

TECHNICAL MEMORANDUM

To: Ben Burgin, Assistant Director of Design & Construction Arlington Public Schools
Cc: Robin Hodges, Senior Project Manager Arlington Public Schools
From: Preston Jutte, PE
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Date: February 4, 2022
Subject: The Heights – Phase 2
Preliminary Multimodal Transportation Assessment (MMTA)

This memorandum is a Preliminary Multimodal Transportation Assessment for the proposed Phase 2 of The Heights. It presents a summary of transportation findings based on a review of current (Phase 1) operations of The Heights building and the proposed Phase 2 addition. A full MMTA containing details of the field observations, data collection, analysis, and findings and recommendations is currently being compiled. The preliminary MMTA's findings are as follows:

- Although some transportation components are operating at acceptable conditions, both the H-B Woodlawn and Shriver programs have difficulties accommodating competing multimodal needs. Existing site circulation and curbside designations are shown in Figure 1 and Figure 2, respectively.
 - Full-time staff parking demands are generally met, as the building has access to 100 permanent spaces in the adjacent parking garage at the Aubrey residential development. These spaces are supplemented by 30 spaces leased at the 1776 Wilson Boulevard parking garage, approximately a 3-minute walk from the main office entrance to the H-B Woodlawn program.
 - School bus boarding and alighting along 18th Street N generally works during arrival and dismissal; however, significant coordination is required between the two programs. Additionally, vehicles often ignore the existing restrictions prohibiting vehicles other than emergency vehicles and buses along 18th Street between N Quinn Street and N Pierce Street.
 - The Shriver program faces significant challenges accommodating ADA-compliant loading and unloading for its students as well as ADA-compliant, short-term visitor parking. ADA-compliant curbside spaces recently constructed along the east side of Quinn Street have alleviated some of these challenges, but they often cannot accommodate all demands and/or are blocked by vehicles that do not require ADA-compliant spaces.
 - Short-term parking needs are not well served under existing conditions. Teachers loading and unloading supplies have difficulty finding a short-term space near their program's front door. Additionally, there are no dedicated spaces for maintenance vehicles which often utilize the ADA-compliant spaces on Quinn Street or the 15-minute parking spaces along Wilson Boulevard meant to accommodate H-B Woodlawn pick-up/drop-off (PUDO).
 - Bicycle parking is a challenge at the schools, with no covered bicycle racks or storage boxes provided. Where bicycle parking is provided along Wilson Boulevard, it is discouraged by school staff due to frequent theft and conflicts with student PUDO.
- The proposed transportation components of Phase 2 address and significantly improve the observed transportation challenges under existing (Phase 1) conditions. Proposed site circulation and curbside designations are shown in Figure 3 and Figure 4, respectively.

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- Dedicated ADA-compliant loading/unloading and short-term parking spaces will be provided in the below-field structure providing covered parking within close proximity to the Shriver program’s main entrance at the northwest side of the building.
 - Dedicated parking spaces for short-term faculty and staff use will be provided in the below-field structure as well as dedicated spaces for maintenance vehicles. This will alleviate conflicts between maintenance vehicles and other curbside demands such as student PUDO and short-term retail parking for nearby businesses.
 - The below-field structure will significantly increase the building’s bicycle parking. The inclusion of a secure bicycle storage room for commuters and covered bicycle racks for students will help the programs meet their Class I and Class II/III bicycle parking requirements. Additional bicycle parking will also help the programs make progress toward goals set in Arlington County’s Master Transportation Plan.
 - School bus operations will be improved through the addition of a covered walkway between 18th Street and the building. Phase 2 also includes changes to the 18th Street streetscape by extending the southern curb between Quinn Street and the mid-block crosswalk at Rosslyn Highlands Park as shown in Figure 5. APS is open to modifying the final design as long as the implemented streetscape improvements will provide the following functionality:
 - Sufficient space for students to queue during arrival and dismissal;
 - Ability for Shriver school buses to load and unload wheelchairs directly on the sidewalk;
 - Adequate sidewalk widths to allow typical pedestrian activity to take place concurrently with arrival and dismissal; and
 - The ability to meet the project’s goals for tree planting, with the secondary benefit of providing shade for students boarding and alighting school buses.
 - The below-field structure will allow The Heights to stop leasing parking spaces from the 1776 Wilson Boulevard parking garage, will accommodate visitor parking, and could be used for event parking on nights and weekends.
 - Other operational improvements are also recommended, including ways to increase the efficiency and capacity of PUDO for both programs with slight changes to curbside management that will not decrease space used for non-school uses such as short-term retail parking and food trucks.

In summary, Phase 2 of The Heights addresses and significantly improves the transportation needs and challenges identified under existing (Phase 1) conditions. Primary improvements address loading/unloading and short-term parking for the Shriver program as well as bicycle parking for students and staff. Additional details for each transportation component across the site are presented in Table 1.

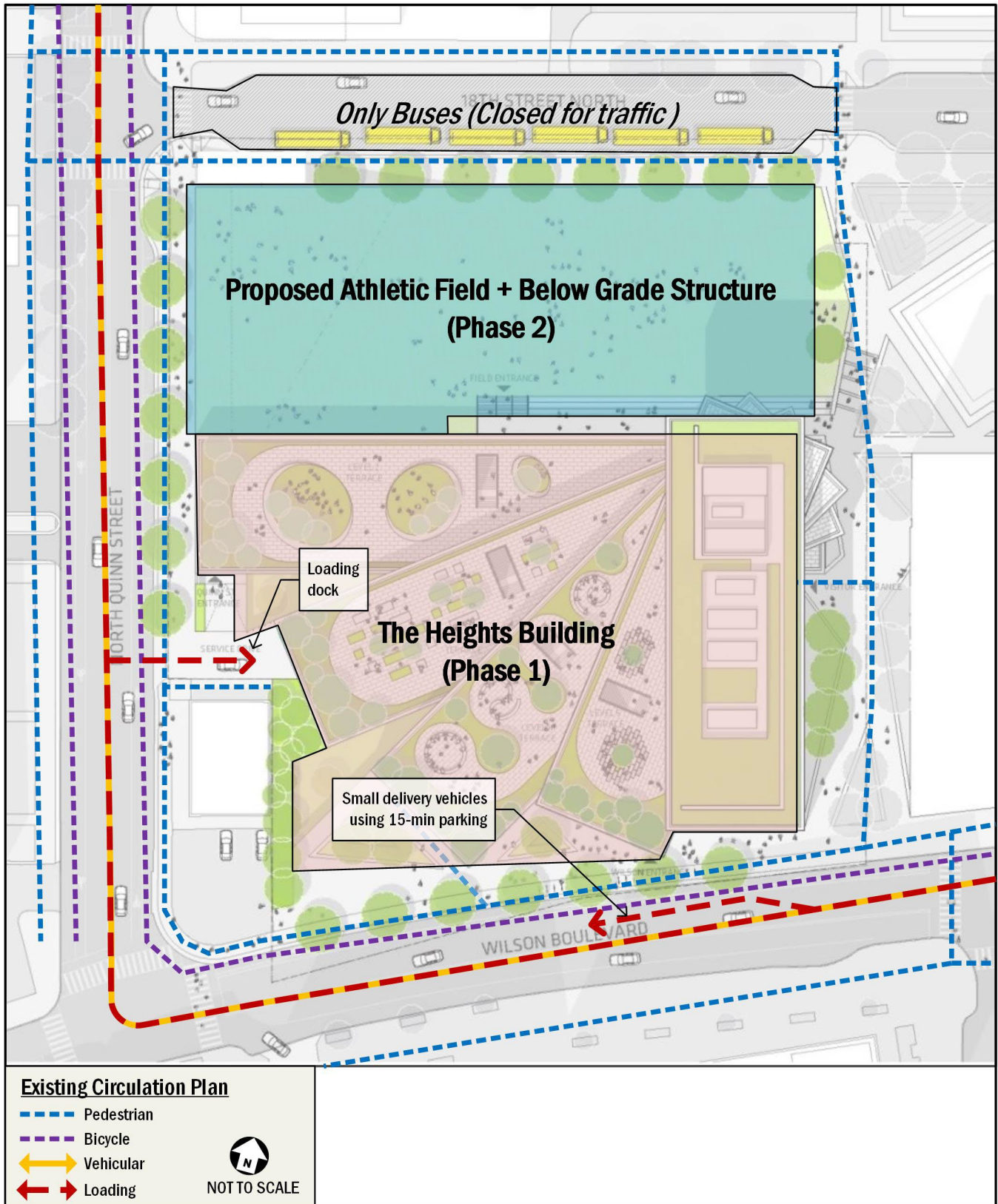


Figure 1: Existing Circulation Plan

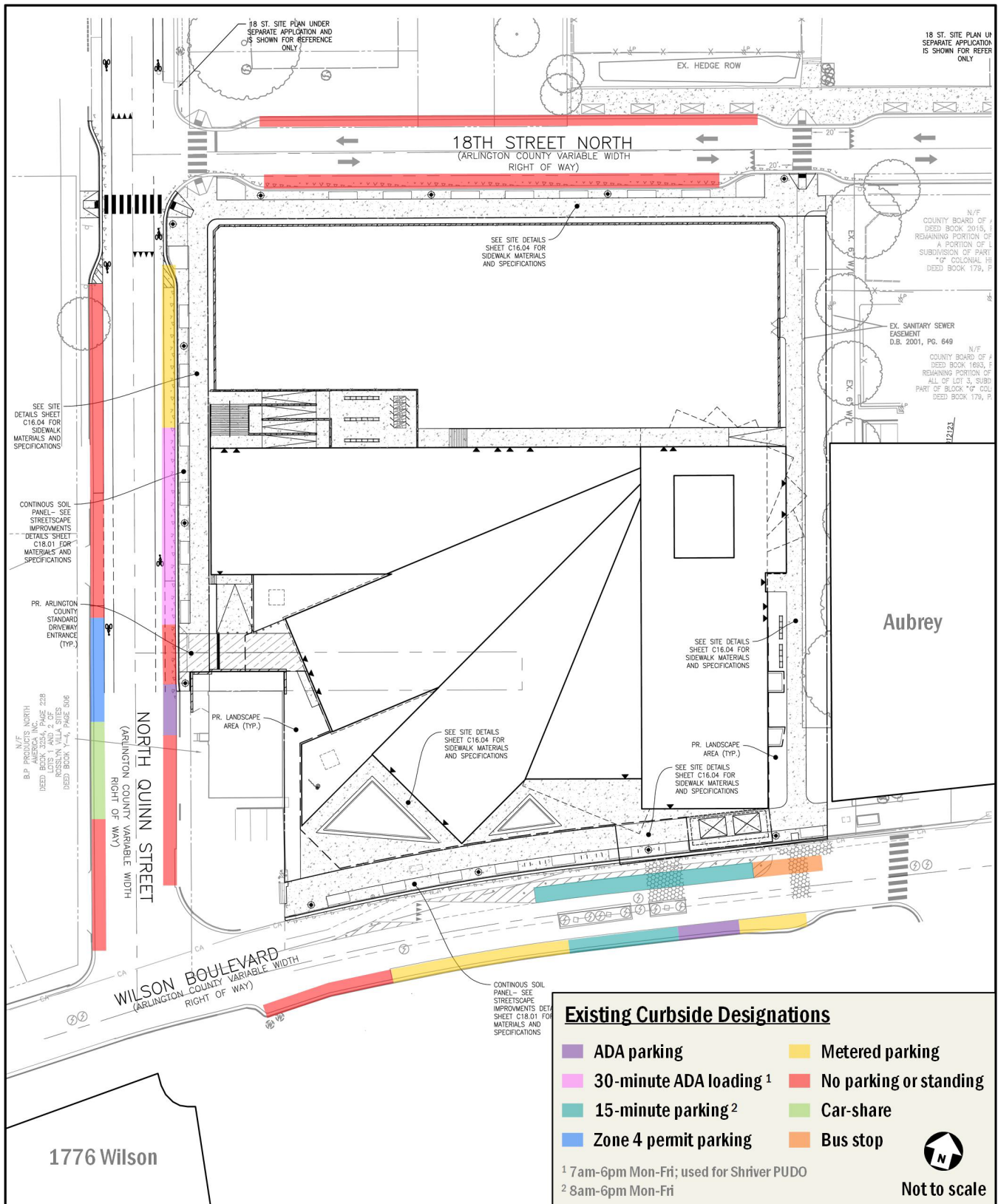


Figure 2: Existing Curbside Designations

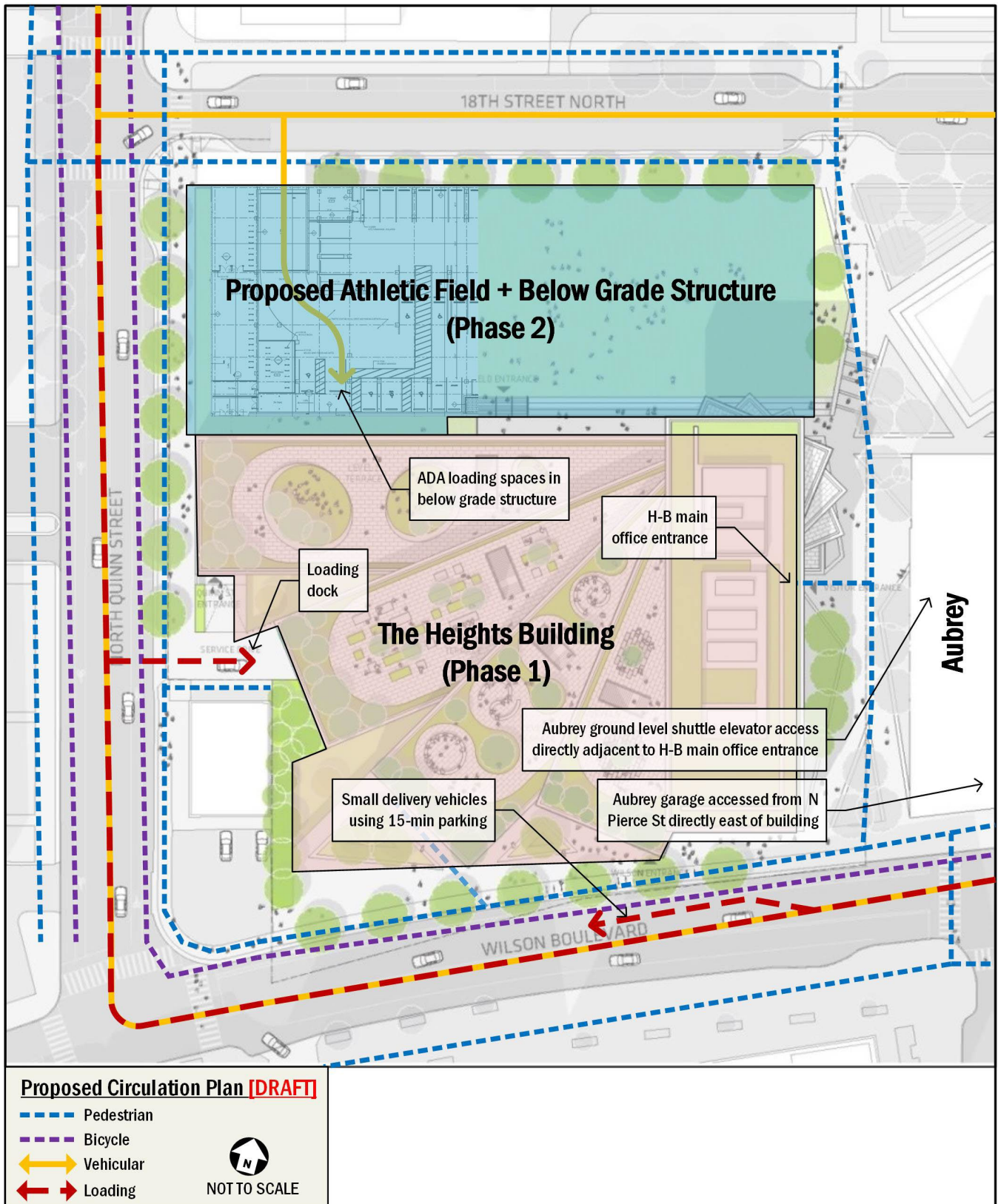


Figure 3: Proposed Circulation Plan – DRAFT

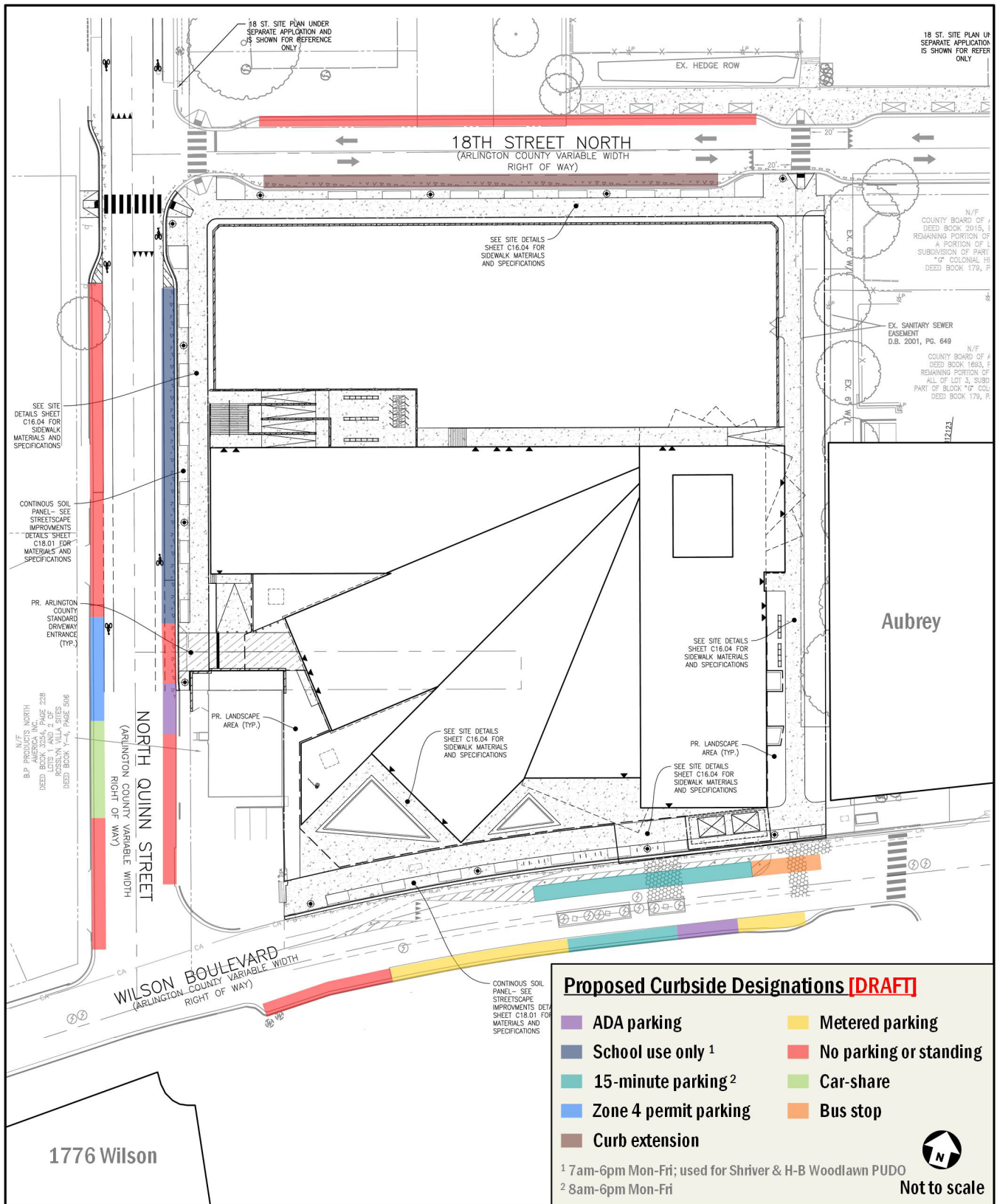


Figure 4: Proposed Curbside Designations – DRAFT

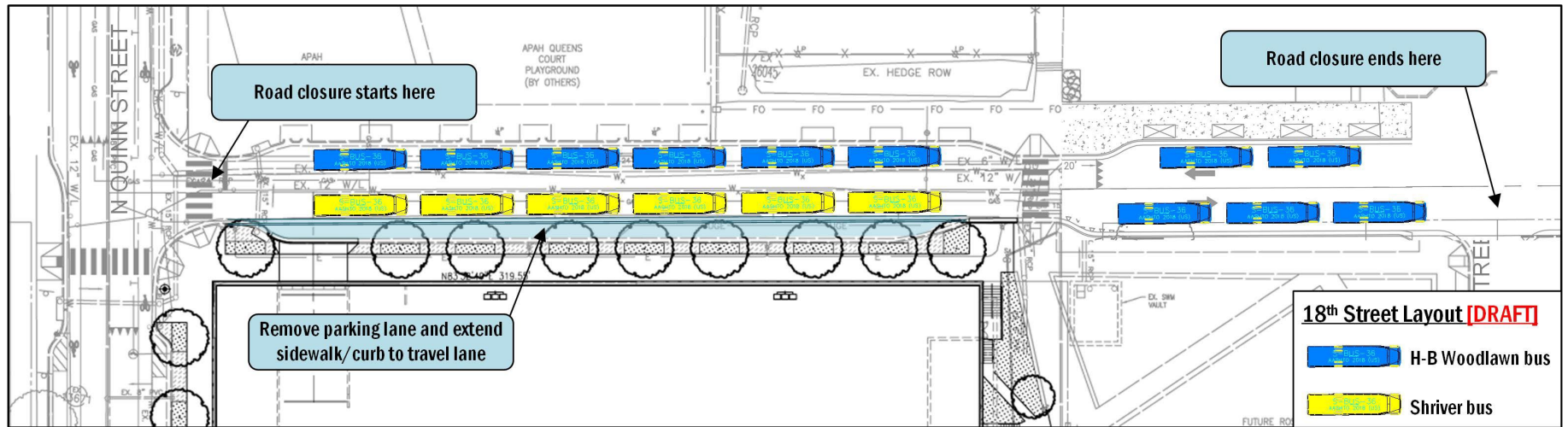


Figure 5: Proposed Streetscape Improvements along 18th Street – **DRAFT**

Table 1: Comparison of Transportation Accommodations

Transportation Component	Needs/Demands <i>(Based on Data Collected in December 2021)</i>	Phase 1		Phase 2		
		Current Location	Issues/Details	Location	Proposed Location/Operations	Strengths/Details
School Buses						
H-B Woodlawn	<ul style="list-style-type: none"> Max of 12 buses at a time Each bus stays 3 to 4 minutes on average during morning arrival, occupying space 9:00 to 9:25am Each bus stays 6 to 7 minutes on average during afternoon dismissal, occupying space 3:50 to 4:30pm 	18 th St adjacent to The Heights (currently closed to traffic)	<p><i>Generally works well, with the following notes:</i></p> <ul style="list-style-type: none"> Conflicts with vehicles that ignore bus/emergency-vehicle-only restrictions Some conflicts between the two programs using the same space Narrow sidewalk limits space for student-bus matching (at dismissal) 	18 th St adjacent to The Heights (closed to traffic during arrival and dismissal)	<ul style="list-style-type: none"> Permanently restrict 18th St to buses and emergency vehicles only between N Quinn St and N Pierce St during arrival and dismissal Extend southern curb to travel lane along 18th St between Quinn St and mid-block crosswalk Allow buses to stage in front of Rosslyn Highlands Park between N Pierce St and mid-block crosswalk 	<ul style="list-style-type: none"> Discourages curbside vehicles along south side of 18th St by removing curbside parking lane Provides additional space for student-bus matching Allows room for street tree plantings Provides sufficient staging space for all buses for both programs during arrival and dismissal
Shriver	<ul style="list-style-type: none"> Max of 6 buses at a time Each bus stays 7 to 8 minutes on average during morning arrival, occupying space 8:45 to 9:20am Each bus stays 14 to 15 minutes on average during afternoon dismissal, occupying space 3:40 to 4:15pm Shriver buses need to board/alight students at the curb, to accommodate wheelchair access 	18 th St adjacent to The Heights (currently closed to traffic)	<p><i>Generally works well, with the following notes:</i></p> <ul style="list-style-type: none"> No covered path from buses to main entrance Some conflicts between the two programs using the same space – Shriver buses need to time arrivals early to allow them to use curbside space Limited curbside space for loading Conflicts with vehicles that ignore bus/emergency-vehicle-only restrictions 	18 th St adjacent to The Heights (closed to traffic during arrival and dismissal)	<p><i>In addition to the above:</i></p> <ul style="list-style-type: none"> Maintain policy of restricting curbside to ADA loading during arrival and dismissal until Shriver boarding and alighting complete 	<p><i>In addition to the above:</i></p> <ul style="list-style-type: none"> Provides additional space for ADA loading and unloading Positions Shriver students closest to covered ramp to main entrance at the southeast corner of Quinn St and 18th St
Off-Peak Buses	<p><i>Mid-day bus needs</i></p> <ul style="list-style-type: none"> Day of data collection counted 1 Shriver bus approximately an hour before afternoon dismissal 	18 th St adjacent to The Heights (currently closed to traffic)	<p><i>Works well</i></p> <ul style="list-style-type: none"> Accommodates off-peak needs with minimal issues observed/reported 	Quinn St	<ul style="list-style-type: none"> Stage off-peak buses in former ADA loading/parking along Shriver frontage Board/Alight students on 18th Street in front of covered walkway <i>(additional details in Pick-Up/Drop-Off section)</i> 	<ul style="list-style-type: none"> Limits conflicts with vehicles along 18th St outside of arrival and dismissal
Pick-Up/Drop-Off						
Shriver	<ul style="list-style-type: none"> Space for up to 4 vehicles or 2 ADA vans along Shriver frontage on N Quinn St Restricted to 30-minute ADA parking from 7:00 AM to 6:00 PM, Monday through Friday, and unrestricted ADA parking at all other times Observations showed up to 2 non-ADA vehicles occupying spaces, sometimes during arrival/dismissal, and insufficient space for ADA vehicles at times (vehicles queuing or loading/unloading in street) 	Quinn St	<p><i>Works poorly</i></p> <ul style="list-style-type: none"> Does not provide a covered pick-up/drop-off similar to prior Shriver program home Sometimes occupied by non-ADA vehicles like maintenance vans Sometimes does not accommodate all ADA pick-up/drop-off demand at arrival/dismissal 	Below Field	<ul style="list-style-type: none"> Phase 2 provides 9 ADA parking spaces, two of which are van-sized, in the below-field structure Provide and adjacent loading areas for ADA loading and unloading in the below-field structure 	<ul style="list-style-type: none"> Provides covered area for Shriver student pick-up/drop-off adjacent to main entrance Additional capacity compared to Phase 1 should accommodate all pick-up/drop-off demands

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		Current Location	Issues/Details	Location	Proposed Location/Operations	Strengths/Details
H-B Woodlawn	<ul style="list-style-type: none"> Space for up to 5 vehicles along H-B Woodlawn frontage, shared with other uses Restricted to 15-minute parking from 8:00 AM to 6:00 PM, Monday through Friday, and unrestricted parking at all other times Processed 148 total vehicles during morning arrival with no spillover into travel lanes Processed 181 total vehicles during afternoon dismissal with 1-3 vehicles spilling over into travel lanes at times 	Wilson Blvd	<p><i>Accommodates most needs, with some exceptions</i></p> <ul style="list-style-type: none"> Not currently designated for exclusive school use Accommodates student pick-up/drop-off, short-term retail parking, food trucks, mail/parcel vehicles, and maintenance vehicles Functions well except when conflicts with parked vehicles Potential conflicts with new floating bus stop H-B Woodlawn students that require ADA access have difficulties using space 	Wilson Blvd Quinn St	<ul style="list-style-type: none"> Remove ADA loading along Quinn St and restrict to school-use-only from 7:00 AM to 6:00 PM, school days, and for unrestricted parking at all other times, to help accommodate H-B Woodlawn pick-up/drop-off and other needs Maintain existing 15-minute parking restrictions along Wilson Blvd Allow H-B Woodlawn students with mobility needs to use the space under the field or gain access to Aubrey garage 	<ul style="list-style-type: none"> Provides school-designated curbside space that does not exist in Phase 1 Additional processing capacity compared to Phase 1 Reduces spillover into travel lanes on Wilson Blvd and potential conflicts with new floating bus stop Maintains short-term parking for non-school uses on Wilson Blvd
Loading						
Mail/Parcel Deliveries	<ul style="list-style-type: none"> Up to 10 daily deliveries based on information provided by schools 	Wilson Blvd Quinn St	<ul style="list-style-type: none"> No existing coordination between deliveries Most smaller parcel delivery vehicles use 15-minute parking on Wilson Blvd or park illegally in ADA loading area on Quinn St 	Wilson Blvd Quinn St	<i>See H-B Woodlawn Pick-Up/Drop-Off</i>	<ul style="list-style-type: none"> Maintaining short-term parking along Wilson Blvd provides space for short-term deliveries
Trash & Cafeteria Deliveries	<p><i>In addition to the above:</i></p> <ul style="list-style-type: none"> 5/7 vehicles entered loading dock for uses other than trash removal or cafeteria deliveries 	Loading Dock	<ul style="list-style-type: none"> Loading dock often blocked because it is frequently used for short-term parking rather than deliveries 	Loading Dock	<i>See H-B Woodlawn Pick-Up/Drop-Off</i>	<ul style="list-style-type: none"> Additional school-designated curbside space along Quinn St provides space for short-term deliveries and discourages inappropriate use of the loading dock
Bicycle Parking						
Class II/III (Bike Racks)	<ul style="list-style-type: none"> 10 bike racks (20 spaces) by main office entrance to H-B Woodlawn 21 bike racks (42 spaces) by ramps down to Shriver entrance 9 bike racks (18 spaces) along frontage on Wilson Blvd 	H-B Entrance Shriver Entrance Wilson Blvd	<p><i>Does not work well:</i></p> <ul style="list-style-type: none"> No covered bike racks Bike racks at H-B Woodlawn entrance over capacity Bike racks by Shriver largely unused due to distance from H-B Woodlawn entrances H-B Woodlawn discourages use of bike racks along Wilson Blvd due to frequent theft; also, conflict with pick-up/drop-off 	Below Field H-B Entrance Wilson Blvd	<ul style="list-style-type: none"> Phase 2 includes 27 bike racks (54 spaces) along covered walkway down to main Shriver entrance in the below-field structure Maintain 10 bike racks (20 spaces) by H-B Woodlawn entrance and 9 bike racks (18 spaces) along Wilson Blvd 	<ul style="list-style-type: none"> Exceeds the Class II/III spaces (outdoor bicycle facilities) required by most recent requirements (March 2021 amended use permit) Maintaining existing bike racks by H-B Woodlawn entrance and along Wilson Blvd helps make progress toward meeting MTP goal of 15% student mode split

Transportation Component	Needs/Demands <i>(Based on Data Collected in December 2021)</i>	Phase 1		Phase 2		
		Current Location	Issues/Details	Location	Proposed Location/Operations	Strengths/Details
Class I (Secure Storage)	<ul style="list-style-type: none"> 3 bike lockers (6 spaces) by ramps down to Shriver entrance 	Shriver Entrance	<ul style="list-style-type: none"> Largely unused due to distance from H-B Woodlawn entrances and lack of protection from the elements 	Below Field	<ul style="list-style-type: none"> Phase 2 includes 14 bike racks (28 spaces) in a secure storage room below-field Maintain access to existing showers and lockers for bicycling/walking commuters 	<ul style="list-style-type: none"> Provides nearly double the Class I spaces required by most recent requirements (March 2021 amended use permit) Encourages bicycle commuting by providing safe storage protected from the elements
Parking						
Staff Parking	<ul style="list-style-type: none"> Access to 100 spaces in the Aubrey parking garage, 90 reserved for staff, 10 for visitors Hourly max of 84/100 school spaces occupied at the Aubrey (11:00 AM) Additional 30 spaces leased in parking garage at 1776 Wilson 	The Aubrey 1776 Wilson	<ul style="list-style-type: none"> Accommodates full-time staff as well as up to 15 temporary staff and 10 long-term visitors (based on information provided by schools) Aubrey has 1 ADA van space and 3 ADA vehicle spaces adjacent to shuttle elevator Visitors directed to the Aubrey during school hours and to 1776 Wilson after school hours 	The Aubrey Below Field	<ul style="list-style-type: none"> Maintain 100 spaces in the Aubrey, and use all for staff (eliminate 10 reserved for visitors) Eliminate 30 leased spaces in 1776 Wilson Blvd, replace with parking spaces in the below-field structure 	<ul style="list-style-type: none"> Provides permanent space for all staff parking needs on-site or directly adjacent between the below-field structure and the Aubrey
Visitor Parking	<ul style="list-style-type: none"> 10 Space in Aubrey parking garage reserved for visitors Space for up to 9 vehicles along Wilson Blvd and 6 vehicles along Quinn St 	The Aubrey 1776 Wilson On-Street	<ul style="list-style-type: none"> Visitors directed to the Aubrey during school hours and to 1776 Wilson after school hours. School validates parking for both garages 	Below Field	<ul style="list-style-type: none"> Designate visitor parking spaces in the below field structure 	<ul style="list-style-type: none"> Accommodates visitor parking in a simpler way for non-regular visitors, eliminates need for validating parking
ADA Visitor Parking	<ul style="list-style-type: none"> Aubrey has 1 ADA van space and 3 ADA vehicle spaces One space on Wilson Blvd along 1550 Wilson frontage One space on Quinn St along 7-Eleven frontage 	The Aubrey Wilson Blvd Quinn St	<ul style="list-style-type: none"> ADA parking not always available Long walk to Shriver program for people with mobility needs 	Below Field	<ul style="list-style-type: none"> Accommodate ADA Visitor parking in the below field structure 	<ul style="list-style-type: none"> Covered parking in close proximity to Shriver program entrance
Maintenance Vehicle Parking	<ul style="list-style-type: none"> No dedicated space 	None	<ul style="list-style-type: none"> Maintenance vehicles park in non-designated areas 	Below Field	<ul style="list-style-type: none"> Designate some parking spaces in the below-field structure for Maintenance vehicles 	<ul style="list-style-type: none"> Eliminates conflicts with maintenance vehicles parking in non-designated areas
Staff Short-term Parking	<ul style="list-style-type: none"> Relies on on-street parking Space for up to 9 vehicles along Wilson Blvd and 6 vehicles along Quinn St 	Wilson Blvd Quinn St	<ul style="list-style-type: none"> Staff that need to load/unload supplies to the school have difficulty finding space near the school 	Below Field	<ul style="list-style-type: none"> Designate some parking in the below-field structure to accommodate short-term staff parking 	<ul style="list-style-type: none"> Provides better access for teachers to load/unload supplies
Event Parking	<ul style="list-style-type: none"> Nearby on-street parking and structured parking 	Various	<ul style="list-style-type: none"> School currently validates parking from garages 	The Aubrey Below Field Nearby garages as needed	<ul style="list-style-type: none"> Use below-field structure to accommodate event parking, expand to Aubrey garage for large events 	<ul style="list-style-type: none"> Reduces need to rely on off-site garages and validation Can accommodate parking needs for small/moderate sized events in the below-field structure