

SECURED PLASTIC COVER OVER AND OUTLET MANHOLE IN 2" MIN DROP FROM D-BOX OUT ACCORDANCE WITH 310 CMR TO 4" PVC PIPE IN LINE #1. 15.228. COVER AND RISER PROVIDE RISER W/ SECURED SHALL BE WATERTIGHT. COVER IN ACCORDANCE WITH PRESBY REQUIREMENTS -LOW VENT FROM LINE #5 ONE (1) OUTLETS FROM DBOX. NO FLOW EQUALIZERS-SLOPE AT 11% BUILDING PRESBY WASTEWATER FOUNDATION PROP. HDPE TREATMENT SYSTEM : DBOX WITH RISER/COVER AT PROPOSED 1,500 GALLON

> PROPOSED SEPTIC SYSTEM PROFILE SCALE: NOT TO SCALE

1. DIST. BOX TO BE PLACED ON A LEVEL & STABLE BASE THAT HAS BEEN COMPACTED BY A VIBRATORY

MIN. 4'-0" ELEV. REQUIRED BETWEEN BOTTOM OF LEACHING AREA AND MAX. GROUNDWATER ELEVATION

THE DESIGN ELEVATIONS INDICATED WILL PROVIDE AT LEAST THE MINIMUM SLOPES FOR THE LENGTHS INDICATED ON

ANY COMPONENT OF THE SYSTEM IS MOVED, THE DESIGN ELEVATIONS MAY NOT PROVIDE ADEQUATE SLOPE. CHECK

4. ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC TAPE OR A COMPARABLE MEANS IN ACCORDANCE

COMPACTOR OR EQUAL

PROVIDE RISER TO GRADE WITH

WITH ENGINEER BEFORE MOVING ANY COMPONENT.

## **SYSTEM NOTES:**

1. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE ENGINEER TO VERIFY THAT THE CONSTRUCTION PLANS ARE THE MOST CURRENT REVISION.

2-COMPARTMENT

2. ALL MODIFICATIONS TO THIS PLAN MUST BE PRE APPROVED IN WRITING BY THE DESIGN ENGINEER AND THE LOCAL BOARD OF HEALTH. 3. ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM WITH THE LOCAL BOARD OF HEALTH AND

THE STATE ENVIRONMENTAL CODE TITLE 5 (310 CMR 15.000) & THE MANUFACTURER'S SPECIFICATIONS. 4. SEVENTY TWO HOURS PRIOR TO COMMENCING ANY EXCAVATION, THE CONTRACTOR SHALL NOTIFY DIG-SAFE AT 811. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF NEW UTILITIES WITHIN THE VICINITY OF EXISTING UTILITIES (UNDERGROUND AND OVERHEAD) WITH THE APPROPRIATE UTILITY PROVIDER

5. EXISTING UTILITY LOCATIONS ARE APPROXIMATE ARE TO BE FIELD VERIFIED. QUINN ENGINEERING, INC. DOES NOT WARRANT THAT ALL EXISTING UTILITIES HAVE BEEN INDICATED. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE EXISTING UTILITY LOCATIONS AND ENSURING THAT THE PROPOSED WORK DOES NOT CONFLICT WITH THE EXISTING UTILITIES (SHOWN OR NOT SHOWN)

6. THE SYSTEM WAS NOT DESIGNED TO FACILITATE A GARBAGE DIŚPOSAI 7. A SURVEYOR REGISTERED IN THE COMMONWEALTH OF MASSACHUSETTS SHALL STAKE OUT THE SYSTEM LOCATION AND SHALL PROVIDE AS-BUILT LOCATION AND ELEVATIONS TO QUINN ENGINEERING, INC. THE INSTALLER SHALL NOT COVER THE SYSTEM OR PIPING UNTIL QUINN ENGINEERING, INC. VERIFIES FROM THE AS-BUILT INFORMATION PROVIDED THAT THE SYSTEM LOCATIONS AND ELEVATIONS ARE SUITABLE.

8. ALL PORTIONS OF THE FILL, A AND B SOIL HORIZONS SHALL BE REMOVED FROM WITHIN THE LIMITS OF THE LEACHING FACILITY AND FOR A DISTANCE OF FIVE FEET IN ALL DIRECTIONS THEREFROM.(310 CMR 15.255 (5)). (SEE DEEP HOLE DATA FOR SOIL HORIZON INFORMATION.

9. WHÉRÈ A SEWAGE DISPOSAL SYSTEM IS TO BE CONSTRUCTED IN FILL, THE FILL SHALL BE PLACED AND COMPACTED IN 12 INCH LIFTS OR ALLOWED TO SETTLE FOR A MINIMUM OF ONE YEAR. THE FILL MATERIAL MUST CONFORM WITH THE LOCAL BOARD OF HEALTH AND STATE ENVIRONMENTAL CODE TITLE 5 SECTION

10. ALL INTERIOR PLUMBING SHALL BE CONNECTED TO PROPOSED LEACHING FACILITY WITH THE EXCEPTION OF WATER SOFTENING OR CONDITIONING SYSTEMS, BACKWASH FROM FILTRATION SYSTEMS, OR FLOOR DRAINS. 11. THE INSTALLER SHALL SUBMIT TO THE ENGINEER A GRADATION ANALYSIS FOR THE FILL WITHIN THE SYSTEM TO DEMONSTRATE CONFORMANCE WITH 310 CMR 15.255(3) FOR "TITLE 5 FILL" & CONFORMANCE WITH THE MANUFACTURER'S SPECIFICATIONS FOR THE "SYSTEM SAND" PRIOR TO PLACING THE FILL

12. THE SYSTEM INSTALLATION SHALL BE INSPECTED BY THE LOCAL BOARD OF HEALTH AT THE MILESTONES AS TOTAL SYSTEM SAND LENGTH = DETERMINED BY THE LOCAL BOARD OF HEALTH. 13. THE INSTALLER SHALL NOTIFY QUINN ENGINEERING, INC. AT LEAST 24 HOURS IN ADVANCE OF REQUESTING DESIGN CALCULATIONS:

INSPECTIONS. QUINN ENGINEERING, INC. SHALL CONDUCT INSPECTIONS AT THE FOLLOWING MILESTONES: A. EXCAVATION COMPLETE - PRIOR TO PLACING FILL B. INSTALLATION OF PIPING

C. FINISH GRADING COMPLETE

D. COMPLETE STABILIZATION 14. ALL SYSTEM PIPING SHALL BE MARKED WITH MAGNETIC MARKING TAPE IN ACCORDANCE WITH 310 CMR 15. THE SYSTEM OWNER SHALL HAVE A SEPTAGE HANDLER, LICENSED BY THE LOCAL BOARD OF HEALTH, PUMP

THE SEPTIC TANK IN ACCORDANCE WITH 310 CMR 15.351. ALL COMPONENTS OF THE SYSTEM SHALL BE MAINTAINED IN ACCORDANCE WITH 310 CMR 15.351, THE SYSTEM MANUFACTURER'S REQUIREMENTS OR OTHER APPLICABLE SECTION OF 310 CMR 15. 16. MACHINERY WHICH MAY CRUSH OR DISTURB THE PIPE SHALL NOT BE ALLOWED ON THE DISPOSAL AREA.

17. THE CONSTRUCTION OF PERMANENT STRUCTURES UPON THE DISPOSAL SYSTEM AND/OR RESERVE AREA IS NOT ALLOWED.

### PRESBY LEACHING SYSTEM NOTES:

INSTALLATION, MAINTENANCE, MONITORING, REPORTING, ETC. SHALL BE IN ACCORDANCE WITH THE ALTERNATIVE USE CERTIFICATION ISSUED BY DEP DATED OCTOBER 2019 AND IN ACCORDANCE WITH THE MANUFACTURER'S

MASS DEP AND PRESBY REQUIRE ALL DESIGNERS AND INSTALLERS TO BE CERTIFIED. SYSTEM TO BE INSTALLED IN ACCORDANCE WITH PRODUCT DESIGN AND INSTALLATION MANUAL, STATE AND LOCAL REGULATIONS. FOR PRODUCT INFORMATION OR THE NEAREST DEALER CONTACT PRESBY. INSTALLERS OF PRESBY SYSTEMS SHALL PROVIDE OWNER, MANUFACTURER, AND THE LOCAL APPROVING AUTHORITY WITH A COPY OF A COMPLETED "SYSTEM INSTALLATION REPORT FORM" FOR EACH NEW OR REMEDIAL SYSTEM

INSTALLED. 4. ALL SYSTEMS SHALL BE DESIGNED AND INSTALLED USING DISTRIBUTION BOXES AS INSPECTION PORTS. THE OUTLET OF THE D-BOX SHALL BE AT LEAST 2" ABOVE THE INLET OF THE HIGHEST PRESBY LINE WITH THE CONNECTING PIPE SLOPE NOT LESS THAN 2%.

THE MINIMUM TOTAL DEPTH OF COVER ON PRESBY LINES IS 10": 6" OF SYSTEM SAND PLUS 4" OF TOPSOIL. PRESBY PIPES WITH 12" OF STRUCTURAL COVER IS DESIGNED FOR H-10 LOADING, AND PRESBY PIPE WITH 18" OF STRUCTURAL COVER IS DESIGNED FOR H-20 LOADING. THE USE OF PRESSURE DISTRIBUTION LINES IN PRESBY WASTEWATER TREATMENT SYSTEMS IS PROHIBITED. SYSTEMS INCORPORATING PUMPS TO GAIN ELEVATION MUST USE DIFFERENTIAL VENTING AND VELOCITY REDUCTION TO

CONTROL LIQUID FLOW. VELOCITY REDUCTION MAY BE ACCOMPLISHED THROUGH THE USE OF A DISTRIBUTION BOX WITH A TEE OR 90° ELBOW AT THE FORCE MAIN OUTLET. 3. EACH PRESBY SYSTEM MUST BE INSTALLED WITH VENTING AT THE END OF EACH D—BOX LINE, SECTION OR SERIAI BED. VENT MANIFOLDS MAY BE USED TO CONNECT MULTIPLE VENTS TO ONE VENT OUTLET.

). EFFLUENT TEE FILTERS WILL NOT BE REQUIRED FOR SEPTIC TANKS USED IN GRAVITY PRESBY SYSTEMS 10. PRESBY SYSTEMS MAY BE INSTALLED IN AN AREA UP TO 40% SMALLER THAN A CONVENTIONAL TITLE 5 BED DESIGNED IN ACCORDANCE WITH 310 CMR 15.252. CURRENTLY MASSACHUSETTS LIMITS ALL SYSTEMS TO A MINIMUM BED SIZE OF 400 SF. 11. ALL CONFIGURATIONS OF PRESBY SYSTEM REQUIRE A MINIMUM OF 6" OF SYSTEM SAND SURROUNDING THE

CIRCUMFERENCE OF THE PIPE, AND 12" OF SAND BEYOND ALL PIPE ENDS AND THE OUTER PIPE ROWS (FIRST & LAST). ASTM STANDARD: C-33 (CONCRETE SAND) MEETS THE REQUIREMENTS FOR SYSTEM SAND. 12. SAND BEDS SLOPING 10% OR LESS REQUIRE THE SYSTEM SAND AREA TO EXTEND A MINIMUM OF 1 FOOT AROUND THE PERIMETER OF THE PRESBY PIPE. (SEE EFFLUENT DISPOSAL AREA CROSS SECTION DETAIL).

13. SAND BEDS SLOPING GREATER THAN 10% REQUIRE THE SYSTEM SAND AREA TO EXTEND A MINIMUM OF 1 FOOT AROUND THE PERIMETER OF THE PRESBY PIPE PLUS AN ADDITIONAL 3 FOOT EXTENSION SHALL BE PROVIDED ON THE DOWNSLOPE SIDE. (SEE EFFLUENT DISPOSAL AREA CROSS SECTION DETAIL). 14. A COMBINATION DISTRIBUTION IS REQUIRED FOR SYSTEMS WITH GREATER THAN 500GPD. TO PREVENT MOVEMENT. BE SURE DISTRIBUTION BOX IS PLACED ON A STABLE SOIL BASE OR CONCRETE PAD.

15. ALL DISTRIBUTION BOXES THAT DIVIDE EFFLUENT FLOW IN PUMP OR GRAVITY SYSTEMS REQUIRE FLOW EQUALIZERS IN THEIR OUTLETS. MOST FLOW EQUALIZERS ARE LIMITED TO A MAXIMUM OF 10 GALLONS/MINUTE IN GRAVITY SYSTEMS AND 20 GALLONS/MINUTE IN PUMPED SYSTEMS.

16. DO NOT INSTALL SYSTEM ON FROZEN GROUND OR LEAVE SYSTEM UNCOVERED FOR EXTENDED PERIODS OF TIME.

## **CERTIFICATION:**

I CERTIFY THAT I AM CURRENTLY APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION PURSUANT TO 310 CMR 15.017 TO CONDUCT SOIL EVALUATIONS AND THAT THE ABOVE ANALYSIS HAS BEEN PERFORMED BY ME CONSISTENT WITH THE REQUIRED TRAINING, EXPERTISE, AND THE EXPERIENCE DESCRIBED IN 310 CMR 15.017. I FURTHER CERTIFY THAT THE RESULTS OF MY SOIL EVALUATION, AS INDICATED ON THE ATTACHED SOIL EVALUATION FORM, ARE ACCURATE AND IN ACCORDANCE WITH 310 CMR 15.100

### BELOW GRADE **DESIGN CRITERIA:**

ESTIMATED SEASONAL HIGH GROUND WATER TABLE AT 28"

> RESIDENTIAL LOADING: BEDROOMS PERC RATE: SOIL GROUP: SYSTEM SLOPE: GARBAGE DISPOSAL / GRINDER: NOT ALLOWED PIPE ROW LENGTH: ENVIRO-SEPTIC PIPE REQ'D: 220 FT ENVIRO-SEPTIC PIPE PROVIDED: 224 FT USE C/L TO C/L SPACING: NUMBER OF SECTIONS: ROWS NUMBER OF PIPE ROWS: MIN SAND AREA REQ'D: 400 SQ FT 510 SQ FT 34 FT SAND AREA PROVIDED: SYSTEM SAND LENGTH: SYSTEM SAND WIDTH:

1. A = LIQUID DEPTH

COVER AT

GRADE

2. B = 14" FOR 4' LIQUID DEPTH

B = 19" FOR 5' LIQUID DEPTH

B = 24" FOR 6' LIQUID DEPTH

24"ø ACCESS-

HOLES W/

3. TANK CONSTRUCTION SHALL CONFORM TO 310 CMR 15.000.

COVER AT

GRADE

1,500 GALLON 2-COMPARTMENT SEPTIC TANK DETAIL

SCALE: NOT TO SCALE

4. TANK SHALL BE CAPABLE OF CARRYING H10 WHEEL LOAD WITH THE PROP. SOIL

5. PROVIDE RISERS WITH LOCKABLE, WATERTIGHT COVERS TO GRADE OVER BOTH TEE'S.

LEACHING AREA REQUIRED UNDER TITLE 5: 440 GPD/0.56 GPD/S.F. = 786 S.F. (PRESBY SYSTEMS ARE REQUIRED TO BE NO LESS THAN 60% OF THE AREA OF A PIPE AND AGGREGATE SYSTEM AND NO LESS THAN 400 S.F.

510 S.F. PROVIDED > (786 S.F.)(60%) 510 S.F. PROVIDED > 400 S.F. REQ'D

BOTTOM ELEV OF ENVIRO-SEPTIC® PIPE HIGHEST ROW = 1069.67 SYSTEM SAND BEYOND HIGHEST ROW = FT SYSTEM SAND BEYOND LOWEST ROW = MATERIAL COVER OVER ENVIRO-SEPTIC® PIPES = 10 INCHES SYSTEM SLOPE = CENTER-TO-CENTER SPACING NUMBER OF ROWS = DEPTH TO SEASONAL HIGH GROUNDWATER 28 INCHES SEPARATION DISTANCE TO GROUNDWATER FEET DROP IN ELEVATION FROM PIPE TO PIPE = OUTSIDE-TO-OUTSIDE PIPE LAYOUT WIDTH OF SYSTEM = 13.0 FT TOTAL SYSTEM SAND WIDTH = 15.0 FT PLUS 3' EXT. 34 FT

LEACHING AREA REQUIRED: (440 GPD)/( 0.56 GPD/S.F.) = 786 S.F. (PRESBY ALLOWS FOR 40% REDUCTION IN LEACHING SIZE = 400 S.F. MIN)

CRITERIA: 4 BEDROOM HOUSE PERC RATE = 11 MPI

% SLOPE OF SYSTEM = 20% CTR. TO CTR. SPACING: MIN. REQ'D = 2.0' PROVIDED = 2.0'LINEAR FT OF Presby PIPE: MIN. REQ'D = 220 LF PROVIDED = 224 LF MINIMUM SAND BED AREA: MIN. REQ'D = 400 SF PROVIDED = 510 SF

LENGTH OF EACH ENVIROSEPTIC PIPE LINE (L) = 32LAYOUT WIDTH OF PIPE (W) = 13' (OUTSIDE OF #1 TO OUTSIDE OF #7) DIMENSIONS OF C-33 SYSTEM SAND BED =  $34L \times 15W = 510 \text{ SF}$ (5' OVERDIG WITH TITLE 5 SAND BEYOND C-33 SYSTEM SAND BED IS REQ'D)

RESERVE AREA 32'x25' = 800 SF > 786 SF = 0 K

# **DESIGN ELEVATIONS:**

SL 2.5Y6/4

BY: KEVIN QUINN, PE

WITNESS: WAYNE CURRAN, RS

SL 10YR6/6 | Bw 4-28

C 28-91

TOP OF FOUNDATION 1077.85 INV. @ FDN INV. IN AT PROP. SEPTIC TANK 1077.25 INV. OUT AT PROP. SEPTIC TANK 1077.00 INV. IN AT PROP. D-BOX 1070.59 INV. OUT AT PROP. D-BOX 1070.42

HIGH | BOTTOM OF | BOTTOM | INV. AT | G.W. C33 SYSTEM OF PIPE | BEG./END | OF PIPE | FINISHED | FINISHED ELEV SAND/ B.O. GRADE GRADE 1067.50 | 1065.17 | 1069.17 | 1069.67 | 1070.25 | 1070.67 | 1071.50 | 1071.50 1067.00 | 1064.67 | 1068.77 | 1069.27 | 1069.85 | 1070.27 | 1071.10 | 1071.10 3 | 1066.50 | 1064.17 | 1068.37 | 1068.87 | 1069.45 | 1069.87 | 1070.70 | 1070.70 1066.00 | 1063.67 | 1067.97 | 1068.47 | 1069.05 | 1069.47 | 1070.30 | 1070.30 5 | 1065.50 | 1063.17 | 1067.57 | 1068.07 | 1068.65 | 1069.07 | 1069.90 | 1069.90 1065.00 | 1062.67 | 1067.17 | 1067.67 | 1068.25 | 1068.67 | 1069.50 | 1069.50

7 | 1064.50 | 1062.17 | 1066.77 | 1067.27 | 1067.85 | 1068.27 | 1069.10 | 1069.10 NOTE: THE BREAKOUT ELEV. IS EQUAL TO THE BOTTOM OF THE C-33 SAND

#### PIPE - 4" PVC PIPE 4" MAX. AND 90° BENDS OFFSET ADAPTER ON END OF EVERY PRESBY PIPE LINE POSITIONED AT 12 O'CLOCK RAISED CONNECTON END DETAIL SCALE: NOT TO SCALE

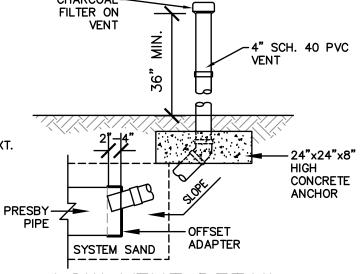
GAS BAFFLE-

MIN. DIFFERENCE IN ELEVATION

PIPE

BETWEEN THE DBOX OUTLET AND INLET INTO THE PRESBY PIPE

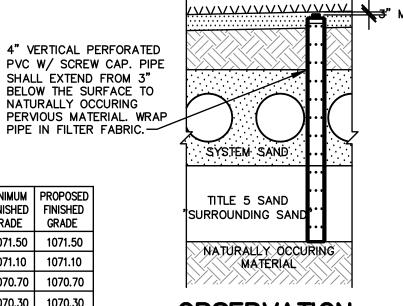
D-BOX CONNECTION DETAIL



### LOW VENT DETAIL SCALE: NOT TO SCALE

1. PROVIDE ONE OBSERVATION PORT WITHIN THE LEACHING AREA.

2. THE OBSERVATION PORTS SHALL CONFORM TO 310 CMR 15.240(13). 



**OBSERVATION** PORT SECTION SCALE: NOT TO SCALE

DH-1A		DH-1B		DH-2A SURFACE		DH-2B
SURFACE		SURFACE				SURFACE
SL 10YR4/2	Ap 0-4	SL 10YR2/2	Ap 0-6	SL 10YR4/2	Ap 0-4	SL 10YR4/2

SL 10YR6/6 | Bw 4-31

MOTTLES @ 31 10YR6/8

C 31-87

SL 2.5Y7/4

NO WEEP

NO WATER

NO REFUSAL

MOTTLES @ 28 10YR6/6 MOTTLES @ 32 10YR7/2 NO WEEP NO WEEP NO WATER NO WATER NO REFUSAL NO REFUSAL

SOIL TESTING: DATE PERFORMED: 7/17/19

SL 10YR6/8 | Bw 6-32

SL 2.5Y6/4 C 32-92

DATE PERFORMED: 7/17/19 DATE PERFORMED: 7/17/19 BY: KEVIN QUINN, PE BY: KEVIN QUINN, PE WITNESS: WAYNE CURRAN, RS WITNESS: WAYNE CURRAN, RS PERC RATE: 11 MPI PERC RATE: 8 MPI

Ap 0-4

SL 2.5Y6/3

MOTTLES @ 39 2.5Y7/4 NO WEEP NO WATER

SL 10YR5/6 | Bw 4-60

C 60-96

NO REFUSAL

DATE: DECEMBER 23, SUBSURFACE SEWAGE DISPOSAL SYSTEM PLAN CAMP STREET

SHEET 2 OF 4

P.O. Paxt 508)7

Ш

NGINE

9

RFACE SEWAGE DIS PAXTON, MA CAMP STREE

-XXX- EXIST. CONTOUR XXX.X—XEXIST. SPOT GRADE -XXX-PROP. FINISH GRADE  $XXX.X \rightarrow PROP.$  SPOT GRADE

**PROJECT NOTES:** 

THERE ARE RESOURCE AREAS WITHIN 100' OF

HAZARD ZONE AS INDICATED ON NFIP FIRM

WITHIN A ZONE A OF A SURFACE WATER

PROPOSED SAS
THE PROPERTY DOES NOT FALL WITHIN A FLOOD

COMMUNITY PANEL MAPS.

NO PORTION OF THE PROPOSED WORK FALLS
WITHIN A MAPPED ESTIMATED HABITAT OF RARE

MILDLIFE OR WITHIN A PRIORITY HABITAT OF RARE

PROTECTION AREA. THE LEACHING FIELD AND ITS COMPONENTS ARE OUTSIDE THE SURFACE WATER

CONSERVATION APPROVAL IS REQUIRED FOR THE WORK SHOWN ON THIS PLAN.

CABELL MADDUX
CAMP STREET, PAXTON
MAP 29, PARCEL 1 + 1A
BOOK 49465 PAGE 84

PROPERTY INFORMATION:

PROTECTION ZONE A.

INV. IN AT SEPTIC TANK

INV. OUT AT SEPTIC TANK

LINE # | BOTTOM | INV. AT

OF PIPE | BEG./END

INV AT FND

3

INV. IN AT DBOX

INV. OUT AT DBOX

**RECORD DATA:** 

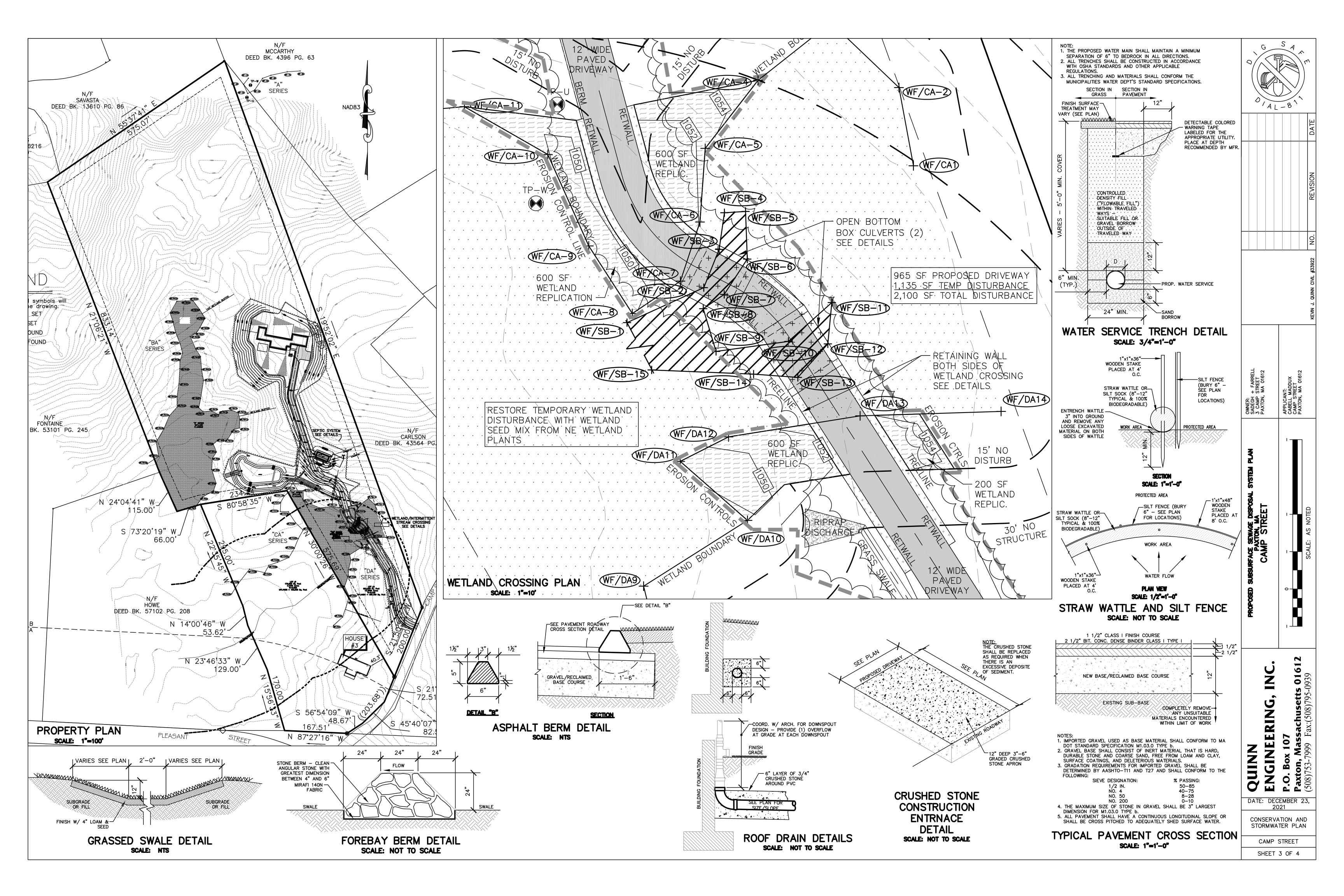
APPLICANT:

LEGEND

SUBSURFACE WASTEWATER DISPOSAL SYSTEM PLAN

SÈPTIC SYSTEM

KEVIN QUINN, PE



# **GENERAL NOTES:**

1. ALL REQUIRED PERMITS SHALL BE SECURED PRIOR TO COMMENCING WORK. PRIOR TO COMMENCING ANY WORK ONSITE, CONTRACTOR SHALL NOTIFY THE TOWN OF PAXTON PLANNING AND ENGINEERING DEPARTMENTS. BUILDING DEPARTMENT. CONSERVATION COMMISSION. DEPARTMENT OF PUBLIC WORKS, SCHOOL DEPARTMENT, POLICE AND FIRE DEPARTMENTS.

2. ALL WORK SHALL CONFORM TO THE TOWN OF PAXTON REGULATIONS, ZONING BY-LAW, CONSERVATION COMMISSION LOCAL BY-LAW OR OTHER REGULATIONS AS APPLICABLE. ALL REQUIREMENTS OF THE TOWN OF PAXTON ARE HEREBY MADE CONDITIONS OF THIS WORK. 3. CONTRACTOR SHALL CONTROL AIRBORNE DUST WITH USE OF SPRAYED WATER AS REQUIRED TO MINIMIZE IMPACT ON NEIGHBORING PROPERTIES. USE OF CALCIUM CHLORIDE OR OTHER CHEMICALS IS NOT PERMITTED.

4. CONTRACTOR SHALL RETAIN A LICENSED SURVEYOR TO LAY OUT THE SITE CONSTRUCTION, WHO CERTIFY THAT ALL LOCATIONS ARE AS PER PLAN.

5. SEVENTY TWO HOURS PRIOR TO COMMENCING ANY EXCAVATION, THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 811. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF NEW UTILITIES WITH THE VICINITY OF EXISTING UTILITIES (UNDERGROUND AND OVERHEAD) WITH THE APPROPRIATE UTILITY.

6. INTERIM AND/OR PERMANENT SOIL STABILIZATION MEASURE SHALL BE INSTITUTED AS SOON AS PRACTICABLE, BUT NO MORE THAN 14 DAYS AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED ON THAT PORTION OF THE SITE.

UTILIZE ONSITE MATERIALS, IF APPROVED BY OWNER. 8. CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF AS-BUILT LOCATIONS OF ALL UNDERGROUND AND ABOVE GROUND FACILITIES. PROVIDE THE OWNER WITH COMPLETE AS-BUILT PLANS UPON COMPLETION OF PROJECT, INCLUDING UTILITIES NOT INDICATED ON THIS

7. REMOVE ALL TOPSOIL, SUBSOIL, PRIOR TO PLACING ANY FILL ONSITE. WHERE GRAVEL IS CALLED FOR ONSITE, CONTRACTOR MAY

#### 9. CONSTRUCTION SEQUENCE:

ALL WORK OF THIS PROJECT SHALL PROCEED ACCORDING TO THE FOLLOWING PROPOSED SEQUENCE:

- 1.) EROSION CONTROL PROVISIONS IN PLACE
- 2.) CLEARING/GRUBBING CONSTRUCTION OF STORMWATER FACILITIES AND THEN SITE DEVELOPMENT CONSTRUCTION.

10. CONTRACTOR SHALL PLACE A MINIMUM OF 6" (COMPACTED DEPTH) OF GOOD QUALITY LOAM AND GRASS SEED IN ALL AREAS NOT SUBJECT TO RESTORATION BY ANY OTHER MEANS.

11. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE HIS WORK WITH MUNICIPALITY TO LIMIT THE POTENTIAL DISRUPTIONS TO THE THE GENERAL PUBLIC. SHALL EMPLOY DUE CARE AND CAUTION TO PROTECT THE PUBLIC FROM DANGERS ASSOCIATED WITH THE OPERATION. SHALL INSTALL TEMPORARY FENCES, BARRICADES AND SIGNAGE TO ENSURE THAT NO PERSONS ENTER THE WORK AREA. SHALL COORDINATE POLICE DETAILS AS REQUIRED FOR WORK TO BE CONDUCTED IN THE STREET. SHALL EMPLOY DUE CARE WHEN

WORKING AROUND PEDESTRIAN AND VEHICLE TRAFFIC. 12. NO EXCAVATION SHALL TAKE PLACE ONSITE UNTIL ALL SEDIMENTATION CONTROLS (STRAW WATTLES, TEMP BASINS, ETC.) ARE FULLY INSTALLED AS PER PLAN. FOLLOWING COMPLETION OF GRADING IN ANY AREA CONTRACTOR SHALL ACT TO PLACE PERMANENT SURFACE FINISH OR TO STABILIZE SURFACE SOILS AGAINST EROSION. LOAM AND SEED SHALL BE PLACED IMMEDIATELY UPON FINAL GRADING. 13. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT THE PROPOSED CONSTRUCTION ACTIVITIES DO NOT DAMAGE OR UNDERMINE EXISTING SLOPES, BUILDINGS, WALLS, STRUCTURES, ETC. IN THE AREA AROUND THE CONSTRUCTION. REPAIR OF EXISTING SLOPES, BUILDINGS, WALLS, STRUCTURES, ETC. THAT ARE DAMAGED OR UNDERMINED BY THE CONTRACTORS WORK SHALL BE THE

RESPONSIBILITY OF THE CONTRACTOR. 14. EXISTING UTILITY LOCATIONS ARE APPROXIMATE ARE TO BE FIELD VERIFIED. QUINN ENGINEERING, INC. DOES NOT WARRANT THAT ALL EXISTING UTILITIES HAVE BEEN INDICATED. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE EXISTING UTILITY LOCATIONS AND

ENSURING THAT THE PROPOSED WORK DOES NOT CONFLICT WITH THE EXISTING UTILITIES NOT SHOWN. 15. SEWERS SHOULD BE LAID AT A MINIMUM OF 10 FEET, HORIZONTALLY, FROM ANY EXISTING OR PROPOSED WATER MAIN. SHOULD LOCAL CONDITIONS PREVENT LATERAL SEPARATION OF 10 FEET TO A WATER MAIN, THE WATER MAIN SHOULD BE LAID IN A SEPARATE TRENCH AND THE ELEVATION OF THE CROWN OF THE SEWER PLACED AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER MAIN. WHENEVER SEWERS MUST CROSS UNDER WATER MAINS, THE SEWER SHOULD BE LAID AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER MAIN. WHEN THE ELEVATION OF THE SEWER CAN NOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHOULD BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL-JOINT PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHOULD BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. WHEN IT IS IMPOSSIBLE TO OBTAIN HORIZONTAL OR VERTICAL SEPARATION AS STIPULATED ABOVE, BOTH SEWER AND WATER MAIN SHOULD BE ENCASED IN CONCRETE FOR 10 FEET EITHER SIDE OF

16. THE GROUND IMMEDIATELY ADJACENT TO FOUNDATIONS SHALL BE SLOPED AWAY FROM THE BUILDING, IN ACCORDANCE WITH 780 CMR 2. EROSION CONTROLS INCLUDING TEMPORARY BASINS SHALL BE IMPLEMENTED AND INSPECTED BY A TOWN 1813.7, AT A SLOPE OF NOT LESS THAN 1:12 FOR A MINIMUM DISTANCE OF 10 FEET MEASURED PERPENDICULAR TO THE FACE OF THE WALL, OTHER APPROVED ALTERNATE METHODS OF DIVERTING WATER AWAY FROM THE FOUNDATION MAY BE ACCEPTABLE. 17. ALL SDR35 PVC SEWER PIPE & FITTINGS SHALL CONFORM TO ASTM D3034 OR ASTM F679.

18. ALL SCH. 40 & SCH. 80 PVC PIPE & FITTINGS SHALL CONFORM TO ASTM D178M D3915, .4, ASTM . D1785, ASTM D3915, ASTM

18. THE SITE IS NOT LOCATED WITHIN A TOWN OF PAXTON WATERSHED RESOURCE PROTECTION DISTRICT.

NORMAL HOUSEHOLD USE TO THE SOIL ABSORPTION SYSTEM.

19. SUITABLE FILL SHALL CONSIST OF MATERIAL SOIL FREE OF ORGANIC MATERIALS, LOAM, AND ANY DELETERIOUS MATERIALS. SUITABLE CONFORMABLE FILL SHALL NOT CONTAIN STONES LARGER THAN 10" IN ANY DIMENSION, AND SHALL HAVE LESS THAN 75% PASSING THE NO. 4 SIEVE AND A MAXIMUM OF 20% PASSING THE NO. 200 SIEVE. SUITABLE FILL SHALL NOT CONTAIN ANY BUILDING RUBBLE, GRANITE, OR CONCRETE BLOCK, ROOFING MATERIALS, OR OTHER CONSTRUCTION REFUSE. AT THE TIME OF PLACEMENT SUITABLE FILL SHALL NOT CONTAIN FROST, SNOW, OR ICE AND SHALL NOT CONTAIN WATER GREATER THAN THE OPTIMAL MOISTURE CONTENT.

20. THE EROSION CONTROL LINE SHALL BE STAKED BY A MA REGISTERED SURVEYOR PRIOR TO THE INSTALLATION OF EROSION CONTROLS THE EROSION CONTROL LINE SHALL SERVE AS THE LIMIT OF WORK. 21. SITE OPERATIONS SHALL NOT DIRECT HAZARDOUS MATERIALS IN QUANTITIES SUBSTANTIALLY GREATER THAT THOSE ASSOCIATE WITH

THE IMPERIVOUS BARRIER SHALL EXTEND
FROM THE TOP OF EMBANKMENT TO A DEPTH - CROWN ON TOP 24" BELOW THE BASIN FLOOR OR 12" INTO OF BERM NATIVE SOIL (WHICHEVER IS DEEPER). THE IMPERVIOUS BARRIER JOINTS SHALL BE OVERLAPPED AND FASTENED TO ENSURE WATERTIGHTNESS OF THE BARRIER. 4" LOAM AND SEED ON SIDE SLOPES (TYPICAL) SEE PLAN-FOR DEPTH FINISH THE BASIN SLOPE TO MEET FLOOR W/ CLEAN EXISTING GRADE

GRAVEL (UNIFIED 40 MIL CONTINUOUS-CLASSIFICATION GW PLASTIC IMPERVIOUS OR GP) REMOVE ALL TOP SOIL FROM-FILL AND TOP SOIL REPLACEMENT LIMITS OF BASIN BERM & FLOORS WITHIN BASIN BERM SHALL BE SUITABLE FILL STORMWATER BASIN BERM DETAIL NOT TO SCALE BUFFALO STYLE SERVICE -BOX-PENAGONAL COVER NUT

SIDEWALK ROADWAY STREET BOX SET 12" BELOW FINISHED GRADE UNLESS CONCRETE BASE EXISTS, IN WHICH CASE THE BOX SHALL BE SET TO FINISHED GRADE OF THE CONCRETE. BOX SUPPLIED BY CITY. WATER MAIN COPPER TYPE K TUBING. EXISTING CORP. MUST BE DRILLED

> BE ACCEPETED. TYPICAL DOMESTIC WATER SERVICE DETAIL SCALE: NOT TO SCALE

AND CLEANED WHEN A SERVICE IS RENEWED. IF REQUIRED

IT SHALL BE CHANGED AT THE DISCRETION OF THE FIELD

INSPECTOR. ALL TAPS SHALL BE DIRECT, NO SADDLES WILL

# LONG TERM POLLUTION PREVENTION PLAN MEASURES:

- 1. GOOD HOUSEKEEPING PRACTICES SHALL BE EMPLOYED IN MAINTENANCE OF THE STORMWATER SYSTEM AND ON SITE AREAS. THE MINIMUM HOUSEKEEPING PRACTICES ARE IDENTIFIED IN THE STORMWATER COLLECTION AND TREATMENT SYSTEM OPERATION AND MAINTENANCE PLAN.
- 2. STORAGE OF MATERIALS AND WASTE PRODUCTS SHALL BE STORED IN A MANNER THAT MINIMIZES EXPOSURE TO STORMWATER, IE USE OF TARPAULINS, INSIDE STORAGE, ETC. MATERIALS AND WASTE SHALL BE MAINTAINED IN AN ORDERLY MANNER AND SHALL BE COLLECTED IMMEDIATELY UPON SPILLS OR DISPERSION. 3. VEHICLE WASHING SHOULD OCCUR IN ACCORDANCE WITH THE "ILLICIT AND NON STORMWATER DISCHARGES'
- PORTION OF THE STORMWATER POLLUTION PREVENTION PLAN NOTES. 4. LONG TERM MAINTENANCE OF THE STORMWATER SYSTEM SHALL FOLLOW THE OPERATION AND MAINTENANCE REQUIREMENTS ON THESE PLANS AT A MINIMUM.
- 5. PARTIES RESPONSIBLE FOR MAINTENANCE OF THE STORMWATER SYSTEM SHOULD BE FAMILIAR WITH "CLEAN UP OF SITES AND SPILLS" INFORMATION AVAILABLE ON THE MA DEP WEB SITE (CURRENTLY AVAILABLE AT http://www.mass.gov/dep/cleanup/laws/spillmgm.doc) AND SHOULD BE PREPARED TO ACT ACCORDINGLY IN THE 6. THE MINIMUM PRACTICES EMPLOYED IN INSPECTION AND MAINTENANCE OF THE ON SITE AREAS AND STORMWATER
- SYSTEM COMPONENTS ARE IDENTIFIED IN THE STORMWATER COLLECTION AND TREATMENT SYSTEM OPERATION AND 7. THE MASSACHUSETTS BUREAU OF FARM PRODUCTS & PLANT INDUSTRIES FACT SHEET FOR "PROTECTING WATER

RESOURCES FROM FERTILIZER" RECOMMENDS THAT: UNUSED FERTILIZER SHOULD BE REMOVED FROM THE SPREADER AND RETURNED TO THE ORIGINAL BAG OR CONTAINER FOR FUTURE USE. STORE UNUSED FERTILIZER IN A DRY PLACE AWAY FROM ANY WATER SOURCE.

F STORED FERTILIZER GETS WET YOU NOT ONLY LOSE NUTRIENT VALUE, THERE IS POTENTIAL FOR NITRATES TO LEACH INTO WATER SOURCES. THE HANDLING OF HERBICIDES AND PESTICIDES SHOULD BE CONDUCTED IN ACCORDANCE WITH GUIDELINES AVAILABLE ON THE MA DEP WEB SITE (CURRENTLY AVAILABLE AT

http://www.mass.gov/dep/recycle/hazardous/pesticid.htm) 8. MANAGEMENT OF PET WASTE SHOULD BE CONDUCTED IN ACCORDANCE WITH THE GUIDELINES AVAILABLE ON THE MA DEP WEB SITE (CURRENTLY AVAILABLE AT http://www.mass.gov/dep/water/resources/petwaste.pdf) 9. OPERATION AND MÀINTENANCE OF ANY ON SITE SEPTIC SYSTEM SHOULD BE CONDUCTED IN ACCORDANCE 310

10. SOLID WASTE SHOULD BE MANAGED IN ACCORDANCE WITH LOCAL, STATE, FEDERAL REGULATIONS AND GUIDELINES. 11. SNOW DISPOSAL SHALL BE CONDUCTED IN ACCORDANCE WITH THE MA DEP GUIDELINE BRPG01-01 (CURRENTLY

AVAILABLE AT http://www.mass.gov/dep/water/laws/snowdisp.htm) 12. USE OF SALT ON ROADS AND WALKS IS TO BE MINIMIZED. STORAGE OF SNOW SALT AND OTHER DE-ICING MATERIALS SHALL BE IN ACCORDANCE WITH MA DEP POLICY DWSG97-1 (CURRENTLY AVAILABLE AT

http://www.mass.gov/dep/water/laws/saltgui.doc)

13. THE FOLLOWING PAVEMENT SWEEPING SCHEDULE IS RECOMMENDED WITH SWEEPING SCHEDULED PRIMARILY IN THE SPRING AND FALL:

- QUARTERLY AVERAGE USING A HIGH EFFICIENCY VACUUM SWEEPER - QUARTERLY AVERAGE USING A REGENERATIVE AIR SWEEPER

- MONTHLY AVERAGE USING A MECHANICAL SWEEPER (ROTARY BROOM) SWEEPINGS SHOULD BE HANDLED IN ACCORDANCE WITH MA DEP POLICY #BRP-94-092. 13. ILLICIT DISCHARGES TO THE STORMWATER SYSTEM ARE PROHIBITED.

14. FOR LAND USES NEAR CRITICAL AREAS OR FROM LAND USED WITH HIGHER POTENTIAL POLLUTANT LOADS THE STORMWATER SYSTEM SHOULD BE PROVIDED WITH A SHUTDOWN DEVICE. 15. PARTIES RESPONSIBLE FOR MAINTENANCE OF THE STORMWATER SYSTEM SHOULD BECOME FAMILIAR WITH THE REQUIREMENTS OF:

- THE STORMWATER POLLUTION PREVENTION PLAN AND NOTES THE STORMWATER COLLECTION AND TREATMENT SYSTEM OPERATION AND MAINTENANCE PLAN THESE LONG TERM POLLUTION PREVENTION PLAN MEASURES

16. IN THE CASE OF AN EMERGENCY DIAL 911 OR CONTACT: MASS DEP CENTRAL REGION

8 NEW BOND STREET WORCESTER, MA 01606 (508) 792-7650

AT OWNER'S

EXPENSE

### WETLAND/STORMWATER NOTES:

. WETLAND DELINEATION BY ECOTEC, INC., OF WORCESTER MA.

# REPRESENTATIVE PRIOR TO STARTING CONSTRUCTION.

3. APPROVAL FROM THE PAXTON CONSERVATION COMMISSION IS REQUIRED FOR THIS PROJECT. WETLAND AREAS IDENTIFIED IN THIS PLAN SET QUALIFY AS WETLANDS UNDER 310 CMR 10.00.

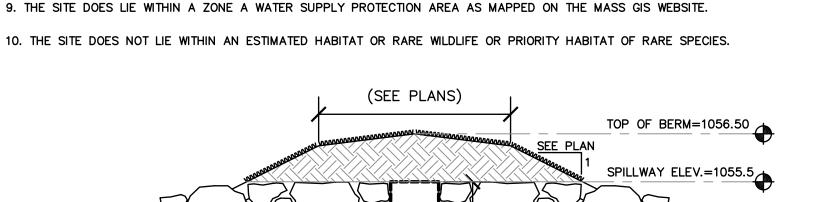
#### 4. NO EXCAVATION SHALL TAKE PLACE ONSITE UNTIL ALL SEDIMENTATION CONTROLS (WATTLES, SILT FENCE, ETC.) ARE FULLY INSTALLED PER PLAN.

5. FOLLOWING COMPLETION OF GRADING IN ANY AREA, CONTRACTOR SHALL ACT TO PLACE PERMANENT SURFACE FINISH OR TO STABILIZE SOILS AGAINST EROSION, LOAM AND SEED SHALL BE PLACED IMMEDIATELY UPON FINAL GRADING.

6. ALL EROSION CONTROL DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AND SHALL NOT BE REMOVED UNTIL ALL DISTURBED SURFACES HAVE BEEN FULLY STABILIZED WITH VEGETATION.

7. EXISTING ROADS CONNECTED TO THE PROJECT SITE WILL BE KEPT CLEAN OF SILT AND DEBRIS AT ALL TIMES.

8. THE SITE DOES NOT LIE WITHIN A FLOOD HAZARD ZONE AS INDICATED ON NFIP FIRM MAPS.



SECTION A-A 6"ø AND 12"ø RIP RAP-PLACE-IN A CLOSE PATTERN PLACE 4" LOAM AND-GRASS SEED ON SEE PLANS BASIN SLOPES FILL SPILLWAY WITH-**CLEAN SAND** 14'Wx2'Hx1'D-CONCRETE WIER -GROUT TO WATER

**ELEVATION** EMERGENCY OVERFLOW SPILLWAY SCALE: 1/2"=1'-0"

METER VALVES METER TO BE SUPPLIED AND INSTALLED BY CITY

# CONSTRUCTION PERIOD POLLUTION PREVENTION PLAN NOTES:

1. CONTROLS TO REDUCE POLLUTANTS:

- A.) THE FOLLOWING IS A BRIEF DESCRIPTION OF EACH BMP IMPLEMENTED TO CONTROL POLLUTANTS IN STORM WATER DISCHARGES. 1.) EROSION CONTROLS: STRAW WATTLES PROVIDE MEASURES OF CONTROLLING EROSION AND SEDIMENTATION AND SHALL BE IMPLEMENTED BY THE CONTRACTOR WHERE NEEDED TO PREVENT SEDIMENT FROM LEAVING THE WORK SITE. 2.) EARTH DIKES, TEMPORARY DRAINAGE SWALES, INTERCEPTOR DIKES AND/OR SWALES SHALL BE EMPLOYED BY THE SITE
- 3.) TEMPORARY CONSTRUCTION ENTRANCES OF CRUSHED STONE SHALL BE IMPLEMENTED BY THE CONTRACTOR WHEN NEEDED TO PREVENT SEDIMENT FROM TRACKING OFF-SITE AND INTO EXISTING ROADWAYS. B.) DISTURBED AREAS NOT SUBJECT TO RESTORATION BY OTHER MEANS SHALL BE STABILIZED UPON FINISH GRADING WITH 4" OF LOAM

CONTRACTOR TO DIRECT STORMWATER RUNOFF FROM DISTURBED AREAS TO AREAS WHERE DISCHARGE IS ACCEPTABLE.

- AND GRASS SEED. AREAS SLOPED AT GREATER THAN 3:1 SHALL BE STABILIZED WITH GEOTEXTILE FABRIC. C.) THE FOLLOWING RECORDS SHOULD BE MAINTAINED BY THE OPERATOR AS PART OF THE POLLUTION PREVENTION PLAN.
- . DATES WHEN MAJOR GRADING ACTIVITIES OCCUR 2. DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE.

CONTROLLED WITH WATER

3. MAINTENANCE AND CONTROLS:

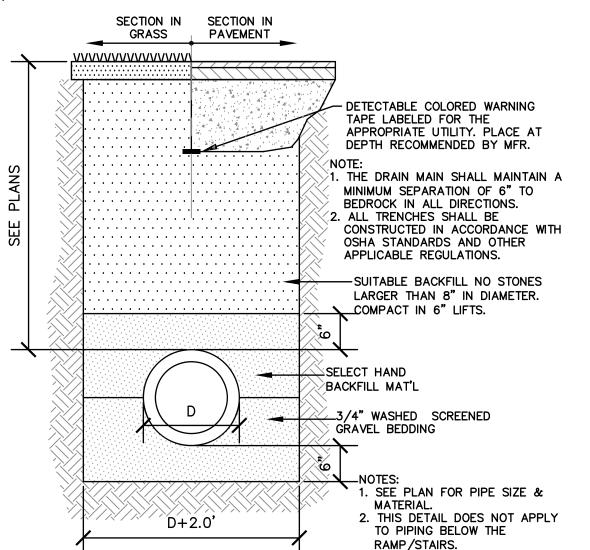
- 3. DATES WHEN STABILIZATION MEASURES ARE INITIATED. D.) HAY BALES, SILT FENCE, STONE CONSTRUCTION ENTRANCES, EARTH DIKES, TEMPORARY DRAINAGE SWALES, INTERCEPTOR DIKES AND SWALES, AND OTHER STRUCTURAL PRACTICES SHALL BE EMPLOYED BY THE SITE CONTRACTOR TO DIRECT STORMWATER RUNOFF FROM DISTURBED AREAS TO AREAS WHERE DISCHARGE IS ACCEPTABLE. THE APPROPRIATE LOCATION AND INSTALLATION TIMING SHALL
- BE DETERMINED BY THE SITE CONTRACTOR E.) THE DISCHARGE OF SOLID MATERIALS, INCLUDING BUILDING MATERIALS, TO ANY WETLAND AREAS, CATCH BASIN, STORMWATER BASIN,
- ETC. ARE PROHIBITED. F.) THE CONTRACTOR SHALL MINIMIZE VEHICLE TRACKED SEDIMENT ONTO THE SURROUNDING ROADWAYS. AIRBORNE DUST SHALL BE
- G.) CONSTRUCTION MATERIALS AND CONSTRUCTION WASTE MATERIALS ASSOCIATED WITH THE PROPOSED DEVELOPMENT SHALL BE STORED IN A MANNER THAT MINIMIZES EXPOSURE TO STORMWATER, IE USE OF TARPAULINS, INSIDE STORAGE, ETC. MATERIALS AND WASTE SHALL BE MAINTAINED IN AN ORDERLY MANNER AND SHALL BE COLLECTED IMMEDIATELY UPON SPILLS OR

H.) DURING CONSTRUCTION, POLLUTANTS FROM SOURCES OTHER THAN THE CONSTRUCTION ACTIVITIES ARE NOT EXPECTED.

2. ILLICIT AND NON STORMWATER DISCHARGES: A. IN ACCORDANCE WITH THE DEP MASSACHUSETTS STORMWATER HANDBOOK, AN ILLICIT DISCHARGE DOES NOT INCLUDE DISCHARGES FROM THE FOLLOWING ACTIVITIES OR FACILITIES: FIRE FIGHTING, WATER LINE FLUSHING, LANDSCAPE IRRIGATION, UNCONTAMINATED GROUNDWATER, POTABLE WATER SOURCES, FOUNDATION DRAINS. AIR CONDITIONING CONDENSATION. FOOTING DRAINS. INDIVIDUAL RESIDENT CAR WASHING, FLOWS FROM RIPARIAN HABITATS AND WETLANDS, DECHLORINATED WATER FROM SWIMMING POOLS, WATER USED FOR STREET WASHING AND WATER USED TO CLEAN RESIDENTIAL BUILDINGS WITHOUT DETERGENTS. B. ILLICIT DISCHARGES TO THE STORMWATER MANAGEMENT SYSTEM SHALL BE PROHIBITED. ILLICIT DISCHARGES INCLUDE WASTEWATER DISCHARGES AND DISCHARGES OF STORMWATER CONTAMINATED BY CONTACT WITH PROCESS WASTES, RAW MATERIALS, TOXIC POLLUTANTS. HAZARDOUS SUBSTANCES, OIL, OR GREASE.

A.) DURING CONSTRUCTION, ALL SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN EFFECTIVE OPERATING CONDITION. IN THE EVENT THAT THE MEASURES ARE NOT WORKING PROPERLY OR IF ADDITIONAL MEASURES ARE REQUIRED, MAINTENANCE AND ADJUSTMENTS SHALL BE MADE BY THE OPERATOR AS SOON AS POSSIBLE BEFORE THE NEXT RAIN STORM.

- B.) DURING CONSTRUCTION, IN THE EVENT THAT MAINTENANCE OR IMPLEMENTATION CANNOT BE MADE PRIOR TO THE NEXT RAIN STORM, THE SITUATION SHALL BE DOCUMENTED BY THE OPERATOR AND ALTERNATIVE BMP'S IMPLEMENTED AS SOON AS POSSIBLE. C.) DURING CONSTRUCTION, CATCH BASINS SUMPS AND SEDIMENT TRAPS SHALL BE CLEANED OF SEDIMENT WHEN THE CAPACITY HAS BEEN REDUCED BY 50%.
- 4. MANAGEMENT PRACTICES: A.) ALL CONTROL MEASURES SHALL BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURE'S RECOMMENDATIONS AND GOOD PRACTICES. INAPPROPRIATE OR INCORRECT USE OF THE CONTROL SHALL BE MODIFIED AS SOON AS PRACTICABLE
- B.) OFF-SITE ACCUMULATION OF SEDIMENT MUST BE REMOVED IMMEDIATELY. C.) LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORMWATER MUST BE PREVENTED
- FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.
- D.) STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED PRIOR TO AND DURING WINTER CONDITIONS.
- E.) A VEGETATED BUFFER SHALL BE MAINTAINED WHEREVER POSSIBLE BETWEEN THE WORK AREA AND DOWNSTREAM RESOURCE AREAS AND PROPERTY BOUNDARIES.
- F.) PROVIDE VELOCITY DISSIPATERS OR RIP RAP AT ALL TEMPORARY AND PERMANENT STORMWATER POINT DISCHARGES.

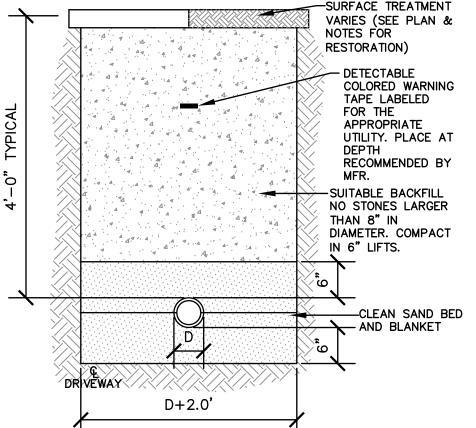


DRAIN TRENCH DETAIL SCALE: 3/4"=1'-0"

THIS DETAIL APPLIES TO UTILITY TRENCHES THAT HAVE NOT BEEN SPECIFIED IN THESE PLANS AND THAT ARE NOT SPECIFIED BY STATE BUILDING CODE. LOCAL REGULATIONS, OR BY THE UTILITY PROVIDER.

1. THE UTILITY CONDUIT, PIPE, ETC SHALL MAINTAIN A MINIMUM SEPARATION OF 6" TO BEDROCK IN ALL DIRECTIONS.

2. ALL TRENCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH OSHA STANDARDS AND OTHER APPLICABLE REGULATIONS.



MISC. UTILITY TRENCH DETAIL SCALE: NOT TO SCALE

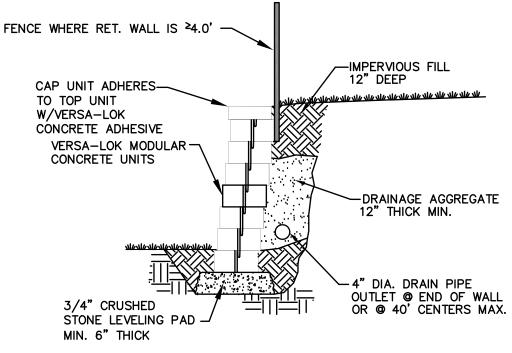
STRUCTURAL PLATE FOOTING DETAIL SCALE: NOT TO SCALE

SYSTEM, OR EQUAL.

2. INSTALL WALL AS PER MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS. 3. RETAINING WALLS WITH DIFFERENCES IN GRADE LEVEL ON EITHER SIDE OF THE WALL IN EXCESS OF FOUR FEET SHALL BE DESIGNED BY A MASSACHUSETTS REGISTERED PROFESSIONAL STRUCTURAL ENGINEER IN ACCORDANCE WITH 780 CMR 116.0. THE MASSACHUSETTS REGISTERED PROFESSIONAL STRUCTURAL ENGINEER SHALL PROVIDE

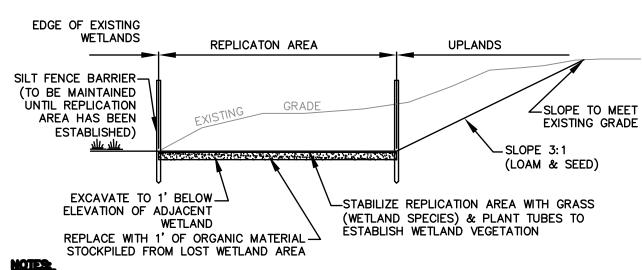
1. RETAINING WALL SHALL BE VERSA-LOK PRECAST CONCRETE BLOCK RETAINING WALL

HIS/HER SEAL AND SIGNATURE ON THE CONSTRUCTION PLANS AND SPECIFICATIONS 4. RETAINING WALLS WITH DIFFERENCES IN GRADE LEVEL ON EITHER SIDE OF THE WALL IN EXCESS OF FOUR FEET. ARE CLOSER THAN TWO FEET TO A WALK, PATH, PARKING LOT, OR DRIVEWAY ON THE HIGH SIDE SHALL BE PROVIDED WITH GUARDS THAT ARE CONSTRUCTED IN ACCORDANCE WITH 780 CMR 1021.0. INTEGRITY OF THE WALL.



# TYPICAL RETAINING WALL

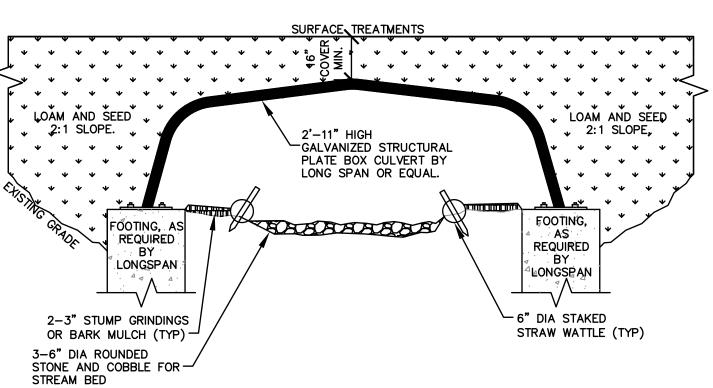
NOTE: REPLICATION SPECIES SHALL INCLUDE RED MAPLE, EASTERN HEMLOCK SAPLING, COMMON WINTER BERRY, AND CINNAMON FERN.



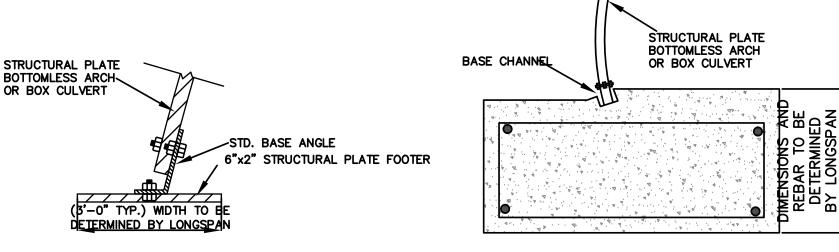
1.) CUT AWAY ALL WOODY PLANTS WITHIN THE WETLAND AREA TO BE FILLED. STRIP AND STORE THE HERBACEOUS PLANT COVER AND TOPSOIL FOR REUSE.

- 2.) REGRADE ALL AREAS SUBJECT TO REPLICATION, BUT REMOVE AT LEAST SIX INCHES OF TOPSOIL, GRADE ALL AREAS SUCH THAT THE FINISH ELEVATIONS IN THE REPLICATION AREA SHALL MATCH THE ADJACENT EXISTING UPLANDS.
- 3.) PLACE SIX INCHES OF STOCKPILED WETLANDS SOILS IN THE REPLICATION AREA. IF NOT ENOUGH WETLAND SOILS ARE AVAILABLE, A  $\frac{50}{50}$  PEAT-SAND MIX SHALL BE ADDED AS A GROWTH MEDIUM.
- 4.) TRANSFER PLANTS AND PLANT PARTS (ROOT STOCK, SEEDS, ETC.) OF SELECTED SPECIES FROM ADJACENT WETLAND, AND PLANT WETLAND SPECIES SAVED FROM THE WETLAND AREA
- 5.) AT LEAST 75% OF THE REPLICATION AREA SHALL BE REESTABLISHED WITH INDIGENOUS WETLANDS SPECIES WITHIN TWO GROWING SEASONS.
- 6.) THE WETLAND REPLICATION SHALL BE PROVIDED IN ACCORDANCE WITH THE GENERAL PERFORMANCE STANDARDS IN PART III OF 310 CMR 10.00 7.) CONTRACTOR SHALL MAINTAIN A MINIMUM STOCK OF BIOFENCE ON-SITE AND PROTECTED FROM THE ELEMENTS.

WETLAND AREA REPLICATION DETAIL SCALE: NOT TO SCALE

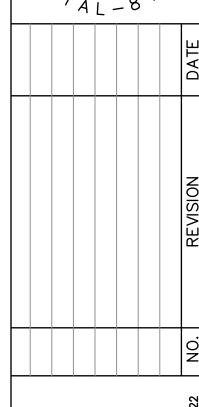


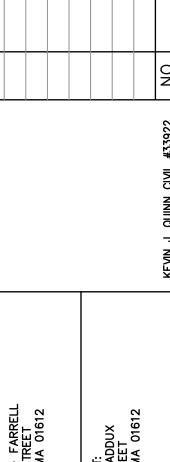
### OPEN BOTTOM BOX CULVERT DETAIL SCALE: NOT TO SCALE

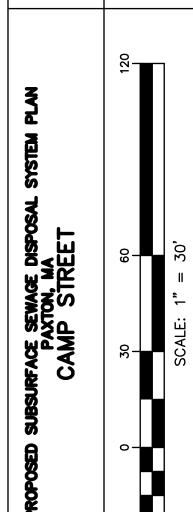


CONCRETE BASE FOOTING DETAIL (SECTION VIEW) SCALE: NOT TO SCALE









0 J ERIN INE

DATE: DECEMBER 23, 2021 TYPICAL DETAILS

CAMP STREET SHEET 4 OF 4

AND NOTES