



December 8, 2021

Mr. Michael Swidrack, AICP
Urban Planner III, Development Division
City of Alexandria
Department of Planning & Zoning
301 King Street
Room 2100
Alexandria, VA 22314

RE: Potomac River Generating Station
CDD #2021-00004
City Compiled Comments for CDD Plan Concept #1
christopher Project #17005.004.00

Dear Mr. Swidrack:

We are in receipt of your comments dated September 3, 2021 and offer the following in response along with the CDD Concept Plan 2 Submission (CDD 2).

PLANNING & ZONING

CDD Conceptual Design Plan Development Principles

Staff has identified the following principles that will guide the development CDD over the course of its review and iterations:

1. The proposed street grid should extend into the site in a way that is generally consistent with the OTNSAP illustrative layout.
 - a. Provide a strong physical and visual continuity from Old Town North into the site primarily through the extension of N. Fairfax Street and then secondarily through the N. Royal Street connection. The layout and connections should also take into account the future Linear Park and its multimodal use.
 - b. Establish a suitable perimeter grid accommodating the site's constraints, topography and established adjacent street grid, with block sizes to follow.
 - c. Blocks shall include mid-block building breaks and alleys that should be open to the sky.
 - d. Limit the roadway adjacent to the north side of the future Linear Park.

Response: The Applicant has worked extensively with City Staff to orient the site's street network to address these comments in ways that are consistent with the goals of the OTNSAP illustrative layout.

- a. Physical and visual continuity are achieved at N. Fairfax and at N. Royal St. The Applicant has revised the street network in the CDD 2 submission to extend N.

Fairfax straight into the site.

- b. Noted. The perimeter is bounded by the extension of N. Fairfax St. to the east and the spine street to the west. Cross streets are provided, dividing the site into blocks reflective of existing block sizes in Old Town North.
- c. Noted. On larger blocks, mid-block alleys have been incorporated. It will be necessary to bridge above these alleys in certain locations which will be reviewed in later DSUPs for those individuals blocks.
- d. The Applicant has reviewed with City staff the critical nature of the main spine street that runs adjacent to the north of the future Linear Park. The street is within a property easement that limits vertical development but allows for street level infrastructure.

2. Remove all roadway from the RPA and respect the topography of the site and adjacent NPS open space.

Response: The Applicant has removed all roadways from the RPA.

3. Provide a balanced land-use mix that has a significant commercial/office component for consistent daytime and nighttime activity.
 - a. The size of blocks shall be designed to accommodate both residential and commercial uses, as developed through the development review process.
 - b. Incorporate uses that are consistent with the OTNSAP recommendations for an innovation district.

Response:

- a. Acknowledged. The Applicant is proposing a flexible mix of uses that meets the goals of the OTN SAP.
- b. Acknowledged. The Applicant will continue to work with City to determine what types of uses meet this definition.

4. The site should feel knitted to the adjacent neighborhoods and maintain public accessibility throughout the site.

Response: Acknowledged. The Applicant has created a street network that integrates with existing neighborhood streets to create a walkable and vibrant mixed-use community. All streets will be open and accessible to the public regardless of ownership.

5. Maximize implementation of affordable housing strategies for on-site units.

Response: The Applicant met with the Office of Housing on November 8, 2021 to discuss the City's goals for affordable housing and will continue to work with City staff to determine the feasibility of on-site affordable housing units under the bonus density program.

6. Provide a strong arts component with arts and cultural anchor(s) that will be a true neighborhood catalyst and regional attraction.

Response: The Applicant will continue to work with City staff to amend the Alexandria Zoning Ordinance to expand the OTN Arts and Cultural District into the property. The Applicant envisions Block A as a potential northern anchor of the arts corridor. Additional potential arts uses are proposed at other locations within the project.

7. Incorporate sustainability strategies (including carbon reduction and energy master planning) into site and building design and neighborhood infrastructure.

Response: The Applicant has met with City staff and members of the Environmental Policy Commission to coordinate and establish a framework for a Carbon Neutrality Analysis (CNA) to be submitted with the CDD Concept Plan. A site-wide Sustainability Master Plan will be developed based on the City's 2019 Green Building Policy and the sustainability goals of the OTNSAP and is anticipated to be submitted with the Infrastructure DSUP.

8. Provide adequate and accessible open space that connects to the street network and directly to NPS property, waterfront and the Linear Park.

Response: The Project is anticipated to provide approximately 5 acres of ground level open space connected to the existing open space network around the site, including approximately 3 acres adjacent to the National Park Service land along the waterfront and approximately 1.5 acres adjacent to the proposed public Linear Park. As a result, a total of approximately 14 acres of usable, ground level open space both in and around the site are anticipated to be provided.

CDD Process Comments

9. Staff and the applicant will continue to coordinate on presentations and outreach to the community and stakeholders (including the National Park Service) and review and presentations to City boards, commissions and City Council.
 - a. Pursue innovative ways to provide community engagement with a mix of in-person, virtual and interactive means of outreach.

Response: Acknowledged. The Applicant will continue to host community outreach events, both virtual and in-person, to include community meetings and property tours and other innovative means of engagement. An on-line open space preference survey was conducted at the November 29, 2021 public meeting and remained open to receive public input until December 15, 2021.

10. Provide an update on the submission of the multimodal traffic impact study.

Response: The Applicant received approval on the scope of the Multimodal Transportation Study from City staff in November 2021 and the data collection phase of the MTS

is now on going. The Applicant will continue to coordinate with City staff and share the analysis and outputs in accordance with the schedule presented to the Staff.

CDD General Comments

11. The proposed building heights do not comply with the stepback or maximum heights recommended in the OTNSAP. Building heights above 120 or 140 feet (depending on the location) should be sought by using bonus height for the provision of affordable housing (related to Section 7-700 of the Zoning Ordinance). Provide an updated building height exhibit that utilizes existing Zoning Ordinance tools and does not require a Master Plan Amendment.
 - a. Provide a graphic that overlays the OTNSAP building heights map with the CDD site plan and proposed building heights.
 - b. Provide information that confirms that proposed building heights will comply with FAA building height limitations.

Response: The Applicant has worked with City staff to study the extent to which on-site constraints that were unknown at the time of the OTNSAP was adopted limit the amount of developable area on the site. These factors were summarized as part of the Rationale for Additional Height memo dated September 27, 2021 and attached to these comments. The OTNSAP contemplated 2.15 million square feet of base square footage (excluding any bonus density) in order to create a vibrant, feasible, mixed-use community. The existing site constraints do not allow that amount of base square footage to be developed without modifying the height limits contemplated in the OTNSAP. As discussed with City staff, the square footage originally contemplated to be developed in these restricted areas will be moved to developable site areas, which will require a Master Plan Amendment. All heights proposed are anticipated to comply with FAA height restrictions.

- a. Please refer to C200 the land use diagram building heights map provided in the Concept 2 submission.
 - b. Please refer to the attached Obstruction Evaluation and Airspace Analysis related to the FAA limitations on the site.
12. Realign N. Fairfax Street to be consistent with the OTNSAP and removed from the RPA. The street should be a public through street that connects the site to areas north and south, and the development to public open space to the east.
 - a. The applicant should consider what pedestrian and bicycle amenities could be located in the RPA portion of the open space at the eastern edge of the site. Pervious surfaces (i.e. boardwalk, pervious pavement, etc.) are acceptable.

Response: Noted. The Applicant has removed all roadways from the RPA. The extension of N. Fairfax St. connects from Old Town North to Slaters Lane and provides access to the waterfront open space. Pedestrian and bicycle amenities will be incorporated as the landscape design evolves in future DSUP submissions.

13. Provide adequate and accessible open space that connects to the street network and directly to NPS property, waterfront, and the Linear Park. The OTNSAP recommends significant public open space on the site in addition to the Linear Park and open spaces located on each development block (see page 63 of the SAP). Continue to ensure consistency with this recommendation.

Response: The Project is anticipated to provide approximately 5 acres of ground level open space connected to the existing open space network around the site, including approximately 3 acres adjacent to the National Park Service land along the waterfront and approximately 1.5 acres adjacent to the proposed public Linear Park. As a result, a total of approximately 14 acres of usable, ground level open space both in and around the site are anticipated to be provided.

14. Provide additional potential locations for an arts anchor and/or other arts uses, per Concept Development Principle #6 above.

- a. Explore arts anchor uses that are adjacent to the central plaza/primary open space(s) and main activity nodes.

Response: The Applicant will continue to work with City staff to amend the Alexandria Zoning Ordinance to expand the OTN Arts and Cultural District into the property. The Applicant envisions Block A as a potential northern anchor of the arts corridor. Additional potential arts uses are proposed within the project, potentially located at the Central Plaza or at the Waterfront park near the existing pumphouse. The location and anticipate use will be further explored as DSUP's are submitted for each block.

15. Work with adjacent property owners to potentially expand the CDD site and street network leading into the site from parcels to the south and west. Continue to coordinate with Pepco on the screening of the substation and future plans for the Pepco property.

Response: Acknowledged.

16. The pumphouse should be considered a focal point of the site and primary open space area. Provide more information on the proposed adaptive reuse of the pumphouse and its connection to the site and waterfront. Additionally, continue to explore the possibility of water transportation and/or marina.

Response: Acknowledged. The feasibility of the adaptive reuse of the pumphouse is being studied. The Applicant will continue to coordinate with the City and the National Park Service on the determination of feasibility and potential future uses of the pumphouse. The possibility of water-based transportation in the form of a water taxi and/or publicly available dock structure will continue to be studied and coordinated with both the City and the NPS.

17. Show how the Linear Park on Norfolk Southern property and waterfront area controlled by the National Park Service connect to the site.

Response: The applicant is working with the National Park Service to coordinate the

integration and connection of open space on the site with the adjacent NPS land. The Applicant does not control the Norfolk Southern land but will design the adjacent on-site open space in such a way that it does not preclude a future connection to this land.

18. Look more closely at the intersection of Slaters Lane with N. Fairfax Street and how the two will connect with NPS land and the adjacent open spaces and plaza/vista at the northeast corner of Block F.

Response: Acknowledged. The N. Fairfax St. roadway has been removed from the RPA. The connection of N. Fairfax to Slaters Lane is consistent with the OTNSAP. The Applicant has met with neighboring stakeholders in this area of the project and will continue to coordinate with City staff on the design of this connection.

19. Provide more information on what can be placed on top of the powerline easement (i.e. pervious or impervious surfaces, plantings, etc.).

Response: Structures are not permitted to be constructed within the easement area. Roadway and open space improvements including streets, sidewalks, bike paths and parks are permitted.

20. Confirm there are no settlement agreement restrictions that will impact the buildability of Block A and proposed streets.

Response: The proposals submitted in CDD #1 and #2 are consistent with the 50-foot building restriction line that is part of the settlement agreement between the United States and PEPCO.

Small Area Plan (OTNSAP) and Urban Design Standards and Guidelines (OTNUDSG) Comments

21. Based on the documentary study and archaeological evaluation, the applicant should provide a plan and narrative that establishes a historic interpretation strategy (per the OTNSAP) at a CDD-wide level which will provide guidance for future DSUP submissions.

- a. Identify themes to interpret on site in consultation with staff and the OTN Historic Interpretation Guide.
- b. The publicly accessible open spaces will include areas where the industrial heritage of the site is incorporated through the restoration/preservation of industrial artifacts and interpretive elements.
- c. Explore the potential to incorporate environmental interpretation as part of the historic interpretation plan for the CDD site.

Response: The Applicant will develop a historic interpretation strategy at a site wide level with a future DSUP.

- a. Acknowledged.
- b. Acknowledged.
- c. Acknowledged.

22. Provide street cross-sections. The cross-sections should be consistent with those depicted in the OTNUDSG.

Response: See Sheets C201-203 which include the Street Sections from the OTNUDSG. Final width and configuration will be determined as part of the Infrastructure DSUP.

23. Block sizes (excluding any internal alleys or streets) should be consistent with the recommendations of the OTNUDSG.

Response: The block sizes, street network, and mid-block alleys are consistent with the OTNUDSG guidelines established in the OTNSAP while also being responsive to the unique site constraints and the geometry of the site.

24. Provide a pedestrian and bike circulation plan to ensure consistency with the Master Plan.
- There should be seamless connections between Linear Park and the waterfront and bicycle/pedestrian facilities.
 - Improve the bike and pedestrian network on Slaters Lane and E. Abingdon Drive.

Response: Please see Sheet A200.

- Acknowledged.
- The Applicant will work to coordinate these bike and pedestrian improvements with City and NPS staff.

25. Provide a circulation plan that depicts routes for buses, loading and vehicle circulation.

Response: Please see Sheet A200.

26. Identify the location of retail focus areas on the site in accordance with the principles listed on page 24 of the OTNSAP.

Response: Please see Sheet C200. The Applicant envisions a vibrant, mixed-use district that includes ground floor retail consistent with the OTNSAP guidelines, specifically: providing appropriate sidewalk access, enabling active uses, creating interesting and visually vibrant entryways, locating loading access away from retail corridors, and providing enhanced pedestrian amenities.

27. The OTNSAP anticipates the site to serve as an innovation district that supports the area's creative economy. In future submittals, clarify how the conceptual design plan will include innovation uses. Innovation uses can include, but are not limited to, an academic and research institution, incubator spaces, a culinary institute, or comparable uses which could serve as an anchor. In addition, uses such as a museum are envisioned for the site. Coordinate with Alexandria Economic Development Partnership to identify potential partners in innovation.

Response: Acknowledged. The Applicant is coordinating with Alexandria Economic Development Partnership staff on opportunities to provide creative and innovative uses that will support the local economy per the OTNSAP.

28. Pursuant to the Old Town North Small Area Plan Implementation Developer Contributions Policy, a contribution is required to the Old Town North Implementation Fund. Based on the policy adopted by City Council in 2018, the contribution amount is as follows:
- a. \$10.43 (2021\$) per net new square foot of development, excluding square footage achieved through the application of Section 7-700 of the Zoning Ordinance, for the design and implementation of the following:
 - i. Linear Park, Segment 2 - Portion between Third Street and E. Abingdon Drive directly fronting the former power plant site
 - ii. Waterfront Park
 - b. In lieu of the monetary contribution, the condition may be fulfilled through an in-kind contribution for design and implementation of each element to the satisfaction of the Directors of Planning & Zoning and Recreation, Parks & Cultural Activities
 - c. Contribution rates are subject to an annual escalation clause equivalent to the CPIU for the Washington Metro area. Contribution rates will be recalculated January of each year. The final contribution amount shall be calculated and verified by the Neighborhood Planning and Community Development Division of the Department of Planning and Zoning at the time of Certificate of Occupancy. All contributions shall be made via wire transfer to the City of Alexandria. Instructions will be provided by Planning and Zoning staff prior to the time of deposit. Wire transfer documentation must include the source name, receiving department name (Planning & Zoning), applicable fund reference code and the condition number being fulfilled. Payments shall be made prior to the release of the first certificate of occupancy.

Response: Consistent with the OTNSAP implementation plan, the Applicant intends to meet this requirement through an in-kind contribution by dedicating, designing and improving open space.

- a. Acknowledged.
- b. Acknowledged.
- c. Acknowledged.

CDD Checklist, Site Plan and Zoning Comments

29. Checklist comments:
- a. Provide site topography overlaid on the site plan and narrative describing how scenic areas and natural features will be preserved.
 - i. Also provide the 100- and 500-year floodplain lines.
 - b. Depict and label the property lines and the existing right-of-way for the Fairfax Street and Royal Street extensions.
 - c. Provide additional information about the proposed parking for the site, including confirming underground parking for each block.
 - d. Building heights should be depicted in compliance with the City's building height definition and Section 6-400 of the Zoning Ordinance.

Response:

- a. The 100- and 500-year floodplain lines have been added to sheet C100. Both the 100- and 500-year floodplain lines are the same and are defined by elevation 10 on the preliminary FEMA Floodplain Map dated September 30, 2020.

- b. The existing right-of-way lines have been added to sheet C100. The lines were taken from the City's GIS and do not represent a field survey.
- c. Underground parking will be provided and may be combined under multiple blocks and under streets to increase efficiency and under a shared parking approach.
- d. As discussed with City staff, the heights presented are measured from average grade of each block to top of the last full occupiable floor (primary roof level). Some portion of penthouse levels, which primarily house mechanical equipment, are also envisioned to be dedicated to occupiable rooftop amenity space for use by building occupants. The CDD guidelines will need to address this discrepancy.

30. The OTNSAP references a gross floor area (GFA) and not the net floor area identified in the submission. The applicant shall recalculate the gross floor area proposed for each block. Requests for additional GFA would be facilitated through the use of bonus density as permitted in the Zoning Ordinance.

Response: Acknowledged. The Applicant has worked with City staff to align how square footage is defined and measured and those changes are reflected in the CDD #2 submission. We will continue to work with staff on the use of density and height bonuses as permitted in the Zoning Ordinance.

31. The arts and cultural district (Section 6-900 of the Zoning Ordinance) will need to be amended to extend into the site.

- a. Provide more explanation on how the arts density bonus as proposed is conceived to work for Block A.

Response: Acknowledged. The Applicant will continue to work with City staff to amend the Alexandria Zoning Ordinance to expand the OTN Arts and Cultural District into the property. The Applicant envisions Block A as a potential northern anchor of the arts corridor. The use of height or density bonuses are proposed to be spread across other blocks in the development to minimize height on Block A.

32. Show the property lines for the existing Norfolk Southern rail corridor on the southern portion of the site.

Response: See sheets C100 and C200.

33. Provide more site plan detail and information on the adjacent properties to the north across Slaters Lane.

Response: See sheet C100. An aerial snapshot is shown since there is no topographic data for this area.

34. Provide additional information regarding the proposed bicycle and pedestrian promenade along the waterfront-adjacent street.

Response: The intent of this pedestrian prioritized street is derived from the Dutch concept of a Woonerf or a "living street." This type of street shares space between pedestrians, bicyclists, and vehicles, which have the lowest priority. The woonerf at N. Fairfax St. will have lower speed limits and its design will promote traffic calming to ensure the priority of pedestrians. There will be times when this street could be closed to vehicular traffic entirely for special programs and events.

35. Depict and label the portion of the off-site Norfolk Southern rail line that the applicant is responsible for designing and constructing as the Linear Park. Staff acknowledges this is not owned by the applicant.

Response: The Applicant does not control the Norfolk Southern land but will design the adjacent on-site open space in such a way that it does not preclude a future connection to this land.

36. Staff does not concur with the information notes 2-5 on Sheet C200. The development parameters as outlined in these are subject to change based on future CDD plan iterations and discussions between staff, the applicant and the community.

Response: Please see revised charts on Sheet C200. The Applicant believes the square footage, proposed use flexibility and other provisions to be consistent with the goals of the OTNSAP and coordination to date with city Staff.

37. The openness and usability of the waterfront public open space is not clear given the topography in that area and the proposal boundary's encroachment into the RPA, and the inclusion of the pumphouse within OS-2. Please provide more justification that the illustrated public open space can be counted toward the required open space.

Response: Please see Sheet A200. The Applicant will continue to coordinate with City staff and the NPS on the usability of the open spaces within and immediately adjacent to the site. A mix of passive and active recreational areas are proposed. The realignment of N. Fairfax St. outside the RPA adds significant flat open space to the east of the roadway.

38. Provide information about what improvements and anticipated activities are proposed within the depicted OS-4, OS-5, and OS-6 areas adjacent to the linear park.

Response: The anticipated activities within these areas will range from active to passive open space typologies. The specific program activities that are being considered for these spaces align with the approved small area plan concepts for the linear park.

39. Staff will recommend an open space requirement that is 20 percent of the site area for each block/DSUP that can be a combination of at-grade and above-grade open space, consistent with recent CDD approvals.

Response: The Project is anticipated to provide approximately 5 acres of ground level open space connected to the existing open space network around the site, including approximately 3 acres adjacent to the National Park Service land along the waterfront and approximately 1.5 acres adjacent to the proposed public Linear Park. As a result, a total of approximately 14 acres of usable, ground level open space both in and around the site are anticipated to be provided.

Sustainability

40. With the next submission, submit a zero-carbon analysis, including the following:
- Carbon Analysis identifies performance targets needed to achieve carbon neutrality;
 - Coordinated Sustainability Strategy narrative;
 - Short, mid, and long-term strategies;
 - Site and infrastructure improvements; and
 - The analysis must provide a comprehensive approach for how sustainability will be addressed across the site. The analysis will need to integrate strategies at the macro, district level that contribute to creating a sustainable development. The sustainability narrative should address sustainable approaches that have been explored and as well as approaches that will be applied within the Coordinated Development District and individual buildings.

Response: The Applicant has met with City staff and members of the Environmental Policy Commission to coordinate and establish a framework for a Carbon Neutrality Analysis (CNA) to be submitted with the CDD Concept Plan. A site-wide Sustainability Master Plan will be developed based on the City's 2019 Green Building Policy and the sustainability goals of the OTNSAP and is anticipated to be submitted with the Infrastructure DSUP. Future DSUP submissions will take into account the changing nature of sustainability measures as those measures will likely be adjusted as phased development occurs.

- The CNA will consider a variety of strategies, their advantages and disadvantages and use this information to identify key performance metrics.
 - Acknowledged. A Coordinated Sustainability Strategy will be submitted under the Sustainability Master Plan.
 - Acknowledged. Short, mid-, and long-term strategies will be identified in the Sustainability Master Plan.
 - Sustainability strategies specific to infrastructure improvements will be identified in the Sustainability Master Plan.
 - Acknowledged. The CNA and Sustainability Master Plan will consider a variety of strategies and approaches.
41. Incorporate sustainability (including carbon reduction and energy master planning) into site and building design and neighborhood infrastructure.

Response: Acknowledged.

TRANSPORTATION AND ENVIRONMENTAL SERVICES (T&ES)

Findings

1. Public Works and DROW have no comments
2. No comments provided by VAWC.

Comments

1. This site must keep impervious surfaces, including roads, outside of the RPA. (SWM)

Response: The Applicant has removed all roadways from the RPA. Other uses, like pedestrian or bicycle paths are contemplated in that area and are recognized as regular uses in RPAs. It's important to note that this redevelopment greatly reduces the amount of impervious area within the existing RPA.

2. Clearly show location of existing and proposed impervious area in the RPA on the site plan. (SWM)

Response: This has been added to the plans. See sheet C101. N Fairfax St has been moved outside the RPA, Applicant will continue to coordinate with staff with any additional impervious areas in the RPA such as sidewalks, trails, etc.

3. Show the location of the floodplain on the site plan. (SWM)

Response: This has been added to the plans. See sheet C100.

4. Provide the schedule for the delivery of a remediation plan. The plan should provide a detailed analysis and proposed strategy that identifies concentrated areas of contamination and the process for removal. A more expansive demolition plan will be required for this site due to the unusual conditions of the existing power plant.

Response: The Applicant entered the Voluntary Remediation Program (VRP) administered by the Virginia Department of Environmental Quality (VDEQ) in February 2021. A Site Characterization Work Plan was submitted to VDEQ and the City of Alexandria in September 2021 and approved by VDEQ on October 1, 2021. Soil and groundwater sampling in accordance with the Work Plan was conducted in October and November 2021. The results of the sampling work are expected early in 2022 and will be defined in a report called a Site Characterization Report.

5. All stormwater must outfall to the Potomac. No stormwater connections will be allowed to the existing CSO. (SWM)

Response: Acknowledged.

6. Future considerations. The following are likely future conditions the applicant should consider in the planning process. Note additional conditions and comments are likely as the review process continues: (SWM)
- a. An overall stormwater management master plan will be required.
 - b. The applicant must work with staff to integrate the RPA into the site in a unique and creative way while maintaining the natural, environmental and sustainable characteristics required of an RPA.
 - c. Educational signage, creative educational exhibits, recreation, and/or public art reflecting the site's unique ties the RPA, water quality and/or the waterfront must be incorporated into the site.
 - d. All future public streets will be required to implement the City's updated Green Streets and Sidewalks Guidelines. Please consider using unique configurations rather than only tree wells.
 - e. All buildings will be required to have some percentage of green roof.
 - f. Green infrastructure must be maximized on this site. Underground and proprietary devices may be used for stormwater treatment only when green infrastructure has been proven to be infeasible.
 - g. The energy balance equation must be utilized for water quantity calculations on this site.
 - h. Electrical transmission lines are located underneath some green space which may limit what can be located in these areas.
 - i. Critical infrastructure should be located outside of the 500-year floodplain.

Response:

- a. Acknowledged.
 - b. Acknowledged.
 - c. Acknowledged.
 - d. Acknowledged.
 - e. Acknowledged.
 - f. The Applicant is working to determine the feasibility of green stormwater infrastructure.
 - g. Acknowledged.
 - h. Acknowledged.
 - i. Acknowledged.
7. Provide a grid of streets more consistent with the Small Area Plan that provides a general continuation of the north-south streets (Royal and Fairfax and Pitt if feasible) with Fairfax following the waterfront through the development and then connecting into Slaters Lane with east-west streets that connect between the waterfront and the internal road. (T&ES)

Response: Please see the revised street layout. See sheet C200.

8. Clearly show and label the Mt. Vernon Trail. (T&ES)

Response: Please see the revised plans. See sheet C200.

9. Provide a connection from the portion of Mt. Vernon Trail along the waterfront to the alternative route that connects from Abingdon Street down to near the intersection of Bashford Street and North Royal Street. Work with staff on details of crossing Royal Street with Infrastructure Plan. (T&ES)

Response: Potential connections will continue to be studied and discussed with City staff and the National Park Service Staff.

10. Provide bicycle/pedestrian connections from the ends of all east-west streets to the Mt. Vernon Trail and waterfront where feasible with the topography. (T&ES)

Response: Acknowledged. See Sheet A200 for proposed potential connections.

11. On-street parking will be expected on all street frontages. (T&ES)

Response: Acknowledged, to the extent feasible. On-street parking is not anticipated along the woonerf.

12. A full streetscape building out including sidewalks will be expected on both sides of all new streets, even adjacent to portions not currently proposed for development. (T&ES)

Response: To be discussed as part of the future Infrastructure and block DSUP's

13. Provide alleys through blocks. All curb-cuts/loading entrances should be provided off alleys. (T&ES)

Response: On larger blocks, mid-block alleys have been incorporated. See Sheet A200 for proposed loading access and locations.

14. Provide a dedicated bicycle facility from Royal Street through to where Fairfax will follow along the waterfront and then up Fairfax to the connection with Slaters Lane. (T&ES)

Response: The Applicant will continue to work with the City Staff to coordinate where bicycle facilities are best located on the site. Please see sheet A200 for proposed bike circulation.

15. DASH anticipates that there will be a bus route that will enter the site from the south via Royal, and then turn left on the street that runs behind the blocks (as opposed to taking the waterfront street) then connects and continues on Slaters Lane. These roads and intersections should be designed to accommodate buses. Provide two bus stop areas, one near Blocks B/C and one near Blocks E/F, with a stop in each direction with bus shelters and pads. (T&ES/DASH)

Response: Acknowledged. Numbers and location of bus stops will be coordinated with the Infrastructure DSUP.

16. Staff acknowledges earlier discussion with applicant team and the transportation consultant regarding the scope of the Multimodal Transportation Impact Study. However, staff still have not received a final version of the Scoping Intake Form and has not approved and signed. Continue to work with staff for approval of scope. The scope should include any input or feedback from the National Park Service as well. (T&ES)

Response: The Applicant received approval on the scope of the Multimodal Transportation Study from City staff in November 2021 and the data collection phase of the MTS is now on going. The Applicant will continue to coordinate with City staff and share the analysis and outputs in accordance with the schedule presented to the Staff.

17. Continue to work with staff to determine appropriate the streets in which would be identified to provide loading areas and trash areas. (T&ES)

Response: Acknowledged. See Sheet A200 for proposed loading access and locations.

18. Applicant shall show existing and proposed sanitary sewer connections on the plans. (AlexRenew)

Response: This will be provided with the Infrastructure DSUP.

19. Applicant to include the following note on the DSP plans and the plans issued for construction:
- Contractor shall ensure all discharges are in accordance with City of Alexandria Code Title 5, Chapter 6, Article B. (AlexRenew)
 - Dewatering and other construction related discharge limits to the sewer system are regulated by AlexRenew Pretreatment. Contractor is required to contact AlexRenew's Pretreatment Coordinator at 703-721-3500 x2020. (AlexRenew)

Response:

- Acknowledged.
- Acknowledged.

20. Applicant shall coordinate with the City of Alexandria T&ES to ensure that the planned flow does not exceed the City of Alexandria's allotted capacity in AlexRenew's Water Resource Recovery Facility or in the Potomac Interceptor during wet and average flow conditions. (AlexRenew)

Response: Acknowledged.

OFFICE OF HOUSING

- The application lies within the Old Town North (OTN) Small Area Plan (SAP). The SAP envisions a variety of housing choices and building types that are affordable and accessible to a diverse range of ages, incomes, abilities, and household sizes. These include persons who wish to live and work in OTN; families with children; persons with fixed incomes; seniors who desire to age-in-place; and new and existing members of the Alexandria workforce.

The SAP vision is anticipated to be accomplished through strategies such as:

- Applying bonus density and height (Section 7-700) to expand the number of affordable housing units.
- Prioritizing the provision of on-site affordable housing units as part of new market-rate developments.
- Promoting flexibility in building design to allow people to age-in-place.
- Promoting a job/housing balance by focusing on-site affordable housing units near transit, jobs, and amenities.
- Exploring innovative housing solutions, such as micro-units.
- Fostering public-private-nonprofit partnerships to expand mixed-income housing.
- Encouraging artist housing.

Colocation with other uses is also an innovative strategy to maximize affordable housing, including housing plus care for seniors.

It is noted that the Illustrative Concept Plan D in the OTN SAP reaffirms the Plan vision by stating that one of the objectives for the subject site is affordable housing.

Response: Acknowledged. The Applicant met with the Office of Housing on November 8, 2021 to discuss the City's goals for affordable housing and will continue to work with City staff to determine the feasibility of on-site affordable housing units under the bonus density program.

2. The OTN SAP Development Summary Table indicates the maximum gross floor area is 2.15 million square feet. The applicant has preliminarily indicated that the proposed development totals 2.15 million (net) square feet. Up to 30% of additional density can be requested through a Special Use Permit pursuant to Section 7-700 in exchange for affordable housing. Should the application of Section 7-700 not be feasible, it is noted that the 2020 Housing Contributions Policy Update requires that 10% of the density in excess of the density envisioned by the underlying small area plan be provided as on-site affordable housing.

Response: Acknowledged. The Applicant met with the Office of Housing on November 8, 2021 to discuss the City's goals for affordable housing and will continue to work with City staff to determine the feasibility of on-site affordable housing units under the bonus density program.

3. The applicant is seeking building heights in excess of the maximum heights outlined in the OTN SAP for the subject site. Up to 25 feet of additional height can be requested through a Special Use Permit pursuant to Section 7-700 in exchange for affordable housing.

Response: The Applicant has worked with City staff to study the extent to which on-site constraints that were unknown at the time of the OTNSAP was adopted limit the amount of developable area on the site. These factors were summarized as part of the Rationale for Additional Height memo dated September 27, 2021 and attached to these comments. The OTNSAP contemplated 2.15 million square feet of base square footage (excluding any bonus density) in order to create a vibrant,

feasible, mixed-use community. The existing site constraints do not allow that amount of base square footage to be developed without modifying the height limits contemplated in the OTNSAP. As discussed with City staff, the square footage originally contemplated to be developed in these restricted areas will be moved to developable site areas, which will require a Master Plan Amendment. All heights proposed are anticipated to comply with FAA height restrictions. Please see Sheet C200.

4. Should affordable units be proposed or required as part of the application, an Affordable Housing Plan (AHP), as described in Part C of the City of Alexandria Procedures Regarding Affordable Housing Contributions, must be submitted no later than at the time of Completeness. The applicant is encouraged to submit a draft AHP for staff review at least three weeks prior to the submission of the Completeness application. The applicant shall present the AHP to the Alexandria Housing Affordability Advisory Committee (AHAAC) for feedback prior to the application's consideration by Planning Commission. The City's guidelines on AHPs can be accessed at https://www.alexandriava.gov/uploadedFiles/housing/info/2019AffordableHousingPlanGuidelines_03.18.19.pdf

Response: Acknowledged.

5. The application is currently zoned UT. No residential uses are permitted either by-right or through a special use permit in this zone. All residential development that is determined to not be subject to the 2020 Housing Contributions Policy will be treated as Tier 2 for the purposes of calculating the monetary affordable housing contribution at the time of future DSUP applications.

Response: The Applicant met with the Office of Housing on November 8, 2021 and will continue to work the Housing Staff to seek to achieve the overall goal of increasing the amount of affordable housing in the City, either through the creation of on-site units, an affordable housing trust fund contribution or a combination thereof.

6. The applicant is encouraged to discuss with the Office of Housing opportunities to provide housing affordability within the plan area as soon as possible.

Response: See response above.

RP&CA

1. The applicant shall provide 5.0 acres of new public open space adjacent to the waterfront and the Linear Park per the OTNSAP, in addition to substantial areas of accessible at-grade open space on the development blocks.

Response: The Project is anticipated to provide approximately 5 acres of ground level open space connected to the existing open space network around the site, including approximately 3 acres adjacent to the National Park Service land along the

waterfront and approximately 1.5 acres adjacent to the proposed public Linear Park. As a result, a total of approximately 14 acres of usable, ground level open space both in and around the site are anticipated to be provided.

ARCHAEOLOGY

Archaeological Findings

- F-1 The Bellevue Plantation was established on the subject property shortly after the American Revolution. By 1801 William Hodgson and his wife Portia Lee began leasing the 17-acre plantation that bordered the Potomac River. At that time the main house was described as a "50 ft. long & 28 ft. wide, 1 story high with a Dutch roof and was constructed of wood." The house had a 20 ft. by 23 ft. brick cellar. Nearby stood a wood frame 28 ft. by 18 ft. kitchen and the yard was populated with a stable, smokehouse, and dairy. The estate was valued at \$4,000 in 1795, one of the more valuable plantation properties in the area. Hodgson was a local merchant and regularly sold goods from his store on Prince Street. By 1820 Bellevue Plantation was put up for sale. Later in the 1840s John Slater acquired Bellevue, built greenhouses, and established a floral business. Slater had learned the trade from William Yeates, a prominent local horticulturalist. During the Civil War there are at least three small "farms" (possibly greenhouses) depicted on the property, each fenced and planted in orchards or other formal plantings, such as might have been part of Slater's floral business. The property remained in the Yeates family into the twentieth century, and continued to operate as a productive farm.

Response: Acknowledged.

- F-2 If this project is a federal undertaking or involves the use of any federal funding, the applicant shall comply with federal preservation laws, in particular Section 106 of the National Historic Preservation Act of 1966. The applicant will coordinate with the Virginia Department of Historic Resources and the federal agency involved in the project, as well as with Alexandria Archaeology.

Response: Acknowledged.

Open Space and Landscaping

1. Hire a professional consultant to work with staff and the landscape designers to incorporate and interpret elements of the historical character and archaeological findings into the design of the open space and to prepare interpretive elements, which shall be erected as part of the development project. The site plan shall indicate themes and locations of interpretive elements. Prior to release of the final site plan, the consultant shall provide text and graphics for the signage subject to approval by the Office of Historic Alexandria/Alexandria Archaeology and the Directors of P&Z and/or RP&CA.* (Arch)(P&Z)(RP&CA)

Response: Acknowledged.

Archaeology Conditions

2. Hire an archaeological consultant to complete a Documentary Study and an Archaeological Evaluation. If significant resources are discovered, the consultant shall complete a Resource Management Plan, as outlined in the City of Alexandria Archaeological Standards. Preservation measures presented in the Resource Management Plan, as approved by the City Archaeologist, will be implemented. (Archaeology)

Response: Acknowledged. The scope of the Documentary Study and Archaeological Evaluation was approved by the City in January 2021. The study is complete and will be submitted to the City. In summary, it states "the potential for locating significant archeological materials and deposits is low to moderate at best, because of the degree of disturbance from the construction of Potomac River Generating Station in the 1940s. No archeological work is recommended.

3. The Final Site Plan, Grading Plan, or any other permits involving ground disturbing activities (such as coring, grading, filling, vegetation removal, undergrounding utilities, pile driving, landscaping and other excavations as defined in Section 2-151 of the Zoning Ordinance) shall not be released until the City archaeologist confirms that all archaeological field work has been completed or that an approved Resource Management Plan is in place to recover significant resources in concert with construction activities. * (Archaeology)

Response: Acknowledged.

4. Call Alexandria Archaeology immediately (703-746-4399) if any buried structural remains (wall foundations, wells, privies, cisterns, etc.) or concentrations of artifacts are discovered during development. Work must cease in the area of the discovery until a City archaeologist comes to the site and records the finds. The language noted above shall be included on all final site plan sheets involving any ground disturbing activities. (Archaeology)

Response: Acknowledged.

5. The applicant shall not allow any metal detection and/or artifact collection to be conducted on the property, unless authorized by Alexandria Archaeology. Failure to comply shall result in project delays. The language noted above shall be included on all final site plan sheets involving any ground disturbing activities. (Archaeology)

Response: Acknowledged.

6. Certificates of Occupancy shall not be issued for this property until interpretive elements have been constructed, interpretive markers have been erected, and the final archaeological report has been received and approved by the City Archaeologist.*** (Archaeology)

Response: Acknowledged.

Code

C-1 All required archaeological preservation measures shall be completed in compliance with Section 11-411 of the Zoning Ordinance.

Response: Acknowledged.

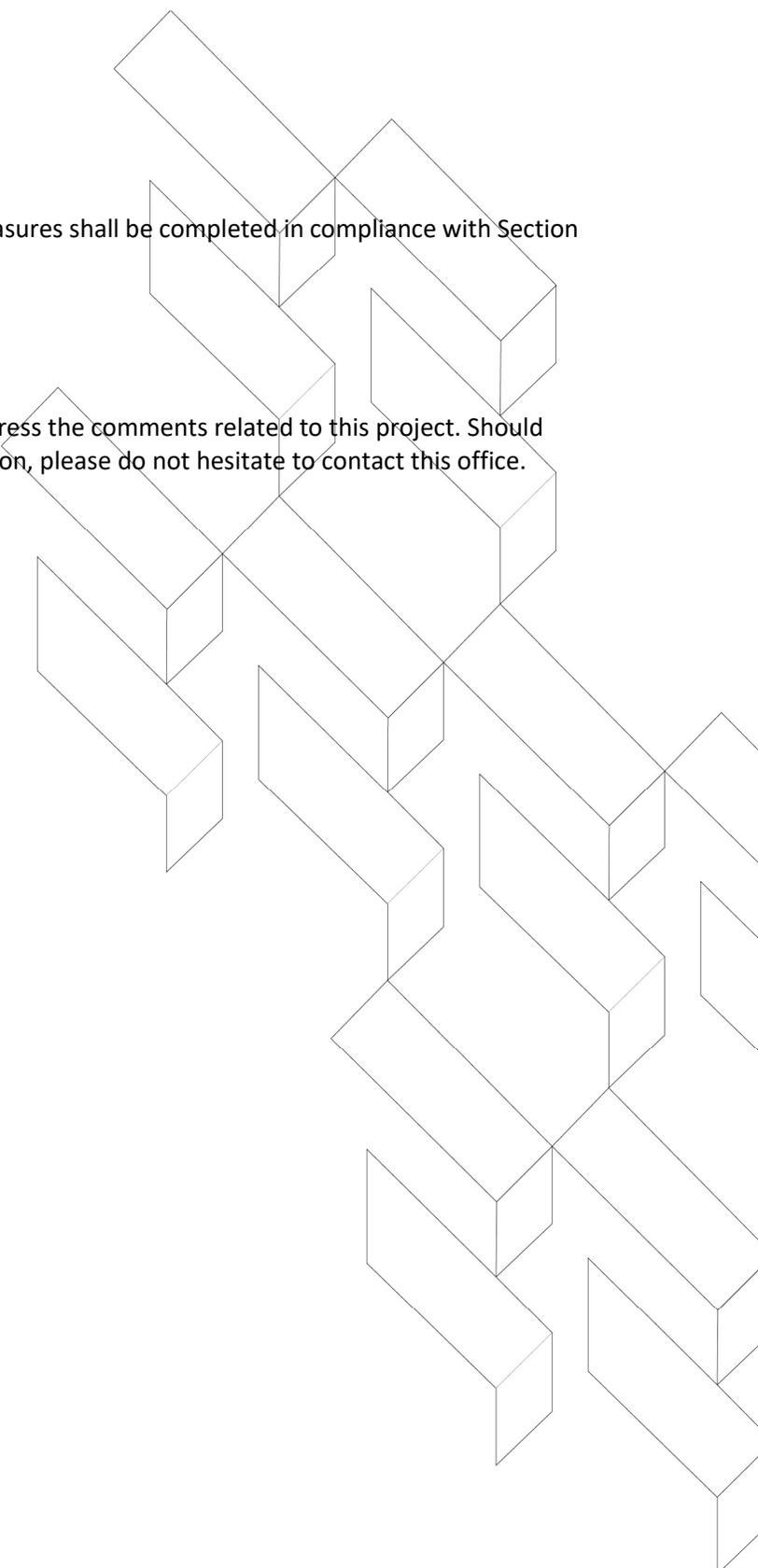
We trust that the above responses satisfactorily address the comments related to this project. Should you have any questions or need additional information, please do not hesitate to contact this office.

Very truly yours,



Kevin M. Washington
Vice President, Urban Land

KMW/mb





Mary Catherine Gibbs

mcgibbs@wiregill.com

703-836-5757

September 27, 2021

Rationale for Additional Height as a Master Plan Amendment
For the Former Potomac River Generating Site

The planning process that led to the Old Town North Small Area Plan (OTN SAP) as adopted by City Council in 2017, did not have the benefit of knowing certain ground level specifics at the Potomac River Generating Site (PRGS). Constraints such as exact locations of utility lines and easements, building restriction lines, and other limiting factors that exist on the property, could not have been known at the time. In fact, the OTN SAP guidelines were described as being “from the 10,000 foot” level, and it was acknowledged that specific planning would take place during the future CDD process itself.

Now the applicant has site control and started the CDD process, several factors that were unknown at the time the OTN SAP was adopted have been brought to light:

- 1) The actual size of the PRGS parcel is smaller than anticipated. In the OTN SAP, under the Development Summary Table (Figure 2.10), the city’s tax assessment records listed the PRGS site (called Site # 24b) as having 852,898 square feet. The actual size of the PRGS parcel is 818,944, a difference of 33,954 square feet, nearly $\frac{3}{4}$ of an acre less site area on which to develop the same amount of density.
- 2) There are substantial utility easements on the site preventing the development of buildings in large portions of the property, but allowing the construction of roadways, sidewalks and open space. PEPCO holds a significant transmission line easement of up to 100 feet in width running along the southwest and western property lines. Further, there are other utility and stormwater easements that exist on the site that were unknown at the time the OTN SAP was planned and adopted.
- 3) Finally, there is a 40-50 foot-wide building restriction line along the eastern boundary as a result of PEPCO’s settlement with the United

States in the historic waterfront litigation over the ownership of the City's waterfront.

site context

Existing Easements & Setbacks

- Multiple utility and stormwater easements are pre-existing on the site
- Additional building restrictions have been established in the Resource Protection Area (RPA) and along the NPS property line



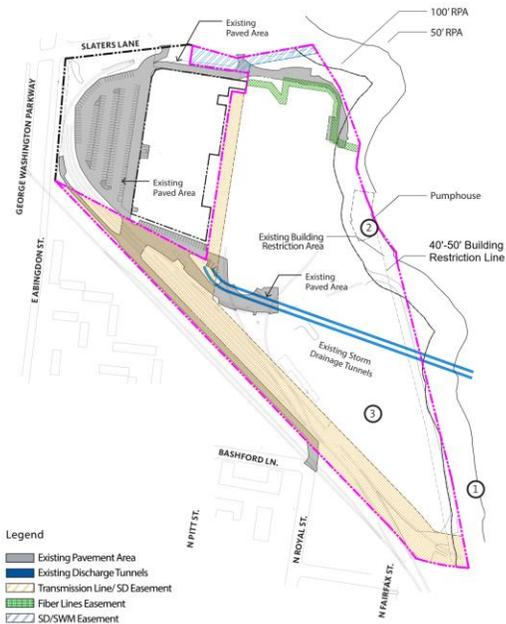
SEPTEMBER 29, 2021

Hico
Redevelopment Partners

Gensler OJB

POTOMAC RIVER GENERATING STATION

ALEXANDRIA COMMUNITY MEETING #4 29

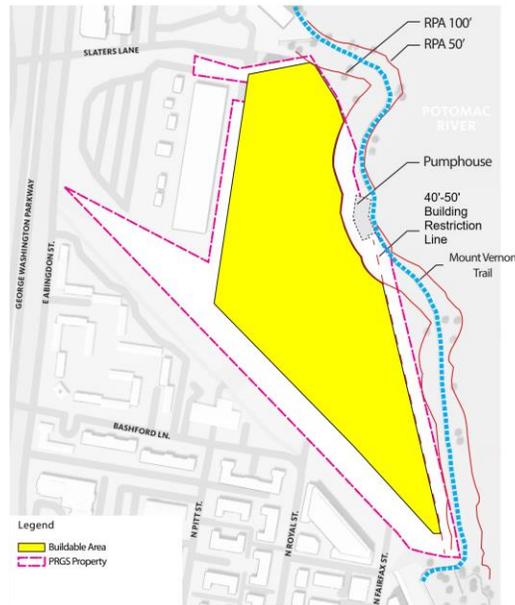


The cumulative result of these site constraints is that only 11.9 acres of the 18.8 acre PRGS parcel can be physically developed, including buildings and interior roadways and sidewalks. Additionally, the OTN SAP contemplated significant ground level open space, which further reduces the developable site area. Factoring in that internal infrastructure plus the open space, means that only about 7-8 acres of the 18.8-acre site is actually available for building development.

site context

Buildable area

- Overall site area is **18.8 acres**
- The area available for building development (outside easement and setback zones) is **11.9 acres**
- Approximately **40% of the overall site area** (or 7 - 8 acres) will be available for building construction once roads, sidewalks and green space are accounted for.



SEPTEMBER 29, 2021



Partnership Partners

Gensler OJB

POTOMAC RIVER GENERATING STATION

ALEXANDRIA COMMUNITY MEETING #4

30

The OTN SAP envisioned 2.15 million square feet of development (Gross Floor Area or GFA as defined in the CDD process) on the site. The 2.15 million square feet of GFA was considered the appropriate amount of development necessary to transform PRGS into a vibrant, mixed-use, waterfront district delivering substantial public benefit related to environmental remediation of the former coal-fired power plant and the delivery of significant public open space improvements both on- and off-site on the immediately adjacent land.

Given the realities of the actual site constraints, the 2.15 million square feet of GFA will not fit on the 11.9 acres of developable site area within the height limits contemplated in the OTN SAP. This is especially true once square footage is further reduced due to building articulation and setting appropriate building widths efficient for marketable multifamily, office, and retail space.

CITY OPTION OTNSAP Height Limits

~1,290,000 sqft
Achievable Floor Area respecting existing easements & setbacks

Building	Floor Area
A	29,000
B	84,300
C	202,000
D	66,000
E	21,500
F	290,000
G	244,000
H	169,000
I	184,200
Total Floor Area	1,290,000

*"Liner" buildings: +/- 16,000 sf; not included in floor area

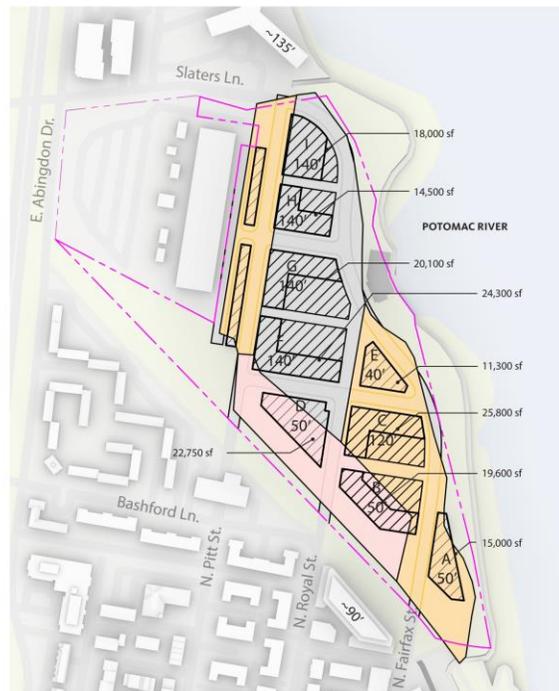
 Potential Heights

Heights per OTNSAP

 85'-140'

 85'-120'

 50'



JUNE 10th, 2021

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POTOMAC RIVER GENERATING STATION JOINT DESIGN WORKSHOP #3 3

In order to fit the 2.15 million square feet of GFA, additional heights as shown below are necessary.

PREFERRED OPTION Heights needed to achieve target floor area

~2,150,000 sqft
Proposed Floor Area with additional building height

Block	Total
A	29,745
B	344,994
C	491,819
D	272,319
E	497,150
F	513,973
Total Floor Area	2,150,000

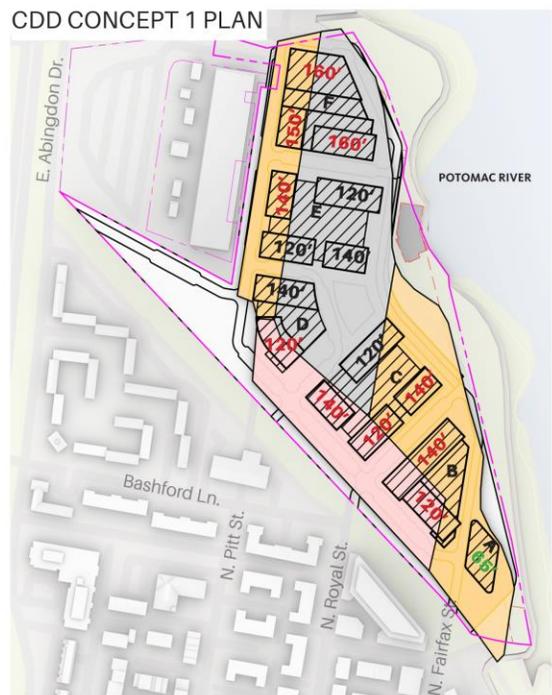
 Potential Heights

Heights per OTNSAP

 85'-140'

 85'-120'

 50'



JUNE 10th, 2021

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POTOMAC RIVER GENERATING STATION JOINT DESIGN WORKSHOP #3 4

Given that additional height is necessary simply to achieve the density envisioned in the OTN SAP, the Affordable Housing Density/Height Bonus

provision of Section 7-700 and the Arts Density/Height Bonus for additional density or height don't work as intended on the PRGS site. The additional density offered by those zoning bonuses would only create the need for even more additional height. If no additional density can be achieved from these bonuses and they only provide additional height, there is no value in the bonuses from which to carve out the public benefits sought through those bonuses. For example, if a developer utilizes a 7-700 density/height bonus, the developer is then expected to provide 1/3 of the additional density or square footage obtained in the additional height in on-site affordable housing units. At the PRGS site, there is no additional density obtained, and therefore, the developer would be asked to provide 1/3 of the amount of the square footage from the additional height *within* the 2.15 million squarer feet of GFA already allowed within the OTN SAP. Furthermore, the additional height allowed under the bonuses may not be enough to achieve the additional heights already being requested.

As shown in the CDD Concept 1 Plan, the project has attempted to locate most of the increased height requested in the least sensitive areas. Specifically, the maximum proposed increased height is located closest to the substation to the northern side of the site where views and vistas will not be impacted. In addition, the proposed heights incorporate FAA regulations on height related to Reagan National Airport. Finally, the CDD Concept 1 Plan proposed reduced height on the southeast corner of the property to respect the neighboring properties in Old Town North.

For all of these reasons, increased heights are justified within the context of a master plan amendment and not as part of any density or height bonus for affordable housing or arts.

1300 North Royal Building Project

HRP Potomac, LLC
Alexandria, Virginia

Obstruction Evaluation & Airspace Analysis

June 30, 2021



Capitol Airspace Group
capitolairspace.com
(703) 256 - 2485



Summary

Capitol Airspace conducted an obstruction evaluation and airspace analysis for the 1300 North Royal project in Alexandria, Virginia. The purpose for this analysis was to identify obstacle clearance surfaces established by the Federal Aviation Administration (FAA) that could limit 168, 180, and 192-foot above ground level (AGL) structures within the defined study area (black outline, [Figure 1](#)).

The FAA requires that all structures exceeding 14 CFR Part 77.9 notification criteria be submitted to the FAA so that an aeronautical study can be conducted. The FAA's objective in conducting aeronautical studies is to ensure that proposed structures do not affect the safety of air navigation or the efficient utilization of navigable airspace by aircraft. The result of an aeronautical study is the issuance of a determination of 'hazard' or 'no hazard' that can be used by the proponent to obtain necessary local construction permits. It should be noted that the FAA has no control over land use in the United States and cannot enforce the findings of its studies.

The lowest obstacle clearance surfaces overlying the 1300 North Royal project range from 190 to 258 feet above mean sea level (AMSL) and are associated with Ronald Reagan Washington National (DCA) instrument departure and approach procedures. Proposed structures that exceed these surfaces could require an increase to instrument departure procedure minimum climb gradients and instrument approach procedure minimum altitudes. If the FAA determines that either of impacts would affect one operation per week, it could result in determinations of hazard.

United States Geological Survey (USGS) elevation data indicates that these surfaces could limit all proposed structure heights throughout the northern and central sections of the study area.

This study did not consider electromagnetic interference on FAA communication or surveillance radar systems. Impact on these systems could be used as the basis for determinations of hazard regardless of the lack of impact on the physical airspace surfaces described in this report.

Capitol Airspace applies FAA defined rules and regulations applicable to obstacle evaluation, instrument procedures assessment and visual flight rules (VFR) operations to the best of its ability and with the intent to provide the most accurate representation of limiting airspace surfaces as possible. Capitol Airspace maintains datasets obtained from the FAA which are updated on a 28-day cycle. The results of this analysis are based on the most recent data available as of the date of this report. Limiting airspace surfaces depicted in this report are subject to change due to FAA rule changes and regular procedure amendments. Therefore, it is of the utmost importance to obtain FAA determinations of no hazard prior to making substantial financial investments in this project.



Methodology

Capitol Airspace studied the proposed project based on location information provided by HRP Potomac, LLC. USGS elevation data indicates that the project's site elevation ranges from 0 to 65 feet AMSL. Using this information, Capitol Airspace generated graphical overlays to determine proximity to airports (**Figure 1**), published instrument procedures, enroute airways, FAA minimum vectoring altitude charts, and minimum instrument flight rules (IFR) altitude charts.

Capitol Airspace evaluated all 14 CFR Part 77 imaginary surfaces, published instrument approach and departure procedures, visual flight rules operations, FAA minimum vectoring altitudes, minimum IFR altitudes, and enroute operations. All formulas, headings, altitudes, bearings, and coordinates used during this study were derived from the following documents and data sources:

- 14 CFR Part 77 Safe, Efficient Use, and Preservation of the Navigable Airspace
- FAA Order 7400.2N Procedures for Handling Airspace Matters
- FAA Order 8260.3E United States Standard for Terminal Instrument Procedures
- FAA Order 8260.58B United States Standard for Performance Based Navigational (PBN) Instrument Procedure Design
- FAA Advisory Circular 150/5300-13A Airport Design
- Technical Operations Evaluation Desk Guide for Obstruction Evaluation/Airport Airspace Analysis (1.5.1)
- United States Government Flight Information Publication, US Terminal Procedures
- National Airspace System Resource Aeronautical Data

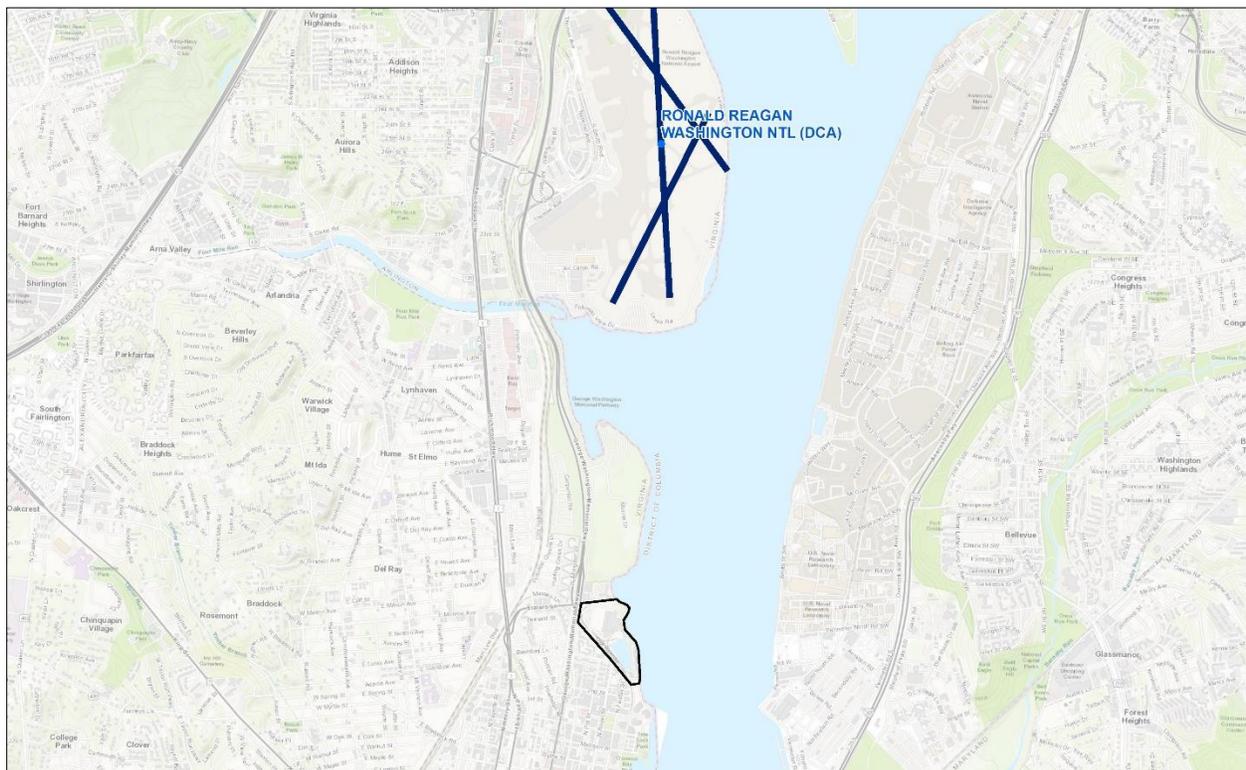


Figure 1: Ronald Reagan Washington National (DCA) in proximity to the 1300 North Royal project



Study Findings

14 CFR Part 77.17(a)(2) Obstruction Standard and 77.19/21/23 Imaginary Surfaces

The FAA uses level and sloping imaginary surfaces to determine if a proposed structure is an obstruction to air navigation. Structures that are identified as obstructions are then subject to a full aeronautical study and increased scrutiny. However, exceeding a Part 77 imaginary surface does not automatically result in the issuance of a determination of hazard. Proposed structures must have airspace impacts that constitute a substantial adverse effect in order to warrant the issuance of determinations of hazard.

14 CFR Part 77.17(a)(2) obstruction standards and imaginary surfaces (solid blue outline, **Figure 2**) overlying the 1300 North Royal building project:

Ronald Reagan Washington National (DCA)

77.17(a)(2): 214 to 265 feet AMSL

77.19: 149 to 164 feet AMSL

At 168, 180, and 192 feet AGL, proposed structures throughout the entire study area (orange area, **Figure 2**) will exceed these surfaces and will be identified as obstructions. However, proposed structures and temporary construction equipment that exceed these surfaces are feasible provided proposed structures do not exceed FAA obstacle clearance surfaces.

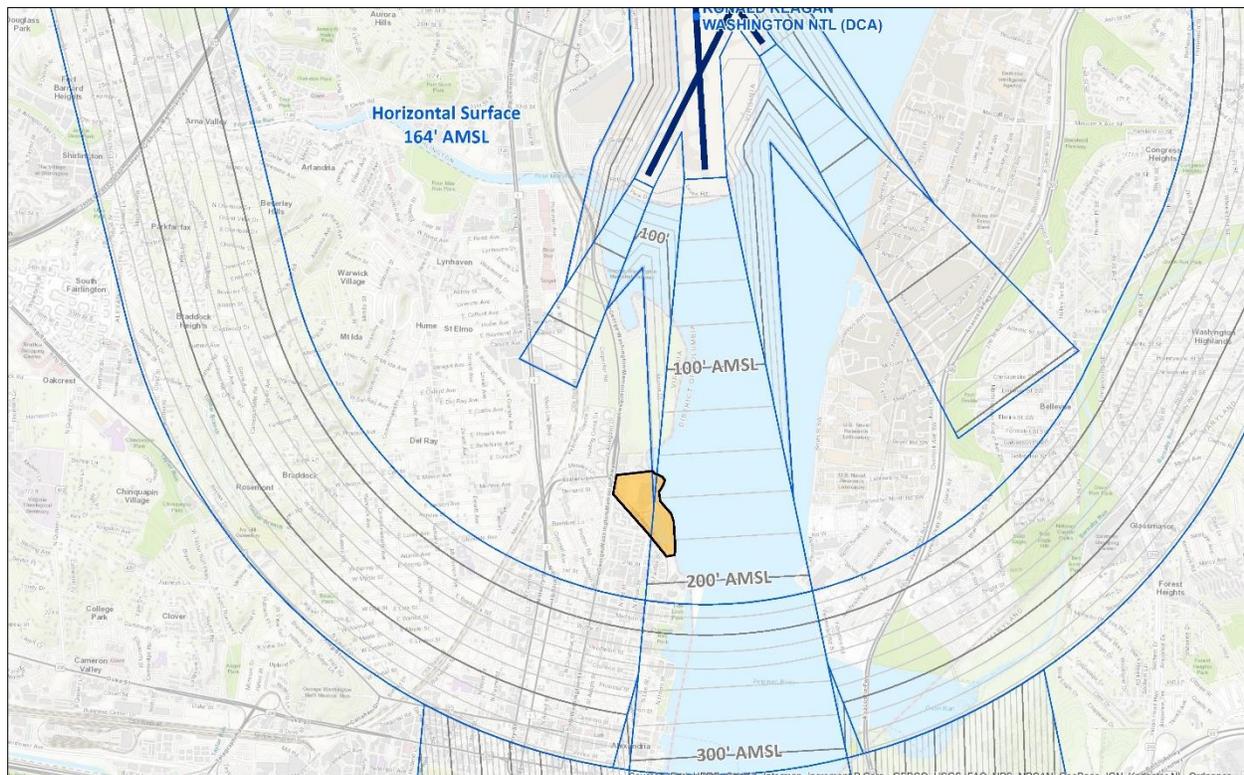


Figure 2: Ronald Reagan Washington National (DCA) 77.19 imaginary surfaces (solid blue outline)



Visual Flight Rules (VFR) Traffic Pattern Airspace

VFR traffic pattern airspace is used by pilots operating during visual meteorological conditions (VMC). The airspace dimensions are based upon the category of aircraft which, in turn, is based upon the approach speed of the aircraft. 14 CFR Part 77.17(a)(2) and 77.19 (as applied to a *visual* runway) imaginary surfaces establish the obstacle clearance surface heights within VFR traffic pattern airspace.

Ronald Reagan Washington National (DCA) VFR traffic pattern airspace overlies the 1300 North Royal building project (**Figure 3**). However, due to the air carrier nature of operations at the airport, the FAA has not historically considered impact on VFR traffic pattern airspace. As a result, this segment of airspace should not limit 168, 180, or 192-foot AGL structures within the defined study area.

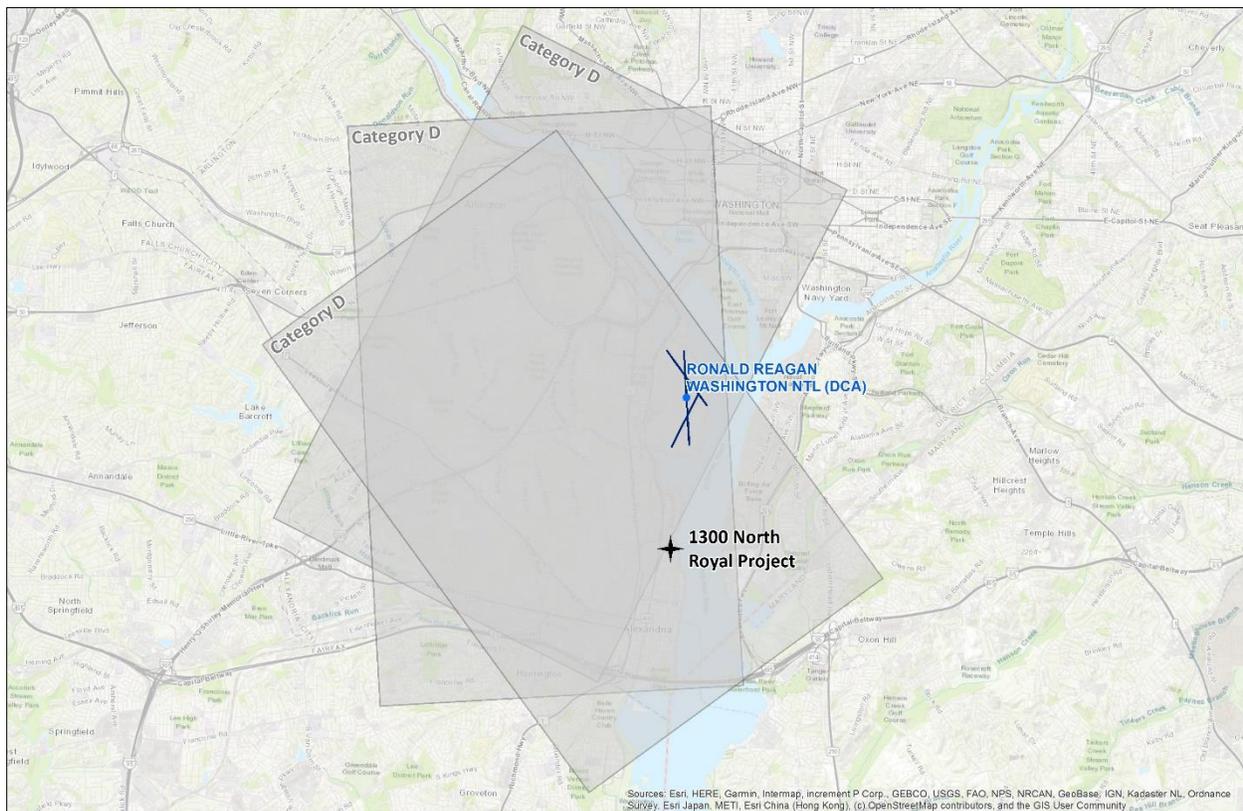


Figure 3: Ronald Reagan Washington National (DCA) VFR traffic pattern airspace



Charted VFR Helicopter Routes

The FAA publishes VFR helicopter routes to enhance helicopter access into, egress from, and operation within high density traffic areas. These routes usually follow landmarks such as rivers and highways and are charted with reference to visual landmarks along with recommended altitudes.

Proposed structures within 250 feet of route centerlines could have an impact on enroute helicopter operations. If the FAA determines that this impact would affect a significant volume of VFR helicopter operations, it could result in determinations of hazard.

Charted VFR helicopter routes do not overlie the 1300 North Royal building project and should not limit 168, 180, or 192-foot AGL structures within the defined study area (Figure 4).

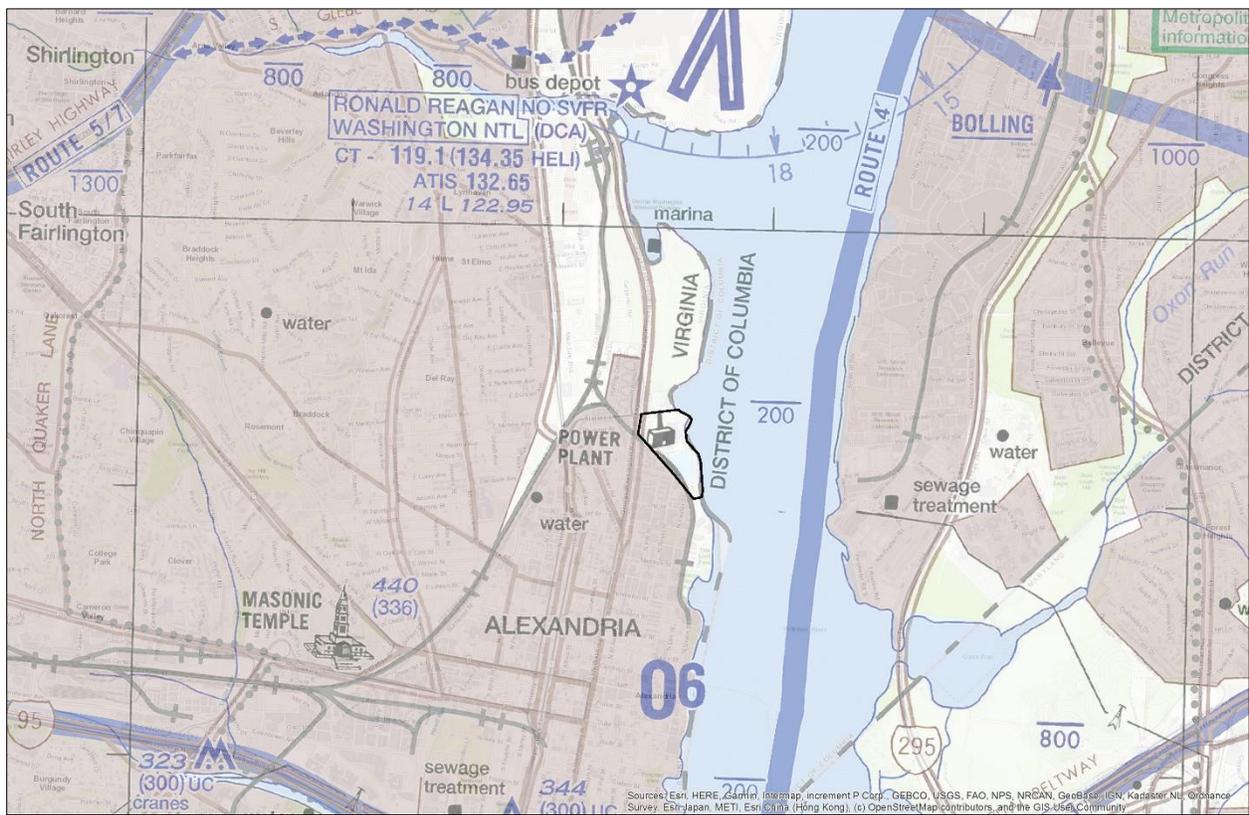


Figure 4: Baltimore-Washington Helicopter Route Chart and the 1300 North Royal building project



One Engine Inoperative Procedures

The FAA requires that airlines develop one engine inoperative (OEI) procedures that allow for the clearance of all terrain and obstacles should an aircraft lose an engine during departure. Aircraft performance calculations based on the loss of one engine ensure that aircraft meet these clearance requirements. The introduction of new obstacles to existing OEI procedures can impact aircraft loading by decreasing the number of passengers or amount of fuel and cargo an aircraft can carry. While this impact is not currently considered by the FAA during aeronautical study, it could result in airline objections.

OEI procedures vary by airline, aircraft type, and runway end, and are proprietary airline information. Since these procedures are not publicly available, Capitol Airspace applied the “straight” OEI obstacle accountability areas (OAA) (blue outline, *Figure 5*) defined in FAA Advisory Circular 120-91 *Airport Obstacle Analysis* to determine the likelihood of proposed structures impacting Ronald Reagan Washington National (DCA) OEI operations.

Considering that the straight-out OEI obstacle accountability areas (OAA) do not overlie the study area, it is unlikely that the 1300 North Royal building project would impact Ronald Reagan Washington National Airport OEI operations.

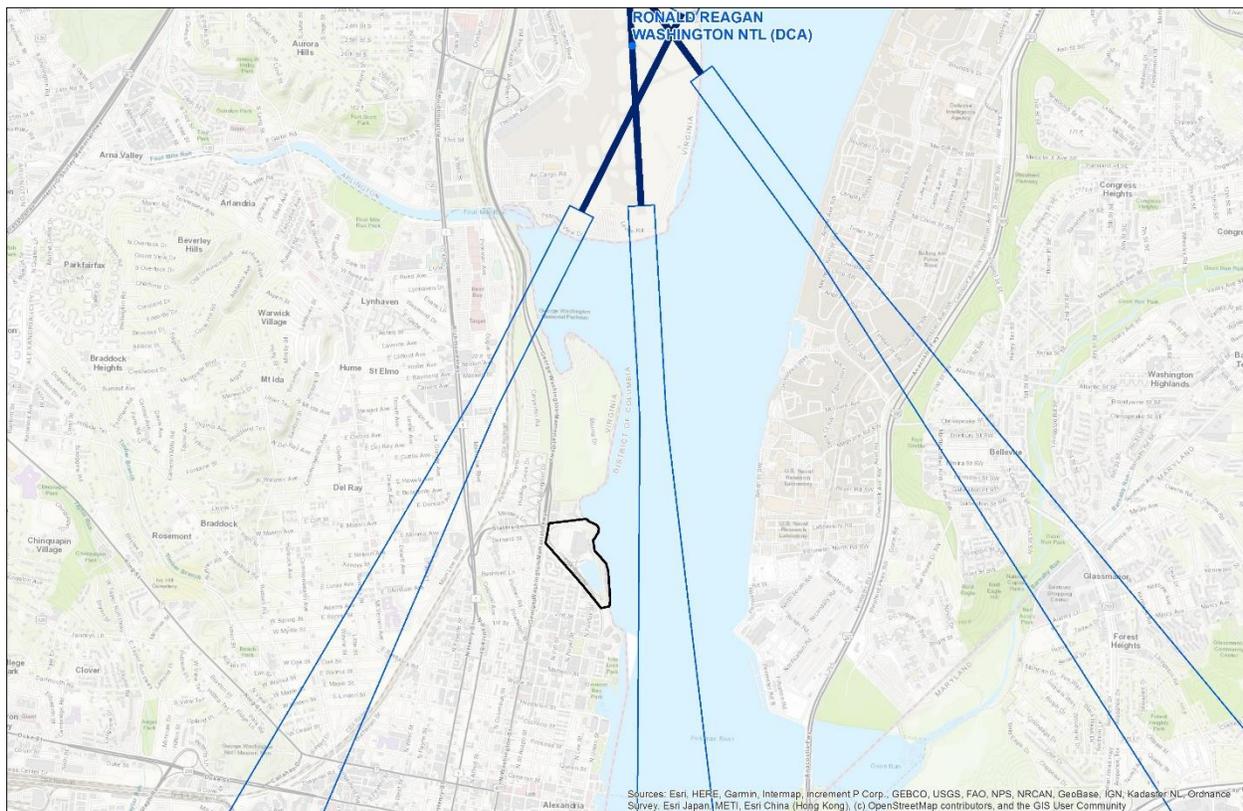


Figure 5: Ronald Reagan Washington National (DCA) straight-out OEI OAA



Instrument Departures

In order to ensure that aircraft departing during marginal weather conditions do not fly into terrain or obstacles, the FAA publishes instrument departure procedures that provide obstacle clearance to pilots as they transition between the terminal and enroute environments. These procedures contain specific routing and minimum climb gradients to ensure clearance from terrain and obstacles.

Proposed structures that exceed instrument departure procedure obstacle clearance surfaces would require an increase to instrument departure procedure minimum climb gradients. If the FAA determines that this impact would affect as few as one operation per week, it could be used as the basis for determinations of hazard.

Ronald Reagan Washington National (DCA)

Runway 19 Obstacle Departure Procedures

The obstacle clearance surfaces (gray contours, **Figure 6**) range from 190 to 385 feet AMSL and are some of the lowest height constraints overlying most of the study area. USGS elevation data indicates that these surfaces could limit 168, 180, and 192-foot AGL structures throughout the northern and central sections of the study area (red, orange, and yellow areas, **Figure 6**).

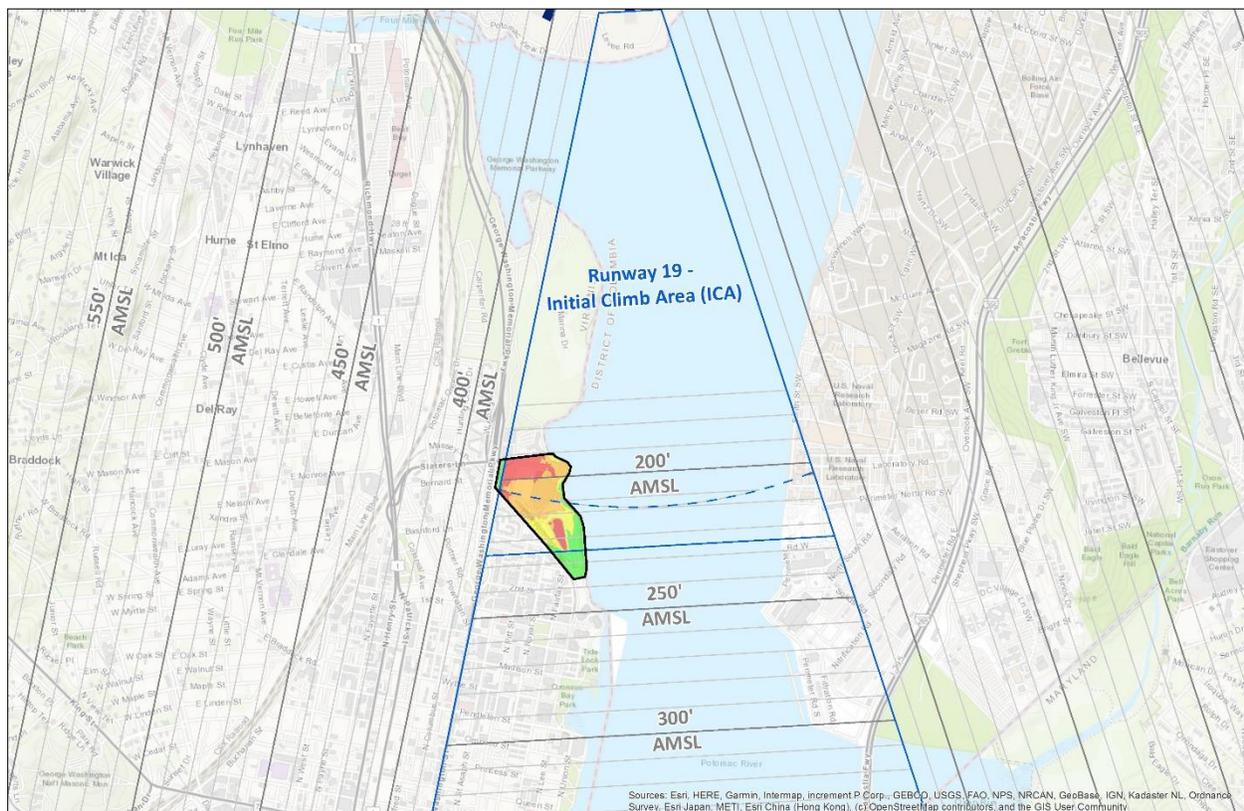


Figure 6: Ronald Reagan Washington National (DCA) Runway 19 obstacle departure procedures obstacle clearance surfaces



Instrument Approaches

Pilots operating during periods of reduced visibility and low cloud ceilings rely on terrestrial and satellite based navigational aids (NAVAIDS) in order to navigate from one point to another and to locate runways. The FAA publishes instrument approach procedures that provide course guidance to on-board avionics that aid the pilot in locating the runway. Capitol Airspace assessed 10 published instrument approach procedures at Ronald Reagan Washington National (DCA):

Ronald Reagan Washington National (DCA)

- ILS or Localizer Approach to Runway 01
- ILS Approach to Runway 01 (SA CAT I)
- ILS Approach to Runway 01 (Cat II)
- RNAV (RNP) Approach to Runway 01
- RNAV (RNP) Approach to Runway 19
- RNAV (GPS) Approach to Runway 15
- RNAV (GPS) Approach to Runway 33
- LDA Y Approach to Runway 19
- LDA Z Approach to Runway 19
- Copter ILS or LOC/DME Approach to Runway 01

Proposed structures that exceed instrument approach procedure obstacle clearance surfaces would require an increase to their minimum altitudes. Increases to these altitudes, especially critical *decision altitudes (DA)* and *minimum descent altitudes (MDA)*, can directly impact the efficiency of instrument approach procedures. If the FAA determines this impact would affect as few as one operation per week, it could be used as the basis for determinations of hazard.

Ronald Reagan Washington National (DCA)

ILS or Localizer Approach to Runway 01

Copter ILS or LOC/DME Approach to Runway 01

The Localizer MDAs are 480 feet AMSL. The obstacle clearance surfaces (blue outline, [Figure 7](#)) range from 230 to 325 feet AMSL and are in excess of other, lower surfaces. However, USGS elevation data indicates that these surfaces could still limit 168, 180, and 192-foot AGL structures in the central section of the study area (red, orange, and yellow areas, [Figure 7](#)).

RNAV (RNP) Approach to Runway 01

The missed approach segment obstacle clearance surface (blue outline, [Figure 8](#)) ranges from 226 to 260 feet AMSL and is the lowest height constraint overlying the western section of the study area. USGS elevation data indicates that this surface could limit 168, 180, and 192-foot AGL structures in the central section of the study area (red, orange, and yellow areas, [Figure 8](#)).

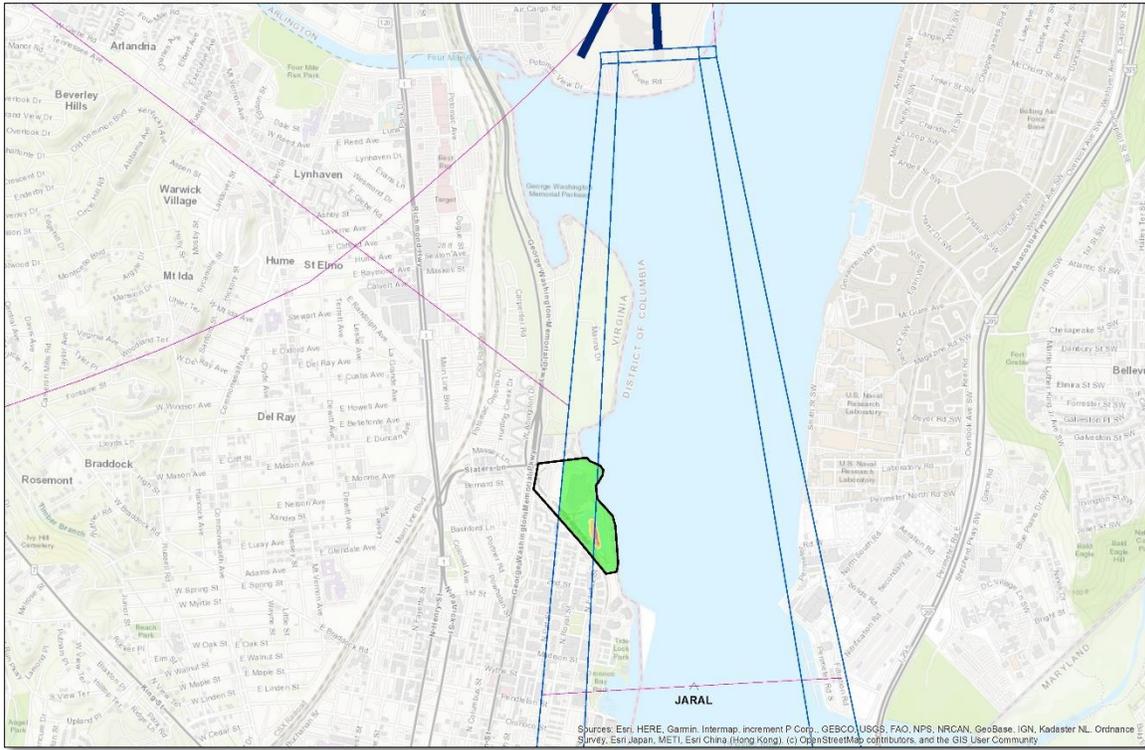


Figure 7: Ronald Reagan Washington National (DCA) Localizer Approach to Runway 01

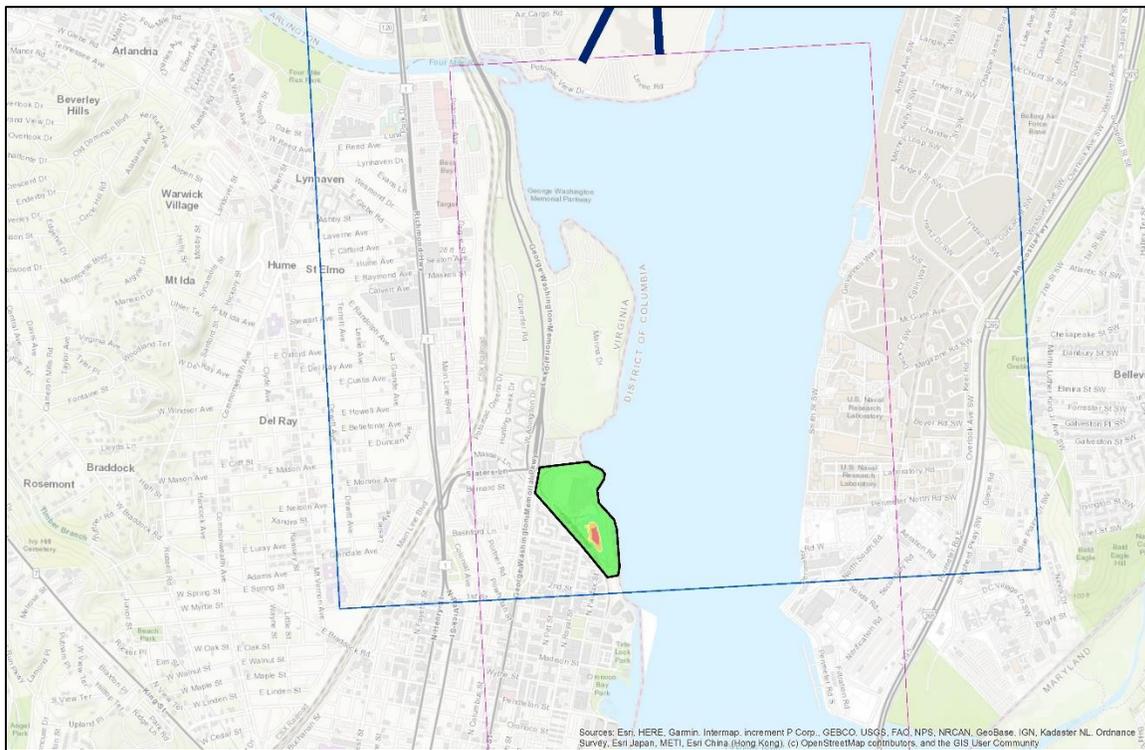


Figure 8: Ronald Reagan Washington National (DCA) RNAV (RNP) Approach to Runway 01



Enroute Airways

Enroute airways provide pilots a means of navigation when flying from airport to airport and are defined by radials between VHF omni-directional ranges (VORs). The FAA publishes minimum altitudes for airways to ensure clearance from obstacles and terrain. The FAA requires that each airway have a minimum obstacle clearance of 1,000 feet in non-mountainous areas and normally 2,000 feet in mountainous areas.

Proposed structures that exceed enroute airway obstacle clearance surfaces would require an increase to their minimum obstruction clearance altitudes (MOCA) and/or minimum enroute altitudes (MEA). If the FAA determines that this impact would affect as few as one operation per week, it could be used as the basis for determinations of hazard.

Low altitude enroute airway obstacle clearance surfaces (e.g., [Figure 9](#)) are in excess of other, lower surfaces and should not limit 168, 180, or 192-foot AGL structures within the defined study area.

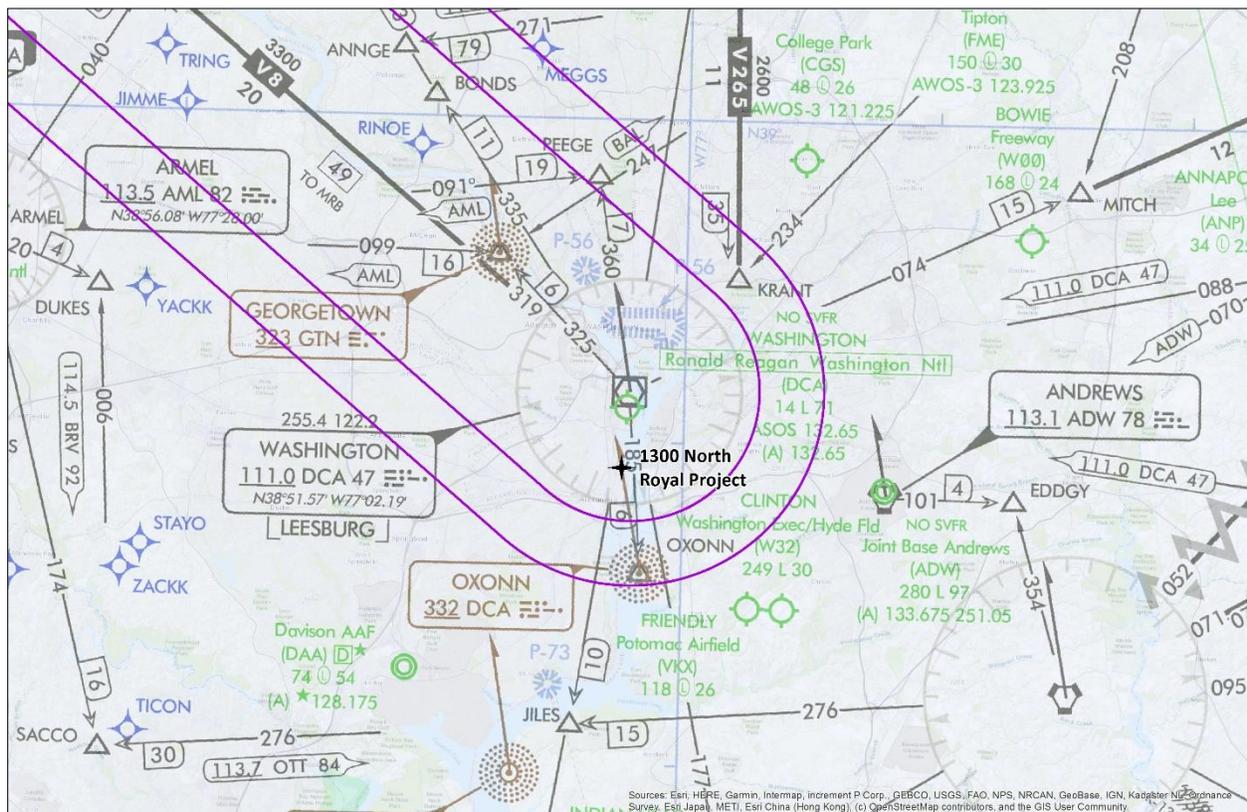


Figure 9: Low altitude enroute chart L-29 with V8 obstacle evaluation areas (purple)



Minimum Vectoring/IFR Altitudes

The FAA publishes minimum vectoring altitude (MVA) and minimum instrument flight rules (IFR) altitude charts that define sectors with the lowest altitudes at which air traffic controllers can issue radar vectors to aircraft based on obstacle clearance. The FAA requires that sectors have a minimum obstacle clearance of 1,000 feet in non-mountainous areas and normally 2,000 feet in mountainous areas.

Proposed structures that exceed MVA/minimum IFR altitude sector obstacle clearance surfaces would require an increase to the altitudes usable by air traffic control for vectoring aircraft. If the FAA determines that this impact would affect as few as one operation per week, it could result in determinations of hazard.

MVA/MIA obstacle clearance surfaces (e.g., [Figure 10](#)) are in excess of other, lower surfaces and should not limit 168, 180, or 192-foot AGL structures within the defined study area.

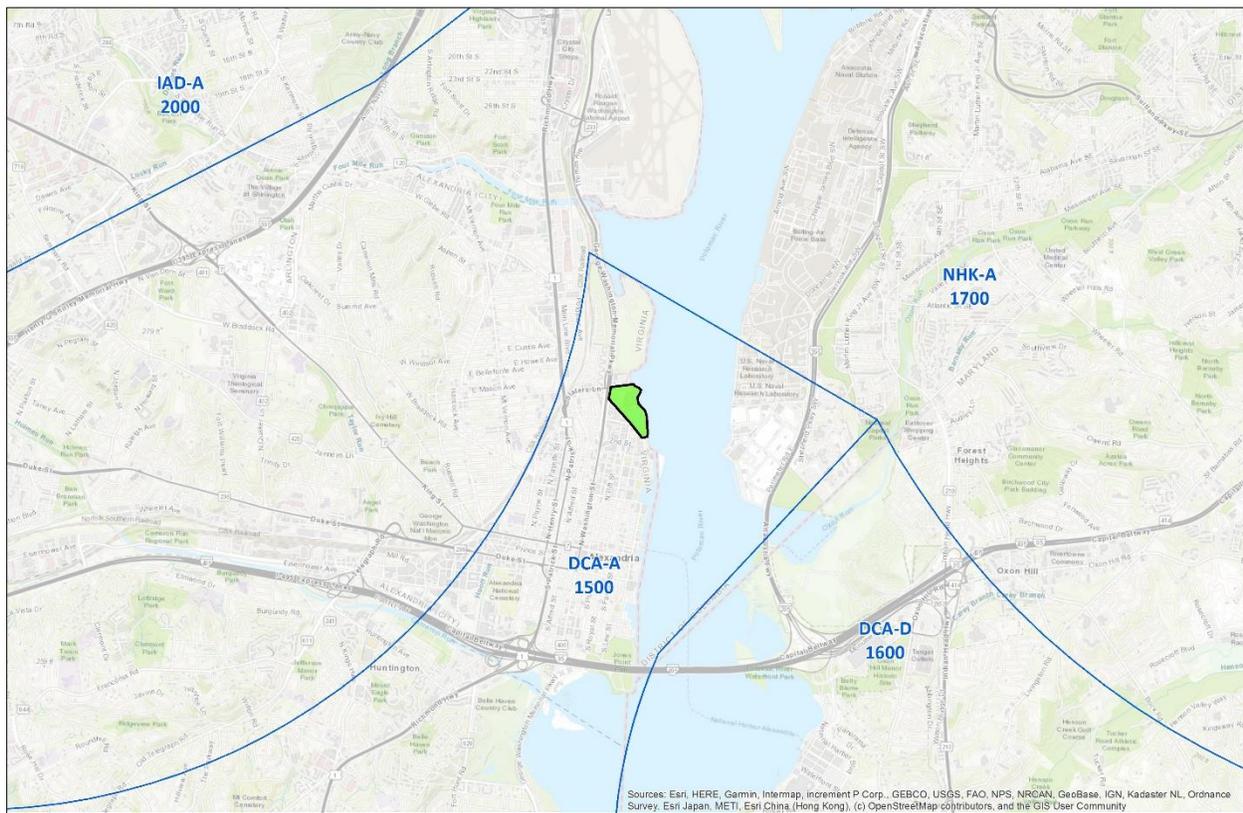


Figure 10: Potomac Consolidated (PCT) TRACON FUSION 3 MVA sectors (blue)



Terminal and Enroute Navigational Aids

The FAA has established protection areas in order to identify proposed structures that may have a physical and/or electromagnetic effect on navigational aids (NAVAIDs). The protection area dimensions vary based on the proposed structure type as well as the NAVAID type. Proposed structures located within these areas may interfere with NAVAID services and will require further review by FAA Technical Operations. If further review determines that proposed structures would have a significant physical and/or electromagnetic effect on NAVAIDs, it could result in determinations of hazard.

Ronald Reagan Washington National (DCA)

Localizers and Glideslopes

The localizer and glideslope protection areas (e.g., blue outline, [Figure 11](#)) do not overlie the 1300 North Royal building project. As a result, it is unlikely that proposed structures would have a physical or electromagnetic on terminal NAVAIDs.

Washington (DCA) VOR/DME

The 1.2° screening surface (purple outline, [Figure 11](#)) does not overlie the 1300 North Royal building project. As a result, it is unlikely that proposed structures would have a physical or electromagnetic on enroute NAVAIDs.

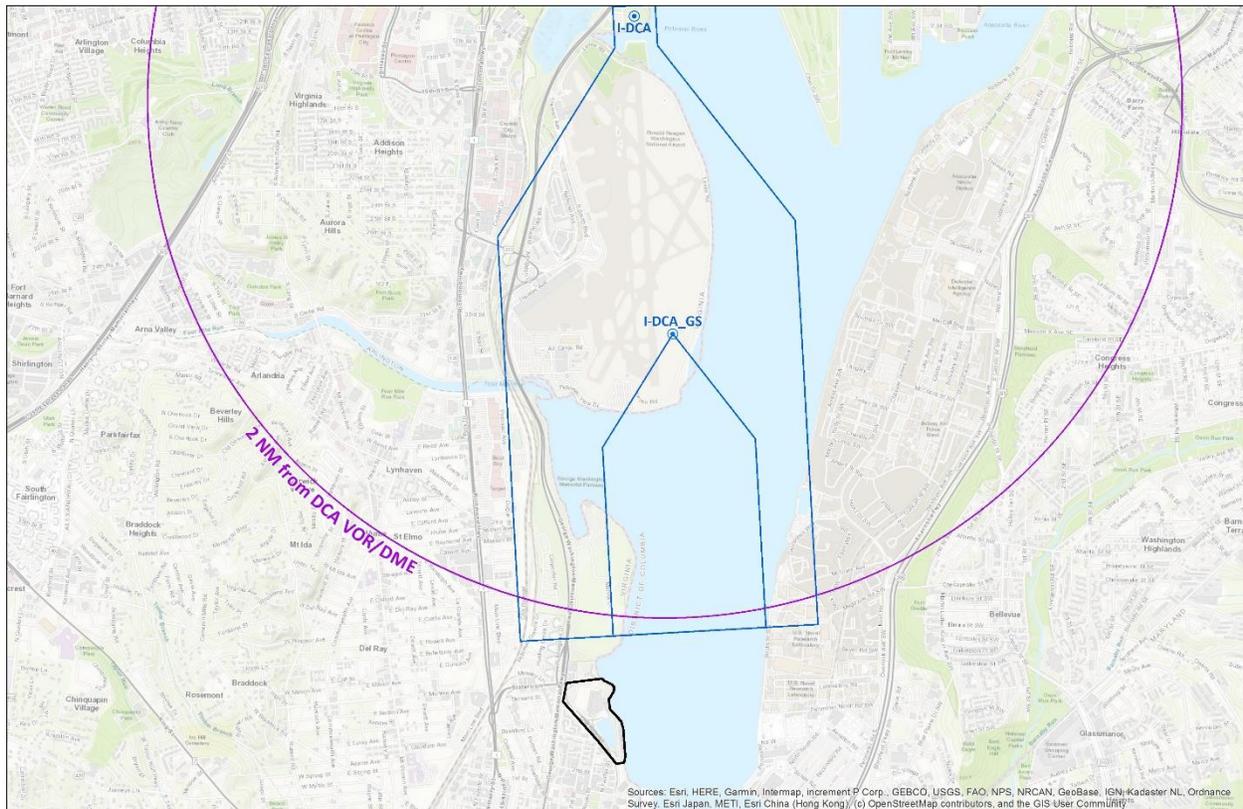


Figure 11: Localizer and glideslope protection areas (blue outline) and the Washington (DCA) VOR/DME protection area (purple outline)



Conclusion

At 168, 180, and 192 feet AGL, proposed structures will exceed the Ronald Reagan Washington National (DCA) 14 CFR Part 77.19 imaginary surfaces (**Figure 2**) and will be identified as obstructions. However, exceeding these surfaces does not automatically result in the issuance of a determination of hazard. Proposed structures must have airspace impacts that constitute a substantial adverse effect in order to warrant the issuance of determinations of hazard.

The lowest obstacle clearance surfaces overlying the 1300 North Royal project range from 190 to 258 feet AMSL (**Figure 12**) and are associated with Ronald Reagan Washington National (DCA) instrument departure procedures and instrument approach procedures. USGS elevation data indicates that these surfaces could limit 168, 180, 192-foot AGL structures throughout the northern and central sections of the study area (red, orange, and yellow areas, **Figure 13**).

At 168, 180, and 192 feet AGL, proposed structures throughout the northern and central sections of the study area (red, orange, and yellow areas, **Figure 6**, **Figure 7**, & **Figure 8**) would require an increase to Ronald Reagan Washington National (DCA) instrument departure procedure minimum climb gradients and instrument approach procedure DAs and MDAs. If the FAA determines that any of impacts would affect as few as one operation per week, it could result in determinations of hazard.

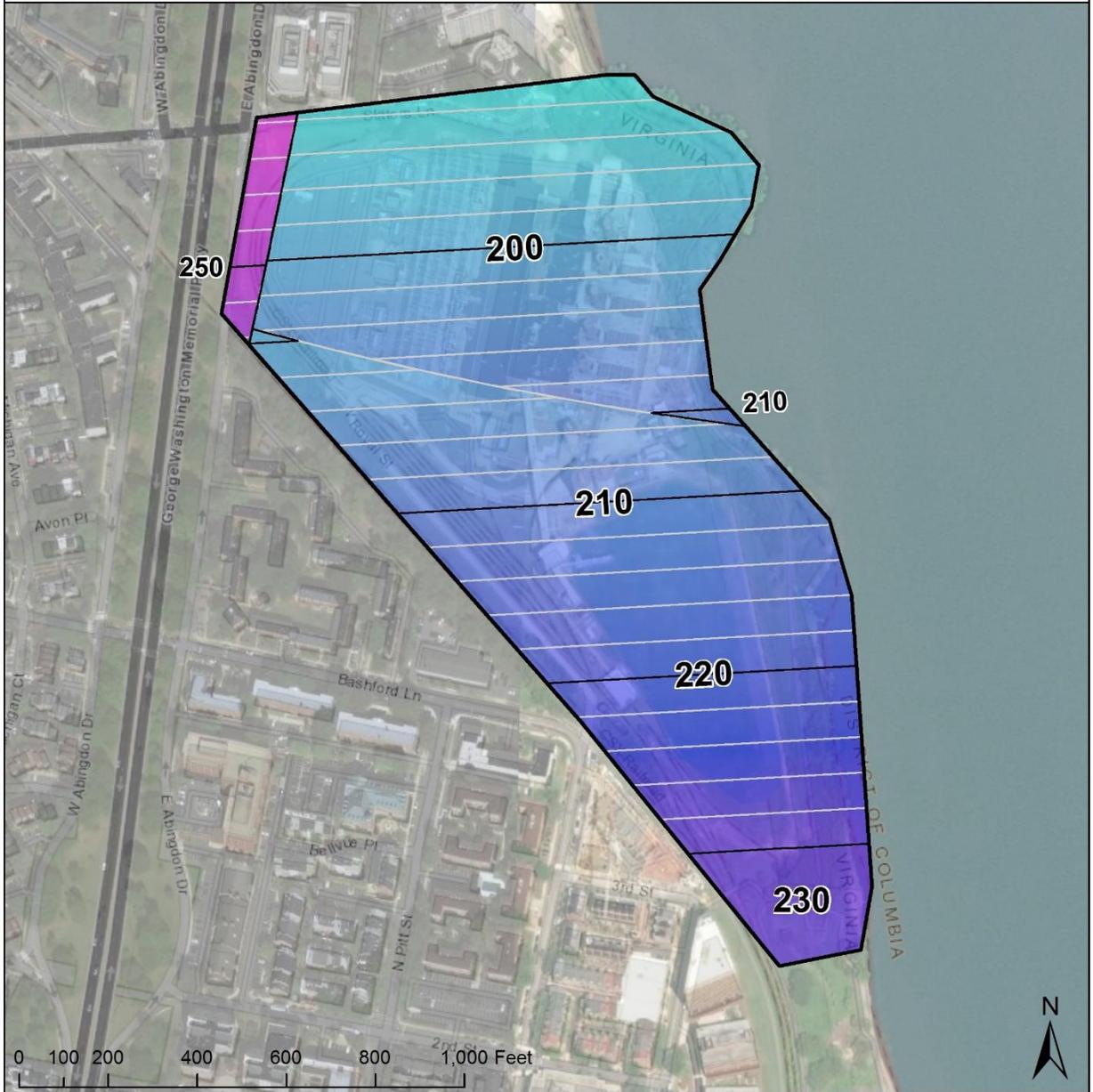
Cranes and other construction equipment that exceed the height or the footprint of the proposed structures must also be filed with the FAA and receive favorable determinations. If temporary equipment required to construct the 1300 North Royal project exceeds FAA obstacle clearance surfaces, it may not receive favorable temporary determinations due to the impact on Ronald Reagan Washington National (DCA).

The AGL Clearance Map (**Figure 13**) is based on USGS National Elevation Dataset (NED 1/3 Arc Second data which has a vertical accuracy of 1.89 meters root-mean-square-error (RMSE). Therefore, the AGL Clearance Map should only be used for general planning purposes and not exact structure siting. In order to avoid determinations of hazard, proposed structure heights should adhere to the height constraints depicted in the Composite Map (**Figure 12**).

If you have any questions regarding the findings of this study, please contact **James Scott** or **Nick Lee** at (703) 256-2485.



Proposed structures that exceed 14 CFR Part 77.17(a)(1) - a height of 499 feet AGL at the site of the object - will be identified as obstructions regardless of location.



Obstacle Clearance Surface

Height - AMSL Feet

High : 258

Low : 190

— 2 Foot Contour

— 10 Foot Contour

Project Boundary

All heights above mean sea level (AMSL)

1300 North Royal Building Project
Composite Height Constraint Map

Plot Date:
30 June 2021

Coordinate System:
NAD 1983 UTM Zone 18N

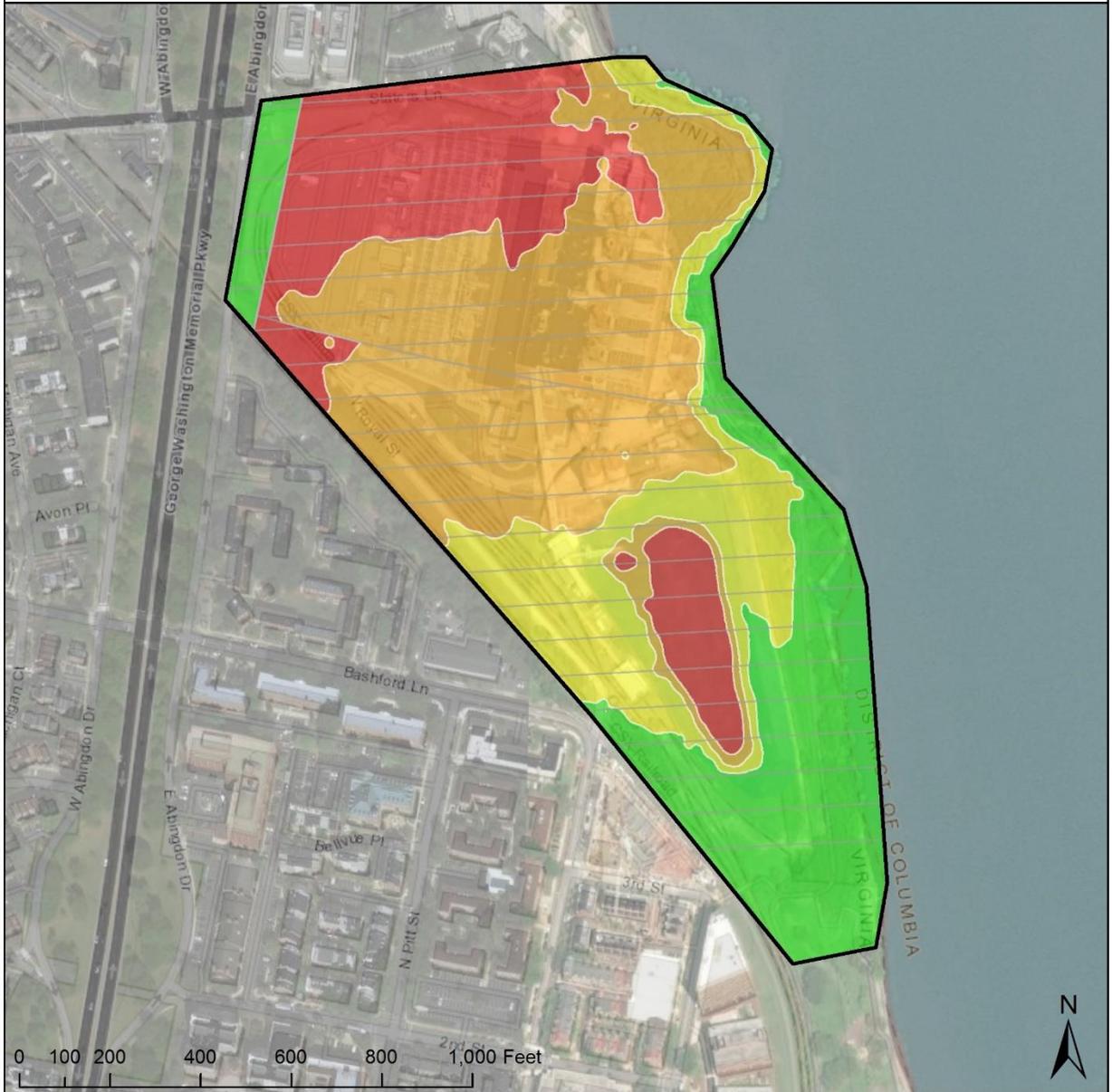
Nick Lee

Figure 12





The USGS 1/3 Arc Second Digital Elevation Model (DEM) data used to create this map has a vertical accuracy of 1.89 meters RMSE. Additionally, this data was resampled to 1 foot cell size. This map should only be used for general planning purposes and not exact structure siting.



Clearance	Project Boundary
Height - AGL Feet	
< 168	
≥ 168 < 180	
≥ 180 < 192	
≥ 192	

1300 North Royal Building Project Above Ground Level (AGL) Clearance Map	
Plot Date: 30 June 2021	Figure 13
Coordinate System: NAD 1983 UTM Zone 18N	Capitol Airspace Group
Nick Lee	