

Government of the District of Columbia
Department of Transportation



d. Planning and Sustainability Division

MEMORANDUM

TO: Sara Bardin
Director, Office of Zoning

FROM: Jim Sebastian
Associate Director *JUS*

DATE: March 25, 2019

SUBJECT: ZC Case No. 06-10D – Art Place Block B

PROJECT SUMMARY

The Morris and Gwendolyn Cafritz Foundation (the “Applicant”) proposes a Second-Stage Planned Unit Development (PUD) and Modification of Significance to a First-Stage PUD at premises bounded by South Dakota Avenue NE to the east, Kennedy Street NE to the north, Ingraham Street NE to the south, and a 20-foot public alley to the west (Square 3765 Lots 1-4 and 7-9, and Square 3767 Lots 3-4).

The proposal to redevelop the site includes the following development program:

- Approximately 264 residential units;
- A common amenity space and artist work spaces associated with the residential units;
- 84,800 SF retail, including a ground level grocery store;
- Family entertainment uses, including a 113,452 SF museum, a 77,204 art facility called Meow Wolf, and a 250 seat theater;
- Approximately 923 on-site vehicle parking spaces;
- 119 long-term and 65 short-term bicycle parking spaces; and
- Four (4) loading berths and two (2) delivery spaces.

Also, the Applicant has filed an application with the DC Office of the Surveyor to close 4th Street NE and the north-south public alley located between 4th Street and South Dakota Avenue.

SUMMARY OF DDOT REVIEW

The District Department of Transportation (DDOT) is committed to achieving an exceptional quality of life in the nation's capital by encouraging sustainable travel practices, constructing safer streets, and providing outstanding access to goods and services. As one means to achieve this vision, DDOT works through the zoning process to ensure that impacts from new developments are manageable within, and take advantage of, the District's multimodal transportation network.

The purpose of DDOT's review is to assess the potential safety and capacity impacts of the proposed action on the District's transportation network and, as necessary, propose mitigations that are commensurate with the action. After an extensive review of the case materials submitted by the Applicant, DDOT finds:

Site Design

- Vehicular access and loading are proposed via two curb cuts off of Ingraham and Kennedy Streets, a private road that will be in the place of where 4th Street NE is now with access points at Ingraham and Kennedy Streets, and the existing public alley;
- The curb cut off Kennedy Street will be designed as a pedestrian plaza to be separated from vehicular access and loading by removable bollards or other features. This includes a curbless section which can operate as a secondary drop off area for those with special needs or authorization to attend special events. Kennedy Street will be realigned in future phases of the Art Place development. When Kennedy Street is realigned, the pedestrian plaza and secondary drop off area will be removed;
- Pedestrian access is via various points in the development;
- The entrance to Meow Wolf will be near the corner of South Dakota Avenue and Ingraham Street. All building entrances should be at grade to maximize green space and minimize paving in public space;
- Per ZR16, the Applicant is required to provide 636 vehicle parking spaces for the proposed mix of uses. The Applicant is proposing to provide a total of approximately 923 vehicle parking spaces, exceeding the minimum parking requirements. The proposed parking spaces are a reduction from the 1,100 parking spaces proposed and approved as part of the 1st Stage PUD application for the site;
- The Applicant is proposing to meet or exceed ZR16 requirements for long-term and short-term bicycle parking spaces and loading facilities;
- The Applicant is proposing to meet the ZR16 requirements for providing loading berths and delivery spaces;
- The Applicant is proposing two (2) electric vehicle charging stations. DDOT recommends at least 19 vehicle parking spaces be served by electric charging stations (1 per 50 spaces);
- The Applicant is proposing streetscape enhancements on South Dakota Avenue. The main entrance to the family entertainment building, which will contain Meow Wolf and the children's museum, will be located at the corner of Ingraham and South Dakota and will be surrounded by a pedestrian plaza;

- The Applicant is proposing two rows of trees on the South Dakota Avenue streetscape. This condition would start near the intersection with Ingraham Street, and continue about halfway down the block; and
- The Applicant is proposing to install a full signal at South Dakota Avenue and Ingraham Street, and proposing to remove the unsignalized crosswalk across South Dakota Avenue at Jefferson Street, along with removing the associated ramps for that crosswalk. The Applicant has provided a peak hour signal warrant for the intersection of South Dakota Avenue and Ingraham Street, which is included as Attachment B.

Travel Assumptions

- The Applicant utilized sound methodology and assumptions to perform the analysis in the CTR;
- The proposed mode split and subsequent trip generation that are shown in Attachment A are consistent with the level of on-site vehicle parking provided;
- The site is well served by Metrorail and Metrobus transit. The site is located approximately 0.25 miles from the Fort Totten Metro station;
- The Applicant considered the future realignment of Kennedy Street NE, which will take place when Art Place Block C is redeveloped; and
- The proposed project is expected to generate a significant amount of vehicle, transit, bicycle, walking, and motorcoach trips during the peak hours.

Analysis

- The analysis provided shows that four (4) intersections within the study area have approaches during at least one peak hour that either operates at LOS E or LOS F conditions resulting from the addition of site traffic or is worsened by site traffic;
- DDOT finds that a signal timing adjustment is not appropriate as an isolated traffic mitigation solution in conjunction with a land development project because an entire corridor would need to be re-timed. In lieu of a traffic signal re-timing, the Applicant should instead mitigate this impact by implementing additional TDM strategies aimed at reducing the auto-mode share and encouraging non-auto travel;
- DDOT finds the amount of vehicle parking provided to be high for the site given the proposed mix and sizes of land uses, parking ratios in the neighborhood, and proximity to transit routes. Providing additional vehicle parking encourages driving and owning an automobile and discourages transit usage, walking, and bicycling;
- Truck turning diagrams demonstrate that 50-foot trucks can enter and exit the loading berths in the commercial building, and 30-foot trucks can enter and exit the loading berths in the residential building without backing maneuvers on public streets. 30-foot trucks must back up in the public alley to access the loading berths in the residential building;
- Walking is expected to be an important mode of transportation for this development. While there are some missing or substandard locations near the site, most notably the lack of connection on 3rd Street NE, the existing pedestrian network around the site is generally complete;

- Because of the entertainment uses, motorcoaches will be an important mode to accommodate. The Applicant proposes a loading management plan to address truck and motorcoach parking. DDOT has additional comments on motorcoach accommodations, which are detailed later in the report;
- The Applicant proposes several design elements in the streetscape to serve as gathering spaces. These are described in more detail in the Applicant’s pre-hearing statement. DDOT will further review these designs as part of the permitting process, and advises the Applicant to avoid using non-standard materials;
- DDOT finds that the streetscape on South Dakota Avenue should match the existing streetscape that was installed as part of Art Place Block A. The second row of trees on South Dakota Avenue should be removed, and the size of the tree boxes should match the existing condition of Block A; and
- The Applicant should provide additional measures in the TDM Plan to offset the additional vehicle trips that will be generated by the extra vehicle parking.

Mitigations

DDOT has no objection to approval of the PUD with the following revisions and conditions:

- To enhance safety for all users in the vicinity of the site, the Applicant should fund and construct the following roadway network improvements, all subject to DDOT approval at permitting:
 - Extend the northbound left turn storage at Riggs Road and South Dakota Avenue by 550 feet. The extension would include the restriping of the existing median area currently closed to drivers with bollards on both sides. DDOT needs the Applicant to add lane widths to the concept plan;
 - Separate eastbound left and through right lanes at South Dakota and Kennedy Street. This mitigation will reduce existing on-street parking on the south side of Kennedy Street. In addition, the available roadway width of Kennedy Street does not seem to be 34 feet as indicated in the CTR but rather approximately 30 feet. Accordingly, the Applicant should commit to implement this mitigation subject to final design and approval at public space permitting;
 - Add a full signal to the intersection of South Dakota Avenue and Ingraham Street. DDOT is currently developing plans to install a HAWK signal at the intersection. The Applicant should commit to install the signal subject to DDOT approval at permitting;
 - Improve pedestrian infrastructure at the intersection of Hamilton, Ingraham, and the public alley at the southwest corner of the site. The Applicant should build curb ramps where they are currently missing, and should construct a sidewalk to continue across the alley on the north side of the intersection; and
 - Improve pedestrian infrastructure on 3rd Street NE, which is a potential pedestrian route between the site and the Fort Totten Metro station. 3rd Street is currently disconnected and does not meet DDOT standards. The Applicant should fund improvements to 3rd Street that provide a connection for pedestrians and bicycles, which is subject to final design and approval at public space permitting.

- Implement the proposed Loading Management Plan, for the life of the project, as proposed by the Applicant in the February 2019 CTR; and
- Implement the Transportation Demand Management (TDM) Plan, for the life of the project unless otherwise noted, as proposed by the Applicant in the February 2019 CTR, and revise the proposed TDM Plan to include additional elements to offset the parking provision and mitigate the identified impacts to the transportation network. These additional elements are listed in more detail later in the report.

Continued Coordination

Given the complexity and size of the action, the Applicant is expected to continue to work with DDOT on the following matters outside of the zoning process:

- Public space, including curb and gutter, street trees and landscaping, street lights, sidewalks, curb ramps, and other features within the public rights of way, are expected to be designed and built to DDOT standards;
- The Applicant will be required to obtain public space permits for all elements of the project shown in public space. The following issues with the current public space design should be coordinated with DDOT as the Applicant pursues public space permits:
 - Make improvements to the pedestrian network, such as the intersection of Hamilton and Ingraham Streets with the public alley, and on 3rd Street NE. These are discussed in further detail in the mitigations section;
 - The Applicant proposes a conceptual design plan for Kennedy Street at South Dakota Avenue, showing two 10 foot northbound approach lanes, and a receiving lane of 14 feet. DDOT would like to further review this proposal during the permitting process, and would also like the Applicant to evaluate two 11 foot lanes, and one 12 foot lane. As part of this review, DDOT would need truck turning diagrams at the intersection of Kennedy and South Dakota;
 - We would like to further review the areas around the existing curb cuts to ensure that views are not obstructed, and may request additional sight distance triangles;
 - The design of the entrances to the private street should be discussed further during permitting. DDOT may prefer to have the private street built similarly to a public street with curbs, or may be willing to approve a curbless design. DDOT may prefer additional design treatments on the private street;
 - DDOT would like to further discuss the pedestrian plaza area/secondary drop off area off of the Kennedy Street curb cut as part of the permitting process;
 - The Applicant will need to include sidewalk dimensions in their plans that are submitted for permits;
 - All building entrances should be at-grade so as to maximize green space and minimize pavement proposed in public space;
 - Determine final locations for the short-term bicycle spaces (inverted U-racks) in the 'furniture zone' within public space; and

- The South Dakota Avenue streetscape should match the existing conditions that were constructed as part of Block A, and they should not install the proposed second row of trees.
- The Applicant should participate in a Preliminary Design Review Meeting (PDRM) to address design related issues raised by DDOT and OP;
- Provide a curbside management and signage plan, assumed to include multi-space meter installation at the Applicant's expense, consistent with current DDOT policies;
- Coordinate with DDOT's Traffic Engineering and Signals Division (TESD) regarding the installation of either a full signal or HAWK signal at the intersection of South Dakota Avenue and Ingraham Street NE, depending on signal warrants, as well as intersection striping changes; and
- The Applicant should coordinate with DDOT's Urban Forestry Division (UFD) so the Ward arborist can confirm tree sizes and health, discuss the preservation and protection of any existing small street trees, and review the planting of new street trees.

TRANSPORTATION ANALYSIS

DDOT requires applicants requesting an action from the Zoning Commission complete a Comprehensive Transportation Review (CTR) in order to determine the action's impact on the overall transportation network. Accordingly, an applicant is expected to show the existing conditions for each transportation mode affected, the proposed impact on the respective network, and any proposed mitigations, along with the effects of the mitigations on other travel modes. A CTR should be performed according to DDOT direction. The Applicant and DDOT coordinated on an agreed-upon scope for the CTR that is consistent with the scale of the action.

The review of the analysis is divided into four categories: site design, travel assumptions, analysis, and mitigations. The following review provided by DDOT evaluates the Applicant's CTR to determine its accuracy and assess the action's consistency with the District's vision for a cohesive, sustainable transportation system that delivers safe and convenient ways to move people and goods, while protecting and enhancing the natural, environmental, and cultural resources of the District.

Site Design

Site design, which includes site access, loading, and public realm design, plays a critical role in determining a proposed action's impact on the District's infrastructure. While transportation impacts can change over time, the site design will remain constant throughout the lifespan of the proposed development, making site design a critical aspect of DDOT's development review process. Accordingly, new developments must provide a safe and welcoming pedestrian experience, enhance the public realm, and serve as positive additions to the community.

Site Access

Primary vehicular access to the underground parking is proposed to occur via two (2) curb cuts, one on Ingraham and one on Kennedy Street, and from the public alley. There is one (1) existing curb cuts on Kennedy Street that is proposed to be closed with this development.

Pedestrian access will be via various entrances throughout the project. The future residents of the property may access the units via three lobbies, all with entrances on the private street. The entertainment uses will have its main entrance near the corner of South Dakota Avenue and Ingraham Street, with additional entrances on the private street and Kennedy Street. There will be various entrances for the retail uses and the maker spaces off the private street. Figure 1 below shows the site layout of the project. All building entrances should be at grade so as to maximize green space and minimize paving in public space.

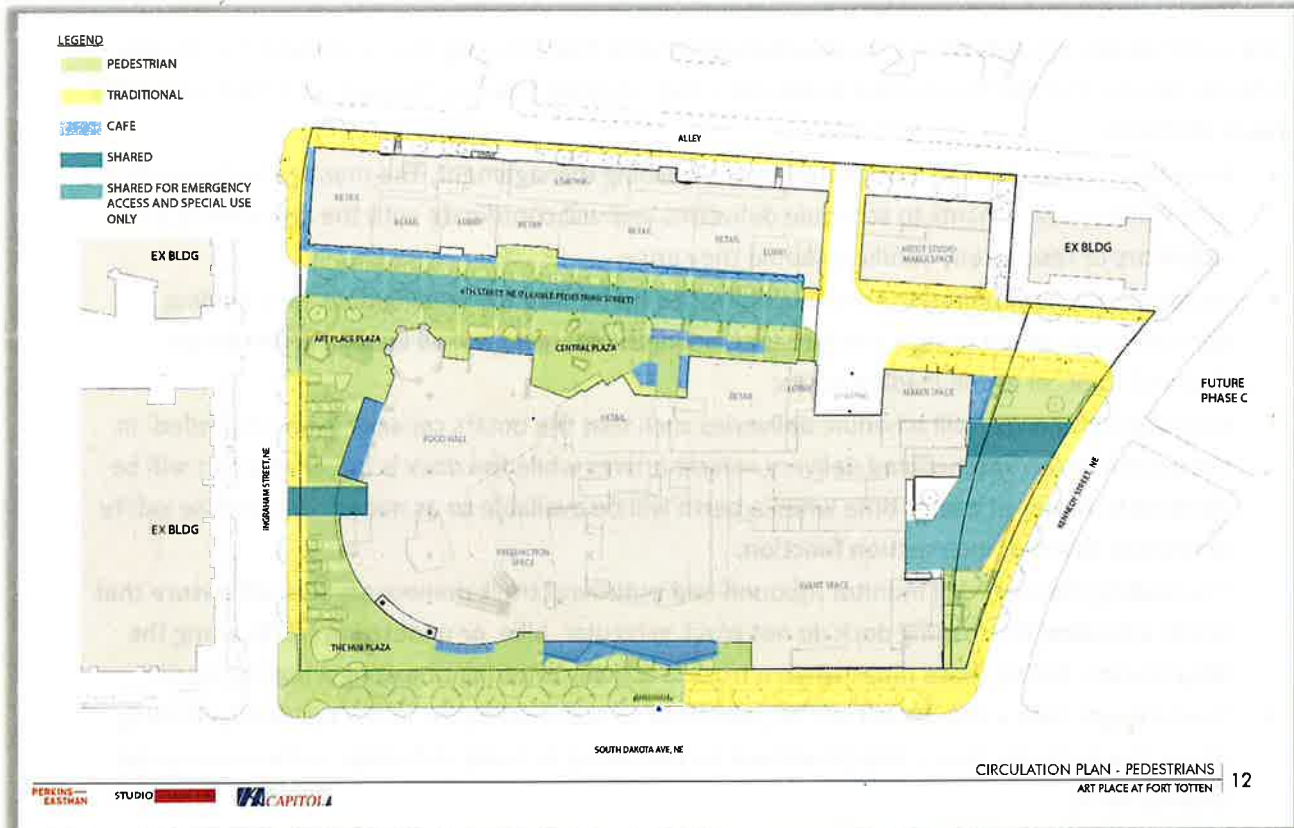


Figure 1 – Project Site Plan (Source: Supplemental Submission, Exhibit A, Page 12, March 15, 2019)

Loading

DDOT’s practice is to accommodate vehicle loading in a safe and efficient manner, while at the same time preserving safety across non-vehicle modes and limiting any hindrance to traffic operations. For new developments, DDOT requires that loading take place in private space and that no back-up maneuvers occur in the public realm.

Per Subtitle C § 901.1, § 901.4, and § 902.2 of the 2016 Zoning Regulations (ZR16) the site is required to provide four (4) loading berths, and two (2) delivery spaces. The Applicant is proposing to meet these requirements by providing three (3) berths for the commercial building off of the private street and one

(1) berth for the residential building off of the public alley. One delivery space is proposed in each of the commercial and residential buildings. Trash collection will occur in the loading areas on private property.

The Applicant provided truck turning diagrams in the appendix of the February 2019 CTR and Attachment A. The diagrams demonstrated that 50 foot trucks can enter and exit the loading berths in the commercial building, and 30 foot trucks can enter and exit the loading berths in the residential building without conflicts or impacting the surrounding public street network. DDOT does not anticipate larger trucks to serve the site. The Applicant provided truck turning diagrams for 67 foot trucks and they do not fit.

To help minimize any impacts on the transportation network from moving trucks, delivery trucks, and trash trucks serving the site, the Applicant proposed the following Loading Management Plan within the February 2019 CTR:

- A loading manager will be designated by the building management. The manager will coordinate with vendors and tenants to schedule deliveries and will coordinate with the community and neighbors to resolve any conflicts should they arise;
- Residents will be required to schedule deliveries that utilize the loading dock (any loading operation conducted using a truck 20 feet in length or larger) and all loading activities are required to occur at the loading docks;
- The loading manager will schedule deliveries such that the dock's capacity is not exceeded. In the event that an unscheduled delivery vehicle arrives while the dock is full, that driver will be directed to return at a later time when a berth will be available so as not to compromise safety or impede street or intersection function;
- The loading manager will monitor inbound and outbound truck maneuvers and will ensure that trucks accessing the loading dock do not block vehicular, bike, or pedestrian traffic along the alley (except during those times when a truck is actively entering or exiting a loading berth);
- Trucks larger than a WB-30 will not be permitted to make deliveries to the residential loading docks. Trucks larger than a WB-50 will not be permitted to make deliveries to the commercial loading dock;
- Trucks using the loading docks will not be allowed to idle and must follow all District guidelines for heavy vehicle operation including but not limited to DCMR 20 – Chapter 9, Section 900 (Engine Idling), the regulations set forth in DDOT's Freight Management and Commercial Vehicle Operations document, and the primary access routes listed in the DDOT Truck and Bus Route Map;
- The loading manager will be responsible for disseminating suggested truck routing maps to the building's tenants and to drivers from delivery services that frequently utilize the development's loading dock as well as notifying all drivers of any access or egress restrictions. The loading manager will also distribute materials as DDOT's Freight Management and Commercial Vehicle Operations document to drivers as needed to encourage compliance with idling laws. The loading manager will also post these documents and notices in a prominent location within the service area; and

- An approximately 180 foot designated bus area is proposed on the west curb of South Dakota Avenue midway between Ingraham Street and Kennedy Street. This area will be monitored and programmed by the loading manager, who will be responsible for coordinating the different uses in the building and authorizing group sizes and arrival times for the bus area. Further, the loading manager will be responsible for disseminating information on the bus parking and loading area to potential visiting groups. In addition to the designated bus area, three PUDO zones are proposed. Buses would be able to perform pick-up drop-off operations at a PUDO zone and park off-site if desired.

DDOT finds the proposed Loading Management Plan sufficient for the proposed development.

Streetscape and Public Realm

In line with District policy and practice, any substantial new building development or renovation is expected to rehabilitate streetscape infrastructure between the curb and the property lines. This includes curb and gutters, street trees and landscaping, street lights, sidewalks, and other appropriate features within the public rights of way bordering the site.

The Applicant must work closely with DDOT and the Office of Planning (OP) to ensure that the design of the public realm meets current standards and will substantially upgrade the appearance and functionality of the streetscape for public users needing to access the property or circulate around it. In conjunction with Titles 11, 12A, and 24 of the DCMR, DDOT's recently released January 2019 version of the *Design and Engineering Manual (DEM)* and DDOT's *Public Realm Design Manual* will serve as the main public realm references for the Applicant. Public space designs will be reviewed in further detail during the public space permitting process. DDOT staff will be available to provide additional guidance during these processes.

While the preliminary public space plans are generally consistent with DDOT standards, there are several considerations that need to be incorporated and items to be reviewed in greater detail during the public space permitting process:

- Make improvements to the pedestrian network, such as the intersection of Hamilton and Ingraham Streets with the public alley, and on 3rd Street NE. These are discussed in further detail in the mitigations section;
- The Applicant proposes a conceptual design plan for Kennedy Street at South Dakota Avenue, showing two 10 foot northbound approach lanes, and a receiving lane of 14 feet. DDOT would like to further review this proposal during the permitting process, and would also like the Applicant to evaluate two 11 foot lanes, and one 12 foot lane. As part of this review, DDOT would need truck turning diagrams at the intersection of Kennedy and South Dakota;
- We would like to further review the areas around the existing curb cuts to ensure that views are not obstructed, and may request additional sight distance triangles;
- The design of the entrances to the private street should be discussed further during permitting. DDOT may prefer to have the private street built similarly to a public street with curbs, or may

be willing to approve a curbless design. DDOT may prefer additional design treatments on the private street;

- DDOT would like to further discuss the pedestrian plaza area/secondary drop off area off of the Kennedy Street curb cut as part of the permitting process;
- The Applicant will need to include sidewalk dimensions in their plans that are submitted for permits;
- All building entrances should be at-grade so as to maximize green space and minimize pavement proposed in public space;
- Determine final locations for the short-term bicycle spaces (inverted U-racks) in the ‘furniture zone’ within public space; and
- The South Dakota Avenue streetscape should match the existing conditions that were constructed as part of Block A, and they should not build the proposed second row of trees.

DDOT encourages the Applicant to participate in a Preliminary Design Review Meeting (PDRM) to address design related issues raised by DDOT and OP.

Heritage Trees

Heritage Trees are defined as a tree with a circumference of 100 inches or more and are protected by the Tree Canopy Protection Amendment Act of 2016. UFD did not identify any Heritage Trees on-site and recommends that the Applicant coordinate with UFD so the Ward arborist can confirm tree sizes and health, discuss the preservation and protection of any existing small street trees, and the planting of new street trees.

Sustainable Transportation Elements

Sustainable transportation measures target to promote environmentally responsible types of transportation in addition to the transportation mode shift efforts of TDM programs. These measures can range anywhere from practical implementations that would promote use of vehicles powered by alternative fuels to more comprehensive concepts such as improving pedestrian access to transit in order to increase potential use of alternative modes of transportation. Within the context of DDOT’s development review process, the objective to encourage incorporation of sustainable transportation elements into the development proposals is to introduce opportunities for improved environmental quality (air, noise, health, etc.) by targeting emission-based impacts.

The Applicant is proposing to provide two 240-volt electric vehicle charging stations. DDOT recommends that the Applicant provide charging stations to serve at least one (1) vehicle parking space for every 50 vehicle spaces provided for a total of 19.

Travel Assumptions

The purpose of the CTR is to inform DDOT’s review of a proposed action’s impacts on the District’s transportation network. To that end, selecting reasonable and defensible travel assumptions is critical to developing a realistic analysis.

Background Developments and Regional Growth

As part of the analysis of future conditions, DDOT requires applicants to account for future growth in traffic on the network or what is referred to as background growth. The Applicant coordinated with DDOT on the appropriate background developments to include in the analysis. Traffic from the three (3) following projects were taken into account as a background development anticipated to be constructed by 2023: 1) Art Place Block A (520 residential units and 91,420 SF retail), 2) Fort Totten South (185 residential units and 30,000 SF retail), 3) 6000 New Hampshire Avenue (school with 22 staff members and 84 students), 4) 5600 2nd Street (154,160 SF storage facility) and 5) Art Place Block C (school with a maximum of 250 students).

DDOT requires applicants account for regional growth through the build-out year of 2023. This can be done by assuming a general growth rate or by evaluating growth patterns forecast in MWCOG's regional travel demand model. The Applicant coordinated with DDOT on an appropriate measure to account for regional growth that accurately accounted for background growth on the network. Annually compounding background regional growth rates of between 0.10% and 2.0% were assumed in the study area, differing based on roadway and peak hour.

DDOT also requires Applicants to consider future changes to the roadway network. The Applicant determined in coordination with DDOT staff that no major changes to the surrounding roadway network are anticipated by 2023. However, the CTR does take into account the future realignment of Kennedy Street NE, which will take place when Art Place Block C is redeveloped.

Vehicle Parking

The overall parking demand created by the development is primarily a function of land use, development square footage, price, and supply of parking spaces. However in urban areas, other factors contribute to the demand for parking, such as the availability of high quality transit, frequency of transit service, proximity to transit, connectivity of bicycle and pedestrian facilities within the vicinity of the development, and the demographic composition and other characteristics of the potential residents.

Per Subtitle C § 701.5 and 702.1(c)(4) of the 2016 Zoning Regulations, the Applicant is required to provide a minimum of 636 vehicle parking spaces for the proposed mix of uses (including the 50% transit reduction for being located within 0.25 mile of the Fort Totten Metrorail station). The Applicant is proposing to provide a total of approximately 923 vehicle parking spaces. Therefore, the site would exceed the minimum parking requirements per ZR16. The proposed parking spaces are a reduction from the 1,100 parking spaces proposed and approved as part of the 1st Stage PUD application for the site.

DDOT finds the amount of vehicle parking provided to be high for the site given the proposed mix and sizes of land uses, parking ratios in the neighborhood, and proximity to transit routes. Providing additional vehicle parking encourages driving and owning an automobile and discourages transit usage, walking, and bicycling. The Applicant should provide additional measures in the TDM Plan to offset the additional vehicle trips that may be generated by the extra vehicle parking.

Trip Generation

Each trip a person makes is made by a certain means of travel, such as vehicle, bicycle, walking, and transit. The means of travel is referred to as a ‘mode’ of transportation. A variety of elements impact the mode of travel, including density of development, diversity of land use, design of the public realm, proximity to transit options, availability and cost of vehicle parking, among many others.

The Applicant provided trip generation estimates by utilizing the rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition* and the assumed mode split to convert base vehicular trips to base person trips using average auto occupancy data and then back to vehicular, transit, bicycle, and pedestrian trips. DDOT finds these methods appropriate.

Mode split assumptions used in the subject analysis were informed by the Census, WMATA’s 2005 Development-Related Ridership Survey, mode splits used for nearby developments, tripsDC.org, traffic counts collected by the Applicant, and other estimates. The table below shows the mode splits that were assumed for this project.

Land Use	Vehicle	Transit	Bike	Walk	Motorcoach
Residential	32%	24%	4%	40%	0%
Retail (Ground-Floor)	32%	24%	4%	40%	0%
Retail (Shopping Center)	47%	34%	5%	14%	0%
Theater	62%	12%	3%	8%	15%
Meow Wolf	62%	12%	3%	8%	15%
Museum	62%	12%	3%	8%	15%

Based on the trip generation and mode split assumptions, Attachment A shows the predicted number of weekday peak hour trips generated by mode.

The proposed project is expected to generate a significant amount of vehicle, transit, bicycle, walking, and motorcoach trips during the peak hours. The proposed mode split and subsequent trip generation is consistent with the amount of vehicle parking provided.

Study Area and Data Collection

The Applicant in conjunction with DDOT identified 10 intersections where detailed vehicle counts would be collected and a level of service analysis would be performed. These intersections are immediately adjacent to the site and include intersections radially outward from the site with the greatest potential to see impacts in vehicle delay. DDOT acknowledges that not all affected intersections are included in the study area and there will be intersections outside of the study area which would realize new trips. However, DDOT expects minimal to no increase in delay outside the study area as a result of the proposed action.

The Applicant collected weekday intersection traffic count data on Tuesday, October 23, 2018 between 7:00 AM-10:00 AM and 4:00 PM-7:00 PM while District of Columbia Public Schools and Congress were in

session. The Applicant also collected Saturday intersection traffic count data on Saturday, February 23, 2019 between 10:00 AM-2:00 PM. DDOT is in agreement with the Applicant on the data collection time frame and dates.

Analysis

To determine the PUD's impacts on the transportation network, the Applicant completed a Comprehensive Transportation Review (CTR), prepared by Wells and Associates, dated February 2019 which includes an extensive multi-modal analysis of existing conditions (2018 Existing), future with no development (2023 Background), future conditions with development (2023 Future), and 2023 Future with Mitigations scenarios. The Applicant also completed an addendum to the CTR, dated March 5, 2019, and a letter responding to comments from DDOT. This letter is included as Attachment A.

Roadway Capacity and Operations

DDOT aims to provide a safe and efficient roadway network that provides for the timely movement of people, goods, and services. As part of the evaluation of travel demand generated by the site, DDOT requests analysis of traffic conditions for the agreed upon study intersections for the current year and after the facility opens both with and without the site development or any transportation changes.

Table 2 in Attachment A summarizes the results of the Applicant's capacity analysis and demonstrates the impacts on delay and level of service of the proposed mitigation measures.

As shown in the Table, the analysis provided shows that two (2) intersections within the study area have approaches during at least one peak hour that either operates at LOS E or LOS F conditions resulting from the addition of site traffic or is worsened by site traffic:

- Riggs Road and South Dakota Avenue NE – while the overall peak hour is projected to operate at LOS D in 2023, some individual movements operate at LOS E or F during the morning, evening, and Saturday peak times. A signal timing adjustment was recommended in the CTR as a way to improve delay, as was extending the northbound left turn storage into the median. DDOT finds that a signal timing adjustment is not appropriate as an isolated traffic mitigation solution in conjunction with a land development project because an entire corridor would need to be re-timed. In lieu of a traffic signal re-timing, the Applicant should instead mitigate this impact by implementing additional TDM strategies aimed at reducing the auto-mode share and encouraging non-auto travel; and
- Riggs Road and First Place NE – while the overall peak hour is projected to operate at acceptable LOS in 2023, the northbound left turn operates at LOS E during the evening peak time. A signal timing adjustment was recommended in the CTR as a way to improve delay. DDOT finds that signal timing changes are not appropriate as an isolated traffic mitigation solution in conjunction with a development project because an entire corridor would need to be re-timed. The

Applicant should instead focus on providing additional TDM measures to offset the impact to this intersection (see Mitigations-section).

Transit Service

The District and Washington Metropolitan Area Transit Authority (WMATA) have partnered to provide extensive public transit service in the District of Columbia. DDOT's vision is to leverage this investment to increase the share of non-automotive travel modes so that economic development opportunities increase with minimal infrastructure investment.

The site is located approximately 0.25 miles from the Fort Totten Metrorail station which is served by the Red, Yellow, and Green Lines.

The Fort Totten Metrorail station is also serviced by numerous Metrobus routes. Metrobus routes 60, 64, 80, E2, E3, E4, F6, K2, K6, K9, R1, and R2 all have boarding bays located at Fort Totten and many of these routes have additional bus stops located within a 0.5 mile radius of the subject site.

Pedestrian Facilities

The District is committed to enhancing pedestrian accessibility by ensuring consistent investment in pedestrian infrastructure on the part of both the public and private sectors. DDOT expects new developments to serve the needs of all trips they generate, including pedestrian trips. Walking is expected to be an important mode of transportation for this development.

The CTR documented an existing inventory of the pedestrian infrastructure in the vicinity of the site. As shown below in Figure 2, the sidewalks and curb ramps along site frontages on South Dakota Avenue and Ingraham Street meet DDOT standards. The sidewalks on Kennedy Street adjacent to the site do not meet DDOT standards, and the developer will be required to bring these sidewalks up to DDOT standards as part of this development. While there are several missing or substandard segments of sidewalk and curb ramps in the broader area, the existing pedestrian network along major pathways to schools and attractions is generally good.



Figure 2 – Pedestrian Facilities Map (Source: CTR, Wells and Associates, Figure 4, February 2019)

DDOT expects that the Applicant will reconstruct the public space on South Dakota Avenue, Ingraham Street, and Kennedy Street adjacent to the development site and upgrade any pedestrian facilities to current DDOT standards.

Bicycle Facilities

The District is committed to enhancing bicycle access by ensuring consistent investment in bicycle infrastructure by both the public and private sectors. DDOT expects new developments to serve the needs of all trips they generate, including bicycling trips.

Per Subtitle C § 802.1 of the 2016 Zoning Regulations, the Applicant is required to provide 119 long-term and 65 short-term bicycle parking spaces. The Applicant is proposing to meet or exceed the long-term bicycle parking requirement by providing several secure storage rooms on the first level of the parking garage. The residential and commercial bicycle spaces will be provided in separate bike rooms with different access methods. The short-term spaces will be provided at grade per DDOT requirements. DDOT notes that the short-term bicycle racks are not shown in the plan set and should be provided in the ‘furniture zone’ in public space with about half of them installed near the retail entrances. DDOT recommends that the Applicant install standard inverted U-racks to function as bicycle parking, and is happy to provide additional guidance on appropriate bike parking location and rack design.

The site is not currently in close proximity to on-street bicycle facilities or trails. DDOT is in the design phase of the Metropolitan Branch Trail. When completed, the trail will have an access point near the Fort Totten Metrorail station, and extend to Silver Spring, Maryland to the north and Union Station to the south. The site is close to two Capital Bikeshare stations, one at the Fort Totten Metrorail station, and one near the intersection of South Dakota Avenue and Riggs Road NE.

Motorcoach

Because of the entertainment uses, specifically Meow Wolf and the children's museum, the Applicant will generate more motorcoach trips than if the site did not include these uses. The Applicant proposes to provide 180 feet of motorcoach parking on South Dakota Avenue near the intersection of Ingraham Street, and management of that space is discussed in the loading management plan. The width of the parking lane for motorcoaches is 9 feet.

DDOT recommends that the Applicant reduce the size of the motorcoach zone to fit a total of three buses, with the intent that the entertainment uses will have 2-3 hour layovers and the volume of the attendance at the attraction is maximum capacity of about 3 bus loads of visitors. The timed parking should be for a maximum of 3 hours during business times, and metered parking all other times. The ROW adjacent to the grocery store should be converted to a 40 foot PUDO zone, with one carshare location added between the PUDO and the motorcoach parking. Adjacent to the door of the museum should be another 40 foot PUDO zone.

Mitigations

As part of all major development review cases, DDOT requires the Applicant to mitigate the impacts of the development in order to positively contribute to the District's transportation network. The mitigations must sufficiently diminish the action's vehicle impact and promote non-auto travel modes. This can be done through Transportation Demand Management (TDM), physical improvements, operations, and performance monitoring.

DDOT preference is to mitigate vehicle traffic impacts first through establishing an optimal site design and operations to support efficient site circulation. When these efforts alone cannot properly mitigate an action's impact, TDM measures may be necessary to manage travel behavior to minimize impact. Only when these other options are exhausted will DDOT consider capacity-increasing changes to the transportation network because such changes often have detrimental impacts on non-auto travel and are often contrary to the District's multi-modal transportation goals.

The following analysis is a review of the Applicant's proposed mitigations and a description of DDOT's suggested conditions for inclusion in the PUD:

Roadway Capacity and Operations

The Applicant's CTR capacity analysis demonstrated that delay and level of service at the intersections of Riggs Road/South Dakota Avenue and Riggs Road/First Place can be improved by making a traffic signal

timing adjustment. In lieu of this improvement, DDOT recommends the Applicant make improvements to the TDM Plan, as discussed below. DDOT finds that a signal timing adjustment is not appropriate as an isolated traffic mitigation solution in conjunction with a land development project because an entire corridor would need to be re-timed.

The Applicant also proposes the following mitigations, which should be committed to by the Applicant and are subject to DDOT approval:

- At Riggs Road and South Dakota Avenue, the Applicant proposes to extend northbound left turn storage into the median. The extension is shown in Figure 3. The Applicant claims the design would accommodate the estimated future queuing at the intersection. The extension would include the restriping of the existing median area currently closed to drivers with bollards on both sides. The restriping would decrease the queues to within 150 feet of background conditions. The median space has been designed to provide future access to the undeveloped parcel of land east of South Dakota Avenue. Consistent with other recommendations made by the Applicant, they propose to mitigate the impact of the estimated northbound left queue with the TDM program described below;
- At South Dakota Avenue and Kennedy Street, the Applicant proposes to provide separated eastbound left and through right lanes. DDOT concurs that applicant's proposal to restripe the eastbound approach of Kennedy Street can mitigate the adverse impact of the proposed development on the eastbound approach level-of-service as long as the projected queues will be adequately stored by the proposed design, however; there will be an impact on the existing on-street parking on the south side of Kennedy Street. In addition, the available roadway width of Kennedy Street does not seem to be 34 feet as indicated in the CTR but rather approximately 30 feet. We would like to continue discussions regarding the width of these lanes as part of the permitting process;
- At South Dakota Avenue and Ingraham Street, the Applicant proposes to add a full signal to the intersection. DDOT is currently developing plans to install a HAWK signal at the intersection. The HAWK signal has the potential to be upgraded to a full signal. DDOT recommends a performance monitoring plan be put in place and a full signal warrant analysis be performed once the subject development is built and sufficiently occupied to determine the appropriateness of a full color signal for the following reasons:
 - Installation of a full color signal based solely on the peak hour warrant is an unusual case;
 - The AM and PM peak hour minor street volumes barely exceed the threshold for warranting a signal and only under total future traffic estimations;
 - Eastbound traffic will balance out with egressing vehicles destined for northbound South Dakota Avenue using the northern access point and the existing signal at South Dakota Avenue and Kennedy Drive;
 - Synchro results are likely overestimating side street delays, as gaps in traffic for egressing vehicles from Ingraham Street will be provided by adjacent signals; and

- The Applicant should continue to work with DDOT on the signal analysis for this intersection and set aside funds to provide a full signal if DDOT approves the analysis. If the analysis does not immediately support a full signal, DDOT would like to continue to monitor the location for several years if the initial warrants do not support a full signal. If a full signal is not ultimately warranted after several years, DDOT wants the Applicant to dedicate those funds that would have been applied to the signal to other transportation improvements in the vicinity of the site.

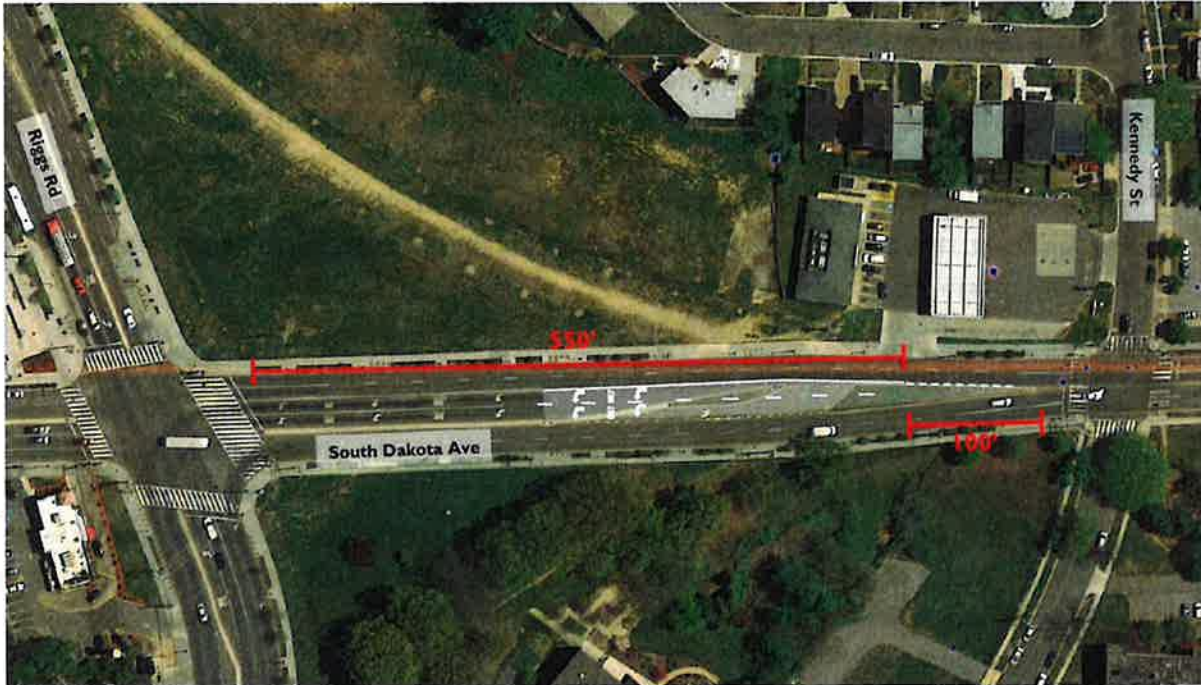


Figure 3 – Riggs Road and South Dakota Avenue Northbound Left Turn Lane Extension
(Source: Wells and Associates, March 14, 2019)

DDOT also proposes the following additional mitigations:

- Work with DDOT to improve pedestrian infrastructure, including the intersection of Hamilton, Ingraham, and the public alley at the southwest corner of the site. The sidewalk should continue across the alley on the north side of the intersection; and
- 3rd Street NE is a potential pedestrian route between the site and the Fort Totten Metro station. 3rd Street is currently disconnected and does not meet DDOT standards. The Applicant should fund improvements to 3rd Street that provide a connection for pedestrians and bicycles that meet DDOT standards.

Transportation Demand Management

As part of all major development review cases, DDOT requires the Applicant to produce a comprehensive Transportation Demand Management (TDM) plan to help mitigate an action's transportation impacts. TDM is a set of strategies, programs, services, and physical elements that

influence travel behavior by mode, frequency, time, route, or trip length in order to help achieve highly efficient and sustainable use of transportation facilities. In the District, this typically means implementing infrastructure or programs to maximize the use of mass transit, bicycle, and pedestrian facilities, and reduce single occupancy vehicle trips during peak periods. The Applicant's proposed TDM measures play a role in achieving the desired and expected mode split.

The specific elements within the TDM plan vary depending on the land uses, site context, proximity to transit, scale of the development, and other factors. The TDM plan must help achieve the assumed trip generation rates to ensure that an action's impacts will be properly mitigated. Failure to provide a robust TDM plan could lead to unanticipated additional vehicle trips that could negatively impact the District's transportation network.

The Applicant proposes a TDM Plan in the February 2019 CTR which includes the following elements:

- A member of the property management team will be designated as the Transportation Management Coordinator (TMC). The TMC will be responsible for ensuring that information regarding transportation options is disseminated to retail and residential tenants of the building. The position may be part of other duties assigned to the individual;
- The property management website will include information on and/or links to current transportation programs and services, such as Capital Bikeshare, car-sharing services, ride-hailing services, and transportation apps;
- An electronic display will be provided in residential lobby as well as the main cultural building lobby and will provide public transit information such as nearby Metrorail stations and schedules, Metrobus stops and schedules, car-sharing locations, and nearby Capital Bikeshare locations indicating the number of bicycles available at each location;
- Shower and changing facilities will be provided in the retail bike parking area building for employees who bike, walk, or jog to work;
- Convenient and covered secure bike parking facilities will be provided in accordance with the minimum required by ZR16;
- A bicycle repair station will be provided on the P1 level of the garage;
- Two electric car charging stations will be provided in the garage; and
- The cost of parking spaces for tenants will be unbundled from leases.

In addition to the specific TDM strategies, the Applicant proposes to locate a Capital Bikeshare station on the site.

DDOT has reviewed the TDM Plan and recommends the following measures in addition to the Applicant's proposed plan:

- The Applicant is proposing too many parking spaces. As the site is within 0.25 miles of a metro station, the Applicant can (as per ZR16) reduce the number of parking spaces by up to 50%;
- The Applicant must unbundle parking from lease or purchase of residential units and must charge market rate. The Applicant shall only rent spaces to residents and not lease spaces to

outside groups (particularly commuters); an exception can be made to accommodate District services like fire and police operations;

- The Applicant shall provide an annual Capital Bikeshare membership to all residents for the first 10 years and a carshare membership of equal value;
- The Applicant shall provide a preloaded SmarTrip card with a \$10 value to all residents upon move-in for the first 10 years of building occupancy;
- The Applicant shall provide funding for a Capital Bikeshare station and work with DDOT to find a suitable location;
- The Applicant shall designate 2 parking spaces for carsharing vehicles and work with a regional carshare company to place two vehicles at the location;
- The Applicant shall designate 2 parking spaces for vanpooling to be used by commuters who vanpool to the area for work;
- The Applicant shall share contact information of a transportation coordinator for the site with DDOT and goDCgo, and work with them to promote sustainable and active transportation options from and to the site;
- The Applicant shall provide a move-in kit to each resident containing a Get Around Guide highlighting local transportation options, annual Capital Bikeshare Membership, carshare membership, Metro brochure, SmarTrip card preloaded with \$10, and other transportation information;
- The Applicant shall post all TDM requirements online for easy reference;
- The Applicant shall hold two annual transportation events for residents (examples: resident social, walking tour of local transportation options, lobby event, and transportation fair);
- The retailers and performing arts spaces must work with DDOT and goDCgo to tailor and share transportation options from/to the site and set goals for increasing the mode split for active transportation from/to the site;
- The performing arts spaces must share “Getting Here” info with attendees/ guests ahead of any events and post the same information on the website. Complimentary goDCgo services are available to create these materials/text; and
- The Applicant shall provide 8 shopping carts for residents to use on errands and grocery shopping.

JS:tvh

APPENDIX A

DDOT COMMENT RESPONSE LETTER FROM WELLS + ASSOCIATES

WELLS + ASSOCIATES

MEMORANDUM



1420 Spring Hill Road,
Suite 610,
Tysons, VA 22102
703-917-6620
WellsandAssociates.com

To: Ted Van Houten, AICP
Jonathan Rodgers
District Department of Transportation (DDOT)

CC: Paul Tummonds
Goulston & Storrs

From: Barbara Mosier, P.E., PTOE
Grady P. Vaughan, EIT
Wells + Associates, Inc.

Re: Art Place Phase 2

Subject: Comprehensive Transportation Review (CTR)
DDOT Comments

Date: March 13, 2019

INTRODUCTION

This memorandum provides a response to comments received on March 6-7, 2019 from DDOT staff regarding the CTR submitted on February 18, 2019 in support of the referenced Second Stage PUD application (ZC Case N. 06-10D). The site is generally bordered by South Dakota Avenue NE to the east, Ingraham Street NE to the south, a public alley to the west and Kennedy Street NE to the north. The site is divided by 4th Street NE running north to south through the western portion of the site.

Each of the issues/comments identified in your correspondence, as well as our responses, are provided below.

Comment #1: *Where are the Saturday counts and analysis? The hearing is less than 30 days away, and we have yet to receive it.*

Response: Hard copies of the CTR addendum including the Saturday counts and analysis were submitted to DDOT on March 5, 2019 and included in the prehearing submittal. A link to the electronic copies was forwarded to DDOT staff on March 6, 2019.

Comment #2: *On the scoping form, we noted that you didn't change your mode splits in your trip generation estimates, but you added 250 parking spaces. We commented that the vehicle*

WELLS + ASSOCIATES

MEMORANDUM

mode split should be higher to reflect the increase in parking, but the mode split in the CTR is the same. It appears that this comment was overlooked.

Response: The number of parking spaces provided on the site was increased since the first submittal of the scoping document based on the related increase in density on the site. The parking planned for the building was increased concurrently with increasing the square footage for the entertainment and retail uses as well as additional dwelling units. Based on zoning requirements, the increase in density from what was included in the initial scoping form would more than require the 250 additional parking spaces. However, based on additional correspondence with DDOT staff, we have reduced the transit mode split by 5% for the FEZ uses in the updated analysis. The 5% reduction was reassigned from person trips to private vehicle trips. The revised site trips are summarized in Table 1. These revised trips were assigned to the road network as described in the February 18, 2019 CTR and the resulting site and total future trips are shown on the attached Figures 1 to 4. The total future Synchro and SimTraffic analysis were updated with these revised total future volumes and are shown in Tables 2 and 3. As shown in Tables 2 and 3, there are no significant changes to the results of the analysis from that shown in the CTR report.

Comment #3: *On the scoping form, we asked you to provide the distance between the new curb cut off the public alley and the future alignment of Kennedy Street. This information is not included in the CTR.*

Response: Please see Attachment 1. The curb cut from the public alley and future alignment of Kennedy Street are 62' 5" apart, measured edge of curb to edge of curb.

Comment #4: *On the scoping form, we asked you to provide more information on the new circular driveway off Kennedy Street. We didn't feel that this was discussed enough in the CTR. We need more information on how it will function, and then how it will be removed when Kennedy is realigned.*

Response: As shown in the attached Attachment 1, revisions have been made to the area that was previously shown as a dedicated circular drive. This area is now planned as a pedestrian plaza area to be separated from the parking access drive by removable bollards or other similar vehicular control devices. It has a curbsless section, which can operate as a secondary drop off area for those with special needs or authorization attending planned special events. At other times, the plaza area is intended to be reserved for pedestrian activities. At the time of the Kennedy Street realignment, the plaza area will be eliminated.

Comment #5: *How do you access the loading to the western residential building that's between the private street and the alley? Figures 15 and 16 don't look like they match.*

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MEMORANDUM

Response: The loading to the western residential building is accessed from the alley as shown on Attachment 1. Swept area diagrams are provided for both loading spaces and are included in Attachment 2.

Comment #7: *How do you enter the lobby of that residential building and the artist studio maker space? Where are the pedestrian access points to those buildings?*

Response: Pedestrian access to the western residential building has been highlighted on Attachment 1. Two (2) main lobbies are provided to the western residential building via 4th Street and several doorways to the maker space are provided off of 4th Street. It is noted that the building connects above the alley for the residential uses.

Comment #6: *In Appendix I, there are several instances of trucks clipping corners and going over curbs, even on the private street. Also, since Kennedy Street will be realigned in the future, the analysis should be done with that future alignment. On page I-12, you'd need to restrict parking on Kennedy to make the turn, so you'll need to discuss in your analysis how and when that parking would be restricted.*

Response: Updated swept area diagrams are provided in Attachment 2. The truck size for the site has been reduced to SU-50 for the commercial uses in the eastern building and SU-30 for the residential uses in the western building. A revised Loading Management Plan is included as Attachment 3. Loading for the western building via the public alley would no longer encroach on the parking area on Kennedy Street prior to entering the alley.

The Kennedy Street alignment has not yet been fully designed; therefore, it would be difficult to provide detailed truck turning diagrams on the future alignment. At the time that the realigned roadway is designed, trucks will be accommodated with appropriate curb radii and roadway widths.

Comment #7: *DDOT provided to following AM and PM Existing Synchro Comments:*

- Please remove all non-study intersection with inaccurate or incomplete data
- Overall intersection PHFs should be used in lieu of individual approaches
- Node 1
 - EBL and WBL should both be coded as phase 1
 - Turn dual entry off for all phases and turn off ped phases for 17 and 18
 - Veh extension and min gap should all be 1s
 - Offset different from existing conditions
- Node 2
 - Turn off right turn on red for EB approach
 - Removed the storage length for NBL

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MEMORANDUM

- Turn off dual entry for all phases
- Split different from existing conditions
- Node 3
 - WBR has 1 storage lane at 40 ft to account for parking
 - Split different from existing conditions
 - Turn off dual entry for phase 2 and 6
- Node 4
 - Turn off dual entry for phase 2 and 6
- Node 7
 - Offset different from existing conditions
 - Turn off dual entry for all phases
- Node 8
 - Turn off dual entry for all phases and turn off ped phases for 17 and 18

PM Existing Synchro

- Node 2 phase 4 should be after phases 2 and 6
- Node 8 split/offset different from existing conditions

Response: The AM and PM synchro files were updated based on the summarized comments above. The Saturday synchro files were updated with consistent parameters to those provided for the AM and PM peak hours. The updated results of the analysis are included in Tables 2 and 3. As shown, the results of the analysis are consistent with the previous submission. Therefore, the recommendations and conclusions of the previous submittal do not change.

Comment #9: *We would like you to add the site access points to the study area intersections, specifically the curb cuts off Ingraham and Kennedy and the access points to the private street off of Ingraham and Kennedy. We would like to see LOS analysis for these four access points. Since they don't exist today, you don't need to do any counts, but we would like Synchro analysis.*

Response: The site access points to the garage on Ingraham Street and Kennedy Street were included in the updated Tables 2 and 3. Each approach of the future intersections operates at a "B" or better.

The private street is designed to restrict vehicles access with removable bollards or other similar vehicular traffic control devices between Ingraham Street and the commercial loading area. Loading is generally scheduled and anticipated outside of the adjacent street peak hour. Therefore, the intersections of the private street are not anticipated to carry vehicular traffic and were not included in the updated analysis.

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MEMORANDUM

Comment #10: We need additional justification for the signal retiming mitigations. We need this information to evaluate the up- and down-stream impacts of the proposed signal retiming. This includes:

- 95% percentile queue analysis for the Future with Improvements (aka the Mitigated Future) scenario
- V/C ratios for the study area intersections

Response: The 95th percentile queueing analysis results and the v/c ratios are provided for the total future conditions with development and improvements in Tables 3 and 4.

We trust that the responses provided herein adequately address the comments raised in DDOT's review. If you have any questions or require additional information, do not hesitate to contact Barbara Mosier at 301.971.3425 or Grady Vaughan at 703.917.6620 or bjmosier@wellsandassociates.com / gpvaughan@wellsandassociates.com.

Table 1
Art Place Phase II
Site Trip Generation Summary

Land Use	ITE Code	Setting/Location	Size	Units	AM Peak Hour			PM Peak Hour			SAT Peak Hour			
					IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	
Residential/Ground Floor Retail														
			264 D.U.											
			26,702 S.F.											
ITE Trips ²												58	60	118
Person Trips ¹	AVO	1.96			96	273	369	318	204	522	113	118	231	
Vehicle Person Trips	AM	PM	32%								36	38	74	
Non-auto Person Trips	64%	71%	68%		61	175	236	226	145	371	77	80	157	
Transit	28%	20%	24%		27	76	103	63	41	104	27	28	55	
Bike	4%	4%	4%		4	11	15	13	8	21	4	5	9	
Walk	32%	47%	40%		31	87	118	149	96	245	45	47	92	
Vehicle Trips	36%	29%	32%		35	98	133	92	59	151	19	19	38	
Shopping Center														
ITE Trips ²	820	General Urban/Suburban	84,800 SF (GLA)		120	74	194	231	250	481	351	324	675	
Person Trips ⁵	AVO	2.0			236	145	381	453	490	943	688	635	1,323	
Vehicle Person Trips					111	68	179	213	230	443	323	298	622	
Non-auto Person Trips	Ret.	Entert.			125	77	202	240	260	500	365	337	701	
Metro ³	0.29	0.26	27%		64	39	103	122	132	255	171	186	357	
Bus ³	0.08	0.06	7%		17	10	27	32	34	66	44	48	93	
Walk/Bike ³	0.27	0.11	19%		45	27	72	86	93	179	121	131	251	
Walk			14%		33	21	54	64	70	134	90	98	189	
Bike			5%		11	7	18	21	23	45	30	33	63	
Vehicle Trips					56	35	91	109	117	226	165	152	317	
Live Theater														
Total			250 Seats		3	2	5	88	15	103	88	15	103	
Rate per seat ⁴								0.35	0.06	0.40	0.35	0.06	0.40	
Person Trips ⁵	AVO	2.0			6	4	10	175	30	205	175	30	205	
Vehicle Person Trips					4	2	6	109	19	127	109	19	127	
Non-auto Person Trips			Entert.		2	2	4	66	11	78	66	11	78	
Metro ³		0.06	6%		2	1	3	10	2	12	10	2	12	
Motorcoach	48	0.15	15%					30		30	30		30	
MetroBus ³		0.06	6%		1	0	1	10	2	12	10	2	12	
Walk/Bike ³		0.11	11%		1		1	19	4	23	19	4	23	
Walk			8%		1		1	14	3	17	14	3	17	
Bike			3%				0	5	1	6	5	1	6	
Motorcoach Trips								1		1	1		1	
Vehicle Trips					2	1	3	55	10	64	55	10	64	
All Vehicle Trips					2	1	3	56	10	65	56	10	65	
Meow Wolf														
Person Trips ⁵	AVO	3.19	77,204 SF		15	2	17	27	142	169	27	142	169	
Vehicle Person Trips					10	2	11	17	89	105	17	88	105	
Non-auto Person Trips			Entert.		5	1	6	10	54	64	10	54	64	
Metro ³		0.06	6%		3	1	4	2	9	10	2	9	10	
Motorcoach	48	0.15	15%						25	25		25	25	
MetroBus ³		0.06	6%		1	0	1	2	8	10	2	8	10	
Walk/Bike ³		0.11	11%		2	0	2	3	16	19	3	16	19	
Walk			8%		2		2	2	12	14	2	12	14	
Bike			3%		0	0	0	1	4	5	1	4	5	
Motorcoach Trips									1	1		1	1	
Vehicle Trips					3	1	3	5	28	33	5	28	33	
All Vehicle Trips					3	1	3	5	29	33	5	29	33	
Museum														
ITE Trips ²	580	General Urban/Suburban	113,452 SF		27	4	32	3	17	20	53	22	75	
Person Trips ⁵	AVO	3.19			87	15	102	10	55	65	170	69	239	
Vehicle Person Trips					54	9	63	6	34	40	105	43	148	
Non-auto Person Trips			Entert.		33	6	39	4	21	25	65	26	91	
Metro ³		0.06	6%		5	1	6	1	3	4	1	3	4	
Motorcoach	48	0.15	15%		15		15		10	10		10	10	
MetroBus ³		0.06	6%		5	1	6	1	3	4	1	3	4	
Walk/Bike ³		0.11	11%		9	2	11	1	6	7	1	6	7	
Walk			8%		7	1	8	1	4	5	1	4	5	
Bike			3%		2	1	3		2	2		2	2	
Motorcoach Trips					1		1		1	1		1	1	
Vehicle Trips					17	2	20	2	11	13	39	13	46	
All Vehicle Trips					18	2	21	2	12	14	33	14	47	
Total Proposed Development														
Total Person Trips					440	439	879	983	921	1,904	1,118	936	2,054	
Non-auto Person Trips					226	261	487	546	491	1,038	583	508	1,091	
Personal Vehicle Trips					113	136	250	262	224	486	276	222	498	
Motorcoach Trips					1		1	1	2	3	1	2	3	
All Vehicle Trips					114	136	251	263	226	488	277	224	501	

Notes:

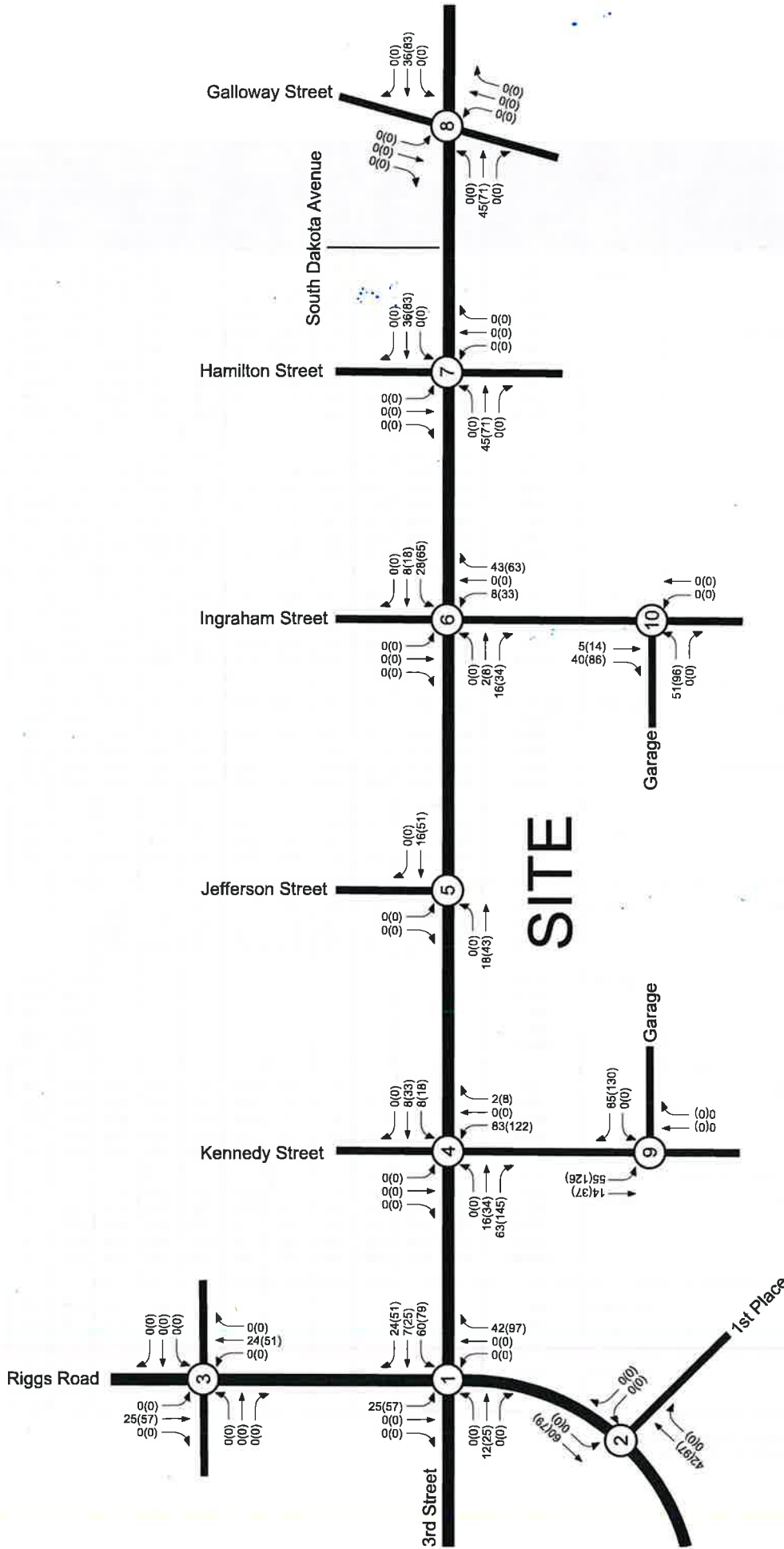
- Residential trip generation (including non-auto mode split) calculated using tripsDC.org.
- Trips generated using Institute of Transportation Engineers (ITE) Trip Generation, 10th Edition.
- Metro, bus, and walk/bike mode splits taken from WMATA 2005 Ridership Survey. The walk mode split was assumed to be 75% of the total walk/bike split.
- Based on counts collected by W + A on Thursday, March 10, 2016 and reflects a show with 90% attendance at an off-site venue.
- Average Vehicle Occupancy from National Household Travel Survey
- Meow Wolf trip generation estimates calculated based on an assumed 9,500 weekly visitors.

Table 4
 Art Place Phase II
 Intersection v/c Summary ^{1,2}

Intersection	Control	Lane Group Approach	Existing Conditions (2018)			Future Conditions without Development (2023)			Future Conditions with Development (2023)			Future Conditions with Improvements with Development (2023)		
			AM Peak	PM Peak	SAT Peak	AM Peak	PM Peak	SAT Peak	AM Peak	PM Peak	SAT Peak	AM Peak	PM Peak	SAT Peak
			v/c	v/c	v/c	v/c	v/c	v/c	v/c	v/c	v/c	v/c	v/c	v/c
1. Riggs Road/South Dakota Avenue <u>Proposed Mitigation Measures</u> 1. Signal timing split improvements 2. Extend northbound left turn storage into median	Signalized	EBL	0.13	0.39	0.37	0.15	0.44	0.42	0.14	0.44	0.42	0.19	0.45	0.51
		EBT	0.2	0.66	0.6	0.21	0.72	0.65	0.21	0.72	0.65	0.26	0.86	0.77
		EBR	0.27	0.55	0.47	0.29	0.65	0.55	0.35	0.81	0.75	0.36	0.84	0.75
		WBL	0.1	0.29	0.27	0.16	0.53	0.36	0.21	0.88	0.67	0.26	0.86	0.83
		WBTR	0.54	0.48	0.5	0.55	0.49	0.52	0.54	0.49	0.52	0.69	0.59	0.62
		NBL	0.87	0.79	1.07	0.96	0.92	1.2	1.06	1.08	1.35	0.87	0.88	1.01
		NBTR	0.2	0.36	0.24	0.23	0.4	0.26	0.26	0.47	0.32	0.22	0.43	0.29
		SBL	0.02	0.33	0.4	0.04	0.39	0.46	0.05	0.42	0.5	0.04	0.42	0.5
		SBTR	0.33	0.54	0.22	0.41	0.59	0.24	0.48	0.64	0.33	0.42	0.64	0.33
		Overall	0.55	0.65	0.64	0.62	0.73	0.7	0.65	0.87	0.81	0.66	0.83	0.8
2. Riggs Road/First Place <u>Proposed Mitigation Measures</u> 1. Signal timing split improvements	Signalized	EBT	0.7	0.95	0.94	0.74	1.05	1.01	0.78	1.12	1.07	0.78	0.89	0.89
		EBR	0.39	0.28	0.16	0.41	0.38	0.22	0.41	0.38	0.22	0.41	0.3	0.18
		WBL	0.21	0.48	0.17	0.23	0.54	0.19	0.24	0.54	0.19	0.38	0.61	0.28
		WBT	0.65	0.54	0.56	0.72	0.59	0.6	0.76	0.63	0.64	0.87	0.55	0.61
		NBL	0.89	0.48	0.34	1.00	0.55	0.44	1.00	0.55	0.44	0.79	0.78	0.51
		NBR	0.07	0.24	0.06	0.08	0.24	0.06	0.08	0.24	0.06	0.08	0.35	0.08
		Overall	0.76	0.75	0.73	0.83	0.83	0.8	0.85	0.88	0.84	0.85	0.84	0.78
3. Riggs Road/Chillum Place	Signalized	EBLTR	0.11	0.54	0.52	0.15	0.59	0.57	0.16	0.61	0.6	0.16	0.61	0.6
		WBLTR	0.74	0.53	0.53	0.78	0.65	0.61	0.81	0.71	0.67	0.81	0.71	0.67
		NBLTR	0.37	0.25	0.23	0.38	0.27	0.24	0.38	0.27	0.24	0.38	0.27	0.24
		SBLTR	0.22	0.54	0.48	0.22	0.56	0.49	0.22	0.56	0.49	0.22	0.56	0.49
		Overall	0.7	0.54	0.52	0.74	0.63	0.59	0.76	0.68	0.64	0.76	0.68	0.64
4. South Dakota Avenue/Kennedy Street <u>Proposed Mitigation Measures</u> 1. Separated eastbound left and through-right lanes	Signalized	EBLTR/EBL	0.04	0.15	0.08	0.25	0.22	0.07	0.71	0.95	0.66	0.45	0.76	0.66
		EBTR	-	-	-	-	-	-	-	-	-	0.03	0.03	0.03
		WBLTR	0.95	0.54	0.28	1.16	0.65	0.42	1.15	0.54	0.3	0.77	0.51	0.34
		NBLTR	0.4	0.44	0.35	0.47	0.51	0.4	0.5	0.58	0.48	0.57	0.6	0.46
		SBLTR	0.4	0.52	0.38	0.45	0.61	0.42	0.5	0.75	0.56	0.57	0.78	0.55
		Overall	0.52	0.53	0.36	0.61	0.62	0.42	0.63	0.79	0.58	0.63	0.78	0.57
5. South Dakota Avenue/Jefferson Street	Unsignalized	WBLR	0.49	0.09	0.08	0.55	0.10	0.07	0.56	0.09	0.08	0.5	0.08	0.07
		NBTR	0.33	0.41	0.26	0.37	0.45	0.29	0.38	0.48	0.31	0.38	0.48	0.31
		SBTR	0.02	0.06	0.01	0.02	0.07	0.01	0.02	0.07	0.01	0.02	0.07	0.01
6. South Dakota Avenue/Ingraham Street <u>Proposed Mitigation Measures</u> 1. Add signal	Unsignalized	EBLTR	0.21	0.4	0.21	0.3	0.47	0.28	0.53	1.73	0.95			
		WBLTR	0.04	0.11	0.01	0.05	0.13	0.01	0.07	0.24	0.02			
		NBLTR	0.03	0.02	0.02	0.03	0.02	0.02	0.08	0.12	0.12			
		SBLTR	0.00	0.02	0.01	0.00	0.02	0.01	0.00	0.02	0.01			
	Signalized	EBLTR										0.33	0.64	0.56
		WBLTR										0.04	0.04	0.01
		NBLTR										0.48	0.68	0.56
Overall										0.47	0.47	0.46		
Overall	0.46	0.67	0.56											
7. South Dakota Avenue/Hamilton Street	Signalized	EBLTR	0.01	0.01	0	0.32	0.29	0.21	0.32	0.29	0.21	0.32	0.29	0.21
		WBLTR	0.14	0.01	0.01	0.14	0.01	0.01	0.14	0.01	0.01	0.14	0.01	0.01
		NBLTR	0.45	0.44	0.37	0.5	0.57	0.48	0.52	0.59	0.53	0.52	0.59	0.53
		SBLTR	0.55	0.42	0.44	0.6	0.5	0.52	0.63	0.54	0.56	0.63	0.54	0.56
		Overall	0.46	0.41	0.35	0.53	0.53	0.41	0.55	0.56	0.45	0.55	0.56	0.45
8. South Dakota Avenue/Galloway Street	Signalized	EBLTR	0.52	0.69	0.14	0.71	0.79	0.19	0.71	0.79	0.19	0.71	0.79	0.19
		WBLTR	0.8	0.3	0.06	0.86	0.32	0.06	0.86	0.32	0.06	0.86	0.32	0.06
		NBLTR	0.68	0.68	0.52	0.75	0.84	0.64	0.79	0.92	0.72	0.79	0.92	0.72
		SBLTR	0.48	0.54	0.62	0.55	0.61	0.68	0.57	0.66	0.74	0.57	0.66	0.74
		Overall	0.72	0.71	0.44	0.79	0.87	0.5	0.82	0.93	0.56	0.82	0.93	0.56
9. Kennedy Street/Garage Entrance *Future Site Driveway	Unsignalized	WBLT							0.04	0.09	0.10	0.04	0.09	0.10
		NBLR							0.10	0.14	0.13	0.10	0.14	0.13
10. Ingraham Street/Garage Entrance *Future Site Driveway	Unsignalized	WBTR							0.08	0.11	0.11	0.08	0.11	0.11
		SBLR							0.07	0.14	0.13	0.07	0.14	0.13

Notes:

- Capacity analysis based on Highway Capacity Manual methodology, using Synchro 10.
- Roadway names in bold are considered east/west for purposes of this analysis.



NORTH
 Art Place Phase II
 Washington, DC



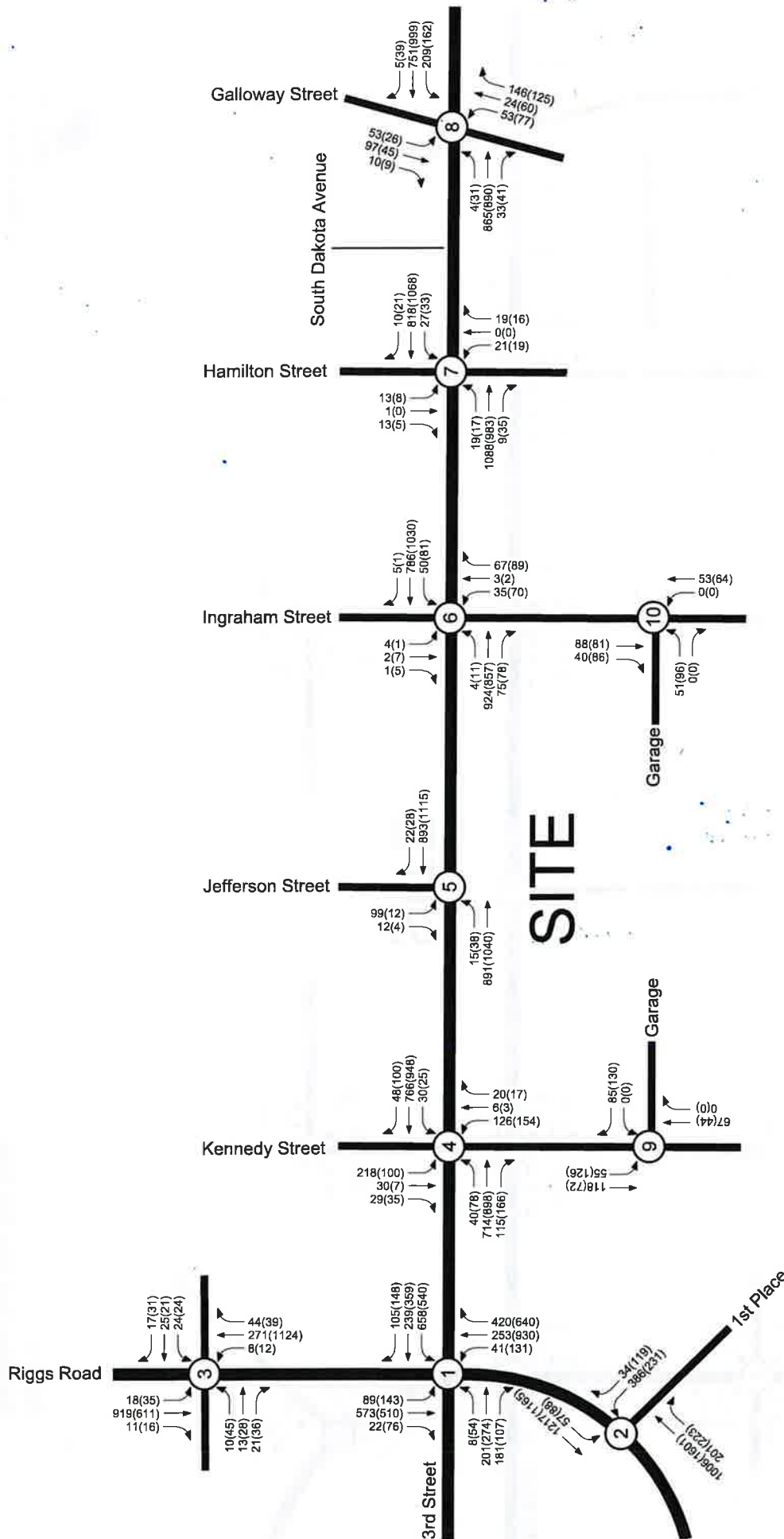


Figure 2
2023 Total Future Volumes



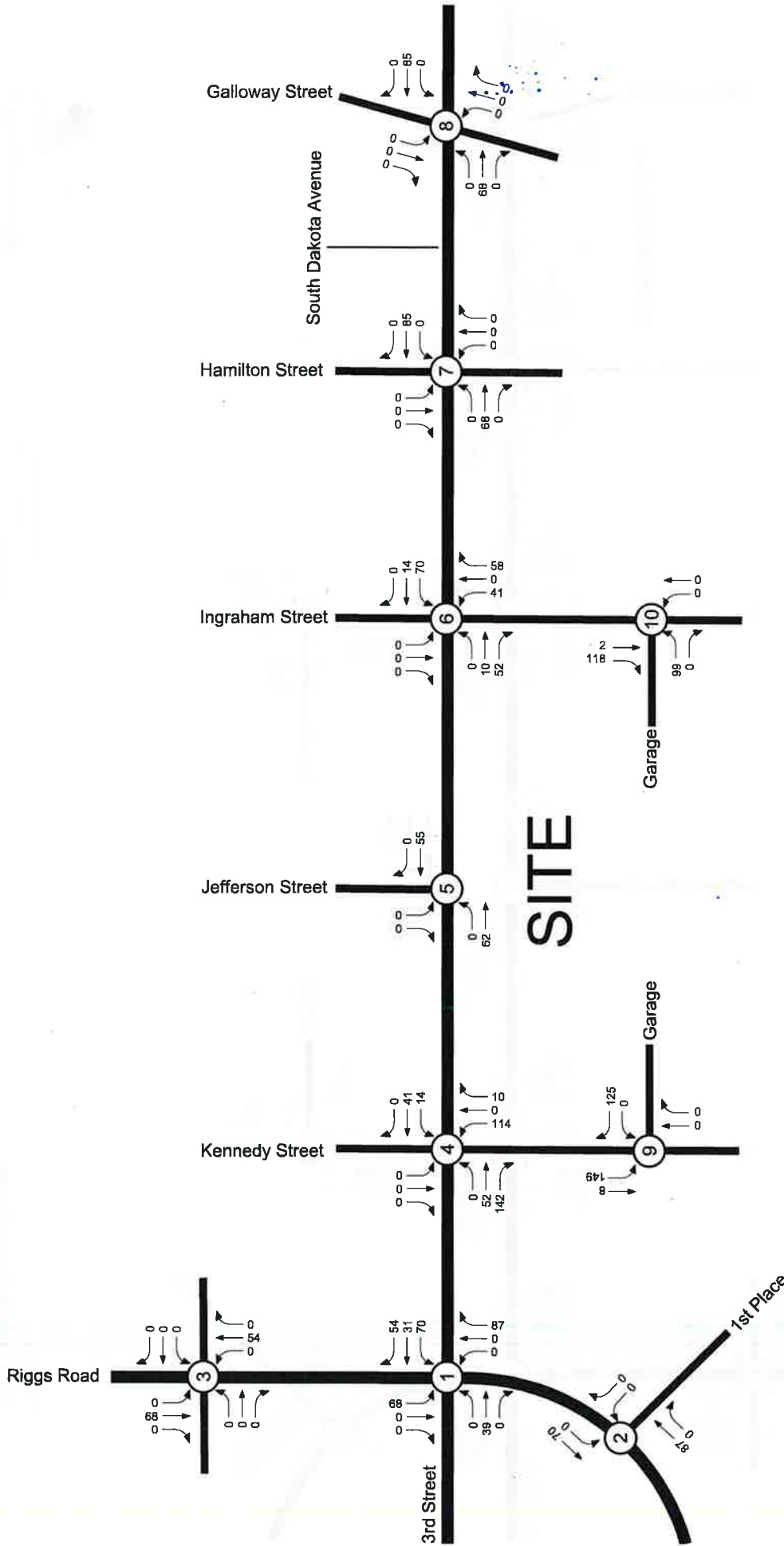


Figure 3
Saturday Peak Hour Site Trips



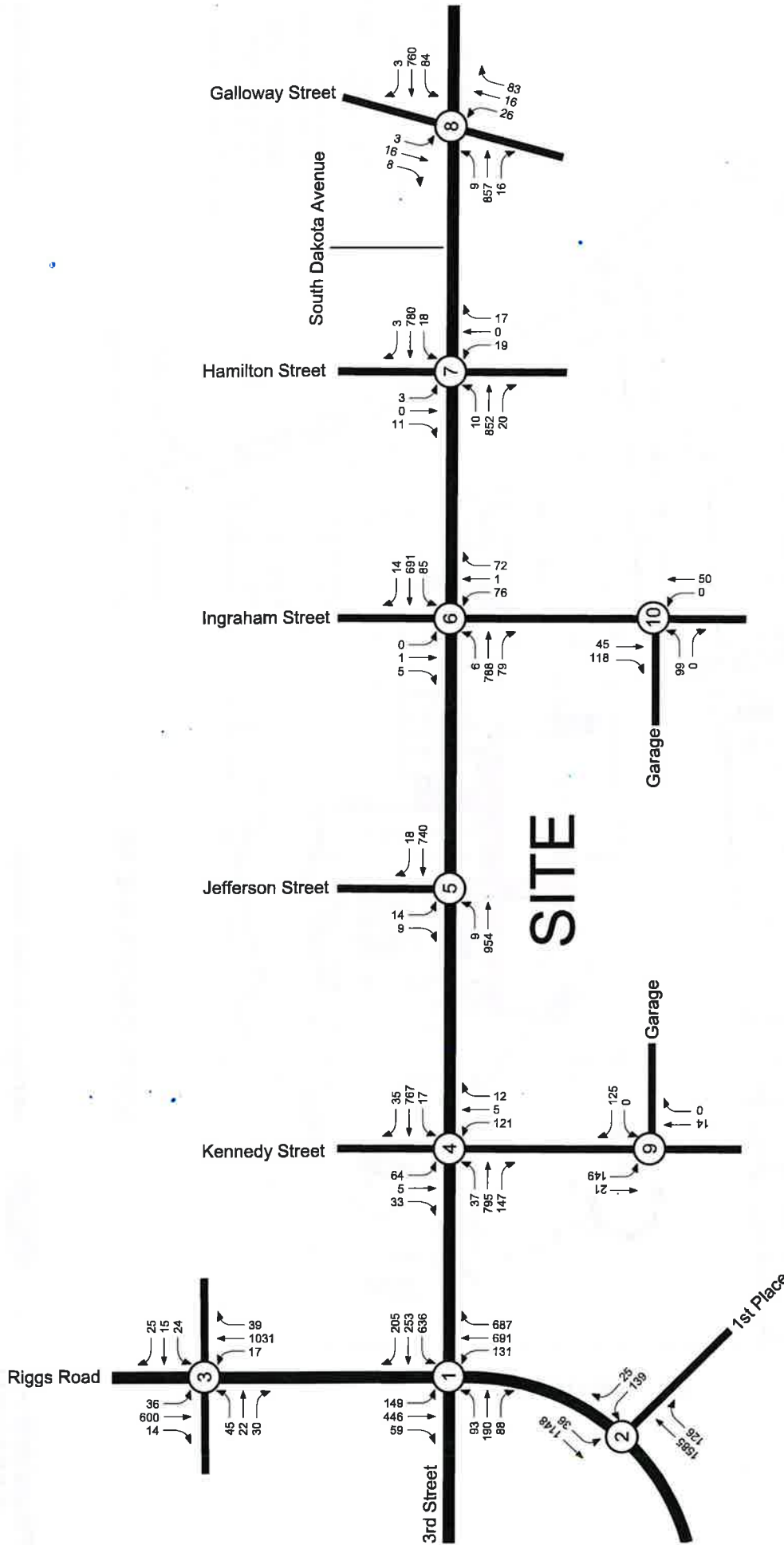
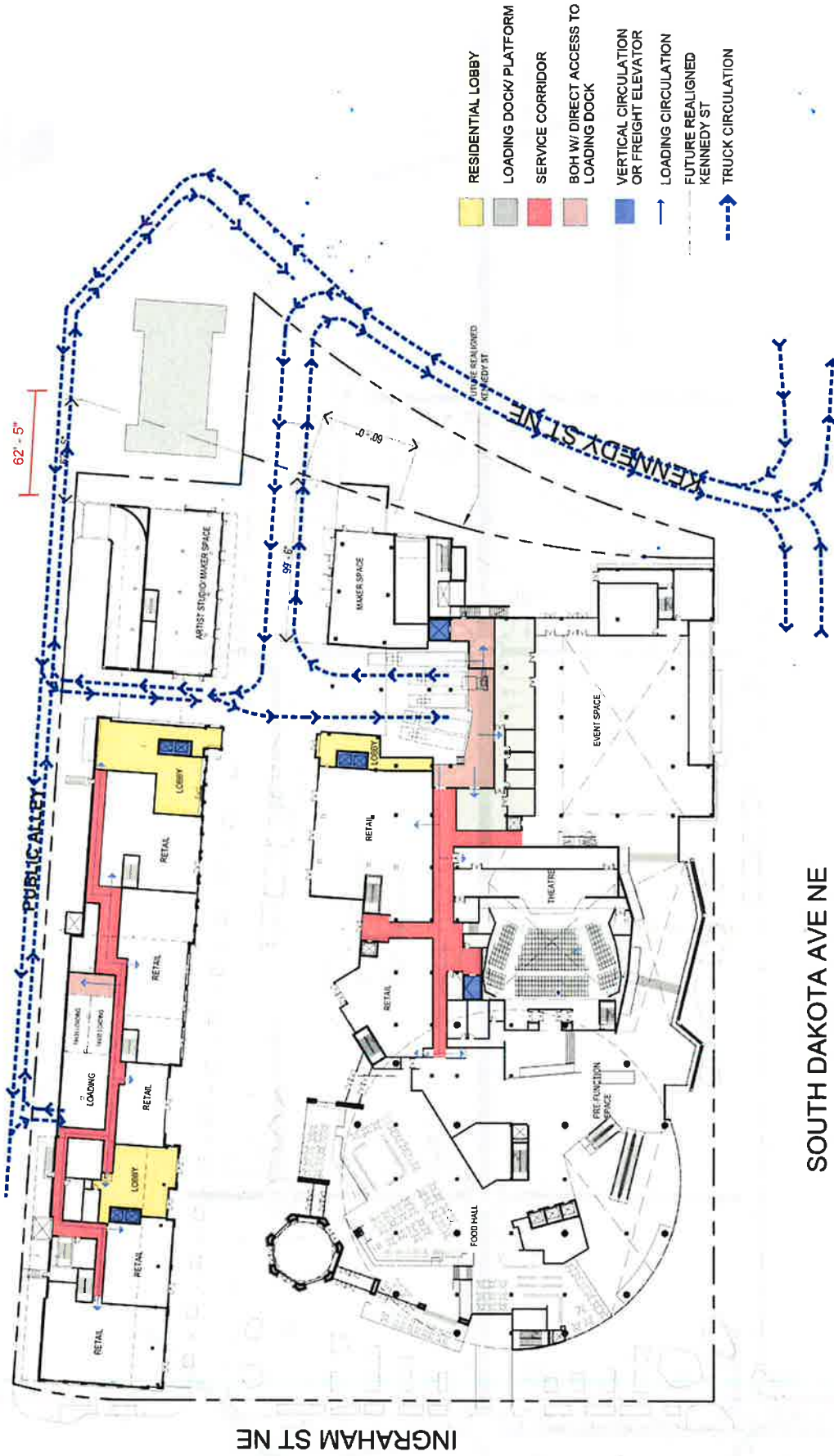


Figure 4
 2023 Saturday Total Future Volumes



Attachment 1



LOADING DIAGRAM
SCALE: 1" = 60'-0"
Z-004

ART PLACE AT FORT TOTTEN
PROJECT NO. 76380
DATE: 03/08/2019

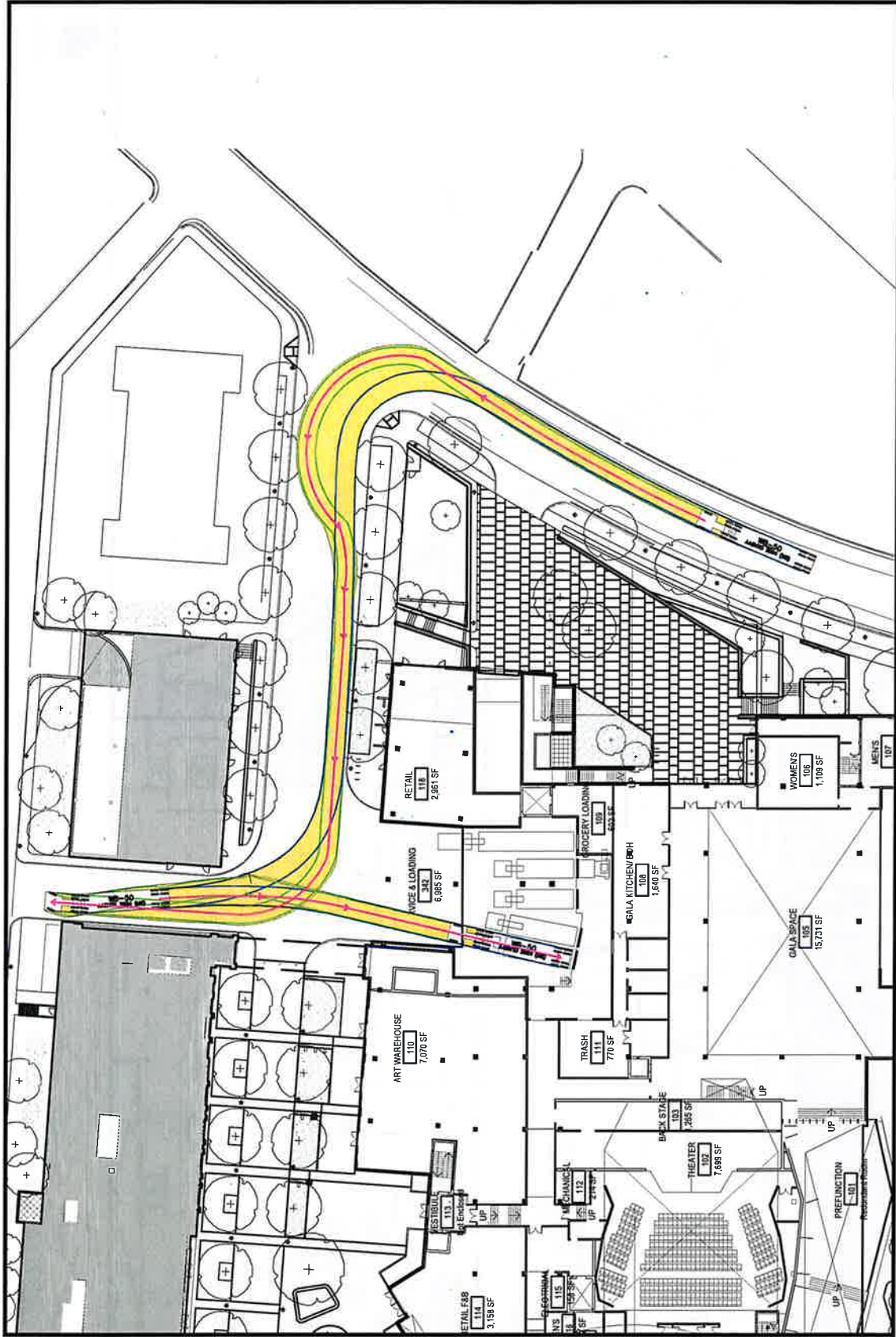
STUDIO SHANGHA


PERKINS EASTMAN

SOUTH DAKOTA AVE NE

INGRAHAM ST NE

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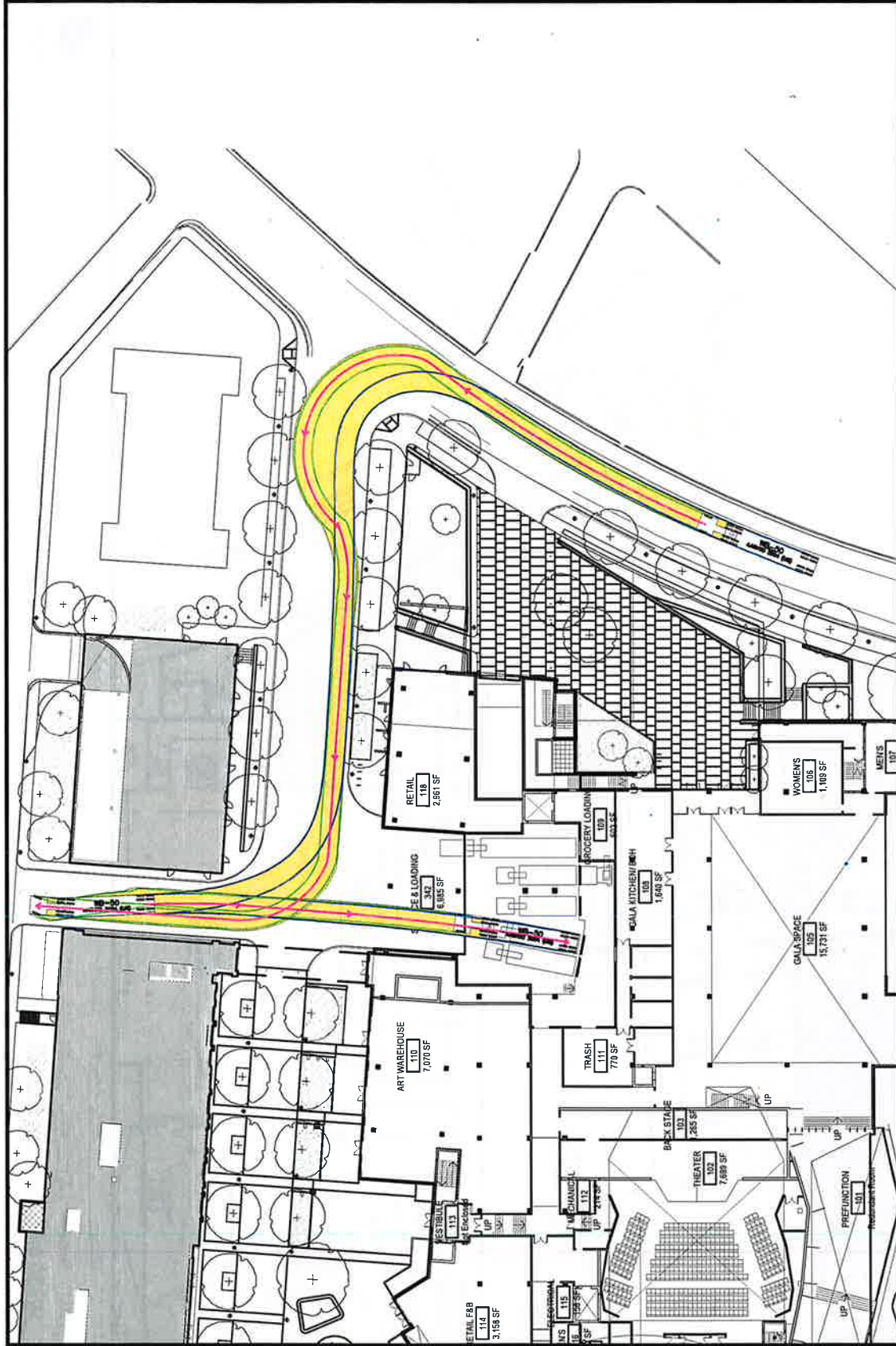


 NORTH
Art Place Phase II
Washington, D.C.

Attachment 2A
WB50 Inbound Berth 1



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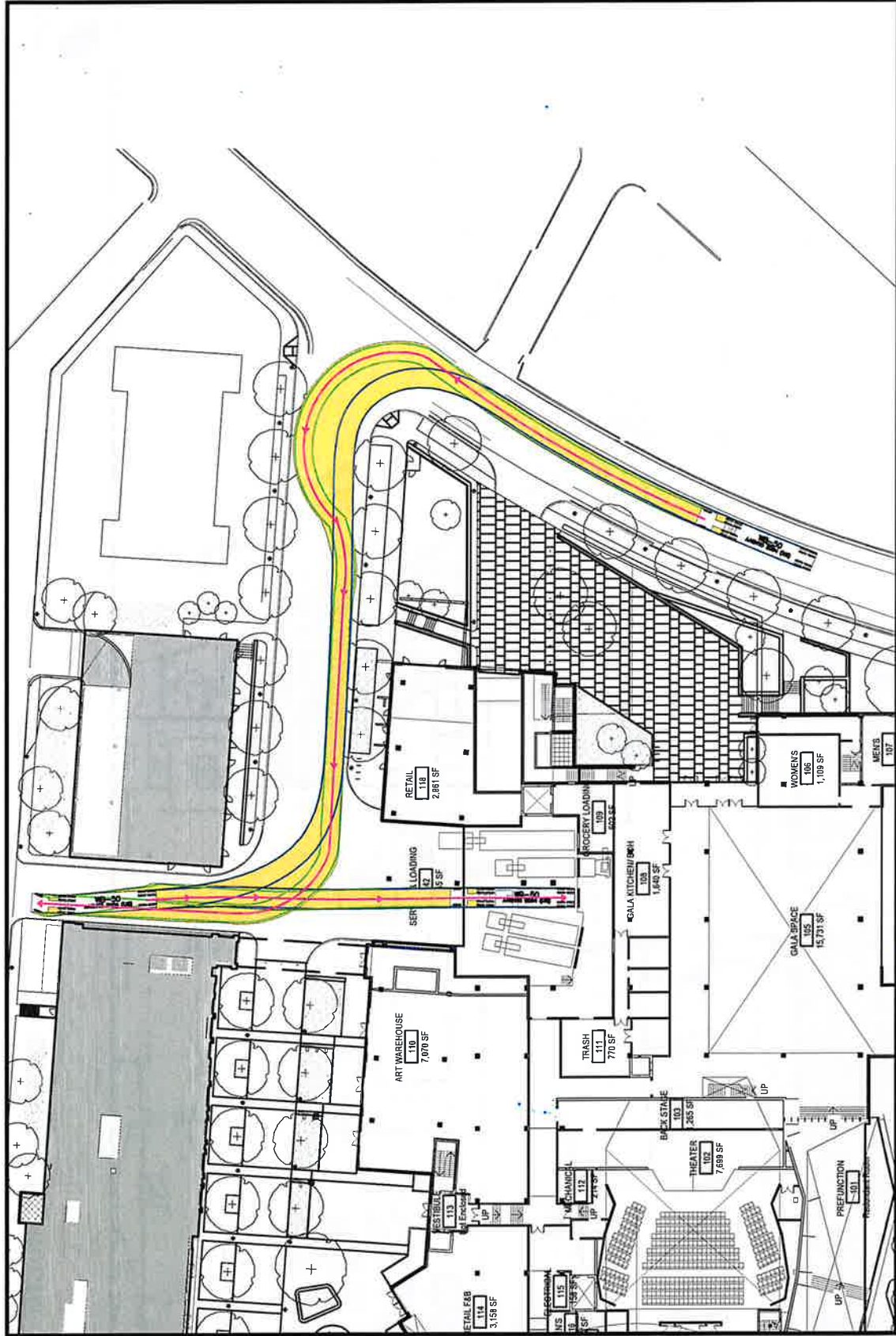


NORTH
Art Place Phase II
Washington, D.C.

Attachment 2B
WB50 Inbound Berth 2



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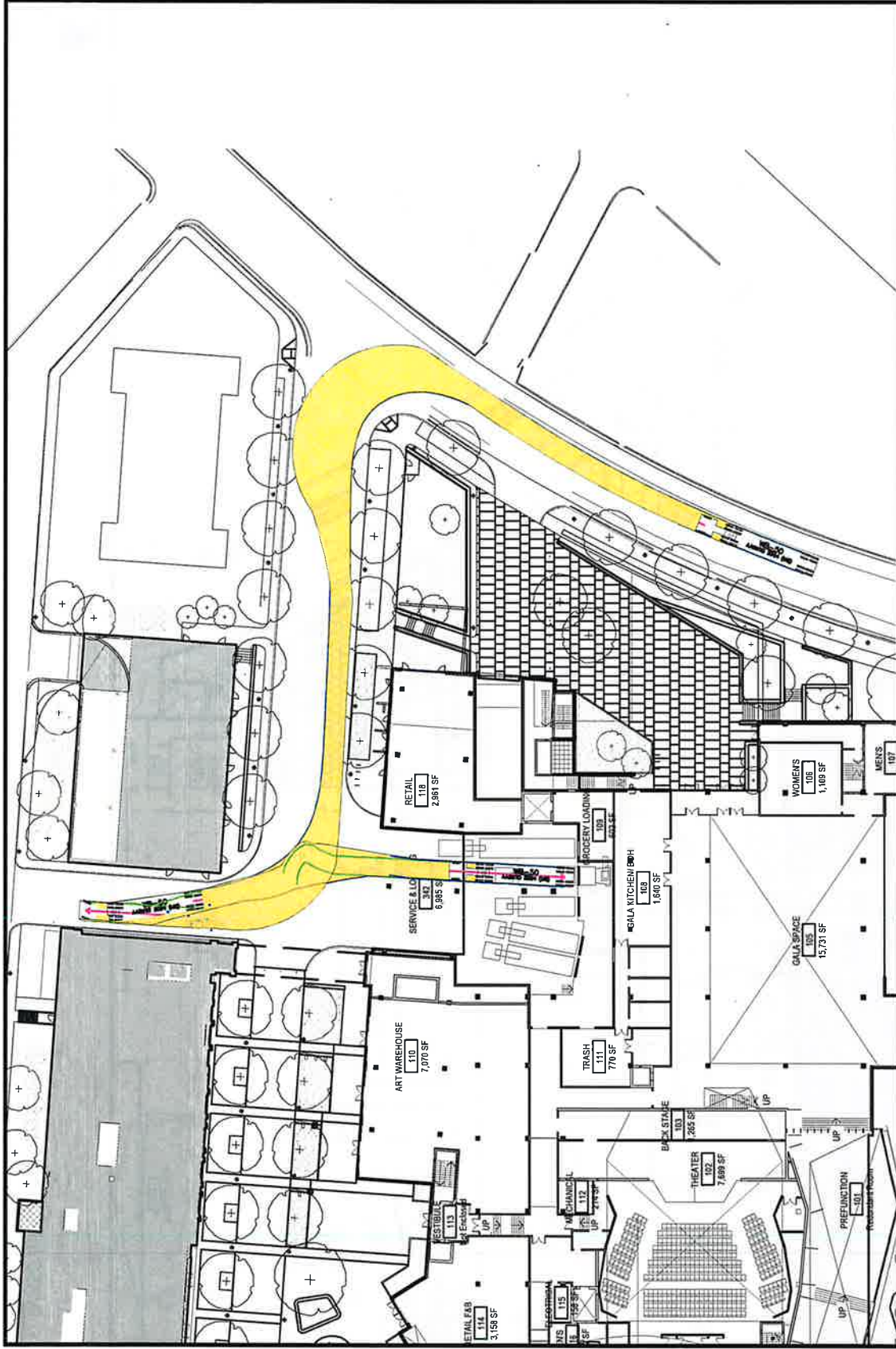


 NORTH
Art Place Phase II
Washington, D.C.

Attachment 2C
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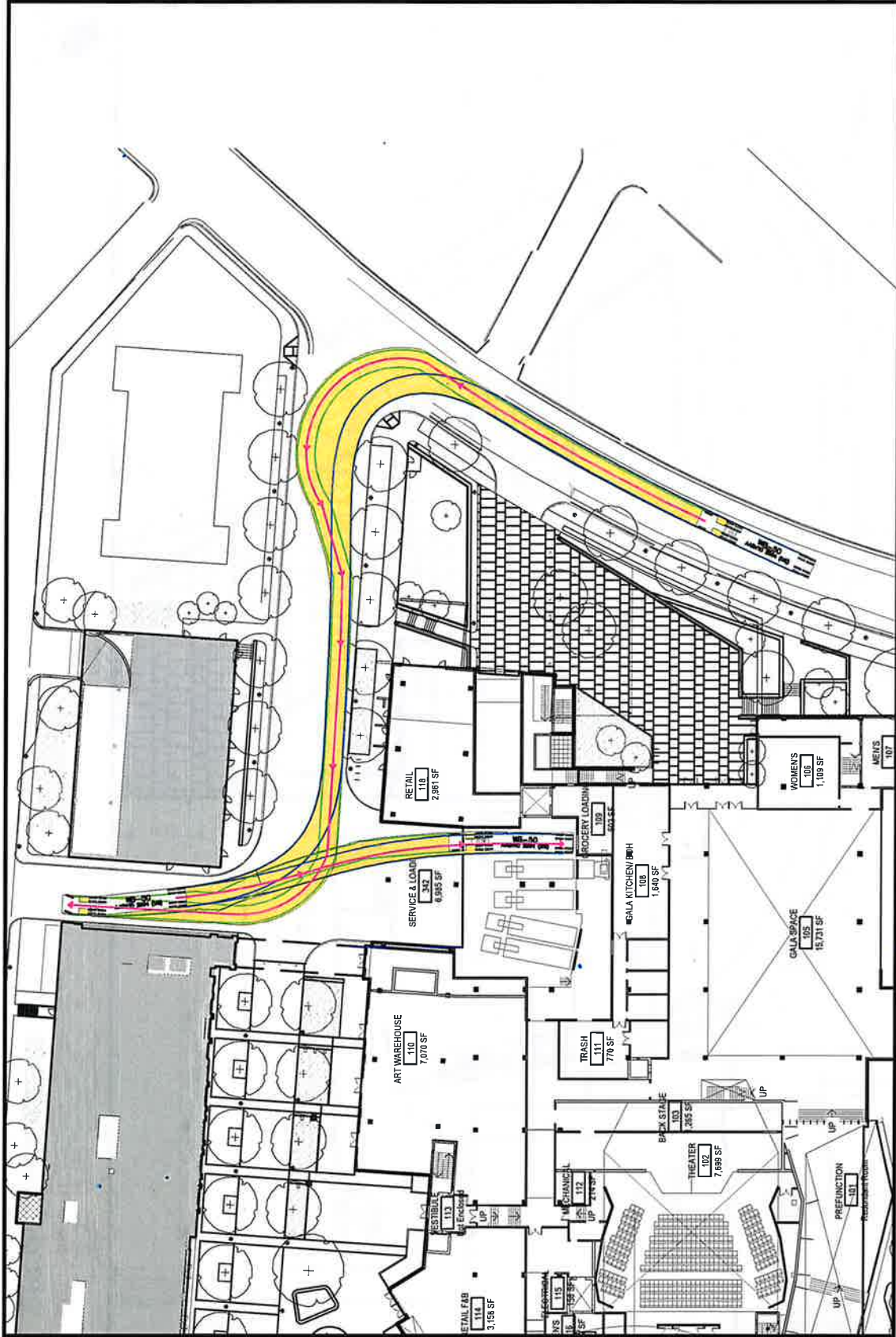


NORTH
Art Place Phase II
Washington, D.C.

Attachment 2D
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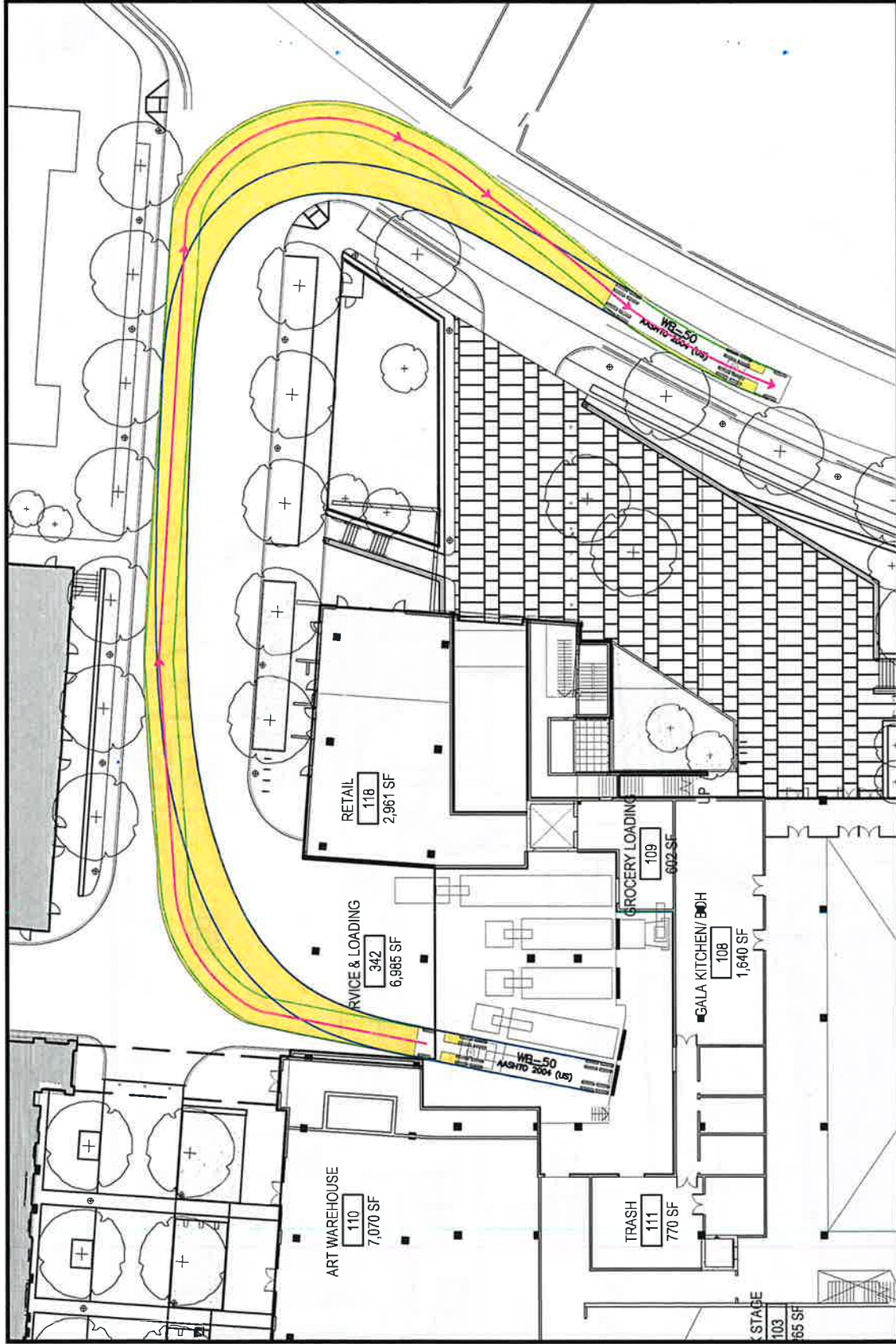


NORTH
Art Place Phase II
Washington, D.C.

Attachment 2E
WB50 Inbound Berth 5



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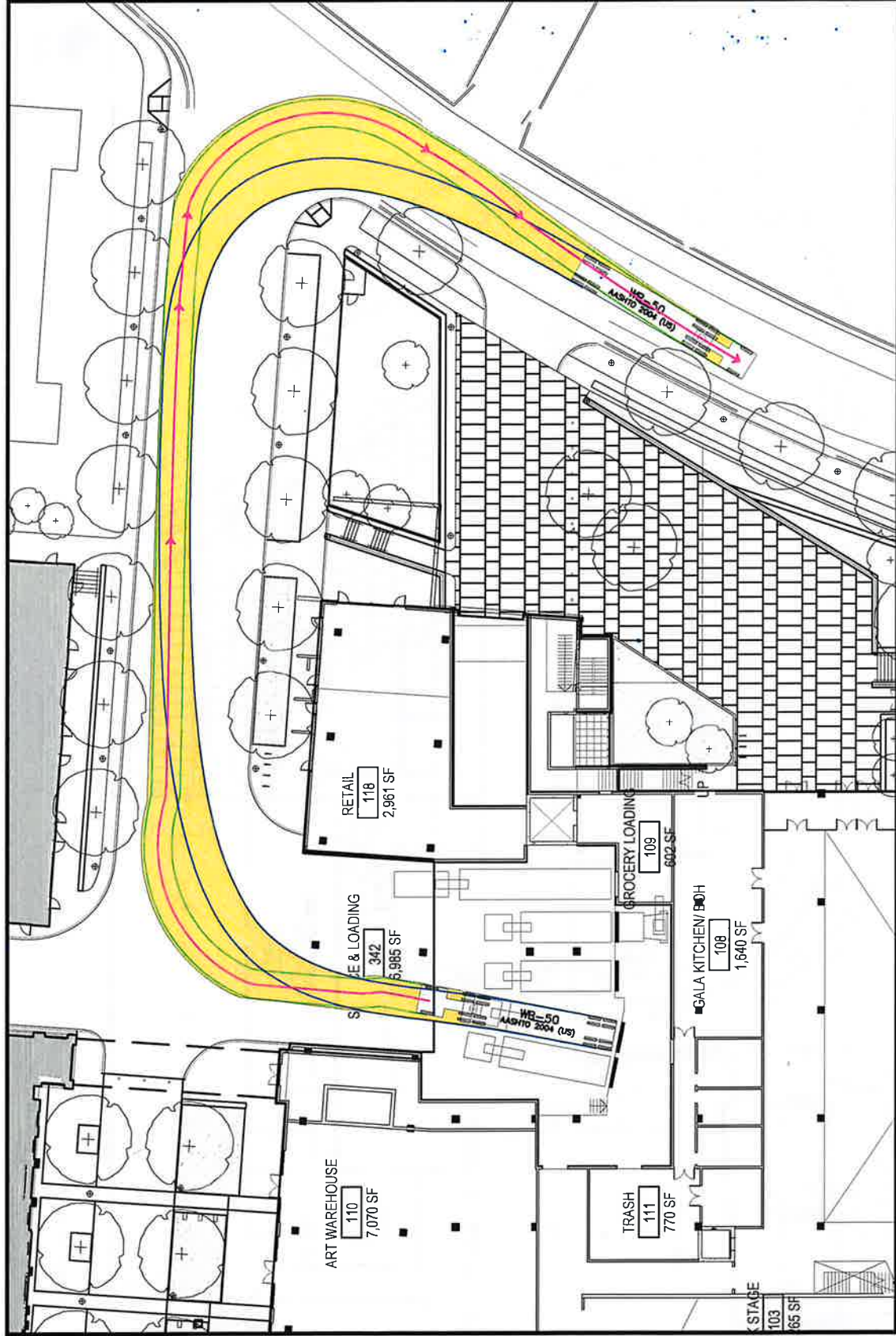


NORTH
Art Place Phase II
Washington, D.C.

Attachment 2F
WB50 Outbound Berth 1



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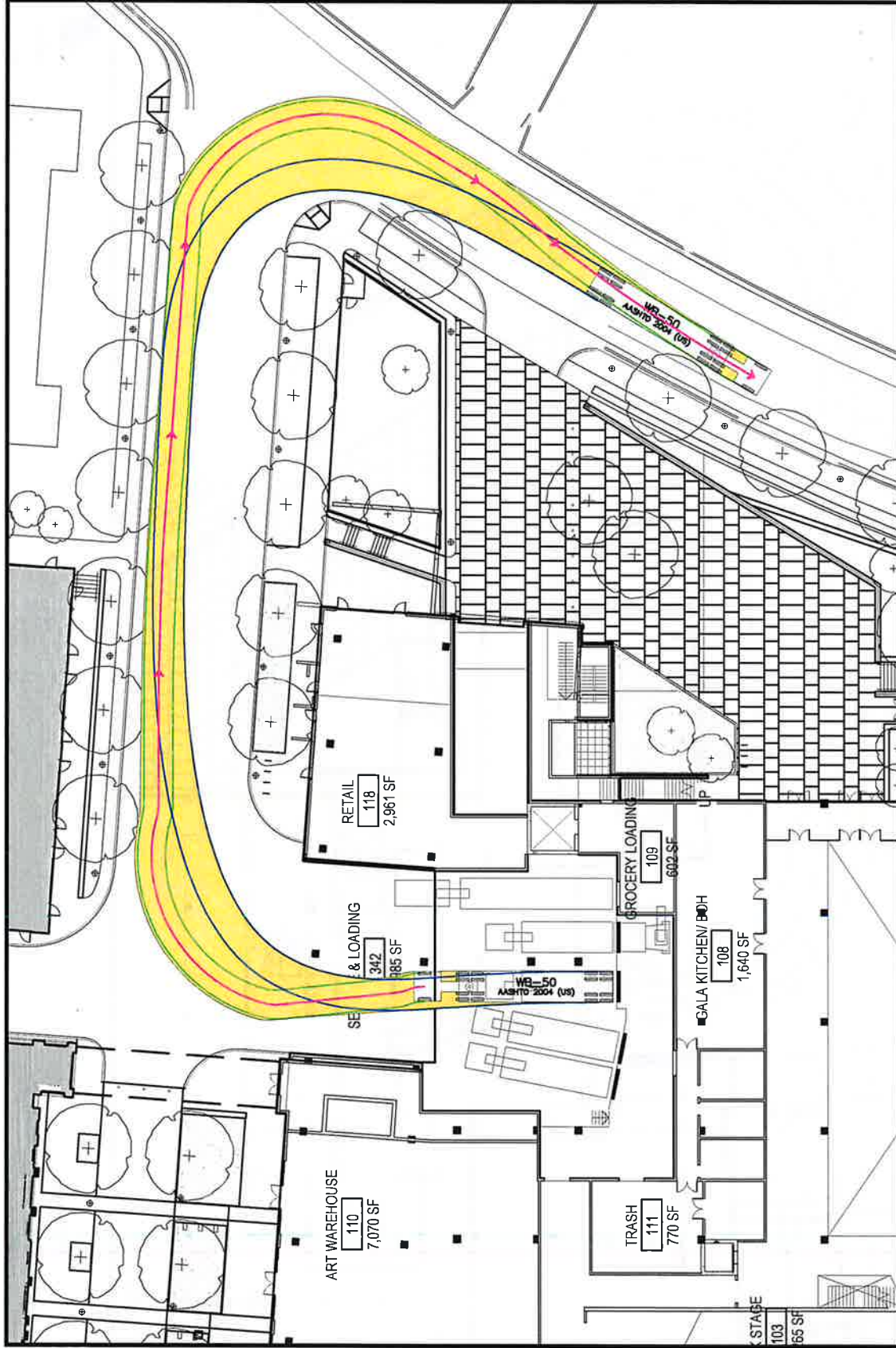


Attachment 2G
WB50 Outbound Berth 2

 NORTH
Art Place Phase II
Washington, D.C.



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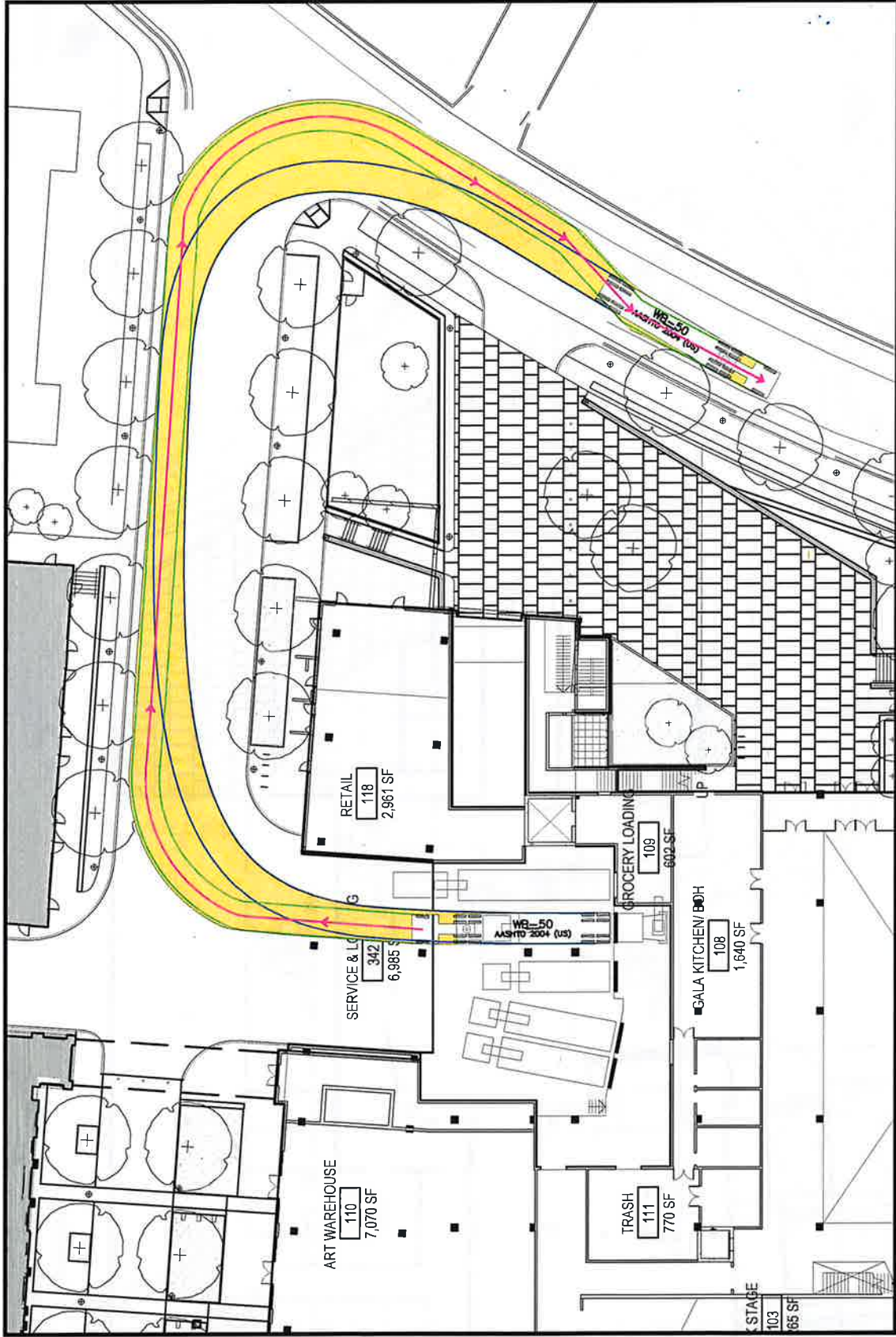
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NORTH
Art Place Phase II
Washington, D.C.



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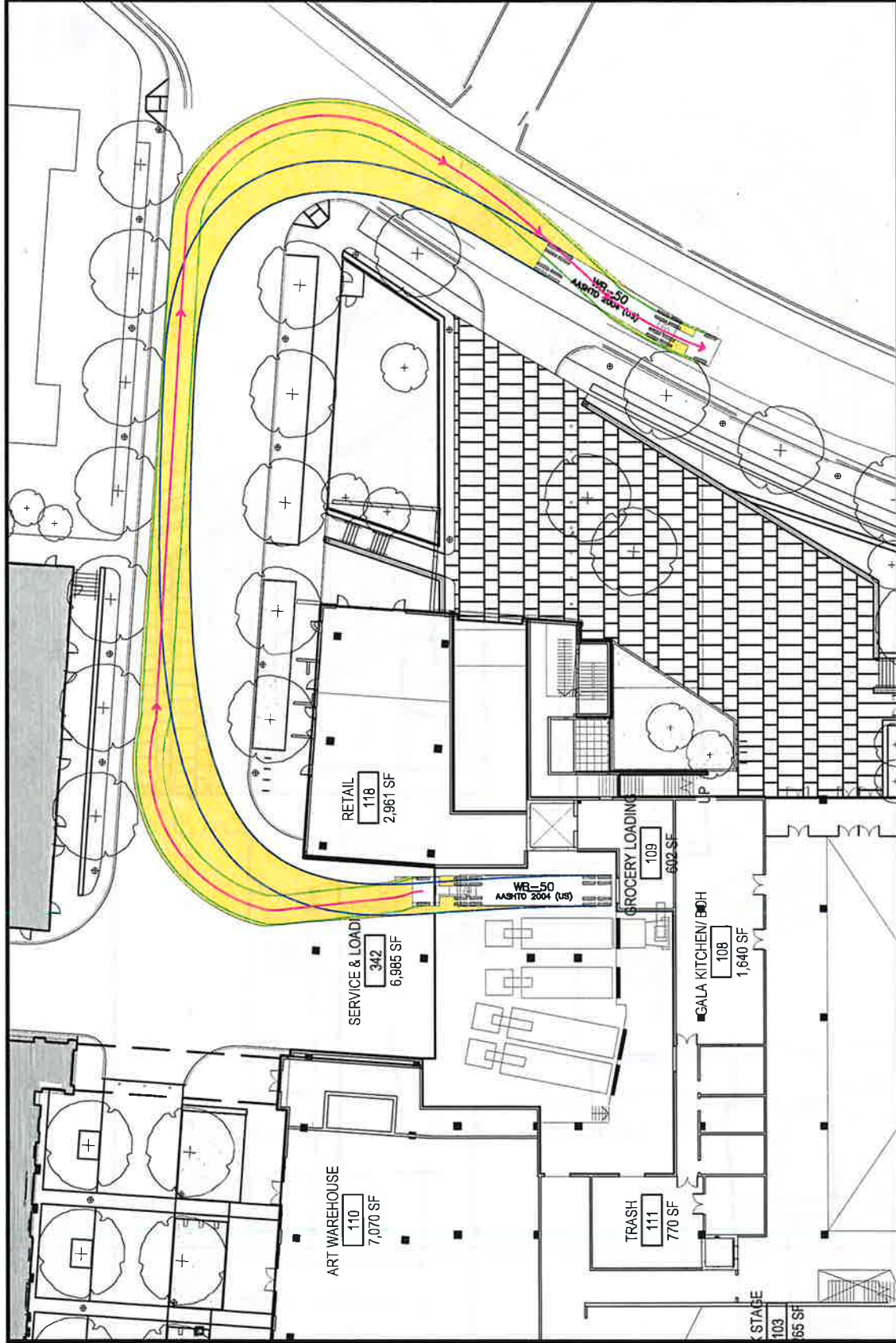


Attachment 21
WB50 Outbound Berth 4

 NORTH
Art Place Phase II
Washington, D.C.



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NORTH
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Attachment 2J
WB50 Outbound Berth 5



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NORTH
Art Place Phase II
Washington, D.C.

Attachment 2K
SU30 Inbound



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NORTH
Art Place Phase II
Washington, D.C.

Attachment 2L
SU30 Inbound



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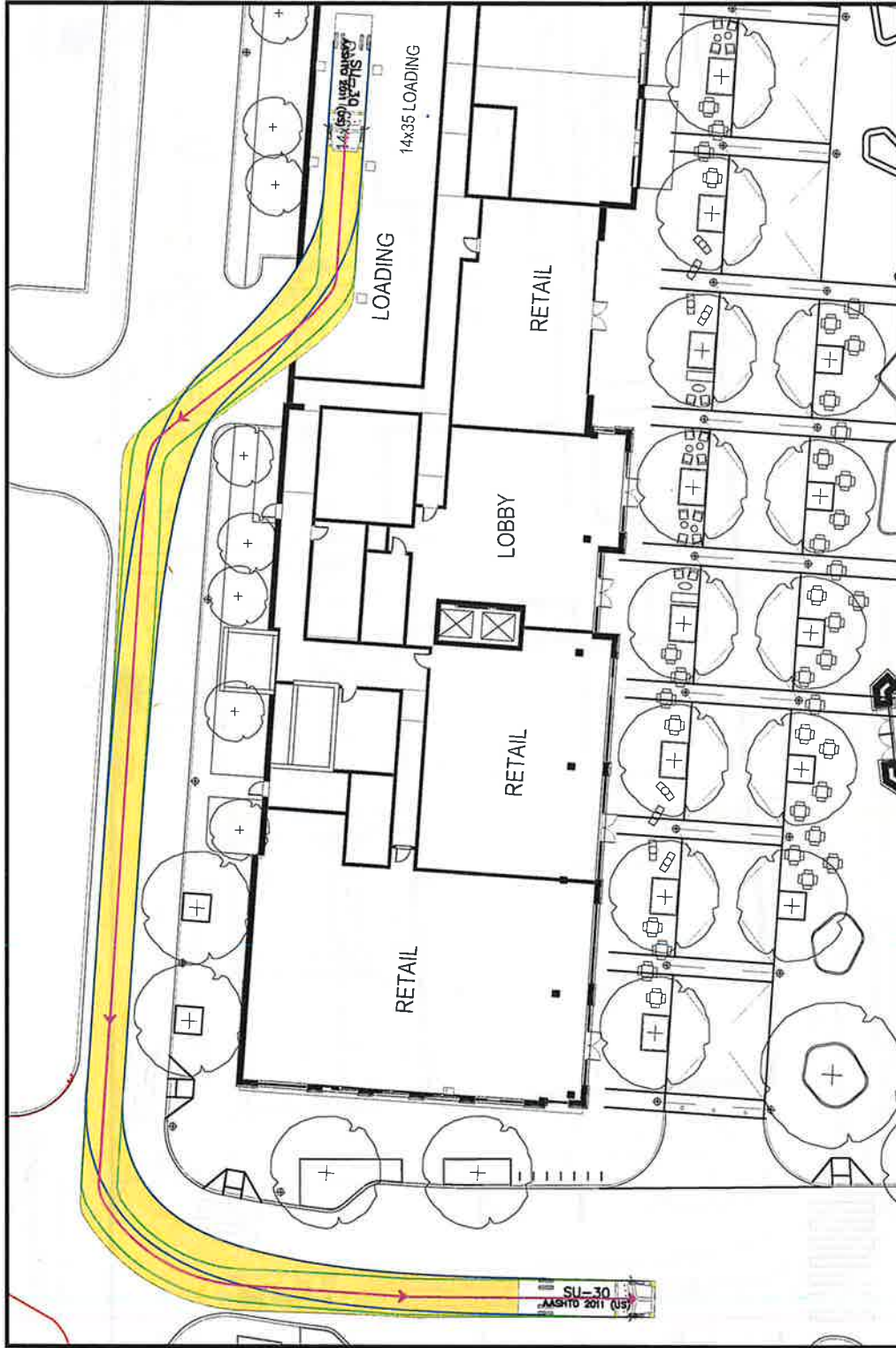


 NORTH
Art Place Phase II
Washington, D.C.

Attachment 2M
SU30 Outbound



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 NORTH
Art Place Phase II
Washington, D.C.

Attachment 2N
SU30 Outbound



LOADING MANAGEMENT PLAN

In order to ensure that the loading and service for the project does not adversely impact the surrounding roadway network, a loading management plan will be implemented for the development. The goals of the plan are to maintain a safe environment for all users of the site, loading dock, street, and nearby intersections; minimize undesirable impacts to pedestrians and to building tenants; reduce conflicts between truck traffic using the loading facilities and other street users; and ensure smooth operation of the loading facilities through appropriate levels of management and scheduled operations. The following are the components of the loading management plan:

- 1) A loading dock manager will be designated by the building management (duties may be part of other duties assigned to the individual). He or she will coordinate with vendors and tenants to schedule deliveries and will coordinate with the community and neighbors to resolve any conflicts should they arise.
- 2) All tenants will be required to schedule deliveries that utilize the loading dock (any loading operation conducted using a truck 20' in length or larger) and all loading activities are required to occur at the loading docks.
- 3) The dock manager will schedule deliveries such that the dock's capacity is not exceeded. In the event that an unscheduled delivery vehicle arrives while the dock is full, that driver will be directed to return at a later time when a berth will be available so as not to compromise safety or impede street or intersection function.
- 4) The dock manager will monitor inbound and outbound truck maneuvers and will ensure that trucks accessing the loading dock do not block vehicular, bike, or pedestrian traffic along the alley (except during those times when a truck is actively entering or exiting a loading berth).
- 5) Trucks larger than a WB-30 will not be permitted to make deliveries to the residential loading docks. Trucks larger than a WB-50 will not be permitted to make deliveries to the commercial loading dock.
- 6) Trucks using the loading docks will not be allowed to idle and must follow all District guidelines for heavy vehicle operation including but not limited to DCMR 20 – Chapter 9, Section 900 (Engine Idling), the regulations set forth in DDOT's Freight Management and Commercial Vehicle Operations document, and the primary access routes listed in the DDOT Truck and Bus Route Map (godcgo.com/truckandbusmap).

- 7) The dock manager will be responsible for disseminating suggested truck routing maps to the building's tenants and to drivers from delivery services that frequently utilize the development's loading dock as well as notifying all drivers of any access or egress restrictions. The dock manager will also distribute materials as DDOT's Freight Management and Commercial Vehicle Operations document to drivers as needed to encourage compliance with idling laws. The dock manager will also post these documents and notices in a prominent location within the service areas.

- 8) An approximately 180 foot designated bus area is proposed on the west curb of South Dakota Street midway between Ingraham Street and Kennedy Street. This area will be monitored and programed by the loading dock manager of the building. The loading dock manager will be responsible for coordinating the different uses in the building and authorizing group sizes and arrival times for the bus area. Further, the loading dock manager will be responsible for disseminating information on the bus parking and loading area to potential visiting groups. In addition to the designated bus area, three PUDO zones are proposed. Buses would be able to perform pick-up drop-off operations at a PUDO zone and park off-site if desired.

C:\Projects\501 - 2000\7411 Art Place Phase 2\Documents\Correspondence\Document Response\213 2019\MP March 13 2019

APPENDIX B

**PEAK HOUR SIGNAL WARRANT FOR INTERSECTION OF SOUTH DAKOTA AVENUE
AND INGRAHAM STREET NE**

INPUT VOLUMES

Condition	major street (total of both approaches)	minor street (high volume approach)	Yes/No	
			1 LANE & 1 LANE	1 LANE
Existing - AM	1621	47	No	No
Existing - PM	1713	58	No	No
2023 Background - AM	1792	54	No	No
2023 Background - PM	1933	65	No	No
2023 Total Future - AM	1844	105	No	No
2023 Total Future - PM	2058	161	No	No

JOB NUMBER: 7611

JOB NAME: Art Place Phase 2

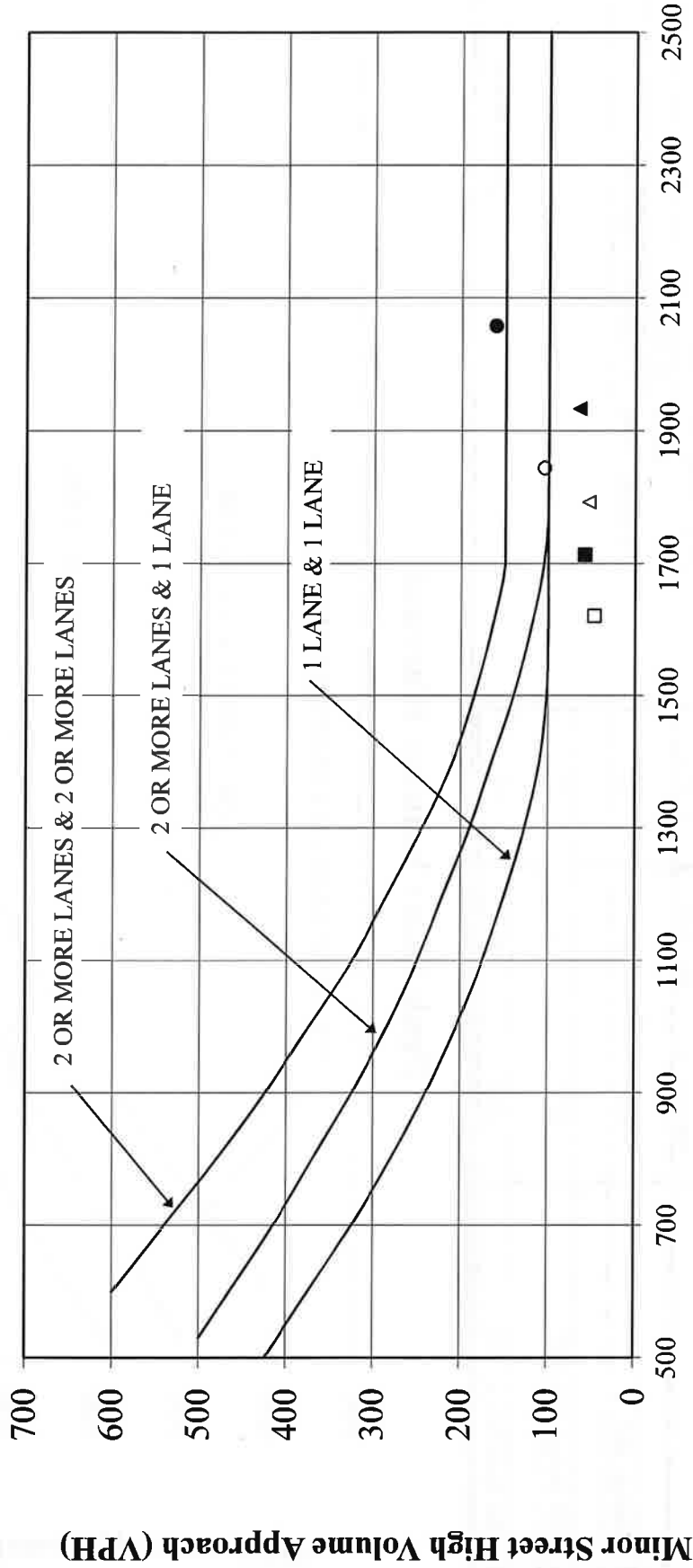
CALCULATED BY: GPV

DATE: 3/13/2019

INTERSECTION: S. Dakota Ave./Ingraham St.

[Below 40 mph]

Peak Hour Volume Warrant



Major Street -- Total of Both Approaches (VPH)

INPUT VOLUMES

Condition	major street (total of both approaches)	minor street (high volume approach)	Yes/No 1 LANE & 1 LANE
<input type="checkbox"/>			
<input checked="" type="checkbox"/> Existing - SAT	1359	44	No
<input type="checkbox"/>			
<input checked="" type="checkbox"/> 2023 Background - SAT	1517	50	No
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<input checked="" type="checkbox"/> 2023 Total Future - SAT	1663	149	No

JOB NUMBER: 7611

JOB NAME: Art Place Phase 2

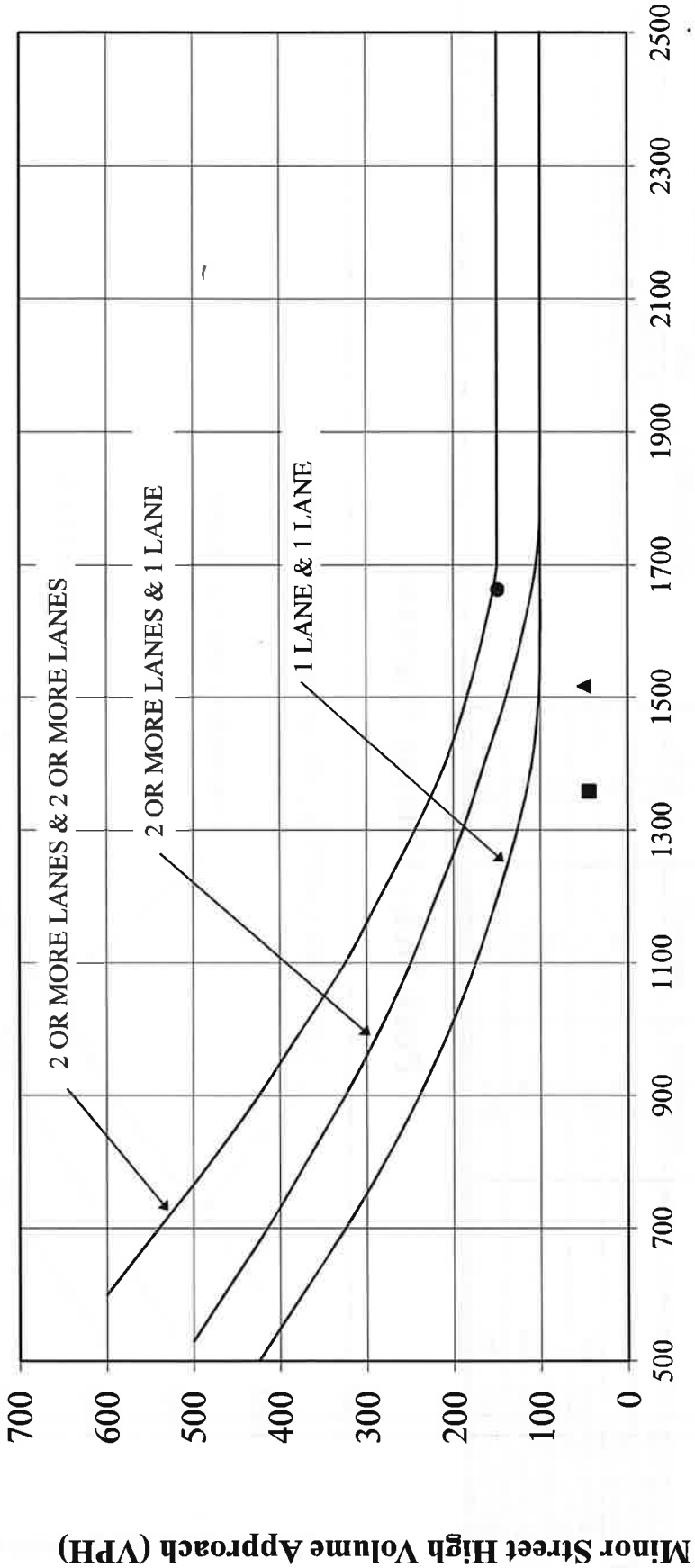
CALCULATED BY: GPV

DATE: 3/13/2019

INTERSECTION: S. Dakota Ave./Ingraham St.

[Below 40 mph]

Peak Hour Volume Warrant



Major Street -- Total of Both Approaches (VPH)