N

RJOC

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

	1% Annual Chance Floodplain Boundary
	0.2% Annual Chance Floodplain Boundary
	Floodway boundary
	Zone D boundary
	CBRS and OPA boundary
	Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
513	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

500 0 250 500 1,000

GRAPHIC SCALE IN FEET

REFERENCE: FEMA FLOOD INSURANCE RATE MAP, NEW LONDON COUNTY, CONNECTICUT PANEL 351 OF 554, MAP NUMBER 09011C0351G EFFECTIVE DATE JULY 18, 2011

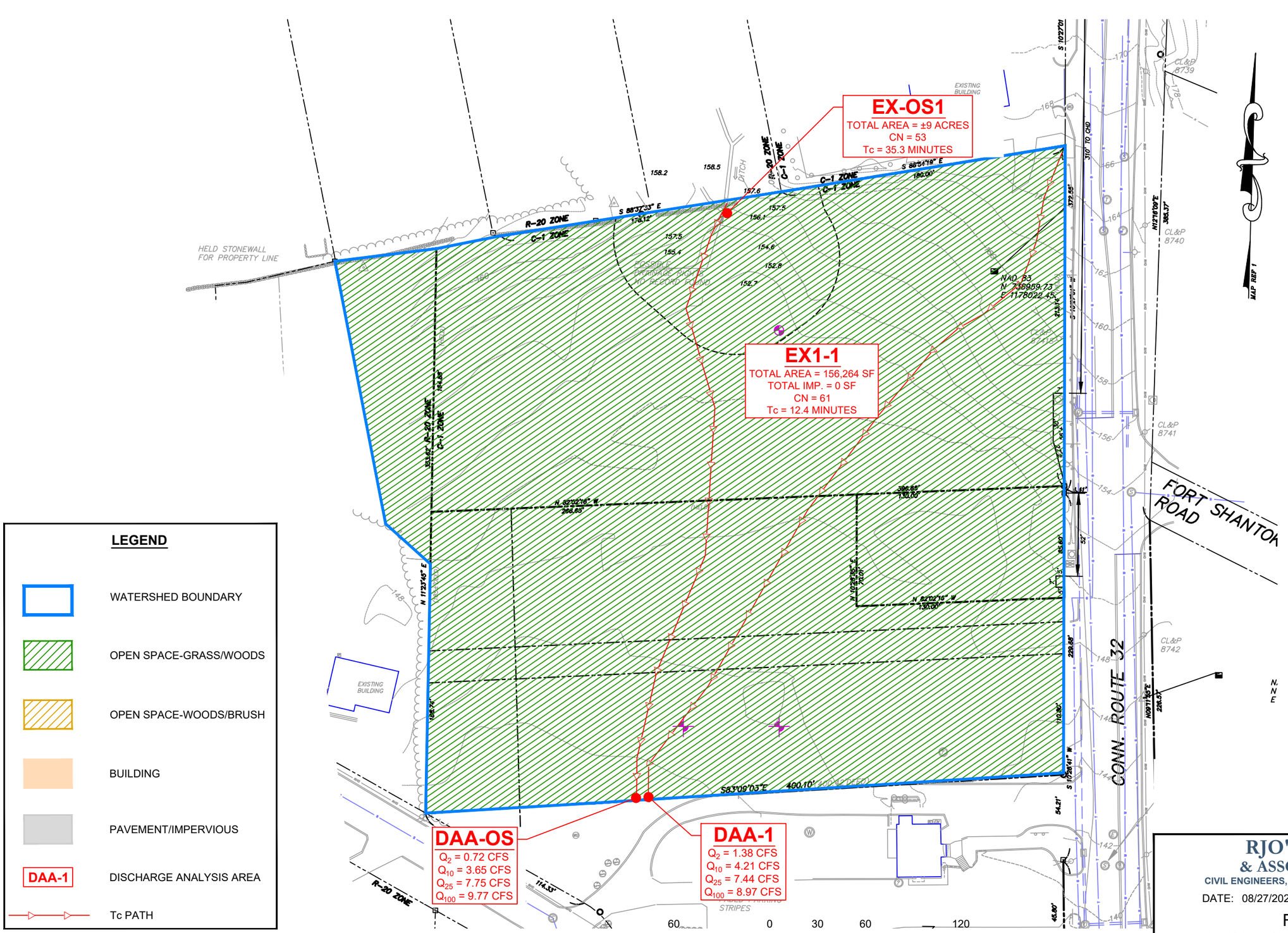
RJO'CONNELL & ASSOCIATES, INC.
CIVIL ENGINEERS, SURVEYORS & LAND PLANNERS

DATE: 08/27/2024 SCALE: 1"=500'

FIGURE 3
FEMA FLOOD INSURANCE RATE MAP

2268-2284 CONN. ROUTE
MONTVILLE, CT 06382

Drawing name: G:\CT\Montville\Honeycomb Real Estate Partners\2268-2284 Route 32\Reports\Stormwater Pollution Control Plan\Figures\24029_FIG-2 FEMA Firm Map.dwg
Aug 27, 2024 - 15:09pm



LEGEND

- WATERSHED BOUNDARY
- OPEN SPACE-GRASS/WOODS
- OPEN SPACE-WOODS/BRUSH
- BUILDING
- PAVEMENT/IMPERVIOUS
- DAA-1 — DISCHARGE ANALYSIS AREA
- Tc PATH

60 0 30 60 120

GRAPHIC SCALE IN FEET

RJOC

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CIVIL ENGINEERS, SURVEYORS & LAND PLANNERS

DATE: 08/27/2024 SCALE: 1"=50'

FIGURE 4
EXISTING WATERSHED PLAN

40 TUNXIS AVENUE
BLOOMFIELD, CT 06002

Drawing name: G:\CT\Montville\Honeycomb Real Estate Partners\2268-2284 Route 32\Engineer\Drainage\Watershed\Existing Watershed Plan.dwg
Aug 28, 2024 - 7:32am

CT DEEP GIS Open Data Website

Natural Diversity Database

ctdeepgis maps
Department of Energy & Environmental Protection

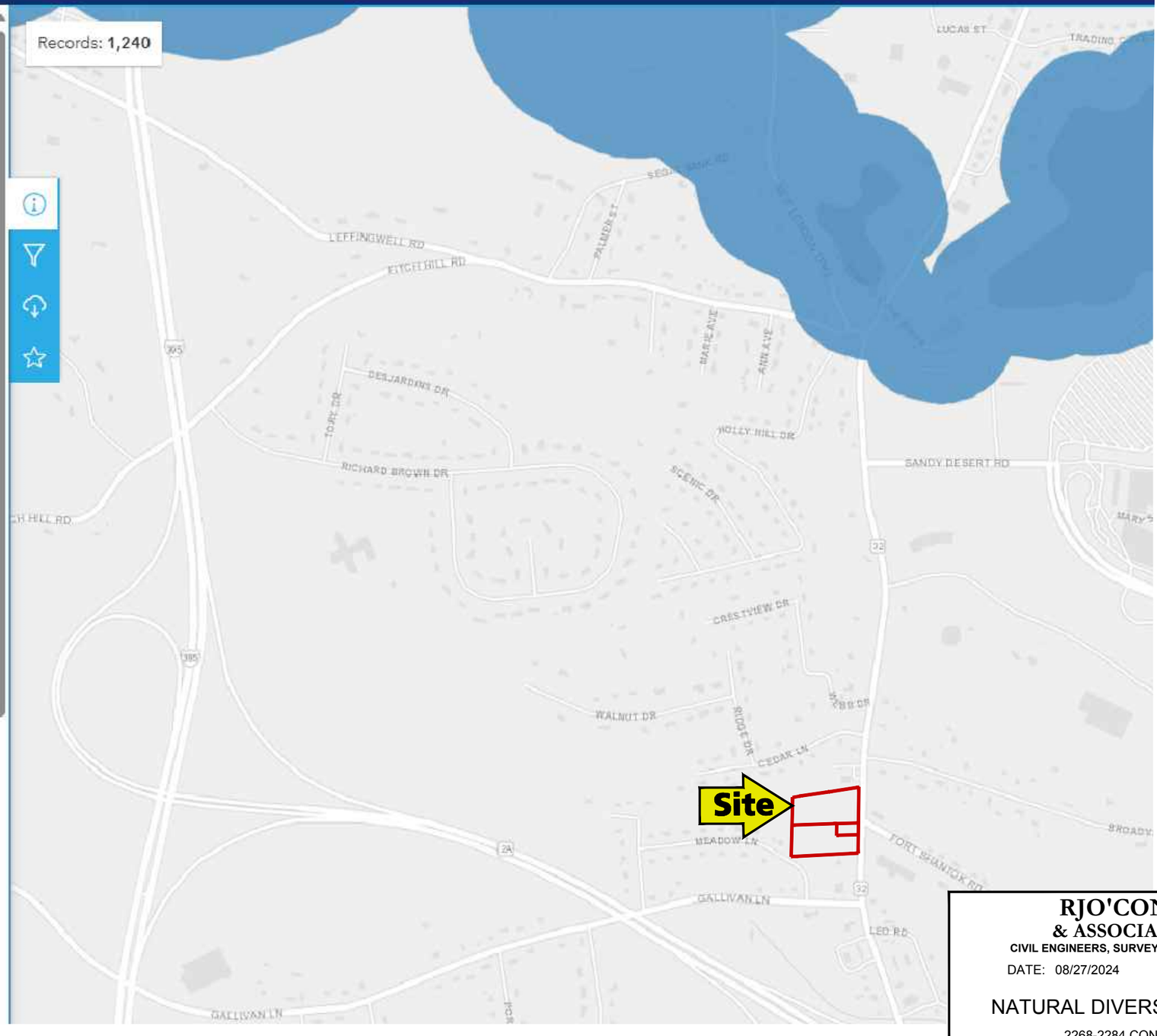
Summary

Natural Diversity Database Areas represent known locations, both historic and extant, of state and federal listed species. State listed species are those listed as Endangered, Threatened or Special Concern under the Connecticut Endangered Species Act (Connecticut General Statutes, Section 26-303 and Regulations of Connecticut State Agencies 26-303). This dataset represents over 100 years worth of field observations, scientific collections, and publications. The data have been compiled from a variety of sources and in most cases do not represent a comprehensive or state-wide survey. Sources include state biologists, university students and professors, conservation organizations and private landowners. Low accuracy reports of species at the town or county level have been excluded. Much of the state is in private ownership and has not been surveyed. Unmapped areas may represent potential habitat that has not been adequately surveyed for all taxa.

Read Less

View Full Details

Download



N

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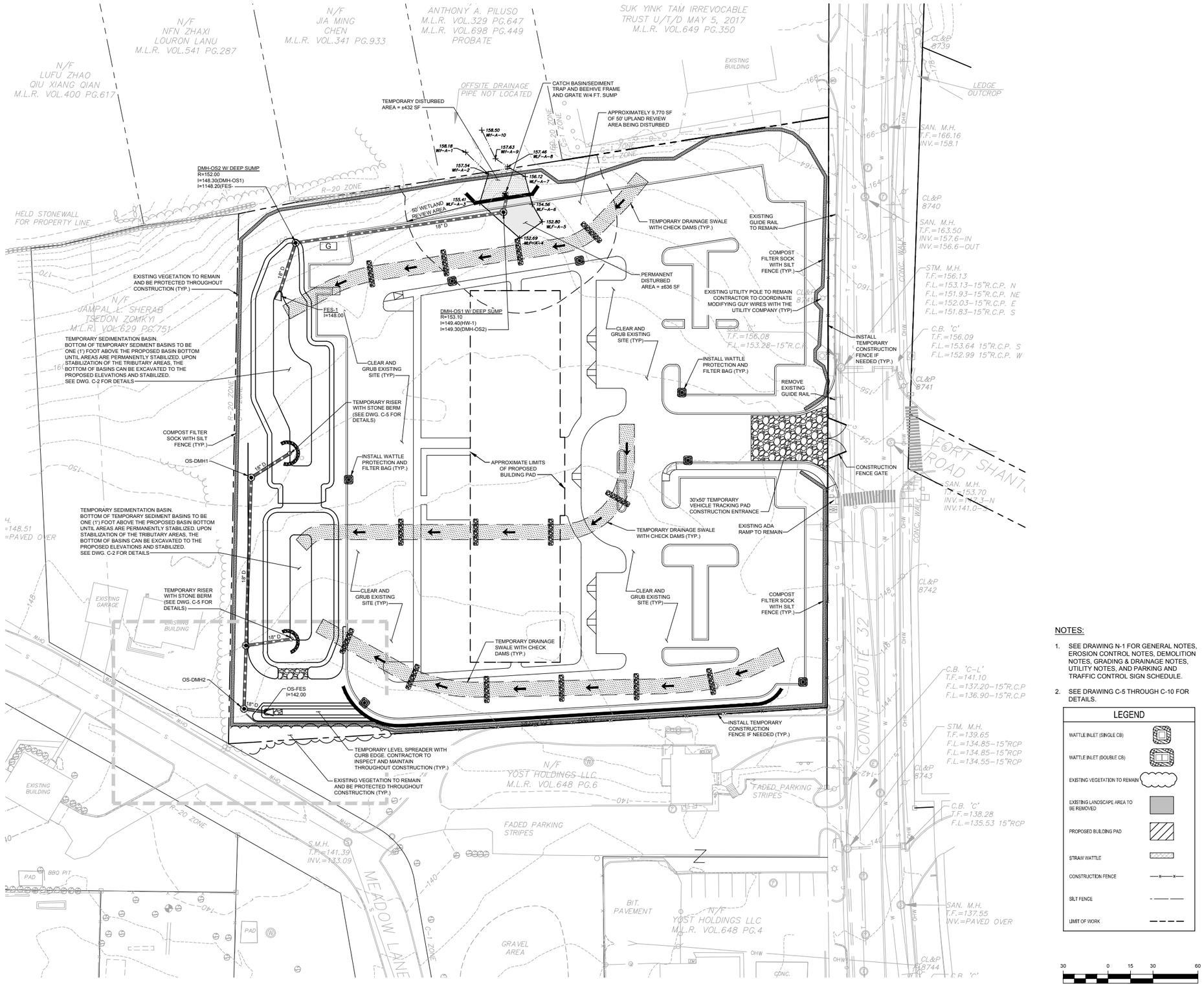
DATE: 08/27/2024 SCALE: 1"=6000'

NATURAL DIVERSITY DATABASE

2268-2284 CONN. ROUTE 32
MONTVILLE, CT

APPENDIX B - PLAN SHEETS

- **Demolition and Erosion Control Plan**
- **Demolition and Erosion Control Notes**
- **Grading and Drainage Plan**
- **Erosion Control Details**
- **Applicable Stormwater details**
- **Overall Landscape Plan**



NOTES:

1. SEE DRAWING N-1 FOR GENERAL NOTES, EROSION CONTROL NOTES, DEMOLITION NOTES, GRADING & DRAINAGE NOTES, UTILITY NOTES, AND PARKING AND TRAFFIC CONTROL SIGN SCHEDULE.
2. SEE DRAWING C-5 THROUGH C-10 FOR DETAILS.

LEGEND

- WATTLE INLET (SINGLE CB)
- WATTLE INLET (DOUBLE CB)
- EXISTING VEGETATION TO REMAIN
- EXISTING LANDSCAPE AREA TO BE REMOVED
- PROPOSED BUILDING PAD
- STRAW WATTLE
- CONSTRUCTION FENCE
- SILT FENCE
- LIMIT OF WORK

30 0 15 30 60

GRAPHIC SCALE IN FEET

RJOC

NO.	DATE	REVISION
1.	09/25/2024	SUBMITTED TO INLAND WETLANDS COMMISSION

PREPARED BY:

RJO'CONNELL & ASSOCIATES, INC.

CIVIL ENGINEERS, SURVEYORS & LAND PLANNERS

80 MONTVALE AVENUE, SUITE 201 STONEHAM, MA 02180

PHONE: 781.279.0180 RJOCONNELL.COM

PREPARED FOR:

HONEYCOMB REAL ESTATE PARTNERS

20 AVON MEADOW LANE
AVON, CT 06001

PROJECT NAME:

HORIZON VIEW

MONTVILLE, CT

SEAL:

DESIGNED BY:	RWS
DRAWN BY:	WJH
REVIEWED BY:	BPD/RWS
SCALE:	1" = 30'
DATE:	09/25/2024

DRAWING NAME:

DEMOLITION AND EROSION CONTROL PLAN

DRAWING NUMBER:

C-1

PROJECT NUMBER:

24029

Drawing name: G:\CT\Montville\Honeycomb Real Estate Partners\22686-2284 Route 32\Main\24029_C-1 Demolition and Erosion Control Plan.dwg
Sep 25, 2024 - 16:08pm

I. GENERAL NOTES:

1. THE CONTRACTOR IS SPECIFICALLY ADVISED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES ESPECIALLY WHERE NEW UTILITIES CONNECT TO OR CROSS EXISTING, SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "CALL BEFORE YOU DIG" (1-800-922-4455 OR 811) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES AND THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

2. THE EXISTING INFORMATION INCLUDING BUT NOT LIMITED TO: BOUNDARY LINE, UTILITY INFORMATION AND TOPOGRAPHY HAS BEEN TAKEN FROM PLANS ENTITLED "PROPERTY/TOPOGRAPHIC SURVEY", PREPARED BY F.A. HESKETH & ASSOCIATES, DATED SEPTEMBER 5, 2024.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL HORIZONTAL CONTROL POINTS AND VERTICAL BENCH MARKS NECESSARY FOR THE WORK.

4. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ANY PERMITS AND/OR CONNECTION/DISCONNECTION FEES REQUIRED TO CARRY OUT THE WORK INCLUDING BUT NOT LIMITED TO DEMOLITION.

5. DISPOSAL OF ALL DEMOLISHED MATERIALS IS THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE AND MUNICIPAL REQUIREMENTS. NO ON-SITE BURIAL PITS ARE ALLOWED.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL INFORMATION SHOWN ON THESE PLANS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING IMMEDIATELY OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE EXISTING FIELD CONDITIONS AS SHOWN ON THESE PLANS.

7. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL/BUILDING PLANS FOR ITEMS SUCH AS: BUILDING LOCATIONS AND DIMENSIONS, EXIT PORCHES, TRUCK DOCKS, UTILITY PENETRATIONS AND SIDEWALK LAYOUT. THE CONTRACTOR SHALL NOTIFY THE OWNER/ENGINEER IN WRITING OF ANY DISCREPANCIES ENCOUNTERED.

8. ALL CONSTRUCTION DUMPSTERS SHALL BE PROPERLY MAINTAINED. ALL DUMPSTERS SHALL BE LOCATED ON A BITUMINOUS CONCRETE OR CONCRETE SURFACE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRASH DISPOSAL ON A REGULAR BASIS AND SHALL ENSURE THAT THE DUMPSTER AREAS ARE PROPERLY MAINTAINED.

9. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE GENERAL UPKEEP AND ROUTINE MAINTENANCE OF THE ENTIRE SITE TO ENSURE AN AESTHETICALLY PLEASING APPEARANCE DURING ALL PHASES OF CONSTRUCTION.

10. UNLESS OTHERWISE INDICATED, AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO ITS ORIGINAL CONDITION.

11. EXISTING LANDSCAPE AREAS SHALL BE KEPT FREE OF DEBRIS AND SHALL BE MAINTAINED FREE OF PHYSICAL DAMAGE. DAMAGED PLANTS SHALL BE REPLACED IN KIND.

12. THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN ALL MATERIAL AND LABOR ASSOCIATED WITH TEMPORARY TRAFFIC CONTROL DEVICES FOR ALL PHASES OF CONSTRUCTION IN ACCORDANCE WITH M.U.T.C.D. STANDARDS AND AS APPROVED BY THE OWNER'S REPRESENTATIVE.

13. NO AUTHORIZED CONSTRUCTION ACTIVITY SHALL OCCUR ON OR AFFECT ABUTTING PROPERTIES. IF THE CONTRACTOR MUST WORK ON AN ABUTTING PROPERTY, WRITTEN AUTHORIZATION SHALL BE OBTAINED FROM THE OWNER OF SAID PROPERTY AND SHALL BE PROVIDED TO THE OWNER AND/OR OWNER'S REPRESENTATIVE PRIOR TO THE START OF WORK.

14. IN THE EVENT OF A HAZARDOUS LEAK AND/OR SPILL THE OWNER, OWNER'S REPRESENTATIVE AND/OR GENERAL CONTRACTOR WILL CONTACT THE DEPARTMENT OF PUBLIC HEALTH, THE FIRE DEPARTMENT, AND DEEP EMERGENCY RESPONSE AND SPILL PREVENTION AT 860-424-3388 OR 1-866--337-7745.

15. ALL TYPES OF FILL MATERIAL IMPORTED TO THE SITE MUST BE CLEAN AND SUITABLE FOR THE USE AS SPECIFIED IN THE SITE WORK SPECIFICATIONS. THE CONTRACTOR WILL PROVIDE THE OWNER'S GEOTECHNICAL ENGINEER AND/OR REPRESENTATIVE WITH RECORDS INDICATING THE TYPE, QUANTITY, ORIGIN AND SOURCE OF ANY FILL MATERIAL IMPORTED TO THE SITE.

16. AT THE COMPLETION OF THE JOB, THE CONTRACTOR SHALL PROVIDE THE OWNER AND/OR OWNER'S REPRESENTATIVE A COMPLETE SET OF AS-BUILT PLANS. THE AS-BUILT PLANS ARE TO BE PREPARED BY AND STAMPED BY A LICENSED PROFESSIONAL SURVEYOR. THE AS-BUILT PLAN WILL INCLUDE BUILDING LOCATION AND DIMENSIONS, FINISH FLOOR ELEVATIONS, LOCATION OF UTILITIES (RIM, INVERT, PIPE SIZE AND TYPE TO BE PROVIDED FOR SANITARY AND STORM DRAIN STRUCTURES), CURBING, ABOVE GRADE FEATURES, STRIPING, SIGNAGE, LANDSCAPING, ETC. AS INSTALLED.

17. THE TEST PITS AND/OR SOIL BORING LOCATIONS AS SHOWN ON DWG. C-2 WERE PERFORMED BY WHITESTONE ASSOCIATES, INC.. SOIL BORINGS AND TEST PIT EXCAVATIONS WERE TAKEN FOR THE PURPOSE OF DESIGN.

18. SITE WORK CONSTRUCTION SHALL MEET OR EXCEED MONTVILLE'S ENGINEERING AND/OR DPW SPECIFICATIONS.

19. THE CONTRACTOR SHALL NOTIFY THE TOWN AT LEAST FORTY EIGHT (48) HOURS PRIOR TO THE COMMENCEMENT OF SITE WORK CONSTRUCTION ACTIVITIES.

20. PRIOR TO THE START OF CONSTRUCTION, THE BOUNDARY OF THE WETLAND RESOURCE AREAS WITHIN THE VICINITY OF THE PROPOSED WORK AREA SHALL BE DELINEATED WITH EITHER WOODEN STAKES AND/OR FLAGGING BY A PROFESSIONAL WETLAND SCIENTIST. ONCE IN PLACE, THE WETLAND BOUNDARY MARKERS SHALL BE MAINTAINED UNTIL A CERTIFICATE OF COMPLIANCE HAS BEEN ISSUED BY THE CONSERVATION COMMISSION.

II. EROSION CONTROL NOTES:

1. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED AND/OR CONSTRUCTED IN ACCORDANCE WITH THE 2024 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, THE CONNECTICUT DEEP GENERAL PERMIT FOR THE DISCHARGE OF STORM WATER AND DE-WATERING WATER FROM CONSTRUCTION ACTIVITIES, AND ALL LOCAL MUNICIPAL REGULATIONS.

2. EROSION AND SEDIMENTATION CONTROL BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE IN PLACE AND FUNCTIONING PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION, CLEARING AND GRUBBING ACTIVITIES OR EARTHWORK OPERATIONS. LOCATION OF THE EROSION CONTROL BARRIER MUST BE STAKED BY THE SITE SURVEYOR AND/OR SITE ENGINEER, AND MUST BE INSPECTED AND VERIFIED TO THE APPROPRIATE TOWN OFFICIALS, IN WRITING, BY THE SITE SURVEYOR AND/OR SITE ENGINEER PRIOR TO CONSTRUCTION. THE EROSION CONTROL BMP'S SHALL BE MAINTAINED DURING CONSTRUCTION, AND SHALL REMAIN IN PLACE UNTIL ALL SITE WORK IS COMPLETE AND FINISHED GROUND COVER IS ESTABLISHED. ALL EROSION CONTROL BMP'S SHALL BE INSTALLED ON-SITE AND NOT ENCROACH ONTO ABUTTING PROPERTIES.

3. PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES AT THE SITE, THE CONTRACTOR SHALL ENGAGE AN INDIVIDUAL WITH SPECIFIC PROFESSIONAL TRAINING AND EXPERTISE IN EROSION AND SEDIMENT CONTROL. THE EROSION CONTROL MONITOR SHALL PREPARE A WEEKLY REPORT WHICH SHALL BE KEPT ON-SITE AT ALL TIMES AND SHALL BE SHOWN TO LOCAL, AND STATE AGENTS UPON REQUEST. THIS REPORT SHALL INDICATE THE STATUS OF THE EROSION CONTROLS AND ANY MAINTENANCE REQUIRED AND PERFORMED. THIS REPORT SHALL CONFORM TO THE REQUIREMENTS OF THE CONNECTICUT DEEP GENERAL PERMIT FOR THE DISCHARGE OF STORM WATER AND DE-WATERING WATERS FROM CONSTRUCTION ACTIVITIES AND STORM WATER POLLUTION CONTROL PLAN (SWPCP).

4. THE PROJECT REQUIRES AN PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL PERFORM ALL WORK INCLUDING BUT NOT LIMITED TO INSTALLATION, INSPECTIONS, CLEANING, REPAIRING, ETC. OF EROSION CONTROL MEASURES INSTALLED IN ACCORDANCE WITH THE STORMWATER POLLUTION CONTROL PLAN (SWPCP).

5. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED DAILY AND CLEANED, REPAIRED OR REPLACED AS NECESSARY THROUGH-OUT CONSTRUCTION. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AFTER EACH STORM EVENT AS OUTLINED IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP).. REFER TO THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR DETAILS REGARDING THE TYPE, INSTALLATION, INSPECTION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION.

6. THE CONTRACTOR SHALL BE AWARE THAT SOIL AT THIS SITE IS PARTICULARLY SUSCEPTIBLE TO SOIL EROSION AND SENSITIVE TO ITS CONSEQUENCES. IT SHOULD BE NOTED THAT THE EROSION CONTROL MEASURES AS SHOWN ON THE DRAWINGS DEPICT THE MINIMUM REQUIRED AND ARE REPRESENTATIVE OF A SINGLE PHASE OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SITING, RELOCATION AND AUGMENTATION OF EROSION CONTROL BMP'S AS THE PROJECT PROGRESSES AND SITE CONDITIONS CHANGE.

7. THE LIMIT OF WORK LINE FOR THE SITE TO BE CLEARED AND GRUBBED SHALL BE WITH SAME AS THE LIMIT OF WORK LINE NECESSARY FOR GRADING PURPOSES (I.E. THE GRADING LIMITS AROUND THE PERIMETER OF THE PROJECT AREA).

8. THE CONTRACTOR SHALL KEEP ON-SITE, AT ALL TIMES, ADDITIONAL WATTLES, FILTER BAGS, SILT FENCE, ETC. FOR INSTALLATION TO MITIGATE ANY EMERGENCY CONDITION.

9. THE PROPOSED ON-SITE DRAINAGE SYSTEM SHALL BE INSTALLED AS SOON AS PRACTICABLE AND ALL INLETS PROTECTED WITH FILTER BAGS (SEE DETAIL). NO SEDIMENT SHALL BE ALLOWED TO ENTER THE ON-SITE OR OFF-SITE DRAINAGE SYSTEM AT ANY TIME.

10. EARTHWORK ACTIVITIES ON SITE SHALL BE PERFORMED IN SUCH A MANNER THAT DIRECTS RAINFALL RUNOFF TO THE APPROPRIATE EROSION CONTROL BEST MANAGEMENT PRACTICE (BMP'S) AS DEPICTED ON DRAWING C-1 TITLED DEMOLITION AND EROSION CONTROL PLAN.

11. STOCKPILES SHALL BE SURROUNDED ON THEIR PERIMETER WITH STAKED WATTLES AND/OR SILTATION FENCING TO PREVENT AND/OR TO CONTROL SILTATION AND EROSION. THE LOCATION OF THE STOCKPILE MAY BE MOVED AS APPROVED BY THE EROSION CONTROL MONITOR. STOCKPILES SHALL BE COVERED SO THAT STORMWATER CANNOT INFILTRATE MATERIALS AND THEREBY RENDER THE MATERIAL UNSUITABLE FOR USE AS FILL.

12. THE CONSTRUCTION ENTRANCE/EXIT AREA TO AND FROM THE SITE SHALL BE MAINTAINED IN A CONDITION THAT PREVENTS TRACKING AND DISCHARGE OF SEDIMENT OFF-SITE. ALL SEDIMENT SPILLED, DROPPED, TRACKED OR OTHERWISE DEPOSITED ON THE PUBLIC RIGHT-OF-WAY SHALL BE REMOVED IMMEDIATELY.

13. ALL DISTURBED OR EXPOSED AREAS SUBJECT TO EROSION SHALL BE STABILIZED WITH MULCH OR SEEDED FOR TEMPORARY VEGETATIVE COVER WHERE CONSTRUCTION ACTIVITIES HAVE PERMANENTLY CEASED OR HAVE TEMPORARILY BEEN SUSPENDED FOR MORE THAN THIRTY (30) DAYS. WHEN FINAL GRADES ARE ACHIEVED IN ANY PORTION OF THE SITE, STABILIZATION MEASURES SHALL BE IMPLEMENTED WITHIN SEVEN (7) DAYS. ALL DISTURBED AREAS ON-SITE MUST BE PERMANENTLY STABILIZED AS SHOWN ON THE SITE LANDSCAPE PLAN. PERMANENT STABILIZATION MUST BE UNIFORM AND COMPLETE. AREAS WHICH REMAIN DISTURBED BUT INACTIVE FOR AT LEAST FOURTEEN (14) DAYS SHALL RECEIVE TEMPORARY SEEDING IN ACCORDANCE WITH THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES. IN ALL CASES, STABILIZATION MEASURES SHALL BE IMPLEMENTED AS SOON AS POSSIBLE IN ACCORDANCE WITH THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES. THE EROSION CONTROL BARRIER MUST BE MAINTAINED UNTIL SITE VEGETATION IS STABILIZED AND INSPECTED BY THE OWNER'S REPRESENTATIVE FOR SITE COMPLIANCE.

14. ANY DE-WATERING ACTIVITIES SHALL BE IN ACCORDANCE WITH SWPCP AND DISCHARGE TO A TEMPORARY BASIN, SETTLING TANK OR OTHER MEASURE TO ALLOW SETTLING OF SEDIMENT BEFORE RELEASE TO THE DRAINAGE SYSTEM. A DEWATERING PIT MUST BE CONSTRUCTED A MINIMUM DISTANCE OF FIFTY (50) FEET ON THE UPLAND SIDE FROM THE EROSION CONTROL BARRIER. LOCATION TO BE CONFIRMED BY THE SITE ENGINEER.

15. ALL PROPOSED SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED WITH A CURLEX EROSION CONTROL MATTING MANUFACTURED BY AMERICAN EXCELSIOR COMPANY (OR ENGINEER APPROVED EQUAL) AND PROTECTED FROM EROSION. ADDITIONALLY, THESE AREAS ARE TO BE HYDROSEEDED.

16. THE CONTRACTOR SHALL CONSTRUCT AT THE END OF EACH WORK DAY A TEMPORARY DIVERSION SWALE WHICH OUTLETS INTO A TEMPORARY SEDIMENT BASIN. THE TEMPORARY DIVERSION SWALE SHALL BE RELOCATED AS REQUIRED TO ACCOMMODATE EARTH WORK ACTIVITIES PERFORMED. CONTRACTOR TO INSPECT, MAINTAIN AND CLEAN TEMPORARY DIVERSION SWALE AND BASIN AS OUTLINED IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND THE NPDES PERMIT REQUIREMENTS.

17. THE LOCATION OF TEMPORARY DRAINAGE SWALES AND SEDIMENTATION TRAPS SHALL BE RELOCATED AS REQUIRED AS CONSTRUCTION PROGRESSES.

18. FILTER BAGS AND/OR HAYBALE/WATTLE DIKES ARE TO BE INSTALLED AT ALL NEW AND EXISTING CATCH BASINS AS INDICATED ON DWG. C-1, AND REMAIN IN PLACE UNTIL ALL DISTURBED AREAS ARE PERMANENTLY STABILIZED. FILTER BAGS AND/OR HAYBALE DIKES ARE TO BE MAINTAINED AS OUTLINED IN THE STORM WATER POLLUTION CONTROL PLAN (SWPCP). NO SEDIMENT SHALL BE ALLOWED TO ENTER THE ON-SITE OR OFF-SITE DRAINAGE SYSTEMS AT ANY TIME.

19. TO MINIMIZE THE MIGRATION OF DUST AND SILT FROM THE CONSTRUCTION SITE, THE FOLLOWING MEASURES SHALL BE IMPLEMENTED AS REQUIRED:
- SPRAY DISTURBED AREAS WITH WATER DURING DRY AND WINDY DAYS
- WASH WHEELS OF VEHICLES BEFORE LEAVING THE SITE
- PERIODICALLY CLEAN SURROUNDING ROADWAYS NEAR THE ENTRANCE TO THE SITE
- ALL VEHICLES HAULING MATERIAL TO AND FROM THE SITE SHALL PLACE SECURE COVERS OVER THEIR LOADS

20. THE CONTRACTOR SHALL ANTICIPATE AND MODIFY EROSION CONTROL MEASURES BASED ON PAST, CURRENT AND FORECASTED WEATHER CONDITIONS, SEASON AND ANTICIPATED FUTURE CONSTRUCTION ACTIVITIES.

21. UPON COMPLETION OF ALL SITE WORK CONSTRUCTION, THE SITE CONTRACTOR SHALL INSPECT ALL EROSION CONTROLS, ON-SITE CATCH BASINS AND PARTICLE SEPARATORS AND REMOVE ALL SEDIMENT AND TRASH DEBRIS THAT HAS ACCUMULATED WITHIN SAID BMP'S AND STRUCTURES DURING THE COURSE OF CONSTRUCTION. ALL ON-SITE CATCH BASINS AND PARTICLE SEPARATORS SHALL BE PUMPED 'DRY' AT THE CONCLUSION OF SITEWORK ACTIVITIES.

22. PRIOR TO THE START OF ANY AUTHORIZED ACTIVITY THE GENERAL CONTRACTOR SHALL PREPARE A DUST CONTROL PLAN. THE DUST CONTROL PLAN WILL OUTLINE MEASURES TO CONTROL AND MITIGATE DUST DURING ALL PHASES OF DEMOLITION AND CONSTRUCTION AND IN ALL TYPES OF WEATHER CONDITIONS. THE DUST CONTROL PLAN SHALL BE IMPLEMENTED DURING ALL PHASES OF CONSTRUCTION AND WILL CONTINUE UNTIL PROJECT COMPLETION.

23. THE CONTRACTOR SHALL REMOVE SEDIMENT FROM TEMPORARY SEDIMENT BASIN WHEN THEY ARE 25% FULL. ALL ACCUMULATED SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS AT THE COMPLETION OF THE PROJECT. ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REQUIREMENTS.

24. WINTER CONSTRUCTION AND STABILIZATION: THE WINTER CONSTRUCTION PERIOD IS FROM NOVEMBER 1 THROUGH APRIL 15

SEDIMENT BARRIERS: DURING FROZEN CONDITIONS, SEDIMENT BARRIERS MAY CONSIST OF EROSION CONTROL MIX BERMS OR ANY OTHER RECOGNIZED SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES OR SILT FENCES.

MULCHING: ALL AREAS SHALL BE CONSIDERED UNSTABLE UNTIL SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1000 SF OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE) AND SHALL BE PROPERLY ANCHORED. EROSION CONTROL MIX MUST BE APPLIED WITH A MINIMUM 4 INCH THICKNESS. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW WILL BE REMOVED DOWN TO A 1-INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA WILL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED OR ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. BETWEEN NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER MULCH NETTING, ASPHALT EMULSION CHEMICAL, OR WOOD CELLULOSE FIBER. THE COVER WILL BE CONSIDERED SUFFICIENT WHEN THE GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL EXPOSED SOIL SHALL OCCUR AT THE END OF EACH WORKDAY DURING FINAL GRADING ACTIVITIES.

SOIL STOCKPILING: STOCKPILES OF SOIL OR SUBSOIL WILL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A 4-INCH LAYER OF EROSION CONTROL MIX. THIS WILL BE DONE WITHIN 24 HOURS OF STOCKING AND REESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL.

SEEDING: BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS BEEN LOOMED, FINAL GRADED WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. DORMANT SEEDING MAY BE PLACED PRIOR TO THE PLACEMENT OF MULCH OR EROSION CONTROL BLANKETS. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4" OF LOAM AND SEED AT AN APPLICATION RATE OF 5 LBS/1000 SF. ALL AREAS SEEDED DURING THE WINTER WILL BE INSPECTED IN THE SPRING BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL DISTURBED AREAS SHALL BE RE-VEGETATED IN THE SPRING.

WINTER STABILIZATION OF DITCHES AND CHANNELS: ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15. ALL GRASS-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY SEPTEMBER 1. IF A DITCH OR CHANNEL IS NOT GRASS-LINED BY SEPTEMBER 1, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE DITCH:
INSTALL A SOD LINING IN THE DITCH: A DITCH MUST BE LINED WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES: PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD ONTO AND UNDERLYING SOIL, WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL, AND ANCHORING SOD AT THE BASE OF THE DITCH WITH JUTE OR PLASTIC MESH TO PREVENT THE SOD FROM SLOUGHING DURING FLOW CONDITIONS.
STALL A STONE LINING IN THE DITCH: A DITCH MUST BE LINED WITH STONE RIP RAP BY NOVEMBER 15. CONTACT REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE AND LINING THICKNESS NEEDED TO WITHSTAND THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHIN THE DITCH.

WINTER STABILIZATION OF DISTURBED SLOPES: ALL STONE-COVERED SLOPES GREATER THAN 15% MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15. AND ALL SLOPES TO BE VEGETATED MUST BE SEEDED AND MULCHED BY SEPTEMBER 1. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE SLOPE.
TEMPORARY VEGETATION AND EROSION CONTROL MATS: BY OCTOBER 1 THE DISTURBED SLOPE MUST BE SEEDED WITH WINTER RYE AT A SEEDING RATE OF 3 LBS PER 1000 SF AND THEN INSTALL EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING. IF THE RYE FAILS TO GROW AT LEAST 3 INCHES OR FAILS TO COVER AT LEAST 75% OF THE SLOPE BY NOVEMBER 1, THEN THE CONTRACTOR WILL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX OR WITH STONE RIP RAP.
SOD: THE DISTURBED SLOPE MUST BE STABILIZED WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR WILL NOT USE LATE-SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
EROSION CONTROL MIX: EROSION CONTROL MIX MUST BE PROPERLY INSTALLED BY NOVEMBER 15. THE CONTRACTOR WILL NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GRADES GREATER THAN 50% OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
STONE RIP RAP: PLACE A LAYER OF STONE RIP RAP ON THE SLOPE BY NOVEMBER 15. CONTACT THE PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY ON THE SLOPE AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIP RAP.

WINTER STABILIZATION OF DISTURBED SOILS: BY SEPTEMBER 15, ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15% MUST BE SEEDED AND MULCHED. IF THE DISTURBED AREAS ARE NOT STABILIZED BY THIS DATE, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN:
TEMPORARY VEGETATION: BY OCTOBER 1, SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 LBS PER 1000 SF, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1000 SF, AND ANCHOR THE MULCH WITH PLASTIC NETTING. MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST 3 INCHES OR FAILS TO COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 1, THEN MULCH THE AREA FOR WINTER PROTECTION AS DESCRIBED BELOW.
SOD: STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
MULCH: BY NOVEMBER 15, MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 LBS PER 1000 SF ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

III. DEMOLITION NOTES:

1. PRIOR TO THE START OF ANY DEMOLITION ACTIVITIES, ON-SITE EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON DRAWING C-1 MUST BE INSTALLED AND APPROVED BY THE OWNER'S REPRESENTATIVE.

2. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT ALL UTILITY SERVICES TO EXISTING STRUCTURE(S) MAY NOT BE SHOWN. CONTRACTOR TO VERIFY UTILITY LOCATIONS VIA "CALL BEFORE YOU DIG" PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION ACTIVITY. EXISTING WATER AND SEWER SERVICES WILL BE CUT AND CAPPED AT THE MAIN IN ACCORDANCE WITH THE DPW STANDARDS. EXISTING GAS, ELECTRICAL AND TELEPHONE SERVICES WILL BE REMOVED PER UTILITY COMPANY SPECIFICATIONS. ALL UTILITIES SERVICING BUILDING(S) WILL BE DECOMMISSIONED PRIOR TO THE COMMENCEMENT OF DEMOLITION ACTIVITIES.

3. ANY REUSE OF EXISTING GRANULAR PAVEMENT SUBBASE MATERIAL AND EXCAVATED MATERIAL SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND PROTECTING ALL EXISTING AND NEW DRAINAGE AND UTILITIES TO REMAIN AND/OR BE CONSTRUCTED.

5. DURING ON-SITE DEMOLITION WORK, STORMWATER RUNOFF SHALL BE CONTROLLED AND DIRECTED TOWARD TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES AS SHOWN ON DWG. C-1.

6. SITE CONTRACTOR SHALL REMOVE EXISTING STRUCTURES INDICATED TO BE DEMOLISHED, INCLUDING BUT NOT LIMITED TO FOUNDATIONS, UTILITIES, BUILDING RELATED APPURTENANCES, LANDSCAPED BEDS, BITUMINOUS PAVEMENT AND ALL OTHER UNSUITABLE MATERIAL TO FIRM NATURAL GROUND AND TO A HORIZONTAL DISTANCE OF TEN (10') FEET BEYOND THE PROPOSED BUILDING LINE.

7. IF GROUNDWATER IS ENCOUNTERED DURING THE REMOVAL OF UNSUITABLE MATERIALS, THE CONTRACTOR SHALL LIMIT THE SIZE OF THE EXCAVATION TO THAT WHICH CAN BE ADEQUATELY MANAGED BY THE CONTRACTOR'S CHOSEN DEWATERING METHOD.

IV. GRADING AND DRAINAGE NOTES:

1. SITE GRADING ACTIVITIES SHALL NOT PROCEED UNTIL APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND APPROVED BY THE OWNER'S REPRESENTATIVE AND/OR ENGINEER.

2. THE EXISTING UTILITIES SHOWN HEREON SHALL BE CONSIDERED APPROXIMATE. THE CONTRACTOR SHALL VERIFY VIA TEST PIT EXCAVATION THE LOCATION AND ELEVATION PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER OF DISCREPANCIES ENCOUNTERED IN THE FIELD.

3. ALL PROPOSED STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE PIPE (HDPE) AND STRUCTURES SHALL BE PRECAST CONCRETE UNLESS NOTED OTHERWISE. HIGH DENSITY POLYETHYLENE PIPE (HDPE) SHALL CONFORM TO AASHTO DESIGNATIONS M294 AND M252, AND SHALL BE N-12 PIPE AS MANUFACTURED BY ADVANCED DRAINAGE SYSTEMS (ADS) OR APPROVED EQUAL. PIPE JOINTS SHALL BE INTEGRAL BELL AND SPIGOT, SOIL TIGHT (ST) WITH FACTORY INSTALLED, O-RING RUBBER GASKETS CONFORMING TO ASTM F477.

4. ALL CATCH BASINS AND OTHER DRAINAGE STRUCTURES TO BE INSTALLED NEW, REPLACED, OR RECONSTRUCTED SHALL CONFORM TO CURRENT CONNECTICUT DEPARTMENT OF TRANSPORTATION (CTDOT) STANDARDS. ALL NEW CATCH BASINS SHALL BE EQUIPPED WITH APPROPRIATELY SIZED "TEE" OR HOODS AND A FOUR (4') FOOT SUMP.

5. ALL MANHOLES, CATCH BASINS AND PARTICLE SEPARATORS SHALL BE PUMPED "DRY" AND CLEANED AT THE END OF CONSTRUCTION. SEDIMENT AND OTHER POLLUTANTS SHALL BE REMOVED OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS.

6. EXISTING PIPES AND/OR CULVERTS THAT ARE TO REMAIN WITHIN THE LIMIT OF WORK AREA SHALL BE CLEANED OF ANY DEBRIS AND/OR SEDIMENTATION. SEDIMENTATION AND OTHER POLLUTANTS SHALL BE REMOVED OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS.

7. ALL PROPOSED DRAINAGE STRUCTURES AND PIPES SHALL MEET HEAVY-DUTY TRAFFIC (H20) LOADING AND BE INSTALLED IN ACCORDANCE WITH CTDOT AND/OR MONTVILLE SPECIFICATIONS.

8. RIP-RAP SPLASH APRONS SHALL BE PROVIDED AT ALL STORM WATER DISCHARGE POINTS AS SHOWN ON THE DRAWINGS.

9. ALL ROOF DRAIN CONNECTIONS SHALL BE INSTALLED TO A POINT TEN (10') FEET FROM THE BUILDING WALL UNLESS OTHERWISE NOTED OR DETAILED.

V. UTILITY NOTES:

A. GENERAL NOTES

1. PRIOR TO THE START OF ANY AUTHORIZED ACTIVITY THE SITE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM THE TOWN OF MONTVILLE. THE CONTRACTOR SHALL OBTAIN FINAL CERTIFICATIONS AND/OR SIGN OFFS UPON MUNICIPALITY AND/OR UTILITY PROVIDER ACCEPTANCE OF WORK WITH COPIES OF FINAL ACCEPTANCE DOCUMENTATION PROVIDED TO THE OWNER.

2. THE SITE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL PERMITS AND/OR CONNECTION FEES REQUIRED FOR THE INSTALLATION OF ALL SITE UTILITIES.

3. DUE TO THE SCALE OF THE SITE WORK DRAWINGS, EXACT LOCATION OF UTILITY STUBS FOR BUILDING CONNECTIONS SHALL BE VERIFIED WITH THE BUILDING DRAWINGS. SERVICE STUBS TO THE BUILDINGS SHALL BE INSTALLED TO A POINT TEN FEET (10') FROM THE BUILDING WALL UNLESS OTHERWISE NOTED OR DETAILED AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AT END.

4. ALL UTILITIES, PIPE MATERIALS, STRUCTURES, AND INSTALLATION METHODS, SHALL CONFORM TO THE TOWN OF MONTVILLE'S DPW/ENGINEERING DEPARTMENT STANDARDS AND REQUIREMENTS, UNLESS OTHERWISE NOTED OR DETAILED.

5. DIMENSIONS ARE SHOWN TO CENTERLINE OF PIPE OR FITTING.

6. UTILITY CONTRACTOR MUST BE LICENSED TO PERFORM WORK IN THE MUNICIPALITY.

7. ALL REQUIRED UTILITY CROSSING ENCASEMENTS (CONCRETE) SHALL EXTEND TEN FEET (10') FROM EITHER SIDE OF THE CROSSING.

8. EXISTING STRUCTURES, LIGHT POLE BASES, CONDUIT AND FIXTURES TO BE REMOVED ARE TO BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.

9. EXISTING UTILITY CASTINGS INDICATED TO REMAIN SHALL BE RESET TO FINISHED GRADE AS REQUIRED AND SHOWN ON DWG. C-2 GRADING AND DRAINAGE PLAN, AND C-3 UTILITY PLAN.

10. DETECTABLE WARNING TAPE SHALL BE INSTALLED A MINIMUM ONE (1') FOOT ABOVE THE UTILITY IN ACCORDANCE WITH THE APPROPRIATE UTILITY COMPANY'S REQUIREMENTS.

B. WATER NOTES

1. ALL WATER MAIN APPURTENANCES, MATERIALS, METHODS OF INSTALLATION AND TESTING REQUIREMENTS SHALL MEET OR EXCEED THE TOWN OF MONTVILLE'S WATER DEPARTMENT'S STANDARDS.

2. ALL WATER MAINS SHALL BE INSTALLED WITH A MINIMUM OF 5'-0" AND MAXIMUM OF 6'-0" OF COVER EXCEPT AS NOTED OR DETAILED OTHERWISE. GREATER DEPTHS ARE PERMITTED WHERE REQUIRED TO AVOID CONFLICTS WITH OTHER UTILITIES. DETECTABLE WARNING TAPE TO BE INSTALLED ABOVE THE WATER MAIN IN ACCORDANCE WITH THE WATER DEPARTMENT'S REQUIREMENTS.

3. GENERALLY, WATER MAIN FITTINGS IDENTIFIED ON THIS DRAWING ARE SHOWN FOR INSTALLATION LOCATION PURPOSES. THE CONTRACTOR SHALL NOTE THAT NOT ALL FITTINGS ARE NOTED, SHOWN OR INDICATED.

4. ALL POTABLE WATER MAINS 3" OR LARGER SHALL BE CEMENT LINED DUCTILE IRON PIPE CLASS 52 AND SHALL BE INSTALLED WITH APPROPRIATELY SIZED FITTINGS AND GATE VALVES. FITTINGS SHALL BE MECHANICAL JOINT, DUCTILE IRON CLASS 350 WITH RESTRAINT DEVICES (MEGALUG) AS MANUFACTURED BY EBAA IRON, INC. OR APPROVED EQUAL.

5. DOMESTIC WATER SERVICES 2-1/2" AND SMALLER SHALL BE TYPE K COPPER TUBING AND SHALL BE INSTALLED WITH APPROPRIATELY SIZED CORPORATION STOP, APPROVED SADDLE, CURB STOP AND BOX.

6. A MINIMUM DISTANCE OF TEN (10) FEET CLEAR HORIZONTALLY SHALL BE MAINTAINED BETWEEN SANITARY SEWER MAINS AND WATER MAINS. WHENEVER CONDITIONS PREVENT A LATERAL SEPARATION OF TEN (10) FEET TO A WATER MAIN, THE WATER MAIN SHALL BE LAID IN A SEPARATE TRENCH AND THE ELEVATION OF THE CROWN OF THE SEWER SHALL BE AT LEAST EIGHTEEN (18) INCHES BELOW THE INVERT OF THE WATER MAIN. A MINIMUM OF EIGHTEEN (18") INCHES VERTICAL CLEARANCE SHALL BE MAINTAINED WHERE WATER MAINS CROSS STORM DRAIN LINES.

7. MAINTAIN A MINIMUM SEPARATION OF THREE FEET (3') BETWEEN GAS AND WATER MAINS (MEASURED FROM THE CENTER OF THE PIPE).

8. ALL HYDRANTS SHALL MEET THE TOWN OF MONTVILLE'S WATER, UTILITY, AND FIRE DEPARTMENT REQUIREMENTS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE WATER AND FIRE DEPARTMENT REQUIREMENTS

9. ALL NEW GATE VALVES INSTALLED FOR THIS PROJECT SHALL OPEN AS REQUIRED BY THE TOWN OF MONTVILLE.

10. ALL WATER MAIN FITTINGS, TEES, HYDRANTS, ETC. SHALL BE RESTRAINED WITH APPROPRIATELY SIZED THRUST BLOCKS OR MECHANICAL JOINT RESTTRAINTS.

11. WATER METERS AND BACK FLOW PREVENTERS SHALL BE LOCATED WITHIN THE BUILDING. ALL BACKFLOW PREVENTERS SHALL BE REGISTERED WITH THE DEPARTMENT OF PUBLIC WORKS.

12. PRESSURE AND LEAKAGE TEST, DISINFECTION AND FLUSHING SHALL BE IN ACCORDANCE WITH THE TOWN'S WATER UTILITY REQUIREMENTS. IN THE ABSENCE OF STANDARDS, THEY SHALL CONFORM TO THE REQUIREMENTS IN THE SITEWORK SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS IN CONNECTION WITH UTILITY TESTS, FLUSHING AND INSPECTIONS AS REQUIRED BY THE TOWN'S WATER UTILITY. COPIES OF TEST RESULTS SHALL BE SUBMITTED TO THE WATER DEPARTMENT.

C. SEWER NOTES

13. ALL GRAVITY SEWER PIPE SHALL BE POLYVINYL CHLORIDE PIPE (P.V.C.), S.D.R. 35 AND SHALL CONFORM WITH ASTM-D3034 UNLESS NOTED OTHERWISE.

14. WHERE SANITARY SEWERS CROSS WATER MAINS, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST EIGHTEEN INCHES BELOW THE INVERT OF THE WATER MAIN. IF THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL JOINT PIPE FOR A DISTANCE OF TEN FEET (10') ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHALL BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. IF MECHANICAL JOINT PIPE IS NOT USED THEN BOTH THE WATER MAIN AND SANITARY SEWER SHALL BE ENCASED IN CONCRETE FOR A MINIMUM DISTANCE OF TEN (10') FEET FROM THE CROSSING POINT OF THE OTHER PIPE AS MEASURED NORMALLY FROM ALL POINTS ALONG THE PIPE.

15. ALL SEWER MAIN APPURTENANCES, MATERIALS, METHODS OF INSTALLATION AND TESTING REQUIREMENTS SHALL MEET OR EXCEED THE TOWN'S SEWER DEPARTMENT'S STANDARDS.

16. SANITARY SEWER SERVICE TO THE BUILDING WILL END TEN FEET (10') OUTSIDE THE BUILDING LIMITS AS SHOWN ON THE PLANS AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AT THE END.

17. DETECTABLE WARNING TAPE TO BE INSTALLED A MINIMUM ONE (1') FOOT ABOVE SEWER MAIN AND IN ACCORDANCE WITH THE MUNICIPALITY'S SEWER DEPARTMENT'S REQUIREMENTS.

18. ALL SANITARY SEWER MANHOLE FRAME AND COVERS ARE TO BE HEAVY DUTY DESIGNED FOR H-20 LOADING.

19. ALL NEW SEWER MAINS AND ASSOCIATED MANHOLES SHALL BE TESTED FOR WATER TIGHTNESS IN THE PRESENCE OF THE AUTHORITY HAVING JURISDICTION.

D. GAS NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR THE LAYOUT, EXCAVATION AND BACKFILLING OF GAS MAIN TRENCH. EXCAVATION AND BACKFILLING REQUIREMENTS SHALL BE PERFORMED IN ACCORDANCE WITH THE GAS COMPANY REQUIREMENTS.

2. THE GAS TRENCH SHALL BE LAID OUT SO AS TO PROVIDE A MINIMUM OFFSET OF THIRTY-SIX (36) INCHES FROM OTHER UTILITIES. NO TRENCHING SHALL BE STARTED UNTIL AN ON-SITE MEETING HAS BEEN HELD BETWEEN THE EXCAVATING CONTRACTOR AND GAS COMPANY PERSONNEL. PRIOR TO THE MEETING, THE EXCAVATING CONTRACTOR MUST NOTIFY DIG SAFE OF THE PROPOSED WORK. THE FOLLOWING SHALL BE CONFIRMED AT THE MEETING:

   A. THE EXCAVATING CONTRACTOR MUST PAD THE TRENCH BOTTOM WITH SIX (6) INCHES OF SAND AND MUST PROVIDE SAND SUFFICIENT TO PROVIDE A MINIMUM OF (6) INCHES OF COVER ABOVE THE GAS PIPE.

   B. THE ROUTE OF THE TRENCH.

   C. MINIMUM FOOTAGE OF THE TRENCH TO BE OPENED BEFORE GAS COMPANY MOBILIZES CREWS TO START INSTALLING THE GAS PIPE.

   D. MINIMUM TWO (2) WEEK NOTICE REQUIRED FOR GAS COMPANY TO START INSTALLING PIPE.

VI. PARKING AND TRAFFIC CONTROL NOTES:

1. ACCESSIBLE PARKING SPACES SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (A.D.A.) ACCESSIBILITY GUIDELINES AND THE LATEST EDITIONS UNLESS OTHERWISE NOTED.

3. VAN ACCESSIBLE HANDICAP PARKING SPACES SHALL BE SIGNED AS "VAN ACCESSIBLE" PER A.D.A. (SEE 4.1.2.5B).

4. ALL PROPOSED CURBING SHALL BE BITUMINOUS BERM CURBING, UNLESS OTHERWISE NOTED. ALL SIDEWALKS SHALL BE MONOLITHIC CURB AND SIDEWALK.

5. ALL PAVEMENT STRIPING SHALL BE PAINTED WITH 2 COATS OF PAINT. PARKING STALLS SHALL BE MARKED WITH FOUR (4") INCH WIDE PAINTED LINES.

6. PARKING AND TRAFFIC CONTROL PLAN IS SCHEMATIC AND FOR LOCATION OF MARKINGS ONLY. SPECIFIC DETAILS OF PAVEMENT MARKINGS ARE PROVIDED AS PART OF THIS PLAN SET.

7. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL/BUILDING PLANS FOR EXACT BUILDING LOCATIONS, BUILDING DIMENSIONS, EXACT UTILITY ENTRANCE LOCATIONS, TRUCK DOCKS, BUILDING SIDEWALKS AND DOOR LOCATIONS.

8. FOR PAVEMENT SECTION SEE DWG. C-8.

9. ALL LIMITS OF PAVEMENT SHALL BE CURBED UNLESS NOTED OR INDICATED OTHERWISE.

10. THE CONTRACTOR SHALL ADJUST ALL UTILITY CASINGS TO THE PROPER LINE AND ELEVATION PRIOR TO THE PLACEMENT OF THE TOP COURSE OF PAVEMENT. NECESSARY ADJUSTMENTS SHALL BE MADE TO CASTINGS IF REQUIRED, TO MAKE THEM FLUSH WITH FINISHED GRADE. NO DEPRESSIONS OR MOUNDS TO ACCOMMODATE CASTINGS WILL BE PERMITTED.

11. ALL ACCESSIBLE CURB RAMPS SHALL BE CONSTRUCTED OF CEMENT CONCRETE AND COMPLY WITH A.D.A. REQUIREMENTS.

TRAFFIC CONTROL SIGN SCHEDULE

SIGN NUMBER	SIGN	SIZE OF SIGN		BACKGROUND	LEGEND	BORDER	MOUNT TYPE	MOUNT SIZE
		WIDTH	HEIGHT					
R1-1	STOP	30"	30"	RED	WHITE	WHITE	CHANNEL	7'-0"
R3-7(L)	LEFT LANE MUST TURN LEFT	30"	30"	WHITE	BLACK	BLACK	CHANNEL	7'-0"
R3-7(R)	RIGHT LANE MUST TURN RIGHT	30"	30"	WHITE	BLACK	BLACK	CHANNEL	7'-0"
R7-8	HANDICAPPED PARKING	12"	18"	BLUE	WHITE	-	CHANNEL	7'-0"
R7-8A	VAN ACCESSIBLE	12"	6"	BLUE	WHITE	-	CHANNEL	6'-6"
X-1	VISITOR PARKING ONLY	12"	18"	WHITE	BLACK	BLACK	CHANNEL	7'-0"

RJOC

NO.	REVISION	DATE
1.	SUBMITTED TO INLAND WETLANDS COMMISSION	09/25/2024

PREPARED BY:
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PREPARED FOR:
HONEYCOMB REAL ESTATE PARTNERS
20 AVON MEADOW LANE
AVON, CT 06001

PROJECT NAME:
HORIZON VIEW
MONTVILLE, CT

SEAL:

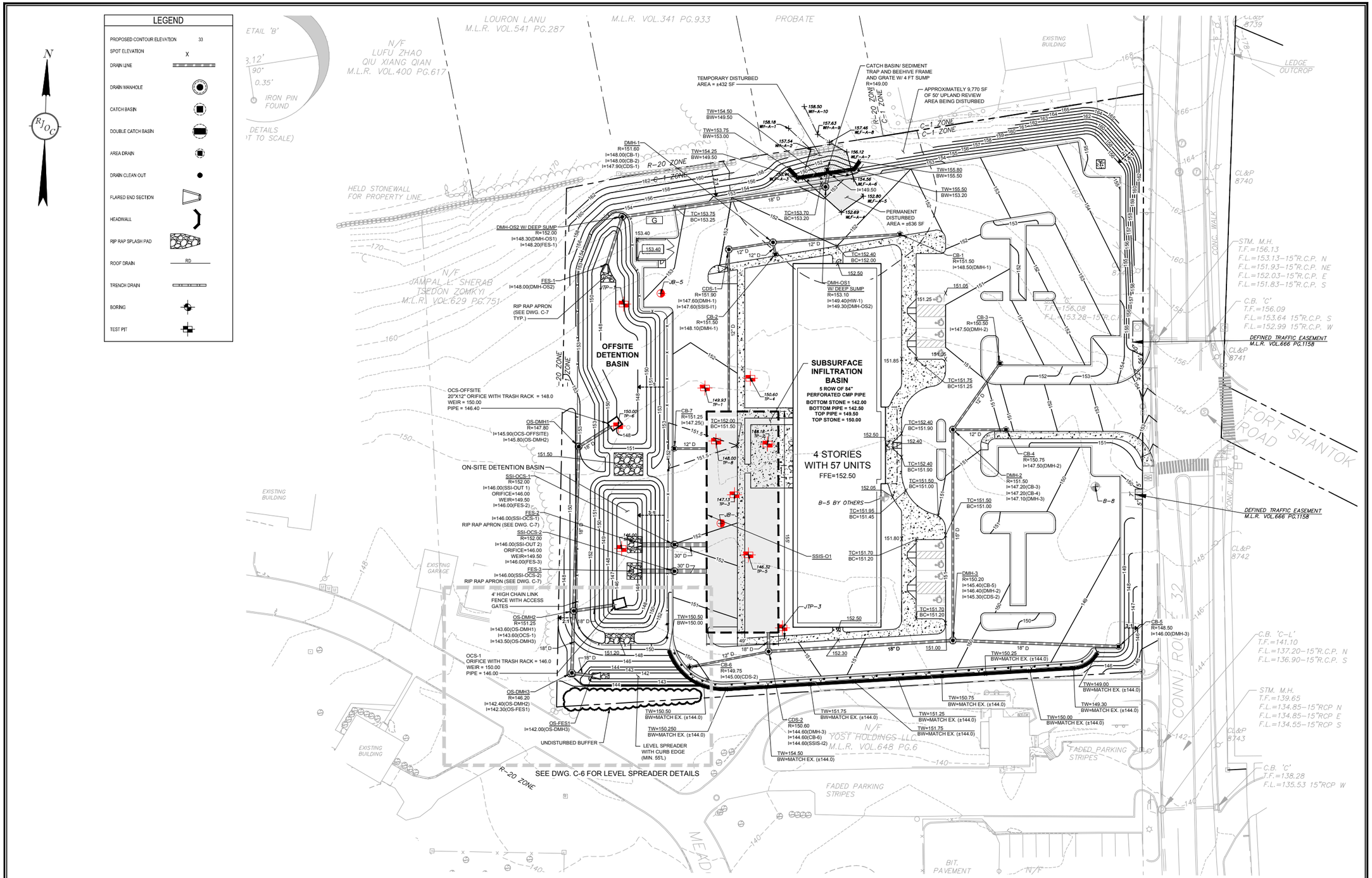
DESIGNED BY: RWS
DRAWN BY: WJH
REVIEWED BY: BPD/RWS
SCALE: NOT TO SCALE
DATE: 09/25/2024

DRAWING NAME:
GENERAL NOTES

DRAWING NUMBER: N-1

PROJECT NUMBER: 24029

Drawing name: G:\CT\Montville\Honeycomb Real Estate Partners\2268-2284 Route 32\Main\24029_N-1 Notes and Legends.dwg
Sep 25, 2024 - 16:10pm



NOTES:

1. SLOPES STEEPER THAN 3:1 REQUIRE EROSION CONTROL MATTING FOR STABILIZATION.
2. SEE DRAWING N-1 FOR GENERAL NOTES, EROSION CONTROL NOTES, DEMOLITION NOTES, GRADING & DRAINAGE NOTES, UTILITY NOTES, AND PARKING AND TRAFFIC CONTROL SIGN SCHEDULE.
3. SEE DRAWING C-5 THROUGH C-10 FOR DETAILS.

NO.	REVISION	DATE
1.	SUBMITTED TO INLAND WETLANDS COMMISSION	09/20/2024

PREPARED BY:
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PROJECT NAME:

HORIZON VIEW
MONTVILLE, CT

SEAL:

DESIGNED BY:	MAP/RWS
DRAWN BY:	WJH
REVIEWED BY:	BPD/RWS
SCALE:	1" = 30'
DATE:	09/25/2024

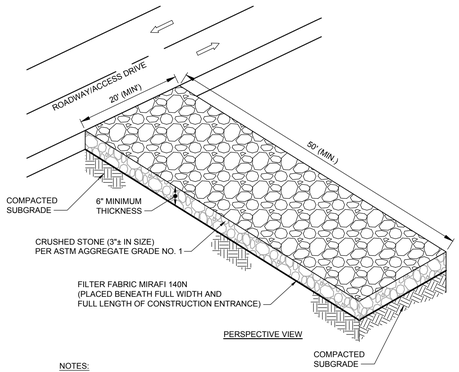
DRAWING NAME:

GRADING AND DRAINAGE PLAN

DRAWING NUMBER:

C-2

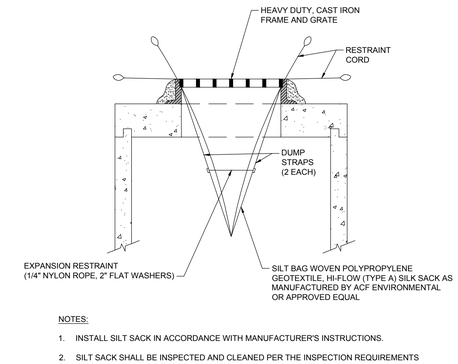
PROJECT NUMBER: 24029



NOTES:

1. ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT PREVENTS TRACKING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY.
2. WHEN THE ENTRANCE PAD BECOMES INEFFECTIVE, THE STONE SHALL BE REMOVED WITH THE COLLECTED SOIL MATERIAL, REGRADED, STABILIZED AND THE CONSTRUCTION ENTRANCE RECONSTRUCTED.

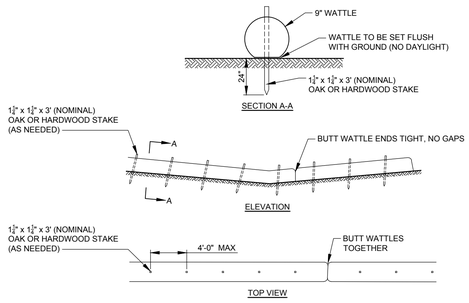
CONSTRUCTION ENTRANCE
SCALE: N.T.S.



NOTES:

1. INSTALL SILT SACK IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. SILT SACK SHALL BE INSPECTED AND CLEANED PER THE INSPECTION REQUIREMENTS AS OUTLINED IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). IN THE ABSENCE OF A SWPPP, SILT SACK SHALL BE CLEANED WHEN THE EXPANSION RESTRAINT CORD IS NO LONGER VISIBLE.
3. REMOVE SILT BAG PER MANUFACTURER'S INSTRUCTIONS.

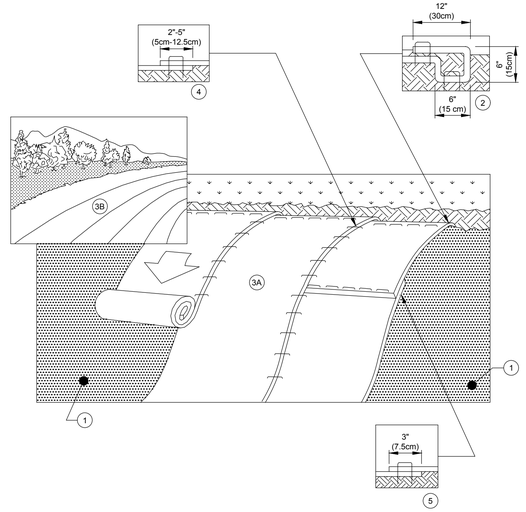
TYPICAL FILTER BAG DETAIL
SCALE: N.T.S.



NOTES:

1. WATTLES SHALL BE A MACHINE PRODUCED TUBE THAT IS 100% STRAW FIBER THAT IS CERTIFIED WEED FREE FORAGE.
2. THE NETTING SHALL CONSIST OF SEAMLESS HIGH DENSITY POLYETHYLENE AND ETHYL VINYL ACETATE AND CONTAIN ULTRA VIOLET INHIBITORS.
3. WATTLE BARRIER TO BE INSPECTED PER THE INSPECTION REQUIREMENTS AS OUTLINED IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). IN THE ABSENCE OF A SWPPP, INSPECTIONS SHALL OCCUR WEEKLY AND AFTER EACH RAINFALL EVENT GREATER THAN 0.25 INCHES.
4. DAMAGED AND/OR DECOMPOSED WATTLES SHALL BE REPLACED IMMEDIATELY.

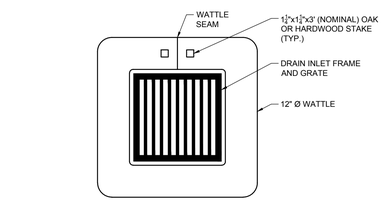
TYPICAL SINGLE ROW WATTLE INSTALLATION DETAIL
SCALE: N.T.S.



NOTES:

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF THE BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH THE APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5cm-12.5cm) OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5cm) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30cm) APART ACROSS ENTIRE BLANKET WIDTH.
6. EROSION CONTROL BLANKET SHALL BE BIODEGRADABLE DOUBLE NET STRAW AS MANUFACTURED BY ACF ENVIRONMENTAL OR APPROVED EQUAL.
7. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

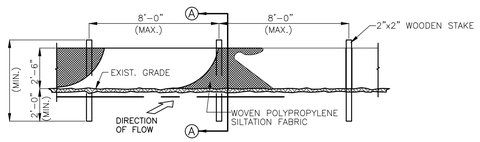
EROSIONAL CONTROL BLANKET DETAIL (FOR SLOPE PROTECTION)
SCALE: N.T.S.



NOTES:

1. WATTLES SHALL BE 12" DIAMETER, MACHINE PRODUCED THAT IS 100% STRAW FIBER AND CERTIFIED WEED FREE FORAGE. THE NETTING SHALL CONSIST OF SEAMLESS HIGH DENSITY POLYETHYLENE AND ETHYL VINYL ACETATE AND CONTAIN ULTRA VIOLET INHIBITORS.
2. WATTLES SHALL BE PLACED IN A ROW WITH THE ENDS TIGHTLY ABUTTING THE ADJACENT WATTLES.
3. WATTLES SHALL BE SECURELY ANCHORED IN PLACE BY STAKES DRIVEN THROUGH THE WATTLES.
4. WATTLES TO BE INSPECTED PER THE INSPECTION REQUIREMENTS AS OUTLINED IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). IN THE ABSENCE OF A SWPPP, INSPECTIONS SHALL OCCUR WEEKLY AND AFTER EACH RAINFALL EVENT GREATER THAN 0.25 INCHES. SEDIMENT DEPOSITS MUST BE REMOVED WHEN DEPOSITS REACH ONE HALF THE HEIGHT OF THE BARRIER.
5. THIS DETAIL IS TO BE USED WHEN PARKING AREAS ARE AT SUBGRADE ELEVATION

TYPICAL CATCH BASIN WATTLE INLET PROTECTION DETAIL
SCALE: N.T.S.

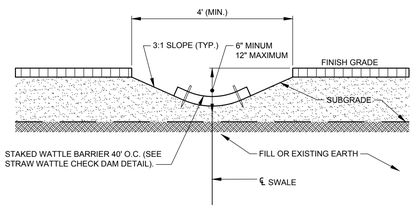


SILT FENCE ELEVATION

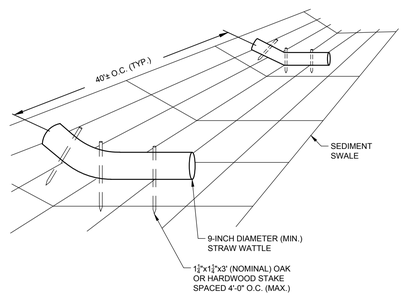
NOTE:
IN AREAS WHERE ANCHOR TRENCH CANNOT BE DUG, FABRIC WILL BE LAID ON SURFACE AND COVERED WITH A MINIMUM OF 6" DEPTH OF SOIL.

SILT FENCE SECTION A-A

SILTATION FENCE DETAIL
SCALE: N.T.S.



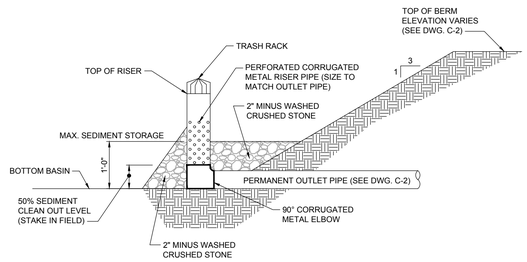
TYPICAL TEMPORARY DRAINAGE SWALE DETAIL
SCALE: N.T.S.



NOTES:

1. STRAW WATTLE CHECK DAMS TO BE SECURED TO THE GROUND WITH 3' LONG GRADE STAKES DRIVEN THROUGH THE WATTLE AND PENETRATING AT LEAST 12-INCHES INTO THE GROUND. STAKES TO BE EXPOSED 3 INCHES (MAX.) ABOVE THE TOP OF THE WATTLE.
2. WATTLES SHALL BE MACHINE-PRODUCED THAT IS 100% STRAW FIBER AND CERTIFIED WEED FREE FORAGE. THE NETTING SHALL CONSIST OF SEAMLESS HIGH DENSITY POLYETHYLENE AND ETHYL VINYL ACETATE AND CONTAIN ULTRA VIOLET INHIBITORS.
3. WATTLES SHALL BE PLACED IN A ROW WITH THE ENDS TIGHTLY ABUTTING THE ADJACENT WATTLE.

STRAW WATTLE CHECKDAM DETAIL
SCALE: N.T.S.



NOTES:

1. PERFORATED CORRUGATED METAL RISER PIPE TO BE WRAPPED WITH FILTER FABRIC (MIRAFI 140N OR APPROVED EQUAL).
2. SEDIMENT BASINSTO BE INSPECTED THROUGHOUT CONSTRUCTION.

TEMPORARY RISER OUTLET DETAIL
SCALE: N.T.S.

NO.	REVISION	DATE
1.	SUBMITTED TO INLAND WETLANDS COMMISSION	09/25/2024

PREPARED BY:
RJO'CONNELL & ASSOCIATES, INC.
CIVIL ENGINEERS, SURVEYORS & LAND PLANNERS
80 MONTVALE AVENUE, SUITE 201 STONEHAM, MA 02180
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PREPARED FOR:
HONEYCOMB REAL ESTATE PARTNERS
20 AVON MEADOW LANE
AVON, CT 06001

PROJECT NAME:
HORIZON VIEW
MONTVILLE, CT

SEAL:

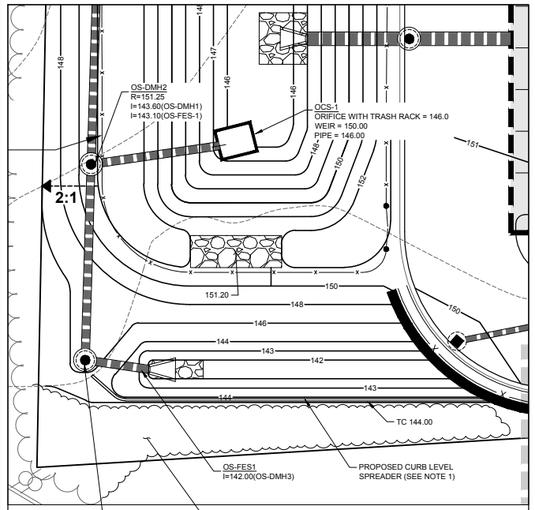
DESIGNED BY:	RWS
DRAWN BY:	WJH
REVIEWED BY:	BPD/RWS
SCALE:	NOT TO SCALE
DATE:	09/25/2024

DRAWING NAME:
DEMOLITION AND EROSION CONTROL DETAILS

DRAWING NUMBER:
C-5

PROJECT NUMBER:
24029

Drawing name: G:\CT\Montville\Honeycomb Real Estate Partners\22268-2284 Route 32\Main\24029_C-5 Demolition and Erosion Control Details.dwg
Sep 25, 2024 - 16:11pm



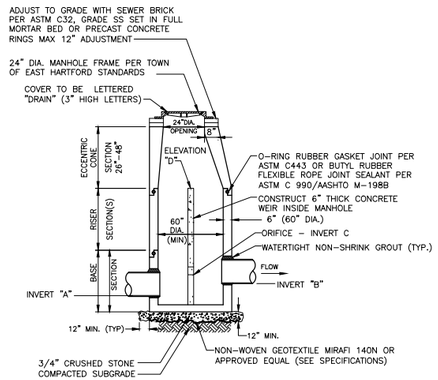
SECTION

NOTE:

1. LEVEL SPREADER MINIMUM LENGTH = 56 FT

LEVEL SPREADER DETAIL

SCALE: N.T.S.



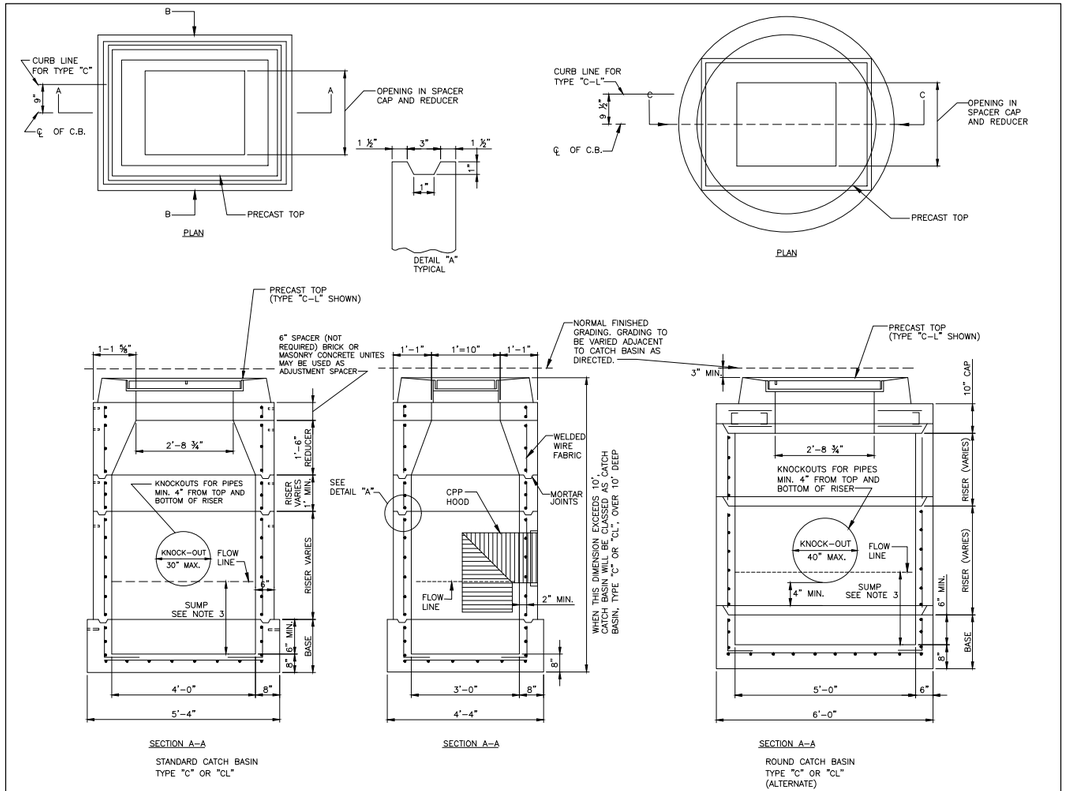
SECTION

OCS-	RIM	INVERT "A" (INLET)	INVERT "B" (OUTLET)	ELEVATION "C" (ORIFICE SIZE/TYPE)	ELEVATION "D" (T/WEIR)	SPILLWAY (T/WEIR)
SSI-OCS1	152.00	146.00 (30")	146.00 (30")	146.00 6" CIRCLE	149.50	N/A
SSI-OCS2	152.00	146.00 (30")	146.00 (30")	146.00 6" CIRCLE	149.50	N/A

NOTES:

1. MANHOLES AND ALL COMPONENT PARTS SHALL BE OF SIZE, STRENGTH AND CONFIGURATION AS SHOWN EXCEPT THAT TOP SLABS MAYBE SUBSTITUTED FOR ECCENTRIC CONE SECTIONS. MANHOLES SHALL BE AN ASSEMBLY OF REINFORCED, PRECAST CONCRETE BASE RISER SECTIONS PER ASTM C478 OR MONOLITHICALLY, CAST-IN-PLACE REINFORCED CONCRETE. APPROVED MANHOLE STRUCTURE SHALL BE DESIGNED AND CONSTRUCTED TO MEET OR EXCEED H20 LOADING AND PREVENT LEAKAGE IN EXCESS OF ONE (1) GALLON PER DAY PER VERTICAL FOOT OF MANHOLE.
2. MATERIALS AND METHODS OF INSTALLATION TO MEET OR EXCEED TOWN SPECIFICATIONS.
3. USE 0-6" SUMP.

OUTLET CONTROL STRUCTURE DETAIL

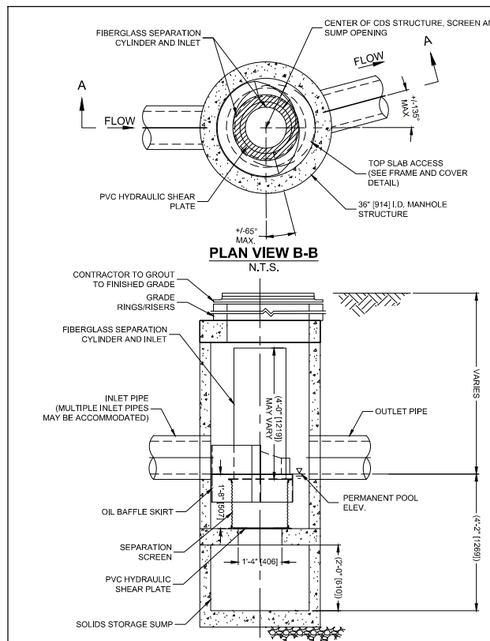


NOTE:

1. HOODS SHALL BE INSTALLED AT ALL CATCH BASIN OUTLETS.
2. REFER TO CT DOT OR MONTVILLE FOR GRATE SPECIFICATIONS
3. CATCH BASINS SHALL HAVE 4' DEEP SUMPS OR 4 TIMES THE DIAMETER OF OUTLET PIPES WHICH IS GREATER.

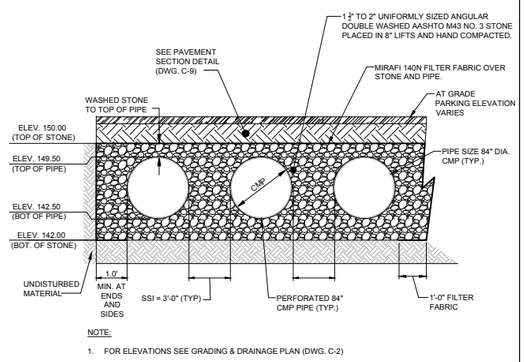
CONNECTICUT D.O.T. STANDARD CATCH BASIN

SCALE: N.T.S.



CDS UNIT - WATER QUALITY UNIT - CDS-1515

SCALE: N.T.S.

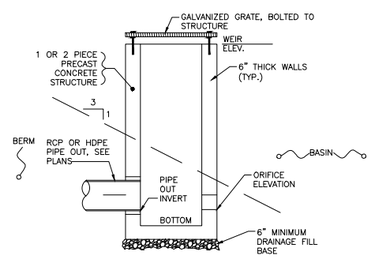


NOTE:

1. FOR ELEVATIONS SEE GRADING & DRAINAGE PLAN (DWG. C-2)

TYPICAL 7' CMP SUBSURFACE INFILTRATION SYSTEM

SCALE: N.T.S.



OCS	RIM	INVERT "A" (INLET)	INVERT "B" (OUTLET)	ELEVATION "C" (ORIFICE SIZE/TYPE)	ELEVATION "D" (T/WEIR)	SPILLWAY (T/WEIR)
OCS-OFFSITE	N/A	N/A	146.40	148.00 20x12 ELLIPSE	150.00	151.50
OCS-1	N/A	N/A	146.00	146.00 6" CIRCLE	150.00	151.20

8 OUTLET CONTROL STRUCTURE (OCS) FOR BASINS

SCALE: N.T.S.

RJOC

NO.	REVISION	DATE
1	SUBMITTED TO INLAND WETLANDS COMMISSION	09/20/2024

PREPARED BY:
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PREPARED FOR:

HONEYCOMB REAL ESTATE PARTNERS

20 AVON MEADOW LANE
AVON, CT 06001

PROJECT NAME:

HORIZON VIEW
MONTVILLE, CT

SEAL:

DESIGNED BY:	MAP/RWS
DRAWN BY:	WJH
REVIEWED BY:	BPD/RWS
SCALE:	NOT TO SCALE
DATE:	09/25/2024

DRAWING NAME:

DRAWING DETAILS I

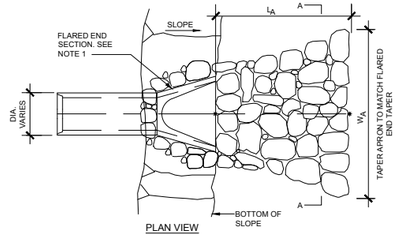
DRAWING NUMBER:

C-6

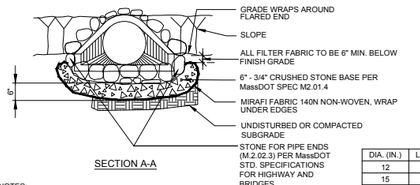
PROJECT NUMBER:

24029

Drawing name: G:\CT\Montville\Honeycomb Real Estate Partners\22668-2284 Route 32\Main\24029_C-6 Drainage Details I.dwg
Sep 25, 2024 - 16:20pm



PLAN VIEW



SECTION A-A

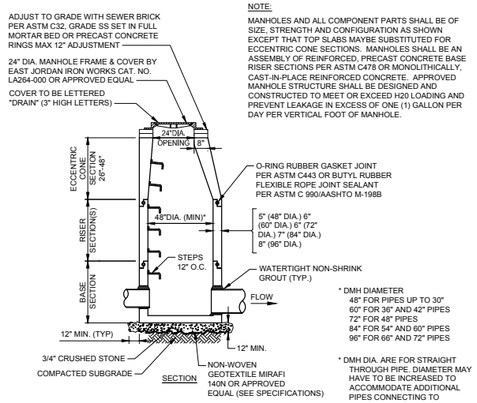
DIA. (IN.)	L_A (FT.)	W_A (FT.)
12	8	10
15	10	12
18	12	14
24	14	16
30	16	20

NOTES:

1. THE FLARED END SECTION (FES) AND THE LAST RUN OF PIPE OUTLETTING TO THE FES SHALL BE REINFORCED CONCRETE (RCP)

FLARED END SECTION WITH RIP RAP APRON

SCALE: N.T.S.



NOTE:

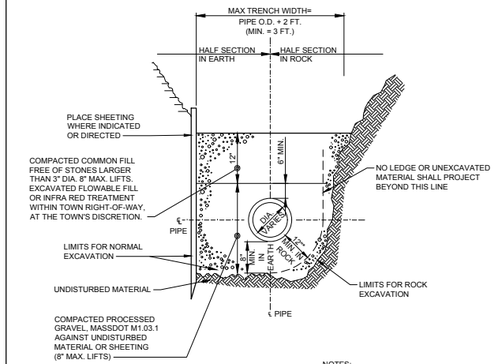
MANHOLES AND ALL COMPONENT PARTS SHALL BE OF SIZE, STRENGTH AND CONFIGURATION AS SHOWN EXCEPT THAT TOP SLABS MAYBE SUBSTITUTED FOR ECCENTRIC CONE SECTIONS. MANHOLES SHALL BE AN ASSEMBLY OF REINFORCED, PRECAST CONCRETE BASE RISER SECTIONS PER ASTM C478 OR MONOLITHICALLY, CAST-IN-PLACE REINFORCED CONCRETE. APPROVED MANHOLE STRUCTURE SHALL BE DESIGNED AND CONSTRUCTED TO MEET OR EXCEED H20 LOADING AND PREVENT LEAKAGE IN EXCESS OF ONE (1) GALLON PER DAY PER VERTICAL FOOT OF MANHOLE.

* DMH DIAMETER
48" FOR PIPES UP TO 30"
60" FOR 36" AND 42" PIPES
72" FOR 48" PIPES
84" FOR 54" AND 60" PIPES
96" FOR 66" AND 72" PIPES

* DMH DIA. ARE FOR STRAIGHT THROUGH PIPE. DIAMETER MAY HAVE TO BE INCREASED TO ACCOMMODATE ADDITIONAL PIPES CONNECTING TO MANHOLE AT ANGLES

PRECAST CONCRETE DRAIN MANHOLE (DMH)

SCALE: N.T.S.



NOTES:

1. MATERIALS AND METHODS OF INSTALLATION SHALL CONFORM TO THE MUNICIPAL DPW AND/OR ENGINEERING DEPARTMENT STANDARDS AND SPECIFICATIONS.

TYPICAL DRAIN TRENCH DETAIL

SCALE: N.T.S.

RJOC

NO.	REVISION	DATE
1.	SUBMITTED TO INLAND WETLANDS COMMISSION	09/25/2024

PREPARED BY:
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PREPARED FOR:

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20 AVON MEADOW LANE
AVON, CT 06001

PROJECT NAME:

HORIZON VIEW
MONTVILLE, CT

SEAL:

DESIGNED BY:	MAP/RWS
DRAWN BY:	WJH
REVIEWED BY:	BPD/RWS
SCALE:	NOT TO SCALE
DATE:	09/25/2024

DRAWING NAME:

DRAINAGE DETAILS II

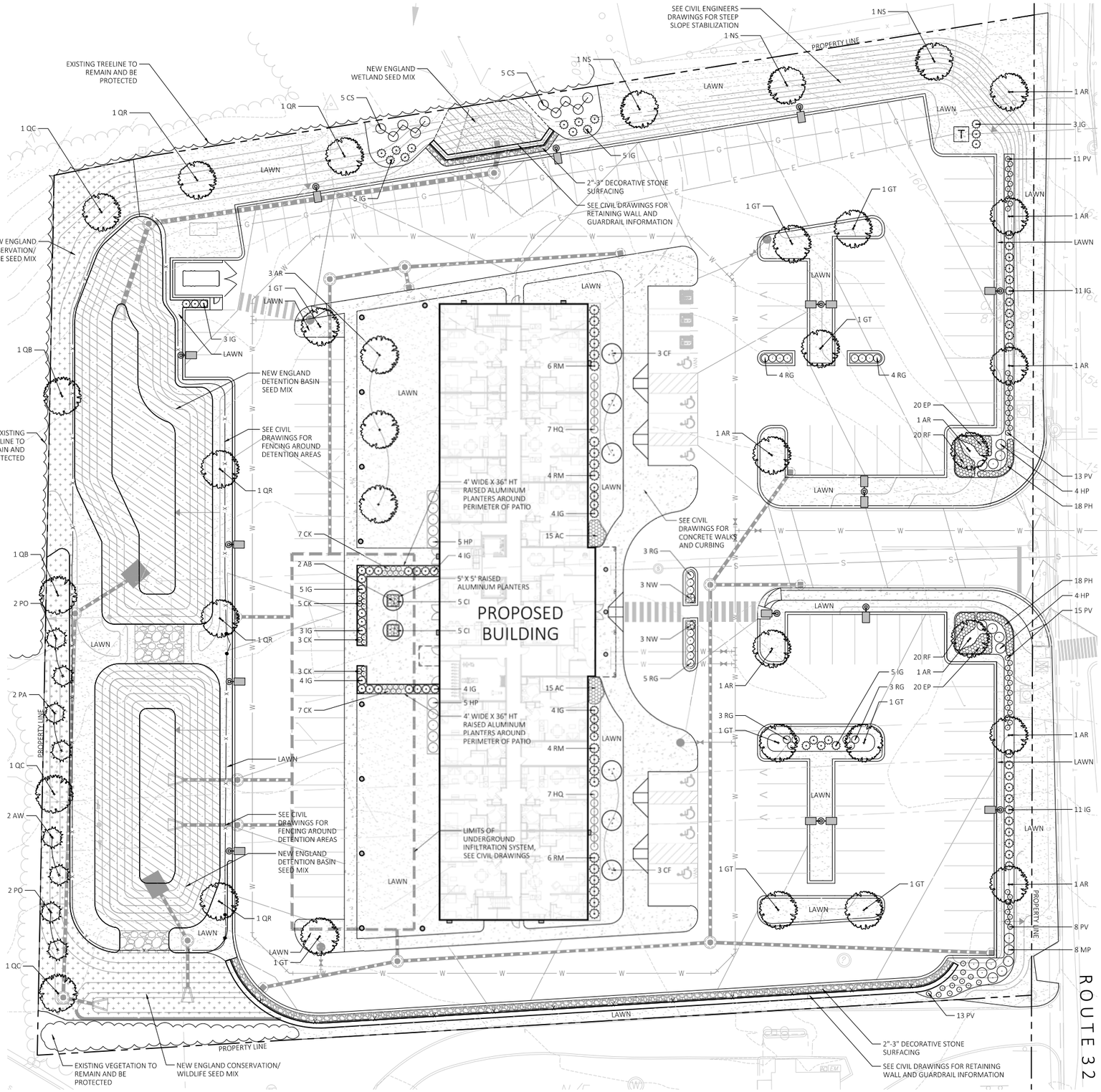
DRAWING NUMBER:

C-7

PROJECT NUMBER:

24029

Drawing name: G:\CT\Montville\Honeycomb Real Estate Partners\2268-2284 Route 32\Main\24029_C-7 Drainage Details II.dwg
Sep 25, 2024 - 16:15pm



1 LANDSCAPE PLANTING PLAN
SCALE: 1" = 20'-0"

PLANTING:

1. DURING CONSTRUCTION, PROTECT ALL EXISTING SITE FEATURES, STRUCTURES AND UTILITIES.
2. PLANTS SHALL BE TRUE TO SPECIES AND VARIETY SPECIFIED AND NURSERY GROWN IN ACCORDANCE WITH THE AMERICAN STANDARD FOR NURSERY STOCK UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT. SUBSTITUTIONS WILL BE PERMITTED ONLY IF APPROVED BY THE LANDSCAPE ARCHITECT.
3. LANDSCAPE ARCHITECT APPROVAL IS REQUIRED BEFORE PLANT MATERIAL IS PURCHASED. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO SEE ALL MATERIAL IN PERSON AT THE NURSERY. IF TRAVEL OUTSIDE OF MA IS REQUIRED, LANDSCAPE ARCHITECT'S TRAVEL COSTS SHALL BE PAID FOR BY THE CONTRACTOR.
4. ALL EXPOSED BURLAP, WIRE BASKETS AND OTHER MATERIALS ATTACHED TO PLANTS SHALL BE REMOVED PRIOR TO PLANTING. CARE SHALL BE TAKEN NOT TO DISTURB THE ROOT BALL OF PLANTS.
5. THOROUGHLY WATER ALL PLANTS IMMEDIATELY AFTER PLANTING.
6. WHERE DISCREPANCIES IN QUANTITIES OCCUR, DRAWINGS SUPERCEDE PLANT NOTES AND SCHEDULE.
7. TRANSPLANTING SHALL BE DONE IN ACCORDANCE WITH THE AMERICAN STANDARD FOR NURSERY STOCK.
8. LOAM USED IN PLANT BEDS SHALL BE UNIFORM IN COMPOSITION, FREE FROM SUBSOIL, STONES LARGER THAN 1", NOXIOUS SEEDS AND SUITABLE FOR THE SUPPORT OF VEGETATIVE GROWTH. THE pH VALUE SHALL BE BETWEEN 5.5 AND 6.5.
9. MULCH IN TREE AND SHRUB BEDS SHALL BE NATURAL, NATIVE HEMLOCK MULCH FREE OF GROWTH OR GERMINATION INHIBITING INGREDIENTS. SUBMIT SAMPLES FOR APPROVAL.
10. LOCATIONS FOR PLANTS AND/OR OUTLINE OF AREAS TO BE PLANTED ARE TO BE STAKED OUT AT THE SITE FOR APPROVAL BY THE LANDSCAPE ARCHITECT.
11. SOIL DEPTHS: a.) SHRUBS AND PERENNIAL BEDS: 18" MIN.; b.) GROUNDCOVER: 6" MIN.; c.) TREES: SEE DETAIL; d.) SOD/SEED: 6"MIN.
12. PROVIDE A SUBSURFACE ROOTBALL ANCHOR BY PLATIPUS EARTH ANCHORS, SIZE FOR CALIPER

PLANT SCHEDULE

SYMBOL	QTY.	LATIN NAME	COMMON NAME	SIZE	NOTES
TREES					
AB	2	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	7-8' HT.	B&B, MULTI-STEM, SPECIMEN
AR	12	ACER RUBRUM 'RED SUNSET'	RED SUNSET MAPLE	3-3.5" CAL.	B&B, 6' CLEAR BRANCHING
CF	6	CORNUS FLORIDA	FLOWERING DOGWOOD	7-8' HT.	B&B, SPECIMEN
GT	9	GLEDITSIA TRIACANTHOS VAR. INERMIS 'SKYCOLE'	SKYLINE HONEYLOCUST	3-3.5" CAL.	B&B, 6' CLEAR BRANCHING
NS	3	NYSSA SYLVATICA	BLACK TUPELO	3-3.5" CAL.	B&B, 6' CLEAR BRANCHING
QB	2	QUERCUS BICOLOR	SWAMP WHITE OAK	3-3.5" CAL.	B&B, 6' CLEAR BRANCHING
QC	3	QUERCUS COCCINEA	SCARLET OAK	3-3.5" CAL.	B&B, 6' CLEAR BRANCHING
QR	5	QUERCUS RUBRUM	RED OAK	3-3.5" CAL.	B&B, 6' CLEAR BRANCHING
EVERGREEN TREES					
AW	2	ABIES CONCOLOR	WHITE FIR	6-7' HT.	B&B
PA	2	PICEA ABIES	NORWAY SPRUCE	6-7' HT.	B&B
PO	4	PICEA OMORIKA	SERBIAN SPRUCE	6-7' HT.	B&B
SHRUBS					
CS	10	CORNUS SERICEA 'ARCTIC FIRE'	RED TWIG DOGWOOD	5 GAL.	48" O.C.; B&B
HP	18	HYDRANGEA PANICULATA 'JANE'	LITTLE LIME HYDRANGEA	5 GAL.	48" O.C.; B&B
HQ	14	HYDRANGEA QUERCIFOLIA 'PEE WEE'	DWARF OAKLEAF HYDRANGEA	5 GAL.	36" O.C.; B&B
IG	71	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY	30" HT.	42" O.C.; B&B
MP	8	MYRICA PENSYLVANICA	NORTHERN BAYBERRY	5 GAL.	48" O.C.; B&B
RM	20	RHODODENDRON MAXIMUM ROSEUM	PINK ROSEBAY RHODODENDRON	5 GAL.	48" O.C.; B&B
RG	22	RHUS AROMATICA 'GRO-LOW'	FRAGRANT SUMAC	3 GAL.	36" O.C.; B&B
PERENNIALS, GROUNDCOVER AND ORNAMENTAL GRASSES					
AC	30	ASTILBE CHINENSIS 'VISIONS IN WHITE'	VISIONS IN WHITE ASTILBE	1 GAL.	18" O.C.; CONTAINER
CI	10	CAREX MORROW 'ICE DANCE'	ICE DANCE SEDGE	1 GAL.	18" O.C.; CONTAINER
CK	25	CALAMAGROSTIS X ACUTILORA 'KARL FOERSTER'	FEATHER REED GRASS	1 GAL.	24" O.C.; CONTAINER
EP	40	ECHINACEA PURPUREA	PURPLE CONEFLOWER	1 GAL.	18" O.C.; CONTAINER
NW	6	NEPETA X FAASSENII 'WALKERS LOW'	CATMINT	1 GAL.	18" O.C.; CONTAINER
PH	36	PENNISETUM ALOPECUROIDES 'HAMELN'	FOUNTAIN GRASS	1 GAL.	24" O.C.; CONTAINER
PV	60	PANICUM VIRGATUM 'SHENANDOAH'	RED SWITCHGRASS	1 GAL.	24" O.C.; CONTAINER
RF	40	RUDBECKIA FULGIDA 'GOLDSTURM'	BLACK EYED SUSAN	1 GAL.	18" O.C.; CONTAINER

SEED MIX

	NEW ENGLAND WETLAND PLANTS, INC. 413-548-8000	NEW ENGLAND CONSERVATION/ WILDLIFE SEED MIX	25 LB/ACRE	SEE SPEC SHEET
	NEW ENGLAND WETLAND PLANTS, INC. 413-548-8000	NEW ENGLAND WETMIX (WETLAND SEED MIX)	18 LB/ACRE	SEE SPEC SHEET
	NEW ENGLAND WETLAND PLANTS, INC. 413-548-8000	NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DETENTION BASIN AND MOIST SITES	35 LB/ACRE	SEE SPEC SHEET

NOT FOR CONSTRUCTION

0 10 20 40
SCALE IN FEET

MDLA
MICHAEL D'ANGELO LANDSCAPE ARCHITECTURE LLC
319 GRISWOLD STREET
SUITE 209
GLASTONBURY, CT 06033
t. 203.592.4788
www.m-d-l-a.com

HORIZON VIEW
MONTVILLE, CT

STAMP
STATE OF CONNECTICUT · MICHAEL D'ANGELO · No. LA0001603 · LICENSED LANDSCAPE ARCHITECT

REV. NO.	DATE	DESCRIPTION
	9/25/24	INLAND WETLANDS SUBMISSION

LANDSCAPE PLANTING PLAN

DRAWN: MR, CB
CHECKED: MR
SCALE: AS NOTED
DATE: 09/25/24

L100

SHEET 1 OF 6

plot date: 9/24/2024

APPENDIX C

Connecticut DEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities

Note: The 2022 CGP is available at

https://portal.ct.gov/-/media/deep/permits_and_licenses/water_discharge_general_permits/stormconstgppdf.pdf

APPENDIX D

CTDOT MS4 Project Design Maximum Extent Practicable Worksheet

CTDOT MS4 Project Design MEP Worksheet Instructions

The CTDOT MS4 Project Design MEP Worksheet is intended to be a living document that follows a project throughout its design. The primary intent of the Worksheet is to track the required metrics that must be reported to CT DEEP annually in order to comply with the DOT MS4 General Permit. It also serves as the required documentation to demonstrate that stormwater mitigation was pursued in a project's design to the maximum extent practical.

Section 1: Project Information

Indicate the Project, Number, Title and Location.

Section 2: Existing Conditions

Before the end of Preliminary Design, fill out the requested information available regarding a project site's existing conditions. As missing or updated information (e.g., soil infiltration potential, depth to groundwater, depth to bedrock) becomes available during later design phases, edit the Existing Conditions accordingly.

EC1. Total Project Area – Total Project Area consists of all areas needed to complete the project which generally consists of the limits of disturbance with an appropriate buffer and includes any lay down areas. The project area could also include abutting DOT owned land where there are no proposed construction activities and areas that will not be impacted by the project.

Designer Insight - Total project area will be used in subsequent calculations for Directly Connected Impervious Area (DCIA) and determining the project's Water Quality Volume. (See instructions for EC2 and DC1, below.)

EC2. Pre-Construction Directly Connected Impervious Area (DCIA) for the Project - Determine the amount of pre-construction DCIA in acres and as a percentage of the overall project area. DCIA is surface area within the project limits that a) is impervious, **and** b) drains to a wetland or watercourse either directly or via a storm sewer system discharge. Impervious cover includes pavement, sidewalks, roofs, exposed ledge, gravel roads/parking ($C \geq 0.7$). The %-DCIA will typically remain consistent as the design progresses unless the total project area changes.

*Designer Insight - The primary purpose of %-DCIA is to determine the **WQV retention design goal**, which will be the minimum goal for impervious area disconnections (see instructions for DC1, below.)*

EC3. Soil Infiltration Potential – Select either *Existing Report/Soils Map* or *Field Verified* as the source of the soils information. Choose from *Good/Fair, Poor* or *Mixed* as the best overall description of the project's surficial geology ability to infiltrate. Generally, soils with an infiltration rate of at least 0.3 in/hr are considered as *Good/Fair.* Retention BMPs will need to be designed to infiltrate all of the ponded water within 48 hours. Select *Mixed* if the soil conditions vary throughout a large project area.

Designer Insight - The soil infiltration potential will be used to inform whether infiltration Best Management Practices (BMPs) are feasible. Any existing information (such as prior soils reports) for the project area should be reviewed. If no prior, area-specific soil information is available, utilize the Soil Drainage Class map from CTECO to identify preliminary locations. ***http://www.cteco.uconn.edu/map_catalog.asp?****. Areas classified as* Somewhat Poorly Drained, Poorly Drained or Very Poorly Drained Areas *can be noted as "Poor" on the Worksheet and do not warrant further consideration for infiltration BMPs. All other areas should be considered as "Good/Fair" and, unless other factors prohibit infiltration, actual infiltration rates will require field verification.*

Section 2: Existing Conditions (continued)

EC4. Depth to Groundwater – At the start of design, check the "TBD" box unless existing data from a previous project or other sources is available. As design progresses and as subsurface investigations are completed, indicate the depth to maximum groundwater as a range over the entire project area. Maximum groundwater is the level to which groundwater rises for a duration of one month or longer during the wettest season of the year. Report zero as the low end of the range if wetlands or standing water are present within the project limits. If depth to groundwater is deeper than the depth to bedrock, indicate as "BR" (below rock). If seasonal variations in depth to groundwater are known, defer to the seasonal high for this Worksheet.

EC5. Depth to Bedrock – At the start of design, check TBD unless existing data from a previous project or other sources is available. As design progresses and as subsurface investigations are completed, indicate the depth to bedrock as a range over the entire project area. Report zero as the low end of the range if bedrock outcrops are present within the project limits.

Designer Insight - The purpose of the depth to groundwater and depth to bedrock is to inform and document whether shallow groundwater or shallow bedrock will make it unfeasible to include infiltration/retention BMPs (see page 2 of DOT MS4 Worksheet) as part of the design.

EC6. Aquifer Protection Area - Indicate (Y/N) if any part of the project falls within an aquifer protection area. This information will be reported to the design unit on the PNDF provided by Office of Environmental Planning.

Designer Insight – If the project is located within an Aquifer Protection Area, then this is a limiting condition to be documented with respect to the infiltration/retention BMPs listed on page 2. Infiltration/retention BMPs should not be pursued in these areas in order to protect groundwater quality from potential contaminants associated with transportation-related spills or other releases.

EC7. MS4 Priority Area - Indicate (Y/N) if any part of the project falls within an "MS4 Priority Area." If yes, indicate which of the three types of priorities (check all that apply). If "Impaired Waterbody" is checked, pick the impairment(s) from the list of drop down boxes. This information will be reported to the design unit on the PNDF provided by OEP.

Designer Insight – Identifying the project's location relative to MS4 Priority Areas is a requirement of the MS4 permit. If a receiving water is impaired, identifying the specific impairment will help inform the suitability of certain BMPs. Refer to the CTDOT BMP Matrix.

EC8. Contamination known or suspected to be present? Indicate (Y/N) whether soil and/or groundwater contamination is known or suspected to be present. Check "Yes" if the Task 100 Environmental Hazardous Screening Form provided by DOT Environmental Compliance recommended that a Task 210 Subsurface Investigation be performed.

Designer Insight – If contaminated soil and/or groundwater is known or suspected to be present, then careful consideration must be made before deciding whether infiltration/retention BMPs are feasible. If the surrounding land use is intensely developed and public drinking water is readily available, or if existing groundwater quality is known to be unsuitable for drinking water supply without treatment, or if remediation is planned as part of the project (for reasons other than BMP implementation), then an infiltration/retention BMP may still be appropriate.

Section 2: Existing Conditions (continued)

EC9. Adjoining DOT ROW beyond project limits available for stormwater quality management. Indicate the approximate acreage of potentially suitable DOT property that is *laterally* beyond the project limit. This can include:

- Additional property in the DOT ROW that was not included in the Total Project Area;
- Adjacent parcels presently owned by DOT;
- Excess property from a parcel to be acquired for the project for reasons other than MS4.

Include only the amount of undeveloped area beyond the project limits. Attach a sketch depicting these areas.

Designer Insight – The available DOT-owned area surrounding a project is a general metric to help inform the possibility of locating stormwater BMPs near the project site if the area directly within the project limits is not sufficient. It is understood that the lateral distance from the project limit to the ROW limit can vary significantly, especially for linear projects that extend over a long distance. Include other relevant information related to additional area in the Notes box at the bottom of the page.

Section 3: Designed Conditions

This portion of the Worksheet was established based on a typical 30/60/90/FDP design process. At each phase, the progression of key metrics associated with a stormwater quality design are tracked by the Worksheet. It is understood that not every project will follow this exact design process. Any information that has not changed compared to what was recorded during the previous design phase review can be indicated as such (e.g., "no change" or "same") However, the FDP column must contain the final values.

Section 3 will rely heavily on the information recorded on Section 4: Stormwater BMP Selection Summary. As such, Section 4 will also need to be completed and updated with each corresponding milestone design review. Refer to the instructions below on how to complete Section 4.

At Design Approval, complete Section 3's 30%-Design Phase column based on the best available information. If a project is using intermediate design reviews, complete the 60%-Design Phase column and/or the 90%-Design Phase column during the respective milestone reviews. These are working-versions of the Worksheet. Save the working versions of the Worksheet to the project's appropriate **310_Milestone_ Submissions** folder in ProjectWise.

Designer Insight – Data from a project's drainage report should be used when available. Review the Worksheet to ensure the reported metrics are consistent with the drainage report.

At the Final Design Plan milestone, complete the FDP Phase column. Upon completion of this column, this will be the record version of the project's Worksheet. Save the Worksheet to the project's ProjectWise **310_Milestone_ Submissions/100%** folder.

DC1. Water Quality Volume (WQV) retention design goal (acre-feet) – Determine the **WQV retention design goal** by first calculating the Water Quality Volume (WQV) for the project. The WQV is the volume of runoff generated across a site by one inch (1") of rainfall. The proposed impervious area ($C \geq 0.7$) must be known to determine the WQV.

WQV = (1-inch)(R)(A)/12 WQV = water quality volume (ac-ft)
R = volumetric runoff coefficient = 0.05+0.009(I)
I = percent impervious cover for post-construction condition as designed ($C \geq 0.7$).
A = Total DOT-Owned Project Area in acres.

Designer Insight - The percent impervious cover (I) in the calculation above is the <u>total</u> impervious area, not just that which is directly connected. This is different from the DCIA area computed for the existing condition (EC2), which excludes surfaces that do not drain to a wetland or watercourse directly or via a storm sewer discharge.

Section 3: Designed Conditions (continued)

The equation above calculates a retention volume based on 1" of rainfall. It is not necessarily the WQV goal for the project. The project's **WQV retention design goal** is determined based on the percentage of DCIA at the pre-construction stage (EC2). If the pre-construction DCIA is greater or equal to 40% of the project area, then project's retention goal will be ½ x Water Quality Volume (WQV). If the preconstruction DCIA is less than 40%, then the retention goal will be 1.0xWQV, or simply the WQV. For many redevelopment projects, the pre-construction DCIA percentage will be above 40% and the retention design goal will be equal to ½ the WQV.

*Designer insight – Designers should note that the Construction Stormwater General Permit bases the WQV goal on the project's percentage of **total impervious area**. The DOT's MS4 Permit uses the percentage of **directly connected impervious area** to determine the WQV goal. This difference means some projects will require retention/treatment of ½ the WQV for the Construction Permit but the full WQV for compliance with the MS4 Permit.*

If possible, an estimate of the retention goal should be calculated during preliminary design in order to approximate the extent of best management practices that will be needed. If the extent of impervious cover is not fully known by Design Approval, then the WQV cannot be calculated and the TBD box should be checked. Provide the information during a later design phase. An accurate value must always be provided for the FDP milestone.

DC2. WQV Goal *Retained* – Copy the total ***WQV Retained*** value column in Section 4: Stormwater BMP Selection Summary. Refer to Section 4 of these instructions.

DC3. WQV Goal *Treated* – Copy the total ***WQV Treated*** value column in Section 4: Stormwater BMP Selection Summary. Refer to Section 4 of these instructions.

*Designer insight – Incorporate run-off retention BMPs to the maximum extent practical as site conditions allow, documenting site constraints on page 2 that are consistent with the Existing Condition information provided on page 1. If the amount of run-off retained in the design condition fails to meet the **WQV retention design goal** (DC1), determine the shortfall and evaluate the use of treatment BMPs to make up the difference. Treatment without infiltration should only be incorporated into the design when runoff retention can be demonstrated to be unfeasible.*

Designer insight - It is acceptable to take credit for disconnecting off site DCIA areas that drain to on-site BMPs.

DC4. Total WQV *Retained* or *Treated* – Add the WQV Retained per 1" of Rainfall (DC2) to the WQV Treated *(DC3)* and indicate the total.

*Designer insight – The **Total WQV Retained or Treated** is compared to the **WQV retention design goal** (DC1) to determine if the project has met the intended run-off reduction target.*

If DC4 is less than DC1, review any adjoining DOT ROW beyond the project limits (identified in EC9) where retention BMPs (primarily) or treatment BMPs (secondarily) could be constructed in order to meet the full **WQV retention design goal (DC1).** Incorporate the retention/treatment of the alternative site(s) and update page 2.

If DC4 is still less than DC 1 after evaluating alternative sites and incorporating BMPs outside the project limits, then describe any limiting factors that make alternative locations unfeasible for BMPs in the Notes box on the bottom of page 1. Review the limiting site constraints in Section 4 with Section 1: Existing Conditions for accuracy and consistency.

Designer insight – For projects that do not meet the required WQV retention design goal, the MS4 Program will be evaluating future water quality improvement projects within the same local drainage basins or in other priority areas to mitigate the shortfall from the original project.

Section 3: Designed Conditions (continued)

DC5. Post-construction DCIA (acres) – Determine the amount of post-construction DCIA. Here, DCIA is surface area within the project limits that a) is impervious **and** b) drains to a wetland or watercourse either directly or via a storm sewer system discharge. Impervious cover includes pavement, sidewalks, roofs (Facilities projects), exposed ledge, gravel roads/parking ($C \geq 0.7$). Do not include turf, temporary pavement areas or temporary access roads. If the post-construction DCIA is unknown during the Preliminary Design phase, check TBD and provide the information at a later design phase.

*Designer insight – For the Post-Construction DCIA value, do not count impervious areas that will drain to BMPs designed to retain and/or treat enough runoff for the area to have met the **WQV retention design goal**. Areas not directed to a qualifying BMP must be counted as DCIA. The goal is to reduce the amount of DCIA (see DC7 , below.)*

DC6. Pre-construction DCIA (acres) – Copy the Pre-Construction DOT-Owned Directly Connected Impervious Area (DCIA) from line EC2.

DC7. Change in DCIA from pre- to post-construction (acres) - Subtract the **Pre-construction *DCIA*** (DC6) from the Post-construction *directly connected* impervious area (DC5).

A negative value indicates that the amount of DCIA will decrease.

A positive value indicates that the project will cause DCIA to increase. Review the limiting site constraints in Section 4 with the recorded existing conditions in Section 1 for accuracy and consistency.

Designer insight – The DOT MS4 General Permit has a statewide compliance metric to reduce DOT DCIA by 2% within five years compared to a July 2019 baseline. While a project will not be in violation if the maximum extent practical falls short of the permit requirements for DCIA and runoff reductions, any additional DCIA added by projects will make meeting the 2%-reduction that much harder.
Designer insight – Since BMPs may have drainage areas that extend beyond the chosen project area, it is acceptable to take credit for disconnecting off site DCIA areas that drain to on-site BMPs and compensate for DCIA remaining on-site. In rare cases it will be possible to disconnect more DCIA than exists within the project area.

Section 4: Stormwater BMP Selection Summary

This section of the Worksheet is intended to present the designer with several specific BMP types that are expected to be the most feasible for transportation-related projects. Refer to the CTDEEP's 2004 Connecticut Stormwater Quality Manual for other acceptable BMPs and their respective design criteria. Innovative BMPs not listed in the Connecticut Stormwater Quality Manual are also encouraged so long as good engineering judgement is used when assigning retention and treatment capacities.

Designer insight – Designers can refer to the BMP one pagers and the examples that have been prepared on various BMPs for guidance on their design. The examples include Natural Dispersion, Grass Channel , Check Dam (Supplemental), Infiltration Trench and Infiltration Basin.

The key metrics associated with a stormwater quality design are tracked by the Worksheet as the project's design progresses.

Complete the Stormwater BMP Selection Summary at each milestone design review. Indicate the current design review phase by checking off the appropriate box in the upper left corner.

Designer insight – While Section 3 (Design Conditions) and Section 4 (Stormwater BMP Selection Summary) were established based on a typical 30/60/90/FDP design process, it is understood that not every project will follow this exact design process and that a project's metrics may not change from one phase to the next.

At the project's Design Approval, potential opportunities to improve water quality with stormwater BMPs should be identified with preliminary locations shown on project plans.

Design phases after Design Approval will need to verify any preliminary assumptions used in siting and sizing BMPs.

Examine all limiting factors for each BMP (see Site Constraints for each type of stormwater management measure listed on the designer worksheet).

Section 4: Stormwater BMP Selection Summary (continued)

- Permeability/percolation information
- Depth to maximum groundwater
- Depth to bedrock

Update Section 1 as needed based on the field investigations.

Designer insight – A best management practice that does not meet every design requirement listed in the Stormwater Quality Manual will still provide a benefit, albeit not the full possible extent. Document the assumptions used in determining the proportional amount of runoff retainage and/or treatment that the BMP will provide given its site constraints.

The BMPs listed under the Stormwater BMP Selection Summary are grouped into four categories:

1. **Disconnection BMPs** promote flow dispersion and reduce flow velocities in order to allow the downstream terrain to absorb and/or filter the runoff. Consider the following factors of the downstream terrain when determining its capacity to retain or treat: slope, soil type, and distance to the nearest surface water or wetland. Consider augmenting the downstream terrain to retain or treat a greater volume of runoff. For example, soil amendments can be used to increase infiltration capacity or certain seed mixes could be specified to promote beneficial vegetation.
2. **Conveyance & Disconnection BMPs** remove pollutants from the runoff as it is collected and conveyed away from the transportation infrastructure. The slope, soil type, and length of the conveyance will generally dictate its capacity to retain and/or treat. Also consider the downstream terrain, if any, between the conveyance's outfall and the nearest surface water or wetland.

*Designer insight – For a Disconnection BMPs and Conveyance & Disconnection BMPs to meet the **WQV retention design goal**, they may need to be coupled with one or more other BMPs designed per the criteria in the CT DEEP Stormwater Quality Manual.*

3. **Infiltration/Retention BMPs** are practices that retain the WQV or a portion of the WQV, temporarily holding it before it infiltrates into the native soil. Any BMP that does not allow the WQV from entering a storm system or adjacent surface water body would qualify for infiltration/retention credit.
4. **Treatment BMPs** are practices that improve the water quality but do not reduce or retain the volume.

WQV Retained – In this column, list the amount of the WQV retained by each BMP used in the design. For example, if a project uses three separate infiltration trenches then each trench should be individually listed (under in the infiltration/retention section) and the WQV retained by each recorded in the cell where the "infiltration trench" row and the "WQV Retained" column intersect.

WQV Treated – In this column, list the amount of the WQV treated by each BMP used in the design. For example, if a project has incorporated two separate wet detention basins then each basin should be individually listed (under the "treatment" section) and the volume treated by each basin should be recorded in the cell where the "wet basin" row and the "WQV Treated" column intersect.

Designer insight – The amount of water that a Disconnection BMP or a Conveyance & Disconnection BMP can infiltrate might be limited to only a portion of the WQV retention design goal. In additional to infiltration, consider the amount of treatment the BMP provides to the portion of the WQV that cannot be retained. Include the amount of treatment under the WQV Treated column.

Section 4: Stormwater BMP Selection Summary (continued)

DCIA Captured (acres) – In this column, list the amount of directly connected impervious area (DCIA) that is captured by the BMP being proposed. DCIA Captured is the amount of surface area within the project limits that a) is impervious **and** b) drains to a BMP for retention and/or treatment that would otherwise of drained to a wetland or watercourse either directly or via a storm sewer system discharge.

DCIA Disconnection Credit (Percentage) – In this column, record the DCIA Disconnection Credit for the proposed BMP. DCIA Disconnection Credit is the percentage of DCIA directed to a BMP that can be considered disconnected. To find the DCIA Disconnection Credit percentage for different BMPs refer to the BMP one pagers which can be found on the CTDOT MS4 Webpage. (https://portal.ct.gov/DOT/PP_Envir/Water_Natural_Resources/CTDOT-MS4)

DCIA Disconnection Credit (Acres) – DCIA Disconnection Credit is the area directed to a BMP that can be considered disconnected. To find this number multiply the total amount of DCIA Captured (acres) by the DCIA Disconnection Credit percentage of the BMP.

Site Constraints: For each of the four categories of BMPs, select one or more site constraint from the drop down boxes. Site constraints are characteristics of the project location that prevent the selection of the corresponding type of BMP in the project's design. Selected site constraints must be consistent with the information provided in Section 2.

*Designer insight – If a BMP is included into a project, and if the **WQV design retention goal** is met (see Section 3), then a Site Constraint does not need to be selected for that BMP's category.*

Every project that affects drainage shall at least have completed the Worksheet with its FDP. The FDP-version will be considered the final version of the worksheet. All metrics extracted for the annual DEEP reports will come from the final FDP Worksheet. Save the FDP version of the Worksheet to the project's ProjectWise **310_Milestone_ Submissions/100%** folder.

CTDOT MS4 Project Design
Maximum Extent Practicable (MEP) Worksheet

Section 1: Project Information	**Project #:**	240229
	Title:	Residential Development
	Location:	Montville, CT

Section 2: Existing Conditions

EC1	Total Project Area		3.40 acres		
EC2	Pre-construction Directly Connected Impervious Area (DCIA):		0.00 acres	0.00 %	
EC3	Soil Infiltration Potential	Data Source: ☑Existing Report / Soils Map ☐Field Verified	☑Good/Fair	☐Poor	☐Mixed
EC4	Depth to Maximum Groundwater	☑TBD	to	ft below grade	
EC5	Depth to Bedrock	☑TBD	to	ft below grade	
EC6	Aquifer Protection Area? (from PNDF)		☐Yes	☑No	
EC7	MS4 Priority Area? (from PNDF)		☑Yes (See Below)	☐No	
	Check All That Apply ☐Urbanized Area ☐DCIA >11% ☐Impaired Waterbody (See Below)				
	Select All Impairments That Apply Cause Unknown Choose an Item Choose an Item				
EC8	Contamination known or suspected to be present? (From Environmental Compliance)		☐Yes	☑No	
EC9	Adjoining DOT ROW beyond project limits available for stormwater quality management		0 acres		

Section 3: Designed Conditions

	Water Quality Calculations	**30% Design**	**60% Design**	**90% Design**	**FDP**
DC1	WQV retention design goal ☑ Full ☐ 1/2"-WQV	ac-ft ☐ TBD	ac-ft	ac-ft	ac-ft
DC2	WQV goal ***retained*** (refer to page 2)	ac-ft	ac-ft	ac-ft	ac-ft
DC3	WQV goal ***treated*** (refer to page 2)	ac-ft	ac-ft	ac-ft	ac-ft
DC4	Total WQV *retained and treated*	0 **ac-ft**	0 **ac-ft**	0 **ac-ft**	0 **ac-ft**
DC5	Post-construction DCIA(acres)	ac. ☐ TBD	ac.	ac.	ac.
DC6	Pre-construction DCIA (refer to EC2 above)	ac.	ac.	ac.	ac.
DC7	Change in DCIA from pre- to post-construction *Can be positive (DCIA gained) or negative (DCIA lost)*	0 **ac.** ☐ **TBD**	0 **ac.**	0 **ac.**	0 **ac.**
	Date completed				
	Completed by (initials)				
	Reviewed by (initials)				

Notes:

Worksheet users should refer to the *CT DOT MS4 Project Design MEP Worksheet Instructions*

Section 4: Stormwater BMP Selection Summary						
Design Phase ☐30% ☐60% ☐90% ☐FDP	**WQV Retained (ac-ft)**	**WQV Treated (ac-ft)**	**DCIA Captured (Acres)**	**DCIA Disconnection Credit (%)**	**DCIA Disconnection Credit (acres)**	**Site Constraints**
Disconnection (Dispersion)						
						Choose an Item.
						Choose an Item.
						Choose an Item.
Conveyance (Swales / Channels)						
						Choose an Item.
						Choose an Item.
						Choose an Item.
Infiltration / Retention						
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
						Choose an Item.
Treatment						
						Choose an Item.
						Choose an Item.
						Choose an Item.
TOTAL	0	0	0	0	0	

Notes:

Worksheet users should refer to the *CT DOT MS4 Project Design MEP Worksheet Instructions.* Refer to the 2004 CT Stormwater Quality Manual for more information on BMP criteria and limitations.

APPENDIX E

Construction Site Environmental Inspection Report (CSEIR)

State of Connecticut
Department of Transportation
Construction Site Environmental Inspection Report

This Form Must Be Completed At Least Once A Week And Within Twenty Four (24) Hours Of The End Of A Storm Event That Is 0.1 inches Or Greater

General Information			
Project Number		**Date**	
Permit Number(s)		**Location**	
		Phone No.	
Project Engineer		**Chief Inspector**	
Contractor			
Describe present phase of construction/activities that are occurring			
Type of Inspection: ☐ Weekly ☐ Pre-storm event ☐During storm event ☐ Post-storm event			
Weather Information			
Has there been a storm event since the last inspection? ☐Yes ☐No **If yes, provide:**			
Storm Start Date & Time:	Storm Duration (hrs):	Type and Approximate Amount of Precipitation (in):	
Weather at time of this inspection? ☐ Clear ☐Cloudy ☐ Rain ☐ Sleet ☐ Fog ☐ Snowing ☐High Winds Temperature:			

Site-specific BMPs

- *Number the structural and non-structural BMPs on your site map and list them below (add as many BMPs as necessary). Carry a copy of the numbered site map for reference with you during your inspections.*

BMP Maintenance							
	BMP or Observation Site and Location	**BMPs Installed ?**	**BMP Maintenance Required?**	**Remedial Action Required and Date Contractor was Notified *ALL REMEDIAL ACTIONS MUST BE COMPLETED WITHIN 24 HOURS***	**Date Fixed**	**Photo Taken ?**	**Repeat Failure?**
1		☐Yes ☐No	☐Yes ☐No			☐Yes ☐No	☐Yes ☐No
2		☐Yes ☐No	☐Yes ☐No			☐Yes ☐No	☐Yes ☐No
3		☐Yes ☐No	☐Yes ☐No			☐Yes ☐No	☐Yes ☐No

Are there any sediment discharges to a regulated area occurring or have any occurred since the last inspection? ☐Yes ☐No

If yes, contact the District Environmental Coordinator immediately.

Describe the discharge including location, time identified, and the approximate amount of sediment. (on back)

Environmental Inspector: _____

Signature: _____ **Date:** _____

Reviewed by: _____

Signature: _____ **Date:** _____

APPENDIX F

Notice of Termination Form

Connecticut Department of
Energy & Environmental Protection
Bureau of Materials Management & Compliance Assurance
Water Permitting & Enforcement Division

General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities

Notice of Termination Form: Non-Solar Projects

This Notice serves as a request to terminate the below listed permit as well as any applicable Letter(s) of Credit.

Part I: Permittee Information

The below information is required in accordance with Section 6(b) of the General Permit.

1. Permit Number: GSN _____
2. Registrant: _____
3. Site Address: _____

   City/Town: _____ State: _____ Zip Code: _____
4. Date of completion of construction: _____

   Date all storm drainage structures were cleared of construction sediment and debris: _____

   Beginning and Ending Dates of post-construction inspections: _____

   Date of final stabilization inspection(s)*: _____

   Qualified Inspector who conducted the Final Stabilization Inspection: (This person must sign Part III) _____
5. Check the post-construction activity(ies)** at the site (check all that apply):

   ☐ Industrial ☐ Residential ☐ Capped Landfill

   ☐ Commercial ☐ Solar Array ☐ Other: _____

* The Final Stabilization Inspection must occur at least one full growing season after final stabilization has been achieved. A full growing season is defined as the timeframe encompassed by two consecutive full seeding seasons: April 1 through June 15, and August 15 through October 1. If final stabilization is achieved during a seeding season, the following seeding season will be considered the first full seeding season after final stabilization has been achieved.

** If the post-construction activity involves solar arrays, the Department may require that the "Solar Projects: Notice of Termination Form" be used. Any questions regarding the necessity of such a form for the project can be sent via email to DEEP.StormwaterStaff@ct.gov.

Locally Approvable Projects Must Complete the following Part II - *(Attach additional sheets as needed)*

Part II: Locally Approvable Post-Construction Inspection Certification

The below information is required in accordance with Section 5(b)(4)(C)(i) of the General Permit.

Certification by a Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional / District Representative

"I hereby certify that I am a qualified professional engineer / a qualified soil erosion and sediment control professional / a representative of the District in which the site is located as defined in Section 2 of the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (general permit). I am familiar with the site described in this Notice of Termination and the requirements of the general permit. I certify, based on my personal inspection of the site pursuant to Section 6(a) of the general permit that all post-construction measures have been installed as specified in the permittee's Stormwater Pollution Control Plan and in accordance with Section 5(b)(2)(C) of the general permit and that all such measures have been cleaned of construction sediment and debris. I understand that this certification is part of a registration submitted in accordance with section 22a-430b of Connecticut General Statutes and is subject to the requirements and responsibilities for a qualified professional in such statute. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

Signature of Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional / Representative of the District	Date
Printed Name of Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional / Representative of the District	Title

Check off the qualifications of the signatory of the above part:

☐ Qualified Professional Engineer ☐ Qualified Soil Erosion and Sediment Control Professional ☐ Representative of the District

Locally Exempt Projects Must Complete the following Part II - *(Attach additional sheets as needed)*

Part II: Locally Exempt Post-Construction Inspection Certification

The below information is required in accordance with Section 5(b)(4)(C)(ii) of the General Permit.

Certification by a Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional

"I hereby certify that I am a qualified professional engineer / a qualified soil erosion and sediment control professional as defined in Section 2 of the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (general permit). I am familiar with the site described in this Notice of Termination and the requirements of the general permit. I certify, based on my personal inspection of the site pursuant to Section 6(a) of the general permit that all post-construction measures have been installed as specified in the permittee's Stormwater Pollution Control Plan and in accordance with Section 5(b)(2)(C) of the general permit and that all such measures have been cleaned of construction sediment and debris. I understand that this certification is part of a registration submitted in accordance with section 22a-430b of Connecticut General Statutes and is subject to the requirements and responsibilities for a qualified professional in such statute. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

Signature of Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional	Date
Printed Name of Qualified Professional Engineer / Qualified Soil Erosion and Sediment Control Professional	Title

Check off the qualifications of the signatory of the above part:

☐ Qualified Professional Engineer ☐ Qualified Soil Erosion and Sediment Control Professional

State Agency Projects Must Complete the following Part II - (Attach additional sheets as needed)

Part II: State Agency Post-Construction Inspection Certification

The below information is required in accordance with Section 5(b)(4)(C)(iii) of the General Permit.

Certification by a DOT District Engineer or his/her designee / a DOT District Environmental Coordinator / a designated employee of another state agency

"I hereby certify that I am a DOT District Engineer or his/her designee / a DOT District Environmental Coordinator / a designated employee of another state agency as defined in Section 2 of the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (general permit). I am familiar with the site described in this Notice of Termination and the requirements of the general permit. I certify, based on my personal inspection of the site pursuant to Section 6(a) of the general permit that all post-construction measures have been installed as specified in the permittee's Stormwater Pollution Control Plan and in accordance with Section 5(b)(2)(C) of the general permit and that all such measures have been cleaned of construction sediment and debris. I understand that this certification is part of a registration submitted in accordance with section 22a-430b of Connecticut General Statutes and is subject to the requirements and responsibilities for a qualified professional in such statute. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

Signature	Date
Printed Name	Title

Check off the qualifications of the signatory of the above part:

☐ Qualified Professional Engineer ☐ Qualified Soil Erosion and Sediment Control Professional ☐ Representative of the District

All Projects Must Complete the following Part III - *(Attach additional sheets as needed)*

Part III: Final Stabilization Inspection Certification

The below information is required in accordance with Section 5(b)(4)(D) of the General Permit.

Certification by a Qualified Inspector

"I hereby certify that I am a qualified inspector as defined in Section 2 of the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (general permit). I am familiar with the site described in this Notice of Termination and the requirements of the general permit. I certify, based on my personal inspection of the site pursuant to Section 6(a) of the general permit that the site has been stabilized, as defined in Section 2 of the general permit, for a period of no less than one full growing season following the cessation of construction activities. I further certify that there is no active erosion or sedimentation present on site and no disturbed areas remain exposed. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

Signature of Qualified Inspector	Date
Printed Name of Qualified Inspector	Title

All Projects Must Complete the following Part IV - *(Attach additional sheets as needed)*

Part IV: Permittee Certification

The below information is required in accordance with Section 5(b)(4)(D) of the General Permit.

Certification by the Permittee

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with section 22a-6 of the Connecticut General Statutes, pursuant to section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."

Signature of Permittee	Date
Printed Name of Permittee	Title

All Projects Must Complete the following Part V - *(Attach additional documentation as needed)*

Part V: Additional Submittals

The following attachments are required to be submitted along with the Notice of Termination Form:

☐ Post-Construction Inspection Report (must contain photos with time stamps)

☐ Final Stabilization Inspection Report (must contain photos with time stamps)

Complete and submit this form in accordance with the general permit (DEEP-WPED-GP-015) to ensure the proper handling of the termination. Print or type unless otherwise noted.

Submit this Notice of Termination Form to the address below, as well as via email to DEEP.StormwaterStaff@ct.gov:

WATER PERMITTING AND ENFORCEMENT DIVISION/STORMWATER GROUP
DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127

APPENDIX D

CTDOT MS4 Project Design Maximum Extent Practicable Worksheet

CTDOT MS4 Project Design MEP Worksheet Instructions

The CTDOT MS4 Project Design MEP Worksheet is intended to be a living document that follows a project throughout its design. The primary intent of the Worksheet is to track the required metrics that must be reported to CT DEEP annually in order to comply with the DOT MS4 General Permit. It also serves as the required documentation to demonstrate that stormwater mitigation was pursued in a project's design to the maximum extent practical.

Section 1: Project Information

Indicate the Project, Number, Title and Location.

Section 2: Existing Conditions

Before the end of Preliminary Design, fill out the requested information available regarding a project site's existing conditions. As missing or updated information (e.g., soil infiltration potential, depth to groundwater, depth to bedrock) becomes available during later design phases, edit the Existing Conditions accordingly.

EC1. Total Project Area – Total Project Area consists of all areas needed to complete the project which generally consists of the limits of disturbance with an appropriate buffer and includes any lay down areas. The project area could also include abutting DOT owned land where there are no proposed construction activities and areas that will not be impacted by the project.

Designer Insight - Total project area will be used in subsequent calculations for Directly Connected Impervious Area (DCIA) and determining the project's Water Quality Volume. (See instructions for EC2 and DC1, below.)

EC2. Pre-Construction Directly Connected Impervious Area (DCIA) for the Project - Determine the amount of pre-construction DCIA in acres and as a percentage of the overall project area. DCIA is surface area within the project limits that a) is impervious, **and** b) drains to a wetland or watercourse either directly or via a storm sewer system discharge. Impervious cover includes pavement, sidewalks, roofs, exposed ledge, gravel roads/parking ($C \geq 0.7$). The %-DCIA will typically remain consistent as the design progresses unless the total project area changes.

*Designer Insight - The primary purpose of %-DCIA is to determine the **WQV retention design goal**, which will be the minimum goal for impervious area disconnections (see instructions for DC1, below.)*

EC3. Soil Infiltration Potential – Select either *Existing Report/Soils Map* or *Field Verified* as the source of the soils information. Choose from *Good/Fair, Poor* or *Mixed* as the best overall description of the project's surficial geology ability to infiltrate. Generally, soils with an infiltration rate of at least 0.3 in/hr are considered as *Good/Fair.* Retention BMPs will need to be designed to infiltrate all of the ponded water within 48 hours. Select *Mixed* if the soil conditions vary throughout a large project area.

Designer Insight - The soil infiltration potential will be used to inform whether infiltration Best Management Practices (BMPs) are feasible. Any existing information (such as prior soils reports) for the project area should be reviewed. If no prior, area-specific soil information is available, utilize the Soil Drainage Class map from CTECO to identify preliminary locations. ***http://www.cteco.uconn.edu/map_catalog.asp?****. Areas classified as* Somewhat Poorly Drained, Poorly Drained or Very Poorly Drained Areas *can be noted as "Poor" on the Worksheet and do not warrant further consideration for infiltration BMPs. All other areas should be considered as "Good/Fair" and, unless other factors prohibit infiltration, actual infiltration rates will require field verification.*

Section 2: Existing Conditions (continued)

EC4. Depth to Groundwater – At the start of design, check the "TBD" box unless existing data from a previous project or other sources is available. As design progresses and as subsurface investigations are completed, indicate the depth to maximum groundwater as a range over the entire project area. Maximum groundwater is the level to which groundwater rises for a duration of one month or longer during the wettest season of the year. Report zero as the low end of the range if wetlands or standing water are present within the project limits. If depth to groundwater is deeper than the depth to bedrock, indicate as "BR" (below rock). If seasonal variations in depth to groundwater are known, defer to the seasonal high for this Worksheet.

EC5. Depth to Bedrock – At the start of design, check TBD unless existing data from a previous project or other sources is available. As design progresses and as subsurface investigations are completed, indicate the depth to bedrock as a range over the entire project area. Report zero as the low end of the range if bedrock outcrops are present within the project limits.

Designer Insight - The purpose of the depth to groundwater and depth to bedrock is to inform and document whether shallow groundwater or shallow bedrock will make it unfeasible to include infiltration/retention BMPs (see page 2 of DOT MS4 Worksheet) as part of the design.

EC6. Aquifer Protection Area - Indicate (Y/N) if any part of the project falls within an aquifer protection area. This information will be reported to the design unit on the PNDF provided by Office of Environmental Planning.

Designer Insight – If the project is located within an Aquifer Protection Area, then this is a limiting condition to be documented with respect to the infiltration/retention BMPs listed on page 2. Infiltration/retention BMPs should not be pursued in these areas in order to protect groundwater quality from potential contaminants associated with transportation-related spills or other releases.

EC7. MS4 Priority Area - Indicate (Y/N) if any part of the project falls within an "MS4 Priority Area." If yes, indicate which of the three types of priorities (check all that apply). If "Impaired Waterbody" is checked, pick the impairment(s) from the list of drop down boxes. This information will be reported to the design unit on the PNDF provided by OEP.

Designer Insight – Identifying the project's location relative to MS4 Priority Areas is a requirement of the MS4 permit. If a receiving water is impaired, identifying the specific impairment will help inform the suitability of certain BMPs. Refer to the CTDOT BMP Matrix.

EC8. Contamination known or suspected to be present? Indicate (Y/N) whether soil and/or groundwater contamination is known or suspected to be present. Check "Yes" if the Task 100 Environmental Hazardous Screening Form provided by DOT Environmental Compliance recommended that a Task 210 Subsurface Investigation be performed.

Designer Insight – If contaminated soil and/or groundwater is known or suspected to be present, then careful consideration must be made before deciding whether infiltration/retention BMPs are feasible. If the surrounding land use is intensely developed and public drinking water is readily available, or if existing groundwater quality is known to be unsuitable for drinking water supply without treatment, or if remediation is planned as part of the project (for reasons other than BMP implementation), then an infiltration/retention BMP may still be appropriate.

Section 2: Existing Conditions (continued)

EC9. Adjoining DOT ROW beyond project limits available for stormwater quality management. Indicate the approximate acreage of potentially suitable DOT property that is *laterally* beyond the project limit. This can include:

- Additional property in the DOT ROW that was not included in the Total Project Area;
- Adjacent parcels presently owned by DOT;
- Excess property from a parcel to be acquired for the project for reasons other than MS4.

Include only the amount of undeveloped area beyond the project limits. Attach a sketch depicting these areas.

Designer Insight – The available DOT-owned area surrounding a project is a general metric to help inform the possibility of locating stormwater BMPs near the project site if the area directly within the project limits is not sufficient. It is understood that the lateral distance from the project limit to the ROW limit can vary significantly, especially for linear projects that extend over a long distance. Include other relevant information related to additional area in the Notes box at the bottom of the page.

Section 3: Designed Conditions

This portion of the Worksheet was established based on a typical 30/60/90/FDP design process. At each phase, the progression of key metrics associated with a stormwater quality design are tracked by the Worksheet. It is understood that not every project will follow this exact design process. Any information that has not changed compared to what was recorded during the previous design phase review can be indicated as such (e.g., "no change" or "same") However, the FDP column must contain the final values.

Section 3 will rely heavily on the information recorded on Section 4: Stormwater BMP Selection Summary. As such, Section 4 will also need to be completed and updated with each corresponding milestone design review. Refer to the instructions below on how to complete Section 4.

At Design Approval, complete Section 3's 30%-Design Phase column based on the best available information. If a project is using intermediate design reviews, complete the 60%-Design Phase column and/or the 90%-Design Phase column during the respective milestone reviews. These are working-versions of the Worksheet. Save the working versions of the Worksheet to the project's appropriate **310_Milestone_ Submissions** folder in ProjectWise.

Designer Insight – Data from a project's drainage report should be used when available. Review the Worksheet to ensure the reported metrics are consistent with the drainage report.

At the Final Design Plan milestone, complete the FDP Phase column. Upon completion of this column, this will be the record version of the project's Worksheet. Save the Worksheet to the project's ProjectWise **310_Milestone_ Submissions/100%** folder.

DC1. Water Quality Volume (WQV) retention design goal (acre-feet) – Determine the **WQV retention design goal** by first calculating the Water Quality Volume (WQV) for the project. The WQV is the volume of runoff generated across a site by one inch (1") of rainfall. The proposed impervious area ($C \geq 0.7$) must be known to determine the WQV.

WQV = (1-inch)(R)(A)/12 WQV = water quality volume (ac-ft)
R = volumetric runoff coefficient = 0.05+0.009(I)
I = percent impervious cover for post-construction condition as designed ($C \geq 0.7$).
A = Total DOT-Owned Project Area in acres.

Designer Insight - The percent impervious cover (I) in the calculation above is the <u>total</u> impervious area, not just that which is directly connected. This is different from the DCIA area computed for the existing condition (EC2), which excludes surfaces that do not drain to a wetland or watercourse directly or via a storm sewer discharge.

Section 3: Designed Conditions (continued)

The equation above calculates a retention volume based on 1" of rainfall. It is not necessarily the WQV goal for the project. The project's **WQV retention design goal** is determined based on the percentage of DCIA at the pre-construction stage (EC2). If the pre-construction DCIA is greater or equal to 40% of the project area, then project's retention goal will be ½ x Water Quality Volume (WQV). If the preconstruction DCIA is less than 40%, then the retention goal will be 1.0xWQV, or simply the WQV. For many redevelopment projects, the pre-construction DCIA percentage will be above 40% and the retention design goal will be equal to ½ the WQV.

*Designer insight – Designers should note that the Construction Stormwater General Permit bases the WQV goal on the project's percentage of **total impervious area**. The DOT's MS4 Permit uses the percentage of **directly connected impervious area** to determine the WQV goal. This difference means some projects will require retention/treatment of ½ the WQV for the Construction Permit but the full WQV for compliance with the MS4 Permit.*

If possible, an estimate of the retention goal should be calculated during preliminary design in order to approximate the extent of best management practices that will be needed. If the extent of impervious cover is not fully known by Design Approval, then the WQV cannot be calculated and the TBD box should be checked. Provide the information during a later design phase. An accurate value must always be provided for the FDP milestone.

DC2. WQV Goal *Retained* – Copy the total ***WQV Retained*** value column in Section 4: Stormwater BMP Selection Summary. Refer to Section 4 of these instructions.

DC3. WQV Goal *Treated* – Copy the total ***WQV Treated*** value column in Section 4: Stormwater BMP Selection Summary. Refer to Section 4 of these instructions.

*Designer insight – Incorporate run-off retention BMPs to the maximum extent practical as site conditions allow, documenting site constraints on page 2 that are consistent with the Existing Condition information provided on page 1. If the amount of run-off retained in the design condition fails to meet the **WQV retention design goal** (DC1), determine the shortfall and evaluate the use of treatment BMPs to make up the difference. Treatment without infiltration should only be incorporated into the design when runoff retention can be demonstrated to be unfeasible.*

Designer insight - It is acceptable to take credit for disconnecting off site DCIA areas that drain to on-site BMPs.

DC4. Total WQV *Retained* or *Treated* – Add the WQV Retained per 1" of Rainfall (DC2) to the WQV Treated *(DC3)* and indicate the total.

*Designer insight – The **Total WQV Retained or Treated** is compared to the **WQV retention design goal** (DC1) to determine if the project has met the intended run-off reduction target.*

If DC4 is less than DC1, review any adjoining DOT ROW beyond the project limits (identified in EC9) where retention BMPs (primarily) or treatment BMPs (secondarily) could be constructed in order to meet the full **WQV retention design goal (DC1).** Incorporate the retention/treatment of the alternative site(s) and update page 2.

If DC4 is still less than DC 1 after evaluating alternative sites and incorporating BMPs outside the project limits, then describe any limiting factors that make alternative locations unfeasible for BMPs in the Notes box on the bottom of page 1. Review the limiting site constraints in Section 4 with Section 1: Existing Conditions for accuracy and consistency.

Designer insight – For projects that do not meet the required WQV retention design goal, the MS4 Program will be evaluating future water quality improvement projects within the same local drainage basins or in other priority areas to mitigate the shortfall from the original project.

Section 3: Designed Conditions (continued)

DC5. Post-construction DCIA (acres) – Determine the amount of post-construction DCIA. Here, DCIA is surface area within the project limits that a) is impervious **and** b) drains to a wetland or watercourse either directly or via a storm sewer system discharge. Impervious cover includes pavement, sidewalks, roofs (Facilities projects), exposed ledge, gravel roads/parking ($C \geq 0.7$). Do not include turf, temporary pavement areas or temporary access roads. If the post-construction DCIA is unknown during the Preliminary Design phase, check TBD and provide the information at a later design phase.

*Designer insight – For the Post-Construction DCIA value, do not count impervious areas that will drain to BMPs designed to retain and/or treat enough runoff for the area to have met the **WQV retention design goal**. Areas not directed to a qualifying BMP must be counted as DCIA. The goal is to reduce the amount of DCIA (see DC7 , below.)*

DC6. Pre-construction DCIA (acres) – Copy the Pre-Construction DOT-Owned Directly Connected Impervious Area (DCIA) from line EC2.

DC7. Change in DCIA from pre- to post-construction (acres) - Subtract the **Pre-construction *DCIA*** (DC6) from the Post-construction *directly connected* impervious area (DC5).

A negative value indicates that the amount of DCIA will decrease.

A positive value indicates that the project will cause DCIA to increase. Review the limiting site constraints in Section 4 with the recorded existing conditions in Section 1 for accuracy and consistency.

Designer insight – The DOT MS4 General Permit has a statewide compliance metric to reduce DOT DCIA by 2% within five years compared to a July 2019 baseline. While a project will not be in violation if the maximum extent practical falls short of the permit requirements for DCIA and runoff reductions, any additional DCIA added by projects will make meeting the 2%-reduction that much harder.
Designer insight – Since BMPs may have drainage areas that extend beyond the chosen project area, it is acceptable to take credit for disconnecting off site DCIA areas that drain to on-site BMPs and compensate for DCIA remaining on-site. In rare cases it will be possible to disconnect more DCIA than exists within the project area.

Section 4: Stormwater BMP Selection Summary

This section of the Worksheet is intended to present the designer with several specific BMP types that are expected to be the most feasible for transportation-related projects. Refer to the CTDEEP's 2004 Connecticut Stormwater Quality Manual for other acceptable BMPs and their respective design criteria. Innovative BMPs not listed in the Connecticut Stormwater Quality Manual are also encouraged so long as good engineering judgement is used when assigning retention and treatment capacities.

Designer insight – Designers can refer to the BMP one pagers and the examples that have been prepared on various BMPs for guidance on their design. The examples include Natural Dispersion, Grass Channel , Check Dam (Supplemental), Infiltration Trench and Infiltration Basin.

The key metrics associated with a stormwater quality design are tracked by the Worksheet as the project's design progresses.

Complete the Stormwater BMP Selection Summary at each milestone design review. Indicate the current design review phase by checking off the appropriate box in the upper left corner.

Designer insight – While Section 3 (Design Conditions) and Section 4 (Stormwater BMP Selection Summary) were established based on a typical 30/60/90/FDP design process, it is understood that not every project will follow this exact design process and that a project's metrics may not change from one phase to the next.

At the project's Design Approval, potential opportunities to improve water quality with stormwater BMPs should be identified with preliminary locations shown on project plans.

Design phases after Design Approval will need to verify any preliminary assumptions used in siting and sizing BMPs.

Examine all limiting factors for each BMP (see Site Constraints for each type of stormwater management measure listed on the designer worksheet).

Section 4: Stormwater BMP Selection Summary (continued)

- Permeability/percolation information
- Depth to maximum groundwater
- Depth to bedrock

Update Section 1 as needed based on the field investigations.

Designer insight – A best management practice that does not meet every design requirement listed in the Stormwater Quality Manual will still provide a benefit, albeit not the full possible extent. Document the assumptions used in determining the proportional amount of runoff retainage and/or treatment that the BMP will provide given its site constraints.

The BMPs listed under the Stormwater BMP Selection Summary are grouped into four categories:

1. **Disconnection BMPs** promote flow dispersion and reduce flow velocities in order to allow the downstream terrain to absorb and/or filter the runoff. Consider the following factors of the downstream terrain when determining its capacity to retain or treat: slope, soil type, and distance to the nearest surface water or wetland. Consider augmenting the downstream terrain to retain or treat a greater volume of runoff. For example, soil amendments can be used to increase infiltration capacity or certain seed mixes could be specified to promote beneficial vegetation.
2. **Conveyance & Disconnection BMPs** remove pollutants from the runoff as it is collected and conveyed away from the transportation infrastructure. The slope, soil type, and length of the conveyance will generally dictate its capacity to retain and/or treat. Also consider the downstream terrain, if any, between the conveyance's outfall and the nearest surface water or wetland.

*Designer insight – For a Disconnection BMPs and Conveyance & Disconnection BMPs to meet the **WQV retention design goal**, they may need to be coupled with one or more other BMPs designed per the criteria in the CT DEEP Stormwater Quality Manual.*

3. **Infiltration/Retention BMPs** are practices that retain the WQV or a portion of the WQV, temporarily holding it before it infiltrates into the native soil. Any BMP that does not allow the WQV from entering a storm system or adjacent surface water body would qualify for infiltration/retention credit.
4. **Treatment BMPs** are practices that improve the water quality but do not reduce or retain the volume.

WQV Retained – In this column, list the amount of the WQV retained by each BMP used in the design. For example, if a project uses three separate infiltration trenches then each trench should be individually listed (under in the infiltration/retention section) and the WQV retained by each recorded in the cell where the "infiltration trench" row and the "WQV Retained" column intersect.

WQV Treated – In this column, list the amount of the WQV treated by each BMP used in the design. For example, if a project has incorporated two separate wet detention basins then each basin should be individually listed (under the "treatment" section) and the volume treated by each basin should be recorded in the cell where the "wet basin" row and the "WQV Treated" column intersect.

Designer insight – The amount of water that a Disconnection BMP or a Conveyance & Disconnection BMP can infiltrate might be limited to only a portion of the WQV retention design goal. In additional to infiltration, consider the amount of treatment the BMP provides to the portion of the WQV that cannot be retained. Include the amount of treatment under the WQV Treated column.

Section 4: Stormwater BMP Selection Summary (continued)

DCIA Captured (acres) – In this column, list the amount of directly connected impervious area (DCIA) that is captured by the BMP being proposed. DCIA Captured is the amount of surface area within the project limits that a) is impervious **and** b) drains to a BMP for retention and/or treatment that would otherwise of drained to a wetland or watercourse either directly or via a storm sewer system discharge.

DCIA Disconnection Credit (Percentage) – In this column, record the DCIA Disconnection Credit for the proposed BMP. DCIA Disconnection Credit is the percentage of DCIA directed to a BMP that can be considered disconnected. To find the DCIA Disconnection Credit percentage for different BMPs refer to the BMP one pagers which can be found on the CTDOT MS4 Webpage. (https://portal.ct.gov/DOT/PP_Envir/Water_Natural_Resources/CTDOT-MS4)

DCIA Disconnection Credit (Acres) – DCIA Disconnection Credit is the area directed to a BMP that can be considered disconnected. To find this number multiply the total amount of DCIA Captured (acres) by the DCIA Disconnection Credit percentage of the BMP.

Site Constraints: For each of the four categories of BMPs, select one or more site constraint from the drop down boxes. Site constraints are characteristics of the project location that prevent the selection of the corresponding type of BMP in the project's design. Selected site constraints must be consistent with the information provided in Section 2.

*Designer insight – If a BMP is included into a project, and if the **WQV design retention goal** is met (see Section 3), then a Site Constraint does not need to be selected for that BMP's category.*

Every project that affects drainage shall at least have completed the Worksheet with its FDP. The FDP-version will be considered the final version of the worksheet. All metrics extracted for the annual DEEP reports will come from the final FDP Worksheet. Save the FDP version of the Worksheet to the project's ProjectWise **310_Milestone_ Submissions/100%** folder.