

April 18, 2022

Mr. Frank Petise, P.E. Transportation Bureau Chief City of Stamford Government Center, 7th Floor 888 Washington Boulevard Stamford, CT 06904

Re: Design Services for Safe Routes to Schools and Public Transit Facilities

City of Stamford, Connecticut

Fuss & O'Neill Reference No. 20210843.A10

Dear Mr. Petise:

At your request, we are pleased to provide this detailed scope of transportation engineering services for pedestrian and access improvements for various school areas within the City of Stamford (City). This scope of services assumes each Task as outlined further will be provided for the following two (2) separate project areas as requested in the City's response letter dated March 25, 2022:

- SITE NO. 1 West Hill High School and Roxbury Elementary School
- SITE NO. 2 Newfield Elementary School and AITE High School

Scope of Services

Task 01 – Right of Way & Topographic Survey

Existing conditions will be based on 2016 Aerial Imagery provided by the Council of Governments. Based on recent field investigations, supplemental field survey is estimated to be necessary for up to twenty-five percent (25%) of the total project length. The intent, as outlined by the City, is to utilize survey information that is readily available to create an existing conditions base map for the design of the proposed sidewalk and access improvements.

A Class A-2 baseline will be prepared throughout each of the project areas. Horizontal control shall be tied to the Connecticut State Plane Coordinate System (NAD 83) and vertical control shall be tied to NAVD88. Ties to this control will be made available to the City upon request. All survey field notes, baseline stationing, on-site benchmarks, control point ties, and project coordinates shall be in English units. A minimum of 20 permanent benchmarks will be required and maintained throughout each project area.

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Right-of-Way lines, property lines easements, means of ingress and egress, and apparent boundary encroachments will be compiled from available local land records and will conform to Class D accuracy and in accordance with the regulations of Connecticut State Agencies and the "Standards for Surveys and Maps in the State of Connecticut" adopted by the Connecticut Association of Land Surveyors.

Additionally, a Class T-2 topographic survey of each project area will be prepared using English unit with 1-foot contour intervals. Topographic survey for preparation of the base map will be provided from 2016 Aerial Imagery noted above.

Areas of supplemental field survey, as defined below, will be limited to the area between center line of roadway to five (5) feet behind the existing right of way line. Topographic features shall include the location and elevations of all pertinent topographic features within each project area including, but not limited to pavement, curbing, retaining walls, structures, pathways, driveways to building frontage, fences, signs, ornamental plantings, specimen trees, sewer manholes, leak-offs, storm drains, and visible surface evidence of other buried utilities, utility poles and guy wires, visible ledge outcrops, visible property line evidence. Underground utilities will be compiled and plotted from evidence of visible surface locations and available record drawings.

The final base map shall be prepared using the latest version of AutoCAD Civil3D and will be at a plotting scale of 1" = 20'. All mapping will follow the CTDOT Location Survey Manual. Flood zones and Aquifer Protection Areas within the project area, if any, will be depicted using current Federal Emergency Management Agency (FEMA) FIRM and local mapping, respectively.

In order to establish the level of effort anticipated for preparation of the final base map, limits of survey are defined as follows:

2016 Aerial Imagery

Location	Total Length (Linear Feet)	
SITE NO. 1	2,800 LF	
SITE NO. 2	11,000 LF	

Supplemental Field Survey (Assumed)

Location	Total Length (Linear Feet)			
SITE NO. 1				
- Roxbury Rd at Long Ridge Rd Intersection	200 LF			
- Roxbury Rd at West Hill Rd Intersection	850 LF			
- Roxbury Rd – steep slopes adjacent to athletic field	400 LF			
SITE NO. 2				



-	Turner Rd at High Clear Dr Intersection	300 LF
-	Turner Rd – new ret. walls east of Pepper Ridge Rd	375 LF
-	Turner Rd at Newfield Ave Intersection	100 LF
-	Pepper Ridge Rd – new ret. walls north of Turner Rd	675 LF
-	Pepper Ridge Rd - new ret. walls east and west of	300 LF
	Kensington Rd	
-	Pepper Ridge Rd at Pepper Ridge Circle Intersection	175 LF
-	Pepper Ridge Rd at Vine Rd Intersection	175 LF

Task 02 – Permitting

Permitting

- The following permits are anticipated for each project area. Should additional permits be identified during design, such permits will be addressed under a task amendment to this proposal.
 - Natural Diversity Data Base Review
 - Fuss & O'Neill will prepare a Natural Data Base Review request for submission to CTDEEP. If CTDEEP requires additional studies as part of their review a separate task amendment will be requested.
 - CTDOT Encroachment Permit
 - o Fuss & O'Neill will prepare a submittal to the CTDOT District 3 Maintenance Office for encroachment permit review of any proposed work that falls within the State's right of way.
 - Submittal for encroachment permit review will include copies of the Preliminary Design (30%) construction plans and cost estimate.
 - All review comments will be addressed as part of the Final Design for Review (90%) submission.
 - A formal response to review comments will be transmitted to District 3 along with copies of the 90% construction plans, specs, and cost estimate.
 - This work includes responding to a maximum of 2 rounds of comments per encroachment permit review; any additional comments will be addressed as part of a task amendment to this Contract.
 - CTDEEP General Stormwater Permit
 - This general permit authorizes the discharge of stormwater and dewatering wastewaters to surface waters from construction activities on a site, as defined in



- this general permit, with a total disturbance of one or more acres of land area on a site, regardless of project phasing.
- o Based on the total area to be disturbed by the subject project, CTDEEP will require an application for the "General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities". The following are services necessary to complete these requirements.
 - Prepare and submit CTDEEP registration form for the stormwater General Permit, stamped and signed by a Professional Engineer.
 - A Stormwater Pollution Control Plan (SWPCP), specific to the site, will be developed to meet the requirements of the CTDEEP General Permit.
 - The permit registration and/or application fee will be covered and paid for by the City of Stamford.
- O During construction, the permit also requires weekly inspections by a qualified professional and monthly turbidity monitoring to ensure compliance with the permit. It is assumed the City will be responsible for this work; therefore, no fees associated with stormwater inspections or monitoring have been included in this agreement.
- No fees associated with turbidity monitoring are included in this agreement.

Task 03 – Design Meetings, Utility Coordination & Public Involvement

Scope Review/Assignment Meeting

• F&O will attend one (1) kick-off meeting with City personnel. It is assumed this meeting will be held via virtual platform (MS Teams, Zoom, Webex, etc) and will include scope review/assignment for both project areas.

Design Development Meetings and Coordination

- F&O will attend one (1) design review meeting for each project area following each Preliminary Design (30%) and Final Design for Review (90%) submissions.
- We will participate in bi-monthly video conference calls with City staff to coordinate
 design elements, discuss proposed conditions and convey any potential issues. We
 anticipate up to twelve (12) video conference calls.
- A separate agreement can be provided if attendance at additional meetings is requested.

Utility Notification Letter, Meeting and Coordination

 F&O will send a project description and location plan to all utility companies listed on the CTDOT Utility Contact List that have facilities in the vicinity the proposed design project.



- Fuss & O'Neill will coordinate with those utility companies whose facilities are affected by the proposed improvements.
- Coordination will begin following the Preliminary Design (30%) submission.
- F&O will attend one (1) field utility coordination meeting per project area to be held prior to the Final Design for Review (90%) submission.
- All potential utility conflicts shall be resolved prior to the Final Design (100%) submission.

Public Information/Involvement Meetings

- F&O will attend and conduct public information meetings for each project area at the following milestones, a total of four (4) meetings are assumed:
 - Following Concept Design submission
 - o Following the Preliminary Design (30%) submission
- F&O will prepare all presentation materials, graphics, etc as necessary for each meeting:
 - It is assumed the City will be responsible for mediating all public information meetings, as well as for scheduling and notifying the public.
 - o F&O will provide necessary recording equipment for each meeting.
 - o F&O to develop presentation via PowerPoint
 - Describe early analysis findings
 - Provide photographs
 - Present concept drawings
 - Request input and/or concerns
 - Conduct record keeping and provide documentation by generating one (1) copy of the typed transcript of each subject project's meeting along with the actual recording of the meeting and a PDF of the transcript.
- All meetings are assumed to be in held in person, but may instead be held in a virtual platform such as MS Teams, Zoom, Webex, etc if an in person meeting is not feasible.

Task 04 - Concept Design

This phase of the project will advance the plans to a design completion of approximately 10%. All plans will be provided at a scale of 1 inch = 20 feet, unless otherwise noted. The conceptual drawings will provide preliminary alignment, layout, and identify potential impacts to private properties. An on-site field review will be completed to confirm conceptual design. A conceptual construction cost estimate will be developed to determine approximate construction values associated with each project. The conceptual plans produced will be presented at the first public information meeting (Task 03).



Task 05 – Preliminary Design (30%)

This phase of the project will advance the plans to a design completion of approximately 30%.

Preliminary Horizontal and Vertical Design

- Refine preliminary baseline alignments developed in Concept Design (Task 04) in accordance with the design guidelines:
 - o CTDOT Highway Design Manual, dated 2003, revised 2020
 - o CTDOT Drainage Manual, dated 2001
 - o City of Stamford Zoning Regulations, Section 12K
 - A Policy on Geometric Design of Highways and Streets; American Association of State Highway and Transportation Officials, Seventh Edition, dated 2018

Preliminary Drainage Design

- F&O will develop plans and details to relocate existing storm drainage facilities that are
 necessary to provide safe and accessible routes. F&O will request information from City
 engineering staff on drainage issues that they are aware of.
- We will develop preliminary layout of structures, outlets and pipes. Improvements will be limited to relocating the existing drainage inlets and connecting to the existing system.
- A stormwater narrative will be provided for each subject project location to identify
 proposed improvements or further evaluations of the downstream stormwater network, if
 necessary.

Cover, Gen. Notes & Legend, Index Plan and Exist. Conditions Plans

• A preliminary cover sheet, general notes and legend plan, index plan and existing conditions plan will be created indicating the project area and the topographic layout.

Miscellaneous Details

- Preliminary details anticipated for construction will include items such as the following: curbing, pavement sections, sidewalks, pavement markings, erosion control systems, ADAcompliant pedestrian ramps, etc. Fuss & O'Neill will utilize the City of Stamford details for the design of sidewalk.
- Retaining Wall Design
 - Areas that necessitate the incorporation and design of a retaining wall due to physical constraints, Right of Way impacts, or grading concerns will require additional information and details within the contract documents.
 - o Develop a retaining wall specification, if necessary.



Typical Cross Sections Plans

• Typical Cross Sections will only be developed for roadway segments that entail improvements such as road diets or recharacterization of streets.

Construction Plans

- Construction plans utilizing the horizontal alignment/baselines will be used to identify the
 proposed layout, materials, and construction activities necessary to reconstruct roadway
 corridors and intersection improvements.
- Right-of-Way Impacts
 - O We do anticipate acquisition of both temporary and permanent easements and various construction rights for this project. Therefore, Fuss & O'Neill will create a Schedule of Property Owners table for those affected properties indicating the type of encroachment and estimated area where applicable. This table will be incorporated within the design statement.
 - o Any required and/or formal right-of-way, taking or easement maps can be provided, if requested, at an additional cost. See allowances below.
 - We do also anticipate the need to obtain temporary rights for incidental construction. These areas will be identified on the general construction plans. Rights may consist of but not limited to; Right to Grade, Right to Construct Sidewalk, Right to Construct Driveway, Right to Install Fence, Right to Install Sedimentation Control Systems etc.

Profiles

Develop preliminary profiles and vertical geometry for the project routes where necessary. The proposed profiles will be designed in accordance with the above-mentioned references. Special attention will be given to the crosswalks to ensure adequate grades are met per ADA and/or PROWAG requirements.

Grading, Drainage and Erosion & Sedimentation Control Plans

- Preliminary drainage modifications and erosion control & sedimentation features will be shown in approximate locations based on the proposed horizontal geometry and preliminary profiles. The drainage design will be advanced once underground utilities are identified after preliminary design.
- Rights to install erosion control may be necessary. These designations will be shown within
 the general roadway construction plans as previously mentioned.
- Preliminary grading will be advanced in the following design phase.



Preliminary Design (PD) Plans

 Preliminary plan sheets, as detailed in the PD Submission section below and described above, will be developed for each of the roadway segments, consistent with CTDOT standard practice for preliminary design plans. We expect to work closely with City Staff in completing the preliminary design.

Preliminary Design Construction Cost Estimate

• F&O will prepare a preliminary construction cost estimate, based on the CTDOT Cost Estimating Guidelines (2021).

Preliminary Design Statement

 The Preliminary Design Statement will include, but not be limited to the following contents: Project Description, Design Exceptions, Traffic Control, Rights of Way, Crash History, Utilities, Schedule, and Construction Cost.

PD Submission

The Preliminary Design Submission to the City will include the following materials in Portable Document Format (pdf):

- Electronic copy consisting of:
 - o Cover Sheet
 - o General Notes & Legend Plan
 - o Index Plan
 - o Existing Conditions Plans
 - o Miscellaneous Details
 - o Typical Cross Sections Plans
 - o Construction Plans
 - o Profiles
 - o Grading, Drainage and Erosion & Sedimentation Control Plans
- Electronic copy of Preliminary Design Construction Cost Estimate
- Electronic copy of Preliminary Design Statement

Post-Submission Tasks

- Submission of Plans to Utilities & Field Utility Meeting See Task 03
- Submit Encroachment Permit Request See Task 02
- Coordinate Test Pits as necessary See Task 06
- PD Review Meeting See Task 03



Task 06 – Final Plans for Review (90%)

Respond to PD Comments

• F&O will respond to one (1) round of comments from the City and CTDOT in regard to the Preliminary Design submission. It is assumed that all PD comments will be provided at one time prior to the initiation of final design.

Horizontal and Vertical Design

• F&O will finalize the proposed geometry, horizontal alignments, and vertical baselines for all segments as necessary within the project limits.

Utility Test Pits

- This activity shall include labor, equipment, and materials to locate the proposed test pit
 location, monitor the operation, and collect required information. One day of test pits is
 included in this proposal for an F&O staff member to attend & record pertinent
 information.
- F&O will incorporate the information gathered from the requested test pits in order to continue advancing the design. All test pits shall be performed prior to advancing to the Final Design (100%) submission.
- The City shall provide police traffic control and waive any permit fees for these test pits
 within city owned streets. An encroachment permit will be necessary and in place prior to
 any test pits on state routes. Test pits for private or City owned utilities may be fully
 reimbursable and shall be paid and coordinated by the City of Stamford.

Final Plans for Review (90%) Plans

• This phase of the project will advance the preliminary design plans to a design completion of approximately 90%. PD comments and value engineering items, as necessary, will be incorporated, as will the additional final design phase elements detailed below.

Grading, Drainage and Erosion & Sedimentation Control Plans

- Grading will be advanced to ensure proper drainage, curb returns and conformance with ADA/PROWAG requirements at crosswalks and walkable surfaces.
- Draft proposed contours will be depicted within the grading plans to begin investigating drainage concerns and walkability requirements.
- Rights to grade may be necessary. These designations will be shown within the general construction plans as previously mentioned.



Critical Cross Sections

F&O will develop cross sections only at critical areas along the corridor. Known utilities
will be shown in each section including but not limited to storm & sanitary sewer, gas,
electric and water will be added into the cross sections.

Maintenance and Protection of Traffic Plans

 Detailed maintenance and protection of traffic plans (MPT) will not be developed. It is assumed CTDOT's MPT templates will be sufficient in maintaining safe traffic operations. Fuss & O'Neill will prepare pedestrian protection plans for construction purposes if necessary.

Bid Package

- The City will provide the front-end boilerplate materials to F&O. F&O will provide a unit cost bid tabulation form, generate a calendar day chart, develop project specifications, and make minor modifications to the City materials in order to create a coordinated bid package. We have assumed the following City staff will review and comment on the Bid Package within its entirety.
 - o Transportation, Traffic and Parking
 - o Engineering
 - o Public Works
 - o Purchasing, etc.

Final Plans for Review Construction Cost Estimate

 F&O will update and submit quantity computations and the anticipated construction estimate for the project.

Final Design Statement

• The Preliminary Design Statement will be advanced and updated to include the latest information, schedule, and construction cost.

Final Plans for Review Submission

The Final Plans for Review Submission to the City will include the following materials in Portable Document Format (pdf):

- Electronic copy consisting of:
 - o Cover Sheet
 - o General Notes & Legend Plan
 - o Index Plan
 - o Existing Conditions Plans



- o Miscellaneous Details
- o Typical Cross Sections Plans
- o Construction Plans
- o Profiles
- o Grading, Drainage and Erosion & Sedimentation Control Plans
- o Critical Cross Sections
- o MPT Templates
- Electronic copy of Final Plans for Review Construction Cost Estimate
- Electronic copy of Draft Bid Package
- Electronic copy of Final Design Statement

Post-Submission Tasks

- Send Revised Plans to Utility Companies
- Final Plans for Review Design Review Meeting See Task 03

Task 07 – Final Design (100%)

Respond to Final Plans for Review Comments

- F&O will respond to one (1) round of comments from the City in regard to the Final Plans for Review submission. It is assumed that all comments will be provided at one time prior to the initiation of final design.
- F&O will review and incorporate applicable comments from DOT in regard to the Encroachment Permit request.

Final Design (100%) Plans

 This phase of the project will advance the final design plans to a design completion of approximately 100%.

Bid Package

Finalize the overall Bid Package and Specifications.

Final Design Construction Cost Estimate

• F&O will update and submit quantity computations and the anticipated construction estimate for the project.



Final Design Submission

The FD submission to the City will include the following materials:

- Three (3) hard copies of the plans consisting of:
 - o Cover Sheet
 - o General Notes & Legend Plan
 - o Index Plan
 - o Existing Conditions Plans
 - o Miscellaneous Details
 - o Typical Cross Sections Plans
 - o Construction Plans
 - o Profiles
 - o Grading, Drainage and Erosion & Sedimentation Control Plans
 - o Critical Cross Sections
 - o MPT Templates
- Construction Cost Estimate
- Bid Package
- Final Design Statement

Task 08 – Bidding Assistance & Design Services During Construction

Fuss & O'Neill will respond and resubmit documents addressing any ancillary items from the city per their 100% review.

The Construction Document (CD) submission to the City will include the following materials per any remaining comments following the 100% deliverable:

- Plans
- Special Provisions (Bid Package)
- Estimate
- Design Statement

The Cities Purchasing Agent will advertise, post the bid package on the City Website, conduct the bid opening, and prepare the initial bid tabulation. F&O will provide support in the bid analysis and qualifications review, as needed.

Fuss & O'Neill will also assist the city with reviewing all shop drawings for specialty products, if necessary.



Fees

Fuss & O'Neill proposes a budget of \$247,500 be established for professional services in support of this effort as outlined below. Lump sum tasks will be billed monthly as a percentage complete while the hourly tasks will be billed on a time and materials basis and the budget would not be exceeded without expressed authorization.

Individual costs are approximated according to the table below.

Task	Description	Basis	Fee
01	Right of Way & Topographic Survey	Lump Sum	\$65,000
02	Permitting	Lump Sum	\$18,500
03	Design Meetings, Utility Coordination & Public Involvement	Lump Sum	\$35,000
04	Concept Design	Lump Sum	\$19,000
05	Preliminary Design (30%)	Lump Sum	\$38,500
06	Final Plans for Review (90%)	Lump Sum	\$40,000
07	Final Design (100%)	Lump Sum	\$20,000
08	Bidding Assistance & Design Services During Construction	Lump Sum	\$11,500
	TOTAL FEE		\$247,500

Direct costs for any reproductions, mileage and mailings are included in the above costs.

Assumptions

The scope detailed above was developed with the following assumptions. Should any of these assumptions prove to be incorrect, additional scope and fee may result.

Right of Way & Topographic Survey

- Periods of adverse weather could impact the ability to perform field work which therefore could delay the completion of the survey. Field survey and wetland delineation can be performed during a time period when there is no ground frost and/or minimal snow cover.
- 2. Storm and sanitary structures will be clear of any snow or debris obstructing the pipe inverts. Storm and sanitary invert elevations at structures filled with snow or debris will not be obtained. Revisiting the site to obtain storm and sanitary inverts in structures that have had snow or debris removed will be considered additional.
- 3. The city will provide existing sanitary sewer collection and other infrastructure system mapping.
- 4. Wetlands will not be field delineated or flagged.



- 5. Utilities will be compiled from field information as well as existing record mapping. The use of ground penetrating radar (GPR) to locate underground utilities will not be performed as part of this task. If the use of GPR to locate underground utilities is required, it will be provided under a separate agreement.
- 6. The actual field location of monumentation agrees with record information within an allowable tolerance.
- 7. Iron pins will not be set at property corners that are not currently monumented. If pins are required at every property corner, an additional task authorization will be required for this service.
- 8. Additional survey, evaluation, wetland flagging, watercourse information and/or design of drainage improvements to the final discharge point and CCTV of the stormwater system are not included in this scope.
- 9. Surveys, data collection, analysis, and reports pertaining to C.G.S. sec 22a will not be required and are not included in this scope.
- 10. Individual property and boundary surveys, formal right-of-way, easement, or taking maps, if required, will be provided under a separate task authorization. An allowance value per each property map can be provided when requested as noted above.
- 11. Mylars necessary for municipality filing are not included in this proposal and will be provided at an additional cost per mylar.

Design

- 1. CTDOT Standard Specifications for Road, Bridges, Facilities and Incidental Construction Form 818 will be utilized with the corresponding cost estimate items.
- 2. The city will conduct and be responsible for all procurement tasks if necessary, or formally request CTDOT to lead the procurement process per city procedures.
- 3. Pavement Marking & Signing Plans, Electrical, Lighting, Landscape, Streetscape, Utility or detailed MPT plans will not be generated as part of this contract.
- 4. Traffic studies or capacity analyses will not be conducted as part of this scope.
- 5. Traffic Control Plan updates and/or coordination with OSTA or the Division of Traffic Engineering for signal upgrades is not included in this agreement.
- 6. This scope does not include the evaluation of the storm drainage system to its ultimate discharge outlet, nor does it include CCTV inspection.
- 7. Traffic control will be required during test pits. We anticipate the City of Stamford will provide police protection and waive any necessary bonds and permits for these tasks as necessary.
- 8. No warranty, or guarantee, is expressed, or implied concerning the granting of permits or approvals required for this project, or timelines for review and action, by regulatory agencies.
- 9. Existing pipe and sewer structure materials are non-hazardous.
- 10. Environmental hazardous materials evaluations and remediation design (CTDOT Task 110, 210, 220, and 310) are not included and assumed to be completed by others.



- 11. The completion of a Coastal Area Management (CAM) permit or Inland Wetlands is not included.
- 12. A Flood Management Certification for FEMA or CTDEEP review is not included.
- 13. Coordination with SHPO is not anticipated.
- 14. Significant project delays initiated or caused by others (City of Stamford, regulatory agencies, utility companies, etc.), resulting in the project schedule being pushed back by more than 180 days, may result in the need for additional design budget.
- 15. Consultations during construction beyond shop drawing reviews are not included within this agreement as well as inspection services. A separate proposal can be provided should the City request it.
- 16. Meeting attendance is limited to the meetings expressly detailed in the scope of services. A separate agreement can be provided if attendance at additional meetings is requested
- 17. Poles that are not owned by the City of Stamford may necessitate relocation due to new construction. Payments for such relocations will be coordinated between the City and the Utility Pole owner.

General Terms and Conditions

Unless expressly instructed by the client to the contrary, Fuss & O'Neill will consider the data provided by organizations that are engaged with respect to mapping current climate conditions and follow the recommendations of applicable municipal, state and/or federal guidelines and standards for design, including consideration of project purpose and location, and future climate conditions relevant to the design life and/or anticipated service life or duration of the project, using applicable available data relevant to the project geography.

Issuance of a purchase order referencing this proposal will serve to authorize the work outlined in the Scope of Services.

Thank you for requesting consulting service from Fuss & O'Neill. We look forward to working with you on this project.

Sincerely,

John A. Guzze, PE

John A. Juzze

Senior Transportation Engineer

Kisten Sallaway For

Mark G. Vertucci, PE, PTOE

Vice President