

LOCATION MAP  
(NOT TO SCALE)

EXISTING UST LEGEND

TANK#	CONTENT	CAPACITY	MATERIAL	INSTALLED	INTENT
5-1	REG. UNL.	8,000 gallons	dwf	5-1-87	to be removed
6-1	PREM. UNL.	8,000 gallons	dwf	5-1-87	to be removed
7-1	REG. UNL.	8,000 gallons	dwf	5-1-87	to be removed

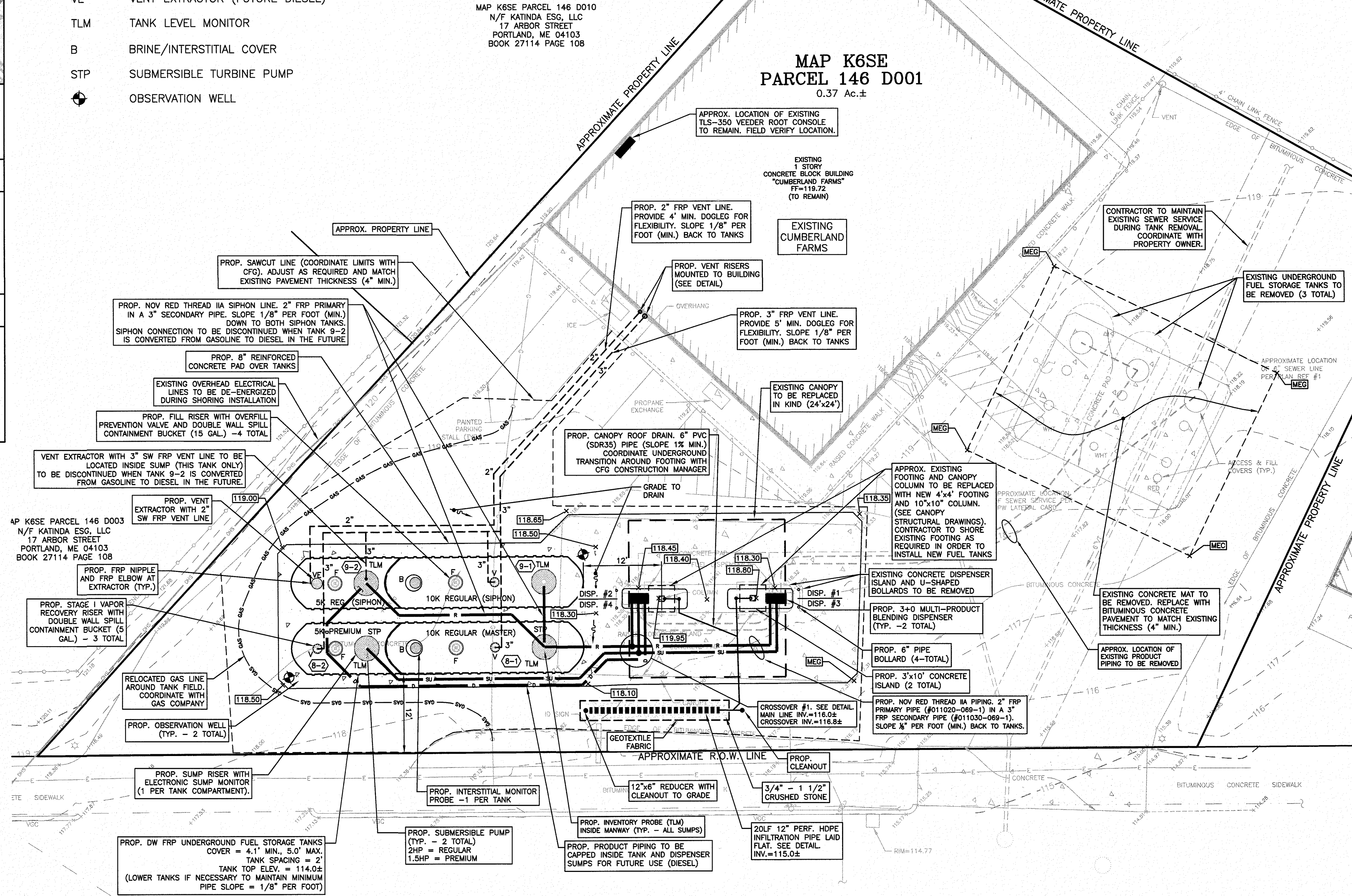
PROPOSED UST LEGEND

TANK#	CONTENT	CAPACITY	MATERIAL	INSTALLED
8-1	REG. UNL.	10,000 gallons	dwf	proposed
8-2	SUPER UNL.	5,000 gallons	dwf	proposed
9-1	REG. UNL.	10,000 gallons	dwf	proposed
9-2	REG. UNL.	5,000 gallons	dwf	proposed

\*TO BE PIPED FOR FUTURE DIESEL CONVERSION

LEGEND

- 99.50 X PROP. SPOT ELEVATION
- MEG X MEET EXISTING GRADE
- 102 PROP. CONTOUR ELEVATION
- ~ PROP. DIRECTION OF SURFACE FLOW
- 100 EXISTING CONTOUR ELEVATION
- F FILL COVER
- V VAPOR RECOVERY/VENT COVER
- VE VENT EXTRACTOR (FUTURE DIESEL)
- TLM TANK LEVEL MONITOR
- B BRINE/INTERSTITIAL COVER
- STP SUBMERSIBLE TURBINE PUMP
- ⊕ OBSERVATION WELL



FOREST AVENUE - ROUTE 302

F:\Projects\CAD\418817\UST PLANS\418817-UST-PLAN-1.dwg T: 5/19/17 9:26am mg

SITE NOTES:

- THIS IS AN EXISTING UST FACILITY (MAINE DEP FACILITY #12130). THE INTENT OF THIS PLAN IS TO SHOW THE INSTALLATION OF TWO NEW UNDERGROUND FUEL STORAGE TANKS, PRODUCT PIPING, VENT PIPING AND DISPENSER ISLANDS.
- EXISTING BOUNDARY, SITE LOCATION, GRADING AND UTILITY INFORMATION AS SHOWN ON THIS PLAN WAS TAKEN FROM AN ACTUAL FIELD SURVEY AS PERFORMED BY THIS OFFICE.

GENERAL UST SYSTEM NOTES:

- THE UNDERGROUND STORAGE SYSTEM WILL BE TESTED BY THE CERTIFIED TANK INSTALLER PRIOR TO BACKFILLING AS FOLLOWS:
  - A. PRODUCT PIPING & SIPHON LINE (NOV-RED THREAD IIA) THE FOLLOWING TESTS SHALL BE CERTIFIED BY THE INSTALLER PRIOR TO BACKFILLING AND COPIES OF THE RESULTS SHALL BE PROVIDED TO THE OWNER AT THE TIME OF BACKFILL INSPECTION.
    - PRIMARY LINE: VISUALLY INSPECT ALL JOINTS FOR PROPER INSERTION AND ADHESIVE CURE PRIOR TO PRESSURIZING THE SYSTEM. A GAP BETWEEN THE ADHESIVE BEAD AND THE FITTING SHOULDER INDICATES THAT THE POSSIBILITY OF JOINT FAILURE EXISTS. MAKE ANY NECESSARY REPAIRS BEFORE PRESSURIZING THE PIPING SYSTEM. CHECK THE INTEGRITY OF THE JOINTS BY PRESSURIZING THE SYSTEM TO 25 PSIG AND HOLDING THE PRESSURE FOR A MINIMUM OF ONE MINUTE. SOAP ALL JOINTS TO TEST FOR LEAKS. IF THERE ARE NO LEAKS, RAISE THE LINE PRESSURE IN THE SYSTEM TO A MAXIMUM OF 50 PSIG. AGAIN HOLD THE PRESSURE FOR AT LEAST ONE HOUR AND SOAP ALL JOINTS TO CHECK FOR LEAKS. AFTER THE PIPING HAS PASSED THE 50 PSIG PRESSURE TEST, REDUCE THE PRESSURE TO 25 PSIG AND MAINTAIN UNTIL ALL PAVING HAS BEEN COMPLETED.
    - SECONDARY LINE: PERFORM AN AIR TEST AT 10 PSIG AND MAINTAIN THE PRESSURE FOR A MINIMUM PERIOD OF ONE HOUR, OR LONG ENOUGH TO SOAP ALL JOINTS. BEFORE BACKFILL, THE CONTRACTOR SHALL MAINTAIN THE REQUIRED PRESSURE FOR A MINIMUM OF 2 HOURS AFTER THE BACKFILL PROCESS HAS BEEN COMPLETED. THE RESULTS OF THIS POST BACKFILL TEST SHALL BE CERTIFIED BY THE INSTALLER AND RESULTS SHALL BE PROVIDED TO THE OWNER WITHIN 30 DAYS OF THE TEST.
  - B. TANKS (CSI) EACH NEW TANK SHALL BE PRECISION TIGHTNESS TESTED AT 5 PSIG FOR 30 MINUTES BY A QUALIFIED TECHNICIAN IN ACCORDANCE WITH THE CONTAMINATION SOLUTIONS INSTALLATION INSTRUCTIONS AND STATE REGULATIONS.
  - C. VENT PIPING (NOV-RED THREAD IIA) THE FOLLOWING TEST SHALL BE CERTIFIED BY THE INSTALLER PRIOR TO BACKFILLING AND COPIES OF THE RESULTS SHALL BE PROVIDED TO THE OWNER AT THE TIME OF BACKFILL INSPECTION.
    - VISUALLY INSPECT ALL JOINTS FOR PROPER INSERTION AND ADHESIVE CURE PRIOR TO PRESSURIZING THE SYSTEM. A GAP BETWEEN THE ADHESIVE BEAD AND THE FITTING SHOULDER INDICATES THAT THE POSSIBILITY OF JOINT FAILURE EXISTS. MAKE ANY NECESSARY REPAIRS BEFORE PRESSURIZING THE PIPING SYSTEM. CHECK THE INTEGRITY OF THE JOINTS BY PRESSURIZING THE SYSTEM TO 25 PSIG AND HOLDING THE PRESSURE FOR A MINIMUM OF ONE MINUTE. SOAP ALL JOINTS TO TEST FOR LEAKS. IF THERE ARE NO LEAKS, RAISE THE LINE PRESSURE IN THE SYSTEM TO A MAXIMUM OF 50 PSIG. AGAIN HOLD THE PRESSURE FOR AT LEAST ONE HOUR AND SOAP ALL JOINTS TO CHECK FOR LEAKS. AFTER THE PIPING HAS PASSED THE 50 PSIG PRESSURE TEST, REDUCE THE PRESSURE TO 25 PSIG AND MAINTAIN UNTIL ALL PAVING HAS BEEN COMPLETED.
  - D. DISPENSER SUMPS AND TANK SUMPS THE FOLLOWING TEST SHALL BE CERTIFIED BY THE INSTALLER PRIOR TO BACKFILLING AND COPIES OF THE RESULTS SHALL BE PROVIDED TO THE OWNER AT THE TIME OF BACKFILL INSPECTION.
    - NEW TANK SUMPS (CSI): HYDROSTATICALLY TESTING SUMPS IS REQUIRED TO ENSURE THAT ALL SUMP PENETRATIONS ARE TIGHT. THE FOLLOWING TEST SHALL BE CERTIFIED BY THE INSTALLER PRIOR TO BACKFILLING AND COPIES OF THE RESULTS SHALL BE PROVIDED TO THE OWNER AT THE TIME OF BACKFILL INSPECTION. THE NEW SUMPS SHALL BE HYDROSTATICALLY TESTED FOR TIGHTNESS AS FOLLOWS:
      - AFTER ALL SEAMS AND FITTINGS HAVE BEEN COMPLETED AND ALL PIPING AND CONDUITS HAVE BEEN INSTALLED;
      - AT A LEVEL THAT IS WITHIN ONE INCH OF THE TOP OF THE SUMP;
      - BY RECORDING THE LIQUID LEVEL MEASUREMENTS AT THE BEGINNING AND END OF THE TEST;
      - FOR A MINIMUM OF 3 HOURS; AND
      - WITH NO ADDITION OF LIQUID TO THE SUMP.
 A PASSING HYDROSTATIC TEST SHALL HAVE NO LOSS OF LIQUID OR OBSERVED LEAKS AFTER THE COMPLETE DURATION OF THE TEST.
    - EXISTING UNDERGROUND FUEL STORAGE TANKS TO BE REMOVED (3 TOTAL): HYDROSTATICALLY TESTING SUMPS IS REQUIRED TO ENSURE THAT ALL SUMP PENETRATIONS ARE TIGHT. THE FOLLOWING TEST SHALL BE CERTIFIED BY THE INSTALLER PRIOR TO BACKFILLING AND COPIES OF THE RESULTS SHALL BE PROVIDED TO THE OWNER AT THE TIME OF BACKFILL INSPECTION. THE NEW SUMPS SHALL BE HYDROSTATICALLY TESTED FOR TIGHTNESS AS FOLLOWS:
      - AFTER ALL SEAMS AND FITTINGS HAVE BEEN COMPLETED AND ALL PIPING AND CONDUITS HAVE BEEN INSTALLED;
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      - WITH NO ADDITION OF LIQUID TO THE SUMP.
 A PASSING HYDROSTATIC TEST SHALL HAVE NO LOSS OF LIQUID OR OBSERVED LEAKS AFTER THE COMPLETE DURATION OF THE TEST.

- EMCO WHEATON DOUBLE SPILL CONTAINMENT MANHOLES ARE VACUUM TESTED, BOTH PRIMARY AND SECONDARY, PRIOR TO SHIPMENT. TO ENSURE THAT NO DAMAGE HAS OCCURRED DURING SHIPMENT OR INSTALLATION, THE FOLLOWING TESTS ARE QUICK, ON-SITE METHODS TO VERIFY THE INTEGRITY OF THE PRIMARY (E1) AND SECONDARY (E2) CONTAINMENTS.
  - E1. PRIMARY HYDROSTATIC TESTING PROCEDURE:
    - FILL THE SPILL BUCKET WITH WATER UNTIL THE LEVEL IS 1" BELOW THE UPPER LIP OF THE SNOW PLOW RING.
    - AFTER 1 HOUR, IF THERE IS NO DETECTABLE DROP IN WATER LEVEL, THE SPILL BUCKET HAS PASSED THE TEST.
  - E2. SECONDARY INTEGRITY TEST (VACUUM):
    - REMOVE THE GAUGE FROM THE INSPECTION PORT AND INSTALL THE TEST ADAPTER P/N 494343 (INCLUDED WITH THE VACUUM APPARATUS).
    - ATTACH AIR PRESSURE SOURCE TO AIR PRESSURE REGULATOR ON VACUUM APPARATUS.
    - SLOWLY APPLY VACUUM OF 30" WC TO THE INTERSTITIAL SPACE. WAIT 30 SECONDS, REAPPLY 30" WC.
    - ENSURE SWITCH IS IN OFF (CENTER) POSITION, START TIMER AND RECORD REMAINING VACUUM AFTER 1 MINUTE.
    - IF THE REMAINING VACUUM IS 25" WC (1.9" MERCURY) OR GREATER, BOTH THE PRIMARY AND THE SECONDARY CONTAINMENT VESSELS ARE TIGHT.
    - IF THE TEST FAILS, THE TEST IS A FAIL. IF THE TEST FAILS A SECOND TIME, THEN PERFORM PRESSURE TEST.
    - REPLACE COMPONENTS OR REPAIR AS NECESSARY.
    - REINSTALL GAUGE (OR PUSH BUTTON TEST PORT ASSEMBLY, IF CM SENSOR MODEL)
  - E3. SECONDARY INTEGRITY TEST (PRESSURE) - (ONLY IF VACUUM TEST FAILS)
    - ATTACH EMCO WHEATON 494343 INSPECTION TOSE TEST ADAPTER IN INSPECTION PORT.
    - PURGE THE INTERSTITIAL SPACE TO 30" WC. WAIT 30 SECONDS FOR THE PRESSURE TO STABILIZE. THE PRESSURE SUPPLY MUST THEN BE TURNED OFF (USING A BALL VALVE) TO ISOLATE THE PRESSURIZED INTERSTITIAL SPACE. RECORD THE PRESSURE. THEN WAIT ONE MINUTE AND RECORD THE PRESSURE AGAIN. THE PRESSURE DECAY SHOULD BE LESS THAN 4" WC IN ONE MINUTE.
    - IF THE UNIT DOES NOT PASS THE PRESSURE DECAY TEST, PRESSURIZE THE INTERSTITIAL SPACE TO 30" WC IN ORDER TO ASSIST IN LOCATING THE PROBLEM AREA.
    - APPLY SOAP SOLUTION TO RIM AND BOLTS, AROUND BASE OF GAUGE TUBE AND FLANGE BASE. OBSERVE FOR LEAKAGE.
    - IF LEAKAGE/BUBBLES APPEAR IN ANY OF THESE AREAS, CHECK THE TORQUE VALUE ON BOLTS AND RETEST. IF LEAKS PERSIST, REMOVE GASKETS, CLEAN, REASSEMBLE AND RETEST.

- OVERFILL PREVENTION VALVE - EVR CERTIFIED (EMCO WHEATON 1100EVR GUARDIAN)
  - F1. ONCE THE SEAL-ALL SEALANT HAS CURED FOR A MINIMUM OF 24 HOURS AND BEFORE INSTALLING THE A1100EVR OVERFILL PREVENTION VALVE, INSPECT THE TANK FOR LEAK TIGHTNESS (INTEGRITY TEST MUST BE PERFORMED).
  - F2. BEGIN BY SEALING BOTH ENDS OF THE A1100EVR OVERFILL PREVENTION VALVE WITH INFLATABLE PLUMBER'S PLUGS. APPLY A MAXIMUM PRESSURE OF 2 INCHES OF WATER COLUMN TO EXCEED THE ALLOWABLE LIMIT OF 0.17 CFI.
  - F3. DO NOT EXCEED THE MAXIMUM PRESSURE OF 2 INCHES OF WATER COLUMN. THIS WILL DAMAGE THE A1100 OVERFILL PREVENTION VALVE AND RESULT IN VOIDING THE WARRANTY.
- THE CONTRACTOR SHALL CALL DSAFE AT 811 AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION.
- ALL CONSTRUCTION AND EQUIPMENT MUST CONFORM TO THE APPLICABLE REGULATIONS AND CODES OF THE MUNICIPALITY, MAINE DEP, AND THE NFPA.
- CONTRACTOR SHALL PROVIDE AT LEAST 5 DAYS ADVANCE NOTICE TO THE ENGINEER TO INSPECT THE INSTALLATION PRIOR TO FINAL BACKFILL.
- CONTRACTOR TO VERIFY WITH OWNER THE PRODUCT PIPING LAYOUT AS SHOWN ON THIS PLAN PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL ADJUST GRADES AS REQUIRED OVER THE TANK MAT TO ENSURE THAT STORMWATER RUNOFF SHEDS AWAY FROM ALL SURFACE MANHOLES.
- FLEXIBLE ENTRY BOOTHS ARE TO BE USED ON THE SIPHON LINE ONLY. CONTRACTOR SHALL NOTE THAT ANY BOSTIK SEALANT SHALL ONLY BE APPLIED TO THE EXTERIOR OF THE SUMP ENCLOSURE AS DIRECTED BY THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- ALL NEW TANK RISERS SHALL BE COATED WITH 1/8" MIN. FIBERGLASS COATING OR 1/8" EPOXY RESIN COATING. THE USE OF PVC 10 MIL PIPE WRAP IS NOT PERMITTED.
- ALL PIPING SYSTEMS SHALL PROVIDE FLEXIBILITY FOR MOVEMENT AT THE TANK END, DISPENSER END, AND AT PIPING DIRECTION CHANGES TO RELIEVE STRESS. CONTRACTOR TO PROVIDE FLEXIBILITY ON ALL FIBERGLASS LINES BY PROVIDING 4" MIN. DOGLEG FOR 2" DIA. PIPE, 5" MIN. DOGLEG FOR 3" DIA. PIPE, AND 5'-6" MIN. DOGLEG FOR 4" DIA. PIPE. CHANGES IN DIRECTION NOT ATTACHED TO A RIGID CONNECTION SHALL NOT HAVE A STRAIGHT RUN OF LESS THAN 4' ON ONE SIDE OF THE CONNECTION.
- PER NFPA 30A (2015) 6.7, EMERGENCY ELECTRICAL DISCONNECTS ARE REQUIRED FOR FUEL DISPENSING SYSTEMS. SUCH DEVICES OR DISCONNECTS SHALL BE INSTALLED IN APPROVED LOCATIONS BUT NOT LESS THAN 20' OR MORE THAN 100' FROM THE FUEL. (SEE SHEET CFG14.6 FOR DETAIL)

PLAN REFERENCES:

- "SITE PLAN, 1132-1144 FOREST AVENUE", PORTLAND, MAINE, PREPARED FOR CUMBERLAND FARMS, 777 DEDHAM STREET, CANTON, MASS. 02021, DATED SEPT. 10, 2003, SCALE: 1"=20'

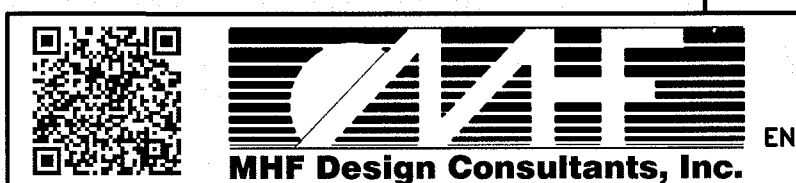
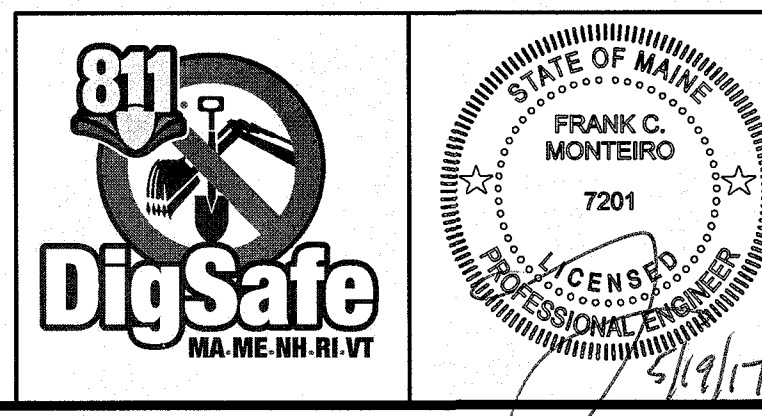
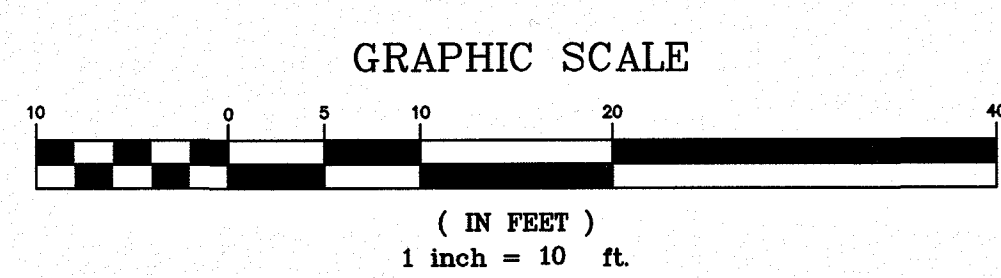
SHEET INDEX

DESCRIPTION	DWG. NO
UST COVER SHEET	CFG14.0
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TANK INSTALLATION DETAILS	CFG14.3
SUMP & PIPING DETAILS	CFG14.4
TANK INSTALLATION DETAILS	CFG14.5
TANK INSTALLATION DETAILS	CFG14.6

DWG. NO

CFG14.0
CFG14.1
CFG14.2
CFG14.3
CFG14.4
CFG14.5
CFG14.6

01 TANK & PIPING LAYOUT  
SCALE: 1" = 10'



REVISIONS

NO.	DATE	REV. BY.	DESCRIPTION
1	5/19/17	HS	CANOPY REPLACEMENT

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1132-1136 FOREST AVENUE  
PORTLAND, MAINE

CSI - DOUBLE WALL FIBERGLASS TANK INSTALLATION FOR:  
ONE(1) 12,000/GALLON ONE(1) 12,000 (6/6 SPLIT) GALLON TANKS

SCALE: 1" = 10'  
DATE: APRIL 11, 2017  
FILE: 418817.DWG  
DRAWN BY: DSA  
CFG14.0

CUMBERLAND FARMS, INC.  
100 Crossing Boulevard  
Franklinham, MA 01702

UST COVER SHEET  
CFG14.0

MHF PROJECT NO. 418817 SHEET 1 OF 7