

MEMORANDUM

To: Jamie Henson
Ryan Westrom
Cc: Rahel Rosner
From: Daniel VanPelt, P.E., PTOE
Robert Schiesel, P.E.
Date: August 25, 2015
Subject: Georgetown Day School PUD – Washington, DC
Progress Materials for 8/27/15 Meeting

DDOT-PPSA
DDOT-PPSA
Georgetown Day School

In advance of our August 27th meeting to discuss the GDS project, we are sending a package of items which have been requested by DDOT. The following materials are attached:

- Illustrative site plans
- Civil site plan and ROW plans
- Circulation, functionality, and curbside management graphics
- Davenport renderings
- Davenport vehicular street cross-section study
- Trip generation table
- TDM Update
- Transportation analysis summary
- Proposed access mitigation sketches
- Pros/cons summary matrix

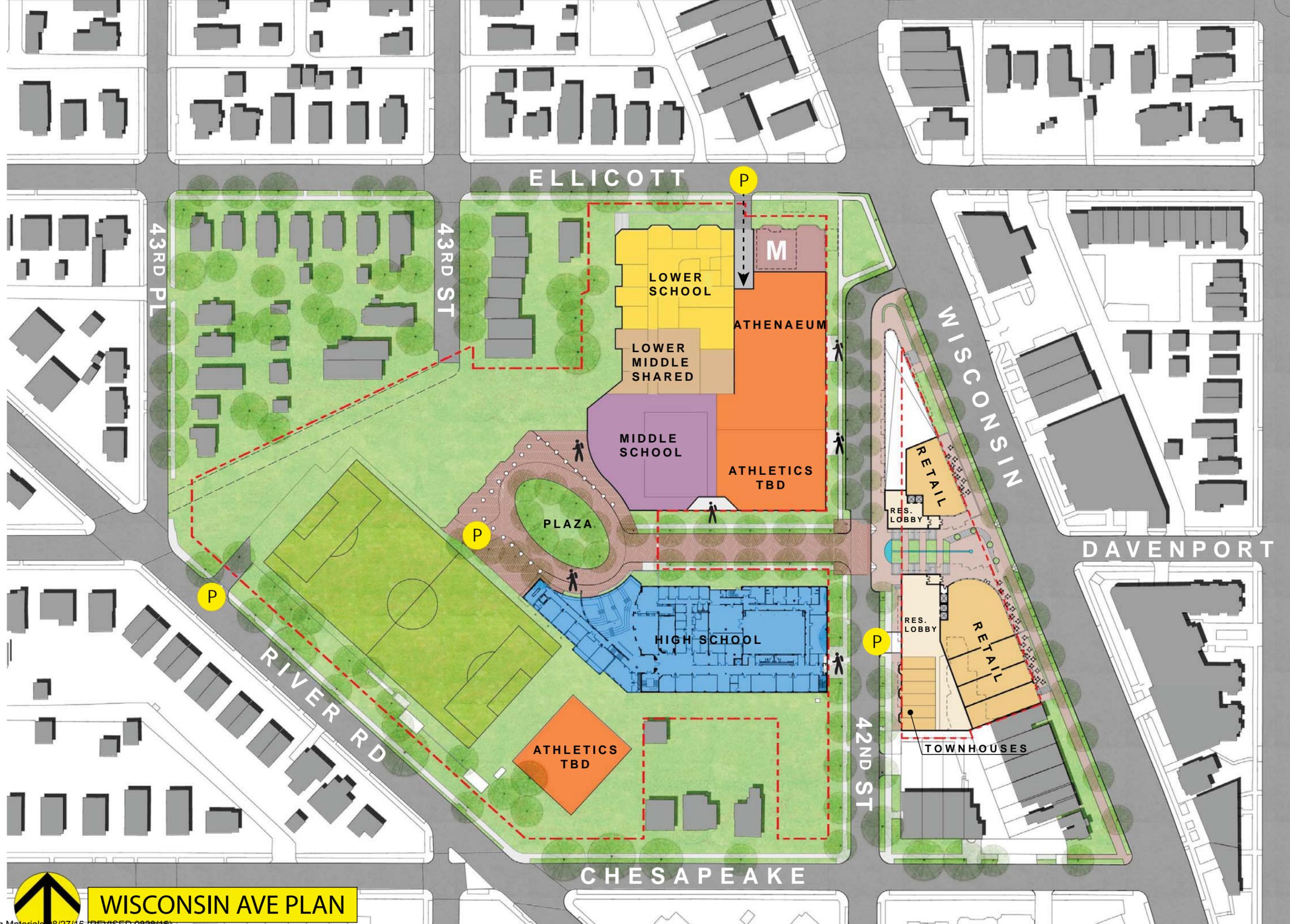
GDS and the development, retail, school and civil consultants that they have engaged continue to believe that a pedestrian connection between Wisconsin and 42nd Street will best serve the community, the development and the School. The focus of the work of these consultants with GDS is to create an activated Wisconsin Avenue and 42nd Street, and for the School's presence to engage with the community. This pedestrian access creates:

- A community oriented gateway from Wisconsin Avenue to the school and to the retailers on 42nd Street
- A large programmable place for community events and activities
- A quiet, beautiful, public seating areas for all community members

- A safe and walkable connection, and a safe and walkable 42nd Street

We understand and appreciate that DDOT is thoroughly evaluating the option for a vehicular Davenport Street, but we hope you will agree that this 120 foot stretch of steeply-graded land would better serve the community as a pedestrian piece of the grid, rather than as a vehicular one. We believe that the traffic analysis, engineering study and urban design/place making exploration clearly support this pedestrian use.

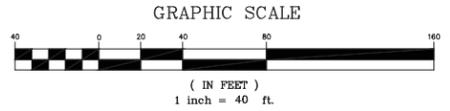
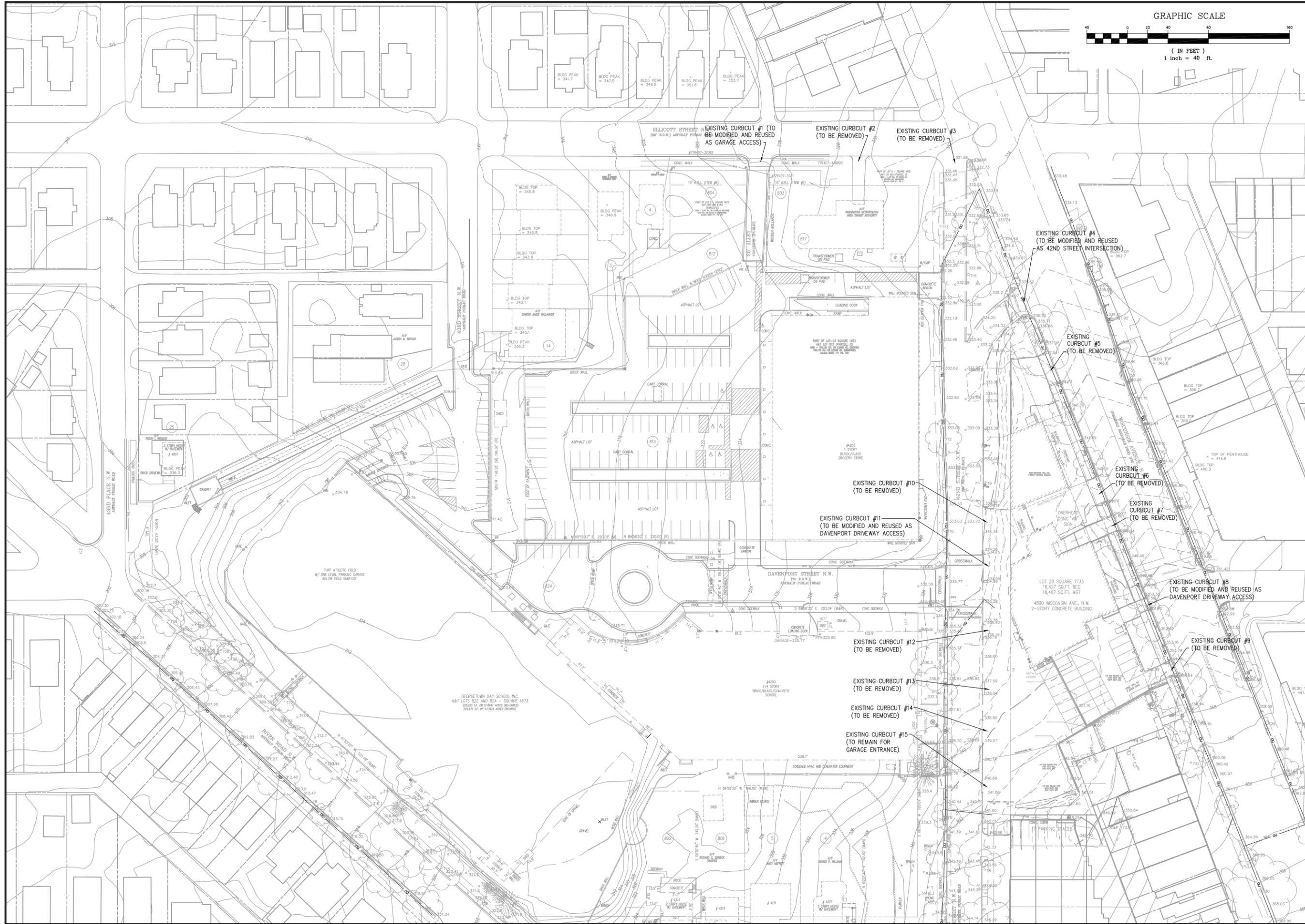
The GDS team looks forward to our meeting this Thursday to review these materials with you.



WISCONSIN AVE PLAN



42ND STREET



Bowman
CONSULTING

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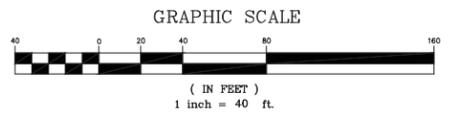
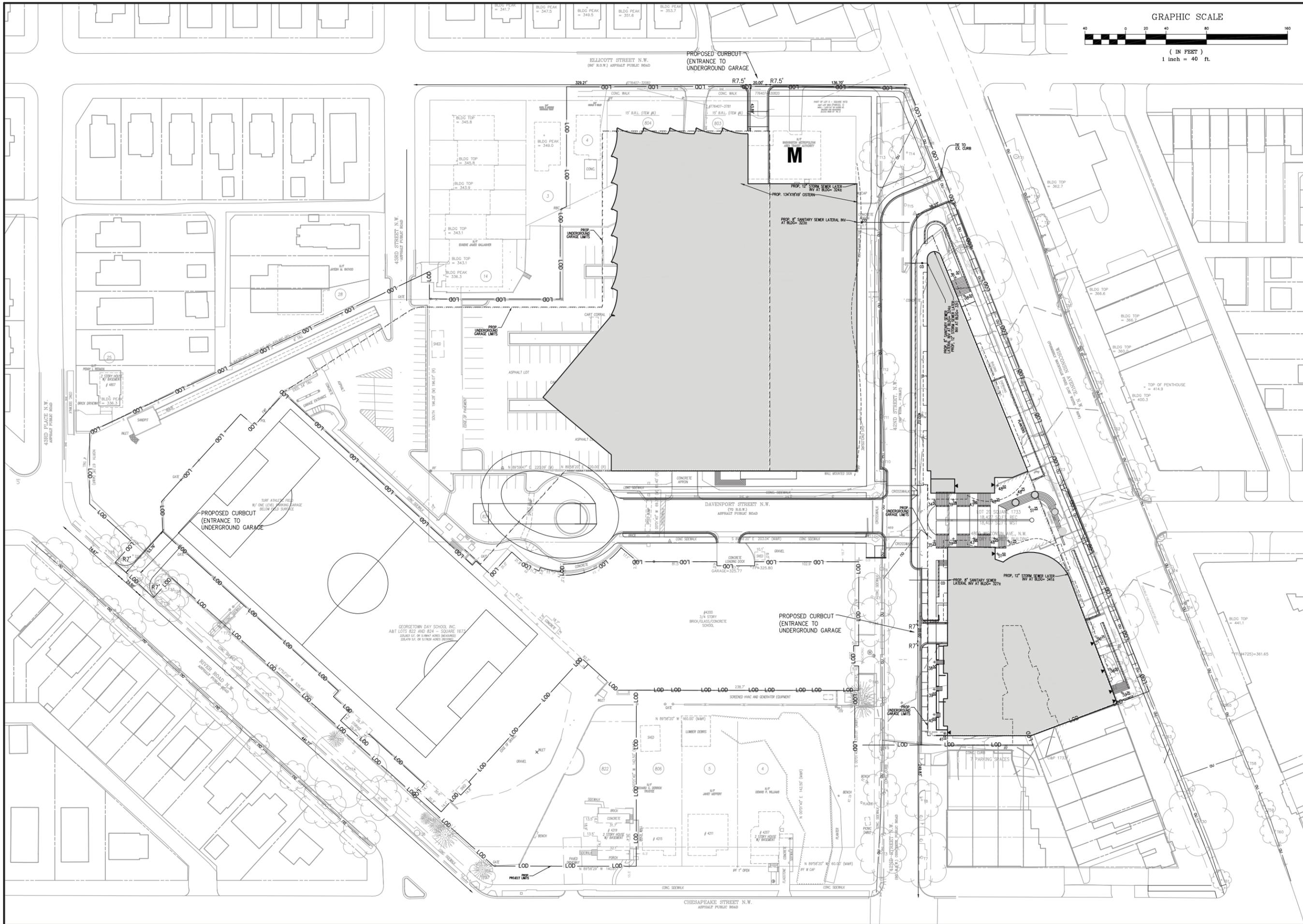
EXISTING CURB CUT EXHIBIT

GEORGETOWN DAY SCHOOL

WASHINGTON

DISTRICT OF COLUMBIA

PLAN STATUS		
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SCALE: H: 1" = 40'		
V: 2"		
JOB No.:		
DATE: AUG 21, 2015		
FILE No.:		
SHEET		C1.00



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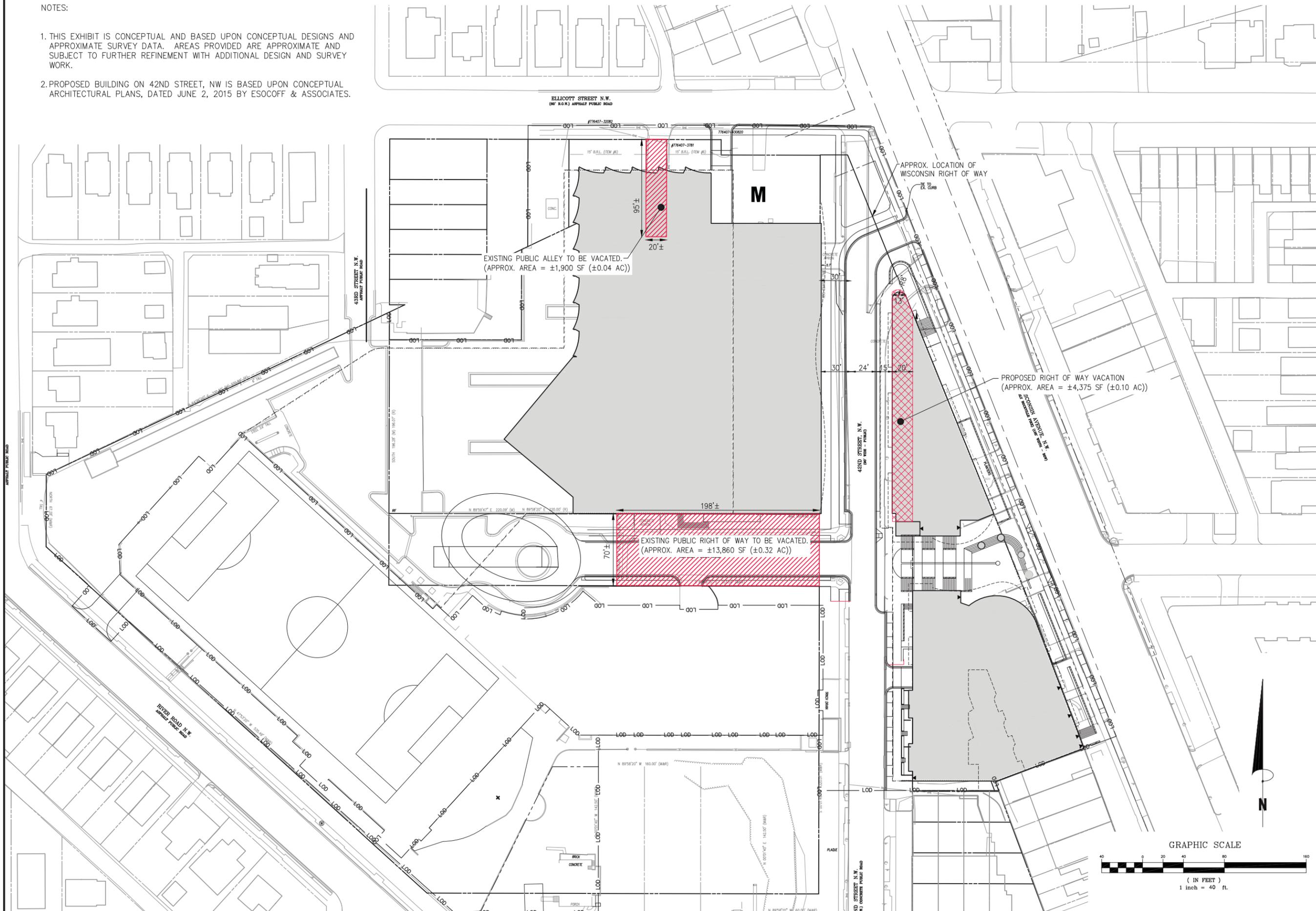
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 www.bowmanconsulting.com

PROPOSED CURB CUT EXHIBIT
GEORGETOWN DAY SCHOOL
 WASHINGTON
 DISTRICT OF COLUMBIA

PLAN STATUS		
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FILE No.		
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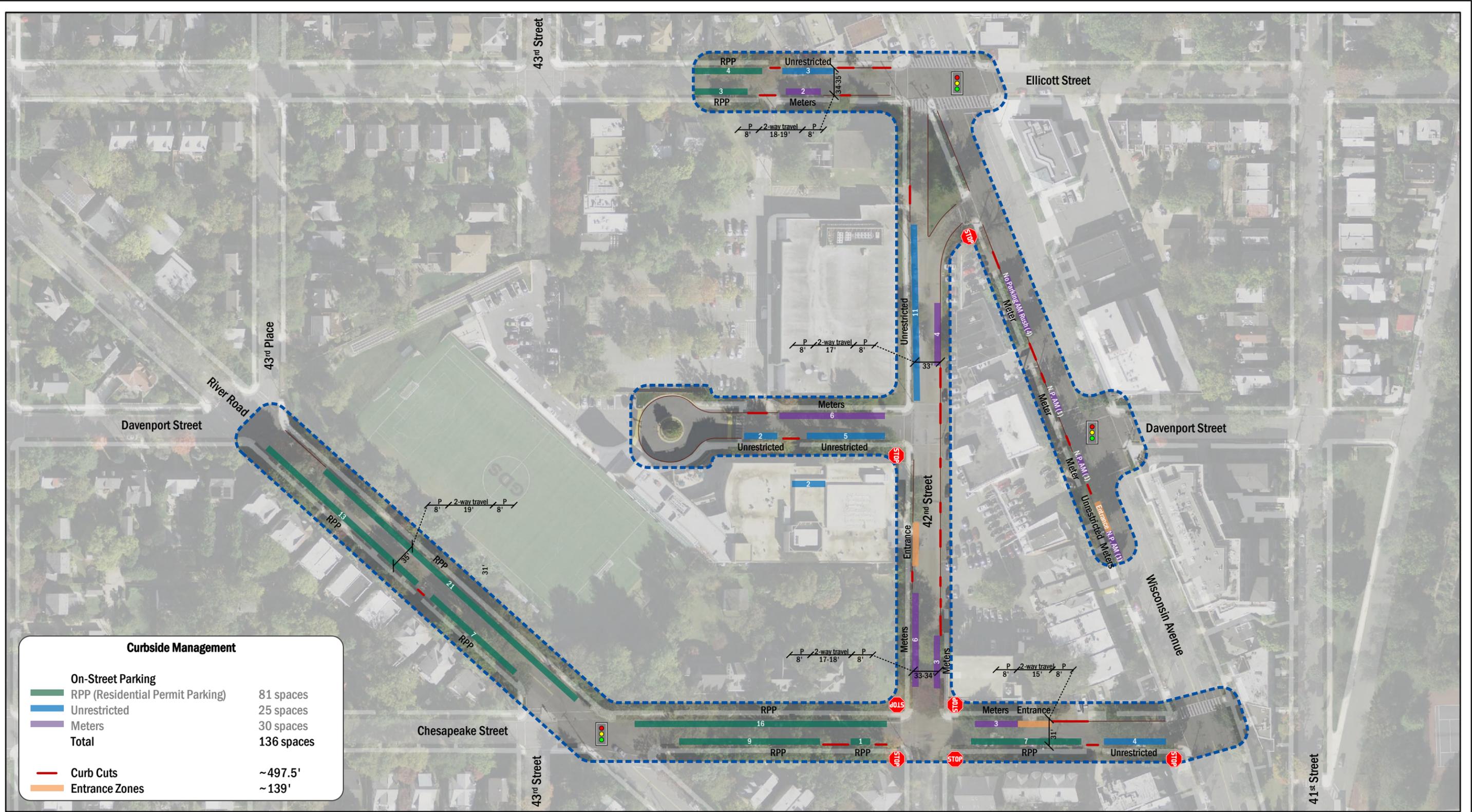
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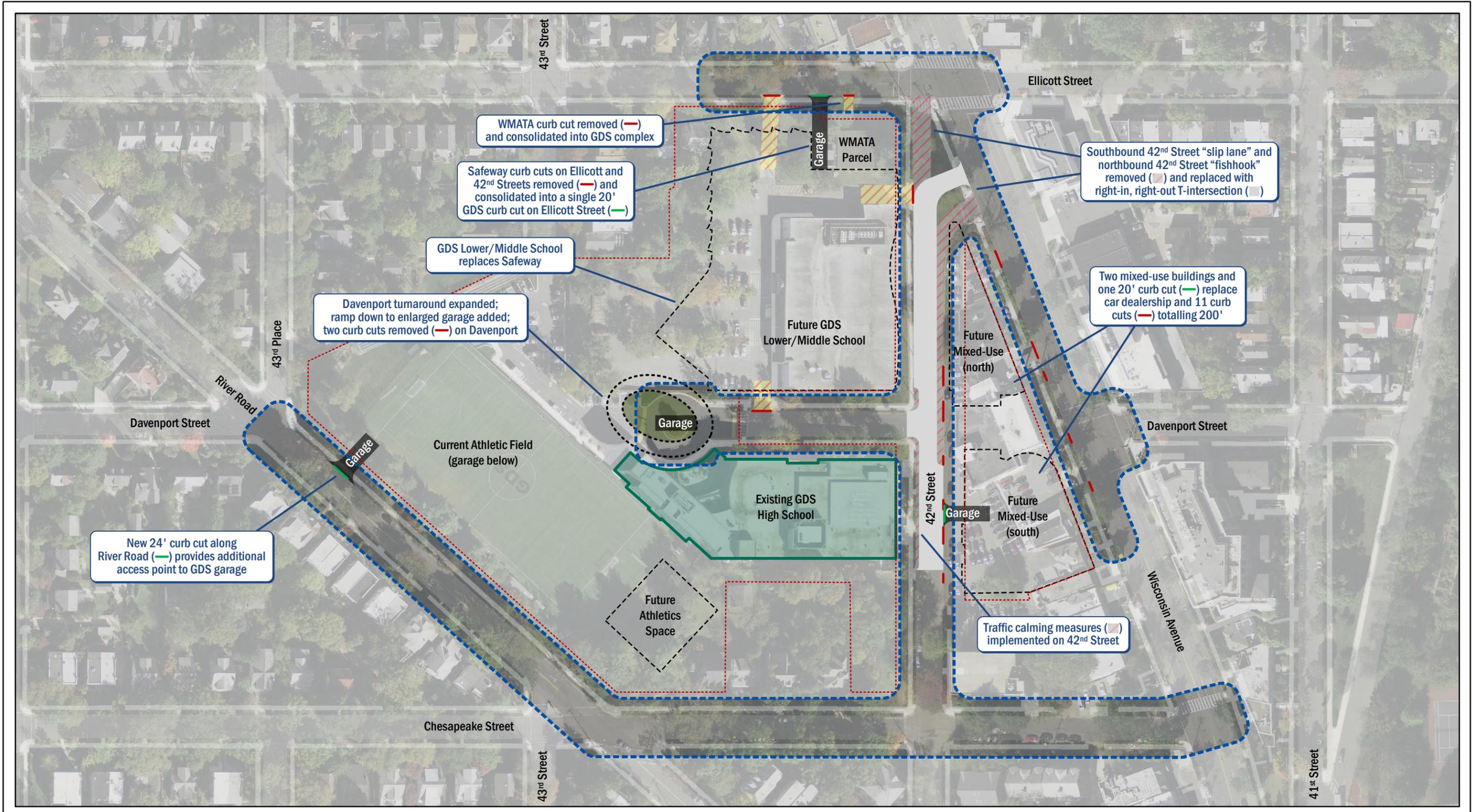
1. THIS EXHIBIT IS CONCEPTUAL AND BASED UPON CONCEPTUAL DESIGNS AND APPROXIMATE SURVEY DATA. AREAS PROVIDED ARE APPROXIMATE AND SUBJECT TO FURTHER REFINEMENT WITH ADDITIONAL DESIGN AND SURVEY WORK.
2. PROPOSED BUILDING ON 42ND STREET, NW IS BASED UPON CONCEPTUAL ARCHITECTURAL PLANS, DATED JUNE 2, 2015 BY ESOCOFF & ASSOCIATES.

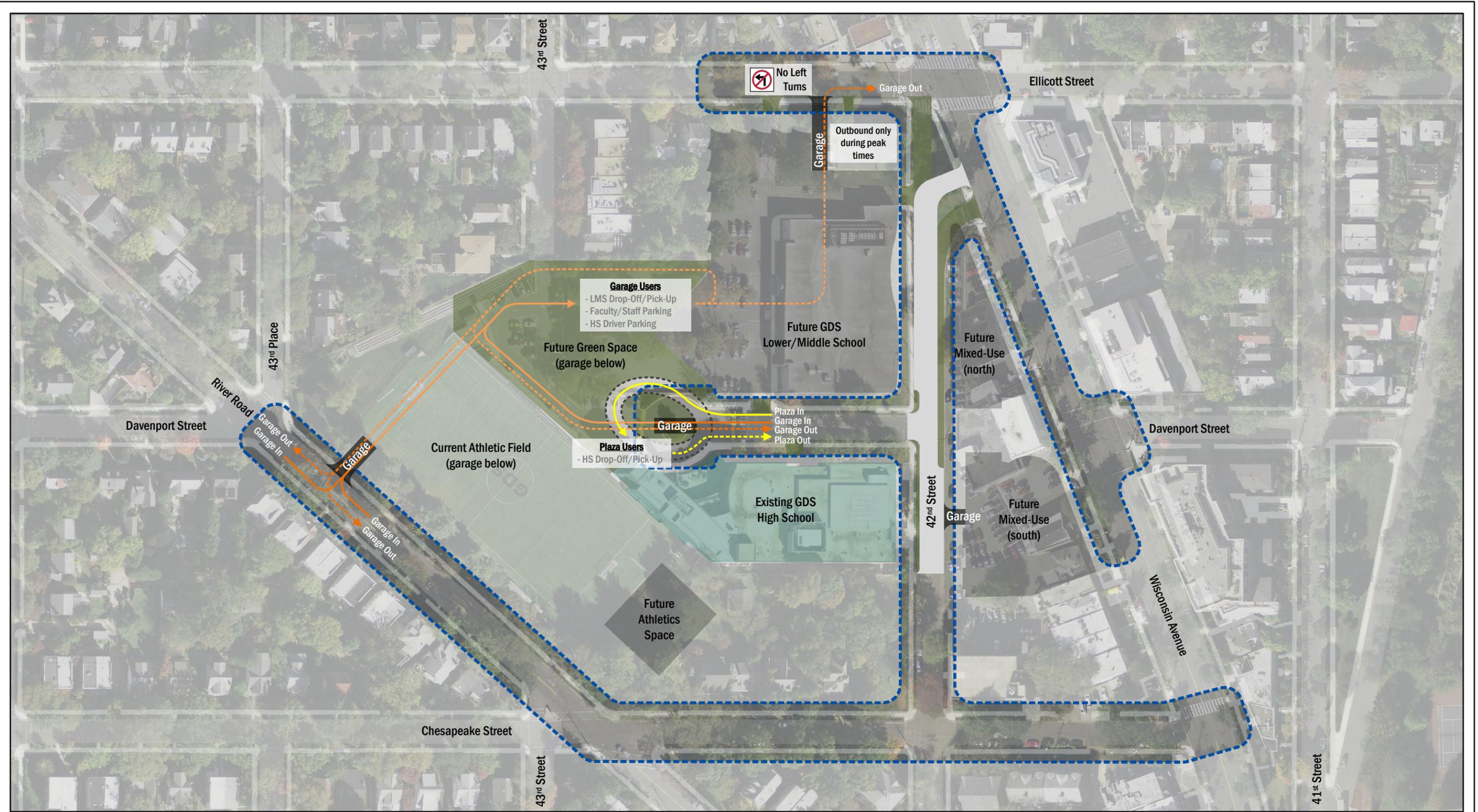


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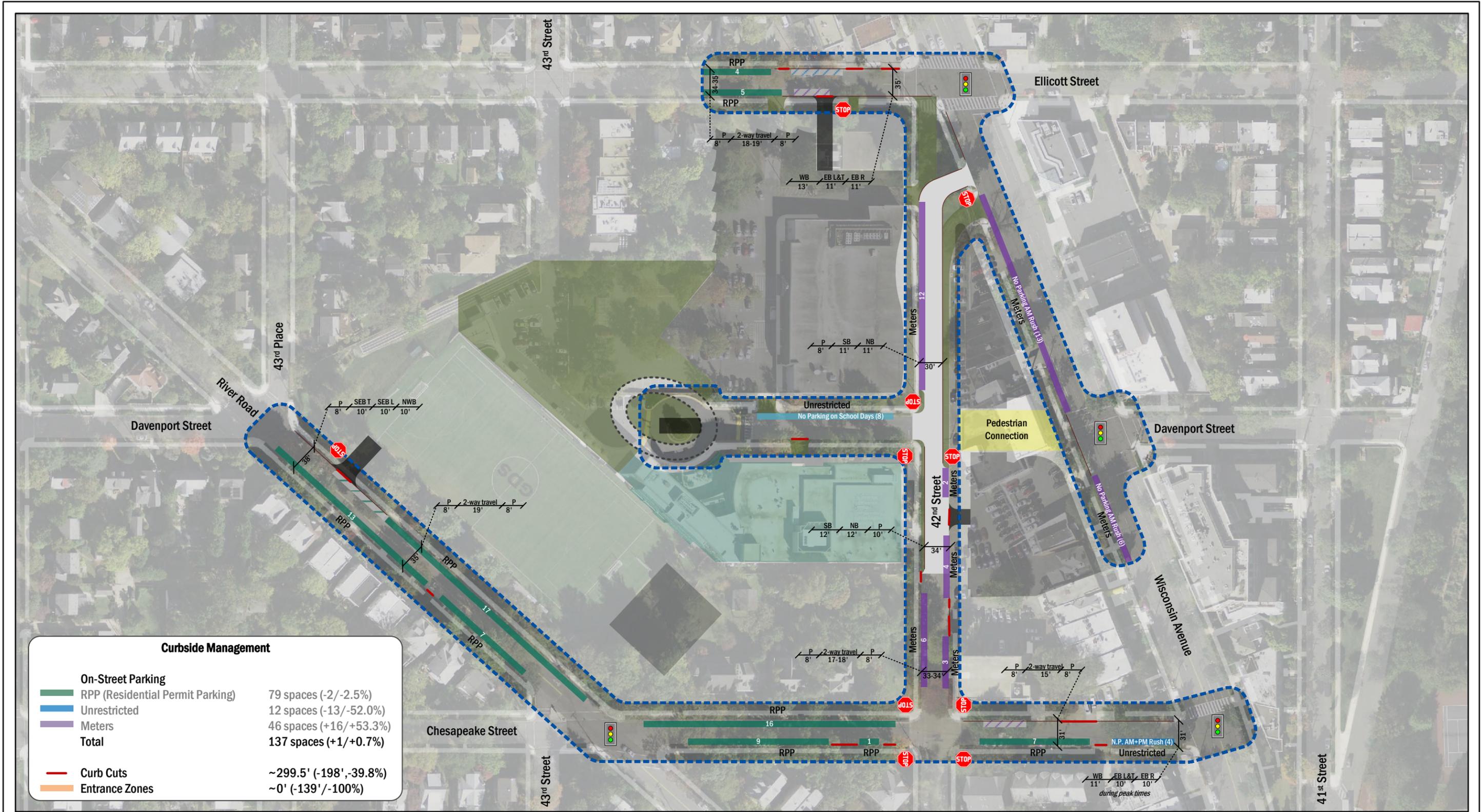
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SCALE: H: 1" = 40'	
V: 1" = 20'	
JOB No.	
DATE :	MAY, 2015
FILE No.	
SHEET	C1.00







Site Access: Vehicle Routing at Peak Drop-Off/Pick-Up Times, by User Group



Curbside Management	
On-Street Parking	
RPP (Residential Permit Parking)	79 spaces (-2/-2.5%)
Unrestricted	12 spaces (-13/-52.0%)
Meters	46 spaces (+16/+53.3%)
Total	137 spaces (+1/+0.7%)
Curb Cuts	~299.5' (-198', -39.8%)
Entrance Zones	~0' (-139'/-100%)





Table DRAFT: Preliminary Auto Trip Volumes (Revised 8/28/15)

Scenario	AM Peak Hour Trips 7:30-8:30 AM ^C			PM School Peak Hour Trips 3:00-4:00 PM ^{C,D}			PM Commuter Peak Hour Trips ^E 5:15-6:15 PM		
	In	Out	Total	In	Out	Total	In	Out	Total
GDS									
Existing GDS High School Only 500 students, 109 staff (spring 2014 data)	256	164	420	60	83	143	59	81	140
Future (unadjusted) ^A GDS LMS + HS Combined/Unadjusted ^B 1,200 students, 245 staff (spring 2014 data + expansion)	674	515	1,189	223	279	502	106	142	248
<i>Adjustments due to Consolidation</i>	-74	-59	-133	-30	-38	-68	-12	-16	-28
<i>Adjustments due to Enhanced TDM</i>	-123	-97	-220	-39	-48	-87	-19	-26	-45
Future (adjusted) ^A consolidated GDS LMS + HS with TDM measures in place	477	359	836	154	193	347	75	100	175
Change	+221	+195	+416	+94	+110	+204	+16	+19	+35
Other Uses									
Existing Safeway (spring 2015 data) + Martens Volvo (ITE rates)	82	74	156	102	106	208	88	112	200
Future 290 apts + 13,000 sf grocery + 15,700 sf retail (ITE rates)	25	53	78	61	44	105	76	56	132
Change	-57	-21	-78	-41	-62	-103	-12	-56	-68
Total									
Existing	338	238	576	162	189	351	147	193	340
Future	502	412	914	215	237	452	151	156	307
Change	+164	+174	+338	+53	+48	+101	+4	-37	-33

Notes:

- ^A Future GDS trips will be able to access the school using three access points (Davenport Street, Ellicott Street, and River Road) instead of only the Davenport Street access point in existing conditions, helping to disperse the impact of the added school trips.
- ^B Future school trips assume combined campus and enrollment growth but are based off existing travel patterns (no reduction in trips associated with campus consolidation, no shifting of bell schedule, no changes to travel mode split due to proposed TDM measures)
- ^C Individual school peak hours are used and may vary ± 15 minutes. Existing peak hour trip generation is slightly lower due to staggered bell schedules; future conditions may further shift bell times to lessen peak period traffic volumes.
- ^D The AM school peak overlaps with the AM commuter peak. The PM school peak is earlier than the PM commuter peak, so volumes for non-school uses are scaled proportionally based on Wisconsin Avenue traffic patterns
- ^E The PM commuter peak analysis period was determined based on existing traffic counts on Wisconsin and River Roads.

Responses to Ryan Westrom's (DDOT) email from 7/8/15 regarding draft GDS TDM plan

Text from Ryan's email in blue
Gorove/Slade responses in red

General comments:

Can you provide a breakdown of residence for students and employee by county?

Students:

County	Student Count
District of Columbia	559
Montgomery	383
Fairfax	94
Prince George's	50
Arlington	19
City of Alexandria	17
Prince William	3
Anne Arundel	2
Charles	2
Loudoun	1
Calvert	1
Howard	1

Employees:

County	Number of Employees
District of Columbia	98
Montgomery	71
Prince George's	16
Arlington	13
Fairfax	12
City of Alexandria	10
Loudoun	3
Frederick	2
Calvert	2
Baltimore	1
Spotsylvania	1
Washington	1
Prince William	1

Also, what proportion of students live within a mile of the school, a mile of transit, and outside those zones?

- Students within 1 mile of GDS – 124 student (11%) out of 1140 student addresses*
- Students within 1 mile of Metrorail stations – 522 students (46%) out of 1140 student addresses*
- Students outside of 1 mile of GDS and 1 mile of Metrorail stations – 618 students (54%) out of 1140 student addresses*

* Although GDS currently has 1,075 students, there are more student addresses on file due to separated/divorced parents. These numbers are based on treating each address equally.

Lastly, do you have an understanding of what impediments to using transit or walking/biking exist? Based on your survey can you glean why families may not currently choose these options?

It appears, based on the survey results and discussions with GDS staff, that many students and parents simply find drop-off in the morning and pick-up in the afternoon to be more convenient. The 8% walk/bike mode split for current HS students lines up with the amount of students living within 1 mile of the Davenport Campus, suggesting that physical impediments are not likely an issue.

There is likely more room for growth in the amount of students that take transit. Although 32% of parents that drop-off/pick-up are passing by the Davenport Campus and as such are unlikely to switch to transit, 43% of drop-off/pick-up parents return to the same area they departed from, indicating they may be good candidates for switching to transit. One of the concepts for the GDS shuttle is to provide areas where parents can drop-off/pick-up students, shorten their round-trip drive to the school, while maintaining a level of convenience for the parent (or improving on it).

Additionally, there will always be some level of drop-off/pick-up activity, simply due to student need for carrying large packages on some days (sports equipment, projects, etc...), and after-school activities leading to missing connections or leaving school after dark.

Specific comments on TDM plan:

- (Slide 4) Be consistent with how you use pick-up (vs. pick up) and drop-off
 - Formatting comment, revisions made in latest plan
- (4) Bypass not by-pass
 - Formatting comment, revisions made in latest plan
- (4) We suggest that the bypass lane benefit potentially be limited to vehicles carrying children from multiple families.
 - That's the intent of the bypass lane. Clarifications have been made to the TDM text.
- (5) We would also suggest commitment to a significant specific number of short-term bicycle parking spaces outside around the school area as well as surrounding the entire site.
 - GDS agrees to a commitment, with the following minimums:
 - 5 U-racks located near each school's primary entrance.
 - 7 U-racks located close to the residential lobby
 - 4 U-racks near the grocery store front door, and one or two at each other expected retail entry. (Minimum total of 8 u-racks for retail).

- *Note that these minimums are for short-term parking outdoors. GDS will also have a secure long-term bike room in the parking garage (the number of bicycle parking spaces has yet to be determined).*
- (5) Could a Capital Bikeshare station be purchased for somewhere on the school site? The nearest station is at Fessenden, but another could be added.
 - The PUD agrees to a station as part of the mixed-use TDM plan.
- (6) The commitment to a shuttle could be useful. But we're not sure all the details need to be settled yet. Perhaps the Red Line stops make the most sense, but perhaps other gathering places could be more effective. Additionally, it should also run in the evening. If someone expects to use this system, they will be much less inclined if it's not available in the afternoon. And furthermore, additional coordination will be necessary before DDOT would sign-off on a shuttle plan. For instance, permits from DDOT for any potential on-street loading areas would be needed, and are not assured. We believe it would be useful to discuss the potential for a shuttle in a slightly more generic fashion. There are various models that could be used, and we would want to work towards the most efficient use of this investment.
 - GDS is willing to rephrase the commitment to their and DDOT's mutual satisfaction. A more generic version of the commitment is included in the revised TDM text.
 - GDS thinks they will have much more success with the morning shuttles, due to the varying departure times of students stemming from after school activities, but will consider a commit to some level of shuttle service in the afternoon.
 - GDS and Gorove/Slade also want to clarify that the purpose of the shuttle is to stop at natural gathering points, which the Metro stations are, instead of providing a link to the school for students/employees that use Metro. For example, a parent that Metros to work could walk with their child to the station, place the student on the shuttle, and then head to work. Or a parent that drives in from Montgomery County to drop-off only to return to Montgomery County could stop at the Bethesda metro and not travel all of the way into DC. Natural gathering points other than Metro stations can be considered for stops when developing the final shuttle plans.
- (6) DDOT expects that GDS will subsidize students who are DC residents at the same level as public school students receive (i.e. full MetroRail benefit).
 - GDS agrees to this level of subsidy.
- (6) What subsidy level will be provided for non-DC residents? Please include a specific dollar level.
 - GDS commits to \$50/month for non-DC residents. GDS believes that parental behavior is more likely to change if they still contribute some portion each month instead of having a fully subsidized service. By creating a partnership, the school will be able to motivate the family to have an equity stake in the service and therefore use it.
- (7) Please also discuss encouragement of walking from the Tenleytown and Friendship Heights Metro stops. Could the 'transit buddies' run a daily "walking school bus"? We would hope that not all students use the shuttle on fair weather days.
 - The expectation is that 'transit buddies' would walk from the Metro station to the school (with their younger students), and not take the shuttle. See above comment on the shuttle not being intended as just a link between the station and the campus for transit riders.
- (7) Provide details on the level of incentives/prizes to be doled out on the active transportation days.
 - GDS commits to \$2,000 per year. In addition to bike and walk to school days, GDS anticipates that most of the incentives/prizes will be rewarded for inter-class and inter-grade competitions with pizza lunches (or similar) for the winning classes. They have found that these 'group' inter-

- class and inter-grade competitions are great motivators for students, much greater than parent-based monetary incentives or individual incentives for students.
- (7) We believe additional daily incentives to walk/bike should be added. For students within one mile a slight tuition or fee discount. For students > 1 mile, a moderately higher level.
 - It is GDS' experience that slight discounts tuition breaks will not change behavior. Similar to the last comment, their preference is to try to change student behavior by having competitions and incentives for students. Based on their knowledge of student and parent behavior, GDS believes that competitions between classes/grades to see which has the most people walking/cycling to school will have a much greater impact (group incentives work better than individual incentives).
 - (7) Provide details on the parking pricing for students who could take transit or walk/drive
 - GDS commits to a \$250/year surcharge for student drivers who live within a 1 mile radius of the school or 1 mile from a metro stop. The current parking price is \$500/year, thus the surcharge would raise the parking price by 50% to \$750/year for these students.
 - (7) What about a charge for students who are dropped off who could take transit or walk/drive? Either the aforementioned walking/biking incentive or this charge is necessary.
 - Although they are not necessarily opposed to this concept, logistically GDS cannot think of way to implement this change. Similar to reasons stated above, GDS is not sure a drop-off/pick-off charge to parents would generate a significant change in behavior.
 - There is also a desire that families have flexibility, such as allowing a parent to drop-off a student carrying a large project, or pick-up a student from an after-school activity without 'penalizing' the family. GDS believes that the group incentives discussed above are the most likely to work (traditional cost-based incentives that work for traditional office buildings or other environments may not be the best option for GDS).
 - (7) Are 2- and 3-person carpools possible within the same family, or does this require children from multiple families?
 - Carpools will be multi-family only.
 - (7) It would likely be helpful to extend this slide onto another slide and increase font size (this may hold for a few of the slides)
 - Comment noted
 - (8) Provide the subsidy level possible for employees on transit. Additionally, consider allowing employees to be eligible for at least two of these benefits.
 - GDS commits to:
 - \$100/month subsidy for faculty using public transportation.
 - Faculty using public transportation would also be entitled to a guaranteed ride home program for emergency use (like Uber) one time per month.
 - Full bikeshare or carshare membership for faculty who neither use public transportation nor drive to campus.
 - Faculty would also be entitled to a guaranteed ride home program for emergency use (like Uber) one time per month.
 - Faculty who live less than 1 mile from a Metro or within a mile of the School will be charged at the same rate as students for parking.
 - (8) The rest of the sentence from the third dash is missing. "...driving allowance at a _____"?
 - This should have been deleted, and is on the revised TDM plan

- (9) This sentence feels wrong to us: "If GDS is not meeting target trip generation and mode splits, they will adjust and enhance the TDM plan under DDOT's guidance." It feels like with this statement you're saying that you want to do *just* enough to meet your target. We believe, alternatively, that you should aim to meet your aspirational goals and, if anything, overshoot the mark on your TDM measures initially. After a period of monitoring, you could then remove the TDM elements that are not working. Overall, we'd rather see a program that gets pared down than one that must be ramped up. If the TDM plan is working, concerns about the money being spent are misplaced. We'd be happy to discuss this further.
 - GDS agrees and will revise the text
- (9) We believe monitoring should occur in the spring (or fall and spring).
 - The intent of a 2-year monitoring program is that is the minimum time GDS believes is needed to see if changes in behavior were occurring on campus. GDS is not against monitoring every year, but would still plan to change the TDM plan elements every other year.
 - GDS still thinks Fall based monitoring is better, so any changes could be tested/adapted that year and ready for full implementation by the following year. That said, they can work with Spring if DDOT feels Spring data would provide improved results.
- (10) Which employees will enforce this? All of them? Specific positions?
 - These TDM commitments are holdovers from the existing TDM, related to enforcement of students that park on-street. GDS Faculty are responsible, and it's part of their job description. A GDS administrator is in charge of the program (currently Rahel).

GDS & Mixed Use TDM plan – August 24, 2015 DRAFT

GDS TDM Plan:

- Overall Goal:
 - Reduce the amount of vehicular trips going to and from the school during peak times of school activity and surrounding neighborhood activity
- Overarching Strategies:
 - Take advantage of the site's proximity to Metro and bus transit
 - Develop walking/cycling programs and incentives
 - Increase number of persons per car
 - Introduce shuttle bus to campus from multiple locations
 - Work with DDOT's Safe Routes to School program
- Structural/Design Elements
 - All queuing associated with drop-off/pick-up will take place underground or on GDS property. With multiple entrance and exit points, there should be no back up on any public street.
 - Within the drop-off/pick-off area, a bypass lane will be provided for drivers with students from two or more families.
 - "Kiss & Ride" parking spaces will be provided at a nominal fee to parents who want to drive their children to school and leave their car in the GDS lot for the day.
 - Bicycle parking will be provided underground, in the parking garage for students and staff. The location will be covered, safe and protected from weather.
 - A bike maintenance facility will be located in the garage.
 - Showers and lockers will be available for staff and students who bike/run to work.
 - Bicycle racks will be provided outside the building for visitors. GDS commits to installing a minimum of 5 U-racks near each of the school's primary entrance.
 - There will be a 200V electric vehicle charging station in the parking garage.
 - An electronic screen displaying real-time transportation information (i.e., Metro rail and Metro bus arrivals, Capital Bikeshare availability, etc.) will be incorporated into the high school lobby.

- The Comprehensive Transportation Review (CTR) accompanying the PUD submittal will review walking routes to and from the school. Based on this review, GDS may upgrade some facilities to encourage walking (e.g. improving sidewalks, repainting crosswalks, etc...).
- Student and Family Strategies
 - GDS commits to operating a shuttle for a nominal charge. The shuttle will connect the campus to various gathering points, such as Metro stations. The exact routing and placement of stops will be coordinated with DDOT and other agencies as needed. The initial concept is for two circuits in the morning and potentially in the afternoon. Use of the shuttle will be encouraged, and promoted through education.
 - GDS will encourage the use of public transportation. Students that take Metro will be eligible for transit subsidies.
 - GDS will encourage all students to enroll for free Metrobus fares, per the existing District One Card program.
 - GDS will fully subsidize all students that are DC residents through the existing District program that provides this via the DC One Card (this includes full MetroRail subsidy).
 - GDS will subsidize SmarTrip card for students that are not DC residents, at a level of \$50 per month.
 - GDS will institute a 'transit buddy' system, matching older students that take transit/walk or bike with younger students (older students using Metrorail will also walk with the younger student between the station and the school). High school students that escort elementary and middle school students will obtain community service hours.
 - GDS will incentivize student transit, cycling and walking by:
 - Hosting four bike/walk to school days during each school year. These days will be heavily marketed and coordinated with DDOT's Safe Routes to School program. The School will provide incentive/prizes for students that participate.
 - GDS will establish inter-class and inter-grade competitions with incentives/prizes for the winning classes, based on the amount of transit/cycling/walking.
 - GDS commits to a minimum prize/incentives total for these programs of \$2,000 per year.
 - GDS will include alternative transportation education for students and parents during orientation/programming at the beginning of each school year to educate as to the transportation options available and how to safely use them getting to/from school.

- As part of a staggered dismissal, an earlier dismissal will be provided for students that walk, bike, or take transit to school
- Ride-matching services will be provided to increase the amount of persons per car.
- Students that drive and live within one mile of a Metro station and/or within a 1 mile radius of the school will be charged a premium for parking. GDS commits to charging a \$250/year surcharge for these students (on-top of the regular parking fee).
- The parking fee will be reduced by for two-person carpools, and will be free for 3 or more person carpools (carpools defined as having students from multiple families).
- Students that drive will have an assigned space. They will be required to register their vehicle. Students will be strictly prohibited from parking on residential streets surrounding the campus.
- Employee Strategies
 - The GDS shuttle will be provided at no cost to staff.
 - GDS will encourage the use of public transportation. Faculty that do not drive will be eligible for the following:
 - \$100/month subsidy for faculty using public transportation.
 - Faculty using public transportation would also be entitled to a guaranteed ride home program for emergency use (like Uber) one time per month.
 - Full bikeshare or carshare membership for faculty who neither use public transportation nor drive to campus.
 - Faculty would also be entitled to a guaranteed ride home program for emergency use (like Uber) one time per month.
 - Faculty that drive and live within 1 mile of the School or 1 mile of a red-line Metro station will be charged a premium monthly parking fee. GDS commits to charging a \$250/year surcharge for these drivers (on-top of the regular parking fee). The monthly fee will decrease for two-person carpools, and will be free for 3 or more person carpools.
 - Ride-matching services will be provided to increase the amount of persons per car.
- Monitoring Commitment
 - GDS will monitor vehicular trip generation and mode splits by students, families, and employees.
 - The purpose of the monitoring is to see how well the TDM plan is meeting its goals and to allow for changes to the strategies based on their performance.

- The Comprehensive Transportation Review (CTR) accompanying the PUD submittal will set target and aspirational goals for both vehicular trip generation and mode splits.
- On an annual basis, GDS will measure vehicular trip generation at school peak hours and perform surveys of parents and employees. The results will be presented in a report to DDOT and the ANC.
- The report will show how GDS is meeting their TDM goals, ideally the aspirational goals set in the CTR. Based on the results, GDS will adjust and enhance the TDM plan with DDOT's guidance.
- Monitoring will be conducted in the fall, after several weeks of school so patterns have been established.
- GDS will have quarterly meetings with the community for feedback on traffic and parking-related issues.
- Enforcement
 - School employees will be trained at the beginning of each year to implement and enforce the TDM plan. These roles are typically filled by GDS Faculty (as part of the job description), with a GDS Administrator in charge of the program.
 - Compliance with the TDM plan will be incorporated into the student contract. Families who do not comply with the TDM plan will risk the student's loss of privileges at GDS, and families with a record of repeated non-compliance risk the student's expulsion.

Mixed-Use Building TDM Plan:

- Overall Goal:
 - Reduce the amount of vehicular trips going to and from the retail/residential buildings during peak times of school and surrounding neighborhood activity
- Overarching strategies:
 - Take advantage of the site's proximity to Metro and bus transit
 - Encourage sustainable modes of transportation
- Residential Policies/Marketing:
 - We will designate a **TDM coordinator**, who is responsible for organizing and marketing the TDM plan and who will act as a point of contact with DDOT.
 - All new residents will be provided in their **welcome packets** information about transportation options serving the site.

- We commit that residents of the building will be **prohibited from obtaining RPP or Visitor Parking Pass (VPP)** permits from the District Department of Motor Vehicles (DMV). This will be included in a clause in all residential leases prohibiting residents from applying for or obtaining RPP or using an RPP guest pass within one mile of the development
- Structural and Design Elements
 - All residential parking will be **unbundled** from the costs of the residential units.
 - **Bicycle parking** will be provided meeting or exceeding existing regulatory minimums. This includes long-term spaces in the garage, and short-term spaces at street level. The PUD commits to a minimum short-term parking of:
 - 7 U-racks located close to the residential lobby
 - 4 U-racks near the grocery store front door, and one or two at each other expected retail entry. (Minimum total of 8 u-racks for retail).
 - We will pay for the **installation of a Capital Bikeshare station and one year of maintenance** and operating costs at location to be determined in coordination with DDOT.
 - The residential building lobby will display **real-time transit** and other alternate mode information, using an electronic video screen.
 - **Showers and lockers** in the building's fitness center shall be made available to retail employees that chose to bike to work.
 - A **car-sharing space** will be reserved in the underground garage. If this space is not desired by any car-sharing service, it shall revert to the to general use.
 - We will install **two (2) 240 volt electric car charging stations** in the garage should the demand for such exist.

Introduction

The following tables provide a summary of a technical comparison of two scenarios; (1) the proposed Pedestrian Davenport connection, and (2) a Vehicular Davenport connection. The technical analysis was performed by Gorove/Slade via a preliminary traffic model using traditional DDOT and industry standard methodologies similar to those employed during DDOT's Comprehensive Transportation Review (CTR) process.

The preliminary traffic model was assembled to help the design team test difference access scenarios, such as driveway placement and circulation patterns. Although less comprehensive than the eventual traffic model to be developed for the CTR, it provides results with a high level of confidence that will be matched in the CTR analyses.

Assumptions

The following lists the technical assumptions used in the preliminary model:

- The time period of analysis was the **AM peak** only and assumes the school peak and commuter peak overlap. The PM peak (for either school or commuter) traffic was not considered vital for the preliminary model as the project's net change in vehicular trip generation during the afternoon will be much lower, and as such conclusions on site access made during the AM peak will dictate the design.
- The study area for the preliminary model is a subset of intersections that will be included in the full traffic model for CTR analysis. The excluded intersections include those farther away from the project, where its impacts will be similar regardless of access scenario.
- The traffic data included in the model was collected on Wednesday, May 7, 2014, Wednesday, November 19, 2014, Tuesday, April 21, 2015,

Thursday, April 23, 2015, Tuesday, April 28, 2015, and Tuesday, June 2, 2015. Individual intersection AM peak hours were used for the analysis.

- The preliminary model uses DDOT provided signal timings at all traffic signals within the model.
- The volumes used in the model were compiled by:
 - Removing trips generated by the existing HS and Safeway.
 - Vehicular trips for are added for the mixed use development and the LMS and HS. LMS and HS trips are broken are by the internal access scheme for each school (pick-up and drop-off patterns).
 - The number of vehicular GDS trips added to the network is an unadjusted amount. That is, it is equal to the current trip generation of the LMS and HS and grown linearly based on the anticipated new student cap. It does not take into account the natural reduction of trips due to school consolidation (such as how some LMS trips will convert to transit due to relocation near Metrorail), or the effects of the enhanced TDM measures proposed in the PUD. This was done to provide a conservative number of GDS-based trips, thus increasing the level of confidence that the access scheme developed in the preliminary model would work in the detailed CTR traffic analysis.
- Trip distribution was based on:
 - For GDS traffic, pick-up/drop-off traffic was assigned based on a parent survey (specific questions were asked about origins and destinations both before and after drop-off). Drivers parking at GDS were assigned based on faculty/staff home address data.
 - For the mixed-use building, traffic was assigned using preliminary distributions based on projected capture areas for retail tenants, and places of employment for residents.
- The preliminary model assumes the connection of 42nd Street to Wisconsin Avenue would be realigned to meet with Wisconsin Avenue as

a T-intersection and changed to right-in/right-out only as part of the project (per conversations with DDOT).

- The model considers additional school garage access points on River Road between 43rd Street and 43rd Place, on Ellicott Road between 42nd Street and 43rd Place, and on 42nd Street between Davenport Road and Wisconsin Avenue. The baseline model assumes no improvements are made at these intersections beyond their construction and the installation of a stop sign.
- The results below do not assume any external intersection improvements as part of the general discussion. Except where specifically noted the study area is assumed to remain configured as it is today. The impact of improvements and recommendations is only discussed when warranted by unsatisfactory intersection or roadway conditions.

Table 1: Evaluation of Intersections along Major Routes to/from Wisconsin Avenue

Intersection	Proposed Scenario with Pedestrian Davenport	How Vehicular Davenport Would Impact Intersection
<p>1. Wisconsin & Chesapeake</p>	<ul style="list-style-type: none"> • Existing condition: long queues develop on EB and NB approaches (during AM peak). Existing traffic volumes are high enough to justify a traffic signal. • Future condition: GDS traffic increases vehicular volumes on Chesapeake during the AM peak, with drivers heading to Wisconsin Avenue This exacerbates the existing condition. <p>Recommended mitigation measures:</p> <ol style="list-style-type: none"> A. Install a traffic signal B. Reconfigure Chesapeake Street to widen two-way section and create separate LEFT and RIGHT lanes at the EB approach (requires removal of 3 parking spaces). <p>These improvements mitigate both the existing condition and the additional traffic generated by the project.</p>	<ul style="list-style-type: none"> • Vehicular Davenport absorbs nearly all of the GDS vehicular traffic that would otherwise use Chesapeake Street. • The long queues on the EB and NB approaches generated by existing traffic remain. A traffic signal could still be installed to improve conditions, but it wouldn't be necessary to accommodate PUD traffic.
<p>2. Wisconsin & Davenport</p>	<p><i>(no vehicular traffic in this scenario)</i></p>	<ul style="list-style-type: none"> • Vehicular Davenport creates a direct path from GDS to Wisconsin Avenue, and as such it is expected to attract a substantial share of site traffic. • EB queues are projected to stretch back to 42nd Street (150' away, approximately 6 cars), blocking the intersection. This creates queues backing up into GDS and on 42nd Street. • The queue would be on a steep hill, posing hill start issues for heavy and/or manual transmission vehicles. <p>Tested mitigation measures (<u>none recommended</u>):</p> <ol style="list-style-type: none"> A. Adjust signal phasing/timing to provide a 'green arrow' for EB left turns to Wisconsin Avenue (not recommended, does not significantly improve conditions)

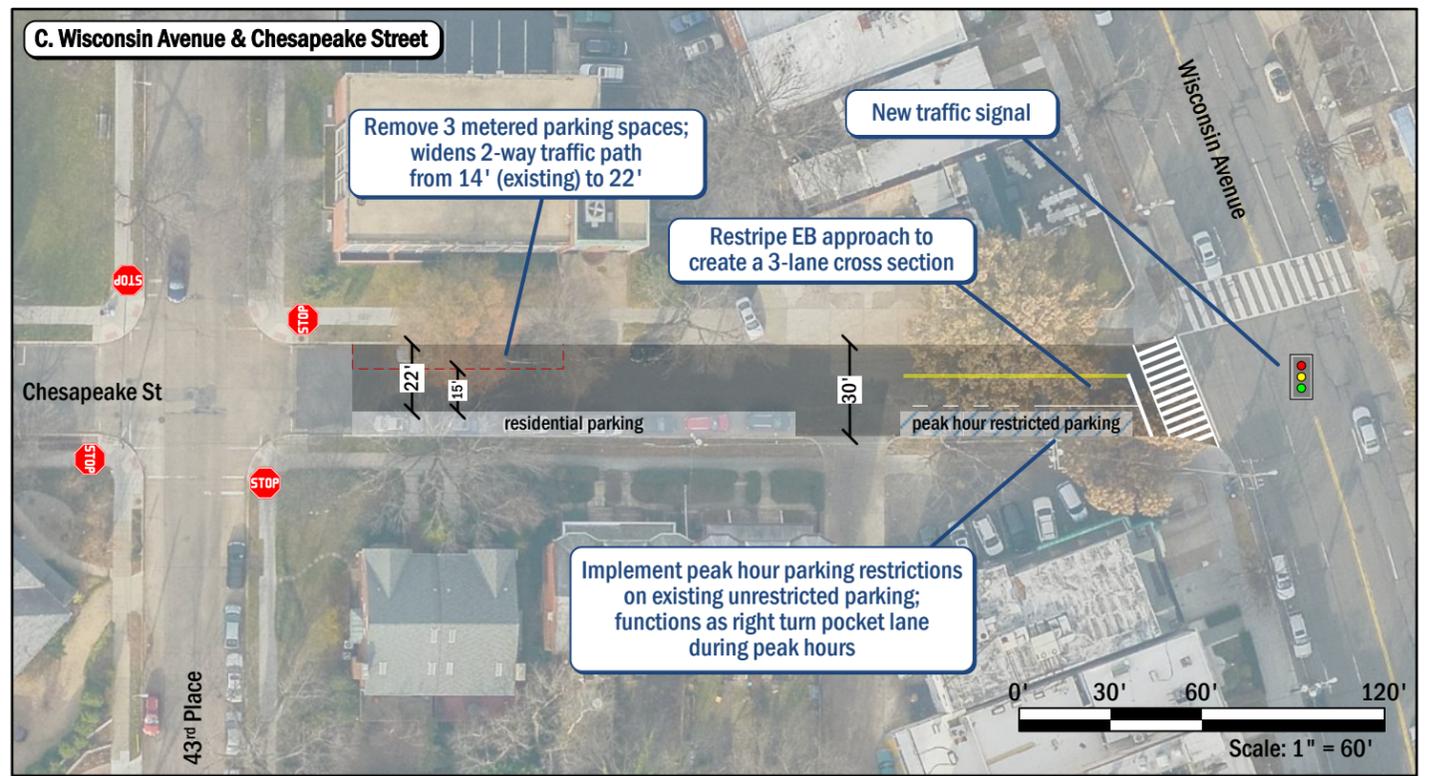
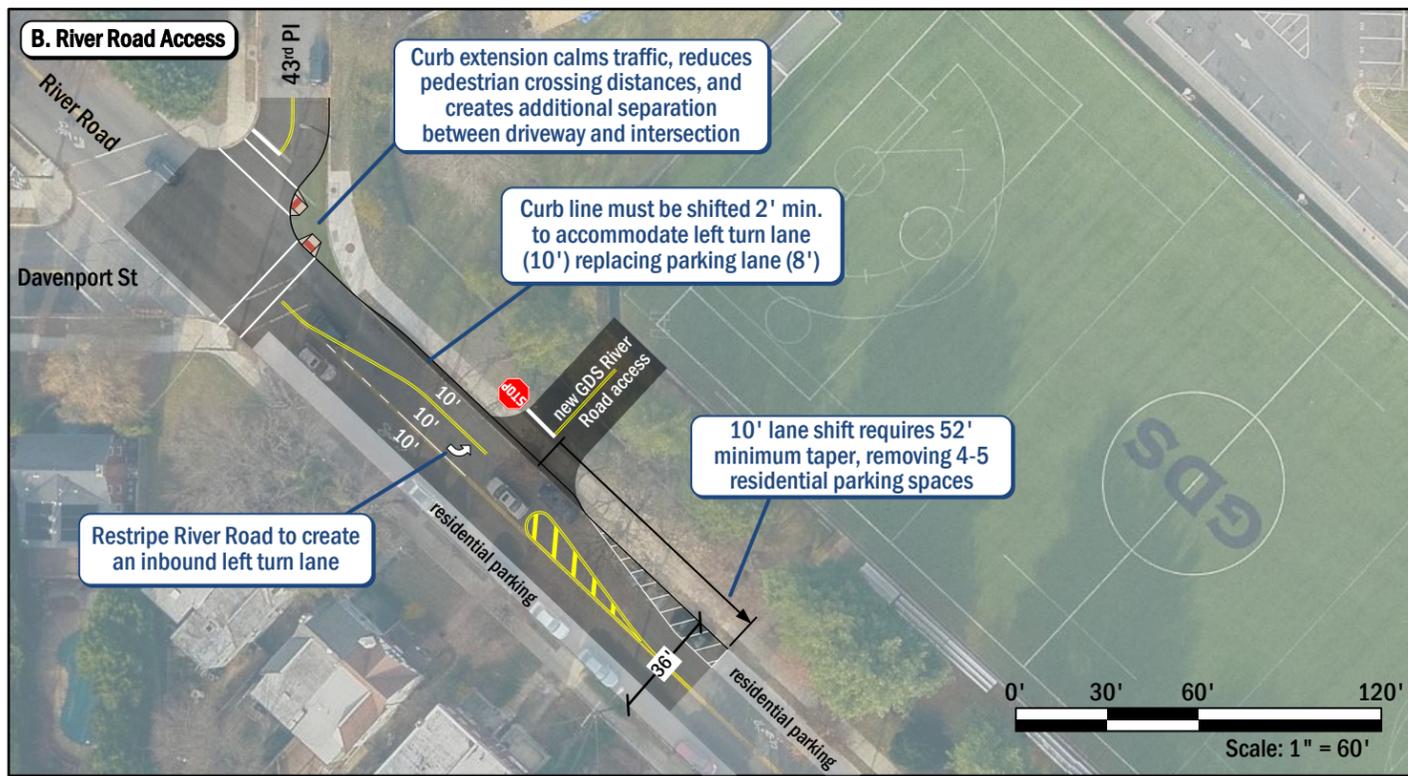
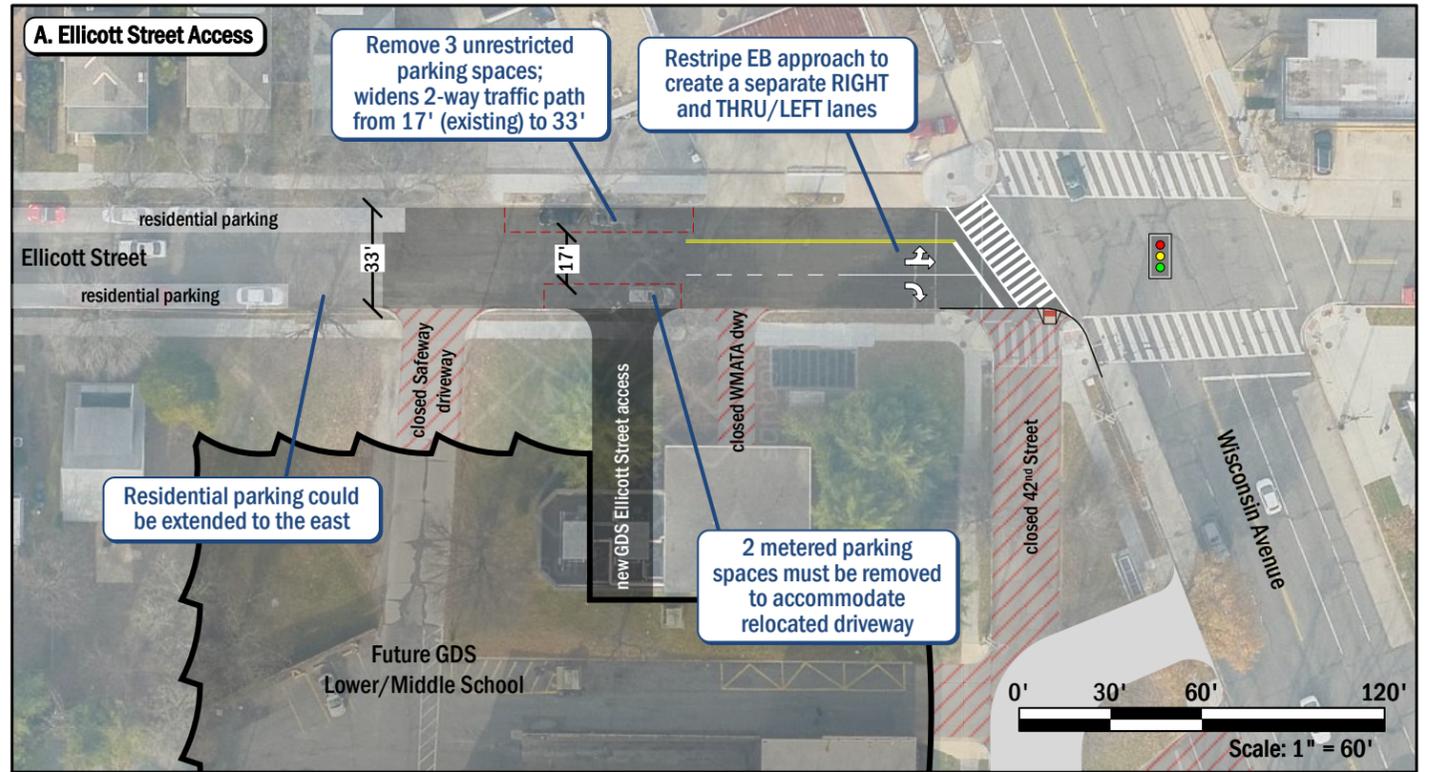
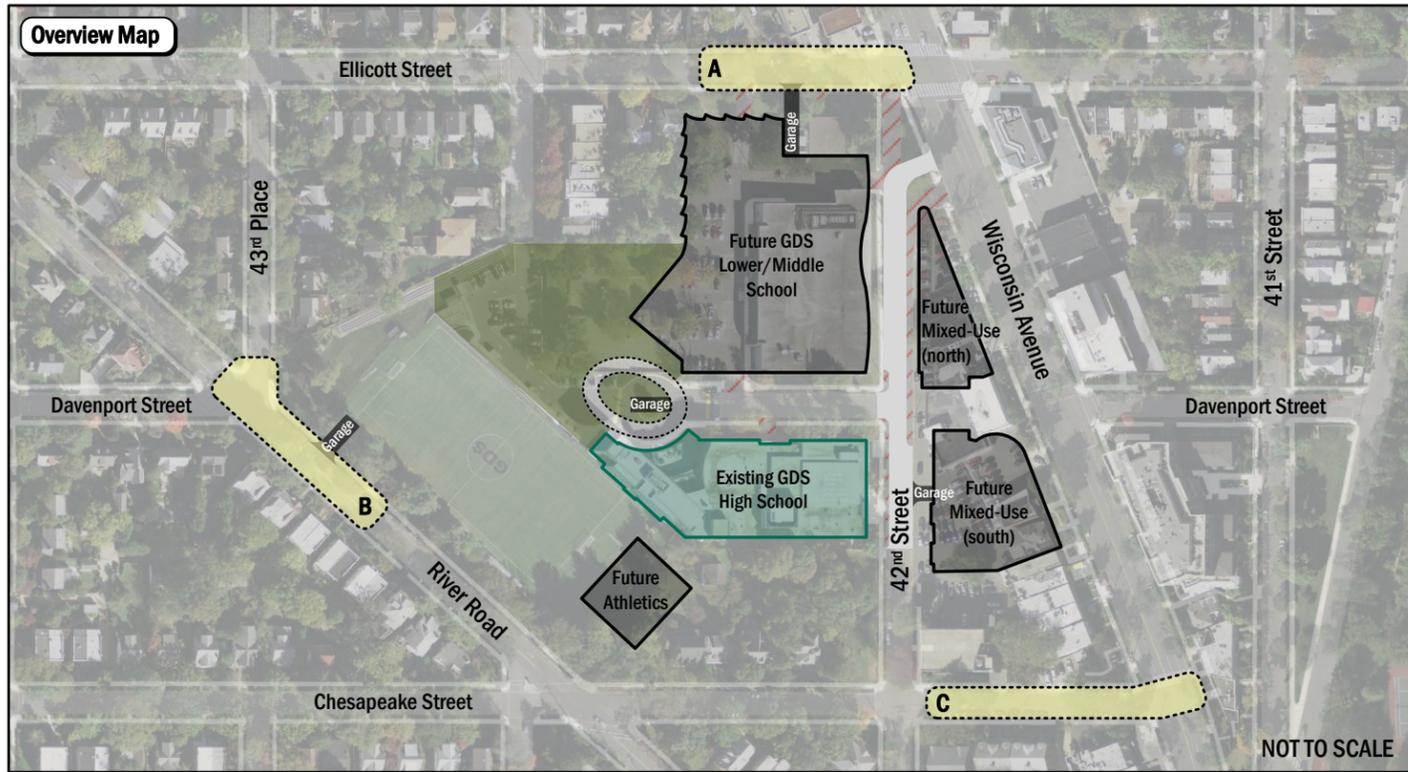
Intersection	Proposed Scenario with Pedestrian Davenport	How Vehicular Davenport Would Impact Intersection
		<ul style="list-style-type: none"> B. Increase green time for the east-west portion of the signal to over 50% (not recommended, causes significant delays to Wisconsin Avenue north-south traffic) C. Create separate RIGHT and THRU/LEFT lanes at the EB approach (not recommended given Vehicular Davenport right-of-way, as it would decrease pedestrian area and lengthen the crosswalk)
<p>3. Wisconsin & Ellicott</p>	<ul style="list-style-type: none"> • Existing condition: AM peak hour has light EB traffic. • Future condition: During AM peak hour, GDS traffic will increase EB volume by 50% (overall volumes remain relatively light). • Expected queues for Ellicott Street traffic waiting for a green light increase to 8 vehicles, which would block GDS Ellicott access. <p>Recommended mitigation measures:</p> <ul style="list-style-type: none"> A. Reconfigure Ellicott to create separate THRU/LEFT and RIGHT lanes at the EB approach (requires removal of 5 metered parking spaces, some of which would be removed anyway to accommodate site driveway) B. Retime the traffic signal to take advantage of new lane configuration 	<p>No substantial difference.</p>
<p>4. 42nd & Chesapeake</p>	<ul style="list-style-type: none"> • A significant number of parents head southeast (towards downtown) after dropping off their students, so the SB approach of this intersection will handle approximately 2/3 of GDS' outbound traffic. • With the PUD, this intersection will experience an increase in traffic heading south on 42nd Street during the AM peak hour. The traffic model shows that queues and delays will increase, but not to unacceptable levels (SB queues of 8+ vehicles). 	<p>Vehicular Davenport would substantially reduce traffic volumes along the SB approach</p>

Intersection	Proposed Scenario with Pedestrian Davenport	How Vehicular Davenport Would Impact Intersection
	<p>Tested mitigation measures (none recommended):</p> <ul style="list-style-type: none"> A. Create separate LEFT and THRU/RIGHT lanes at SB approach by restricting parking (not recommended, multi-lane approaches at all-way stops are not a common situation in the District) B. Signalize intersection (not recommended, does not significantly improve conditions) <p>No improvements recommended. Projected traffic increases delays, but not to a level necessary for mitigation. Additionally, tested mitigation measures do not improve conditions.</p>	
<p>5. Curb Cuts on Project Site</p>	<ul style="list-style-type: none"> • Existing condition: Approximately 360 linear feet of curb cuts. 18 total curb cuts • Future condition: Approximately 110 linear feet of curb cuts. 6 total curb cuts <p>This project will improve pedestrian safety by substantially reducing curb cuts.</p>	<p>No substantial difference.</p>

Table 2: Evaluation of GDS Access Points

GDS Access Point	Proposed Scenario with Davenport as a Pedestrian Street	How Vehicular Davenport Would Impact Access Point
<p>1. Davenport & 42nd</p>	<ul style="list-style-type: none"> • During AM peak hour EB queues increase slightly • Increased pedestrian traffic to/from Wisconsin Avenue creates need to improve crosswalk protections. <p>Recommend mitigation measures:</p> <ul style="list-style-type: none"> A. Convert intersection to all-way stop control B. Increase pedestrian safety through traffic calming measures on 42nd Street <p>(Recommendations are primarily pedestrian-safety based, and not necessarily for capacity reasons.)</p>	<ul style="list-style-type: none"> • Because of shortness and grade of vehicular Davenport, WB queues will block this intersection. • Potential improvements may be necessary to ensure safe and efficient traffic flow through the intersection during AM peak hours. This would likely be though installing a traffic signal coordinated with the one at Davenport/Wisconsin.
<p>2. River Road Access</p>	<ul style="list-style-type: none"> • Inbound left turning vehicles will have to wait for gaps in the opposing traffic stream to enter the garage. River Road's 12' travel lanes do not leave enough room for thru traffic to pass, creating delays. <p>Recommended mitigation measures:</p> <ul style="list-style-type: none"> A. Reconfigure River Road to establish a left turn lane at this location (requires loss of 4-5 RPP spaces, some of which would be removed for driveway regardless) 	<p>No substantial difference.</p>
<p>3. Ellicott Street Access</p>	<ul style="list-style-type: none"> • There are no queuing issues at this intersection after the implementation of the Ellicott Street and Wisconsin Avenue improvements recommended above. • There are community concerns about traffic exiting the school heading west along residential Ellicott Street. <p>Recommended mitigation measures:</p> <ul style="list-style-type: none"> A. To prevent any WB outbound traffic from using this GDS access point, outbound left turns will be prohibited per the school's management plan and/or 	<p>No substantial difference.</p>

GDS Access Point	Proposed Scenario with Davenport as a Pedestrian Street	How Vehicular Davenport Would Impact Access Point
	<p>using driveway geometry to minimize traffic past Ellicott residences</p>	
<p>4. 42nd Street Access (mid-block between Ellicott & Wisconsin)</p>	<p>This access point is not necessary; recommend removing from plan.</p> <p>The Ellicott and Davenport access points have sufficient capacity to handle traffic heading out to Wisconsin Avenue.</p>	<p>No substantial difference.</p>



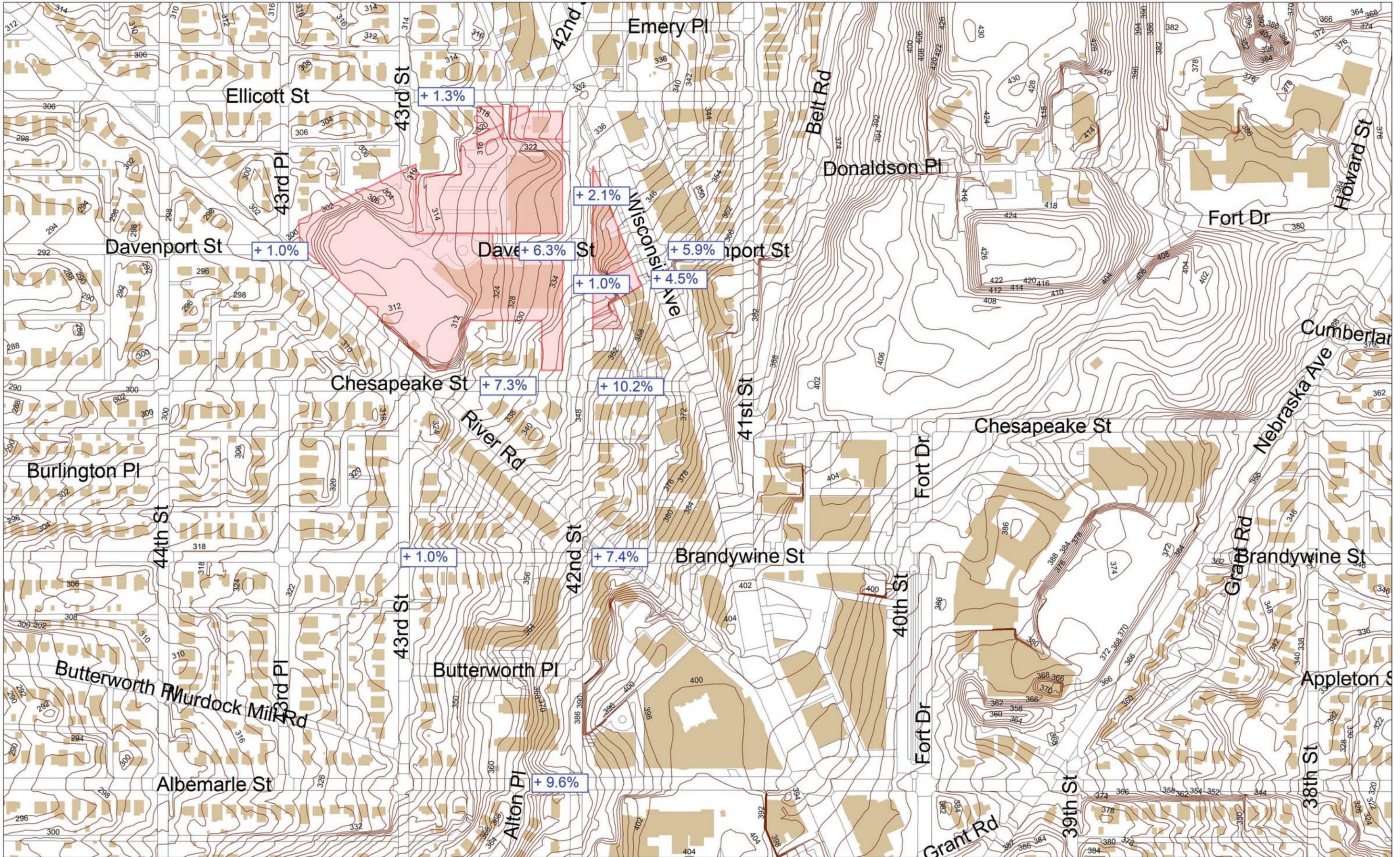
	Davenport as a Pedestrian Connection		Davenport as a Vehicular Street	
	PROS	CONS	PROS	CONS
Safety				
Grade	Grade will be broken up by flat terraces making Davenport even more walkable.			<p>14% grade is among the steepest in the City, and is the steepest of any surrounding streets. (See Figures 1 & 2)</p> <p>Exceeds ADA limits of 8%.</p> <p>Grade will be challenging for drivers travelling east or west on Davenport.</p> <p>Potential dangers with this slope are worsened in inclement weather.</p>
Pedestrians & Bicyclists	<p>There will be ample space for bike rails to transport bikes down the terraces between Wisc. and 42nd.</p> <p>42nd Street will be a safe, pedestrian and biker-friendly street</p>			<p>The grade and shortness of the street could create a dangerous crosswalk area at 42nd and Davenport.</p> <p>Potential dangers with this slope are worsened in inclement weather.</p>
Traffic				
	Chesapeake Street is long enough between 42 nd St and Wisconsin Avenue to accommodate vehicles without backing up traffic on 42 nd St.	<p>Does not provide additional vehicular capacity (notably, for left turns to/from Wisconsin Ave), thus necessitating other improvements. The simplest way to provide this capacity is through a new traffic signal at Chesapeake St/Wisconsin Avenue.</p> <p>Existing traffic volumes already trigger the need for a signal at this intersection. If one were to be installed to handle PUD traffic, it would help solve this existing issue at the same time.</p>	<p>Cars turning north onto Wisconsin will have Davenport option in addition to Chesapeake and Ellicott Streets.</p> <p>Direct connection to Wisconsin Avenue for school traffic.</p>	<p>Davenport Street between 42nd Street and Wisconsin Avenue is short enough that back-ups on 42nd Street would occur at peak travel times. This may necessitate operational improvements at the intersection of 42nd/Davenport, such as a traffic signal coordinated with one on Wisconsin (currently being studied.)</p>

	Davenport as a Pedestrian Connection		Davenport as a Vehicular Street	
	PROS	CONS	PROS	CONS
Parking				
		Slight changes to Chesapeake Street required to process traffic to/from new signal. ~3 parking spaces removed.		
Grid				
	<p>Pedestrian connection allows for forward-thinking, creative opening of the grid</p> <p>The vehicular street grid remains largely the same. The reconfiguration of the intersection of Wisconsin Ave/Ellicott St/42nd St removes some vehicular pathway, but with minimal impact to the grid.</p>	One fewer places for cars to access or cross Wisconsin Avenue.	Having Davenport Street as a vehicular connection provides an opportunity to establish an intuitive 'missing' link to the surrounding street grid. (Though it should be noted that a) this portion of Davenport was never previously open and b) pedestrian connectivity still opens the grid.)	
Sustainability				
	<p>This is the greener option:</p> <p>More pervious surfaces; Improved capacity for site to capture storm water; No need for heavy salting and treatment in winter; Not automobile-centric</p>			<p>This is the less green option:</p> <p>More impervious surface Less capacity to capture storm water;</p>

	Davenport as a Pedestrian Connection		Davenport as a Vehicular Street	
	PROS	CONS	PROS	CONS
Place-Making				
Communal Area	<p>~8,000 SF community park, terrace, stairs. The area would be designed to easily host a variety of community programs such as weekend markets, movie nights, etc.</p> <p>This area new public space will be +/-418 s.f. greater than the proposed ROW that is requesting to be incorporated into the North building. (GDS is asking for +/- 4,375 s.f. of the 42nd Street R.O.W. to be closed for the building. The area of GDS' property that will be dedicated to the "public" steps is +/- 4,793 s.f.</p>		8ft sidewalk on both sides of davenport street will be provided.	While sidewalks and tree boxes can be nicely designed, there will not be a large contiguous area that will be programmable a community gatherings or activities.
Retail	<p>In order to attract and sustain great retail tenants the project needs to be differentiated from other buildings in Tenleytown. Retail is more successful when accompanied by great public space.</p> <p>Allows for pedestrian circulation between Wisconsin and 42nd Street making 42nd street retail more viable.</p>			Without the pedestrian activity on Davenport, 42 nd Street retail could be viewed as commodity retail space making it difficult to attract premiere retail tenants.

Vehicular Davenport Street Road Grade Comparison

<i>Street</i>	<i>Approximate Steepest Grade</i>
Proposed Davenport Street	14.59%
Existing Davenport Street (east of WI)	5.90%
Existing Davenport Street (west of WI)	6.30%
Chesapeake Street (east of 42nd)	10.20%
Chesapeake Street (west of 42nd)	7.30%
Ellicott Street	1.30%
Brandywine Street	7.40%
River Road	1.00%
Albemarle Street	9.60%
Existing 42nd Street (N of Davenport)	2.10%
Existing 42nd Street (S of Davenport)	1.00%
Wisconsin Avenue (west side)	4.50%
34th Street (Georgetown)	16.00%
35th Street (Georgetown)	17.70%
South Street (Georgetown)	12.50%



Date: 7/13/2015

GEORGETOWN DAY SCHOOL - GRADES OF EXISTING NEIGHBORHOOD ROADS
DISTRICT OF COLUMBIA

