGI32 3D modeling and calculations.

**Project Manager for Enbridge Energy – Straits of Mackinac Tunnel Boring** Enbridge Energy was looking to bore a 4-mile utility corridor under Lake Michigan. As part of the tunnel bore project, Enbridge was adding to their Mackinac south facility. These proposed additions caused concerns with the neighboring properties and owners; The Headlands International Dark Sky Park, and the local indigenous tribes. Wi-Skies had been tasked with quality control and design oversight to ensure that IES and other applicable guidelines were met. This was done to both identify the minimum light levels necessary for construction activities but also minimize any sky glow as a direct result of the lighting. Aaron was responsible for reviewing all documentation, providing a final report with his findings, and creating 3D renderings to help with the approval process.

**Senior Lighting Designer for I-75 at Chula-Brookfield Road (GDOT)** At the Chula-Brookfield exit along I-75, GDOT was upgrading the existing on/off ramp intersections with new roundabouts as well as realigning the ramps to accommodate the new intersection locations. Partial interchange lighting was being provided as part of this project utilizing high mast towers at both roundabouts and ramp terminals. Aaron was responsible for all lighting plans, including the calculations.

**Senior Lighting Designer for Sea Island at Frederica Roundabout (Glynn County, GA)** The County was replacing the existing major intersection at Sea Island and Frederica with a roundabout to improve traffic flow. Wi-Skies was tasked with providing new lighting at this intersection and working with Glynn County to establish lighting standards for the island; both conventional and decorative. Aaron was responsible for all lighting plans, including calculations.

**Senior Lighting Designer for Carolina Crossroads Phase 3 Design-Build for South Carolina DOT** SCDOT was designing improvements along the interstate corridor of I-20/26/126 which included system interchanges at I-20/I-26 and I-26-I/126 in Lexington and Richland Counties in five phases. These improvements were proposed to increase mobility and enhance traffic operations by reducing existing traffic congestion within the I-20/26/126 corridor, while accommodating future traffic needs. The corridor's approximately 14 miles of mainline interstate included I-26 from Exit 101 - Broad River Road (US 176) to east of the Saluda River, I-20 from the west of the Saluda River to west of the Broad River, and I-126 from I-26 to east of the interchange with Colonial Life Boulevard. Phase 2 of the design included the design of I-20 as well as a new Diverging Diamond Interchange at Broad River Road (US 176). The lighting design included both high mast towers along the interstate and interchange as well as conventional roadway lighting along the side streets, with an effort to minimize spill lighting to the residential areas on the side streets. Aaron was responsible for all modeling and lighting plans for the pursuit phase.

**Senior Lighting Designer for Experimental Daytime Lighting for GDOT.** As part of ongoing high-level research work with IES, GDOT and other agencies, Joe Marsh is leading the effort to overhaul the international standard for daytime lighting within short tunnels, which are considered to be under 400'. Measuring of over a dozen tunnels has led to the belief that the amount of daytime lighting recommended within short tunnels is excessive and Joe is recommending providing only lighting which would be minimally necessary to ensure good visibility throughout the tunnel and nothing more. As part of this effort, GDOT has chose two tunnels which certainly need some sort of daytime lighting and has tasked Wi-Skies to provide what they believe would be the minimum amount of lighting necessary within them, along with others that need to be analyzed. Wi-Skies is putting together full lighting plans to accomplish this and will verify the results in the field before it is ultimately accepted. From these tunnels and others, the hope is that GDOT can revise policy based on these findings, even before international policy is revised. Aaron is responsible for 3D modeling of the existing bridges GDOT has identified and run daylight calculations in AGI32.

**Senior Lighting Designer for I-285 WB Auxiliary Lane Expansion (GDOT)** A 1.25-mile-long auxiliary lane was being constructed along I-285 westbound between Roswell Rd and Riverside Dr as part of an advance project for a larger scale future project. This project extended an existing bridge over Long Island Dr, which impacted the existing lighting underneath the bridge, which was being replaced and re-

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spaced. Additionally, the existing Mt Vernon bridge over I-285 was replaced and relocated 25' east to minimize construction impacts for staging. The new bridge has significant lighting on it, including pedestrian scale post top poles integral to half-walls between sidewalks and separated bike path, wall sconce lights along the sidewalks and sign lighting on the outside of the bridge to accentuate new decorative signage attached to the decorative bridge façade. Aaron was responsible for all lighting plans, including calculations and construction details.

**Electrical Engineer for Pensacola, FL Fuel Farm** ST Engineering at Pensacola airport was installing a fuel farm to provide a site to offload and re-fill fuel from planes before and after maintenance activities performed at the site. Adjacent to the fuel tanks, there is a new covered building for other material storage being constructed, which would house an electrical service room, sub-fed from an existing panelboard within the building. Both the fuel tank area and the storage shed are hazardous location rated. Aaron is developed electrical power, panel schedules, grounding, hazardous location, and lighting plans for the fuel farm. There are both 480/277V and 240/120V loads consisting of a 15HP pump, several 3/4HP pumps, two recirculating hot water heaters, and general power and lighting.

**Senior Lighting Designer for Irving Park Road and Old River Road Intersection (IDOT)** The Illinois Department of Transportation (IDOT) was widening a section of IL-19 (Irving Park Road). In conjunction with this project, The Village of Schiller Park was replacing the existing post-top lighting, which needed to be removed to accommodate the wider roadway width, with new lighting. The village had requested that designs be completed for both conventional roadway luminaires and a hybrid model consisting of conventional & post-top. Aaron was responsible for all lighting plans, including the calculations.

**Senior Lighting Designer for Ozora Church Rd Roundabout (GDOT).** An existing three-legged intersection in a rural area was being converted to a roundabout. As the area was also littered with many large trees and distribution lines which have minimum clearance requirements, light pole placement was limited. To save cost, approach lighting on some of the legs was recommended for removal where there was adequate visibility from an AASHTO safe stopping distance. Aaron was responsible for the lighting on this project, including photometric calculations and plan preparation.

**Senior Lighting Designer for Shoal Creek at SR 136 Roundabout (GDOT).** Shoal Creek Rd was being straightened, which meant the existing three-legged intersection was being removed and replaced by a new roundabout further down the road at the new intersection location. At this location, there are existing overhead distribution lines and an existing service point that required coordination. Aaron was responsible for the lighting on this project, including photometric calculations and plan preparation.

**Project Manager for I-35 NEX Central Design-Build Lighting Quality Control (TXDOT)** The Texas Department of Transportation (TxDOT) was expanding approximately 19.5 miles of interstate highway I-35 in Bexar, Comal, and Guadalupe Counties, Texas. The I-35 design-build project involved the construction of two non-toll 15-mile-long elevated bridges between the I-35 main lanes and frontage roads. The elevated lanes would provide one high occupancy vehicle lane and two general-purpose lanes in each direction. In addition to the elevated lanes on either side of I-35, the mainline lanes of I-35 were widened for the addition of two general-purpose lanes. The project also includes revisions of ramps and frontage roads to transition the elevated lanes and connectors with the existing highways. Wi-Skies had the distinctive opportunity to provide quality control and design oversight for lighting of the entire project, which encompassed the entire 19.5 miles of the interstate. Our role included conversing with three design firms and the overall PM to make sure uniform lighting was provided throughout the project. Multiple drawing packages needed to be reviewed and TXDOT specific lighting requirements must be adhered to. The complexity of this layout of highway made it imperative that the lighting was designed correctly and the lighting on the pavement was uniform, so that motorists navigating this stretch of extremely busy highway can do so safely and effectively.

**Senior Lighting Designer for US78 at Mountain Industrial Blvd (GDOT)** As an extension of the Tucker Summit CID Street Lighting Project between DeKalb County, City of Tucker and Georgia power, GDOT was widening the existing exit ramps at US78 and Mountain Industrial Blvd. As part of the widening, this previously unlit section of highway was adding continuous lighting to both on and off ramps. Additionally, lighting at the intersections was to be upgraded and coordinated with Tucker Summit Phase 2 project. Aaron was responsible for all lighting plans, including the calculations.

**Senior Lighting Designer for Woodruff Road Bypass – Greenville, South Carolina (SCDOT)** Wi-Skies provided a complete lighting design for the Woodruff Road Bypass project, which spans a total of six miles of roadway. Woodruff Road is a highly traveled roadway and experiences extreme congestion during peak travel times. SCDOT proposed a parallel route to bypass the overly crowded Woodruff Road. The roadway contained ten total roundabouts with four travel lanes with a decorative median for most of the route, along with both a sidewalk and multi-use path. As an additional challenge, this roadway intersects a railroad and crosses under transmission lines. Aaron was responsible for designing the lighting throughout the entire parkway limits, including photometric calculations, service point coordination, voltage drop calculations, conduit routing, and lighting plan development.

**Project Manager for City of Leesburg, GA Downtown Lighting Improvements.** The town is focusing on revitalizing the historic downtown core of Leesburg by enhancing walkability, economic vitality, and the town's role as a regional destination. The city infrastructure and streetscape upgrades include improved sidewalks, crosswalks, decorative lighting, ADA-compliant infrastructure, street furniture, and tree planting. Wayfinding and branding will be improved with refreshed signage and pavement markings. The courthouse lawn is also being transformed into an attractive "town-square" type of space for community gatherings, events, and everyday use. Wi-Skies is tasked with developing a cohesive lighting design that not only elevates the downtown charm, but also the safety for drivers navigating one-way traffic and crossing the existing active railroad. The same goes for pedestrian travel, where lighting is strategically placed to improve crosswalk visibility so the community can safely navigate the town after dark. Our team

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worked closely with the City to avoid existing utility conflicts, highlight areas that were key to the project initiative, and generate a design that considers constructability around environmental features such as drainage ditches and foliage. Aaron oversees the creation of all traffic signal and lighting scope deliverables at each project site.

**Project Manager for I-285 at SR 400 Interchange Lighting and ITS Power (GDOT)** As part of the largest design-build effort the state has ever taken on, Wi-Skies designed the entire lighting and electrical ITS work for the interchange, comprising of several hundred devices. This interchange is the busiest and fastest-growing interchange in the Atlanta area, subject to traffic volumes of over 250,000 vehicles daily. The overall design intent was to provide collector-distributor (CD) lanes throughout the project limits for a total of 8.3 miles along both SR 400 and I-285, which would eliminate much of the congestion in the area. Throughout the design process, several lighting and ITS design alternatives were designed and considered. Due to the contract requirements, an extra nine amps (9A) was required at the end of each of the ITS branch circuits to allow for maintenance and future expansion. This design constraint required implementing a secondary transformer design for the entire ITS system. Aaron was tasked with completing the voltage drop calculations and single-line diagram for the project.

**Project Manager for Langford Parkway (SR 166) Lighting Replacement** Langford Parkway is a major thoroughfare which connects I-285 to I-85 north of the Atlanta airport in the southwest side of the city. The corridor was originally built as an urban collector, but over time has become an access control freeway with entrance and exit ramps. However, urban curbs still exist in portions of the roadway and the lighting was installed based on the original urban collector setting and subsequent setbacks. Because of this, most of the lighting installed on the outside of the roadway is within unprotected clear zone and subject to frequent knock-downs. As the entire 6.5 mile corridor is continuously lit, this results in a lot of maintenance. To properly address this situation, coupled with inadequate lighting, the recommendation was made to provide a new lighting system through the corridor, which would increase pole setbacks coupled with barrier protection as warranted. This new lighting system would also replace and upgrade the existing lighting along the median wall, where applicable. As the corridor was untouched for decades, full survey, LIDAR and SUE was necessary, which Wi-Skies coordinated the effort on through our sub-consultant. Aaron was tasked with completing the voltage drop calculations and single-line diagram for the project.