

GROUND TO SKY PROJECT



Project Description

**MPDG FFY 2023 and 2024
GRANT APPLICATION
AUGUST 2023**



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Supplemental information, including letters of support and appendices, may be accessed:
<https://connect.ncdot.gov/resources/MPDG2023-126DIV13/Pages/default.aspx>

Project Description

Through varied public-private collaborations, North Carolina is poised to launch next-generation aviation technology and equitable access to good paying manufacturing careers in southern Buncombe County, NC. This dynamic transportation-economic development initiative includes NCDOT's proposal to the USDOT to invest in the Ground to Sky Project (G2S) to bolster this federal-state-local-private partnership.

G2S is a model of the power of public-private partnership to spur economic development, strengthen supply chains, and transform a region's economy. Access to transportation is frequently cited as a top priority for economic development projects. The access afforded by this proposed investment will create hundreds of jobs in the near term and likely thousands over the long term. For the ARC region it underscores that prosperity through partnership is achievable.

The project is needed to address the lack of network connectivity between NC 191 and I-26 in southern Buncombe County. The purpose of the project is to provide access to I-26 and improve east-west connectivity within the project vicinity to accommodate current and planned growth.

NCDOT has \$32.5 million programmed for a new interchange on I--26 (future Exit 35) and connector road, approximately 6 miles south of Asheville, north of the Blue Ridge Parkway and south of the I-26 French Broad River bridge (*Figure 1*). Included in the total programmed amount is a \$2.5 million Appalachian Regional Commission (ARC) grant. The ARC grant reflects the importance of investing in rural America to help ensure equality of opportunity for all. Final design is underway, and construction is expected to be complete in 2026.

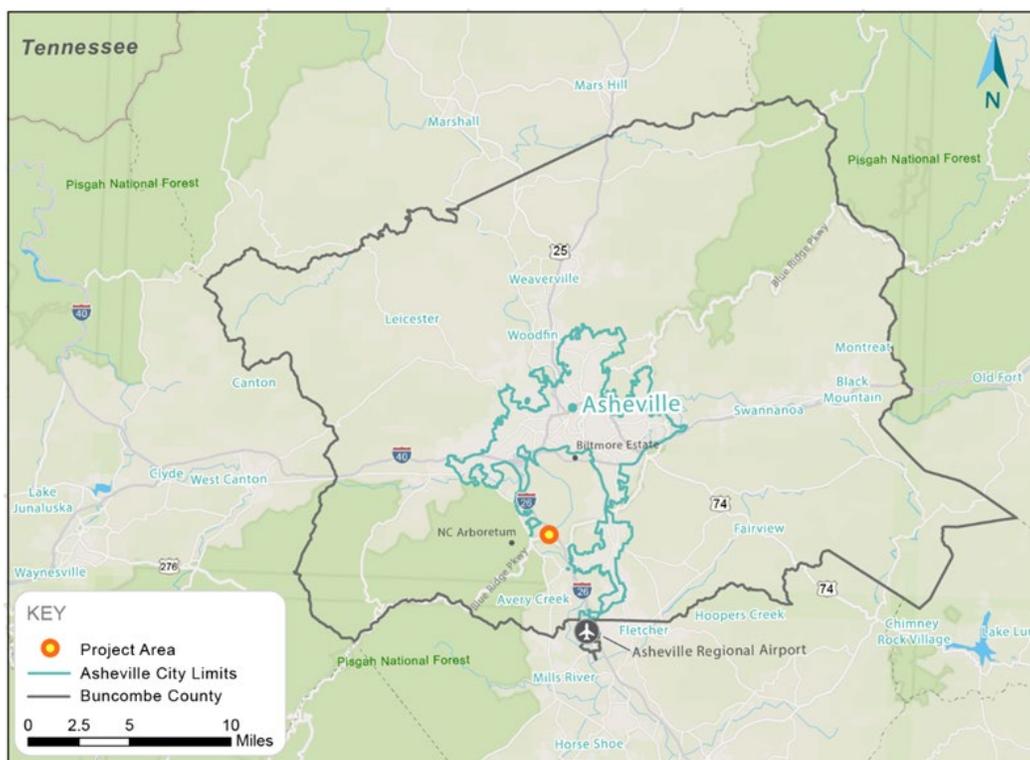


Figure 1. Location of the Ground to Sky Project (G2S). Note that G2S is in rural area.

G2S is leveraging substantial private investment for public infrastructure for job creation. In partnership with the State of North Carolina, Biltmore Farms, LLC, a private developer and landowner, has invested approximately \$7 million in improvements. With a \$12 million contribution from the Golden Leaf Foundation, Biltmore Farms constructed a new French Broad River bridge and approximate one-mile roadway, i.e., East Frederick Law Olmsted Way (FLOW), to access the Pratt & Whitney parcel. Biltmore Farms also donated 100 acres to Pratt & Whitney, a division of Raytheon, Inc., an approximately \$500,000 value. This investment in infrastructure opened the approximately 450-acre parcel, known as Biltmore Park West, for smart development in proximity to Asheville and I-26, a major east-west freight and commuter corridor. In turn, Pratt & Whitney constructed a 1.2-million-square-foot manufacturing facility and plans to invest at least \$650 million through 2029 in the turbine airfoil production facility.

Pratt & Whitney is creating 800 new, good paying manufacturing and engineering jobs on the edge of Asheville and within the heart of the Appalachian Region. Pratt & Whitney is building on a culture of career growth and education by partnering with five regional community colleges, including a partnership with Asheville-Buncombe Technical Community College (A-B Tech) which will construct a new training facility near the Manufacturing Plant to train and develop a pipeline of local technical talent to deliver high tech engine components for commercial and military service.

Learn more: [Pratt & Whitney's "Factory of the Future – Coater Arrival and Industry 4.0 Features"](#)

The Asheville region continues to strive to develop its economy and provide opportunity for all. The proposed grant is a strategic opportunity for the USDOT and NCDOT to support economic vibrancy through enhanced mobility and access.

Project Components (Figure 2)

East FLOW from NC 191 (Brevard Road) to Pratt & Whitney (Privately Funded Project):

East FLOW, a new, one-mile road, was constructed by Biltmore Farms, LLC. The roadway was inspected by NCDOT and accepted into the state highway system prior to opening to traffic in the Fall of 2022. The privately funded road project begins at NC 191 (Brevard Road) and crosses the French Broad River on a new, five-lane bridge. The two-lane roadway terminates in a roundabout adjacent to the Pratt & Whitney Manufacturing Plant. The private developer paved a two-lane facility but graded the East FLOW corridor to accommodate a four-lane, median-divided boulevard to accommodate foreseeable future traffic volumes. A 10-ft side path was constructed on the bridge, and a separated sidewalk extends along the length of the roadway. The private developer also implemented localized operational improvements at the existing NC 191 signalized intersection, including turn lanes and storage bays.

East FLOW aligns with the existing NC 191 intersection with Frederick Law Olmsted Way/Blue Ridge Parkway Access Road, which connects NC 191 to the NC Arboretum and the Blue Ridge Parkway, a major regional economic driver and recreation and tourism destination. G2S will provide a direct connection from I-26 to these recreational and tourism destinations.

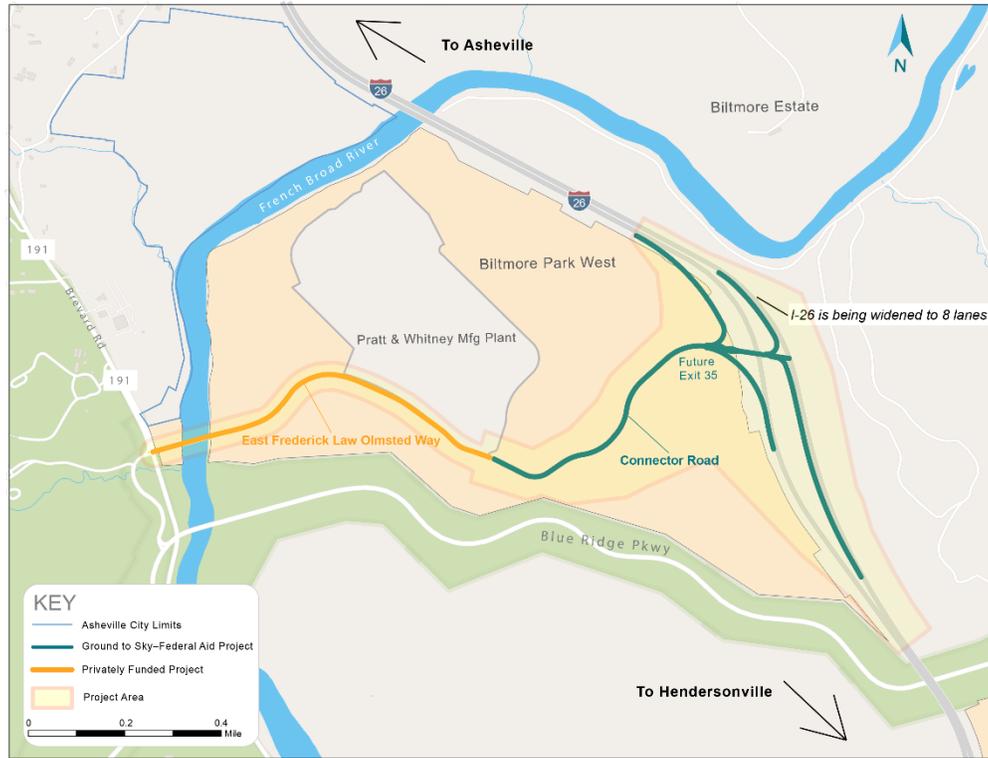


Figure 2. Through partnership with Biltmore Farms, LLC, Pratt & Whitney, and the State of North Carolina, G2S completes a critical transportation connection to benefit safe and efficient access to economic opportunity in southern Buncombe County.

East FLOW from Pratt & Whitney to I-26 (Federal-Aid Project)

NCDOT is seeking grant funds from USDOT to complete G2S, including the extension of East FLOW from the existing roundabout to I-26, approximately one-half-mile, and the future Exit 35. The extension of East FLOW leverages substantial private investment and will complete a critical connection between NC 191 and I-26, improving regional connectivity, mobility, and transportation network resiliency. Biltmore Farms has committed to donate the right-of-way for the project.

NCDOT’s new road extension will be constructed as a two-lane roadway, consistent with East FLOW east of NC 191, with auxiliary lanes at intersection approaches to meet operational needs (e.g., turn lanes). A separated sidewalk is also included, extending the multimodal facility constructed with private investment to the control of access (C/A) 1,000 feet

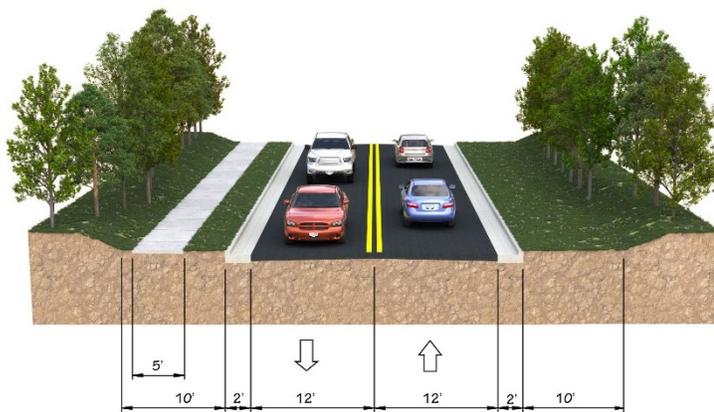


Figure 3. East Frederick Law Olmsted Way proposed typical section includes two 12-foot travel lanes, curb and gutter, and a five-foot concrete sidewalk on one side of the roadway.

west of the eastbound I-26 ramp terminal. See *Figure 3*.

Interchange (Federal-Aid Project)

The interchange will be constructed primarily within the existing right-of-way of I-26. I-26 is currently being widened from two lanes to four lanes in each direction as part of NCDOT STIP projects I-4400/I-4700. NCDOT is leveraging the interstate widening project by integrating the interchange construction. This approach is expected to reduce costs and accelerate the construction schedule by avoiding rework within the projects' overlap, garnering material buying power within the larger project, and eliminating mobilization time and costs. Portions of the interchange will be constructed beginning August 2023.

Early in project development, NCDOT and FHWA worked closely to evaluate the feasibility of several interchange forms and configurations. Some of the constraints the transportation team faced included two significant historic properties and tourist destinations: the National Historic Landmark (NHL) Biltmore Estate located east of I-26 and the National Register of Historic Places (NRHP) eligible Blue Ridge Parkway located south of the project. (Note that an NHL designation is pending for the Blue Ridge Parkway and was, therefore, treated with the same deference.) NCDOT and FHWA avoided impacts to the Biltmore Estate by using the existing right-of-way within a bifurcated area of I-26 and designing a left exit/entrance. NCDOT confirmed with the Biltmore Estate that it has no future I-26 access plans for this area of their property. The transportation team also ensured a design that maximized the distance between the project and the Blue Ridge Parkway to avoid or minimize potential adverse effects.

Through an alternative analysis process, in consideration of public comments, and in coordination with state and federal regulatory and resource agencies, NCDOT selected a left exit/entrance Half Diverging Diamond Interchange (DDI) design to accommodate all vehicle types efficiently and safely. See *Figure 4*.

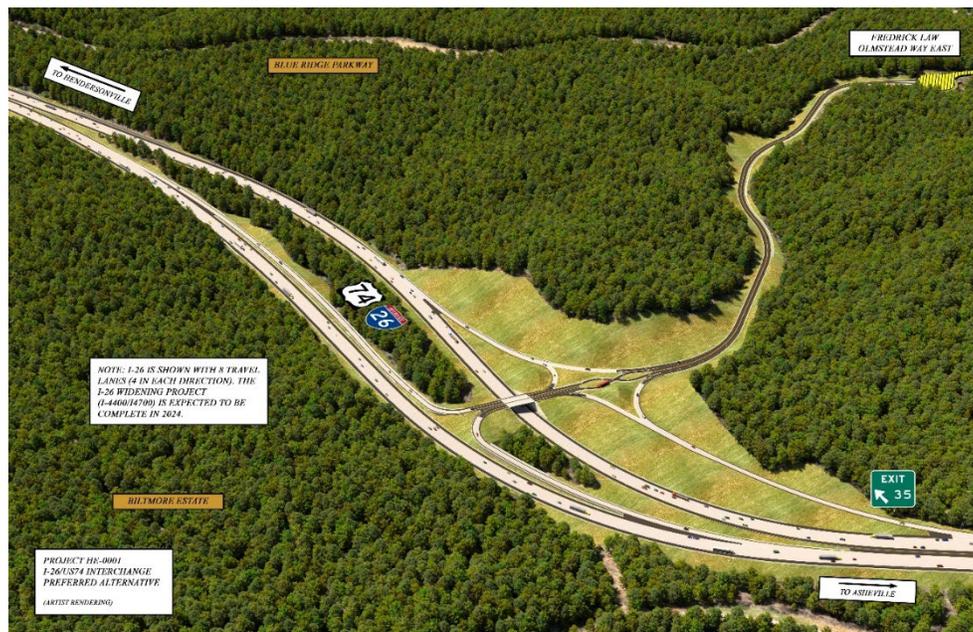


Figure 4. Rendering showing the new Half Diverging Diamond Interchange (DDI) (future Exit 35) and the one-half mile East Frederick Law Olmsted Way (FLOW) connector road.

I-26 is part of the National Highway System and the National Highway Freight Network. NC 191 is part of the State Highway System in North Carolina, is a Federal Aid Road, and a minor arterial. This corridor connects to coastal ports across the state in Wilmington, North Carolina, and south into Charleston, North Carolina.

The Asheville area, and western North Carolina in general, is strongly dependent upon the service industries of the recreation and tourism markets. Costs of living are commonly out of step with wages. G2S is envisioned as a generator of sustainable regional economic growth and quality of life improvements for the region.

Located on the outskirts of Asheville municipal limits, G2S meets USDOT’s “rural” definition (refer to *Figure 1*). Though the project is not located in an area of persistent poverty nor historically disadvantaged community, G2S will bring 800 good paying engineering and manufacturing careers within 20 miles of 25 historically disadvantaged communities in the greater Appalachian Region. Three of these communities are located within five miles of the project. G2S will provide improved, efficient, and direct access to technical training programs through regional community colleges and Pratt & Whitney, and career options with salaries that exceed the state and county median income. (*Figure 5*)

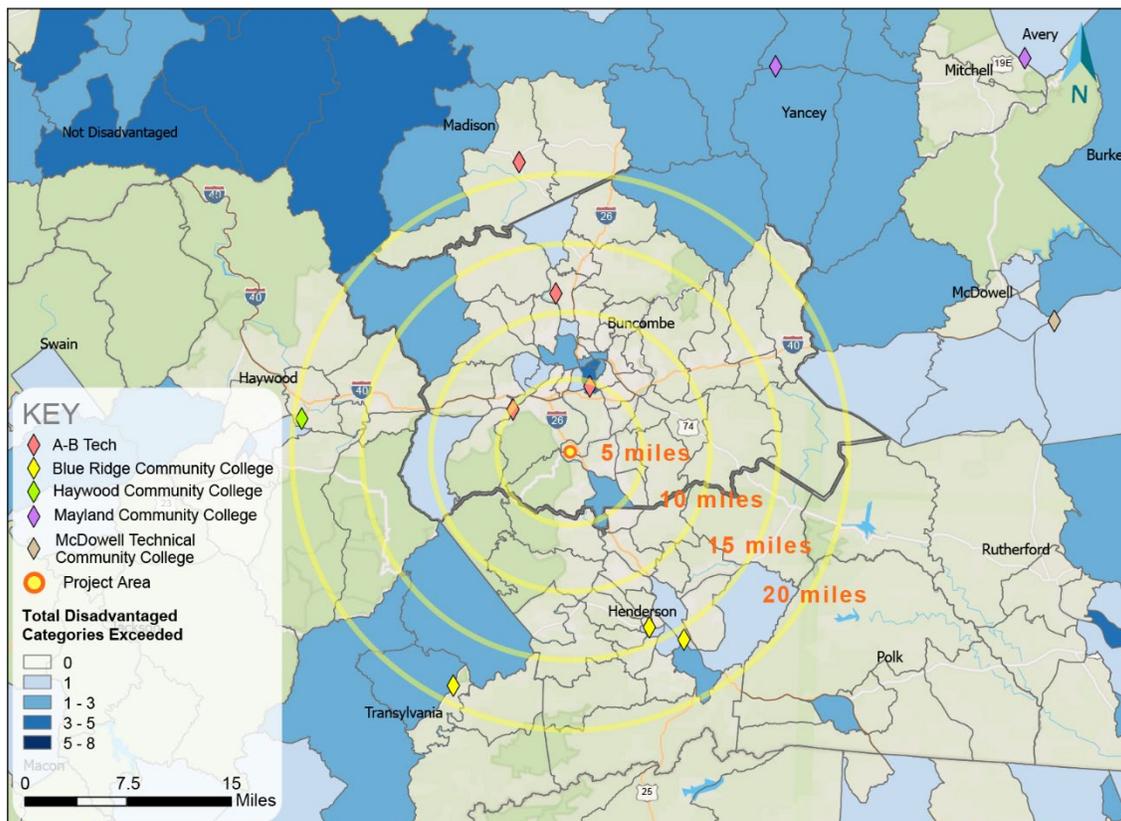


Figure 5. G2S will bring good-paying and high-tech education and training opportunities to the western North Carolina Appalachian Region. G2S is located within 20 miles of 25 historically disadvantaged communities (defined by census tract) based on exceeding USDOT defined category criteria, including but not limited to workforce development (low median income, poverty, high school education) and transportation barriers. Also displayed are the five community colleges (and their campuses) partnering with Pratt & Whitney.

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