EROSION AND SEDIMENT CONTROL NARRATIVE

1. The proposed work on this project site consists of the removal of certain existing site features; construction of commercial business rental units in three (3) separate buildings; construction of ancillary support features; construction of infrastructure, including storm water management facilities comprising yard drains, manholes and connecting piping, and stormwater retention/infiltration basins, sanitary sewer, potable water supply, natural gas and wired electric and telecommunication services; and associated land regrading and restoration.

2. Construction on this site is expected to begin in the second half of 2020, with completion at a future date to be determined.

3. Prior to any construction activity occurring on this site, install erosion and sediment control barriers at the edge of the proposed disturbed area boundary to the limits as depicted on the drawings herein and/or as described in the narratives hereon, before any actual disturbance of the land occurs. All erosion and sediment control measures and construction practices shall be as described herein and as further described in the "2002 Connecticut Guidelines for Soil Erosion and Sediment Control by the Connecticut Council on Soil and Water Conservation in Cooperation with the Connecticut Department of Environmental Protection, DEP Bulletin 34", as amended. Maintain and/or replace all erosion and sediment control measures as required throughout the construction period.

4. Following the installation of the initial prescribed erosion and sediment control measures, the sequence of construction activities on this site will proceed in the following suggested order. (Note that one or more of these tasks may occur concurrently and/or in a different order than suggested, as appropriate for specific site conditions and/or efficient project management and coordination.)

   A. Remove existing site features as necessary to perform the proposed work.

   B. Construct the stormwater retention/infiltration basins and outlet features.

   C. Commence site regrading and roughing in of driveways and parking areas

   D. Commence construction of site utilities and other site infrastructure.

   C. Excavate for and construct the foundations for the new structures, and backfill.

   E. Construct superstructures and floors for the buildings and continue on with subsequent building construction activities.

   F. Complete construction of site utilities.

   G. Finish grade and construct parking areas and driveways

   H. Complete all necessary remaining permanent site restoration

   I. Remove all temporary erosion and sediment control measures after all permanently restored areas of the site are stable.

5. During the entire period of work on the site, vehicular access to and egress from the work area shall be by way of the construction entrance from Burnham Street.

6. Insofar as possible, disturbance of the land shall be limited to the minimum amount necessary to complete the proposed work. The limits of disturbance shall be established in the field prior to starting any actual construction activities.

7. Grading taking place as the site work progresses shall be done in a manner to allow drainage toward diversion ditches and erosion and sediment control barriers. Silt fence and/or haybale erosion and sediment control checks or equivalent measures shall always be placed immediately after a cut slope has been graded and before a fill slope has been made. Concentrated runoff shall not be permitted to overflow newly graded areas, sediment barriers or other erosion and sediment control measures.

8. A. In so far as seasonably possible, all disturbed areas on the project site not otherwise to be built upon or paved, regardless of their location on the site, shall be restored by establishment of permanent grass cover, landscaping or placement of a permanent mulch cover as soon as practicable following substantial completion of surrounding construction and/or immediately following finish grading. If final grading must be delayed for more than 30 days after the land disturbance activities are completed for any particular area of the site and/or if permanent stabilization is not seasonably possible within 30 days of completion of final grading on any area of the site, temporary soil stabilization measures consisting of temporary seeding and/or heavy mulching shall be performed within 7 days after the suspension of grading work in the subject areas. This shall also apply to stockpiled topsoil and subsoils. Temporary seed shall be perennial ryegrass having a minimum purity of 98 percent and a minimum germination of 90 percent. If the area to be seeded has not been recently loosened or disturbed, loosen the soil to a depth of 3-4 inches by hand or with suitable mechanical equipment to produce a slightly roughened surface, taking care to avoid excessive compaction of the surface. Apply ground limestone and grass seed uniformly to the prepared soil surface at rates of 90 lbs/1000 square feet and 1.0 lbs/1000 square feet, respectively. Increase the seeding rate by 10% when hydroseeding. Optimum planting dates for perennial ryegrass are March 15 to July 1 and August 1 to October 15. Following the completion of the temporary seeding, apply mulch to the seeded surface following the procedure and coverage rates described below. If heavy mulching is used in lieu of temporary seeding, the temporary mulch shall be weed-free straw and/or hay applied uniformly to the soil surface by hand or machine to obtain 100% coverage of the disturbed soil surface. Application rate for the mulch shall be 2-3 tons/acre, or 90-135 lbs/1000 square feet.

B. Where a permanent grass cover is to be established, sufficient topsoil shall be placed and spread over a properly prepared subsoil subgrade to obtain a minimum settled depth of 4 inches of the topsoil, then the surface shall be fine-graded and raked to remove large stones, clumps and other debris, followed by application of lime, fertilizer, grass seed and mulch. Uniformly apply limestone to the prepared soil surface at a rate of 4 tons/acre or 200 lbs/1000 square feet, followed by 10-10-10 or equivalent fertilizer uniformly applied at a rate of 300 lbs/acre or 7.5 lbs/1000 square feet, or as otherwise established by laboratory testing of samples of the actual topsoil placed and spread in the areas to be planted. Work the lime and fertilizer into the topsoil uniformly to a depth of 3 to 4 inches by hand raking or with suitable mechanical equipment, following the finish contours, until a reasonably uniform, fine seedbed is obtained. Once the seedbed is ready, apply grass seed uniformly on the prepared surface. Seed may be applied by any agronomically acceptable procedure. If not applied by hydroseeding, lightly rake in the seed to obtain a ¼ inch soil cover over the seed. Seed application should occur within 7 days after the seedbed preparation is complete. Permanent seeding should be performed only during the periods of April 1 to June 15 and August 15 to October 1. When not seasonably possible to perform permanent seeding, the disturbed areas shall be temporarily seeded and/or mulched following the procedure described above.

The seed mixture and application rate for all finished permanent grass areas shall be the following. Only "certified" seed varieties shall be used, as listed in Article M.13.04 of Connecticut DOT "Form 816", as amended. Seeding rates shall be increased by 10% when hydroseeding or frost crack seeding.

Kentucky Bluegrass	45%	20 lbs/acre	0.46 lbs/1000 sq. ft.
Creeping Red Fescue	45%	20 lb/acre	0.46 lbs/1000 sq. ft.
Perennial Ryegrass	10%	5 lb/acre	0.11 lbs/1000 sq. ft.

When not applied by hydroseeding, mulch the seeded surface immediately following seeding with straw or hay free from weeds and coarse matter, applied and spread uniformly by hand or machine at a rate of 2 tons/acre, or 90 lbs/1000 square feet; or with cellulose fiber, applied and spread in accordance with the manufacturer's recommended application procedure and rate. Whichever method of mulching is used, the mulch application shall be made to obtain 80%-95% uniform coverage of the seeded soil surface, without interfering with seed germination or plant growth. When seeding outside the recommended seeding dates, mulch with straw or hay at an application rate of 2.5-3 tons/acre, or 115-135 lbs./1000 square feet, to provide 95%-100% uniform coverage of the seeded soil surface. (Cellulose fiber is not recommended as mulch when seeding occurs outside of the recommended seeding dates.) Anchor the mulch immediately after spreading by application of a water soluble liquid mulch binder or mulch netting applied in accordance with the manufacturer's recommendations.

Whether permanently or temporarily restored, the seeded areas should be kept uniformly moist by artificial watering when sufficient rainfall does not occur at any time during the period between planting and establishment of a substantially complete grass cover, and otherwise maintained and repaired as necessary until all vegetation is well established and growing self-sufficiently.

C. The interior side slopes and bottoms of the stormwater retention/infiltration basins shall be seeded with "New England Erosion Control/Restoration Mix for Detention Basins and Moist Sites", and the berms and exterior slopes of the stormwater retention/infiltration basins shall be seeded with "New England Conservation/Wildlife Mix", both available from New England Wetland Plants, Inc., Amherst, MA. The preparation of the planting medium, application of the seed mix, mulching and follow-up maintenance procedures shall be in strict compliance with New England Wetland Plants, Inc.'s requirements, specifications and recommendations.

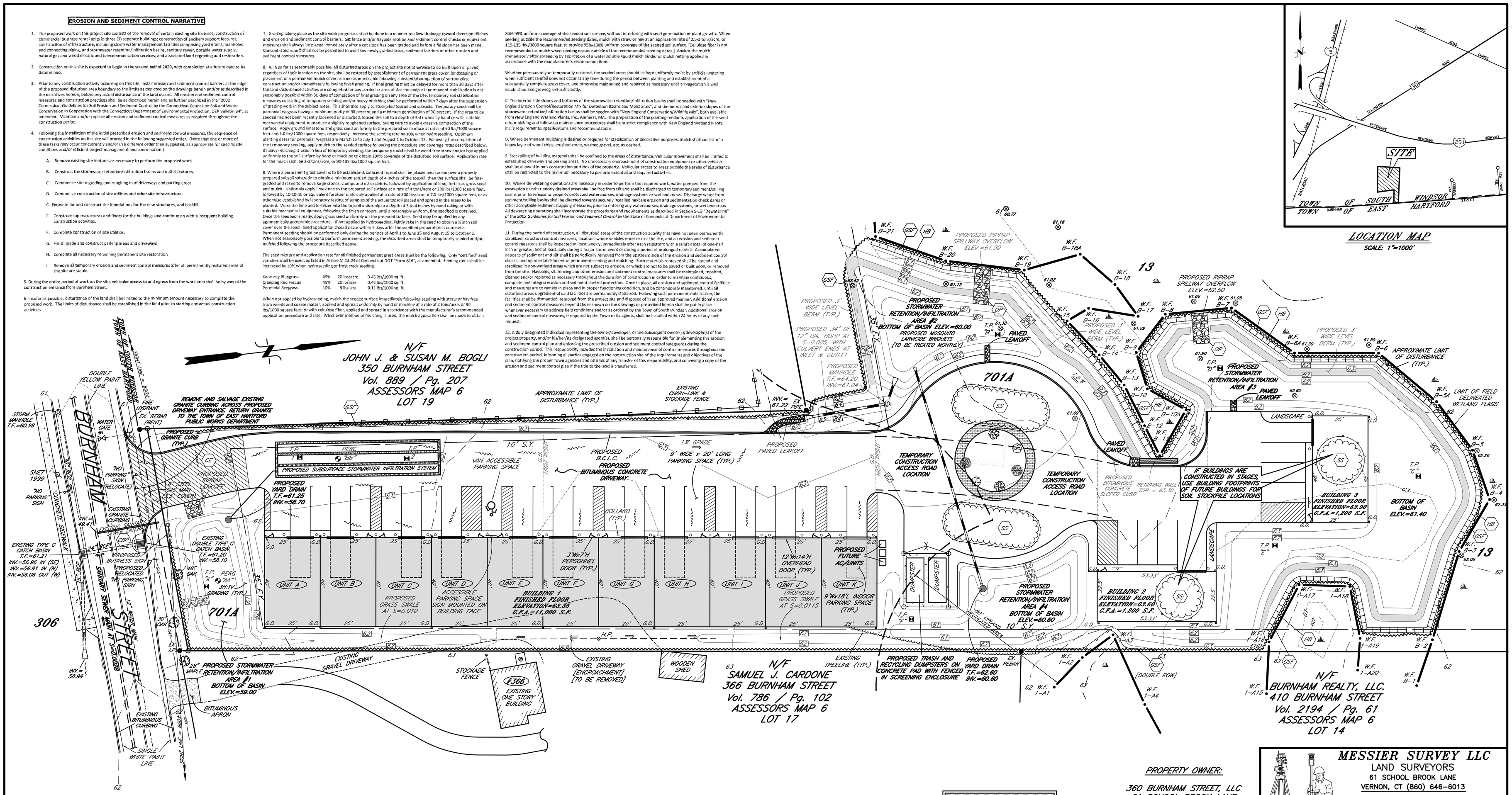
D. Where permanent mulching is desired or required for stabilization or decorative purposes, mulch shall consist of a heavy layer of wood chips, crushed stone, washed gravel, etc. as desired.

9. Stockpiling of building materials shall be confined to the areas of disturbance. Vehicular movement shall be limited to established driveway and parking areas. No unnecessary encroachment of construction equipment or other vehicles shall be allowed in non-construction portions of the property. Vehicular access to areas outside the areas of disturbance shall be restricted to the minimum necessary to perform essential and required activities.

10. Where de-watering operations are necessary in order to perform the required work, water pumped from the excavation or other poorly drained areas shall be free from silt and shall be discharged to temporary sediment/settling basins prior to release to properly protected watercourses, drainage systems or wetland areas. Discharge water from sediment/settling basins shall be directed towards securely installed haybale erosion and sedimentation check dams or other acceptable sediment trapping measures, prior to entering any watercourse, drainage system, or wetland areas. All dewatering operations shall incorporate the procedures and requirements as described in Section 5-13 "Dewatering" of the *2002 Guidelines for Soil Erosion and Sediment Control* by the State of Connecticut Department of Environmental Protection.

11. During the period of construction, all disturbed areas of the construction activity that have not been permanently stabilized, structural control measures, locations where vehicles enter or exit the site, and all erosion and sediment control measures shall be inspected at least weekly, immediately after each rainstorm with a rainfall total of one-half inch or greater, and at least daily during a major storm event or during a period of prolonged rainfall. Accumulated deposits of sediment and silt shall be periodically removed from the upstream side of the erosion and sediment control checks, and upon establishment of permanent seeding and mulching. Such materials removed shall be spread and stabilized in non-wetland areas which are not subject to erosion, or which are not to be paved or built upon, or removed from the site. Haybales, silt fencing and other erosion and sediment control measures shall be maintained, repaired, cleaned and/or replaced as necessary throughout the duration of construction in order to maintain continuous, complete and integral erosion and sediment control protection. Once in place, all erosion and sediment control facilities and measures are to remain in place and in proper functioning condition, and be continuously maintained, until all disturbed areas upgradient of said facilities are permanently stabilized. Following such permanent stabilization, the facilities shall be dismantled, removed from the project site and disposed of in an approved manner. Additional erosion and sediment control measures beyond those shown on the drawings or prescribed herein shall be put in place whenever necessary to address field conditions and/or as ordered by the Town of South Windsor. Additional erosion and sediment control measures, if required by the Town or its agents, shall be installed within 24 hours of any such request.

12. A duly designated individual representing the owner/developer, or the subsequent owner(s)/developer(s) of the project property, and/or his/her/its designated agent(s), shall be personally responsible for implementing this erosion and sediment control plan and enforcing the prescribed erosion and sediment control safeguards during the construction period. This responsibility includes the installation and maintenance of control measures throughout the construction period, informing all parties engaged on the construction site of the requirements and objectives of the plan, notifying the proper Town agencies and officials of any transfer of this responsibility, and conveying a copy of the erosion and sediment control plan if the title to the land is transferred.



LOCATION MAP
SCALE: 1"=1000'

SOIL MAPPING UNIT LEGEND

SYMBOL	DESCRIPTION
13	Walpole Sandy Loam, 0 to 3 percent slopes
306	Udorthents – Urban Land Complex
701A	Ninigret Fine Sandy Loam, 0 to 3 percent slopes

SOURCE: SOIL MAP – STATE OF CONNECTICUT, WEB SOIL SURVEY, NATIONAL COOPERATIVE SOIL SURVEY, USDA NATURAL RESOURCES CONSERVATION SERVICE

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL KEY

- CBP — CATCH BASIN PROTECTION
- CE — ANTI-TRACKING APRON (CONSTRUCTION ENTRANCE)
- GSF — STAKED GEOTEXTILE SILT FENCE SEDIMENT BARRIER
- OP — OUTLET PROTECTION
- HB — STAKED HAYBALE SEDIMENT BARRIER
- SS — SOIL STOCKPILE

LEGEND

- 200 — EXISTING CONTOUR
- 200 — PROPOSED CONTOUR
- G.B. — PROPOSED GRADE BREAK
- ● — EXISTING IRON PIN
- ○ — PROPERTY CORNER
- W.F. 22 • — WETLAND FLAG
- ⓓ — STORM DRAIN MANHOLE
- — LIMIT OF FIELD DELINEATED WETLANDS
- TREE
- C.B. — CATCH BASIN

GENERAL NOTE

ALL STORMWATER RETENTION/INFILTRATION AREAS TO BE TREATED MONTHLY WITH MOSQUITO LARVICIDE BRIQUETS

GRAPHIC SCALE
0 20 40 60 80
(1"=20 FEET)

TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON. THIS MAP HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300B-1 THROUGH 20-300B-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996, AND CONFORMS TO HORIZONTAL ACCURACY CLASS A-2 AND TO TOPOGRAPHIC ACCURACY CLASS T-2 & T-3.

SURVEY TYPE: IMPROVEMENT LOCATION – PROPOSED

BOUNDARY DETERMINATION CATEGORY: DEPENDENT RESURVEY

SURVEYORS SIGNATURE — 09/19 DATE — 70278 LICENSE NUMBER

LOCATION OF THE WETLANDS AS SHOWN WERE DETERMINED BY GEORGE T. LOGAN, CERTIFIED SOIL SCIENTIST, MANCHESTER, CONNECTICUT, AND WERE FIELD LOCATED BY MESSIER SURVEY LLC.

I HAVE DELINEATED THE WETLANDS ON THIS PROPERTY IN THE FIELD AND HAVE REVIEWED THE WETLANDS AS SHOWN ON THIS PLAN, AND FIND THAT THEY SUBSTANTIALLY REPRESENT THE WETLANDS AS DELINEATED IN THE FIELD.

GEORGE T. LOGAN
CERTIFIED SOIL SCIENTIST

PROPERTY OWNER:
360 BURNHAM STREET, LLC
61 SCHOOL BROOK LANE
VERNON, CT 06066

APPLICANT:
360 BURNHAM STREET, LLC
61 SCHOOL BROOK LANE
VERNON, CT 06066
(860)-803-1859

ZONE: I
(INDUSTRIAL)

RAYMOND F. NELSON, JR., P.E.
CIVIL ENGINEER
P.O. BOX 173
VERNON ROCKVILLE, CT 06066-0173
rfnelsonjr.pe@gmail.com

REV.	DATE	DESCRIPTION
1	4-15-2020	ADDRESS TOWN REVIEW COMMENTS

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MESSIER SURVEY LLC
LAND SURVEYORS
THESE DRAWINGS ARE THE PROPERTY OF THE SURVEYOR AND HAVE BEEN PREPARED SPECIFICALLY FOR THE OWNER FOR THIS PROJECT AT THIS SITE, AND ARE NOT TO BE USED FOR ANY OTHER PURPOSE, LOCATION, OR OWNER WITHOUT WRITTEN CONSENT OF THE SURVEYOR.
NO DECLARATION IS EXPRESSED OR IMPLIED UNLESS THIS PLAN BEARS THE EMBOSSED SEAL OF THE LAND SURVEYOR WHOSE SIGNATURE APPEARS HEREON.

DAVID A. SIMLER
L.S. #70278

MESSIER SURVEY LLC
LAND SURVEYORS
61 SCHOOL BROOK LANE
VERNON, CT (860) 646-6013
WWW.MESSIERSURVEY.COM

SURVEY–SUBDIVISION–CONSTRUCTION LAYOUT

EROSION AND SEDIMENT CONTROL/CONSERVATION PLAN

SHOWING PROPERTY OF:
360 BURNHAM STREET, LLC
PREPARED FOR:
360 BURNHAM STREET, LLC
360 BURNHAM STREET
SOUTH WINDSOR, CONNECTICUT

(COMP. FILE = 19-010-E&S.DWG)

DATE : 09/19
SCALE : 1"=20 FT.
DRAWN : DAS
CHECK : DAS
SHEET 7 OF 12

PROJECT No. 19-023
PLAN No. 19-010ES