D'ANDREA SURVEYING & ENGINEERING, P.C.

LAND PLANNERS . ENGINEERS . SURVEYORS

SIX NEIL LANE • P.O. BOX 549 RIVERSIDE, CONNECTICUT 06878 TELEPHONE: 203 637-1779 FAX: 203 637-1770 EMAIL: info@rvdi.com

June 11, 2021

Ms. Susan Kisken, P.E. Engineering Bureau Government Center 888 Washington Boulevard Stamford, CT 06901

Re: "Commercial Development"
Hope Street, LLC
523 & 535 Hope Street
Stamford, CT
Zoning Application No. 221-17

Dear Ms. Kisken,

We have reviewed the comments listed in your Engineering Bureau review memo. The plans have been revised in accordance with some of these comments and in response to preliminary Zoning Commission comments.

The following revisions to the plan set were made in response to preliminary Zoning Commission comments:

- A proposed pedestrian plaza area with connecting walk to the building has now been added to the southwest corner of the property.
- The connecting walk from the proposed pedestrian plaza area to where it meets the proposed parking lot resulted in the relocation of a previously proposed parking space in this area to the northeast corner of the property.
- The addition of the proposed pedestrian plaza and connecting sidewalk increases the previously proposed amount of impervious surfaces on the site by approximately 850 square feet (S.F.). However, the previously proposed site layout resulted in a net reduction of overall impervious surfaces on the site by approximately 17,408 S.F. The inclusion of the proposed pedestrian plaza and connecting walk will now result in an overall decrease in impervious surfaces on the site by approximately 16,558 S.F., as compared to existing conditions. Therefore, the proposed drainage concept will remain similar to what was previously proposed and submitted. Final drainage calculations and modeling and a revised Drainage Summary Report will be submitted to your office for review prior to the issuance of a Building Permit. An updated/final Low-Impact Development Plan will also be submitted to your office for review prior to the issuance of a Building Permit.

The following responses correspond respectively to the comments listed in your review memorandum to Vineeta Mathur, dated May 3, 2021.

- 1. The proposed grading contour labels in the southwest corner of the property have been corrected. Refer to Sheet 2 of 6.
- 2. The proposed grading along the southerly property line has been reviewed and found to be acceptable.
- 3. A detailed logistics plan for the relocation of the culvert, which will include any proposed pumping or dewatering measures, will be prepared and submitted to the Engineering Bureau for review prior to installation.
- 4. There is no basement proposed for the building and therefore there are currently no underdrains being proposed for this project.
- 5. The existing catch basin along the southerly property line has been called out on Sheet 3 of 6 to be replaced with a standard 2' sump and bell trap basin.
- 6. Hydrodynamic/cyclonic oil/grit separators to treat stormwater runoff prior to discharging into the proposed retention/infiltration systems will be incorporated into the final set of design plans to be submitted to you for review prior to Building Permit.
- 7. A lot consolidation map will be filed on the Stamford Land Records prior to the issuance of a Building Permit.
- 8. The proposed security gate near the southwest corner of the building has been shifted to the west, so that its southerly base structure will now be outside of the proposed drainage easement. Refer to Sheet 2 of 6.
- 9. Wall drain outlet connections to nearby catch basin structures have been added to Sheet 3 of 6.
- 10. The existing building structure has prohibited test borings to be performed in some areas. However, additional deep test borings have been conducted on the property in the vicinity of all proposed subsurface retention/infiltration systems. Refer to Sheet 3 of 6 for additional deep test boring locations.
- 11. Data for the deep test borings conducted in the vicinity of the proposed retention/infiltration systems have been added to Sheet 6 of 6.
- 12. Refer to the enclosed signed Checklists.
- 13. The entire concrete curb and sidewalk along Hope Street north of the existing driveway entrance to remain up to the northern property line has now been called out to be replaced. Refer to Sheet 2 of 6. Refer to Sheet 5 of 6 for concrete curb and sidewalk details.
- 14. We have inquired with the current owner of the site, who has been operating their business at this property for decades, to see if they have ever experienced any drainage or flooding issues. They have responded stating that there has never been any drainage or flooding problems on their site, since they have been in operation. Therefore, we feel the existing culvert size is most likely adequate and no additional improvements are warranted.
- 15. The Geotechnical Engineer on the project will be consulted to verify what type of supporting base material is recommended for beneath the new culvert. The recommended base support will be included in the Culvert Relocated Logistics plan and submitted to your office for review prior to installation.
- 16. We have been informed that an environmental assessment has been performed on the site and that no further remediation will be required regarding excavation and site work.

- 17. The existing 72" culvert running through the site is approximately 333-feet long with an approximate slope of 1.15%. The proposed culvert location will be a more direct path across the site and will only be approximately 295-feet long with an approximate slope of 1.25%. This proposed increase in slope will allow for greater flow capacity within the culvert.
- 18. General Note #23 on Sheet 2 of 6, states that an easement map and document will be filed on City Land Records prior to issuance of a Certificate of Occupancy.
- 19. The Owner is aware that all costs associated with the relocation of the 72" culvert shall be at their own expense

Please find enclosed the following information in support of this project:

- One (1) copy of the signed Checklists, revised June 11, 2021.
- One (1) copy of the Site Plan Review Set, revised through June 11, 2021.

Please contact our office if you have any questions or require any additional information in support of the Zoning application for this project. Thank you very much.

Sincerely,

D'ANDREA SURVEYING & ENGINEERING, P.C.

Derek E. Daunais, P.E.

20MB_SK01 Enclosures

cc: Vineeta Mathur – Associate Planner Hope Street, LLC



CHECKLISTS			
Project Name: Commercial Development			
Project Address 535+523 Hope Street			
Property Owner(s) Hope Street, LLC			
Tax Account Number(s) 001-7917/000-6010 Engineer's Signature Daul Daunain Date: 4/15/2021			
Engineer's Signature Link Launin Date: 4/15/2021 6/11/2021			
All checklists must be completed and submitted. Provide a brief explanation for any items not provided. Check boxes as completed or N/A as not applicable.			
Existing Conditions Plan			
Stormwater Management Report			
Stormwater Management Plan / Construction Plan			
Certificate of Occupancy			
Checklist for Existing Conditions Plan General Information			
Site address			
✓ Orientation, block, zone, City, street name			
Applicant name and legal address			
Surveyor name) address, contact information			
√ North arrow, bar scale, horizontal and vertical datum			

Existing conditions survey shall be prepared in accordance with the Minimum Standards for Surveys and Maps in the State of Connecticut. The class of survey shall be A-2 and T-2 and shall be represented as such on the map. The base map shall be sealed and signed by a Professional Land Surveyor licensed in the State of Connecticut.

24" x 36" sheet size unless otherwise approved

Drawing scale shall be set at 1" = 20' or 1" = 40' when possible



II. Existing Conditions Plan Elements

1	Show and label all property boundaries with linear bearing / distances and curve information
	Required zoning setbacks
	Show and label monument information
1	Show and label at least one permanent benchmark on the parcel with northing, easting and elevation
1	Label adjacent property ownership information
/	Existing contours based on NAVD 88 (no exceptions) at 2 foot contour interval or 1 foot contour interval when slope is flatter than 2 percent at a minimum of 20 ft. beyond the property boundaries of the subject parcel
	Show spot elevations at low points, high points, and where topography is flatter than 2 percent
	All buildings and structures (label current use and finished floor elevations)
1	All pavement, parking, driveways, property access points
1	All roadways, streets, and rights-of-way. Label streets as public or private with street name
	intersections)
	Show and label (size, material, inverts) all existing utilities (overhead and underground) within the right-of-way and the project site (label ownership) including but not limited to water, gas and electrical services, wells, storm sewers, sanitary sewers and subsurface sewerage disposal systems.
1	Show and label existing conveyance systems (swales, ditches, storm drains) including dimensions, elevations, sizes, slopes, and direction of flow
	Show and label boundaries of all easements, both public and prints and
	Show and label all other existing features and improvements (e.g. light poles, mature trees of 8" (dbh) diameter or greater, vegetation, walls with top and bottom elevations, fences, pavement markings)

III. Resource Areas

N/A	Show and label limits of inland wetlands, tidal wetlands and any associated setbacks.
NIA	watercourses, waterbodies, streams
J/A	
NIA	Show and label any Conservation Easement Areas
VIA	Show and label Connecticut Coastal Jurisdiction Line (CJL)
VIA	Show and label existing steep slopes (25% and greater)



Checklist for Stormwater Management Report

I. Project Report

Α.	Applicant / Site Information
1	Applicant name, legal address, contact information (email & phone)
1	Engineers name, legal address, contact information (email & phone)
1	Site address and legal description
1	Current / proposed zoning and land use
1	Site vicinity map (8.5" x 11")
В.	Project Description and Purpose
$\sqrt{}$	Project description including proposed project elements and anticipated construction schedule
C.	Existing Conditions Description
W.	Site area, ground cover, vegetation, features (roads, buildings, utilities, etc.)
1	Site topography, slopes, drainage patterns, conveyances systems (swales, storm drains, etc.), stormwater discharge locations
MA	Receiving waterbody information including stormwater impairments and TMDL information (See the most recent State of Connecticut Integrated Water Quality Report)
1	Site soils information including soil types, hydrologic soil group, bedrock / outcroppings, groundwater elevation, significant geologic features
1	Provide NRCS Soils Mapping
NIA	Resource protection areas (wetlands, streams, lakes, etc.), buffers, floodplains, floodways
D.	Summary of Applicable General Design Criteria
1	Methodology, design storm frequency
/	Hydrologic design criteria
NIA	Hydraulic design criteria
NIA	Flood hazard areas
	Applying under "Lite" Stormwater Management: Skip to Section I (Refer to Flow Chart on page vii of the City of Stamford Stormwater Drainage Manual)
Ε.	Project Type in Accordance with Standard 1 Definitions
1	Area of disturbance, receiving waterbody classification (High Quality, Tidal Wetlands, Direct Waterfront)
1	Project type (development redevelopment) linear development)
1	Pollutant reduction standard per flowchart Section 2.4



F	. Summary of LID Site Constraints
N	Description of sensitive areas for protection
0,	Mature tree inventory, which shall include 8-inch (dbh) diameter trees or greater
N	A Steep slopes
V	Ledge and bedrock depth
V	Seasonal high groundwater elevation
N	Pollutant hotspots
	Summary of infiltration rates
G.	Summary of Proposed Stormwater Treatment Practices Proposed LID controls (i.e. minimize impervious, minimize DCIA, minimize disturbance, increase time of concentrations, other LID controls and strategies)
1	Location, size, types
A	Design criteria and references
1	Stormwater treatment practice, drainage area characteristics / details
Н.	Summary of Compliance with Standards 1
1	Required pollutant reduction criteria
1	
J	Provided pollutant reduction (WQV) by stormwater treatment practice
	Summary of compliance with Standard 1
I	Summary of Compliance with Standards 2, 3, and 4
<u> </u>	Description of proposed stormwater management system
V	Pre-development site hydrology with delineation of each watershed area and sub-basin
1	Post-development site hydrology with delineation of each watershed area and sub-basin
<u> </u>	Comparison table of pre- and post-development hydrology, peak flow, volume, and percent difference
1	Summary table of watershed areas and sub-basin areas time of
//A	lowest of either:
2	- The pre-development 1-year, 24-hour storm peak flow rate - 50 percent of the pre-development 2-year, 24-hour storm peak flow rate
A	Conveyance protection, emergency outlet sizing
/A	Hydraulic grade line summary and tail water elevation used in analysis
	Construction erosion and sediment control description, Standard 3
	Operation and Maintenance, maintenance tasks and schedule on construction plans per Standard 4
	Feet Par Section 1



<u> </u>	Summary of Compliance with Applicable Drainage Facility Design Requirements			
/	Description of applicable design requirements and compliance			
\checkmark	Description of proposed drainage facilities and compliance			
К.	Stormwater Management Report			
V	Signed and stamped by professional engineer licensed in the State of Connecticut			
1	Drainage impact statement in accordance with Standard 5B.			
II. S	Supporting Calculations (as appendix to Project Report)			
	Applying under "Lite" Stormwater Management: Skip to Section N			
L.	Water Quality Volume / Water Quality Flow Calculations			
1	Calculations demonstrating the total Water Quality Volume generated by the post-development site and the required retention/treatment volume per Standard 1 in cubic feet.			
Í	Calculations demonstrating the total Water Quality Volume retained/treated by each stormwater treatment			
V	practice and the total Water Quality Volume generated by the post-development contributing drainage area to each stormwater treatment practice			
М.	Stormwater Treatment Practice Sizing Calculations			
	Calculations demonstrating how each stormwater treatment practice has been designed and sized in accordance			
with the Structural Stormwater BMP Design references in Appendix B. Calculations will vary by stormwater treatment practice, but a minimum, applicants shall provide calculations in accordance with design criteria.				
	the Connecticut Stormwater Quality Manual.			
Ν.	Hydrologic and Hydraulic Design Calculations			
NA	Stream channel protection, Standard 2A			
	Conveyance protection, Standard 2B (Will Submit Princ to Building Permit)			
1	Peak flow control (1-year, 2-year, 5-year, 10-year, 25-year, and 50-year storms), Standard 2C			
NIA	Inlet analysis			
NIA	Gutter flow (Site by site basis as requested by Engineering Bureau)			
	Storm sewers and culverts (velocities, capacity, hydraulics) (Will Submit Prize to Building Permit)			
	Hydraulic grade line required when pipe is flowing at full capacity			
NA	 Provide existing and proposed summary table Provide existing and proposed mapping, label structures 			
1	Detention facilities (outlet structure, stage/storage, freeboard)			
NA	Emergency outlet sizing, safely pass the 100 year storm, Standard 2D			
NIA	Outlet protection calculations, based on conveyance protection (i.e. riprap, energy dissipater)			



_	D. Hydrologic and Hydraulic Model, Existing and Proposed				
	Drainage routing diagram				
L	√ Summary				
L	Storage pond input				
P	. Downstream analysis (Site by site basis as required by the Engineering Bureau)				
N	Downstream analysis, Standard 2E				
I	II. Supporting Mapping (as appendix to Project Report)				
LQ	Pre-Development Drainage Basin Area Mapping				
V	11" x 17" or 8.5" x 11" sheet size				
V	Topography, drainage patterns, drainage area boundaries and sub basins, flow paths, times of concentration	ion			
V	Locations of existing stormwater discharges	1011			
NI					
_	NRCS soil types, locations, boring locations, infiltration testing locations				
1	Vegetation and groundcover				
V	Existing roads, buildings, driveways, parking areas, walks, patios, pools and other impervious surfaces, decorder structures	cks and			
	Location, size, type of existing structural stormwater controls, facilities and conveyance systems				
R.	Post-Development Drainage Basin Area Mapping				
1	11" x 17" or 8.5" x 11" sheet size				
\checkmark	Topography, drainage patterns, drainage area boundaries and sub basins, flow paths, times of concentration	N15			
1	Locations of proposed stormwater discharges	on			
NA	Perennial and intermittent streams, wetlands, and floodplain / floodways				
V	NRCS soil types, locations, boring locations, infiltration testing locations				
1	Vegetation, ground cover and proposed limits of clearing (disturbance)	ati			
1	Proposed, roads, buildings, driveways, parking areas, walks, patios, pools and other impervious surfaces, de and other structures	ecks			
\checkmark	Location, size, type of proposed structural stormwater controls, facilities and conveyance systems				
IV.	DCIA Tracking Worksheet (as appendix to Project Report)				
V	DCIA Tracking Worksheet (Use form found in Appendix E)				



V. Proposed LID Review Map

	Applying under "Lite" Stormwater Management - Proposed LID Review Map NOT required.			
Α.	General			
1	Site address			
1	Applicant name legal address, contact information			
$\sqrt{}$	Engineers name, address, contact information			
1	North arrow, bar scale, horizontal and vertical datum			
1	Drawing scale shall be set at 1"=20' or 1"=40' when possible			
	Signed and stamped by a Licensed Professional Engineer in the State of Connecticut			
1	11" x 17" or 24" x 36" sheet size unless otherwise approved			
/	Existing and proposed contours based on NAVD 88 at 2 foot contour interval or 1 foot contour interval when slope is flatter than 2 percent			
	Locations of existing stormwater discharges			
1	Roads, buildings, driveways, parking areas, walks, patios, pools and other impervious surfaces, and decks and other structures			
$\sqrt{}$	Location, size, ownership of stormwater conveyance systems (swales, pipes, etc.)			
3.	LID Constraints:			
1	Boring / test pit locations			
	Infiltration testing locations and results (Refer to Boring Logs in Drainage Report)			
1	Vegetation and proposed limits of clearing / disturbance			
1	NRCS soils mapping			
/A	Steep slopes			
1/4	Surface waters / Perennial and intermittent streams			
MA	Resource protection areas and buffers, wetlands, floodplain / floodways			
	Existing vegetation and mature trees, which shall include 8-inch (dbh) diameter trees or greater			
1	Poor soils (HSG C & D)			
1A	Shallow bedrock / ledge			
1/19	Seasonal high groundwater elevation			
//A	Other site constraints (e.g. brownfield caps)			
C.	Proposed Stormwater Treatment Measures:			
1	Location, size, type, limits, and WQV provided by each proposed stormwater treatment practices			
	Drainage area to each proposed stormwater treatment practice (total area, impervious area, WQV)			
D	Site Summary Table:			
J	Total site area, disturbed area, pre- and post-development impervious areas			
J	Required pollutant reduction volume (retention or detention)			
1	Provided pollutant reduction volume (retention or detention)			



Checklist for Stormwater Management Plan / Construction Plans

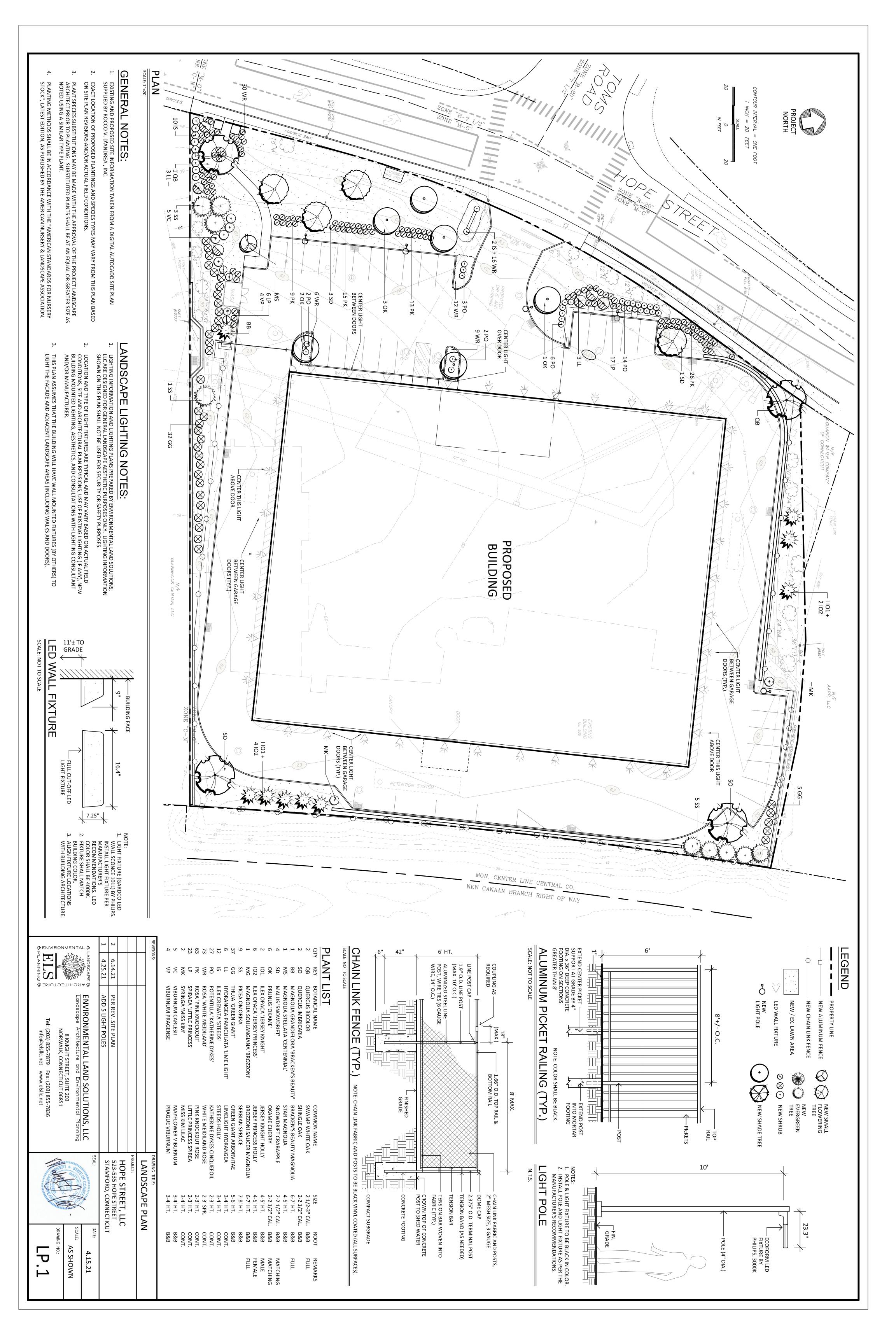
A	. General
A	Site orientation, address and legal description
4	Applicant name, legal address, contact information
,	Engineers name, address, contact information
V	North arrow, bar scale, horizontal and vertical datum
V	Drawing scale shall be set at 1"=20' or 1"=40' when possible
V	Stamped by a Licensed Professional Engineer in the State of Connecticut
V	24" x 36" sheet size unless otherwise approved
В.	Site Development Plans
V	City of Stamford Standard Notes
1	As required by the Drainage Maintenance Agreement, provide a written narrative describing the nature of the proposed development activity and the program for operation and maintenance of drainage facilities and control for the project.
V	Existing and proposed contours based on NAVD 88 at 2 foot contour interval or 1 foot contour interval when slope is flatter than 2 percent
1	All required spot elevations to clearly depict positive pitch
1	Top and bottom elevation of all walls
1	Roads, buildings, driveways, parking areas, walks, patios, pools and other impervious surfaces, and decks and other structures
V	All utilities and easements
√	Location, size, maintenance access, type of proposed structural stormwater controls and facilities with elevations
NIA	Location, size, maintenance access, type of proposed non-structural stormwater controls and facilities with
1	Location, size, type of proposed stormwater infrastructure, inlets, manholes, infiltration and detentions systems, control structures with elevations and inverts
1	Location, size, ownership of stormwater conveyance systems (swales, pipes, etc.) with elevations and inverts
1	Identify roof leaders, curtain drains and foundation drains with elevations and inverts
√	Proposed water quality treatment systems, size and model type
V	Final stabilization measures which may include slope stabilization
C.	Erosion and Sedimentation Control Plan
✓	Phasing and schedule
1	Construction access and staging and stock pile areas
1	Operation and maintenance of erosion and sedimentation controls
1	Tree protection
1	Downstream protection such as location of silt fencing
1	Limit of disturbance
\checkmark	Construction fencing

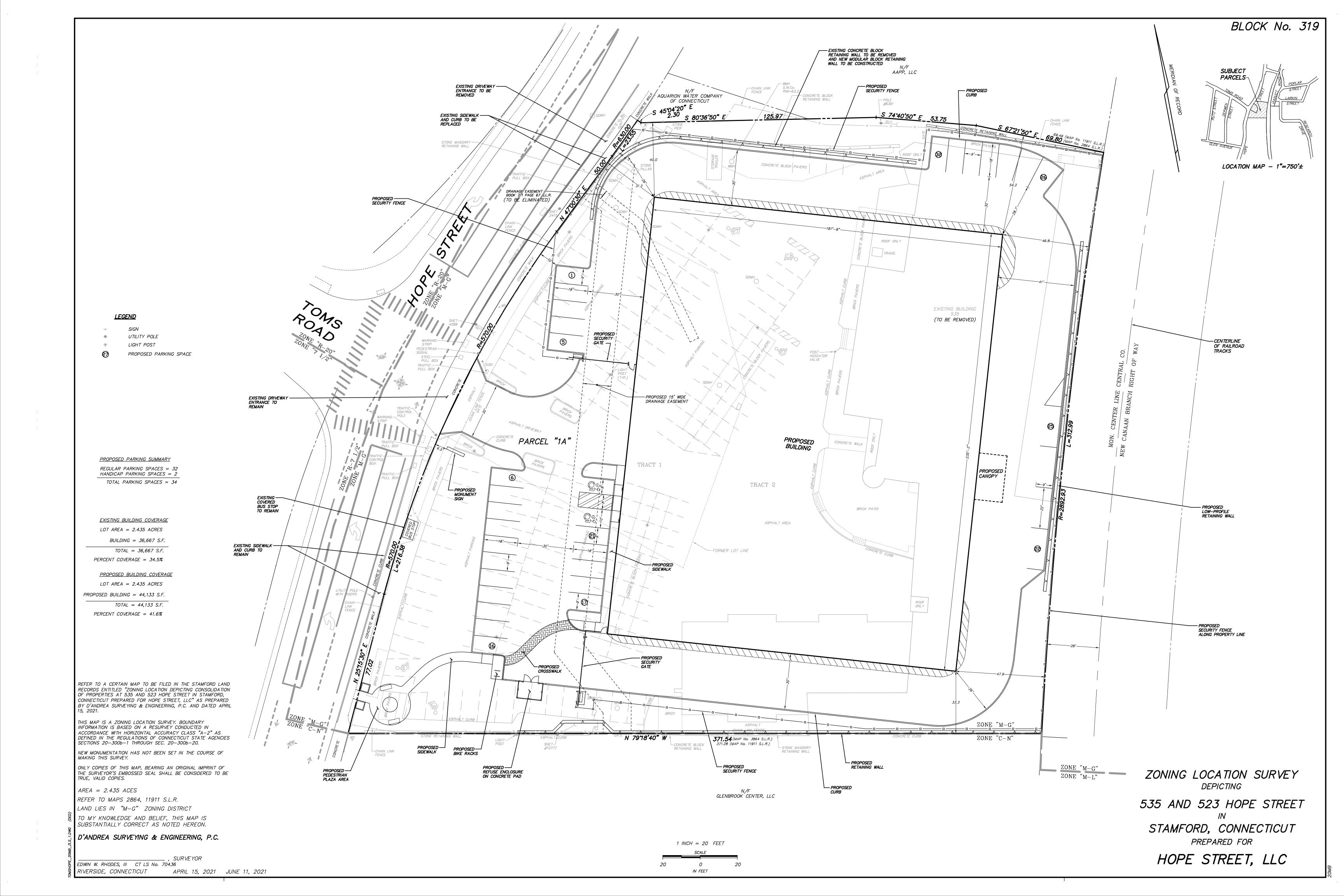


D.	Construction Details			
1	Standard City of Stamford details			
1	Infiltration system details			
1	Control structure details			
/	Water quality treatment details			
	Infiltration testing results (Refer to Borns Loss in Drainage Summary Report)			
Checklist for Certificate of Occupancy				
	Final Improvement Location Survey			
	Stormwater Management Certification Form			
	Final DCIA Tracking Worksheet			
	Standard City of Stamford Drainage Maintenance Agreement (Agreement Covenant)			
Other Certifications at the discretion of the Engineering Bureau and/or EPB				

Wall Certification
Landscape Certification
Landscape Maintenance Agreement
Waiver Covering Storm Sewer Connection
Waiver Covering Granite Block, Depressed Curb, and Driveway Aprons
Flood Certification

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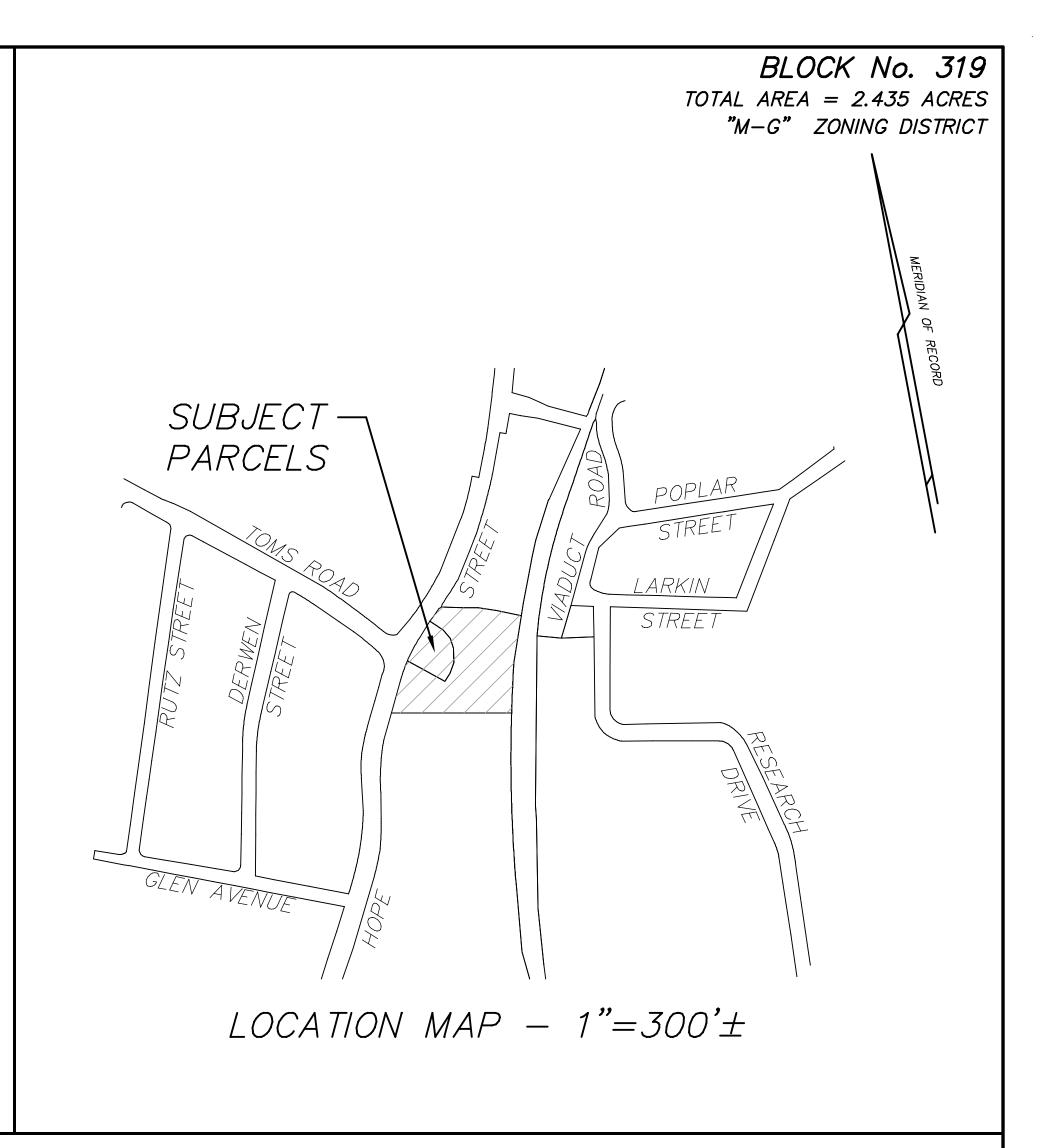
SITE PLAN REVIEW SET " COMMERCIAL DEVELOPMENT"

LOCATION

535 & 523 HOPE STREET STAMFORD, CONNECTICUT

PREPARED FOR

HOPE STREET, LLC



SHEET INDEX

SHEET	<u>TITLE</u>	REVISION	DATE
	TOPOGRAPHIC SURVEY - "EXISTING CONDITIONS"		4-15-21
1 OF 6	DEMOLITION PLAN	Ο	4-15-21
2 OF 6	SITE GRADING AND LAYOUT PLAN	1	6 - 11 - 21
3 OF 6	STORM DRAINAGE AND UTILITY LAYOUT PLAN	1	6-11-21
4 OF 6	SEDIMENTATION AND EROSION CONTROL PLAN	1	6-11-21
5 OF 6	NOTES AND DETAILS	1	6-11-21
6 OF 6	DETAILS	0	4-15-21
1 OF 1	LOW-IMPACT DEVELOPMENT PLAN	0	4-15-21

ENGINEERING PLANS PREPARED BY

6-11-21

1 6-11-21

0 4-15-21

DATE

ZONING RESUBMISSION

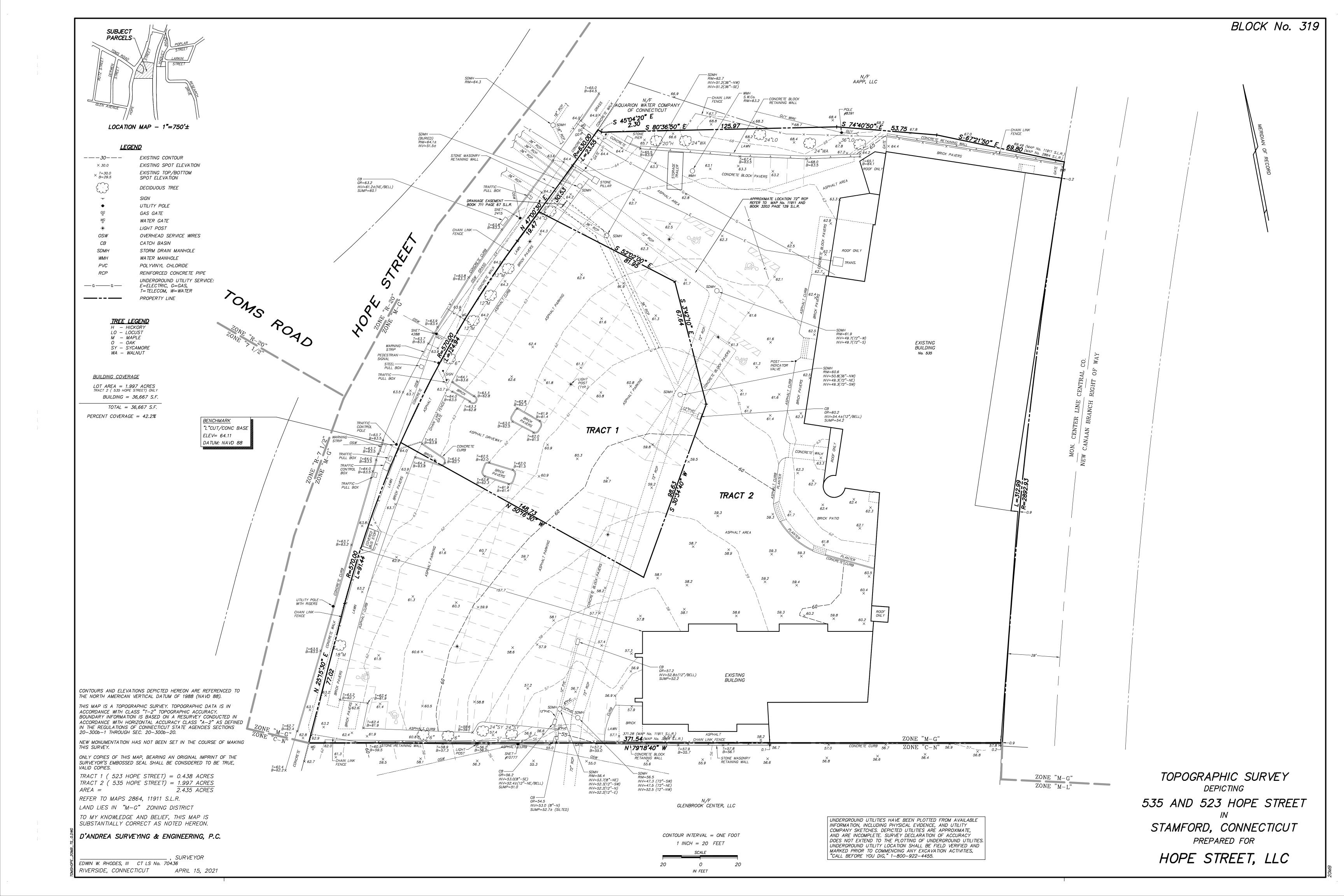
ZONING SUBMISSION

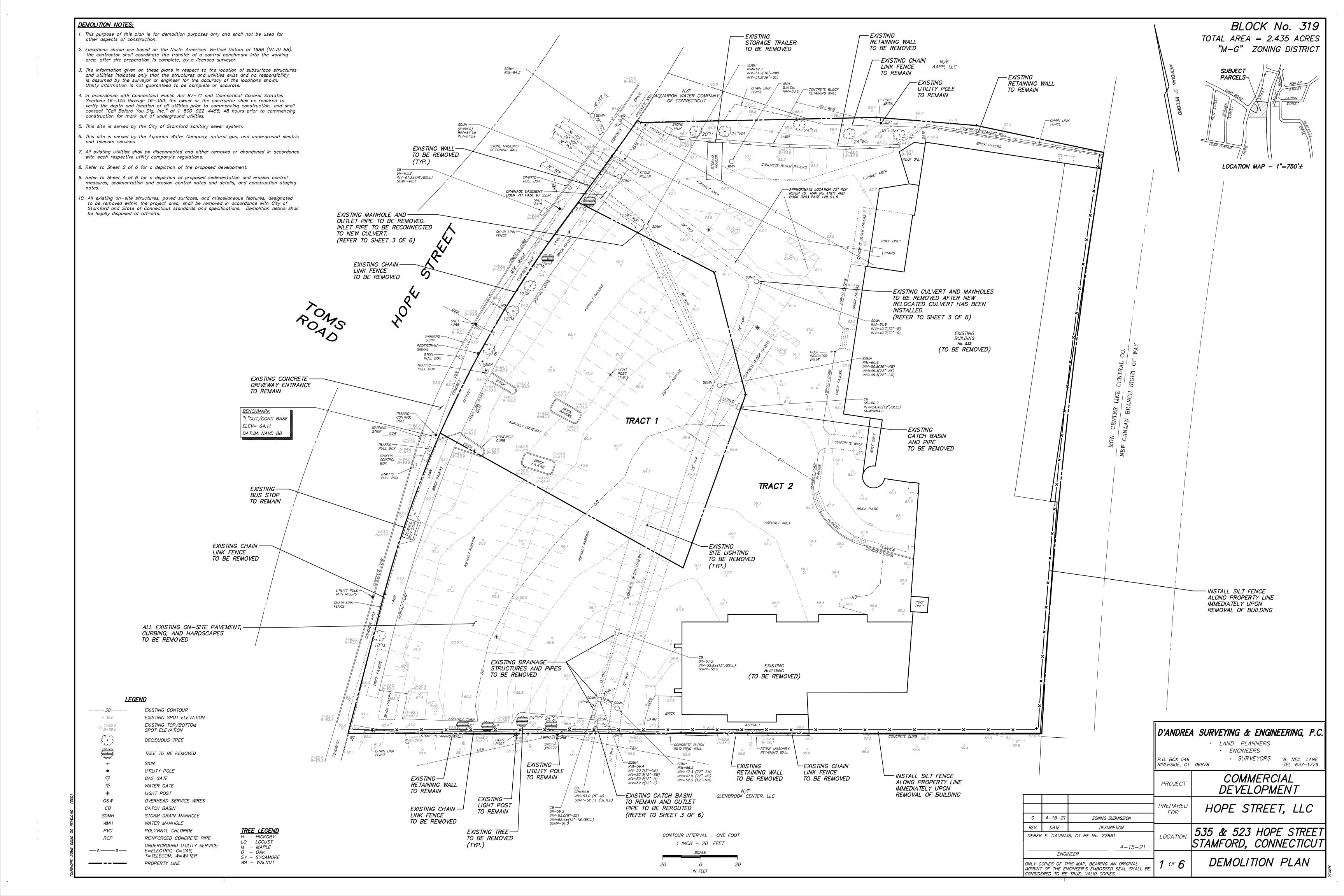
DESCRIPTION

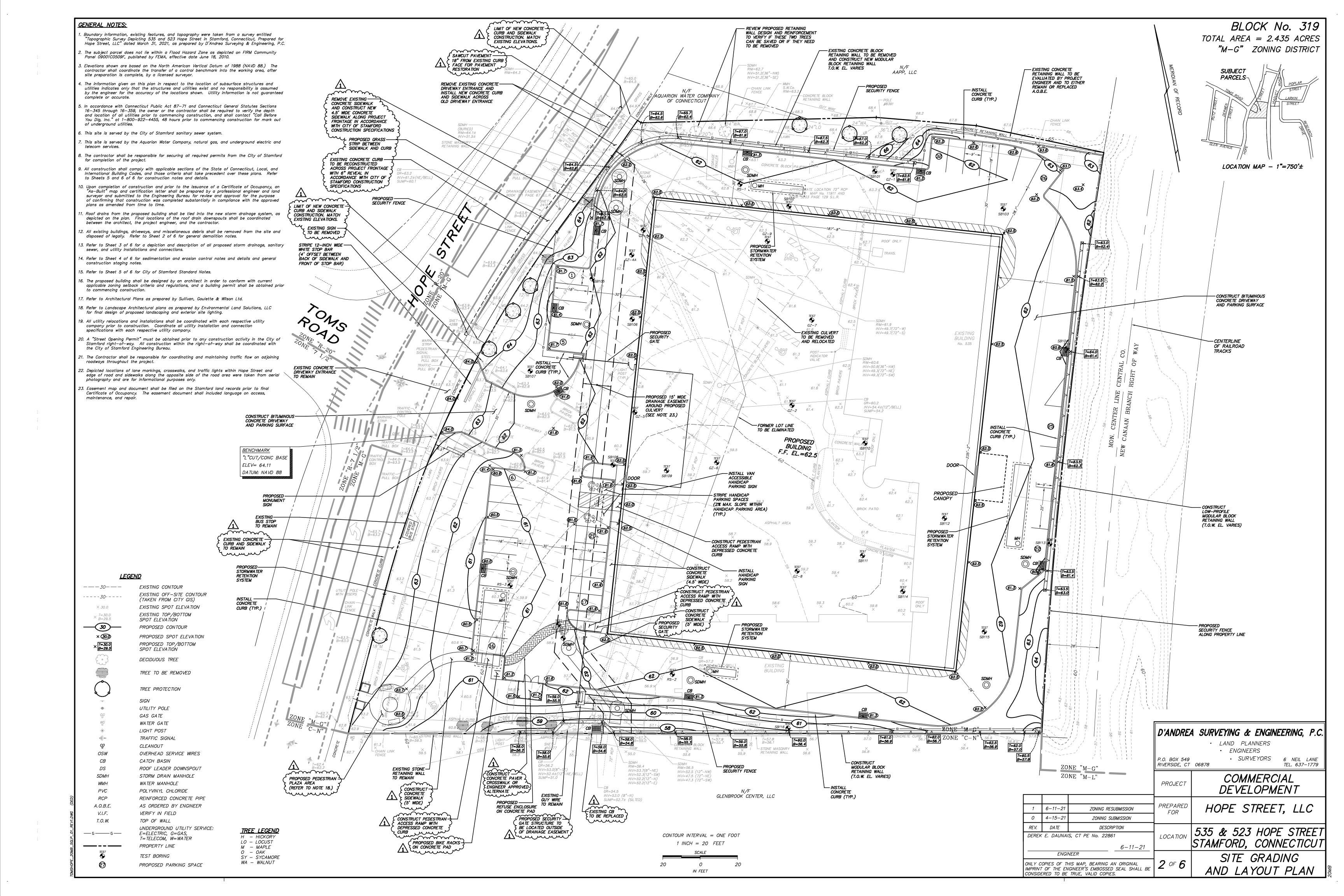
D'ANDREA SURVEYING & ENGINEERING, P.C.
DEREK E. DAUNAIS, CT. PE No. 22861

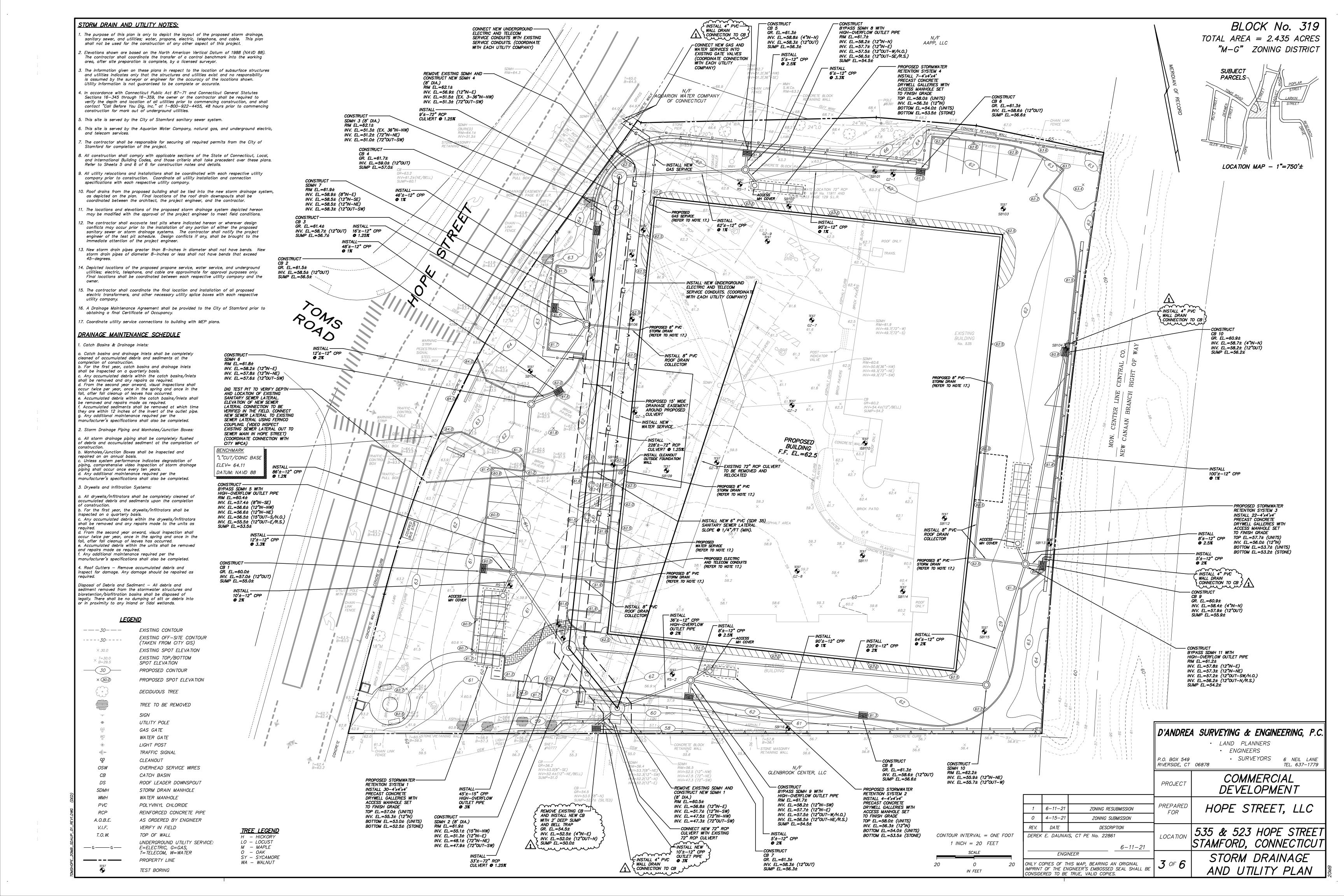
ONLY COPIES OF THIS SET, BEARING AN ORIGINAL IMPRINT OF THE ENGINEER'S / SURVEYOR'S EMBOSSED SEAL SHALL BE CONSIDERED TO BE TRUE, VALID COPIES.

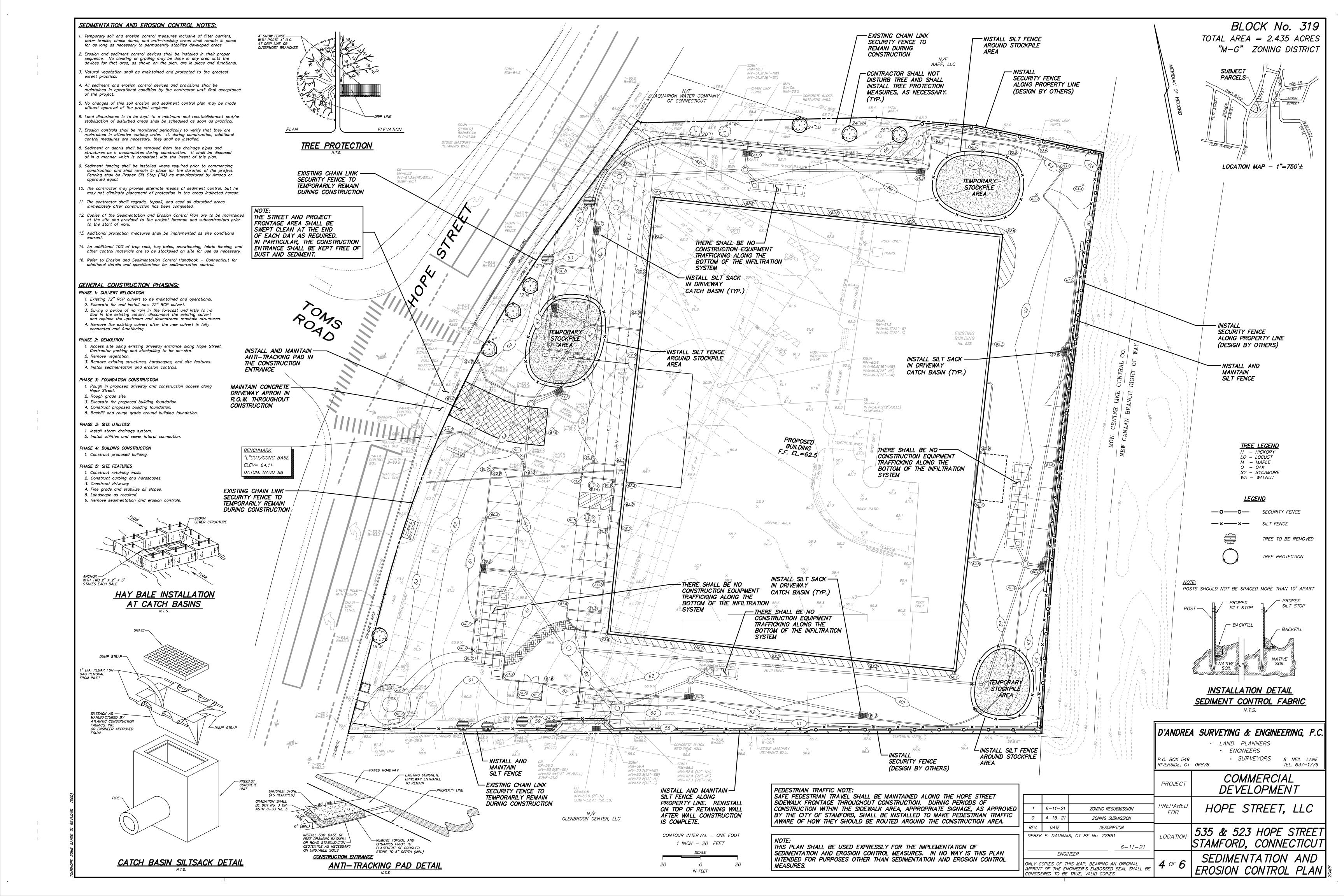
D'ANDREA	A SURVEYING & ENGINEERING, P.C.
P.O. BOX 549 RIVERSIDE, CT	 LAND PLANNERS ENGINEERS SURVEYORS 6 NEIL LANE 06878 TEL. 637–1779
PROJECT	COMMERCIAL DEVELOPMENT
PREPARED FOR	HOPE STREET, LLC
LOCA TION	535 & 523 HOPE STREET STAMFORD, CONNECTICUT
	COVER SHEET











CONSTRUCTION NOTES:

- 1. The contractor shall obtain all appropriate permits prior to commencing construction.
- 2. The contractor shall be solely responsible to coordinate his work with the work being done by others. The contractor shall likewise bear the responsibility for delays or other factors related to the work by others. No claims shall be allowed due to the contractor's failure to adequately coordinate such work.
- 3. All construction shall be inspected by a professional engineer prior to backfill and as the work progresses.
- . The project engineer shall be notified a minimum of three working days prior to the commencement of each phase of construction.
- 5. Appropriate measures shall be taken to control any sedimentation and erosion which may result during construction.
- 5. All specimen trees shall be protected during the construction period, except those specifically designated to be removed, in accordance with generally accepted standards.
- . There shall be no dumping of construction debris and/or excess excavated material into or in proximity to any inland or tidal wetland areas. All excavated material shall be stockpiled and contained on-site within silt fencing. The contractor shall be responsible for the removal of all excess material excavated during construction. All excess material shall be removed in a careful and environmetally sound manner and shall be disposed of legally off—site.
- 3. The proposed building shall be designed by the architect in order to conform with current applicable zoning setback criteria and regulations, and a building permit shall be obtained prior to commencing construction.
- 9. Existing utilities in conflict through or above this parcel shall be relocated as directed by the appropriate utility company or the owner. The contractor shall excavate test pits to verify the location and depth of utilities where conflicts may exist.
- 10. Pavement replacement shall be bituminous concrete, placed in accordance with the City of Stamford standards and/or Connecticut State Highway specifications.
- l. Shoulders and disturbed areas shall receive four inches of topsoil; fine graded and seeded as soon as practical to prevent erosion.
- 12. The contractor shall not commence any paving until the grading and shaping of the compacted gravel base has been approved by the project engineer.
- 13. Regrading, filling, and other such alterations to the site shall be restricted to the minimum level necessary to complete the project as shown on the plan.
- 14. Existing inverts on storm drains, sanitary sewers, and utility conduits shall be field verified where appropriate, before commencing construction. The contractor shall excavate test pits where indicated hereon or wherever design conflicts may occur. The contractor shall notify the project engineer of the test pit schedule. Design conflicts if any, shall be brought to the immediate attention of the project engineer. Plate or backfill and patch test pits as directed by the project engineer.
- 15. Manhole structures shall be precast concrete with gaskets as manufactured by Eastern Precast Co., Inc. or engineer approved equal, unless noted otherwise.
- 16. Precast concrete cone section to be eccentric. Flat slab tops to have eccentric openings. Eccentric cone sections shall be used when the vertical distance between manhole frame and top of highest pipe is six (6) feet or greater, otherwise flat slab tops shall be used. Aluminum manhole steps (drop form type) shall be provided in all manholes at 12 inch intervals. Each step shall be capable of supporting a minimum load of 1,000 pounds. Wall joints to be "O-ring" rubber gasket type with the interior and exterior faces of joints to be sealed with waterproof non-shrink grout.
- 7. Connection between manholes and PVC sanitary sewer or storm drain pipes shall be made with flexible rubber boot type connections sealed water tight with a stainless steel clamp. The contractor shall make sure that all connections of new sanitary sewers to manholes are water tight. Connections to manholes for reinforced concrete storm and sanitary sewer pipe shall be made with concrete brick masonry and non-shrink grout. The Contractor shall make sure that all connections of new sanitary sewers to manholes are water tight.
- 18. All gravity PVC storm drain and sanitary sewer pipes shall conform to ASTM D 3034 "Standard Specification for type PSM Poly Vinyl Chloride (PVC) Sewer Pipe and Fittings" or approved equal (SDR35).
- 19. Corrugated plastic pipe (CPP) shall be HDPE, N-12, smooth interior pipe as manufactured by Advanced Drainage Systems, Inc. or engineer approved equal and shall comply with AASHTO M294-94 Type S (smooth inner liner).
- 20. Where unsuitable foundation is encountered during construction of storm drains or sanitary sewers, the contractor shall remove the unsuitable material and replace it with other material approved by the project engineer.
- 21. Bedding and backfill material shall conform to ASTM D2321 specification "standard recommended
- practice for underground installations of flexible thermoplastic sewer pipe (PVC)." 22. All drainage and sewer conduits within the City right—of—way shall have 2 foot minimum cover or
- 23. All storm drainage and sewer connections shall be sloped at 2% (minimum) or as otherwise noted.
- 24. The contractor shall provide all equipment, tools, labor and materials necessary to satisfactorily clean and remove all visible obstructions, dirt, sand, sludge, roots, gravel, stones, etc., from the storm drains, sanitary sewers, and structures.
- 25. Processed aggregate shall be in accordance with the City of Stamford standards and/or Connecticut State Highway specifications.

be encased in concrete if located under a paved or traveled way.

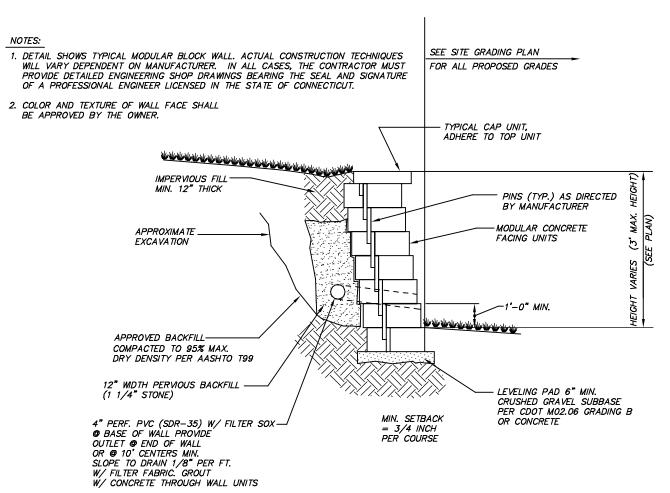
- 26. Roadway pavement shall be 2 course bituminous concrete placed in accordance with the City of Stamford standards and/or Connecticut State Highway specifications.
- 27. All existing manhole frames, catch basin grates, and utility structures shall be adjusted to new finish grade as required. Contractor to coordinate with existing utility companies to ensure their facilities are adjusted to finish grade.
- 28. Curbs and sidewalks in the City right-of-way shall be constructed in accordance with the City of Stamford specifications. The contractor shall pay specific attention to the location of construction joints.
- 29. All traffic control devices including traffic signs and pavement markings shall be installed in conformance with the Manual on Uniform Traffic Control Devices for Streets and Highways, U.S. Department of Transportation, Federal Highway Administration, Millenium Edition, as amended to

STANDARD CITY OF STAMFORD NOTES:

- 1. A Street Opening Permit is required for all work within the City of Stamford Right-of-Way.
- 2. All work within the City of Stamford Right-of-Way shall be constructed to City of Stamford requirements, the State of Connecticut Basic Building Code and the Connecticut Guidelines for Soil Erosion and Sedimentation Control.
- 3. The Engineering Bureau of the City of Stamford shall be notified three days prior to any commencement of construction or work within the City of Stamford Right-of-Way.
- 4. Trees within the City of Stamford Right—of—Way to be removed shall be posted in accordance with the Tree Ordinance.
- 5. Prior to any excavation the Contractor and/or Applicant/Owner, in accordance with Public Act 77-350, shall be required to contact "Call Before You Dig" at 1-800-922-4455 for mark out of underground utilities.
- 6. All retaining walls three (3) feet or higher measured from finished grade at the bottom of the wall to finished grade at the top of the wall and retaining walls supporting a surcharge or impounding Class I, II or III-A liquids are required to have a Building Permit. Retaining walls shall be designed and inspected during construction by a Professional Engineer licensed in the State of Connecticut. Prior to the issuance of a Certificate of Occupancy, retaining walls shall be certified by a Professional Engineer licensed in the State of Connecticut.
- 7. Certification will be required by a professional engineer licensed in the State of Connecticut that work has been completed in compliance with the approved drawings.
- 8. A Final Improvement Location Survey will be required by a professional land surveyor licensed in
- the State of Connecticut.

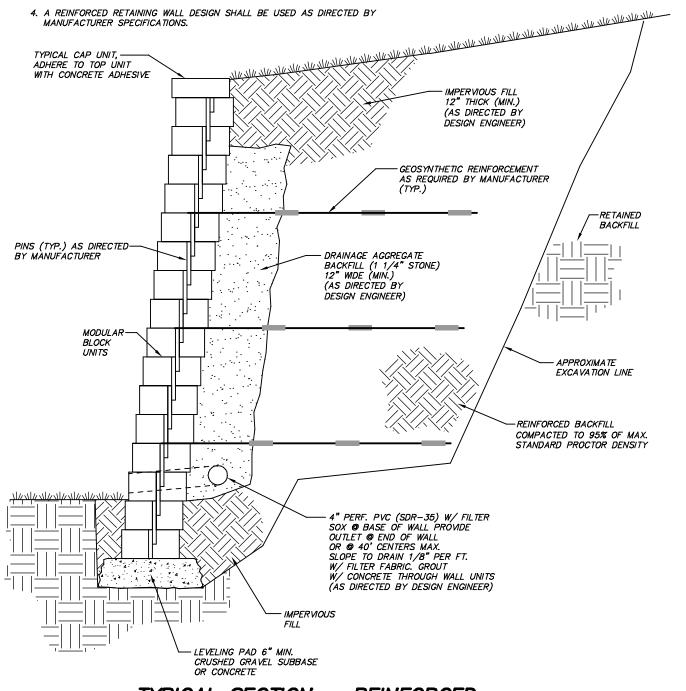
9. Connection to a city-owned storm sewer shall require the Waiver Covering Storm Sewer

- Connection to be filed with the City of Stamford Engineering Bureau. 10. Granite block or other decorative stone or brick, depressed curb, driveway apron and curbing
- within the City of Stamford Right-of-Way shall require the Waiver Covering Granite Block Depressed Curb and Driveway Aprons to be filed with the City of Stamford Engineering Bureau.
- 11. Sediment and erosion controls shall be maintained and repaired as necessary throughout construction until the site is stabilized.
- 12. To obtain a Certificate of Occupancy, submittal must include all items outlined in the Checklist for Certificate of Occupancy (Appendix D of the City of Stamford Drainage Manual).
- 13. Reference EPB Permit #, Zoning Permit #, Zoning Board of Appeals #, Subdivision #, if applicable.



TYPICAL SECTION — UNREINFORCED LOW-PROFILE MODULAR CONCRETE BLOCK RETAINING WALL

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DELEGATING THE STRUCTURAL DESIGN OF THE REINFORCED MODULAR BLOCK WALLS TO THE MANUFACTURER OF THE WALL SYSTEM. THE DESIGN AND AS-BUILT CERTIFICATION OF THE WALL SYSTEM MUST BE PREPARED, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT.
- 2. DETAIL SHOWS TYPICAL MODULAR BLOCK WALL. ACTUAL CONSTRUCTION
 TECHNIQUES WILL VARY DEPENDENT ON MANUFACTURER AND DESIGN ENGINEER
 SPECIFICATIONS. IN ALL CASES CONTRACTOR MUST PROVIDE DETAILED ENGINEERING HOP DRAWINGS BEARING THE SEAL AND SIGNATURE OF A P.E. LICENSED IN THE
- 3. COLOR AND TEXTURE OF MODULAR BLOCKS SHALL BE APPROVED BY THE



TYPICAL SECTION - REINFORCED MODULAR CONCRETE BLOCK RETAINING WALL (DELEGATED DESIGN)

RESERVED

PARKING

REQUIRED

VIOLATORS WILL BE FINED MIN \$150

VAN

ACCESSIBLE

All accessible signage sizes, lettering, and symbols shall comply with federal and

All accessible signage shall be installed 60" (minimum) above the floor or ground

RESERVED PARKING SPACE SIGN DETAIL

surface of the parking space, measured to the bottom of the sign.

"RESERVED PARKING PERMIT REQUIRED" & "VAN ACCESSIBLE" signs shall have

white lettering against a blue background.

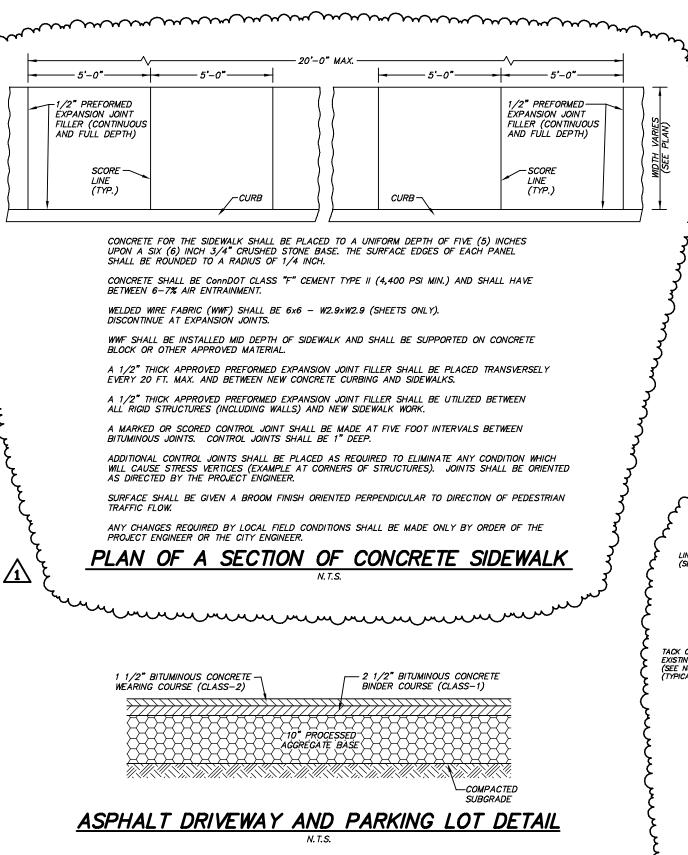
Confirm fine amount prior to sign fabrication.

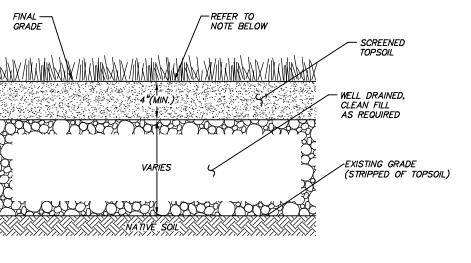
state specifications.

NOTE: THE VAN ACCESSIBL

SIGN SHALL ONLY BE USED FOR DESIGNATING VAN

ACCESSIBLE SPACES.





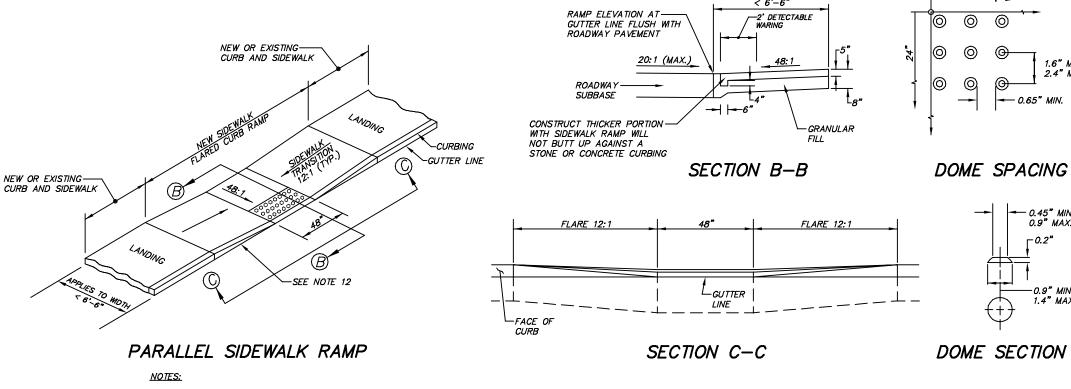
LAWN RESTORATION DETAIL

1. Land disturbance shall be kept to a minimum. All disturbed areas shall be planted in where permanent plantings are called for as soon as practicable. Seed and mulch disturbed areas with grass seed where permanent plantings are not called for, as soon as practicable. Prepare seedbed (4" thick minimum) with topsoil. Seed, rake, roll, water and mulch areas according to mixes below. Water as often as necessary (up to 3 times per day) to establish cover. Mulch seeded areas at 1 to 2 tons/acre with salt hay. Maintain mulch and watering until grass is 3" high with 85% cover. Reseed or overseed if necessary.

Temporary Seed Mix: Perennial ryegrass 40 lbs/ac.

Permanent Lawns: Kentucky Bluegrass 20 lbs/ac. Creeping red fescue 20 lbs/ac. Perennial ryegrass 5 lbs/ac. (1 lb/1000 sf.)

Optimum Seeding Dates: April 15 through June 15 August 15 through October 1 45 lbs/ac. (1 lb/1000 sf.)



1. MAXIMUM SLOPES OF ADJOINING CUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO THE SIDEWALK RAMP OR ACCESSIBLE ROUTE SHOULD NOT EXCEED 20:1.
2. CARE SHALL BE TAKEN TO ASSURE UNIFORM GRADE ON THE RAMP, FREE OF SAGS AND ABRUPT GRADE CHANGES.
3. ALL RAMPS SHALL BE CONSTRUCTED OF CLASS "C" CONCRETE IN ACCORDANCE WITH CONNECTICUT STANDARD SPECIFICATIONS ARTICLE M.03.01.
4. SIDEWALK RAMPS SHALL HAVE A COARSE BROOM FINISH TRANSVERSE TO THE SLOPE OF THE RAMP. THE SURFACE ALONG ACCESSIBLE ROUTES SHALL BE STABLE,

FIRM AND SLIP RESISTANT IN COMPLIANCE WITH ADAAG SECTION 4.5.

5. DIAGONAL SIDEWALK RAMPS AT MARKED CROSSINGS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES. REMOVAL OF EXISTING SIDEWALK FOR NEW RAMP INSTALLATIONS SHALL BE TO THE NEAREST EXPANSION/CONTRACTION JOINT OR DUMMY JOINT, 12:1 MAY NOT BE ACHIEVABLE DUE TO SIDEWALK GRADE. IN RECOGNITION OF THIS, A MINIMUM LIMIT OF 15' FOR A PARALLEL RAMP SHALL BE USED. REMOVAL SHALL NOT BE FURTHER THAN 2' FROM THE PROPOSED RAMP UNLESS DIRECTED BY THE ENGINEER, SAW CUT REQUIRED FOR DUMMY JOINTS SHALL BE INCLUDED IN THE COST OF "CONCRETE" 7. EXPANSION JOINTS IN CONCRETE SHALL MATCH THOSE IN ADJACENT SIDEWALKS BUT IN NO CASE SHALL THE SPACING BETWEEN EXPANSION JOINTS EXCEED 12'

B. RAISED ISLANDS IN MARKED CROSSINGS SHALL HAVE SIDEWALK RAMPS AT BOTH SIDES AND A LEVEL AREA AT LEAST 4' LONG BETWEEN THE RAMPS. IF THIS CANNOT BE ACHIEVED, THE RAISED ISLAND SHALL BE CUT THROUGH LEVEL WITH THE ROADWAY AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

9. SIDEWALK RAMPS SHALL BE CONSTRUCTED AND PAID FOR UNDER THE ITEM "CONCRETE SIDEWALK" INCLUDING CURBING WITHIN THE LIMITS OF THE NEW SIDEWALK

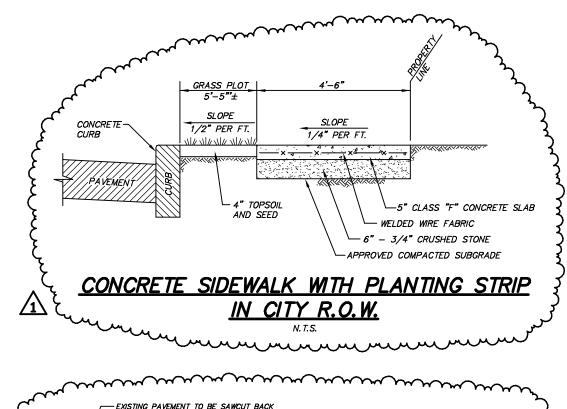
10. CURBING WITHIN THE LIMITS OF NEW SIDEWALK RAMP SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE REQUIREMENTS OF FORM 817 SECTIONS 8.11 AND 8.13.

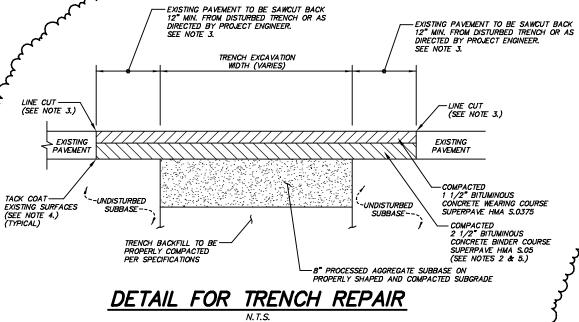
11. HANDICAP RAMPS CONFORMING WITH CONNECTICUT GENERAL STATUTES, SEC. 7—118A, SHALL BE INCORPORATED IN ALL PROPOSED SIDEWALKS AT ALL STREET INTERSECTIONS, AND AT ALL OTHER LOCATIONS WHERE THE GRADE OF A DRIVEWAY OR OTHER FACILITY TAKES PRECEDENCE OVER THE GRADE OF THE PROPOSED 12. TRANSITION TO FULL HEIGHT CURB. INSTALL STONE CURBING IF ADJACENT CURBING IS STONE. INSTALL CONCRETE CURBING IF ADJACENT CURBING IS CONCRETE

OR BITUMINOUS.

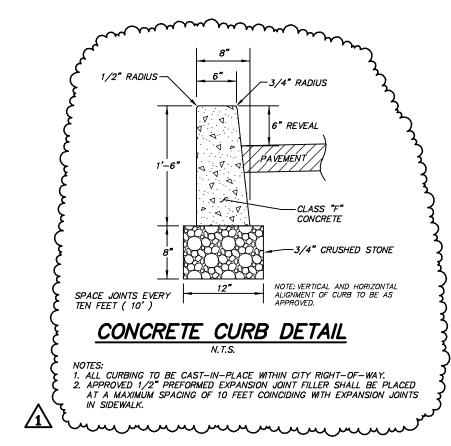
13. INSTALL THE EDGE OF THE DETECTABLE WARNING 6" FROM THE EDGE OF ROAD. 14. TO PERMIT WHEELCHAIR WHEELS TO ROLL BETWEEN DOMES, ALION DOMES ON A SQUARE GRID IN THE DIRECTION OF PEDESTRIAN TRAVEL.

DETAILS FOR PEDESTRIAN ACCESS RAMPS





I. ALL WORK TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONNECTICUT DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION, LATEST EDITION, OR AS DIRECTED BY PROJECT ENGINEER. 2. SHOULD THE TOTAL THICKNESS OF EXISTING PAVEMENT EXCEED THICKNESS OF PROPOSED BINDER PLUS WEARING COURSE, THE THICKNESS OF BINDER COURSE SHALL BE INCREASED SUCH THAT THE TOTAL THICKNESS OF REPAIR BITUMINOUS PAVEMENT MATCHES EXISTING 3. CUTBACKS SHALL BE MADE IMMEDIATELY PRIOR TO TRENCH REPAIR AND NOT WHEN TRENCH IS EXCAVATED. CUTBACKS SHALL BE STRAIGHT AND EVEN TO ELIMINATE IRREGULAR 4. TACK COAT SHALL BE APPLIED TO THE FULL DEPTH OF EXISTING PAVEMENT ALONG THE PERIMETER EDGES OF THE TRENCH AND ALL CONTACT SURFACES SUCH AS CURBING AND STRUCTURES (MANHOLES AND CATCH BASINS). TACK COAT SHALL BE APPLIED BETWEEN LIFTS/COURSES THAT HAVE BEEN IN PLACE LONGER THAN FIVE (5) DAYS. 5. HMA S.O5 BINDER COURSE SHALL NOT BE PLACED IN LIFTS GREATER THAN 2 1/2"



┌*0.2*"

-#4 REBAR AT 12" O.C. EACH WAY, CENTERED IN SLAB CONCRETE SLAB - 12" THICK 3/4" CRUSHED STONE SUB-BASE

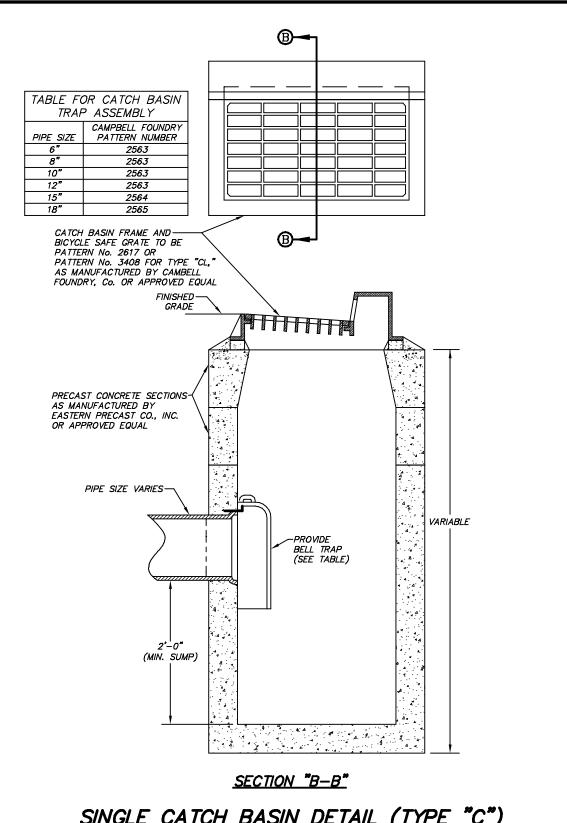
REFUSE PAD DETAIL

CONTRACTOR SHALL PROVIDE SAMPLES AND/OR CUT SHEETS OF ALL MATERIAL TO BE INSTALLED FOR REVIEW BY THE PROJECT ENGINEER PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL ALLOW THREE DAYS FOR PROJECT ENGINEER TO REVIEW MATERIALS AND/OR CUT SHEETS FOR APPROVAL. ALL MATERIALS AND PRODUCTS MUST BE APPROVED BY THE PROJECT ENGINEE PRIOR TO INSTALLATION.

D'ANDREA SURVEYING & ENGINEERING, P.C. LAND PLANNERS ENGINEERS SURVEYORS P.O. BOX 549 6 NEIL LANE RIVERSIDE, CT 06878 TEL. 637-1779 COMMERCIAL PROJECT DEVELOPMENT PREPARE HOPE STREET, LLC

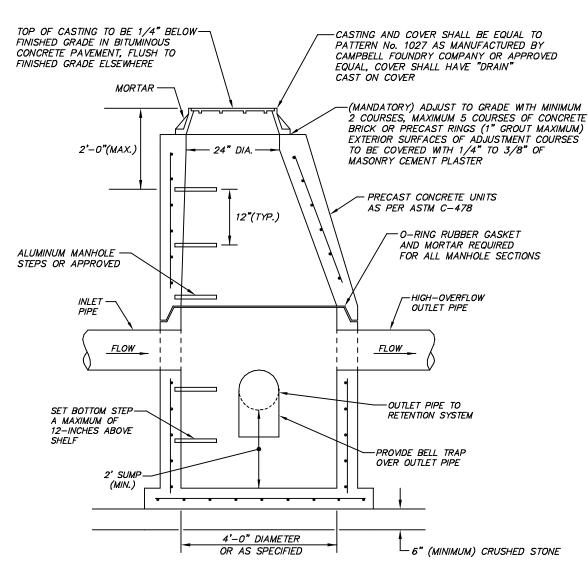
ZONING RESUBMISSION 6-11-20 4-15-21 ZONING SUBMISSION REV. DATE DESCRIPTION |535 & 523 HOPE STREET DEREK E. DAUNAIS, CT PE No. 22861 STAMFORD, CONNECTICUT 6-11-21 **ENGINEER** NOTES AND DETAILS ONLY COPIES OF THIS MAP, BEARING AN ORIGINAL IMPRINT OF THE ENGINEER'S EMBOSSED SEAL SHALL I

CONSIDERED TO BE TRUE, VALID COPIES.



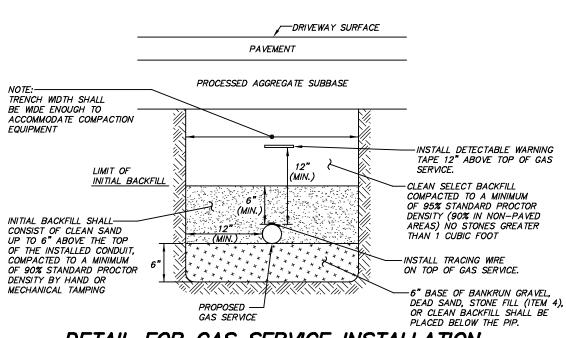
SINGLE CATCH BASIN DETAIL (TYPE "C")

CATCH BASIN SHALL HAVE A MINIMUM SUMP OF 2 FEET AS MEASURED FROM THE LOWEST PIPE INVERT ELEVATION TO THE INTERIOR BOTTOM OF THE STRUCTURE. CONTRACTOR SHALL PURCHASE AND INSTALL A SEPARATE SUMP SECTION. NO OUTLET OR INLET PIPES SHALL PENETRATE THE BOTTOM SUMP SECTION. REFER TO DEVELOPMENT PLAN FOR SIZES, LOCATIONS, AND INVERT ELEVATIONS OF ALL PIPES.



STORM DRAIN MANHOLE WITH HIGH-OVERFLOW OUTLET DETAIL

MANHOLE SHALL HAVE A MINIMUM SUMP OF 2 FEET AS MEASURED FROM THE LOWEST PIPE INVERT ELEVATION TO THE INTERIOR BOTTOM OF THE STRUCTURE. REFER TO DEVELOPMENT PLAN FOR SIZES, LOCATIONS, AND INVERT ELEVATION OF ALL PIPES.



DETAIL FOR GAS SERVICE INSTALLATION

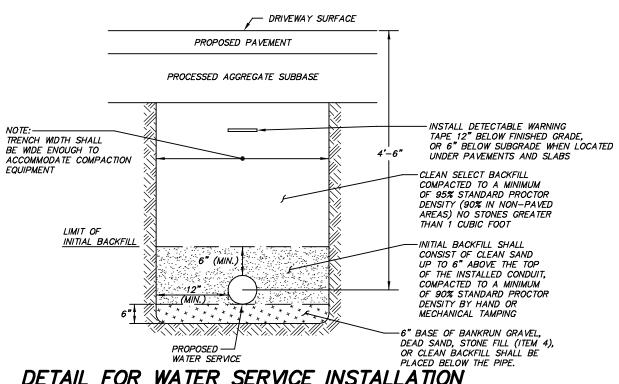
AND THE GAS COMPANY.

1. THE CONTRACTOR SHALL HAVE ALL MATERIAL SELECTION AND INSTALLATION SPECIFICATIONS APPROVED BY THE GAS COMPANY PRIOR TO INSTALLATION. 2. ACTUAL NUMBER AND SIZE OF SERVICES TO BE INSTALLED MAY VARY. CONTRACTOR SHALL COORDINATE ACTUAL NUMBER AND SIZE OF SERVICES TO BE INSTALLED WITH BOTH THE OWNER

TOP OF CASTING TO BE 1/4" BELOW-FINISHED GRADE IN BITUMINOUS -CASTING AND COVER SHALL BE EQUAL TO PATTERN No. 1027 AS MANUFACTURED BY CONCRETE PAVEMENT, FLUSH TO CAMPBELL FOUNDRY COMPANY OR APPROVED FINISHED GRADE ELSEWHERE EQUAL, COVER SHALL HAVE "DRAIN" CAST ON COVER (MANDATORY) ADJUST TO GRADE WITH MINIMUM COURSES, MAXIMUM 5 COURSES OF CONCRETE EXTERIOR SURFACES OF ADJUSTMENT COURSES 2'-0"(MAX.) TO BE COVERED WITH 1/4" TO 3/8" OF MASONRY CEMENT PLASTER 12"(TYP.) ALUMINUM MANHOLE STEPS OR APPROVED -- O-RING RUBBER GASKET AND MORTAR REQUIRED FOR ALL MANHOLE SECTIONS PRECAST CONCRETE UNITS AS PER ASTM C-478 BRICK MASONRY INVERT AND SHELF 12"(MAX.) SET BOTTOM STEP-A MAXIMUM OF 12-INCHES ABOVE CLASS "A" CONCRET 4'-0" DIAMETER OR AS SPECIFIED dash 6" (MINIMUM) CRUSHED STONE

TYPICAL STORM DRAIN MANHOLE DETAIL

REFER TO DEVELOPMENT PLAN FOR SIZES, LOCATIONS, AND INVERT ELEVATIONS OF ALL PIPES.

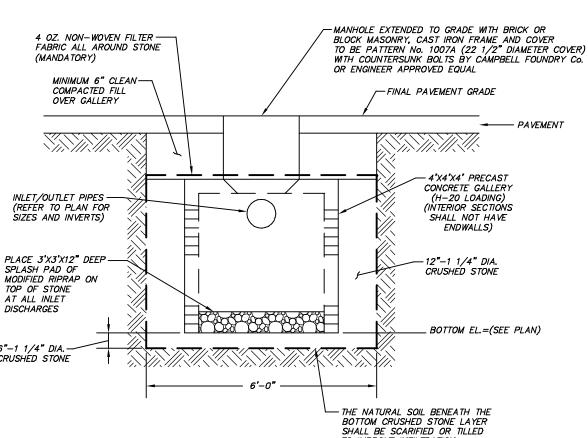


DETAIL FOR WATER SERVICE INSTALLATION

NOTES:

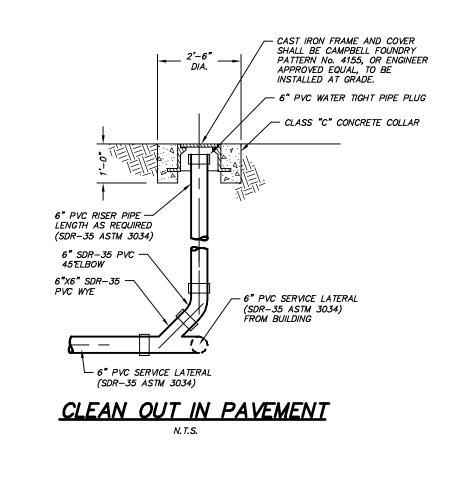
AND THE AQUARION WATER COMPANY.

1. THE CONTRACTOR SHALL HAVE ALL MATERIAL SELECTION AND INSTALLATION SPECIFICATIONS APPROVED BY THE AQUARION WATER COMPANY PRIOR TO INSTALLATION. 2. ACTUAL NUMBER AND SIZE OF SERVICES TO BE INSTALLED MAY VARY. CONTRACTOR SHALL COORDINATE ACTUAL NUMBER AND SIZE OF SERVICES TO BE INSTALLED WITH BOTH THE OWNER



4'X4'X4' PRECAST CONCRETE GALLERY DRYWELL DETAIL

NOTE: DURING CONSTRUCTION MUDDY AND TURBID WATER SHALL BE PREVENTED FROM ENTERING THE DRYWELLS.



-DRIVEWAY SURFACE

COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR

THAN 1 CUBIC FOOT

DENSITY (90% IN NON-PAVED AREAS) NO STONES GREATER

INITIAL BACKFILL SHALL CONSIST

OF CLASS I. II. OR III MATERIAL

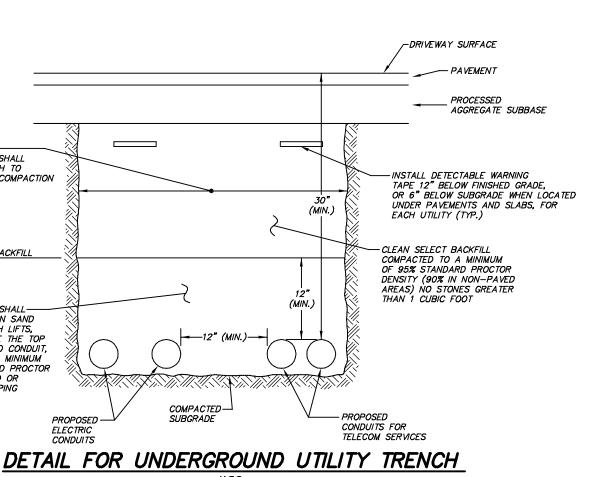
PLACED IN 6 INCH LIFTS COMPACTED TO A MINIMUM

OF 90% STANDARD PROCTOR DENSITY BY HAND OR

OR OTHÉR SUITABLE MATERIAL

PROPOSED PAVEMENT

PROCESSED
AGGREGATE SUBBASE



I. COORDINATE INSTALLATION WITH EACH RESPECTIVE UTILITY COMPANY PRIOR TO INSTALLATION.

COORDINATE ACTUAL NUMBER AND SIZE OF CONDUITS TO BE INSTALLED WITH BOTH THE OWNER AND EACH RESPECTIVE UTILITY COMPANY

2. ACTUAL NUMBER AND SIZE OF CONDUITS TO BE INSTALLED MAY VARY. CONTRACTOR SHALL

ONLY COPIES OF THIS MAP, BEARING AN ORIGINAL IMPRINT OF THE ENGINEER'S EMBOSSED SEAL SHALL I

CONSIDERED TO BE TRUE, VALID COPIES.

DETAIL FOR PVC SANITARY SEWER AND PVC/CPP STORM DRAIN INSTALLATION

FOR RESTORED TURF SURFACES FOR PAVED SURFACES

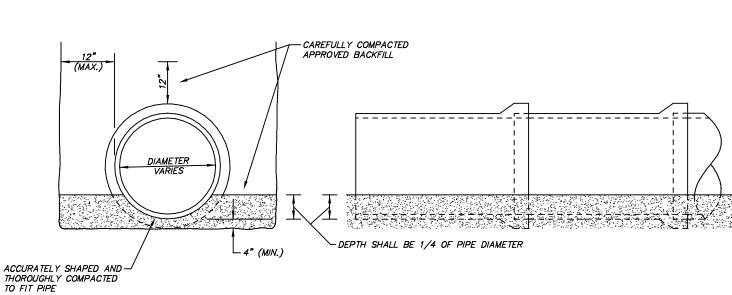
FINAL TURF GRADE—

REPLACEMEN

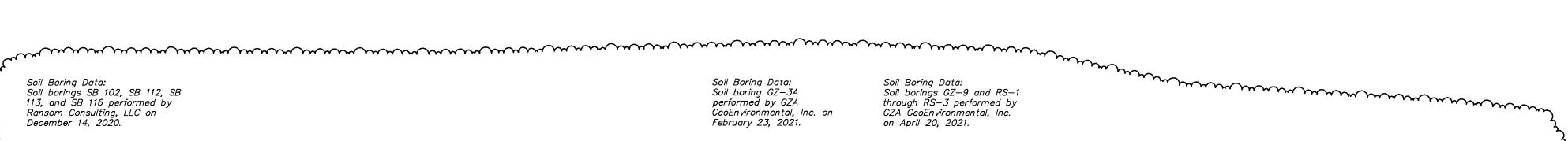
TRENCH WDTH SHALL
BE WDE ENOUGH TO
ACCOMMODATE COMPACTION

INITIAL BACKFILL

1. REFER TO ASTM D2321 (STANDARD PRACTICE FOR UNDERGROUND INSTALLATION THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS, FOR TRENCHING SPECIFICATIONS.



TYPICAL METHOD OF LAYING PIPE (R.C.P.)



SB 102 0.0'----Asphalt 0.3'----

32" tan fine to medium Sand and Crushed Rock 5.0'----35" tan fine to medium

Sand and Crushed Rock 10.0'----31" tan fine to medium Sand and Crushed Rock 15.0'----23" tan fine to medium Sand and Crushed Rock 18.5'======== Groundwater @ 18.5'

End boring @ 18.5' (refusal)

SB 112 0.0'----Concrete 0.5'----17" brown fine to medium

Sand, some fine to coarse gravel, brick and crushed 5.0'----6" medium to coarse Gravel, some fine to medium sand over 23" tan fine to medium SB 113

Concrete

0.0'----

0.5'----

5.0'----

No Groundwater

35" brown fine to medium

Sand, some fine to coarse

gravel, trace crushed rock,

23" brown fine to medium

Sand and Crushed Rock,

some fine to medium gravel

End boring @ 10.0' (refusal)

coal clinkers and coal ash

Sand, some fine to coarse 10.0'=========== gravel and crushed rock 10.0'----24" tan fine to medium Sand. some fine to coarse gravel and crushed rock 15.0'========= Groundwater @ 17.0' End boring @ 15.0' (refusal)

and the second s

SB 116

0.0'----Asphalt 9" brown fine to medium Sand, some fine to medium gravel and crushed rock 5.0'----

14" brown fine to medium Sand, some fine to medium

gravel and crushed rock 2" brown fine to medium Sand, some fine to medium gravel and crushed rock, over 4" Organic Silt, over 20" grey Silty Clay, some fine to medium gravel, over 8" gray fine to medium Sand, 10.0'---trace fine gravel

Sand and fine to coarse 15.0'========== Gravel, trace Silt Groundwater @ 15.0' End boring @ 15.0' (refusal) 12.0'-----

15.0'----Top 9": Brown, fine to coarse Sand and fine to coarse Gravel, trace Silt Bottom 9": Grey, fine to coarse Gravel (Weathered 17.0'========== Groundwater @ 12'

GeoEnvironmental, Inc. on February 23, 2021.

0.0'----

0.2'----

5.0'----

Asphalt Pavement

Gravel, little Silt

GZ-3A

GZA GeoEnvironmental, Inc. on April 20, 2021.

GZ-90.0'----Asphalt Pavement Very dense, brown, fine to coarse Sand and fine to coarse Gravel, little Silt

Loose, dark brown, fine to coarse Sand, some fine 2.0'----Dense, brown, fine to coarse 7.0'----Top 5": Dark brown, fine to Sand, little fine Gravel, little Silt coarse Sand, some fine Gravel, little Silt, trace (Fill) 4.0'----Bottom 8": Grey, tan, fine 5.0'---to medium Sand, some Silt

to medium Sand. little fine 9.0'---trace Asphalt (Fill) Dense, brown, fine to coarse 7.0'-----Dense, brown, fine to medium Sand and fine to coarse Gravel, trace Silt 9.0'----

Very dense, brown, fine to medium Sand, some fine to coarse Gravel, trace Silt 11.0'========= No Groundwater End of Exploration @ 11'

RS-1

0.0'----Asphalt 0.2'----Very dense, brown, fine to coarse Sand, little fine to coarse Gravel, little Silt 2.0'-----Brown, fine to coarse Sand,

trace fine Gravel, trace silt 2.4'=========== No Groundwater End of Exploration @ 5' Medium dense, brown, fine (due to obstruction) to coarse Gravel, some Silt,

Bottom 8": Grev. fine to

RS-3 0.0'----0.0'----Asphalt 0.2'----0.2'----Medium dense, brown, black Very dense, brown to dark fine to coarse Sand, trace brown, fine to coarse Sand, little fine to coarse Gravel, trace Silt, trace Ash

TRENCH WIDTH SHALL BE WIDE ENOUGH TO ACCOMMODATE COMPACTION

INITIAL BACKFILL

INITIAL BACKFILL SHALL— CONSIST OF CLEAN SAND PLACED IN 6 INCH LIFTS,

UP TO 12" ABOVE THE TOP OF THE INSTALLED CONDUIT,

COMPACTED TO A MINIMUM

DENSITY BY HAND OR

MECHANICAL TAMPING

OF 90% STANDARD PROCTOR

NOTES:

fine Gravel, trace Silt, trace Ash 2.0'----2.0'----Medium dense, brown to black, fine to coarse Sand trace Gravel, trace Silt, trace Brick, trace Ash 4 0'----5.0'----Loose, black, fine to coarse Sand, trace Silt

medium Sand adn Silt,

trace fine Gravel

12.0'==========

Groundwater @ 10'

RS-2

Asphalt

Medium dense, brown, fine to medium Sand, little Silt, trace fine to coarse Gravel, trace Brick, trace Ash 7.0'-----Dense, brown, black, fine to coarse Sand, trace Silt 7.0'-----Medium dense, brown, fine to coarse Sand, trace fine 9.0'---to coarse Gravel, trace Silt, 10.0'---trace Ash Top 10": Black, fine to medium Sand adn Silt 9.0'----

10.0'----Very dense, brown, fine to coarse Sand, some fine to coarse Gravel, trace Silt End of Exploration 5 ..

Dense, dark brown, fine to

coarse Sand, trace fine to

coarse Gravel, trace Silt,

4 0'----

trace Ash

(Fill)

D'ANDREA SURVEYING & ENGINEERING, P.C. LAND PLANNERS ENGINEERS SURVEYORS P.O. BOX 549 6 NEIL LANE RIVERSIDE, CT 06878 TEL. 637-1779 COMMERCIAL PROJECT DEVELOPMENT PREPAREI HOPE STREET, LLC ZONING RESUBMISSION 6-11-2 0 4-15-2 ZONING SUBMISSION REV. DATE DESCRIPTION 535 & 523 HOPE STREET DEREK E. DAUNAIS, CT PE No. 22861 STAMFORD, CONNECTICUT 6-11-21 ENGINEER **DETAILS**

