

LEGEND:

- N/F NOW OR FORMERLY
- TREE LINE
- - - EXISTING CONTOUR
- - - EXISTING CONTOUR
- △ WETLAND FLAG
- 99X9 SPOT ELEVATION
- PROPOSED PLANTING AREA

EDGE OF BORDERING VEGETATED WETLAND (DELINEATED BY B&C ASSOCIATES)

MEAN ANNUAL HIGH WATER (DELINEATED BY B&C ASSOCIATES)

PROPOSED PUMP HOUSE SLAB=151.00

PROPOSED PLANTING AREA (SEE NOTE 3)

100' BUFFER ZONE

PROPOSED INFILTRATION BASIN

PROPOSED ANCHOR TRENCH (SEE DETAIL)

15" PERFORATED ADS N-12 L=127', TO BE SET LEVEL

PROPOSED 24" OUTLET W/TRASH RACK AT INLET RIM=148.00 15" INV. OUT=138.00

PROPOSED EMERGENCY OVERFLOW WEIR EL.=149.00

15" ADS N-12 WT L=53', S=0.031

15" FLARED END=136.00 PROVIDE 3-6" RIP-RAP AT OUTLET

PROPOSED OVERFLOW TRENCH L=129' (SEE INFILTRATION BASIN DETAIL)

EXISTING EROSION CONTROL

15" ADS N-12 L=19', S=0.021

OUTLET STRUCTURE RIM=138.25

PROPOSED EMERGENCY OVERFLOW WEIR EL.=138.50

EDGE OF BORDERING VEGETATED WETLAND

RELOCATE SILTATION BARRIER (APPROX. 5' FROM EXIST. LOCATION IN THIS AREA ONLY)

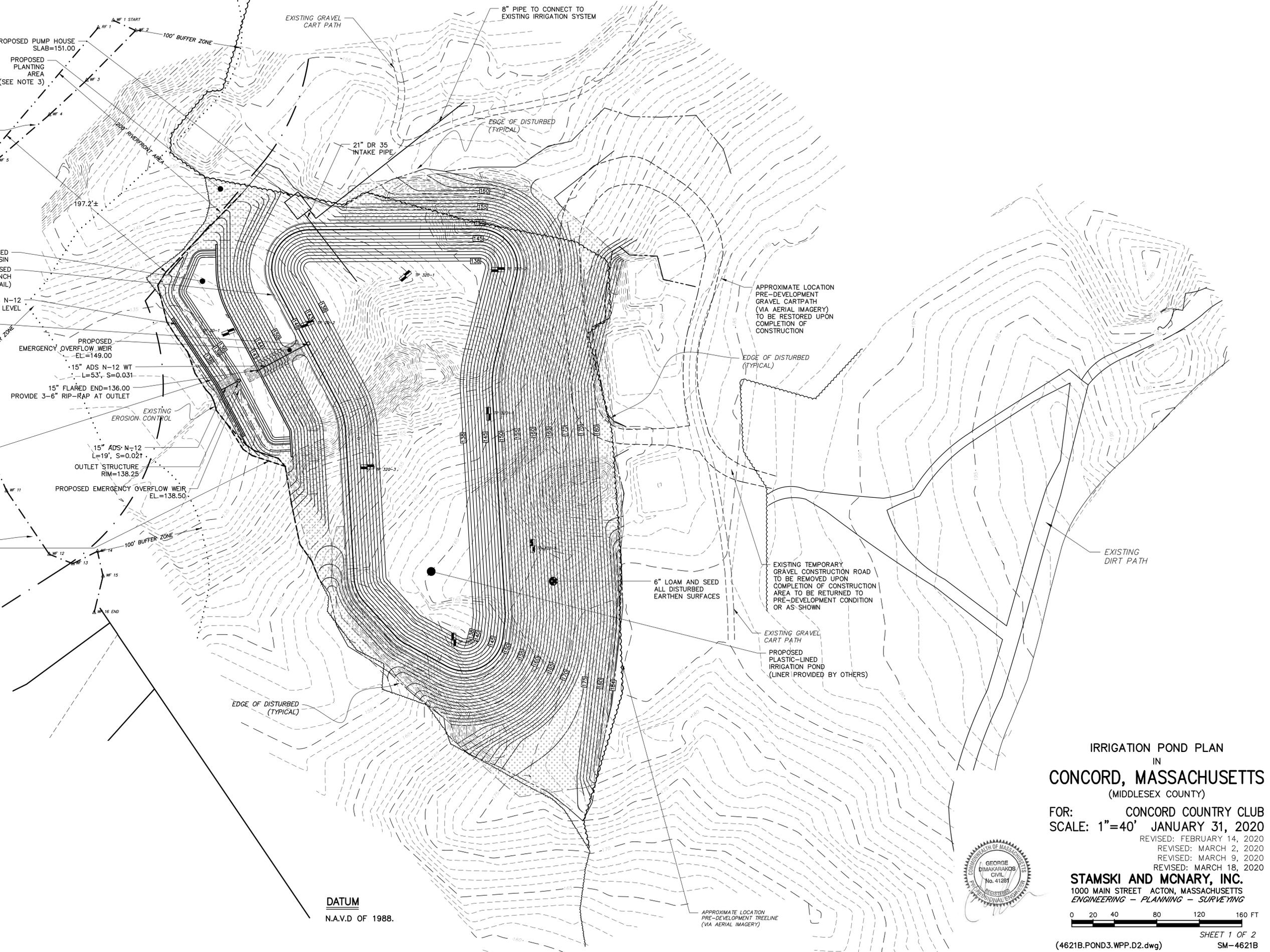
100' BUFFER ZONE

EDGE OF DISTURBED (TYPICAL)

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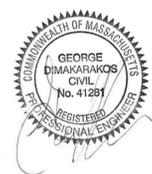
EDGE OF DISTURBED (TYPICAL)



DATUM
N.A.V.D OF 1988.

IRRIGATION POND PLAN
IN
CONCORD, MASSACHUSETTS
(MIDDLESEX COUNTY)

FOR: **CONCORD COUNTRY CLUB**
SCALE: 1"=40' **JANUARY 31, 2020**
REVISED: FEBRUARY 14, 2020
REVISED: MARCH 2, 2020
REVISED: MARCH 9, 2020
REVISED: MARCH 18, 2020

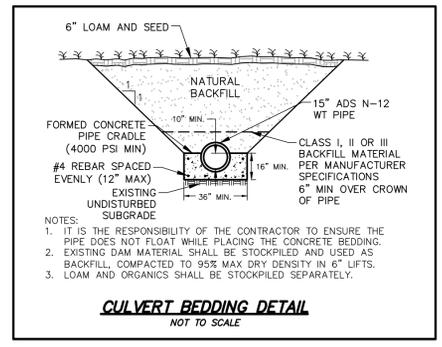
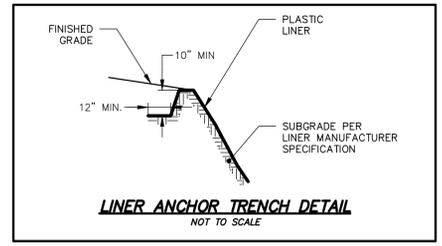
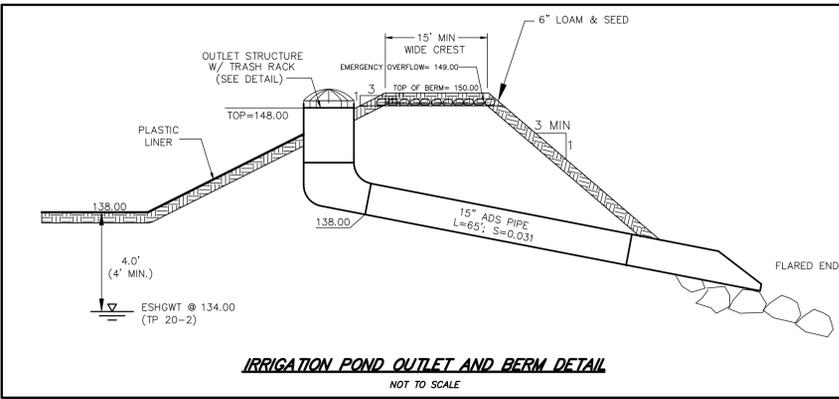
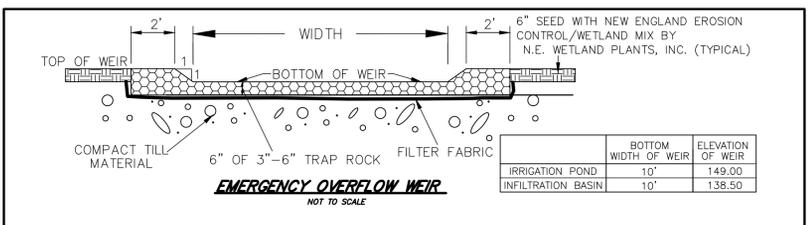
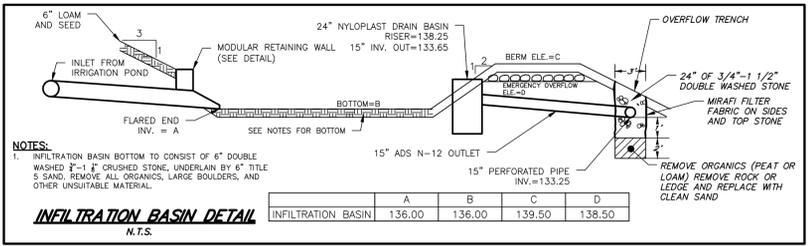


STAMSKI AND MCNARY, INC.
1000 MAIN STREET ACTON, MASSACHUSETTS
ENGINEERING - PLANNING - SURVEYING



DRAINAGE SYSTEM OPERATION AND MAINTENANCE PLAN

- BMP OWNER:** CONCORD COUNTRY CLUB
246 OLD ROAD TO NINE ACRE CORNER
CONCORD, MA 01742
- PARTIES RESPONSIBLE FOR THE MAINTENANCE OF THE STORM WATER MANAGEMENT SYSTEM:**
DURING CONSTRUCTION: APPLICANT - CONCORD COUNTRY CLUB
246 ORVAC
CONCORD, MA 01742
AFTER CONSTRUCTION: THE APPLICANT SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE STORMWATER MANAGEMENT SYSTEM.
- SCHEDULE FOR INSPECTION AND MAINTENANCE:**
INFILTRATION BASINS:
PREVENTATIVE MAINTENANCE SHOULD BE PERFORMED AT LEAST TWICE A YEAR, AND IDEALLY SHOULD BE REMOVED FROM THE SEDIMENT FOREBAY AFTER EVERY MAJOR STORM EVENT. SEDIMENT SHALL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND FEDERAL GUIDELINES. ONCE ONLINE, THE BASIN SHALL BE INSPECTED AFTER EVERY MAJOR STORM EVENT (1" IN 24 HOURS) FOR THE FIRST 3 MONTHS THEREAFTER. THE BASIN SHOULD BE INSPECTED AT LEAST TWICE PER YEAR. IMPORTANT ITEMS TO CHECK FOR INCLUDE: DIFFERENTIAL SETTLEMENT, CRACKING, EROSION, LEAKAGE, OR TREE GROWTH ON THE EMBANKMENTS, CONDITION OF RIPRAP, SEDIMENT ACCUMULATION, AND HEALTH OF THE TURF. NOW THE SIDE SLOPES AND EMBANKMENT AND CLEAN THE EMERGENCY SPILLWAYS AT LEAST TWICE PER YEAR. GRASS CLIPPINGS AND ACCUMULATED ORGANIC MATTER SHOULD BE REMOVED TO PREVENT THE FORMATION OF AN IMPERVIOUS ORGANIC MAT. SCARIFY BOTTOM AND ADD ADDITIONAL SAND IF NECESSARY.
OVERFLOW TRENCH:
THE TRENCH SHALL BE INSPECTED ANNUALLY. THE FILTER FABRIC SHALL BE INSPECTED FOR EXCESSIVE SEDIMENT BUILT UP. IF APPRECIABLE AMOUNTS OF SEDIMENT ARE OBSERVED, THE TOP LAYER OF STONE SHALL BE MOVED ASIDE AND WASHED BEFORE BEING REPLACED OVER THE PERFORATED PIPE.
EMERGENCY CONTACTS:
IN THE EVENT OF A HAZARDOUS MATERIALS SPILL ON THE SITE THE FOLLOWING PARTIES SHALL BE CONTACTED:
FIRE DEPARTMENT: PH: 978-318-3488
RECORDS:
THE OWNER SHALL MAINTAIN AN INSPECTION LOG OF ALL ELEMENTS OF THE STORM WATER MANAGEMENT PLAN. THE OWNER SHALL MAINTAIN A MAINTENANCE LOG DOCUMENTING THE INSPECTION AND MAINTENANCE OF THE DRAINAGE STRUCTURES UNDER THEIR CONTROL. A COPY OF THE EROSION CONTROL AND STORM WATER MAINTENANCE PLAN AND INSPECTION LOGS SHALL BE KEPT ON SITE AT ALL TIMES.

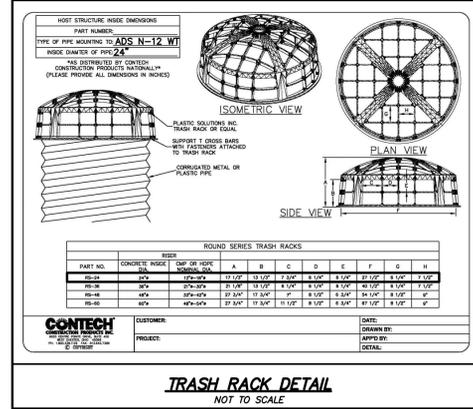
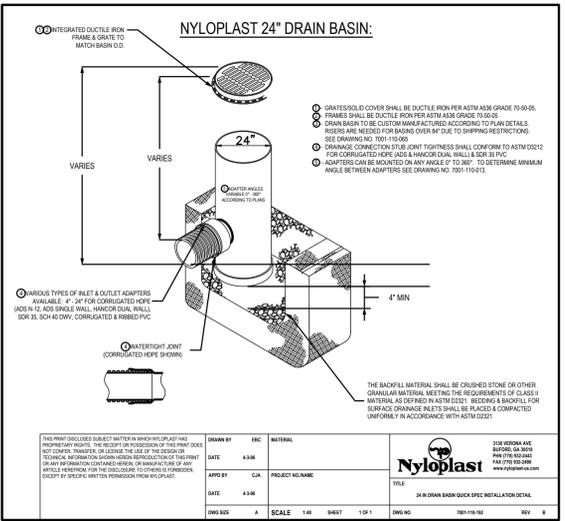
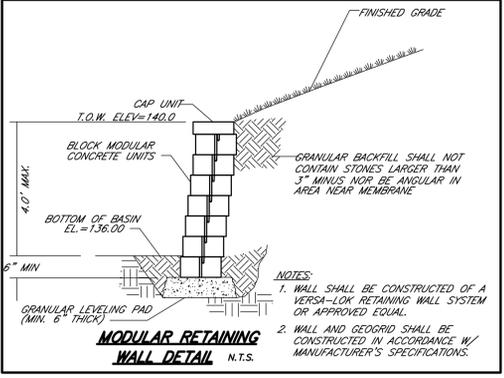


EROSION AND SEDIMENTATION CONTROL NOTES

- THE LIMITS OF WORK SHALL BE MARKED IN THE FIELD PRIOR TO THE RETURN TO WORK.
- ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE IMPLEMENTED PRIOR TO RETURN TO ANY WORK ON THE SITE. SILTATION BARRIER AND SILT FENCE SHALL BE PLACED IN ALL AREAS AS SHOWN ON ALL THE PLANS AND IN ANY OTHER AREAS AS DETERMINED NECESSARY DURING CONSTRUCTION.
- ALL SOIL STOCKPILES SHALL HAVE EROSION CONTROL MEASURES AROUND THEIR EDGES AT ALL TIMES. SOIL STOCKPILES SHALL BE COVERED WITH TEMPORARY VEGETATION OR FASTENED TAUPALUM SHEETS.
- THE DRAINAGE SYSTEM SHALL BE CONSTRUCTED DURING THE EARLIEST STAGES OF THE PROJECT IN ORDER TO COLLECT RUNOFF AND SEDIMENT.
- ALL CATCH BASINS IN WILLIAMS ROAD SHALL BE PROTECTED WITH SILT SACKS DURING CONSTRUCTION.
- ALL CUT AND FILL SLOPES SHALL BE IMMEDIATELY COVERED WITH 6" OF LOAM AND SEEDING DURING THE GROWING SEASON (APRIL 1 TO NOVEMBER 1) OR COVERED WITH HAYMULCH DURING THE NON-GROWING SEASON (NOVEMBER 1 TO APRIL 1), UNLESS OTHERWISE INDICATED. ALL DISTURBED AREAS SHALL RECEIVE 6" OF LOAM AND BE SEEDED TO PREVENT EROSION.
- THE DRAINAGE BASIN SHALL BE CLEANED FOLLOWING CONSTRUCTION AND TWICE ANNUALLY THEREAFTER. UPON ACCUMULATION OF 6" OF SEDIMENT, THE DRAINAGE BASIN SHALL BE CLEANED.
- THE SILTATION BARRIER SHALL BE MAINTAINED UNTIL VEGETATIVE COVER HAS BEEN SUITABLY ESTABLISHED AND GRADED SLOPES ARE STABLE.
- INSPECTION/MAINTENANCE:**
- THE SITE CONTRACTOR IS RESPONSIBLE TO CLEAN UP ANY SEDIMENT WHICH ERODES FROM THE SITE INTO ANY ADJACENT PUBLIC WAY, PARTICULARLY WILLIAMS ROAD, OR ABUTTING PROPERTY IMMEDIATELY UPON DISCOVERY.
- THE CONTRACTOR SHALL FOLLOW STANDARD PRACTICE AND LOAM AND SEED ALL DISTURBED AREAS FOLLOWING CONSTRUCTION.
- OPERATOR PERSONNEL MUST INSPECT THE CONSTRUCTION SITE AT LEAST EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 0.5 INCHES OR MORE. DISTURBED AREAS THAT HAVE BEEN STABILIZED MUST BE INSPECTED AT LEAST ONCE PER MONTH.
- ALL CATCH BASIN SUMPS FITTED WITH SILT SACKS AND MANHOLES LOCATED DOWNDRAINANT FROM CATCH BASINS SHALL BE CLEANED OUT AFTER CONSTRUCTION.
- DURING CONSTRUCTION, THE CONTRACTOR SHALL SPRAY DOWN THE SITE WITH A WATER TRUCK AS NEEDED FOR DUST CONTROL.
- DURING CONSTRUCTION THE CONTRACTOR SHALL INSPECT THE ADJACENT PUBLIC WAYS, PARTICULARLY WILLIAMS ROAD, AND SWEEP AS NECESSARY.
- THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL STRUCTURES AND DEVICES THROUGHOUT CONSTRUCTION. ANY EROSION CONTROL DEVICES FOUND TO NO LONGER TO BE SERVICEABLE SHALL BE REMOVED. ALL ACCUMULATED SEDIMENTS MUST BE REMOVED WHEN DEPOSITS REACH NO MORE THAN ONE HALF THE HEIGHT OF THE SILTATION BARRIER.
- THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE LEFT IN UNTREATED OR UNVEGETATED CONDITION FOR A MINIMUM TIME. AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 15 DAYS OF FINAL GRADING (7 DAYS IF WITH 100 FEET OF A STREAM, POND OR WETLAND) AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL.
- TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINAL GRADED SHALL BE COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST TO PROTECT THE SITE FROM SPRING RUNOFF PRIOR TO THE FIRST KILLING FROST OF THE DISTURBED AREAS IS NOT COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST TEMPORARY MULCH OR OTHER METHODS APPROVED BY THE ENGINEER SHALL BE EMPLOYED TO PROTECT THE SITE.
- A STOCKPILE OF ADDITIONAL SILT FENCE AND FILTERMATS SHALL BE KEPT ON SITE IN ORDER TO BE ABLE TO IMMEDIATELY RESPOND TO ISSUES WHICH MIGHT DEVELOP DURING CONSTRUCTION.

TEST PIT DATA:

DATE OF TESTING:	1/30/2020 (TP 20-1, 20-2)	DATE OF TESTING:	1/30/2020 (TP 320-1 THRU 6)
TEST BY:	STAMSKI AND McNARY, INC.	TEST BY:	STAMSKI AND McNARY, INC.
CERT. SOIL EVAL.:	PAUL KIRCHNER, SE 14237	CERT. SOIL EVAL.:	DANIEL CARR, SE13207
TEST PIT: TP 320-1 ELEV.=135.0±	0'-16" LAYER B: SAND 16"-102" LAYER C: FINE SAND	TEST PIT: TP 320-2 ELEV.=158.5±	0'-228" LAYER C: FINE SAND
NO MOTTLING OBS.	E.S.H.G.W. ELEV =130.5'+	NO MOTTLING OBS.	E.S.H.G.W. ELEV =132.5'+
TEST PIT: TP 320-2 ELEV.=138.8±	0'-16" LAYER B: SAND 16"-52" LAYER C1: SAND 52"-108" LAYER C2: FINE SAND	TEST PIT: TP 320-3 ELEV.=149.5±	0'-20" LAYER B: LOAMY SAND 20"-72" LAYER C2: FINE SAND 72"-192" LAYER C3: FINE-MEDIUM SAND
NO MOTTLING OBS.	E.S.H.G.W. ELEV =134.0'+	NO MOTTLING OBS.	E.S.H.G.W. ELEV =133.5'+
TEST PIT: TP 320-4 ELEV.=158.5±	0'-48" LAYER C1: MEDIUM SAND 48"-180" LAYER C2: FINE-MEDIUM SAND 180"-312" LAYER C3: MEDIUM SAND	TEST PIT: TP 320-5 ELEV.=158.5±	0'-12" LAYER B: SANDY LOAM 12"-296" LAYER C: MEDIUM SAND
NO MOTTLING OBS.	E.S.H.G.W. ELEV =132.5'+	NO MOTTLING OBS.	E.S.H.G.W. ELEV =133.8'+
TEST PIT: TP 320-5 ELEV.=158.5±	0'-16" LAYER B: SAND 16"-52" LAYER C1: SAND 52"-108" LAYER C2: FINE SAND	TEST PIT: TP 320-6 ELEV.=169.5±	0'-60" LAYER C1: MEDIUM SAND 60"-228" LAYER C3: FINE SAND
NO MOTTLING OBS.	E.S.H.G.W. ELEV =134.0'+	NO MOTTLING OBS.	E.S.H.G.W. ELEV =150.5'+



NOTES:

- ALL UNDERGROUND UTILITIES SHOWN HERE WERE COMPILED ACCORDING TO AVAILABLE RECORD PLANS FROM VARIOUS UTILITY COMPANIES AND PUBLIC AGENCIES AND ARE APPROXIMATE ONLY. ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD BEFORE DESIGNING, EXCAVATING, BLASTING, INSTALLING, BACKFILLING, GRADING, PAVEMENT RESTORATION OR REPAIRING. ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, MUST BE CONTACTED INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN. SEE CHAPTER 370, ACTS OF 1963 MASS. WE ASSUME NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN. BEFORE PLANNING FUTURE CONNECTIONS THE APPROPRIATE PUBLIC UTILITY ENGINEERING DEPARTMENT MUST BE CONSULTED. DIG SAFE TELEPHONE No. 1-888-344-7233.
- AREAS DISTURBED FOR TEMPORARY CONSTRUCTION ACCESS SHALL BE RESTORED TO THEIR PRE-DEVELOPMENT CONDITION.
- PROPOSED PLANTING AREAS SHALL BE PLANTED IN ACCORDANCE WITH PLANTING SCHEDULE PREPARED BY B&C ASSOCIATES.
- ALL DISTURBED SURFACES SHALL BE STABILIZED WITH FLEXTERRA HIGH PERFORMANCE FLEXIBLE GROWTH MEDIUM, OR APPROVED EQUAL. AREAS SHALL BE PLANTED IN ACCORDANCE WITH THE PLANTING SCHEDULE PREPARED BY B&C ASSOCIATES.
- APPROXIMATELY 164,000 S.F. OF WOODED AREA HAS BEEN CLEARED TO ALLOW FOR POND CONSTRUCTION. NO ADDITIONAL TREE CLEARING IS PROPOSED.

**IRRIGATION POND PLAN
IN
CONCORD, MASSACHUSETTS
(MIDDLESEX COUNTY)**

FOR: CONCORD COUNTRY CLUB
SCALE: AS SHOWN JANUARY 31, 2020

REVISED: FEBRUARY 14, 2020
REVISED: MARCH 2, 2020
REVISED: MARCH 9, 2020
REVISED: MARCH 18, 2020

STAMSKI AND McNARY, INC.
1000 MAIN STREET ACTON, MASSACHUSETTS
ENGINEERING - PLANNING - SURVEYING

