

**SOIL EROSION & SEDIMENTATION CONTROL PLAN NARRATIVE**

THE SITE CONTRACTOR MUST FOLLOW ALL GUIDELINES SET FORTH IN THE MANUAL ENTITLED "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" PUBLISHED BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION IN COOPERATION WITH THE CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION. THIS MANUAL IS ALSO KNOWN AS DEP BULLETIN 34.

**PROJECT DESCRIPTION**

THE APPLICANT IS PROPOSING TO CONSTRUCT A SINGLE STORY 3-BAY BOAT STORAGE BUILDING AS SHOWN. THE PROPOSED BUILDING WILL BE FULLY FLOOD VENTED AND WILL BE FULLY FEMA COMPLIANT. THE PROPOSED BUILDING WILL HAVE NO WATER SERVICE, NO PLUMBING OR SEPTIC SYSTEM. THE EXISTING DWELLING AND SEPTIC SYSTEM WILL BE REMOVED.

CONSTRUCTION IS ANTICIPATED TO COMMENCE IN SPRING 2020. ALL EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED PRIOR TO CONSTRUCTION ACTIVITIES. E & S CONTROLS SHALL BE MAINTAINED AND REPAIRED OR REPLACED AS NEEDED THROUGHOUT THE CONSTRUCTION DURATION. ALL E & S CONTROLS SHALL BE REMOVED AND PROPERLY DISPOSED OF AS SOON AS THE SITE IS COMPLETELY STABILIZED.

**CONSTRUCTION SEQUENCE**

- CONTACT "CALL BEFORE YOU DIG" TO MARK OUT ALL UTILITY LOCATIONS PRIOR TO ANY CONSTRUCTION ACTIVITIES.
- ENSURE ALL LAND USE PERMITS HAVE BEEN SECURED. OBTAIN ALL NECESSARY PERMITS.
- LAND SURVEYOR TO STAKE OUT CLEARING LIMITS & PROPOSED IMPROVEMENTS.
- INSTALL ALL EROSION AND SEDIMENT CONTROLS AND CONSTRUCTION ENTRANCE.
- REMOVE ALL TREES, BRUSH AND STUMPS WITHIN CLEARING LIMITS.
- ROUGH GRADE DRIVEWAY AND PARKING AREA.
- STRIP AND STOCKPILE TOPSOIL AND OTHER EXCAVATED SOILS IN AREA(S) SHOWN ON PLAN. APPLY TEMPORARY SEED MIXTURE TO PILES IF THEY WILL NOT BE DISTURBED FOR MORE THAN 30 DAYS.
- CONSTRUCT THE FOUNDATION FOR THE PROPOSED BOATHOUSE.
- FRAME AND CONSTRUCT THE PROPOSED BOATHOUSE.
- INSTALL PROPOSED STORMWATER INFILTRATION SYSTEM AND RAIN GARDEN.
- CONNECT ALL UTILITIES FROM WITHIN THE PROPOSED BOATHOUSE.
- FINISH GRADE DRIVEWAY AND PARKING AREA PER PLAN.
- FINISH GRADE, SEED AND MULCH ALL DISTURBED AREAS AS REQUIRED.
- REMOVE ALL EROSION AND SEDIMENT CONTROLS ONCE SITE IS COMPLETELY STABILIZED. DISPOSE OF PROPERLY.

**LAND DISTURBANCE**

- ALL EXISTING VEGETATION OUTSIDE OF THE CLEARING LIMITS SHALL BE PROTECTED. EXISTING VEGETATION SHALL BE REMOVED ONLY IN AREAS NECESSARY FOR SITE CONSTRUCTION ACTIVITIES. ANY ADDITIONAL CLEARING OUTSIDE OF THE PROPOSED CLEARING LIMITS SHALL BE APPROVED BY TOWN STAFF PRIOR TO CLEARING.
- ALL AREAS SHALL REMAIN UNDISTURBED UNTIL IMMEDIATELY PRIOR TO SITE DEVELOPMENT.
- ALL CONSTRUCTION EQUIPMENT, MATERIALS AND STOCKPILES SHALL NOT BE PLACED OUTSIDE OF THE DISTURBED AREAS.
- ALL TREES, BRUSH, STUMPS, WOOD CHIPS OR OTHER ORGANIC MATTER SHALL BE DISPOSED OF PROPERLY OFF-SITE. WOOD CHIPS MAY BE USED AS A SILTATION BARRIER DURING CONSTRUCTION AND SPREAD AFTER SITE IS STABILIZED. NO ORGANIC MATTER INCLUDING TREES, BRUSH AND STUMPS SHALL BE BURIED ON-SITE.

**STRIPPING AND STOCKPILING**

ALL STOCKPILES THAT CONSIST OF ERODIBLE MATERIALS SHALL BE LOCATED WITHIN AREAS AS SHOWN ON THE SITE PLAN AND SURROUNDED BY A SILTATION BARRIER THAT WILL REMAIN UNDISTURBED FOR A PERIOD LONGER THAN 30 DAYS SHALL BE SEED WITH A TEMPORARY GRASS SEED MIXTURE TO PREVENT EXCESSIVE EROSION AND SEDIMENTATION.

**TRENCH EXCAVATION AND BACKFILL**

THE CONTRACTOR SHALL PROPERLY MAINTAIN ALL BACKFILLED EXCAVATIONS. ANY DEPRESSIONS DUE TO SETTLING IN THESE AREAS SHALL BE FILLED AND RESEED AS NECESSARY.

THE WIDTH OF ALL EXCAVATED TRENCHES SHALL BE KEPT AS NARROW AS PRACTICABLE TO ACCOMMODATE THE WORK. ALL MATERIALS EXCAVATED FROM TRENCHES SHALL BE STOCKPILED AND USED AS TRENCH BACKFILL MATERIAL UNLESS IT IS DETERMINED TO BE UNSUITABLE BY THE ENGINEER. EXCESS MATERIALS SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR.

**SOIL EROSION AND SEDIMENT CONTROLS**

ALL ADJACENT PROPERTIES AND RECEIVING WATERCOURSES AND / OR WETLAND AREAS SHALL BE ADEQUATELY PROTECTED FROM SOIL EROSION AND SEDIMENTATION BOTH DURING AND AFTER CONSTRUCTION.

ADDITIONAL EROSION AND SEDIMENT CONTROLS MAY BE REQUIRED BY THE TOWN AND SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROLS BEFORE, DURING AND AFTER CONSTRUCTION. THE CONTRACTOR IS ALSO RESPONSIBLE FOR THE PROPER REMOVAL AND DISPOSAL OF ALL EROSION AND SEDIMENT CONTROLS ONCE THE SITE IS COMPLETELY STABILIZED.

ALL EROSION AND SEDIMENT CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER ALL RAINFALL EVENTS. E & S CONTROLS SHALL BE REPAIRED OR REPLACED AS NECESSARY WITHIN 24 HOURS THROUGHOUT THE CONSTRUCTION DURATION.

IF NECESSARY, A TEMPORARY FILTER FABRIC SILT BARRIER SHALL BE PLACED BENEATH THE GRATE OF THE PROPOSED CATCH BASIN TO PREVENT ANY SILTATION OF THE DRAINAGE SYSTEM. THE FILTER FABRIC SHALL BE REMOVED IMMEDIATELY AFTER THE SURROUNDING AREAS ARE ADEQUATELY STABILIZED.

ALL ACCUMULATED SEDIMENTS AT ALL EROSION AND SEDIMENT CONTROLS SHALL BE PERIODICALLY REMOVED AND SPREAD IN AREAS THAT ARE NOT SUBJECT TO EROSION.

THE CONTRACTOR SHALL EMPLOY BEST MANAGEMENT PRACTICES TO CONTROL STORMWATER DISCHARGES AND TO PREVENT EROSION AND SEDIMENTATION AND TO OTHERWISE PREVENT POLLUTION OF WETLANDS OR WATERCOURSES OR PRIVATE PROPERTY. THE CONTRACTOR SHALL IMMEDIATELY INFORM THE TOWN OF ANY PROBLEMS INVOLVING EROSION AND/OR SEDIMENTATION THAT HAVE DEVELOPED IN THE COURSE OF, OR THAT ARE CAUSED BY, THE AUTHORIZED WORK.

THE RESPONSIBLE CONTACT PERSON FOR THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS ON THIS PROJECT WILL BE THE SITE CONTRACTOR AND / OR THE GENERAL CONTRACTOR. ONCE THE GENERAL CONTRACTOR IS SELECTED, CONTACT INFORMATION WILL BE PROVIDED TO THE TOWN.

**VEGETATIVE TURF ESTABLISHMENT PROCEDURE**

SCARIFY ALL AREAS TO BE TOPSOILED AND SEEDED. APPLY A MINIMUM OF 4 INCHES OF TOPSOIL ON ALL AREAS TO BE SEEDED. APPLY GRASS SEED, LIME, FERTILIZER AND MULCH ACCORDING TO THE FOLLOWING SCHEDULE:

|                         |                             |
|-------------------------|-----------------------------|
| PERMANENT SEED MIXTURE: |                             |
| CREeping RED FESCUE     | 0.45 LBS. PER 1,000 SQ. FT. |
| REDTOP                  | 0.05                        |
| TALL FESCUE             | 0.45                        |
| TOTAL                   | 0.95                        |

FERTILIZER:  
10-10-10 APPLY AT 7.5 LBS. PER 1,000 SQ. FT.

LIMESTONE:  
APPLY AT 150 LBS. PER 1,000 SQ. FT.

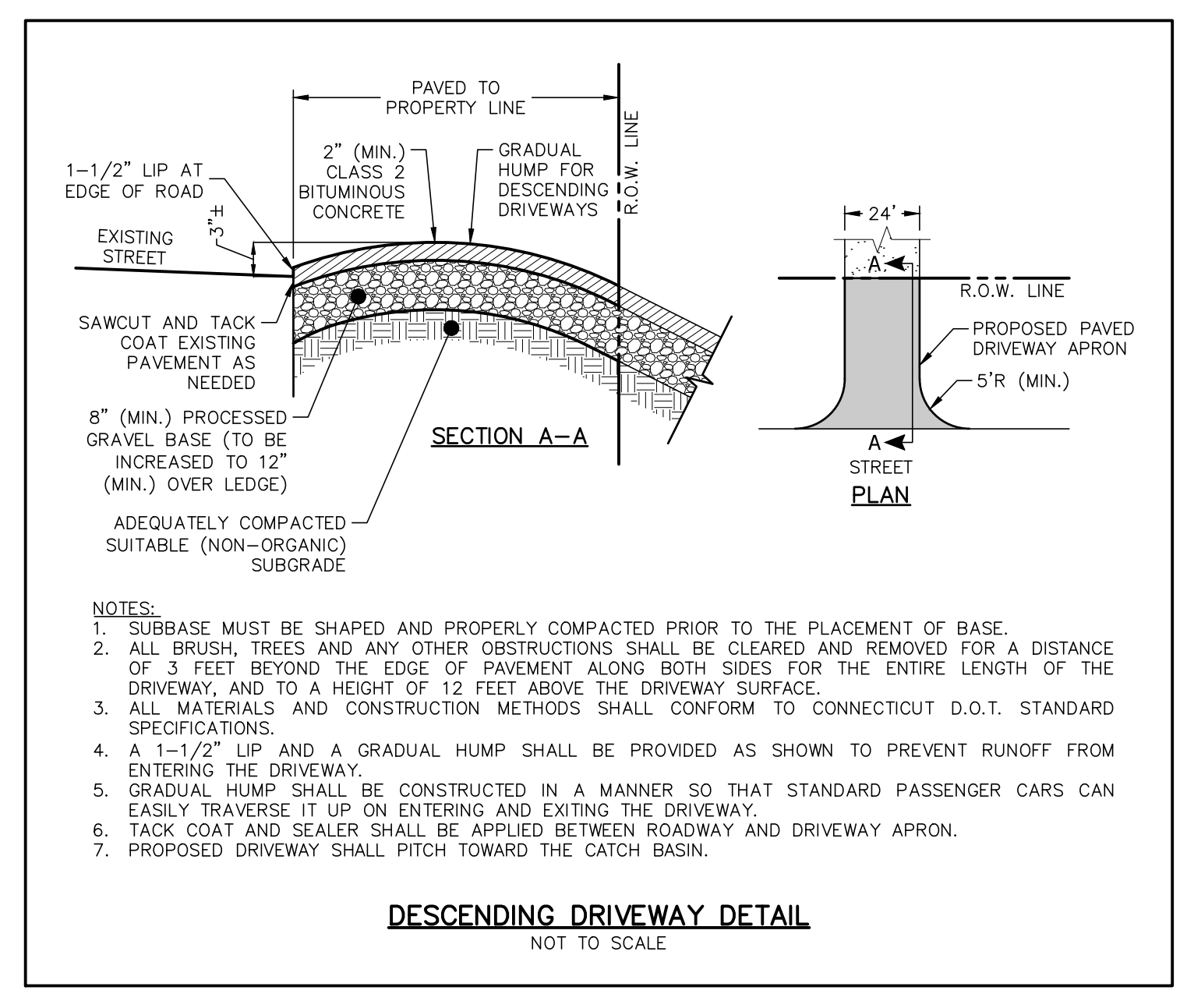
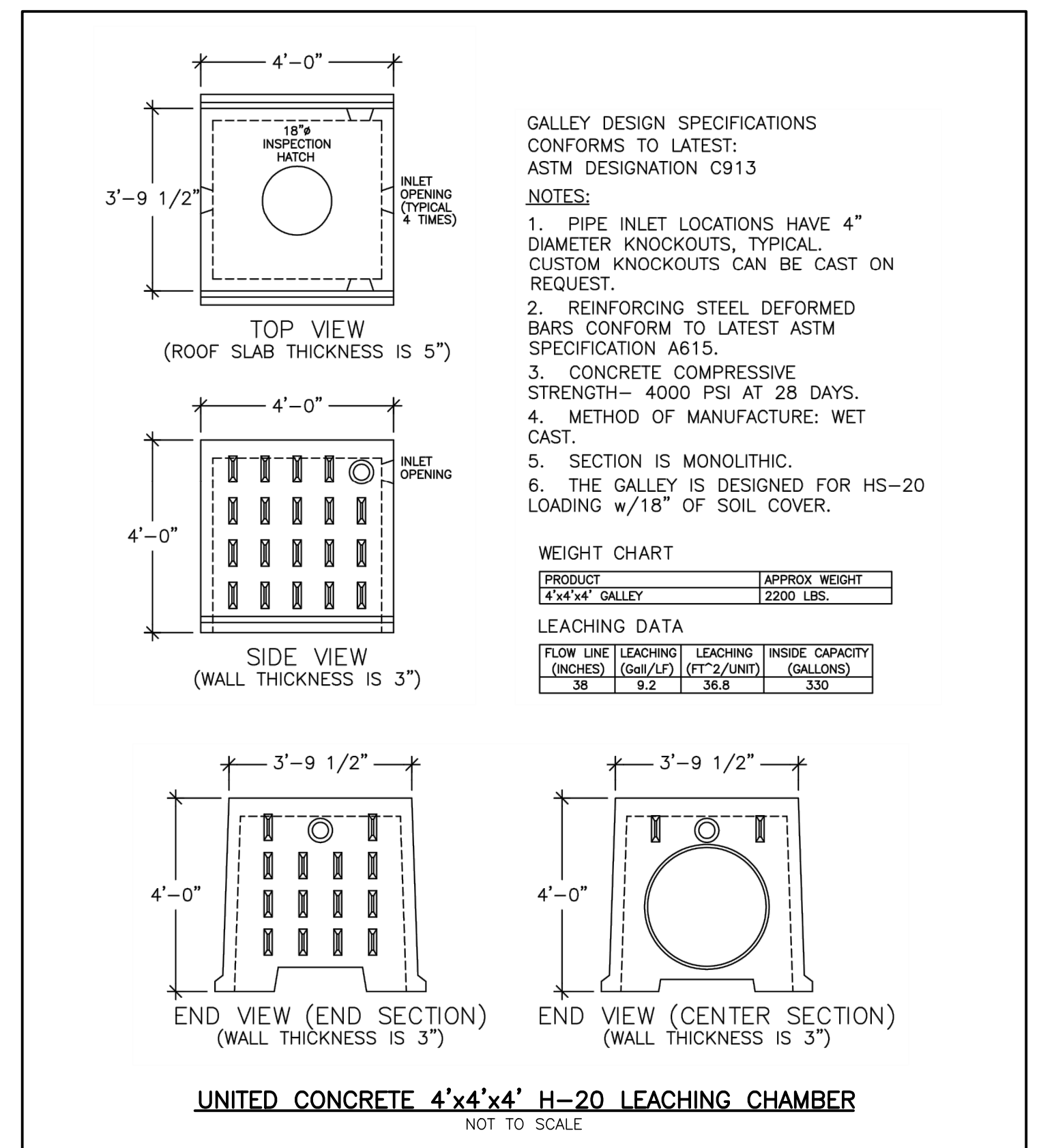
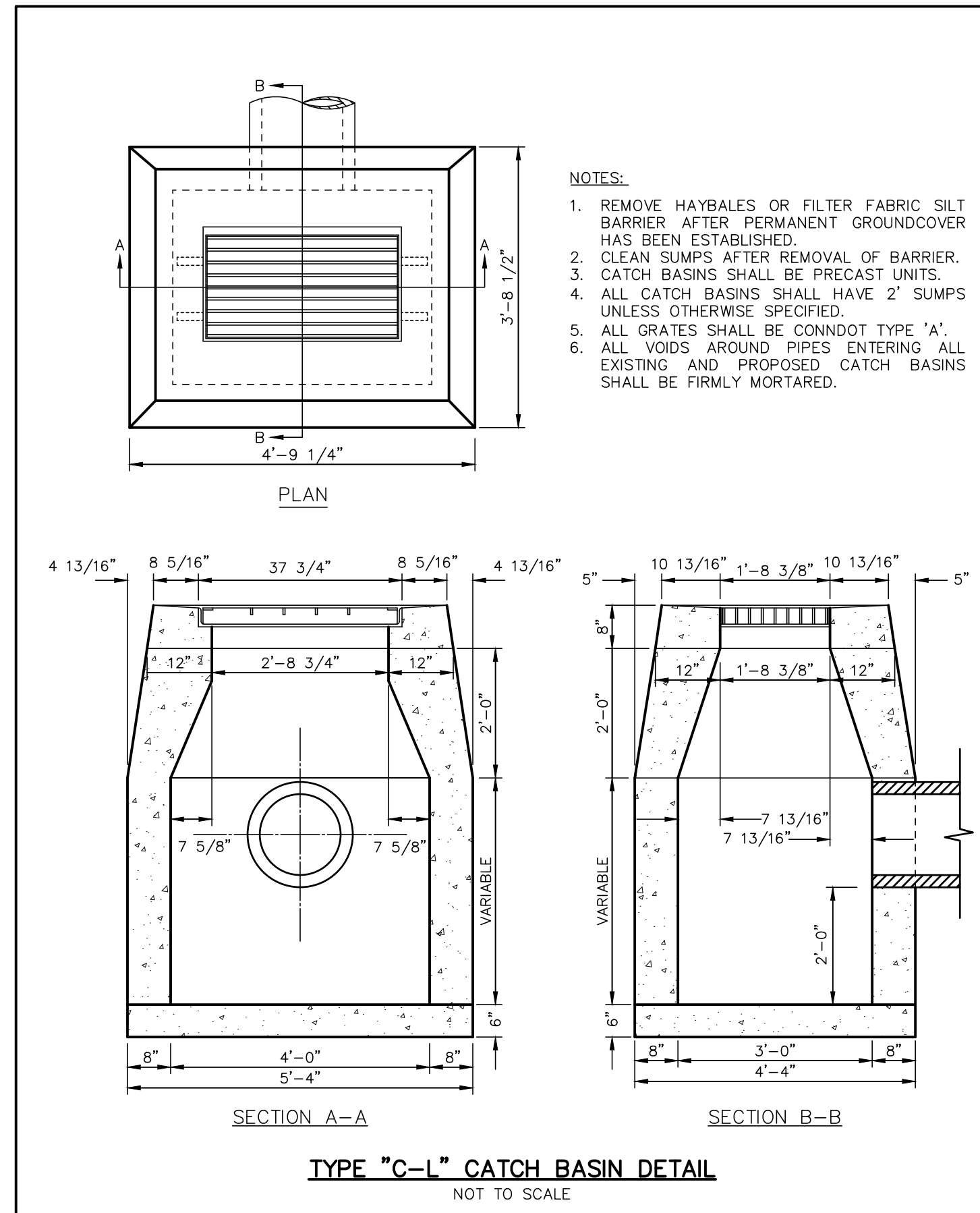
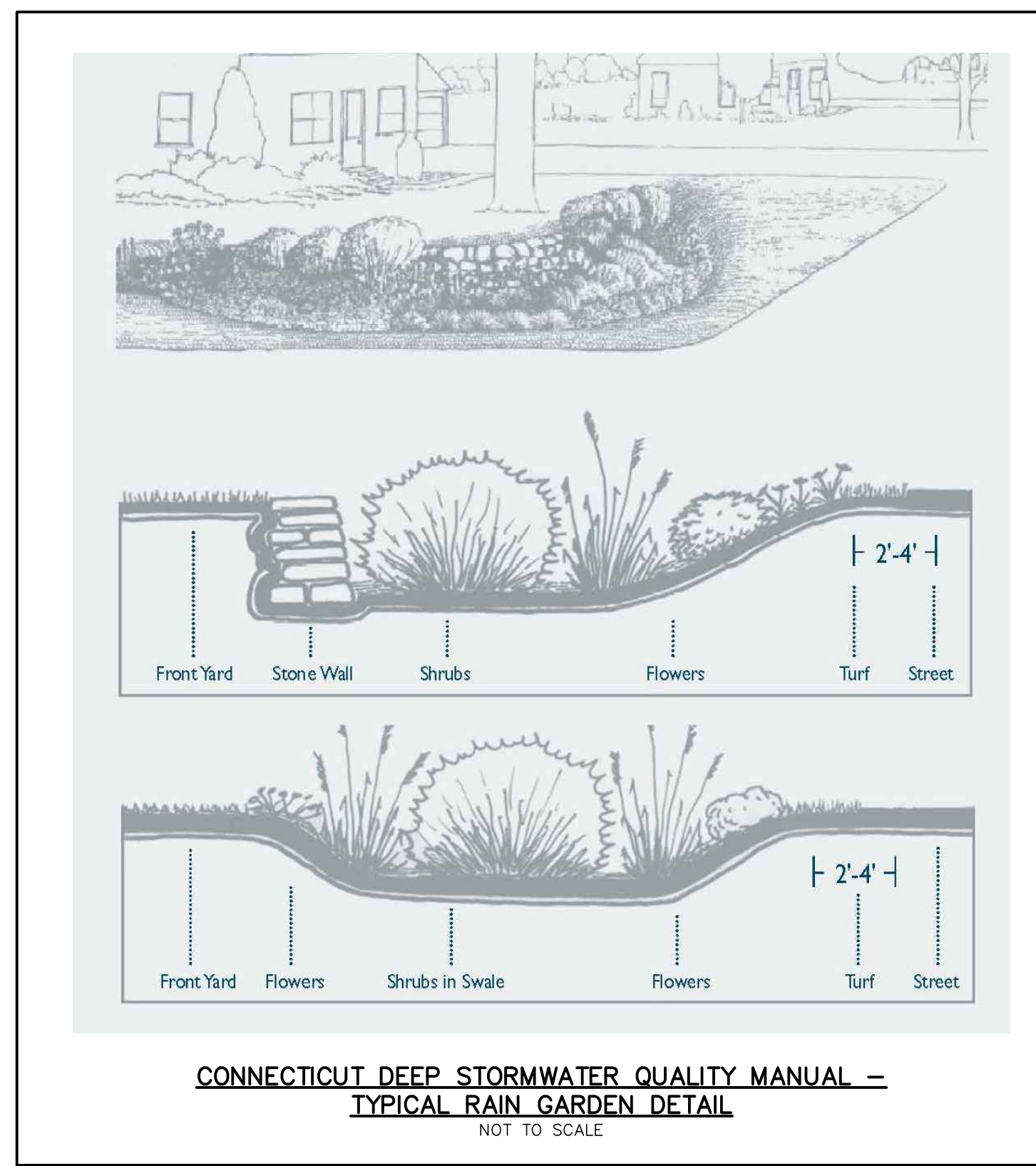
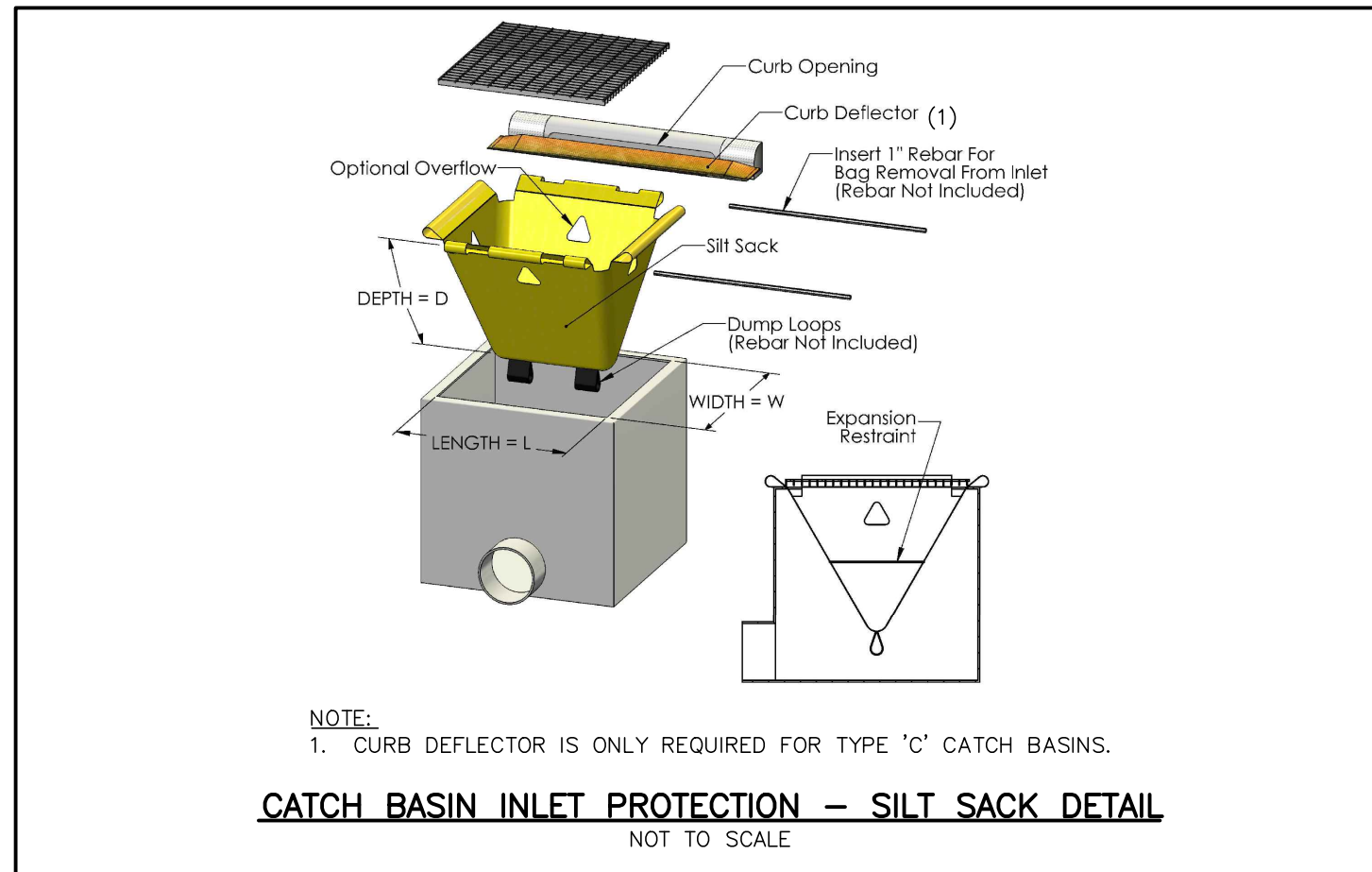
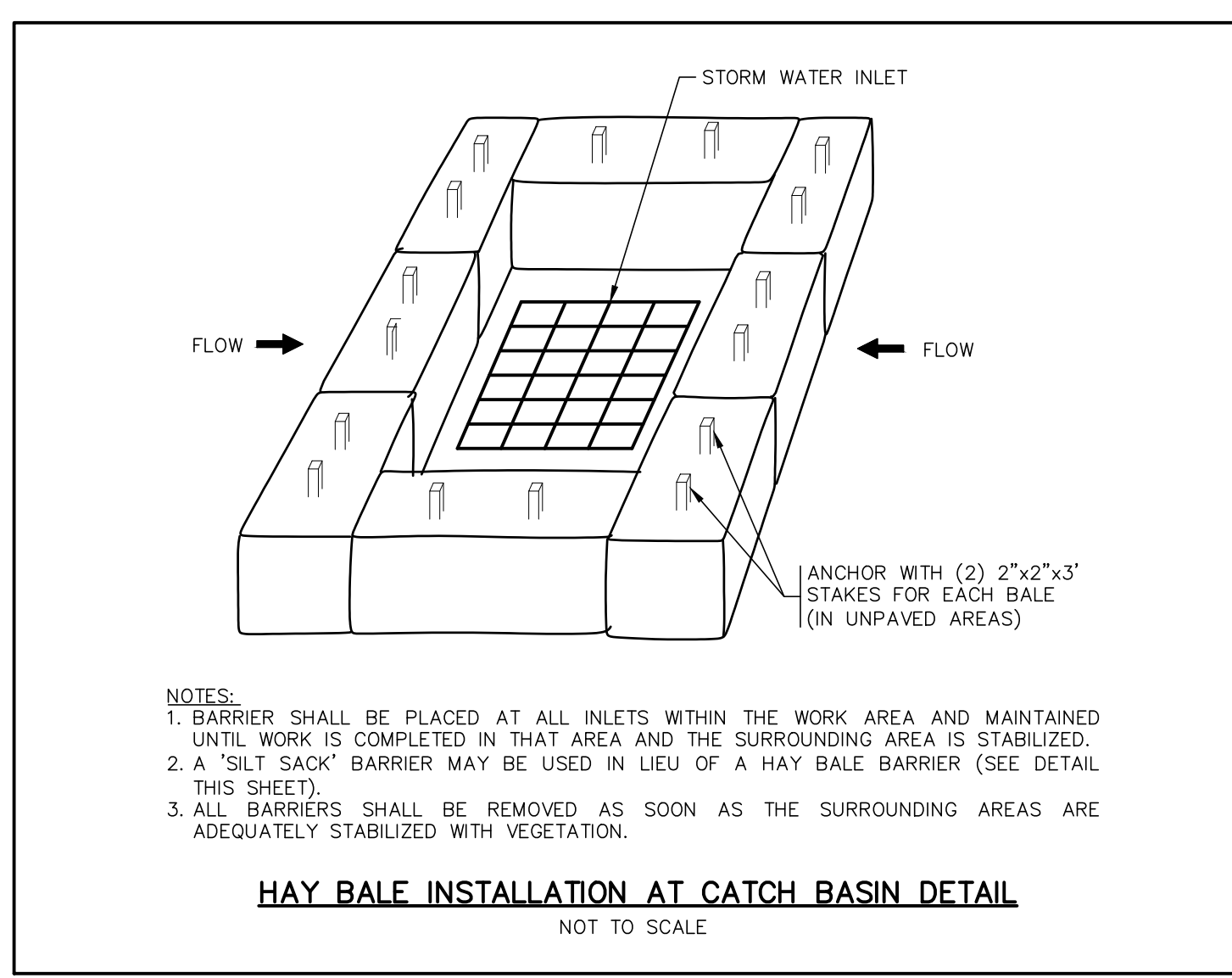
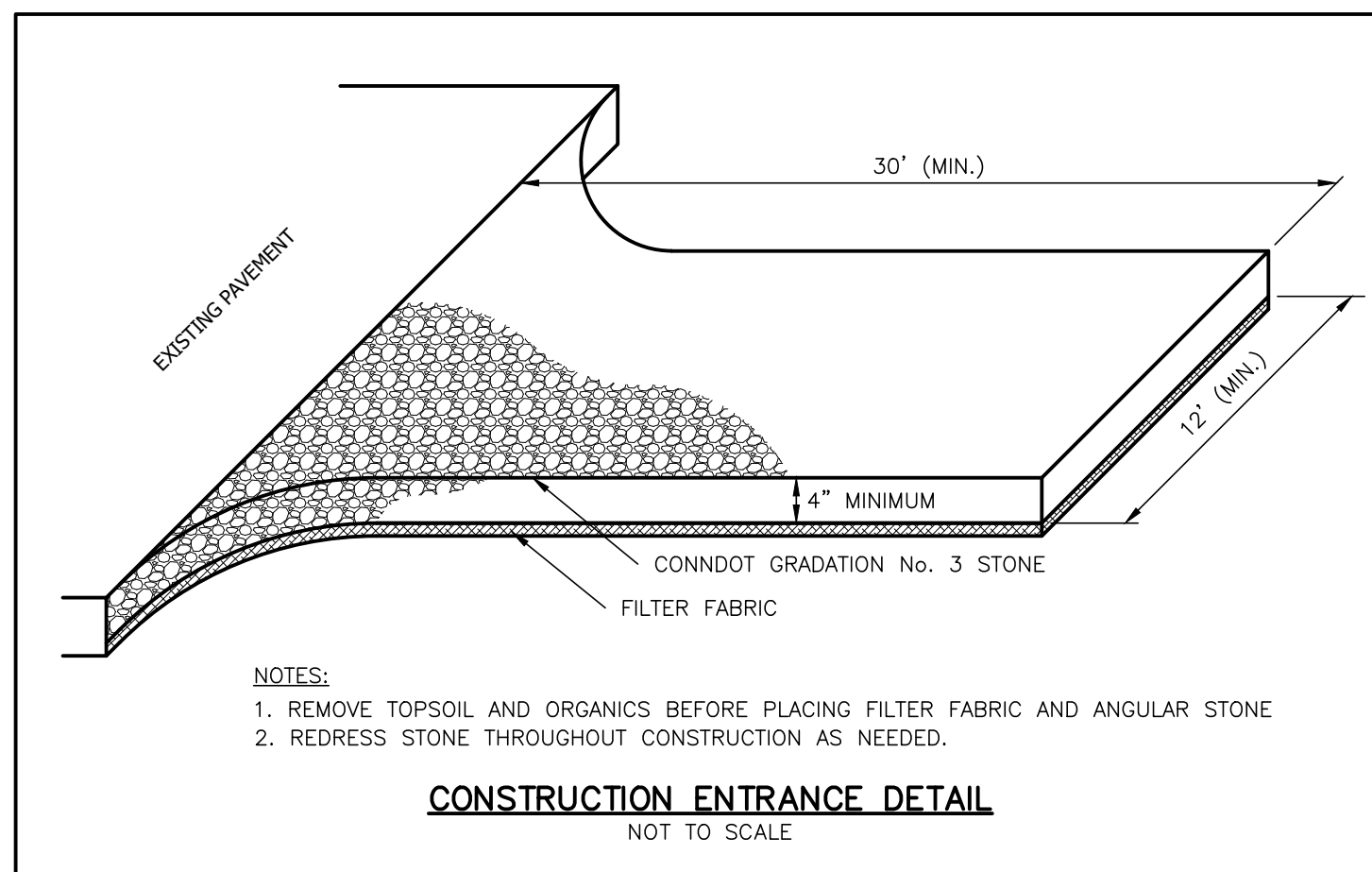
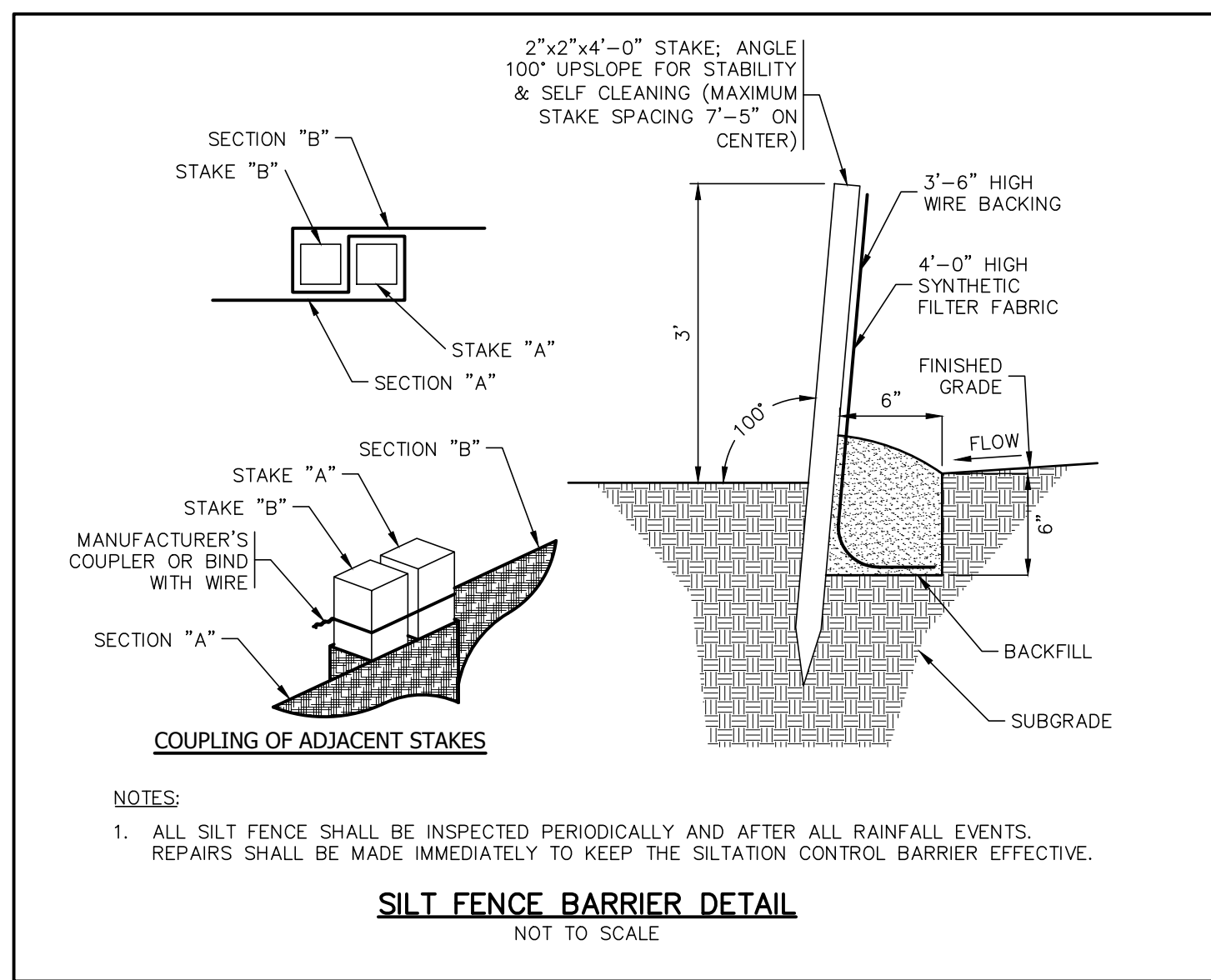
MULCHING:  
SPREAD HAY OR STRAW OVER ALL AREAS AFTER SEEDING. USE 1 1/2 TO 2 BALES PER 1,000 SQ. FT. TARGET FOR 100% COVERAGE, ANCHOR BY USING NETTING OR TRACKING AS NECESSARY.

TEMPORARY EROSION CONTROL BLANKETS:  
USE TEMPORARY EROSION CONTROL BLANKETS ON ALL SEEDED SLOPES STEEPER THAN 3 (H) TO 1 (V) AND/OR AS DIRECTED BY THE DESIGN ENGINEER.

SEEDING DATES:  
SEEDING DATES IN CONNECTICUT ARE NORMALLY APRIL 1 THROUGH JUNE 15 AND AUGUST 15 THROUGH OCTOBER 1. SEED GERMINATION NORMALLY CANNOT BE EXPECTED FROM NOVEMBER THROUGH FEBRUARY. IF ADEQUATE SEED GERMINATION IS NOT POSSIBLE DUE TO TIME OF YEAR CONSTRAINTS, MULCHING SHALL BE ADEQUATELY PROVIDED TO PROTECT THE SEED FROM WIND AND SURFACE EROSION UNTIL THE WEATHER IMPROVES AND THE SEEDING BECOMES WELL ESTABLISHED.

**DRAINAGE SYSTEM MAINTENANCE**

IT SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER TO MAINTAIN THE RAIN GARDEN AND DRAINAGE SYSTEM TO ENSURE PROPER FUNCTION AND EFFICIENT OPERATION.



**STORMWATER CALCULATIONS:**

**TREATED RUNOFF ON LOTS #50 & #51**  
FIRST INCH OF RAINFALL FROM NET INCREASE IN IMPERVIOUS SURFACE AREA: (INCLUDES EXISTING PAVED DRIVE AND CONC. WALK ON NW SIDE OF BUILDING)\*  
9,948 S.F. x 1" RUNOFF x (1/12) = 829 C.F.

PROPOSED STORAGE CAPACITY\*\*\*:  
(RAIN GARDEN)  
848± S.F.  
848± C.F. PROVIDED > 829 C.F. REQUIRED --- O.K.

**TREATED RUNOFF ON LOT #52**  
FIRST INCH OF RAINFALL FROM NET INCREASE IN IMPERVIOUS SURFACE AREA: (INCLUDES PROPOSED BUILDING, PAVED APRON, GRAVEL DRIVE AND CONC. WALK ON SE SIDE OF BUILDING)\*\*  
11,650 S.F. x 1" RUNOFF x (1/12) = 971 C.F.

PROPOSED STORAGE CAPACITY\*\*\*:  
(TWENTY (20) 4'x4'x4' H-20 CONCRETE LEACHING CHAMBERS BY UNITED CONCRETE)  
20 CHAMBERS x 330 GAL. PER CHAMBER / 7.48 GAL PER C.F. = 882 C.F.  
(12" MIN. CRUSHED STONE AROUND PERIMETER, ASSUMING 40% VOIDS)  
400 C.F. x 40% VOIDS = 160 C.F.  
TOTAL STORAGE CAPACITY = 882 C.F. + 160 C.F. = 1,042± C.F.  
1,042± C.F. PROVIDED > 971 C.F. REQUIRED --- O.K.

NOTES:  
\* THE EXISTING BUILDING ON LOT #51 HAS EXISTING STONE INFILTRATION TRENCHES ALONG THE NW & SE SIDES OF THE BUILDING.  
\*\* THE EXISTING BUILDINGS AND OTHER IMPERVIOUS SURFACE COVERAGE ON LOT #52 ARE PROPOSED TO BE REMOVED (TOTAL AREA = 3,360 S.F.). THE MAJORITY OF THE PROPOSED IMPERVIOUS SURFACE COVERAGE ON LOT #52 WILL BE CAPTURED AND TREATED USING UNDERGROUND LEACHING CHAMBERS AND THE REMAINING PORTION OF THE PROPOSED IMPERVIOUS SURFACE COVERAGE THAT IS NOT CAPTURED (TOTAL AREA = 2,018 S.F.) IS LESS THAN THE EXISTING IMPERVIOUS SURFACE COVERAGE THAT IS TO BE REMOVED (3,808 S.F. - 2,108 S.F. = 1,790 S.F. REDUCTION). THE LEACHING TRENCHES AND RAIN GARDEN HAVE AN EXCESS STORAGE VOLUME OF 90 C.F.  
\*\*\* PER NATURAL RESOURCE CONSERVATION SERVICE (NRCS) MAPPING, THE ENTIRE SITE CONTAINS HINKLEY LOAMY SAND (NRCS SOIL MAP UNIT 38A) WHICH TYPICALLY HAS AN AVERAGE INFILTRATION RATE OF MORE THAN 20 INCHES/HOUR.

PLAN PREPARED BY:  
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THE EMBOSSED SEAL OF THE REGISTERED PROFESSIONAL ENGINEER MUST BE AFFIXED HERE FOR THIS MAP TO BE VALID

| NO. | REVISIONS | DATE | DESCRIPTION                                       |
|-----|-----------|------|---|
| 3   | 1/28/2020 | RC   | REVISIONS FOR PLANNING & ZONING COMMISSION, MISC. |
| 2   | 1/14/2020 | RC   | REVISIONS PER TOWN ENGINEER'S COMMENTS, MISC.     |
| 1   | 1/7/2020  | RC   | GENERAL REVISIONS                                 |
| #   |           |      |   |

**E&S, DETAILS & STORMWATER COMPUTATIONS**  
PREPARED FOR THE NEW HAVEN ROWING CLUB, INC.  
403, 407 & 411 ROOSEVELT DRIVE  
OXFORD, CONNECTICUT

DATE: NOVEMBER 4, 2019  
SCALE: AS NOTED  
DRAWN BY: JW  
CHECKED BY: JW  
DWG. NO.: ES-1  
SHEET NO.: 2 of 2  
JOB NO.: 2018-371