

# Government of the District of Columbia

## Department of Transportation



**d.** Infrastructure Project Management Administration

### SCOPE OF WORK

**PROJECT NAME:**

Cleveland Park Streetscape and Drainage Improvement.

**PROJECT LIMIT:**

Connecticut Avenue, N.W. from Macomb Street to Quebec Street, N.W.



## **PURPOSE OF THE PROJECT:**

The objective of the this project is to address the local reoccurring flooding problem near the Cleveland Park Metro Station for drainage improvements; to improve pedestrian safety, access and visibility at all intersections; and introduce public realm improvements along the corridor of Connecticut Avenue from Macomb Street to Quebec Street, NW.

The overall project includes but not limited to drainage improvement, streetscape, streetlight modification, paving and stormwater management along the Connecticut Avenue corridor. This study will include the following details: subsurface utility engineering (SUE), drainage analysis and improvements, curb extensions, improvement of crosswalk striping, upgrading curb ramps to meet ADA standards, adding street furnishings (benches, bike racks, trash cans, tree box fencing), adding gathering areas, adding permeable landing strips between curb and tree boxes, introducing LID/Bio-retention, introducing permeable pavers around the Metro station entrance and service lane medians, and raising Metro air vent grates above flooding levels.

The selected design firm shall include surveying, existing condition analysis, conceptual layout for geometric improvements, developing recommendations for drainage improvements based on the site conditions, project schedule, and funding availability.

## **PROJECT SCHEDULE:**

Final design and recommendations shall be completed and delivered within nine (9) months from the Notice to Proceed (NTP) date. This includes interim submissions of 30%, 65%, 90%, 100%, and a final PS&E submission. All submissions shall include plans, hydraulic calculations and reports, specifications, and cost estimate for review, and shall also be provided to permitting agencies. Construction schedule shall be prepared and included with the plans starting from 90% submittal.

## **PROJECT AREA:**

The proposed study area is located in the Cleveland Park Section of northwest DC, at Connecticut Avenue from Macomb Street to Quebec Street. The drainage area is known to be larger than the study area. Hydraulic boundaries should be evaluated using survey and District GIS resources.

## **PROJECT OBJECTIVES:**

The goal is to analyze the existing condition of the drainage system and streetscape of the study area (drainage area, street segments & associated drainage system) and determine the best/most practical solution to address:

- A) Street flooding near Metro Station by improving the drainage system, modifying the drainage structures, and providing detention of stormwater (permeable pavement, LID, temporary retention pipe, etc.) in order to improve reliability and preserve safety and mobility.
- B) Traffic and pedestrian safety, access, visibility by improving the streetscape along the Connecticut Avenue corridor.
- C) Public realm requirements by providing and installing necessary street furnishings, gathering areas and signage.

- D) Green Infra-structure by planting trees, introducing new LID/Bio-retention and permeable paving.

Implementation plans will use DDOT Context Sensitive Design Guidelines.

## **PROJECT SCOPE OF SERVICE:**

The design process shall include the following tasks,

1. Project Management
2. Project Interagency Coordination
3. Public Involvement
4. Collection and Consolidation of Data
5. Drainage Analysis and Improvements
6. Streetscape
7. Paving
8. LID/Bio-Retention
9. Design Deliverables

All tasks of the project shall comply with current design practices and code requirements of District of Columbia (DC), Department of Transportation (DDOT), FHWA, and AASHTO.

### **1- Project Management**

- a. **Progress Meetings:** The consultant shall attend monthly progress meetings (in addition to a kick-off meeting) with the project manager. The consultant shall provide materials for meeting presentations, and shall provide meeting minutes within one week of the meeting date.
- b. **Monthly Invoices:** The consultant shall provide monthly invoices to the DDOT project manager for approval and timely payment.
- c. **Monthly Progress Reports:** Along with invoices, the consultant shall prepare and submit monthly progress reports to the DDOT project manager. Each report shall outline the task accomplishments, meetings held, status of deliverables, expected activities for the next period, issues for resolution and the responsible party, problems and their disposition from the previous period, updated schedule, and financial status.

### **2- Project Interagency Coordination:**

The Consultant shall work with the Project Manager and coordinate with various offices, utility companies (DC Water, WMATA, Washington Gas, Pepco and others) and other Local and Federal Agencies regarding their requirements for review and approval of required permits and include them in the project as directed by the Project Manager. It is the Consultant's responsibility to coordinate with various utility companies and other consultants, and receive their responses in a timely manner as prescribed in the project schedule and to make any changes resulting from the reviews and coordination with various utility companies and other consultants. The Consultant shall keep the Project Manager informed of all dealings with various offices, other DDOT Project Managers, and utility companies and delays, if any, caused by those utilities. The consultant shall also coordinate efforts on this project with other ongoing projects in the project area.

### **3- Public Involvement:**

The consultant shall develop a meaningful community participation process that will consist of Two (2) public meetings and up to maximum four (4) community meetings with community including, but not limited to, residents, commercial property owners, and affected representatives from Advisory Neighborhood Commissions. The purpose of the meeting will be to obtain input for development of concept designs. The consultant shall participate in a planning work session meeting with DDOT at the beginning of the project to complete the draft scope of work, schedule milestones, discuss the public involvement process, and refine the project deliverables. This planning meeting shall occur during the first two week of the project.

### **4- Collection and Consolidation of Data:**

The consultant shall conduct field reconnaissance of the corridor area, noting existing land uses, existing roadway geometric and traffic conditions, traffic flow patterns, transit facilities and services, pedestrian facilities, bicycle facilities, as well as opportunities and constraints pertaining to access from intersecting local streets and driveways. In addition the consultant shall also perform existing utility investigation, a hydrology study of the catchment area, drainage analysis for the reoccurring flooding problem at the sag curve on Connecticut Avenue near Cleveland Park Metro Station, environmental investigation, and right-of-way investigation to support the development of the proposed alternatives. See task description below.

- a. Survey & Existing Utility Investigation:** The consultant shall perform a site investigation within the project limits and make all surveys required including, but not limited to, utility maps and topographical maps of the catchment area (with property ties, right-of-way lines, stations, elevations, and controls). Utility work shall include obtaining existing utility information from utility records from the Department's Office of Public Space located at 1100 4<sup>th</sup> Street, SW Washington, D.C. and elsewhere as needed, as well as from subsurface utility engineering (SUE). Location of existing streetcar tracks is included in the SUE scope. Compilation of such information shall be in a report and in the plan set. Information shall be saved in Microstation CADD and shown on the preliminary plans, after resolving any discrepancies. Work shall include preparing composite utilities drawings showing all above-ground proposed features around the proposed work area and between the existing right-of-way lines such as curbs, sidewalks, wheelchair ramps, trees, fire hydrants, etc. Plans shall also show all underground existing and proposed utilities, including electrical conduits, communication lines, sewer and water lines, streetcar tracks and all other utility appurtenances such as catch basins and manholes. Survey control points shall be established for new and existing structures that are to remain, and minimum vertical and horizontal clearances under all structures shall be evaluated to ensure that they do not conflict.
- b. Environmental Investigation:** As part of this project, the consultant shall conduct appropriate studies, consult with appropriate Federal and Local Agencies, collect new and relevant data, and review existing databases/records to identify environmental and socioeconomic effects associated with the proposed alternatives. Data on physical features, biological resources, traffic, land use, historic/archaeological resources, utility constraints, water resources, and water quality shall be collected, analyzed and submitted to DDOT using latest Environmental Forms I and II. The information gathered from this research as well as appropriate mitigation solutions or avoidance strategies shall be included in the final report submitted to DDOT.

- c. **Right-of-Way Investigation:** Under this task, the consultant shall perform survey work and right of way determination for any properties affected by potential street rehabilitation.

## 5- Drainage Analysis and Improvements:

The proposed work includes but not limited to analyzing the major cause of the reoccurring overland flooding problem at the low point in Connecticut Avenue, between Ordway Street and Porter Street, near the Cleveland Park Metro Station for drainage improvement, calculating the total flow from the overall catchment area, analyzing the capacity and efficiency of all the drainage structures (catch basins, underground drainage pipes) at Connecticut Avenue, Ordway Street and an Alley between the two roads contributing flow to the Ordway Street which are upstream of the flooded area, calculating the flood spread width and depth at the curb, evaluating different design options to develop conceptual alternatives with a recommended solution to mitigate the flooding problem. The design solutions shall include but not limited to drainage improvement options by improving the existing drainage structures and introducing innovative Storm Water Management: Low Impact Development (LID) and permeable pavements around the entrance of the Metro Station. The consultant shall develop at a minimum of two conceptual alternatives of the proposed improvements with recommended solution to make a preferred design selection.

## 6- Streetscape:

Under this task the consultant shall perform but not limited to the following tasks:

### a. Pedestrian Safety:

1. **Road Configuration:** Construct planned curb extension on southern corner of Newark Street (considering Cleveland Park Library renovation) to improve pedestrian visibility, crossing distance and intersection geometry; add curb extension at northeast corner of Ordway Street and Connecticut Avenue to reduce pedestrian crossing distance and improve pedestrian access to Metro; add curb extensions at gas station to provide larger pedestrian waiting area and shorter crossing distance access at Porter Street; evaluate curb extension on north east and north west corners of Macomb Street to improve pedestrian visibility in conjunction with future library renovation plans.
2. **Access and Visibility:** Add high visibility “Zebra” crosswalk striping to enhance pedestrian safety and crosswalk visibility; add flared, high visibility crosswalk at northeast corner of Ordway Street and Connecticut Avenue to improve pedestrian access to Metro; upgrade curb ramp to ADA standards at northeast corner of Macomb Street and Connecticut Avenue, at east corner of Porter Street and Connecticut Avenue, and at south side of Porter Street crossing at Quebec Street.

### b. Public Realm:

1. **General public realm:** Provide additional benches to sidewalk along tree boxes, install additional bike racks at community sourced locations along corridor, install new black trash cans consistent with historic furnishings palette; establish permeable landing strips between curb and tree boxes to improve accessibility and to manage storm water;

2. **Green Infrastructure:** Add a planted Bio-retention area at the edge of parking lot north of Newark St. in sidewalk on west of Connecticut Avenue, and incorporate Bio-retention in to tree boxes in front of the Metro station entrance; replace impermeable brick or concrete service lane median, between tree boxes, in new gathering areas, in landing strip and new Bike-share station with permeable paving.

## **7- Paving:**

This task include but not limited to restore Connecticut Avenue, Newark Street, Ordway Street, Porter Street and Quebec Street pavement cuts full width by milling, resurfacing and pavement marking.

## **8- LID/Bio-Retention:**

The Consultant shall develop innovative storm water management by introducing Low Impact Development (LID) to retain the overflow from adjacent parking lot (National Reality parking lot) that contributes significant flow to the flooded area at the low point (Sag) in Connecticut Avenue near the Metro Station entrance and incorporate the bio-retention into tree boxes. In addition as part of this task develop a planted bio-retention area at the edge of parking lot north of Newark St. in sidewalk on west side of Connecticut Ave. to collect runoff from the adjacent lot and side walk.

## **9- Design Deliverables:**

The consultant shall come up with at least two design alternatives and a preferred alternative shall be recommended by the consultant with evaluation and justification. Based on the final recommendation the Consultant shall develop and provide all the design submissions as per the District of Columbia Department of transportation, Design and Engineering Manual, Latest version. These submissions shall include but not limited to construction plans, specifications, design report, and construction schedule.