GALES FERRY
19 & 29 MILITARY RD
GALES FERRY, TOWN OF LEDYARD
NEW LONDON COUNTY, CONNECTICUT
MAP 91, LOT 39

APPLICANT

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OWNER

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PROJECT TEAM

EPIC CLEANTEC
WASTEWATER ENGINEER
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LOCATION MAP

LIST OF DRAWINGS

GENERAL/ CIVIL LEGEND

EXISTING	NEW	
E — E	E — E	ELECTRICAL
		FLOWLINE/SWALE/DRAINAGE DITCH
OH — OH		OVERHEAD POWERLINE
FP — FP	FP — FP	FIRE PROTECTION (FP)
GAS — GAS	GAS — GAS	GAS (G)
IRR — IRR	IRR — IRR	IRRIGATION (IRR)
PW — PW	PW — PW	PROCESS WASTEWATER (PW)
	SD — SD	STORM DRAIN (SD)
SD — SD	SS — SS	SANITARY SEWER (SS)
		TELECOM
W — W	W — W	WATER (W)
		VENT (V)
		DRIP TUBING
		GRADE BREAK
	x15	GRADE
70	20	CONTOUR
x15		SPOT ELEVATION
	2:1	TOP OF CUT/BANK
		EMBANKMENT SLOPE, AS INDICATED
		TOE OF FILL
	3 1 3:1	SLOPE (3 HORIZONTAL TO 1 VERTICAL)
		FLOW ARROW
	%	SLOPE
	FG	SPOT ELEV OR FINISHED GRADE
		CURB AND GUTTER
		SHOULDER
		EDGE OF PAVEMENT
		LIMITS OF AC PAVEMENT
		LIMITS OF CONCRETE PAVEMENT
		LIMITS OF AGGREGATE BASE PAVEMENT
X — X		FENCE
		PROPERTY LINE
		EASEMENT
		CULVERT
		FIRE HYDRANT
		IRRIGATION BOX
		BURIED VALVE
X 25.9		SPOT ELEVATION OR GRADE
CONTROL PT # N E ELEV		CONTROL POINT
		DEMO
		DEMO UTILITY

	CONNECT TO (E) UTILITY
	CAP OR PLUG UTILITY
	CLAY OR SLURRY CEMENT PLUG
	THRUSTBLOCK
	FIRE HYDRANT
	POST INDICATOR VALVE (PIV)
	FIRE DEPT CONNECTION (FDC)
	FIRE PROTECTION RISER
	CHECK VALVE
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	PLUG VALVE
	HOSE BIBB
	REDUCER/ENLARGER
CO	CLEANOUT (CO)
DS	DOWNSPOUT (DS)
	DI (DROP INLET) OR AD (AREA DRAIN)
	HANDICAPPED PARKING
	FIBER ROLL
	SILT FENCE

APPLICABLE CODES

ALL PROPOSED IMPROVEMENTS SHALL BE CONSTRUCTED TO MEET THE CURRENT REQUIREMENTS OF THE CONNECTICUT BUILDING AND PLUMBING CODES AND STATE ONSITE TREATMENT & DISPERSAL GUIDELINES. ALL PLUMBING SHALL MEET THE REQUIREMENTS WITH APPROPRIATE FIELD LABELING AND COLORATION OF PIPING PER AHJ REQUIREMENTS.

SCOPE OF WORK

THE PROJECT SCOPE ENTAILS CONSTRUCTION OF A NEW TREATMENT SYSTEM AND DISPERSAL FIELD TO SUPPORT CONSTRUCTION ON A PREVIOUSLY DEVELOPED LOT.

THE SYSTEM IS DESIGNED FOR MODULARITY WITH POTENTIAL FUTURE REUSE OF RECYCLED WATER ONSITE. ALTHOUGH THIS FUNCTIONALITY IS NOT REQUESTED IN THIS PERMIT PACKAGE SUBMITTAL, FUTURE SYSTEM MODIFICATIONS AND EQUIPMENT MAY BE SUBMITTED TO SUPPORT RECYCLED WATER USE ON THE PARCEL.

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REV	DATE	DESCRIPTION
0	5/13/24	PERMIT SUBMITTAL

DESIGN BY: -
DRAWN BY: -
REVIEWED BY: -
S&MT BY: -
CLIENT PROJECT NO.: -
PLOT DATE: May 13, 2024
PLOT SCALE: NONE
PROJECT NUMBER: 23107
FILE NAME: GALES FERRY - WWTP.DWG

GALES FERRY

TITLE SHEET

19 & 29 MILITARY HIGHWAY,
GALES FERRY, TOWN OF LEDYARD,
NEW LONDON COUNTY,CONNECTICUT

MAP 91, LOT 39

WW 1.0

ABBREVIATIONS

∠	ANGLE
A.D.	ALGEBRAIC DIFFERENCE
℄	CENTERLINE
Ø	DIAMETER
℄	FLOWLINE
℄	PROPERTY LINE
AC	ASPHALT CONCRETE
ACP	ASBESTOS CEMENT PIPE
AD	AREA DRAIN
ADDL	ADDITIONAL
AFF	ABOVE FINISHED FLOOR
AGG	AGGREGATE
AH	AHEAD
ALT	ALTERNATE
ARCH	ARCHITECT/ARCHITECTURAL
AVG	AVERAGE
BC	BEGIN CURVE
BCO	BURIED CLEANOUT
BCR	BEGIN CURB RETURN
BK	BACK
BLDG	BUILDING
BM	BENCHMARK
BOF	BOTTOM OF FOOTING
BOT	BOTTOM
BRG	BEARING
BVC	BEGINNING OF VERTICAL CURVE
BVCE	BEGINNING VERTICAL CURVE ELEVATION
BVCS	BEGINNING VERTICAL CURVE STATION
CB	CATCH BASIN
CI	CURB INLET/CAST IRON
CIP	CAST IN PLACE/CAST IRON PIPE
CIPCP	CAST IN PLACE CONCRETE PIPE
CJ	CONTROL JOINT/CONSTRUCTION JOINT
CKRD	CHECKERED
CL	CLASS
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT/COUNTY
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CPP	CENTRAL PRECAST PRODUCTS
CSP	CORRUGATED STEEL PIPE
CTR	CENTER
CV	CHECK VALVE
D	DITCH DEPTH
DB	DRAINAGE BOX
DI	DROP INLET
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DIST	DISTANCE
DIV	DIVERSION
DS	DOWNSPOUT
DWG	DRAWING
E	EAST/ELECTRICAL
(E)	EXISTING
EA	EACH
EC	END CURVE
ECR	END CURB RETURN
EF	EACH FACE
EG	EXISTING GROUND/EXISTING GRADE
EL/ ELEV	ELEVATION
ELEC/ E	ELECTRICAL
EQPT	EQUIPMENT
EQ	EQUAL/EQUATION
ES	EACH SIDE
ETW	EDGE OF TRAVELED WAY
EVC	ENDING OF VERTICAL CURVE
EVCE	ENDING VERTICAL CURVE ELEVATION
EVCS	ENDING VERTICAL CURVE STATION
EW	EACH WAY
EXC	EXCAVATION/EXCAVATE
EXIST	EXISTING
EXP	EXPANSION JOINT
EXT	EXTERIOR
FDC	FIRE DEPARTMENT CONNECTION
FDN	FOUNDATION
FES	FLARED END SECTION
FF	FINISH FLOOR
FG	FINISH GRADE
FH	FIRE HYDRANT
FIN	FINISH/FINISHED
FLGD	FLANGED
FLR	FLOOR
FM	FORCE MAIN
FO	FACE OF
FOC	FACE OF CONCRETE/COLUMN/CURB
FOCC	FACE OF CONCRETE CURB
FOW	FACE OF WALL
FP	FIRE PROTECTION
FTG	FOOTING
FS	FINISH SURFACE
FT	FOOT/FEET
FUT	FUTURE
G	GAS/ROAD GRADIENT
GALV	GALVANIZED
GB	GRADE BREAK
GP	GUARD POST
GRD	GRADE
GRND	GROUND
GV	GATE VALVE
GW	GREY WATER
HB	HOSE BIBB
HD	HEAVY DUTY
HDPE	HIGH DENSITY POLYETHYLENE
HORIZ	HORIZONTAL
HP	HIGH POINT
HT	HEIGHT
HW	HIGH WATER
ID	INSIDE DIAMETER
IE (INV)	INVERT ELEVATION
IF	INSIDE FACE
IG	INLET GRATE
IN	INCH
INT	INTERIOR
IP	IRON PIPE
IRR	IRRIGATION
IW	INDUSTRIAL WASTE
JB	JUNCTION BOX
K	CURVE COEFFICIENT
L	LENGTH
LAT	LATERAL
LD	LIGHT DUTY
LF	LINEAL FOOT
LP	LOW POINT
LPG	LIQUID PROPANE GAS
LS	LANDSCAPE
LT	LEFT
MAX	MAXIMUM
MEG	MATCH EXISTING GRADE
MFR	MANUFACTURER
MG	MILLION GALLON
MH	MANHOLE
MHWL	MAXIMUM HIGH WATER LINE
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
(N)	NEW
N	NORTH
NIC	NOT IN CONTRACT
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OG	ORIGINAL GROUND
OH	OVERHEAD
ORIG	ORIGINAL
OSD	OVERSIDE DRAIN
PC	BEGINNING POINT OF CURVATURE
PCC	PORTLAND CEMENT CONCRETE/POINT OF COMPOUND CURVE
PCO	PRESSURE CLEANOUT
PD	PLANTER DRAIN
PI	POINT OF INTERSECTION/TANGENT-TANGENT INTERSECTION
PIV	POST INDICATOR VALVE
PVC	POINT OF VERTICAL CURVATURE
PP	POWER POLE
PRC	POINT OF REVERSE CURVATURE
PSD	PERFORATED SUBDRAIN
PT	POINT OF TANGENT/PRESSURE TREATED/CURVE/TANGENT INTERSECTION
PUE	PUBLIC UTILITIES EASEMENT
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PW	PROCESS WASTEWATER
PWCO	PROCESS WASTEWATER CLEANOUT
PWFM	PROCESS WASTEWATER FORCE MAIN
PWJB	PROCESS WASTEWATER JUNCTION BOX
R/ RAD	RADIUS
RCP	REINFORCED CONCRETE PIPE
RED	REDUCER/REDUCING
REF	REFERENCE
REINF	REINFORCING
REQD	REQUIRED
RP	RADIUS POINT OF CURVE
RT	RIGHT
R/W	RIGHT OF WAY
RWD	REDWOOD
RWL	RAIN WATER LEADER
S	SOUTH/SLOPE
SAD	SEE ARCHITECT'S DRAWINGS
SCD	SEE CIVIL DRAWINGS
SCH	SCHEDULE
SD	STORM DRAIN
SED	SEE ELECTRICAL DRAWINGS
SF	SQUARE FEET
SFPD	SEE FIRE PROTECTION DRAWINGS
SG	SUBGRADE
SHT	SHEET
SIM	SIMILAR
SLAD	SEE LANDSCAPE ARCHITECT'S DRAWINGS
SMD	SEE MECHANICAL DRAWINGS
SPEC	SPECIFICATION
SPD	SEE PLUMBING DRAWINGS
SQ	SQUARE
SRD	SEE REFRIGERATION DRAWINGS
SS	STAINLESS STEEL/SANITARY SEWER
SSCO	SANITARY SEWER CLEANOUT
SSD	SEE STRUCTURAL DRAWINGS/SUBSURFACE DRAIN
SSJB	SANITARY SEWER JUNCTION BOX
SSMH	SANITARY SEWER MANHOLE
SSR	SEE SOILS REPORT
STA	STATION
STD	STANDARD
STL	STEEL
STRUC	STRUCTURAL
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
SWM	STORMWATER MANAGEMENT
SYM	SYMMETRICAL
T/ TAN	TANGENT
T/ TEL	TELEPHONE
T&B	TOP AND BOTTOM
TBM	TEMPORARY BENCH MARK
TC	TOP OF CONCRETE
TCC	TOP OF CONCRETE CURB
TD	TRENCH DRAIN
TG	TOP OF GRATE
THK	THICK
TOF	TOP OF FOOTING
TOW	TOP OF WALL
TP	TOP OF PAVEMENT
TRANS	TRANSITION
TRAP	TRAPEZOIDAL
TYP	TYPICAL
UC	UTILITY CHASE
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VG	VALLEY GUTTER
VIF	VERIFY IN FIELD
VSD	VINEYARD SUBDRAIN
W/	WITH
W/O	WITHOUT
W	WEST/WATER
W(T)	TREATED WATER
W(W)	WATER FROM WELL
WBD	WALL BACK DRAIN
WW	WASTEWATER
WWF	WELDED WIRE FABRIC
XFMR	TRANSFORMER
YD, YDS	YARD, YARDS
Z	DITCH SIDE SLOPE

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE UNIFORM BUILDING CODE AND/OR APPLICABLE STATE OF CONNECTICUT CODES, ORDINANCES, ZONING AND PLANNING LAWS, AND THE PROJECT USE PERMIT CONDITIONS.
2. ALL WORK SHALL BE IN COMPLIANCE WITH ALL APPLICABLE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (O.S.H.A.) STANDARDS AS SET FORTH BY THE FEDERAL DEPARTMENT OF LABOR AND/OR THE STATE OF CONNETICUT. THE CONTRACTOR SHALL SECURE A TRENCH PERMIT FROM THE CONNETICUT DIVISION OF INDUSTRIAL SAFETY PRIOR TO EXCAVATION OF ANY TRENCH OVER FIVE FEET DEEP.
3. ALL ON-SITE SEWER, WATER AND GAS LINE CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE ADOPTED UNIFORM PLUMBING CODE, (U.P.C.) AND ALL APPLICABLE REGULATIONS OF THE STATE OF CONNECTICUT, AND COGNIZANT UTILITY COMPANIES.
4. THE DRAWINGS SHALL NOT BE SCALED. ALL WORK SHALL BE GOVERNED BY THE DIMENSIONS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS SHOWN AND BRING DISCREPANCIES TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
5. DETAILS OF CONSTRUCTION NOT INDICATED OR NOTED SHALL BE CONSIDERED OF THE SAME CHARACTER SHOWN FOR SIMILAR OR EXISTING CONSTRUCTION.
6. THIS DRAWING DOES NOT REPRESENT A PROPERTY SURVEY. PROPERTY LINES HAVE BEEN PLOTTED FOR INFORMATIONAL PURPOSES ONLY AND ARE APPROXIMATE.
7. CONTRACTOR SHALL SECURE LETTERS OF PERMISSION FROM ADJACENT LANDOWNERS BEFORE ENTERING SUCH PROPERTIES.
8. THE LOCAL JURISDICTION HAVING AUTHORITY SHALL BE NOTIFIED 48 HOURS PRIOR TO STARTING ANY WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE JURISDICTION HAVING AUTHORITY INFORMED OF HIS SCHEDULE.
9. CONTRACTOR SHALL PROVIDE 48 HOURS ADVANCE NOTICE TO THE ENGINEER FOR REQUESTED INSPECTIONS.
10. THE OWNER SHALL PROVIDE FOR NECESSARY MATERIAL AND SOILS TESTING AND OBSERVATION. THE CONTRACTOR SHALL PROVIDE 48 HOURS MINIMUM NOTICE PRIOR TO REQUIRED OBSERVATION OR TESTING.
11. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THE PLAN ARE BASED ON THE BEST INFORMATION AVAILABLE; HOWEVER, THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES MAY NOT HAVE BEEN INDICATED ON THESE DRAWINGS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE INFORMATION SHOWN, OR THE INADVERTENT OMISSION OF ANY SUCH INFORMATION. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITIES; CONFLICTS AND/OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. UNLESS NOTED OTHERWISE, EXISTING UTILITIES SHALL BE PROTECTED AND MAINTAINED IN SERVICE BY THE CONTRACTOR. UTILITIES THAT INTERFERE WITH WORK TO BE PERFORMED UNDER THIS PROJECT SHALL BE PROTECTED AS REQUIRED IN ACCORDANCE WITH STATE OF CONNECTICUT, AND LOCAL UTILITY PROVIDER REQUIREMENTS.
12. UNDERGROUND SERVICE ALERT (U.S.A.) - CALL 811 AT LEAST 48 HOURS PRIOR TO EXCAVATION.
13. THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES PRIOR TO STARTING ANY WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THESE UTILITY COMPANIES INFORMED OF HIS SCHEDULE.
14. THE CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS AND INSPECTIONS FROM CONNECTICUT COUNTY. THE OWNER WILL PAY ALL PERMIT FEES.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING FACILITIES AND IMPROVEMENTS FROM DAMAGE RESULTING FROM HIS WORK. ANY DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
16. CONTRACTOR SHALL COORDINATE HIS WORK WITH ONSITE OPERATIONS. CONTRACTOR SHALL BE PREPARED TO PHASE PORTIONS OF THE WORK SO THAT IT DOES NOT INTERFERE WITH OR INHIBIT EXISTING OPERATIONS.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ACCESS TO THE SITE AND ADJOINING OPERATIONS OPEN TO THE OWNERS AT ALL TIMES.
18. OBTAINING OF CONSTRUCTION WATER AND UTILITIES SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE(S).
19. ALL EXISTING FENCES AND GATES AT THE SITE SHALL BE LOCATED, PROTECTED AND MAINTAINED AT ALL TIMES.
20. THE SCREENED CONTOURS AND TOPOGRAPHIC INFORMATION ON THESE DRAWINGS REPRESENT THE APPROXIMATE SURFACE CONDITIONS TO BE FOUND AT THE PROJECT LOCATION. CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO SYSTEM CONSTRUCTION.
21. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR SOIL CONDITIONS IN THE AREA OF CONSTRUCTION OPERATIONS. FOR INFORMATION ON GEOLOGY AND EARTHWORK REQUIREMENTS, REFER TO THE GEOTECHNICAL INVESTIGATION AND RECOMMENDATIONS THE FACILITY MAY HAVE FOR THE PROJECT SITE.
22. SUBSTITUTIONS FOR MATERIALS OR EQUIPMENT INDICATED ON THE CONTRACT DRAWINGS SHALL BE REVIEWED BY THE ENGINEER. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR WORK AFFECTED BY SUCH CHANGES ACCOMPLISHED WITHOUT HIS REVIEW.
23. NO TREE SHALL BE REMOVED WITHOUT PRIOR REVIEW WITH THE ENGINEER.
24. THE CONTRACTOR SHALL PURCHASE AND MAINTAIN SUCH INSURANCE AS WILL PROTECT AND HOLD HIM, THE OWNER AND THE ENGINEER HARMLESS FROM CLAIMS THAT MAY ARISE OUT OF OR RESULT FROM THE CONTRACTOR'S OPERATIONS UNDER THE CONTRACT, WHETHER SUCH OPERATIONS BE BY HIMSELF OR BY ANY SUBCONTRACTOR OR BY ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM, OR BY ANYONE FOR WHOSE ACTS ANY OF THEM BE LIABLE.
25. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS AND OTHER SERVICES NECESSARY FOR PROPER EXECUTION OF THIS CONTRACT.
26. CONTRACTOR SHALL PROVIDE FIRST AID FACILITIES AND OTHER TEMPORARY SERVICES SUCH AS WATER, POWER, TELEPHONE, TOILETS, ETC.
27. THE CONTRACTOR SHALL PROVIDE THE OWNER, AS A CONDITION OF COMPLETION AND RECEIPT OF FINAL PAYMENT, A WRITTEN GUARANTEE COVERING ALL MATERIALS AND WORKMANSHIP FURNISHED AND PERFORMED FOR THIS WORK AGAINST DEFECTS FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF FILING THE NOTICE OF COMPLETION.
28. THE CONTRACTOR SHALL BE RESPONSIBLE FOR A DAILY RECORD OF "AS BUILT" CONDITIONS THAT DIFFER FROM THE ORIGINAL DRAWINGS. THE CONTRACTOR WILL BE PROVIDED WITH A SET OF REPRODUCIBLE DRAWINGS ON WHICH THE "AS BUILT" CONDITIONS SHALL BE RECORDED. THE "AS BUILT" DRAWING (SIGNED AND DATED) SHALL BE FURNISHED TO THE ENGINEER UPON COMPLETION OF THE WORK AND PRIOR TO FINAL PAYMENT.

UTILITY NOTES

1. ALL EXISTING UTILITIES TO REMAIN IN THE WORK AREA SHALL BE PROTECTED DURING CONSTRUCTION ACTIVITIES (UNO).
2. ALL WORK SHALL CONFORM TO THE LATEST APPLICABLE CONNECTICUT STATE CODES, ORDINANCES, ZONING AND PLANNING LAWS INCLUDING THE LATEST ADOPTED EDITION OF THE UNIFORM PLUMBING CODE.
3. CONTRACTOR SHALL COORDINATE WITH OWNER REGARDING LOCATION OF POWER AND CONTROL UTILITIES. ELECTRICAL POWER DISTRIBUTION SHALL BE DESIGN-BUILD.
4. CONTRACTOR SHALL COORDINATE WITH OWNER FOR CONTINUATION OF UTILITY LINES INTO BUILDINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING LOCATION OF ALL UTILITY CONNECTIONS.
5. WHERE POSSIBLE AND WHERE SEPARATION STANDARDS CAN BE MET, UTILITIES CAN BE INSTALLED IN COMMON TRENCHES. THE CONTRACTOR SHALL VERIFY BEDDING AND BACKFILL DETAILS WITH THE ENGINEER WHERE COMMON TRENCHING IS DESIRED.
6. CONTRACTOR SHALL EXPOSE, BY POTHOLING, AND VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES, INCLUDING STORM DRAINS, SANITARY SEWERS AND WATER LINES BEFORE ORDERING MATERIALS AND/OR CONSTRUCTING NEW FACILITIES.
7. ALL TRENCHES AND EXCAVATIONS SHALL BE CONSTRUCTED IN STRICT COMPLIANCE WITH THE APPLICABLE SECTIONS OF CONNETICUT AND FEDERAL O.S.H.A. REQUIREMENTS AND OTHER APPLICABLE SAFETY ORDINANCES. CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR TRENCH SHORING DESIGN AND INSTALLATION. SEE GENERAL NOTES.

   PIPELINE DEPTH OF BURY:
   - A. GRAVITY LINES: TO ELEV NOTED, 1.5' MIN IN LANDSCAPED AREAS 2.0' MIN (UNO)
   - B. FIRE PROTECTION/WATER: 3' MINIMUM (UNO)
   - C. FORCE MAINS: 2.5' MINIMUM (UNO)
   - D. GAS: 2.5' MINIMUM (UNO)
   - E. ELECTRIC: 3' MINIMUM (UNO)
8. SLOPE FOR GRAVITY LINES (SD & PW) = 0.02 MIN (UNO), (SS) = 0.02 MIN (UNO)
9. GRAVITY PW, SS, SD LINES AND PRESSURE FORCE MAINS SHALL BE CONSTRUCTED USING MANUFACTURER'S STANDARD FITTINGS FOR THE PIPE SYSTEM SPECIFIED. FITTINGS USED SHALL PROVIDE FOR SMOOTH, UNIFORM TRANSITIONS IN SIZE, DIRECTION AND WHEN PIPES JOIN. THE USE OF 90° BENDS AND TEES WILL NOT BE ALLOWED UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
10. PVC WATER SYSTEM MAINS AND OTHER PRESSURE FORCE MAINS SHALL HAVE LOCATING WIRE INSTALLED IN THE TRENCH ABOVE THE PIPE.
11. CONTRACTOR IS TO COORDINATE LOCATION OF UTILITY TRENCH WITH STRUCTURAL DRAWINGS TO ENSURE THAT UTILITY TRENCHES ARE LOCATED OUTSIDE THE ZONE OF INFLUENCE.
12. ALL UTILITY CROSSINGS ARE TO HAVE A MINIMUM OF 6" SEPARATION AS MEASURED FROM THE OUTSIDE EDGE OF ALL PIPES. IF MINIMUM CROSSING SEPARATION CANNOT BE MET, CONSULT ENGINEER REGARDING REDUCED CLEARANCE OPTIONS INCLUDING CONCRETE ENCASEMENT OF CROSSING.
13. WHENEVER A POTABLE WATER MAIN IS TO CROSS A SANITARY SEWAGE FORCE MAIN, THE WATER MAIN SHALL BE INSTALLED A MINIMUM OF 2 FEET ABOVE THE SEWER LINE WHERE POSSIBLE AND SHALL BE OF DUCTILE IRON OR AWWA C-900 CLASS 200 PVC WITH NO JOINTS WITHIN 9 FEET ON EACH SIDE OF THE FORCE MAIN. IF THE PUBLIC WATER MAIN CROSSES A SEWER LINE CLOSER THAN 2 FEET, THE WATER MAIN SHALL BE COMPLETELY ENCASED IN CLASS B CONCRETE FOR THE SAME DISTANCE SPECIFIED ABOVE.
14. THE HORIZONTAL DISTANCE BETWEEN PUBLIC PRESSURE WATER MAINS AND SANITARY SEWER LINES SHALL BE AT LEAST 10'.
15. IF THERE IS A SITUATION WHERE A SANITARY SEWER LINE MUST CROSS ABOVE A PUBLIC WATER LINE, THE DESIGN OF SUCH A CROSSING MUST CONFORM TO STATE AND LOCAL HEALTH LAWS AND BE APPROVED BY BOTH THE COUNTY PUBLIC HEALTH SERVICE DEPARTMENT AND STATE HEALTH DEPARTMENT.
16. ALL FORCE MAINS ENTERING STRUCTURES AND/OR BOXES SHALL BE FITTED WITH A 45° BEND INSIDE THE BOX. THE FITTING SHALL BE PLACED SO THE OUTLET IS DIRECTED DOWNWARD.
17. ALL TEES, BENDS, PLUGS, AND OTHER FITTINGS & APPURTENANCES ON ALL PRESSURE PIPING GREATER THAN 3" IN SIZE WITH MECHANICAL JOINT, PUSH ON OR OTHER FLEXIBLE FITTINGS SHALL BE ANCHORED BY THE USE OF THRUST BLOCKS, THRUST ANCHORS OR HARNESSES AS SHOWN ON THE DRAWINGS. THE BEARING PRESSURES OF THRUST BLOCKING ON THE SUPPORTING SOIL SHALL NOT EXCEED THAT ALLOWABLE FOR THE SOIL INVOLVED (SEE SOILS REPORT). REQUIRED THRUST BLOCK BEARING AREAS SHALL BE CALCULATED IN ACCORDANCE WITH THE DETAILS ON THE DRAWINGS AND NFPA STANDARDS.
18. ALL BURIED METAL VALVES AND FITTINGS REQUIRE PROTECTIVE COATINGS.

CONSTRUCTION NOTES

1. OWTS SHALL BE INSTALLED IN ACCORDANCE WITH THE PLANS APPROVED BY THE STATE. REGULATORY STAFF AND THE WASTEWATER ENGINEER MUST APPROVE ANY CHANGES IN THE INSTALLATION PLAN PRIOR TO INSTALLATION.
2. THE BUILDING SEWER AND DISTRIBUTION PIPING SHALL BE CONSTRUCTED WITH MATERIALS IN CONFORMANCE TO STATE STANDARDS IDENTIFIED IN THE UNIFORM PLUMBING CODE. THE SEWER AND DISTRIBUTION PIPING SHALL HAVE APPROVED WATERTIGHT FITTINGS WITH CLEAN-OUTS PROVIDED IN ACCORDANCE WITH THE UNIFORM PLUMBING CODE. PIPING SHALL BE ABS OR PVC SCHEDULE 40 OR BETTER.
3. THE USE OF WHEEL TYPE VEHICLES IS PROHIBITED FOR THE FOLLOWING:
   - A. DRIVING ON PRIMARY AND RESERVE AREAS
   - B. ANY TIME THAT THE SOIL CONDITIONS ARE WET, MOIST OR SATURATED
4. DIG DRIP LINE TRENCHES AND PLACE TUBING.
5. PERFORM HYDRAULIC TEST AFTER THE DISTRIBUTION SYSTEM HAS BEEN COMPLETED. THIS TEST SHALL BE INSPECTED BY THE ENGINEER AND THE COUNTY. DRIP LINE TRENCHES SHALL NOT BE BACKFILLED UNTIL THIS TEST IS COMPLETE.
6. PROVIDE SEEDING OF THE DISPERSAL AREA FOR EROSION CONTROL AND TO PROMOTE SYSTEM HEALTH WHERE ALTERNATE COVER OR HARDSCAPE IS PLANNED.

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REV	DATE	DESCRIPTION
0	5/13/24	PERMIT SUBMITTAL

DESIGN BY: -
DRAWN BY: -
REVIEWED BY: -
SBMT BY: -
CLIENT PROJECT NO.: -
PLOT DATE: May 13, 2024 3:43 PM
PLOT SCALE: NONE
PROJECT NUMBER: 23107
FILE NAME: GALES FERRY - WWTP.DWG

GALES FERRY

GENERAL INFORMATION

19 & 29 MILITARY HIGHWAY,
GALES FERRY, TOWN OF LEDYARD,
NEW LONDON COUNTY,CONNECTICUT

MAP 91, LOT 39

WW 1.1

SUBSURFACE DRIP SYSTEM CALCULATIONS

PUMP SIZING

Job Description:	*Gales Ferry*
Contact:	-
Prepared by:	*Richard Ross, Epic Cleantec*
Date:	*4/9/2024*

Worksheet - Pump Sizing

Section 1 - Summary from Worksheet 1

	Flow required to dose field	21.81	gpm
	Flow required to flush field	10.36	gpm
	Flow required to dose & flush field	32.17	gpm
	No. of Zones	4	zones
	Zone valve		-
	Dripline longest lateral	484.61	ft.

Section 2		Ft of head		Pressure	
A.	**Flush line - Losses through return line**				
	Select Pipe from dropdown menu	PVC schedule 40			
	Select Flush Line Diameter	1-1/2"	inch		
	Length of return line	800	ft.		
	Equivalent length of fittings	10	ft.		
	Elevation change. (if downhill enter 0)	**0**	ft.		
	Pressure loss in 100 ft of pipe	0.84	ft.	0.36	psi
	Total pressure loss from end of dripline to return tan	*6.8*	*ft.*	2.93	psi
B.	**Dripline - Losses through Wasteflow dripline**				
	Length of longest dripline lateral	**485**	ft.		
	Minimum dosing pressure required at end of dripline	23.10	ft.	10.00	psi
	Loss through dripline during flushing	37.93	ft.	16.42	psi
	Total minimum required dripline pressure	*61.03*	*ft.*	26.42	*psi*
A+B.	**Minimum Pressure required at beginning of dripfield**				
	CALCULATED pressure required at beginning of drip	*67.80*	*ft.*	29.35	*psi*
	SPECIFIED pressure at beginning of dripfield (from w	**92.4**	**ft.**	40.00	*psi*
	Great! SPECIFIED Pressure is greater than CALCULATED Pressure requirement. Go to next step				
C.	**Drip components - Losses through headworks**				
	Filter	18.5	ft.	8.00	psi
	Zone valve pressure loss (not in diagram)	4.62	ft.	2.00	psi
	Flow meter pressure loss (not in diagram)	2.31	ft.	1.00	psi
	Other pressure losses	11.55	ft.	5.00	psi
	Total loss through drip components	**36.96**	**ft.**	16.00	psi
D.	**Supply line - Minimum Pressure head required to get from pump tank to top of dripfield**				
	Select Pipe from dropdown menu	PVC schedule 40			
	Select Supply line diameter	1-1/2"	inch		
	Length of supply line	800	ft.		
	Equivalent length of fittings	10	ft.		
	Height from pump to tank outlet	10	ft.		
	Elevation change. (if downhill enter 0)	11	ft.		
	Pressure loss/gain in 100 ft. of pipe	6.81	ft.	2.95	psi
	Total gain or loss from pump to field	***76.2 ft.***		32.99	psi
	Total dynamic head	**205.6 ft.**		88.99	*psi*
	Pump capacity * - Field Flush Flow	**32.2 gpm**		88.99	*psi*

DRIP DISPERSAL PUMP CALCULATIONS

FIELD FLOW

Job Description:	*Gales Ferry*
Contact:	-
Prepared by:	*Richard Ross, Epic Cleantec*
Date:	*4/9/2024*

Worksheet 1- Field Flow

Total field

	Total Quantity of effluent to be disposed per day	52,338	gallons / day
	Hydraulic loading rate	1.5	gallons / sq.ft. / da
	Minimum Dispersal Field Area	34,892	square ft.
	Total Dispersal Field Area	34,892	square ft.

Flow per zone

	Number of Zones	**4**	zone(s)
	Dispersal area per zone	8,723	square ft.
	Choose line spacing between WASTEFLOW lines	2	ft.
	Choose emitter spacing between WASTEFLOW emit	2	ft.
	Total linear ft per zone (minimum required)	4,362	ft. per zone
	Total number of emitters per zone	2,181	emitters per zone
	Select Wasteflow dripline (16mm)	Wasteflow PC - 1/2gph	dripline
		Wasteflow Classic	
		Wasteflow PC - 1/2gph	
		Wasteflow PC - 1 gph	
	Pressure at the beginning of the dripfield	40	psi
	Feet of Head at the beginning of the dripfield	92.4	ft.
	What is the flow rate per emitter in gph?	0.6	gph
	Dose flow per zone	**21.81**	**gpm**
	If required, choose flush velocity	1.5	ft/sec
	How many lines of WASTEFLOW per zone?	9	lines
	Fill in the *actual* length of longest dripline lateral	485	ft.
	Flush flow required at the end of each dripline	1.15	gpm
	Total Flow required to achieve flushing velocity	10.36	gpm
	Total Flow per zone- worst case scenario	**32.17**	**gpm**

Dosing

	Number of doses per day / zone:	12	doses
	Timer ON. Pump run time per dose/zone:	50.00	mins:secs
	Timer OFF. Pump off time between doses	1:09	hrs:mins
	Per Zone - Pump run time per day/zone:	10:00	hrs:mins
	All Zones - Number of doses per day / all zones	48	doses / day
Dose volume per zone		1,090	gallons per dose

COLD WEATHER INSTALLATION NOTES

1. "TOP FEED" MANIFOLDS SHOULD BE USED ON ALL SITES WITH A DISCERNIBLE SLOPE TO ALLOW FOR PROPER DRAINAGE OF THE MANIFOLDS AND THE 3/4" AND 1/2" LATERAL CONNECTORS INTO THE DRIP TUBING.
2. THE MAIN SUPPLY AND RETURN LINES SHALL BE INSTALLED BELOW THE FROST LINE AND SHALL FEED THE SHALLOW "TOP FEED" MANIFOLDS WITH A SINGLE VERTICAL SECTION OF INSULATED SCH 40 PVC PIPE. INSULATION SHALL BE MINIMUM 1/2" THICK FOAM INSULATION (OR EQUIVALENT).
3. ON FLAT SITES WHERE "TOP FEED" MANIFOLDS WILL NOT DRAIN THEREFORE REQUIRING THE USE OF SIDE FEED MANIFOLDS, 12" COVER IS RECOMMENDED BETWEEN HIGHEST POINT OF 1/2" BLACK FLEXIBLE PVC PIPE (NON LOOP CONNECTIONS) AND FINAL GRADE. ON DRIP TUBING INSTALLATIONS LESS THAN 12" THIS WOULD REQUIRE ADDITIONAL COVER OVER THE HEADER DITCH AREA TO CREATE THE 12" SEPARATION. ANY ADDITIONAL COVER IS TO BE GRADED AND TAPERED INTO LANDSCAPE WITHOUT COMPACTING SOIL IN TUBING AREA. PLEASE SEE NOTE ON LOOP CONNECTIONS BELOW.
4. DENSE VEGETATION TURF COVER TO BE ESTABLISHED OVER SUPPLY TRENCH, RETURN TRENCH AND TUBING PRIOR TO 1ST EXPOSURE TO COLD WEATHER. IF VEGETATION CANNOT BE ESTABLISHED, THEN TRENCHES AND TUBING TO BE COVERED WITH A THICK LAYER (MINIMUM 6") OF MULCH, STRAW/HAY, ETC. UNTIL SUCH TURF COVER IS ESTABLISHED. COVER MUST BE STABILIZED AND MAINTAINED UNTIL DENSE VEGETATIVE TURF IS ESTABLISHED. AMOUNT OF COVER MAY NEED TO BE ADJUSTED TO ACCOUNT FOR SETTLING.
5. ALL VALVE BOXES THAT HOUSE "REMOTE ZONE VALVES" SHALL BE INSULATED BY CONTRACTOR. INSULATION TO CONSIST OF EITHER BLUE BOARD, BAGGED STYROFOAM PEANUTS OR EQUIVALENT. IF FIBERGLASS INSULATION IS USED IT MUST BE SEALED TO PREVENT IT FROM BECOMING SATURATED. THE "REMOTE VALVES" SHALL BE PLACED ON A BED OF GRAVEL OR SCREENINGS (4"-6"). POSITIVE GRADE AWAY FROM VALVE BOXES IS ENCOURAGED TO REDUCE THE VOLUME OF GROUNDWATER THAT MAY COLLECT IN VALVE BOX. CERTAIN SITES MAY REQUIRE POSITIVE DRAINS TO DAYLIGHT.
6. ALL LOOPS CONNECTING DRIP RUNS WITH 1/2" FLEXIBLE PVC SHALL BE SLIGHTLY ELEVATED (MINIMUM 1"-2") SO THAT THEY DRAIN INTO THE DRIP TUBING AFTER THE PUMP SHUTS OFF. IT IS CONTRACTORS RESPONSIBILITY TO ENSURE THESE LOOPS STAY ELEVATED DURING AND AFTER THE LOOPS ARE BACKFILLED.
7. ALL MAIN SUPPLY AND RETURN TRENCHES TO BE INSTALLED BELOW THE LOCAL FROST LINE. IF THIS IS NOT POSSIBLE DUE TO SITE RESTRICTIONS THEN ADEQUATE SOIL MUST BE ADDED OVER THE TOP OF THE TRENCHES SO THAT THE EFFECTIVE DEPTH REMAINS BELOW THE FROST LINE AFTER SETTLING OCCURS. THE ADDED SOILS MUST BE PREPARED FOR TURF COVER AND STABILIZED. IF VEGETATION CANNOT BE ESTABLISHED THEN TRENCHES ARE TO BE COVERED WITH AN ADDITIONAL LAYER (MINIMUM 6") OF MULCH, STRAW/HAY, ETC. UNTIL SUCH TURF COVER IS ESTABLISHED.
8. SUFFICIENT GROUND COVER AROUND THE HYDRAULIC UNIT IS REQUIRED TO INSULATE THE UNIT. ALL PIPES ENTERING AND LEAVING THE HYDRAULIC UNIT SHALL ELBOW VERTICALLY DOWN 90 DEGREES TO A DEPTH BELOW THE FROST LINE PRIOR TO EXTENDING AWAY FROM THE UNIT HORIZONTALLY. ADDITIONAL INSULATION INSIDE THE HYDRAULIC UNIT IS ENCOURAGED. INSULATION TO CONSIST OF EITHER BLUE BOARD, BAGGED STYROFOAM PEANUTS, OR EQUIVALENT. IF FIBERGLASS INSULATION IS USED IT MUST BE SEALED TO PREVENT IT FROM BECOMING SATURATED.
9. ALL CONDUIT ENTERING INTO EXTERIOR CONTROL PANELS SHALL BE SEALED TO PREVENT CONDENSATION INSIDE THE PANEL.
10. ESTABLISHED VEGETATION HEIGHT SHALL BE MINIMUM 4"-6" THROUGHOUT WINTER MONTHS.
11. AIR RELEASE VALVES SHALL BE PLACED BELOW THE GROUND SURFACE INSIDE A VALVE BOX BUT AT AN ELEVATION ABOVE THE HIGHEST DRIP LINE IN THAT PARTICULAR ZONE.

EQUIPMENT SPECIFICATIONS

TANKS

MANUFACTURED BY XERXES (OR APPROVED ALTERNATE) WITH A WATERTIGHT TANK, RISER, AND LID SYSTEM. A WATERTIGHT TEST SHALL BE PERFORMED BY THE CONTRACTOR WHICH IS TO BE OBSERVED BY THE STATE AND ENGINEER. TANK SHALL BE TRAFFIC RATED AND ABLE TO BE PLACED IN HIGH GROUNDWATER CONDITIONS.

A. EQUALIZATION/SEPTIC TANK: 50,000 GAL CAPACITY
B. ANOXIC TANK: 20,000 GAL CAPACITY
C. AEROBIC TANK: 25,000 GAL CAPACITY
D. TREATED WATER STORAGE & DOSING TANK: 50,000 GAL CAPACITY

TREATMENT SYSTEM

MANUFACTURED BY EPIC CLEANTEC WITH AUTOMATIC SCREENING & FILTRATION, ACTUATED VALVES, INSTRUMENTATION, AND ENCLOSURE FOR INDOOR LOCATION. UNIT TO BE RATED TO ACCOMMODATE FLOWS UP TO 53,000 GPD. TREATED EFFLUENT TO MEET STATE STANDARDS.

SUBSURFACE DRIP TUBING

MANUFACTURED BY NETAFIM MODEL 08WRAM.6-24V, PRESSURE COMPENSATING, 0.6 GPH NOMINAL DISPERSAL RATE, 24" SPACING BETWEEN EMITTERS

UNDERGROUND PIPING

PVC, SCH 40, SOLVENT WELD

DESIGN CRITERIA

DESIGN FLOW = 52,338 GPD
TOTAL BEDROOM COUNT = 572 (ALL BUILDINGS ONSITE)
FLOW PER BEDROOM = 91.5 GPD (SEE SIMILAR BUILDING DATA AND FLOW JUSTIFICATION FOR VARIANCE VERSUS STANDARD VALUE)
APPLICATION RATE = 1.5 GPD/SF

DISPERSAL AREA (100% PRIMARY):
STATE MINIMUM = 34,892 SF
DISPERSAL FIELD DESIGN AREA SHOWN = 34,892 SF

DISPERSAL AREA (200% RESERVE):
STATE MINIMUM = 34,892 SF
DISPERSAL FIELD DESIGN AREA SHOWN = 34,892 SF

MONITORING AND CONTROL PROVISIONS

TREATMENT METHODOLOGY: MEMBRANE BIOREACTOR WITH DISINFECTION

THE ABILITY TO MONITOR AND CONTROL ENHANCED PRETREATMENT PROCESSES, AND THE EQUIPMENT ASSOCIATED THEREWITH, IS VITAL TO SUCCESSFUL USE OF SUCH PROCESSES. THE TREATMENT SYSTEM IS FULLY AUTOMATED WITH THE ABILITY TO LOG IN REMOTELY TO MONITOR THE SYSTEM AND ADJUST PROCESS PARAMETERS. THE OPERATOR(S) OF ENHANCED PRETREATMENT PROCESSES SHOULD HAVE INSTRUMENTATION AND EQUIPMENT AVAILABLE TO BE ABLE TO DETERMINE:

- THAT THE PROCESS VARIABLES ARE WITHIN OPERATING LIMITS REQUIRED FOR PROCESS STABILITY AND EFFICIENCY,
- THE OPERATING STATUS OF ALL ELECTRICALLY AND MECHANICALLY OPERATED EQUIPMENT,
- THAT CRITICAL LIQUID LEVELS ARE WITHIN THE NORMAL RANGE.

THE OPERATOR(S) SHOULD ALSO BE ABLE TO EASILY VARY OPERATING CONDITIONS AS REQUIRED TO MAINTAIN PROCESS STABILITY AND EFFICIENCY.

PROPOSED MONITORING AND CONTROL EQUIPMENT IS AS FOLLOWS:

a. MONITORING EQUIPMENT
- FLOW MEASUREMENT, INDICATION AND RECORDING
- LIQUID LEVEL DETECTION, DISPLAY AND REPORTING
- EQUIPMENT OPERATING STATUS
- FAULT DETECTION, DISPLAY AND REPORTING FOR ALL MECHANICALLY AND ELECTRICALLY OPERATED EQUIPMENT. THIS INCLUDES, BUT IS NOT LIMITED TO:
  1. LOSS OF NORMAL ELECTRICAL POWER SUPPLY
  2. EQUIPMENT OVERLOADS
  3. HIGH AND LOW LIQUID LEVELS
  4. HIGH AND LOW EQUIPMENT AND PROCESS OPERATING TEMPERATURES
  5. FAILURE OF EQUIPMENT TO START OR STOP UPON RECEIPT OF START/STOP INITIATING SIGNALS
  6. DISINFECTION STATUS AND FAULTS
  7. MEMBRANE INTEGRITY AND ASSOCIATED TURBIDITY COMPLIANCE
  8. AERATION FAULTS
- ALARM PANELS, WITH HUMAN MACHINE INTERFACE (HMI) CAPABLE OF SIGNALING LOCAL AND REMOTE ALARM DETECTION AND NOTIFICATION FACILITIES
- ALARM LIGHTS AND HORNS
- REMOTE ALARM INDICATION (INTERNET WITH CELLULAR BACKUP)
- RUNNING TIME METERS FOR ALL ELECTRICALLY OPERATED EQUIPMENT INDICATED ON THE HMI
- EVENT RECORDERS OR CYCLE COUNTERS FOR ALL PUMPS
- FULL SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA) PLATFORM FOR LOGGING OF PROCESS PARAMETERS AND ALARM HISTORY

b. CONTROL EQUIPMENT

- MAIN ELECTRICAL CIRCUIT BREAKERS, SECONDARY CIRCUIT BREAKERS, AND MANUAL AND AUTOMATIC MOTOR STARTERS MEETING REQUIREMENTS OF NATIONAL, STATE AND LOCAL ELECTRIC CODES
- HAND-OFF-AUTOMATIC (HOA) SWITCHES FOR ALL ELECTRICALLY OPERATED EQUIPMENT
- TIME CLOCKS
- REPEAT CYCLE TIMERS
- LIQUID LEVEL DETECTION EQUIPMENT (CAPABLE OF PROVIDING A LEVEL INDICATION SIGNAL OUTPUT TO OPERATING EQUIPMENT THAT CONTROL, OR ARE CONTROLLED BY, LIQUID LEVELS)
- PROGRAMMABLE LOGIC CONTROLLER (PLC)
- COMPUTER WITH HMI INTERFACE INTEGRATED INTO THE CENTRAL SCADA PANEL
- IN LINE METERS
  1. PH
  2. DISSOLVED OXYGEN
  3. TURBIDIMETER
  4. PRESSURE
  5. TEMPERATURE
  6. UV DOSAGE (CALCULATED), INTENSITY (MEASURED), & UVT (ESTIMATED)
  7. LEVEL
  8. FLOW
  9. VFD STATUS AND SPEED

epiccleantec

REV	DATE	DESCRIPTION
0	5/13/24	PERMIT SUBMITTAL

DESIGN BY: -
DRAWN BY: -
SBMT BY: -
REVIEWED BY: -
PLOT DATE: May 13, 2024 3:43 PM
PLOT SCALE: NONE
CLIENT PROJECT NO.: -
PROJECT NUMBER: 23107
FILE NAME: GALES FERRY - WWTP.DWG

GALES FERRY

CALCULATIONS & MATERIAL SPECIFICATIONS

19 & 29 MILITARY HIGHWAY,
GALES FERRY, TOWN OF LEDYARD,
NEW LONDON COUNTY,CONNECTICUT

MAP 91, LOT 39

WW 1.2

EQUIPMENT SCHEDULES

MBR TANK: GENERAL PURPOSE

Quantity	APES Number	Manufacturer	Part Number	Description	TAG
2	13331	Custom		Valve, Manual, Ball, SS Body, Teflon Seal, 2", Threaded	V-0604, V-0605
1	14435	Pinacle Stainless Steel	14435	Valve, Manual, Ball, SS Body, Teflon Seal, 1/2"	V-0603
1	19279	Warrick	PY2CW4000	Level, Switch, Mech Float, Narrow Angle, N.C., YEL Length, N/C, Yellow float	LSHH|-0601
1	26008	Indumart	P32T2	Gauge, Combination, -200 to 200"WC, Bottom Mount, 2-1/2" Dial, SS Case, ...	PI|-0702
1	27810	IFM Efector	PG2409	Pressure, Transmitter, -14.5-14.5 psi, 4-20mA	VT|-0701
3	27811	IFM Efector	EVC002	Flow, Meter, Connector, 4 Wire Mirco DC connector, Cable 5m, 22AWG	LSLL|-0701, TT|-0601, VT|-0701
1	27825	IFM Efector		Flow, Meter, Parts, Adapter IFM SM600, G1/2 BSPP to 1/2" NPT SS	VT|-0701
1	29734	Custom		Valve, Manual, Check, PVC Body, 1/2", True Union Ball, GF- 562 Series with ...	CV-0701
10	37667	Afflu-O	K15-010VS	Valve, Manual, Ball, PVC, 1", True-Union, Soc & FNPT Ends, c/w FPM [Viton] ...	V-0701, V-0702, V-0708, V-0709, V-0710, V-0719, V-0720, V-0721, V-0722, V-0723
1	41081	IFM efector	TA2633	Transmitter, Temperature, 0-300°F, 4-20mA	TT|-0601
1	45170	IFM efector	UT0022	Transmitter, Temperature, Thermowell, UT0022	TT|-0601
1	45829	Ginice	GQ-004	Valve, Actuated, Ball, PVC, 2", 3 WAY, 24 V DC, GINICE GQ-004, Afflu-O Val...	AV|-0701
1	46422	Xylem	04300545A	Pump, Diaphragm, Motor Driven, Xylem/Flojet, Quad, 115 Vac, 50-60hz, 4.5 ...	P|-0703
1	47279	IFM Efector	LMC500	Switch, Level, Capacitive Sensor, IFM, LMC500, 1/2"NPT, 24VDC, NO/NC, M1...	LSLL|-0701
1	M1343	Warrick	PB20W4000	Level, Switch, Mech Float, Narrow Angle, N.O., Blue	LSLL|-0601

ONSITE SCREEN: CL1 DIV2

Quantity	APES Number	Manufacturer	Part Number	Description	TAG
2	37664	Custom	K15-040VS	Valve, Manual, Ball, PVC, 4", True-Union, Soc Ends, c/w FPM [Viton] O-Rings...	V-0101, V-0102
2	49202	Ginice	GQ-004	Valve, Actuated, Ball, PVC, 4", 2 WAY, 24 V DC, GINICE GQ-004, Afflu-o ball ...	AV|-0101, AV|-0102

SITE BUILDING: GENERAL PURPOSE

Quantity	APES Number	Manufacturer	Part Number	Description	TAG
3	37018	Prominent	BT4B1602PVT2000UD010A...	Pump, Metering, Prominent, Beta 4, BT4B1602PVT2000UD010A01, 2.2L/Hr, ...	P|-6101B, P|-6102, P|-6103
1	37662	Afflu-O	K15-020VS	Valve, Manual, Ball, PVC, 2", True-Union, Soc Ends, c/w FPM [Viton] O-Rings...	V-0901
1	38895	Ginice	GQ-004	Valve, Actuated, Ball, PVC, 2", 2 WAY, 24 V DC, GINICE GQ-004, Afflu-o ball ...	AV|-0901
1	43074	IFM Effector	EVC003	Cable, Connector, IFM efector 4 wire Mirco DC cordset, 10m, 22AWG, M12 F...	FIT|-0901
1	43617	IFM efector	E40234	Flow Meter, IFM Efector, Ground Clamp, for units with M12 connector	FIT|-0901
1	47295	IFM efector	SM2601	Flow Meter, IFM Efector, SM2601, Magnetic-Inductive, 0-160 GPM, 24VDC, 4...	FIT|-0901
1	60052	Prominent	BT4B1602PVT7000UD010A...	Pump, Metering, Prominent, Beta 4, BT4B1602PVT7000UD010A01, 1.4L/Hr, ...	P|-6101

SKID-7910: GENERAL PURPOSE

Quantity	APES Number	Manufacturer	Part Number	Description	TAG
2	10034	Custom		Valve, Manual, Gate, Brass Body, 2"	V-0301, V-0302
7	10047	Custom		Valve, Manual, Ball, Brass Body, Teflon Seal, 1/4", NPT, 150#, 597 PSI WOG	SP-0301, SP-0302, SP-0401, SP-0402, SP-0403, SP-0501, SP-0502
2	10162	Custom		Valve, Manual, Check, Swing, Brass Body, 2"	CV-0301, CV-0302
2	10184	Dwyer	1823-80	Pressure, Switch, 9-85" wc, Nema 1	PSL|-0301, PSL|-0501
1	11352	Custom		Valve, Manual, Check, Spring, Brass Body, 3/4"	V-0703
8	16196	Ashcroft, Indumart	BY12YPC4LWP16T2-FG-15	Gauge, Pressure, 0-15 PSI, Bottom Mount, 2-1/2" Dial, SS Case, Brass Intern...	PI|-0302, PI|-0303, PI|-0305, PI|-0306, PI|-0307, PI|-0502, PI|-0503, PI|-0505
5	16202	Indumart	P16T2-FG-30	Gauge, Pressure, 0-30 PSI, Bottom Mount, 2-1/2" Dial, SS Case, Brass Intern...	PI|-0401, PI|-0402, PI|-0403, PI|-0506, PI|-0507
4	37662	Afflu-O	K15-020VS	Valve, Manual, Ball, PVC, 2", True-Union, Soc Ends, c/w FPM [Viton] O-Rings...	V-0303, V-0304, V-0305, V-0306
2	37663	Custom	K15-030VS	Valve, Manual, Ball, PVC, 3", True-Union, Soc Ends, c/w FPM [Viton] O-Rings...	V-0402, V-0404
8	37664	Custom	K15-040VS	Valve, Manual, Ball, PVC, 4", True-Union, Soc Ends, c/w FPM [Viton] O-Rings...	V-0403, V-0405, V-0406, V-0407, V-0503, V-0504, V-0505, V-0506
2	40586	FPZ	SCL K07R-MD-7.5-3	Blower, Regenerative, FPZ, 7.5 HP, SCL K07R-MD-7.5-3, 208-230/460V, 3 Ph...	B|-0301, B|-0302
2	44448	Spears	S1720C20	Valve, Manual, Check, Swing, PVC, 2", Clear, Socket, EPDM, True Union, Spe...	CV-0303, CV-0304
1	44449	Spears	S1720C30	Valve, Manual, Check, Swing, PVC, 3", Clear, Socket, EPDM, True Union, Spe...	CV-0401
4	44450	Spears	S1720C40	Valve, Manual, Check, Swing, PVC, 4", Clear, Socket, EPDM, True Union, Spe...	CV-0402, CV-0403, CV-0503, CV-0504
2	45400	Price Pumps	RC200AI-406-26566-33-18-...	Pump, Centrifugal, Price Pump, RC200, 1/3 HP 208-230/460V/3ph/60hz, 180...	P|-0301, P|-0302
2	46966	CDI	NBR20-0AXXX	Valve, Manual, Relief, Pressure, CDI, Cast Iron Body, 2", set @	PRV-0301, PRV-0302
2	46969	CDI	NBR30-0AXXX	Valve, Manual, Relief, Pressure, CDI, Cast Iron Body, 3", set @	PRV-0501, PRV-0502
2	M1096	Solberg	FS-30P-200	Filter, Air, Silencer, Solberg, FS-30P-200	FLT-0301, FLT-0302
4	M1267	Western Gauge and Instruments	WL31205	Gauge, Temperature, 0-250F, 3" Dial, 4" Stem, 1/2" NPT, Western Gauge an...	TI|-0301, TI|-0302, TI|-0501, TI|-0502
4	M1319	Indumart	J60"-0WC	Gauge, Vacuum, 60-0"wc, SS Case, Dry Fill, 1/4" NPT, Indumart, J60"-0WC	PI|-0301, PI|-0304, PI|-0501, PI|-0504
2	M1489	Solberg	FS-230P-300	Filter, Air, Silencer, Solberg, 3"	FLT-0303, FLT-0501
2	M1524	Custom		Valve, Manual, Check, Swing, Brass Body, 3"	CV-0501, CV-0502
2	P1104	Custom		Valve, Manual, Ball, Brass Body, Teflon Seal, 3", NPT, 150#, 600 PSI WOG	V-0501, V-0502

SKID-7920: GENERAL PURPOSE

Quantity	APES Number	Manufacturer	Part Number	Description	TAG
1	10184	Dwyer	1823-80	Pressure, Switch, 9-85" wc, Nema 1	PSL|-0601
3	10538	Unified Valve Group	10538	Valve, Manual, Ball, Brass Body, Teflon Seal, 1/2", NPT, 150#, 596 PSI WOG	SP-0701, SP-0702, SP-0801
1	12244	ASCO	8210G4	Valve, Actuated, Solenoid, 2 Way, ASCO, 1", 150 psi, Nema4, UL, NC, 120/60...	SV|-0801
3	16196	Ashcroft	BY12YPC4LW	Gauge, Pressure, 0-15 PSI, Bottom Mount, 2-1/2" Dial, SS Case, Brass Intern...	PI|-0602, PI|-0604, PI|-0605
3	16203	Indumart	P16T2-FG-60	Gauge, Pressure, 0-60 PSI, Bottom Mount, 2-1/2" Dial, SS Case, Brass Intern...	PI|-0701, PI|-0703, PI|-0801
1	19279	Warrick	MYEL40W	Level, Switch, Mech Float, Narrow Angle, N.C., YEL Length, N/C, Yellow float	LSHH|-0801
3	21552	Custom		Level, Switch, Tether Weight, Cast Iron	LSH|-0801, LSHH|-0801, LSL|-0801
2	22346	Custom		Valve, Manual, Check, Swing, PVC Body, 1/2", Clear	CV-0801, CV-0802
1	35517	Dwyer	RMB-83D-SSV	Meter, Flow, Water, Dwyer, RMB-83D-SSV, 0-20 GPH, 1/4"FNPT, SS Needle ...	FI|-6103
1	37661	Custom	K15-015VS	Valve, Manual, Ball, PVC, 1-1/2", True-Union, Soc Ends, c/w FPM [Viton] O-R...	V-0801
5	37662	Afflu-O	K15-020VS	Valve, Manual, Ball, PVC, 2", True-Union, Soc Ends, c/w FPM [Viton] O-Rings...	V-0704, V-0705, V-0706, V-0707, V-0802
4	37665	Afflu-O	K15-005VS	Valve, Manual, Ball, PVC, 1/2", True-Union, Soc & FNPT Ends, c/w FPM [Vito...	V-6101, V-6102, V-6103, V-6104
2	43074	IFM Effector	EVC003	Cable, Connector, IFM efector 4 wire Mirco DC cordset, 10m, 22AWG, M12 F...	FIT|-0701, FIT|-0801
2	43617	IFM efector	E40234	Flow Meter, IFM Efector, Ground Clamp, for units with M12 connector	FIT|-0701, FIT|-0801
1	44446	Spears	S1720C15	Valve, Manual, Check, Swing, PVC, 1-1/2", Clear, Socket, EPDM, True Union, ...	CV-0803
2	44448	Spears	S1720C20	Valve, Manual, Check, Swing, PVC, 2", Clear, Socket, EPDM, True Union, Spe...	CV-0702, CV-0703
2	46422	Xylem	04300545A	Pump, Diaphragm, Motor Driven, Xylem/Flojet, Quad, 115 Vac, 50-60hz, 4.5 ...	P|-6104, P|-6105
2	46966	CDI	NBR20-0AXXX	Valve, Manual, Relief, Pressure, CDI, Cast Iron Body, 2", set @	PRV-0601, PRV-0602
1	47087	Dwyer	RMB-84-SSV	Meter, Flow, Water, Dwyer, RMB-84-SSV, 4-40 GPH, 1/4"FNPT, SS Needle Va...	FI|-6103
2	47295	IFM efector	SM2601	Flow Meter, IFM Efector, SM2601, Magnetic-Inductive, 0-160 GPM, 24VDC, 4...	FIT|-0701, FIT|-0801
2	48067	Fabco Plastics LTD	0484-X	Eductor, PVDF, 0484-X, Mazzei, 3/4" NPT INLET/OUTLET CONNECTIONS, 1/...	EDTR-0201
2	M1015	Goulds	1ST1F5C4W9	Pump, Centrifugal, Goulds, NPE, 1.5 HP, 3 Phase, 208-230/460V, 60 Hz, 350...	P|-0701, P|-0702
2	M1267	Western Gauge and Instruments	WL31205	Gauge, Temperature, 0-250F, 3" Dial, 4" Stem, 1/2" NPT, Western Gauge an...	TI|-0601, TI|-0602
2	M1319	Indumart	J60"-0WC	Gauge, Vacuum, 60-0"wc, SS Case, Dry Fill, 1/4" NPT, Indumart, J60"-0WC	PI|-0601, PI|-0603
2	M1343	Warrick	MBLU40W	Level, Switch, Mech Float, Narrow Angle, N.O., Blue	LSH|-0801, LSL|-0801
2	M1489	Solberg	FS-230P-300	Filter, Air, Silencer, Solberg, 3"	FLT-0601, FLT-0602
2	M1524	Custom		Valve, Manual, Check, Swing, Brass Body, 3"	CV-0601, CV-0602
2	P1104	Custom		Valve, Manual, Ball, Brass Body, Teflon Seal, 3", NPT, 150#, 600 PSI WOG	V-0601, V-0602

SKID-7921: GENERAL PURPOSE

Quantity	APES Number	Manufacturer	Part Number	Description	TAG
2	11352	Custom		Valve, Manual, Check, Spring, Brass Body, 3/4"	V-7201, V-7202
1	21766	Prominent	7902593	pH, Transmitter, pH tuff tip electrode, 7902593	PH|-0701
1	27150	Hach	CL17sc	Transmitter, Chlorine free Residual Hach CL17sc With reagents, 75psi max pr...	AIT|-0702
1	27936	Prominent	7781499	pH, Transmitter, 4-20mA, Dulcometer pH or ORP	PH|-0701
1	33776	McMaster-Carr		Regulator, WATER , 1/4", Push in fitting, NSF Approved, 0-25psi out 300psi i...	PLV-0701
8	37662	Afflu-O	K15-020VS	Valve, Manual, Ball, PVC, 2", True-Union, Soc Ends, c/w FPM [Viton] O-Rings...	V-0714, V-0715, V-0716, V-0717, V-0724, V-0725, V-0726, V-0727
2	37665	Afflu-O	K15-005VS	Valve, Manual, Ball, PVC, 1/2", True-Union, Soc & FNPT Ends, c/w FPM [Vito...	V-0711, V-0713
1	45829	Ginice	GQ-004	Valve, Actuated, Ball, PVC, 2", 3 WAY, 24 V DC, GINICE GQ-004, Afflu-O Val...	AV|-7201
1	47529	Hach	TU5300sc W/SC4500 Contr...	Turbidity Meter and Universal Controller, Hach, KIT: TU5300sc w/sc4500 2 C...	AIT|-0701

TNK-0301: GENERAL PURPOSE

Quantity	APES Number	Manufacturer	Part Number	Description	TAG
1	19279	Warrick	PY2CW4000	Level, Switch, Mech Float, Narrow Angle, N.C., YEL Length, N/C, Yellow float	LSHH|-0301
2	21552	Custom		Level, Switch, Tether Weight, Cast Iron	LSHH|-0301, LSLL|-0301
1	60370	Dwyer	PBLTX-10-40	Transmitter, Pressure, Dwyer PBLTX, 0-10psi (0-23ft), 40 ft cable	LT|-0301
1	M1343	Warrick	PB20W4000	Level, Switch, Mech Float, Narrow Angle, N.O., Blue	LSLL|-0301

TNK-0401: GENERAL PURPOSE

Quantity	APES Number	Manufacturer	Part Number	Description	TAG
1	19279	Warrick	PY2CW4000	Level, Switch, Mech Float, Narrow Angle, N.C., YEL Length, N/C, Yellow float	LSHH|-0401
2	21552	Custom		Level, Switch, Tether Weight, Cast Iron	LSHH|-0401, LSLL|-0401
1	37663	Custom	K15-030VS	Valve, Manual, Ball, PVC, 3", True-Union, Soc Ends, c/w FPM [Viton] O-Rings...	V-0401
1	60369	Dwyer	PBLTX-5-40	Transmitter, Pressure, Dwyer PBLTX, 0-5psi (0-11.5ft)	LT|-0401
1	M1343	Warrick	PB20W4000	Level, Switch, Mech Float, Narrow Angle, N.O., Blue	LSLL|-0401

TNK-0501: GENERAL PURPOSE

Quantity	APES Number	Manufacturer	Part Number	Description	TAG
1	19279	Warrick	PY2CW4000	Level, Switch, Mech Float, Narrow Angle, N.C., YEL Length, N/C, Yellow float	LSHH|-0501
2	21552	Custom		Level, Switch, Tether Weight, Cast Iron	LSHH|-0501, LSLL|-0501
1	21766	Prominent	7902593	pH, Transmitter, pH tuff tip electrode, 7902593	PH|-0501
1	27325	RDO	RDO Pro-x	O2, Transmitter, Optical, Pro-x, 10m cable	DO|-0501
1	27936	Prominent	7781499	pH, Transmitter, 4-20mA, Dulcometer pH or ORP	PH|-0501
1	60369	Dwyer	PBLTX-5-40	Transmitter, Pressure, Dwyer PBLTX, 0-5psi (0-11.5ft)	LT|-0501
1	M1343	Warrick	PB20W4000	Level, Switch, Mech Float, Narrow Angle, N.O., Blue	LSLL|-0501

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CLIENT PROJECT NO.: -
PLOT DATE: May 13, 2024 3:43 PM
PLOT SCALE: NONE
PROJECT NUMBER: 23107
FILE NAME: GALES FERRY - WWTP.DWG

GALES FERRY

EQUIPMENT SCHEDULES

19 & 29 MILITARY HIGHWAY,
GALES FERRY, TOWN OF LEDYARD,
NEW LONDON COUNTY,CONNECTICUT

MAP 91, LOT 39

WW 1.3

OTHER LOOSE SHIP ITEMS SCHEDULE

ADDITIONAL LOOSE SHIP ITEMS

1	Sensidyne	8200205	Gas Detection sensor - LEL	AIT-7901
1	Sensidyne	8200205	Gas Detection sensor - H2S	AIT-7902
1	Sensidyne	8200205	Gas Detection sensor - LEL	AIT-7903
1	LYCO	SF2000	Single Drum Screen, Enclosed with connection for odor control, 0.020" (32 mesh) openings, 15" Dia x 60" L, 40 - 180 gpm	Screen
1	Carbtrol	G-3B1000	Foul Air Treatment system, 1000 cfm max with 280 lbs granular activated carbon for treatment of odorous air	FA-001

PLUMBING INTERCONNECTION SCHEDULE

ID	From	To	Fluid	Size (in)	Insulation	Pipe Specification	Notes
1	Skid-7910	EQ Tank (TNK-0301)	Process Air	2	No	Galvanized	Air to EQ Tank, connect to diffusers within the tank
2	Screen	FA-001	Foul Air	6	No	PVC, SCH80	
3	EQ Tank (TNK-0301)	FA-001	Foul Air	12	No	PVC, SCH80	
4	Building	EQ Tank (TNK-0301)	Wastewater	6	No	PVC, SCH80	Building collection wastewater to WWTP Actuated diversion valve (AV-0101) shipped loose for installation by contractor.
5	Screen	EQ Tank (TNK-0301)	Wastewater	6	No	PVC, SCH80	Overflow from Screen
6	Screen	EQ Tank (TNK-0301)	Wastewater	6	No	PVC, SCH80	Drain from Screen
7	Building	Screen	Potable water (cold)	0.5	No	PEX	
8	Screen	Anoxic Tank (TNK-0401)	Wastewater	6	No	PVC, SCH80	Screened effluent to treatment
9	Anoxic Tank (TNK-0401)	FA-001	Foul Air	6	No	PVC, SCH80	
10	Skid-7910	Aerobic Tank (TNK-0501)	Process Air	3	No	Galvanized	Air to Aeration Tank, connect to diffusers within the tank
11	FA-001	Building Exhaust	Foul Air	12	No	PVC, SCH80	Treated foul air exhaust, see MEP drawings
12	EQ Tank (TNK-0301)	Skid-7910	Wastewater	2	No	PVC, SCH80	
13	Skid-7910	Anoxic Tank (TNK-0401)	Wastewater	2	No	PVC, SCH80	EQ to Anoxic transfer line
14	Anoxic Tank (TNK-0401)	Aerobic Tank (TNK-0501)	Wastewater	8	No	PVC, SCH80	Aerobic to Anoxic recirc return
15	Anoxic Tank (TNK-0401)	Aerobic Tank (TNK-0501)	Wastewater	8	No	PVC, SCH80	Aerobic to Anoxic equalization
16	Skid-7910	Aerobic Tank (TNK-0501)	Wastewater	4	No	PVC, SCH80	Anoxic to Aerobic transfer line
17	Anoxic Tank (TNK-0401)	Skid-7910	Wastewater	4	No	PVC, SCH80	pump suction
18	Skid-7910	Aerobic Tank (TNK-0501)	Wastewater	3	No	PVC, SCH80	Mixing, connect to eductors within tank
19	Anoxic Tank (TNK-0401)	Skid-7910	Wastewater	3	No	PVC, SCH80	pump suction
20	Aerobic Tank (TNK-0501)	Skid-7910	Wastewater	4	No	PVC, SCH80	pump suction
21	Aerobic Tank (TNK-0501)	Off Haul	Wastewater	2	No	PVC, SCH80	Sludge wasting, actuated valve shipped loose installed inline. Connect to vac truck for offsite hauling
22	P-6103	Aerobic Tank (TNK-0501)	Chemical	0.25	No	Teflon flexible tubing	caustic transfer line, double contained
23	Membrane Tank (TNK-0601)	Aerobic Tank (TNK-0501)	Wastewater	6	No	PVC, SCH80	
24	Skid-7910	Membrane Tank (TNK-0601)	Wastewater	4	No	PVC, SCH80	Aeration Tank to MBR Tank
25	P-6102	Anoxic Tank (TNK-0401)	Chemical	0.25	No	Teflon flexible tubing	Micro C transfer line, double contained
26	P-6101	Skid-7921	Chemical	0.25	No	Teflon flexible tubing	Hypochlorite transfer line, double contained
27	SKID-7920	Membrane Tank (TNK-0601)	Process Air	3	No	Galvanized	Air to MBR Tank
28	SKID-7920	Membrane Tank (TNK-0601)	CIP	2	No	PVC, SCH80	Maintenance wash
29	Membrane Tank (TNK-0601)	SKID-7920	Wastewater	2	No	PVC, SCH80	Permeate from MBR Tank
30	SKID-7920	SKID-7921	Wastewater	2	No	PVC, SCH80	UV system inlet, MBR filtered water
31	SKID-7921	EQ Tank (TNK-0301)	Wastewater	2	No	PVC, SCH80	Off spec water bypass to sewer
32	SKID-7921	Treated NP Storage Tank (TNK-7201)	Recycled Water	2	No	PVC, SCH80 (purple)	Inlet to storage tank
33	Treated NP Storage Tank (TNK-7201)	Booster Pump	Recycled Water	2	No	PVC, SCH80 (purple)	To Dispersal Field & potential reuse
34	Building	Safety Shower	Potable water (cold)	1.25	No	PVC, SCH80	
35	Building	Hose Bibbs	Potable water (cold)	0.5	No	PEX	Various throughout the room, see MEP design
36	Building	Treated NP Storage Tank (TNK-7201)	Potable water (cold)	2	No	PVC, SCH80	NP makeup feed from municipal supply
37	Building	Utility Sink	Potable water (hot)	0.5	Yes	PEX	Sink faucet. Alternate: Provide instantaneous water heater under sink and connect to cold water supply.
38	Building	Utility Sink	Potable water (cold)	0.5	No	PEX	Sink faucet
39	Utility Sink	EQ Tank (TNK-0301)	Wastewater	2	No	PVC, SCH80	Sink drain
40	Building	EQ Tank (TNK-0301)	Wastewater	4	No	PVC, SCH80	Floor sink, multple locations
41	Building	EQ Tank (TNK-0301)	Wastewater	4	No	PVC, SCH80	Area drains, multple locations
42	P-6104	Recirculation loop	Chemical	1/2"	No	Teflon flexible tubing	
43	P-6105	Recirculation loop	Chemical	1/2"	No	Teflon flexible tubing	

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PLOT SCALE: NONE
CLIENT PROJECT NO.: -
PROJECT NUMBER: 23107
FILE NAME: GALES FERRY - WWTP.DWG

GALES FERRY

PLUMBING INTERCONNECTION & LOOSE HIP SCHEDULES

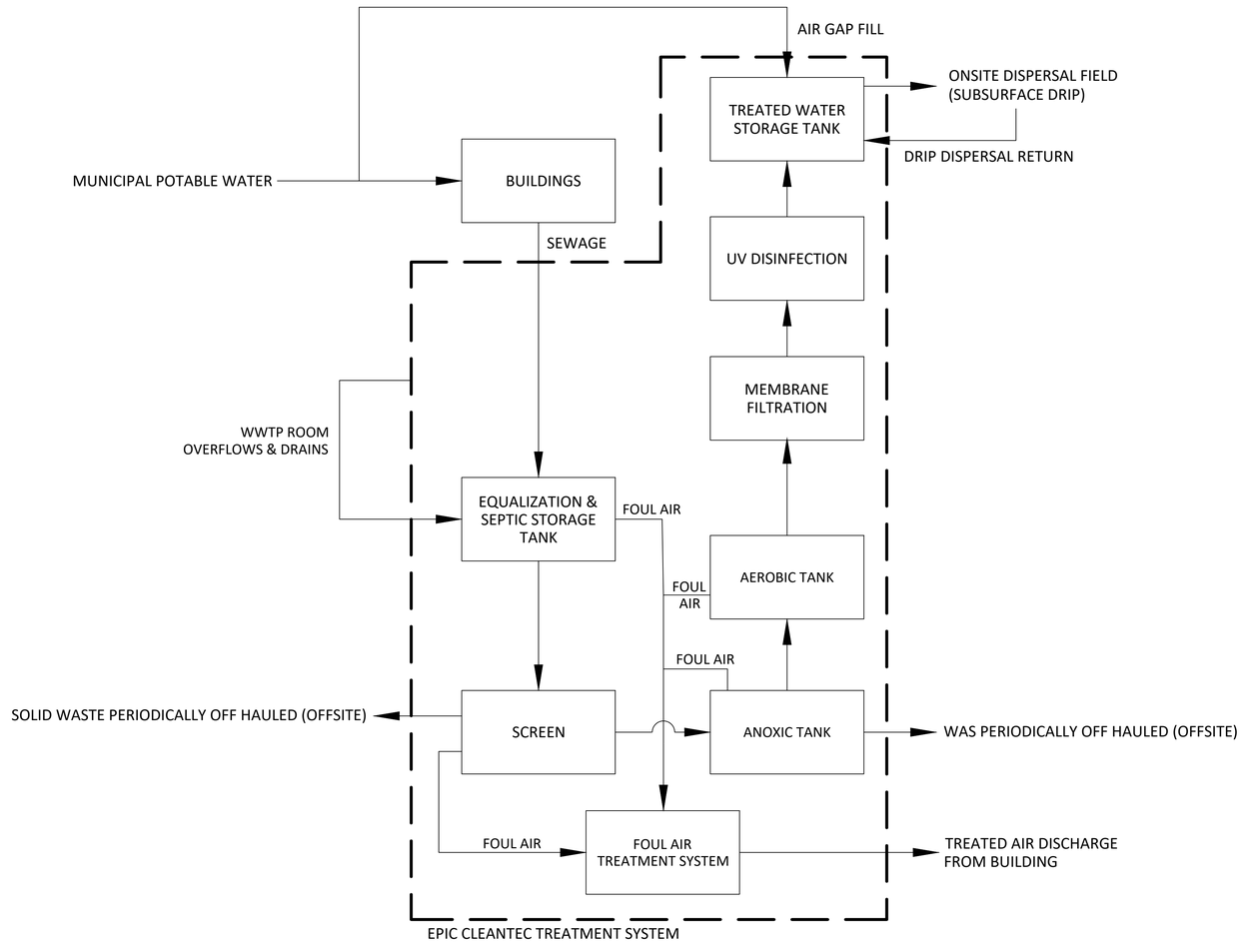
19 & 29 MILITARY HIGHWAY,
GALES FERRY, TOWN OF LEDYARD,
NEW LONDON COUNTY,CONNECTICUT

MAP 91, LOT 39

WW 1.4

NOTES:

1. SYSTEM MODULAR DESIGN ALLOWS FOR EXPANSION AND ADDITIONAL FLOWS IN A FUTURE PHASE DEVELOPMENT FOR RECYCLED WATER USE IN CONJUNCTION WITH THE PROPOSED DISPERSAL FIELD. ADDITIONAL EQUIPMENT MAY NEED TO BE ADDED AND SYSTEM MODIFICATIONS MADE AT THAT TIME. A SEPARATE PERMIT APPLICATION WILL BE SUBMITTED IN THE FUTURE FOR THIS ADDITIONAL FUNCTIONALITY.
2. TANKS ARE LOCATED ABOVE AND BELOW GRADE, SEE SYSTEM LAYOUT FOR MORE DETAILS. NOT ALL PROPOSED TANKS ARE SHOWN FOR CLARITY.



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CLIENT PROJECT NO.: -
PROJECT NUMBER: 23107
FILE NAME: GALES FERRY - WWTP.DWG

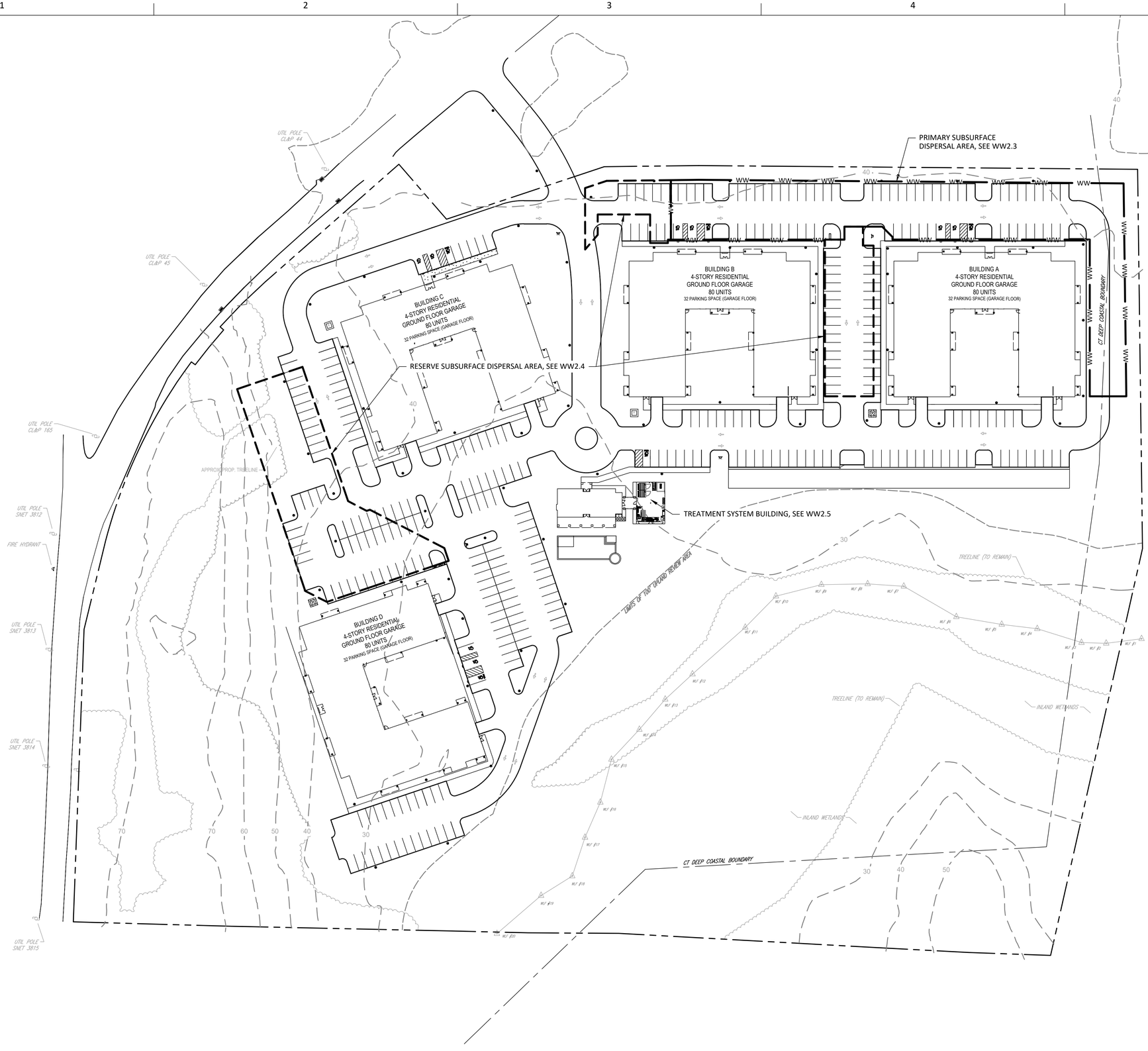
GALES FERRY

PROCESS FLOW DIAGRAM

19 & 29 MILITARY HIGHWAY,
GALES FERRY, TOWN OF LEDYARD,
NEW LONDON COUNTY,CONNECTICUT

MAP 91, LOT 39

WW 2.0



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FILE NAME: GALES FERRY - WWTP.DWG

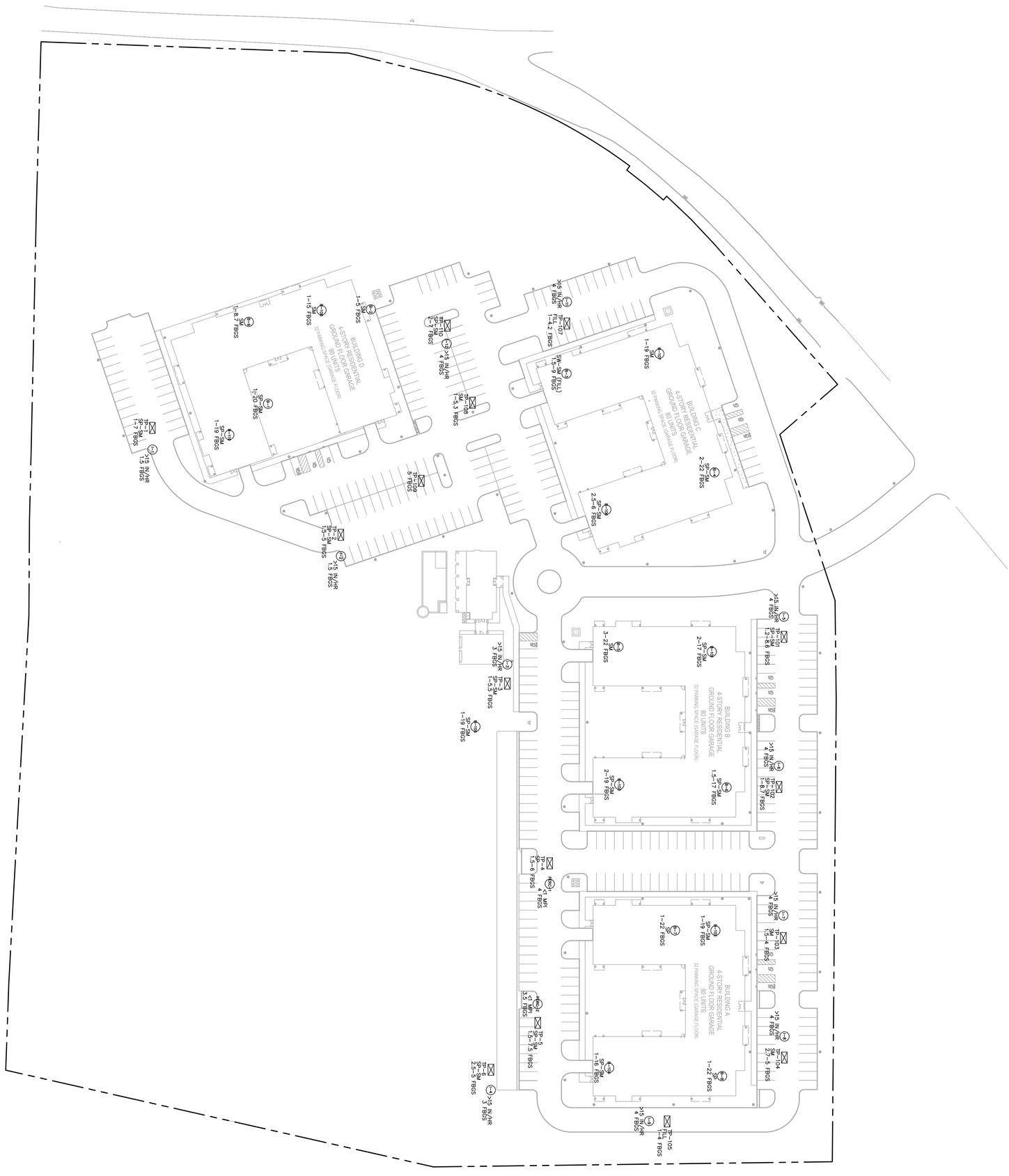
GALES FERRY

OVERALL SITE PLAN

19 & 29 MILITARY HIGHWAY,
GALES FERRY, TOWN OF LEDYARD,
NEW LONDON COUNTY,CONNECTICUT

MAP 91, LOT 39

WW 2.1



GRAPHIC SCALE IN FEET
0
50
100

WW 2.2

19 & 29 MILITARY HIGHWAY,
GALES FERRY, TOWN OF LEDYARD,
NEW LONDON COUNTY,CONNECTICUT

MAP 91, LOT 39

GALES FERRY

SOILS TESTING

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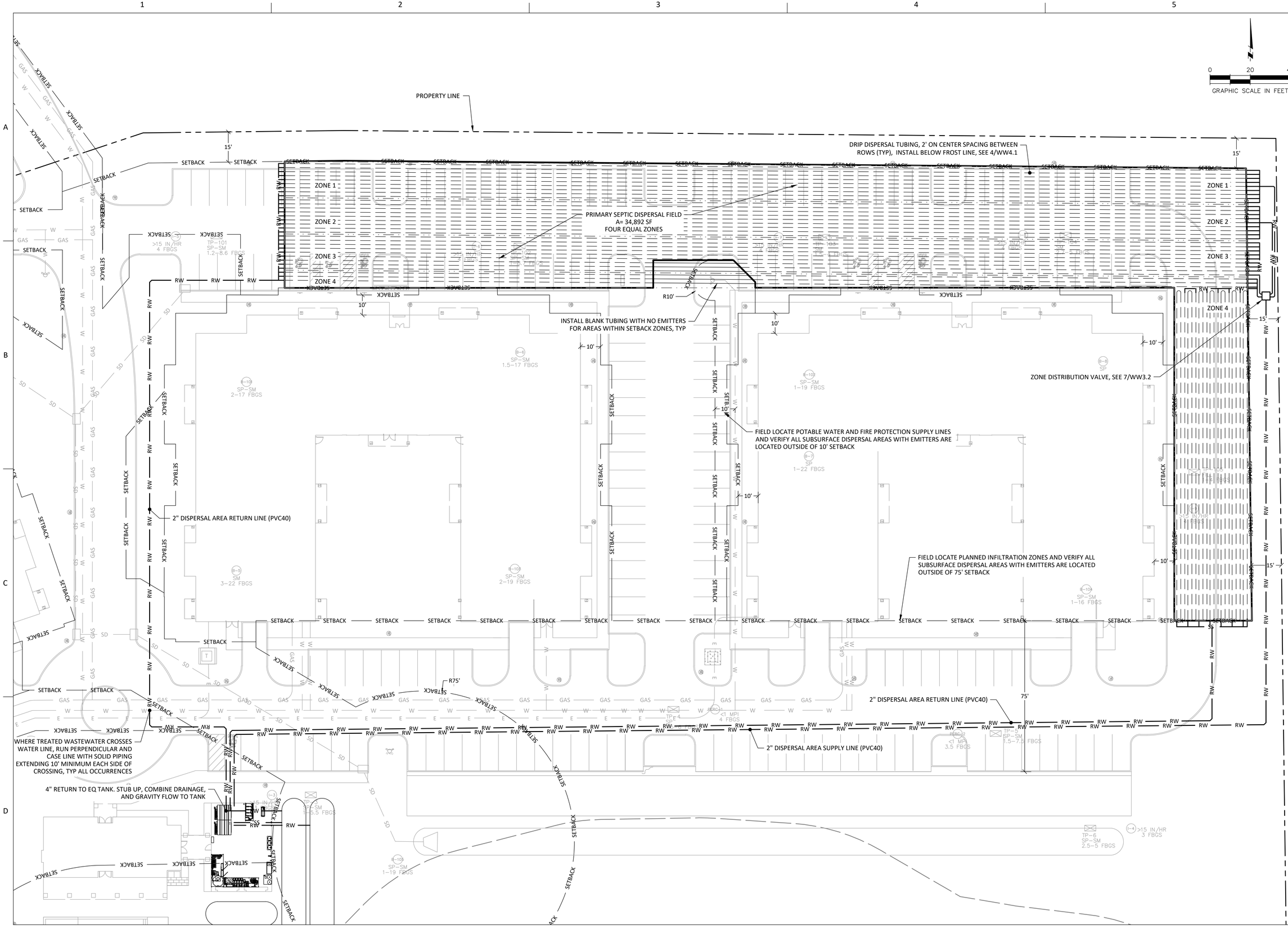

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PROJECT NUMBER: 23107
PLOT SCALE: AS SHOWN
FILE NAME: GALES FERRY - WWTP.DWG

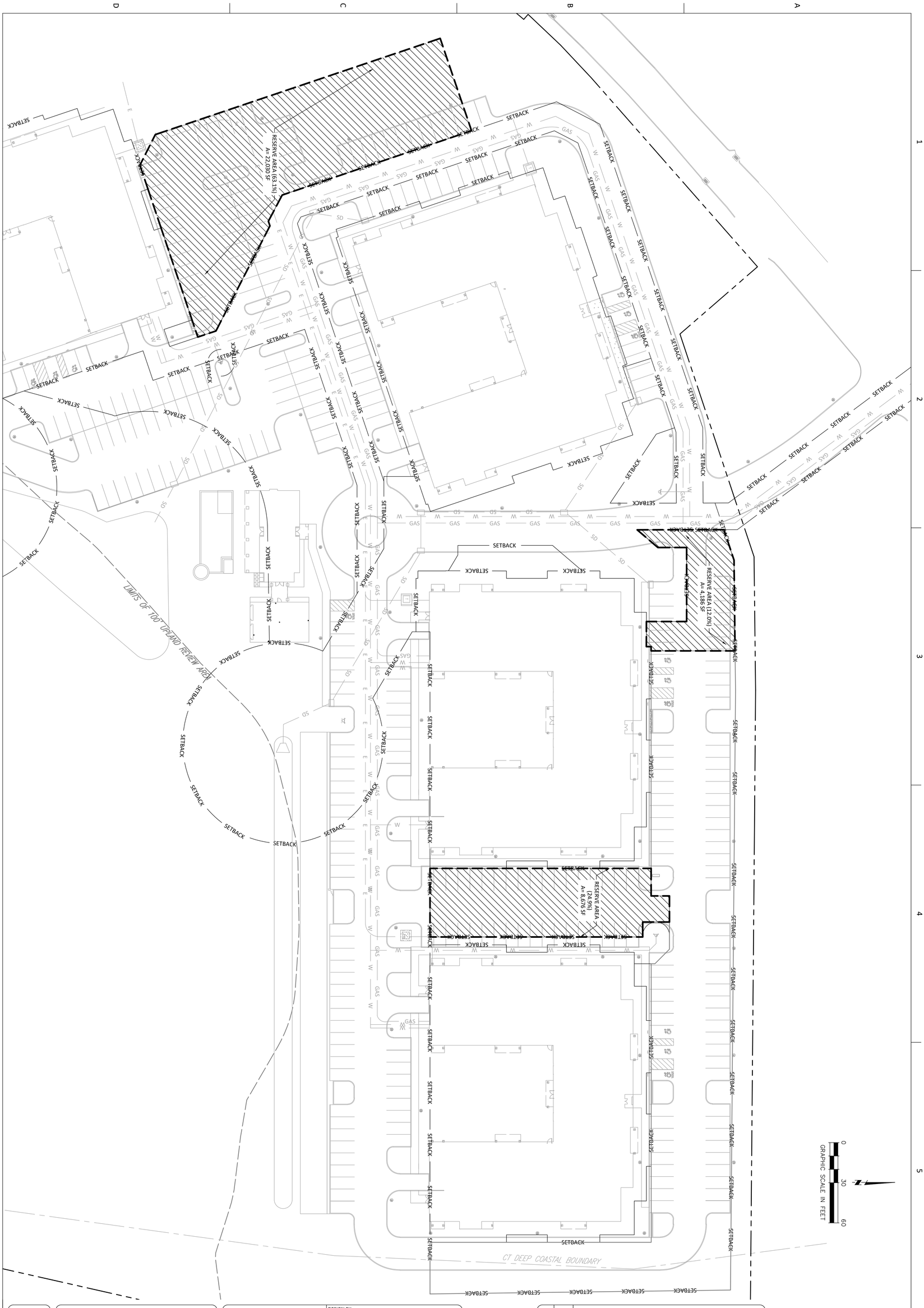
GALES FERRY

SEPTIC SYSTEM
PRIMARY AREA SITING PLAN

19 & 29 MILITARY HIGHWAY,
GALES FERRY, TOWN OF LEDYARD,
NEW LONDON COUNTY,CONNECTICUT

MAP 91, LOT 39

WW 2.3



WW 2.4

19 & 29 MILITARY HIGHWAY,
GALES FERRY, TOWN OF LEDYARD,
NEW LONDON COUNTY,CONNECTICUT

MAP 91, LOT 39

GALES FERRY

SEPTIC SYSTEM
RESERVE AREA SITING PLAN

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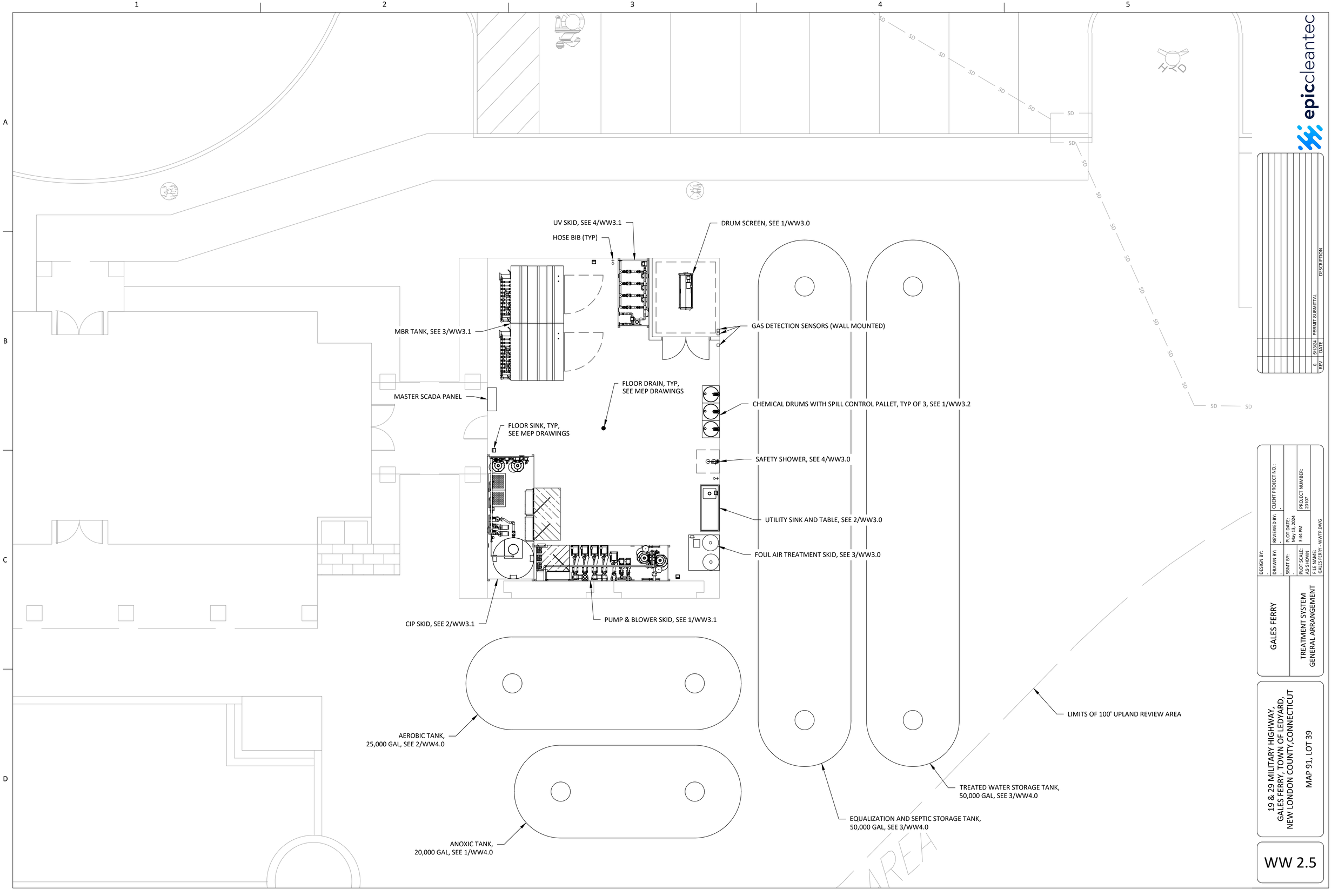

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GALES FERRY

TREATMENT SYSTEM GENERAL ARRANGEMENT

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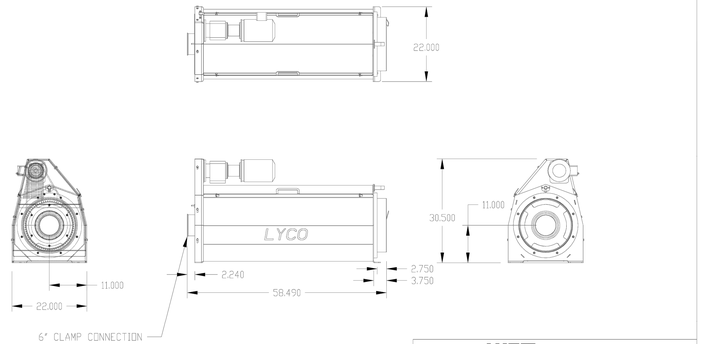
19 & 29 MILITARY HIGHWAY,
GALES FERRY, TOWN OF LEDYARD,
NEW LONDON COUNTY,CONNECTICUT

MAP 91, LOT 39

WW 2.5

JOB #	QTY	SO #	STEP
			ASSY
			CUT
			SAW
			N.C.
			FORM
			MACH

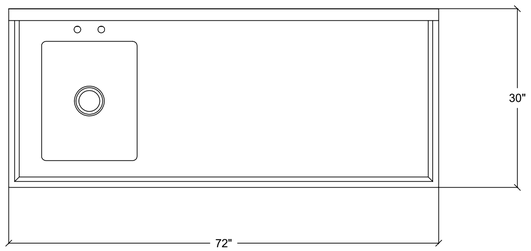


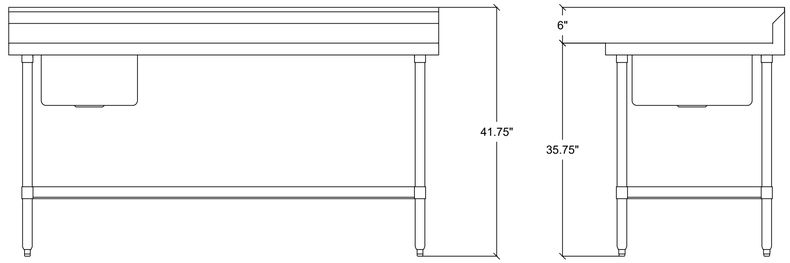
NO.	E.C.N.#	DESCRIPTION	BY

LYCO Manufacturing, Inc.

ALL DIMENSIONS IN INCHES UNLESS NOTED TOLERANCES: LOCATIONAL: FRAC. ± 1/32 DEC. ± .01 DEC. ± .005 ANGLE ± 1° UNDER 10GA ± .025 10GA ± .030 7GA ± .040 OVER 7GA ± .060	SCALE: 0.060	WEIGHT: ? LBS	DRAWN BY: TLS
	DATE: 18-JUL-08	JOB #: A - ???	N.C. NUMBER: 3351646
	TITLE: FA, 15X48 SDS		DRAWING NUMBER: 3351646
	CUSTOMER: customer		

DRUM SCREEN (1)
SCALE: NONE





OPERATOR SINK & WORKTABLE (2)
SCALE: NONE

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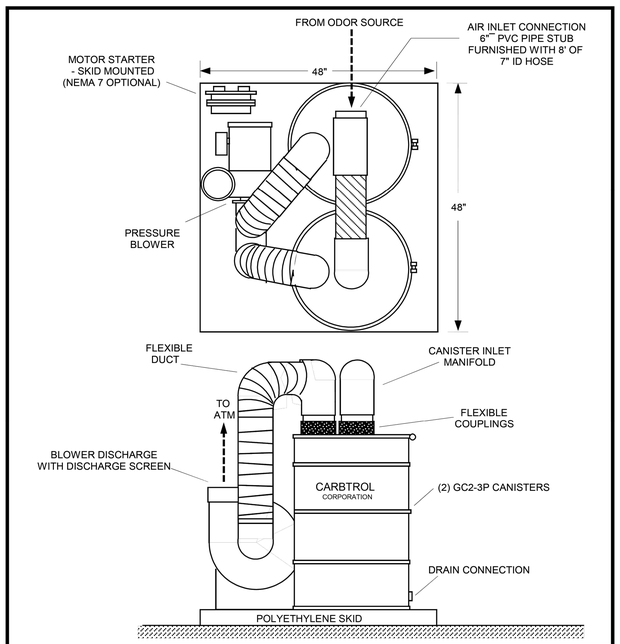
REV	DATE	DESCRIPTION
0	5/13/24	PERMIT SUBMITTAL



CARBTROL CORPORATION

955 CONNECTICUT AVENUE
BRIDGEPORT CONN. 06607
(203) 337-4340

SCALE ----		BY	CJR
DATE 6-8-22	Wah	REV	5-10-23

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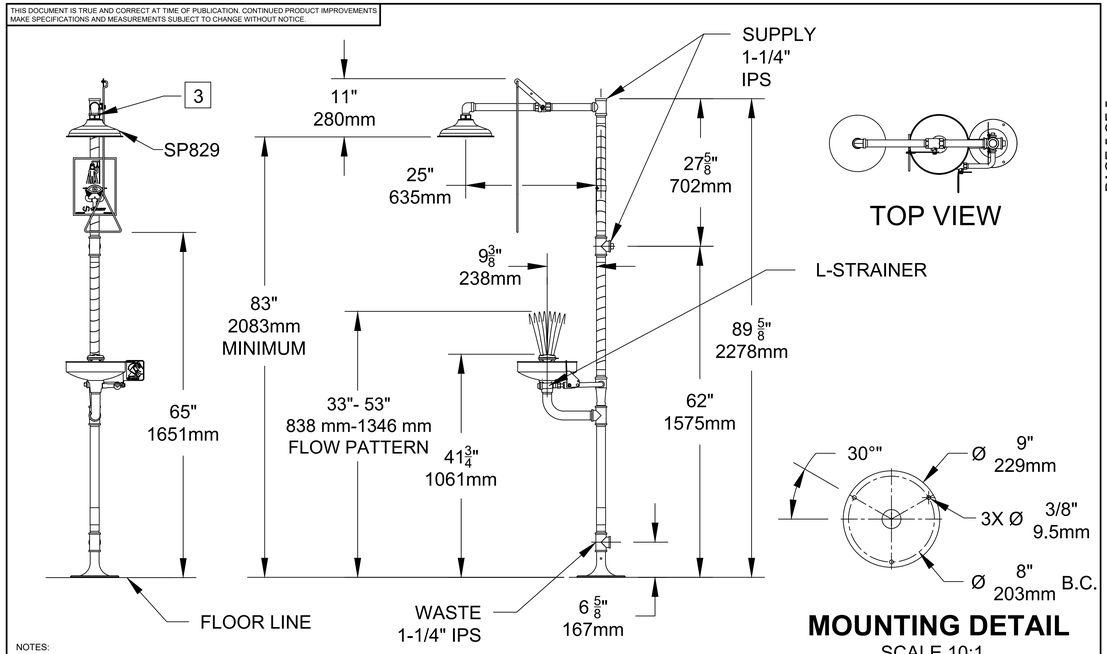
GC2-3B1000

ODOR CONTROL SYSTEM

ARRANGEMENT | **S** | DWG **CR060822-1**

FOUL AIR TREATMENT (GAC) (3)
SCALE: NONE

THIS DOCUMENT IS TRUE AND CORRECT AT TIME OF PUBLICATION. CONTINUED PRODUCT IMPROVEMENTS MAKE SPECIFICATIONS AND MEASUREMENTS SUBJECT TO CHANGE WITHOUT NOTICE.



MOUNTING DETAIL
SCALE 10:1

NOTES:

1. DIMENSIONS MAY VARY BY ± 1/2 INCH [13mm].
2. TO COMPLY WITH ANSI Z358.1-2014 FOR EMERGENCY EYEWASH OR EYE/FACE WASH AND SHOWER EQUIPMENT:
   - UNIT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND ACCEPTABLE PLUMBING PRACTICES.
   - EYEWASH OR EYE/FACE WASH SHALL BE POSTIONED SUCH THAT FLUSHING FLUID PATTERN IS NOT LESS THAN 33" (838 mm) AND NOT GREATER THAN 53" (1364 mm) FROM SURFACE ON WHICH USER STANDS; AND 6.0" (153 mm) MINIMUM FROM WALL OR NEAREST OBSTRUCTION.
   - SHOWER SHALL BE POSITIONED SO THAT SHOWER HEAD IS NOT LESS THAN 208.3 CM (82 IN.) NOR MORE THAN 243.8 CM (96 IN.) FROM SURFACE ON WHICH USER STANDS.
   - SHOWER SPRAY PATTERN SHALL HAVE A MINIMUM DIAMETER OF 50.8 CM (20 IN.) AT 152.4 CM (60 IN.) ABOVE SURFACE ON WHICH USER STANDS, AND CENTER OF SPRAY PATTERN SHALL BE LOCATED AT LEAST 40.6 CM (16 IN.) FROM ANY OBSTRUCTION.

3 DO NOT USE REGULAR PIPE SEALANT. IF NECESSARY USE DOW CORNING 832 SEALANT PLACING 5 SMALL BEADS ON THE MALE THREADS, JUST ABOVE THE FIRST THREAD.

Haws®
1455 KLEPPE LANE
SPARKS, NEVADA. 89431
(775) 359-4712 FAX (775) 359-7424
E-MAIL: HAWS@HAWSCO.COM
WEBSITE: WWW.HAWSCO.COM

ECN NO.	REVISED PER ECN: 5866	BY: JL
DRAWN: SLS	DATE: 04/25/08	CHKD: BJM
APPROVED: JL	DATE: 01/12/23	

MODEL(S)
8300-8309/8300CRP-8309CRP

PART NUMBER 0002080162.D
REVISION 26

SCALE: NA | DRAWING TYPE: INSTALLATION | SIZE: A | SHEET 1 OF 1

SAFETY SHOWER & EYEWASH (4)
SCALE: NONE

DESIGN BY: -	
DRAWN BY: -	REVIEWED BY: -
SBMT BY: -	PLOT DATE: May 13, 2024
PLOT SCALE: AS SHOWN	3:44 PM
FILE NAME: GALES FERRY - WWTP.DWG	

CLIENT PROJECT NO.: -
PROJECT NUMBER: 23107

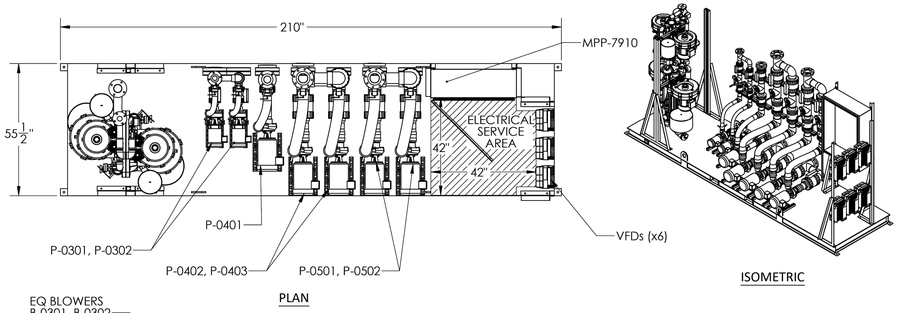
GALES FERRY

PRETREATMENT SYSTEM DETAILS

19 & 29 MILITARY HIGHWAY,
GALES FERRY, TOWN OF LEDYARD,
NEW LONDON COUNTY,CONNECTICUT

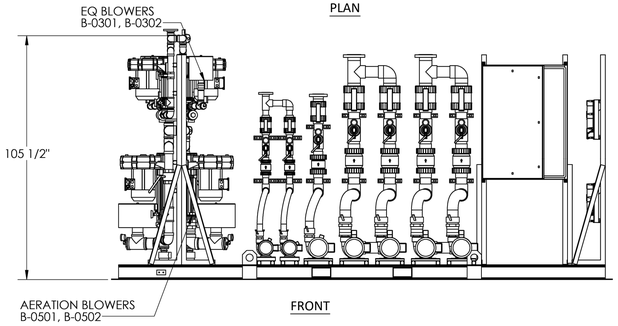
MAP 91, LOT 39

WW 3.0



PLAN

ISOMETRIC



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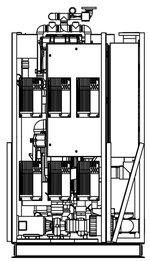
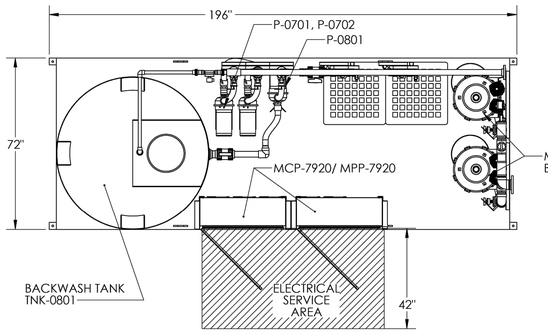


SIDE

PUMPS & BLOWERS SKID (SKID 7910)

SCALE: NONE

1



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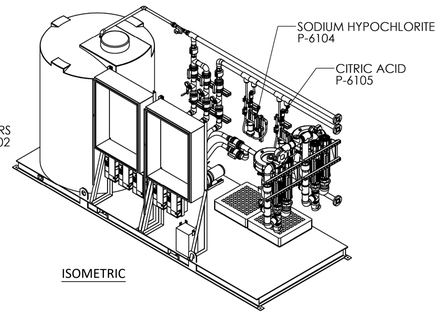

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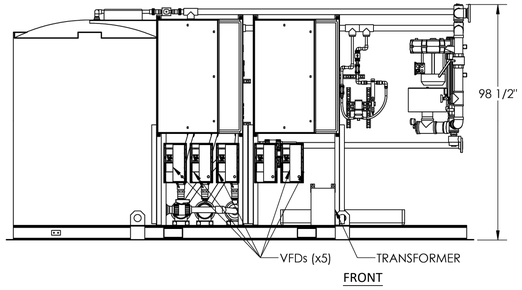

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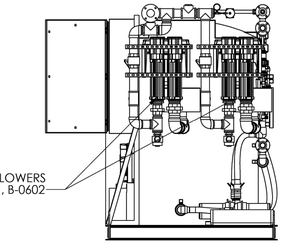
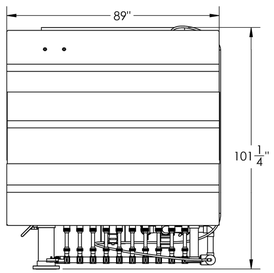


SIDE

CIP & BLOWERS SKID (SKID 7920)

SCALE: NONE

2



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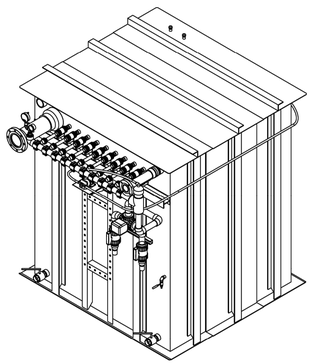

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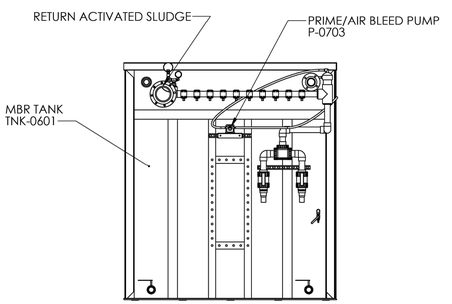

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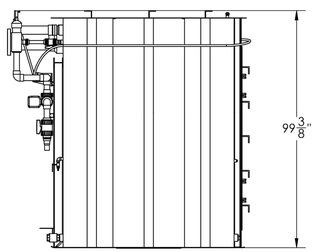
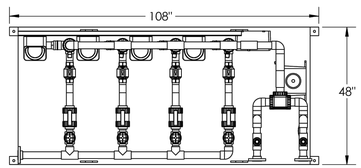


SIDE

MBR TANK

SCALE: NONE

3



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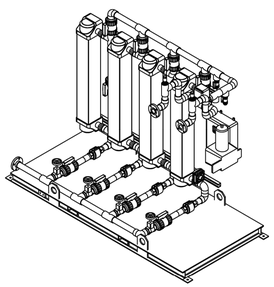

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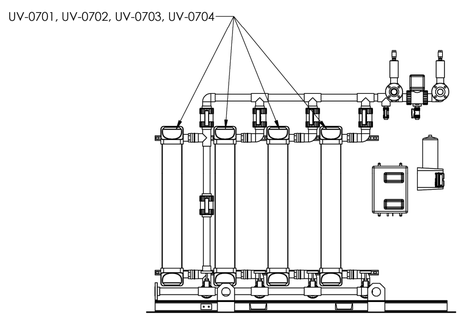

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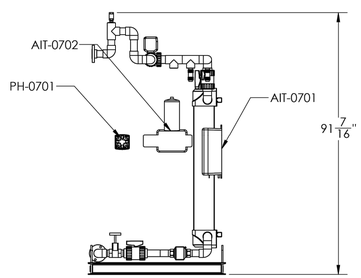


SIDE

UV SKID (SKID 7921)

SCALE: NONE

4

epiccleantec

REV	DATE	DESCRIPTION
0	5/13/24	PERMIT SUBMITTAL

DESIGN BY: -
DRAWN BY: -
CHKD BY: -
REVIEWED BY: -
PLOT SCALE: AS SHOWN
CLIENT PROJECT NO.: -
PLOT DATE: May 13, 2024 3:46 PM
PROJECT NUMBER: 23107
FILE NAME: GALES FERRY - WWTP.DWG

GALES FERRY

PRETREATMENT SYSTEM DETAILS

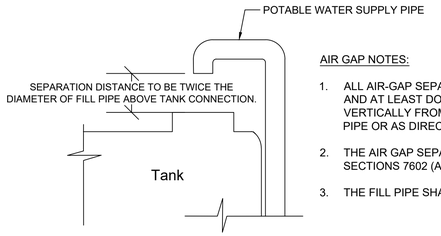
19 & 29 MILITARY HIGHWAY,
GALES FERRY, TOWN OF LEDYARD,
NEW LONDON COUNTY,CONNECTICUT

MAP 91, LOT 39

WW 3.1

Part#	1010 - no drain. 1011 - with drain.
Dimensions In. (mm)	53 x 29 x 16½ (1346 x 737 x 419)
Load Capacity UDL lb.(kg)	3,000 (1,361)
Sump Capacity gal (L)	66 (250)
Weight lb. (kg)	63.0 (29.0)
ForkLift Access	2-way
# per Pallet	6
Composition	Linear Low-Density Polyethylene (LLDPE)
Color	Yellow
Compliance	Spill Prevention, Control and Countermeasure Act (SPCC). 40 CFR 264.175

CHEMICAL DRUM SPILL CONTROL
SCALE: NONE
1

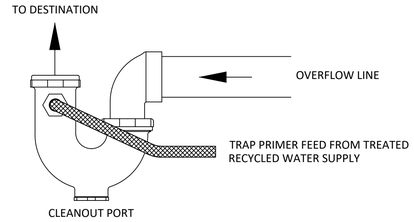


AIR GAP NOTES:

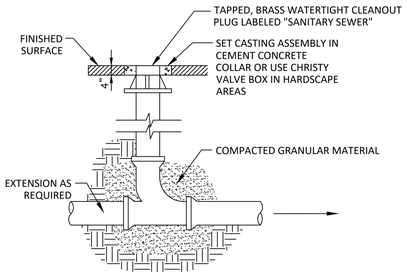
1. ALL AIR-GAP SEPARATIONS SHALL BE CONSTRUCTED PER TITLE 22 STANDARDS AND AT LEAST DOUBLE THE DIAMETER OF THE SUPPLY PIPE, MEASURED VERTICALLY FROM THE FLOOD RIM OF THE RECEIVING VESSEL TO THE SUPPLY PIPE OR AS DIRECTED BY THE AUTHORITY HAVING JURISDICTION.
2. THE AIR GAP SEPARATION MUST COMPLY WITH THE REQUIREMENTS OF SECTIONS 7602 (A) AND 7603 (A) OF TITLE 17, CALIFORNIA CODE OF REGULATIONS.
3. THE FILL PIPE SHALL BE PERMANENTLY MOUNTED ON THE TANK

AIR GAP FILL DETAIL

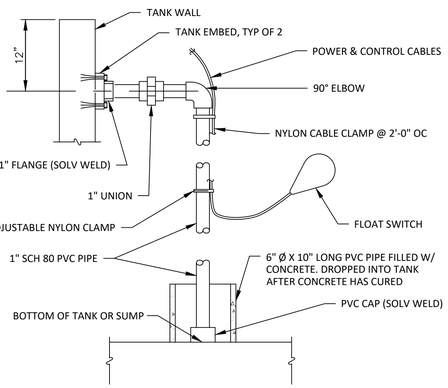
AIR GAP FILL DETAIL
SCALE: NONE
2



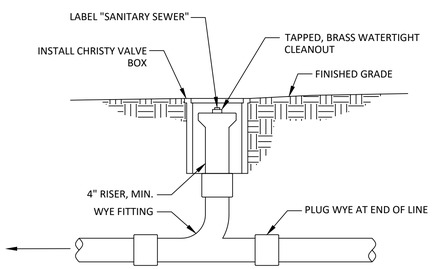
OVERFLOW P-TRAP
SCALE: NONE
3



HARDSCAPE

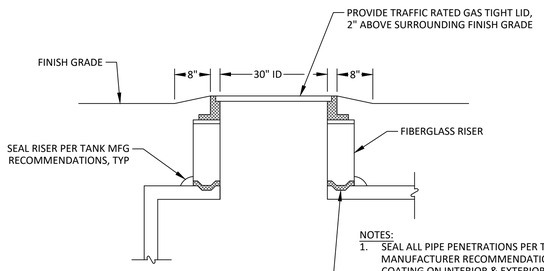


LIQUID LEVEL SUPPORT
SCALE: NONE
4



SOFTSCAPE

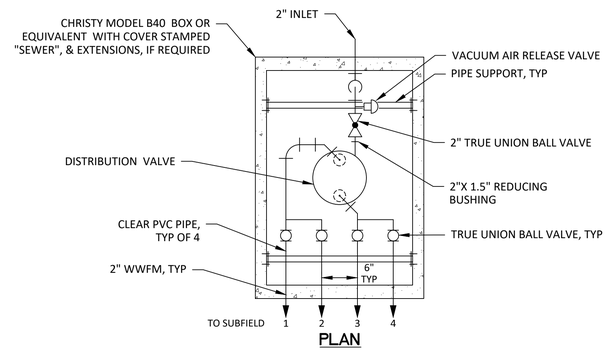
CLEANOUT
SCALE: NONE
5



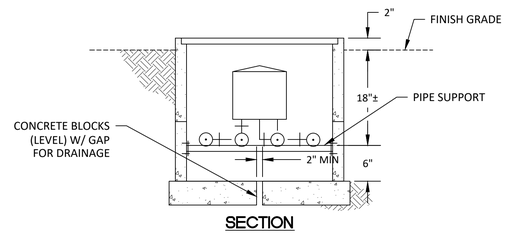
NOTES:

1. SEAL ALL PIPE PENETRATIONS PER TANK & RISER MANUFACTURER RECOMMENDATIONS. APPLY FLEXIBLE COATING ON INTERIOR & EXTERIOR FOR CORROSION PROTECTION.
2. IF RISER IS LOCATED IN A TRAFFIC RATED AREA, CONTACT ENGINEER FOR DETAIL REGARDING DECOUPLING LOADS TRANSFERRED TO TANK RISER. ADDITIONAL CONCRETE AND SITE WORK NEEDED IF IN A TRAFFIC RATED AREA.

TANK MANWAY ACCESS
SCALE: NONE
6



PLAN



SECTION

NOTE: DESIGN DOSES TWO ZONES SIMULTANEOUSLY, TIMED DOSING

DISPERSAL FIELD ZONE CONTROL VALVE
SCALE: NONE
7

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REV	DATE	DESCRIPTION
0	5/13/24	PERMIT SUBMITTAL

DESIGN BY: -
DRAWN BY: -
SBMT BY: -
REVIEWED BY: -
PLOT DATE: May 13, 2024 3:44 PM
PLOT SCALE: AS SHOWN
CLIENT PROJECT NO.: -
PROJECT NUMBER: 23107
FILE NAME: GALES FERRY - WWTP.DWG

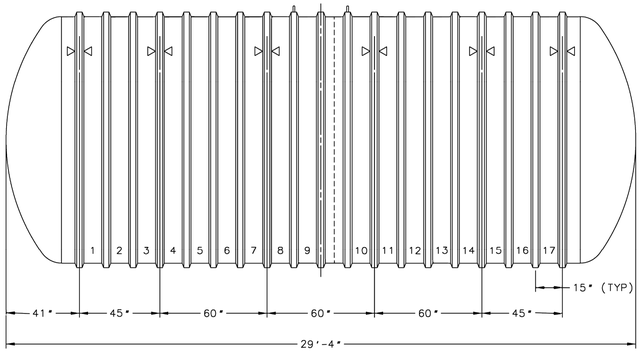
GALES FERRY

PRETREATMENT SYSTEM DETAILS

19 & 29 MILITARY HIGHWAY,
GALES FERRY, TOWN OF LEDYARD,
NEW LONDON COUNTY,CONNECTICUT

MAP 91, LOT 39

WW 3.2



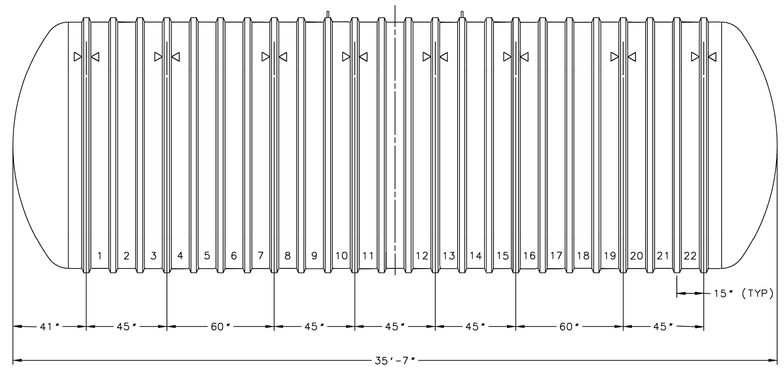
For non UL-listed configurations only.

XERXES®

TITLE	12' DIA. S.W.T. CAP. 20,000 GALLONS
DATE 9/23	DR. NO. S10-895.02

ANOXIC TANK (FIBERGLASS, LOCATED BELOW GRADE) — 1

SCALE: NONE



For non UL-listed configurations only.

XERXES®

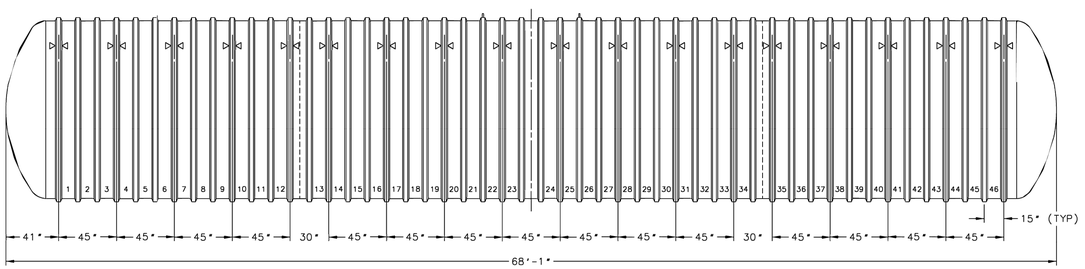
TITLE	12' DIA. S.W.T. CAP. 25,000 GALLONS
DATE 9/23	DR. NO. S 1 0-896. 04

AEROBIC TANK (FIBERGLASS, LOCATED BELOW GRADE) — 2

SCALE: NONE

FIBERGLASS TANK GENERAL NOTES (TYP FOR ALL TANKS OF THIS TYPE):

1. SEE TANK MANUFACTURER MANUAL FOR COMPLETE INSTALLATION INSTRUCTIONS.
2. TANK BACKFILL SHALL CONFORM TO TANK MANUFACTURER REQUIREMENTS, SEE FIGURE 1 (DETAIL 4/WW4.0) FOR REFERENCE. WHEN USING SECONDARY BACKFILL, POTENTIAL FROST RELATED PROBLEMS SHALL BE CONSIDERED AND APPROPRIATE MATERIAL SELECTED TO AVOID FROST HEAVE.
3. DEADMEN ANCHORS TO BE FIELD INSTALLED TO COUNTERACT TANK BUOYANCY. ANCHORS SHALL BE BASED ON SEASONAL GROUNDWATER ABOVE TOP OF TANK.
4. FIELD VERIFY ZONE OF INFLUENCE FOR BUILDING FOOTINGS AND SIMILAR LOAD SOURCES. SEE TANK MANUFACTURER MANUAL FOR MORE DETAILS REGARDING TANK SITING.
5. PRESSURE TESTING OR HYDROSTATIC TESTING SHALL BE PERFORMED ON ALL TANKS AFTER PENETRATIONS, ACCESS OPENINGS EXTENDING TO FINISH GRADE, AND PIPING. SEE TANK MANUFACTURER GUIDELINES FOR TESTING PARAMETERS. THIS TESTING SHALL BE COMPLETED AND OBSERVED BY THE DESIGN ENGINEER PRIOR TO BACKFILL OF THE TANK.



For non UL-listed configurations only.

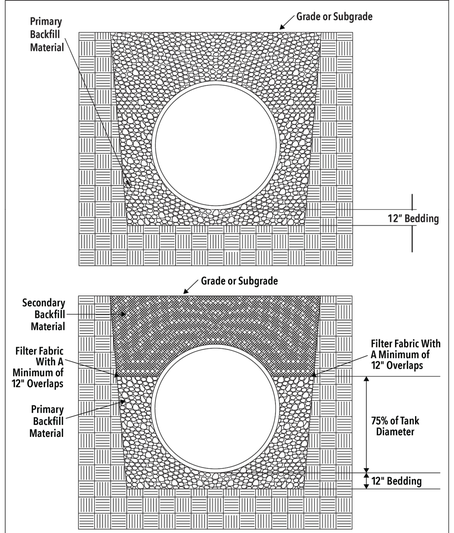
XERXES®

TITLE	12' DIA. S.W.T. CAP. 50,000 GALLONS
DATE 9/23	DR. NO. S10-901.02

TREATED WATER STORAGE & EQUALIZATION TANKSS (FIBERGLASS, LOCATED BELOW GRADE) — 3

SCALE: NONE

Figure 1-1



FIBERGLASS TANK BACKFILL — 4

SCALE: NONE

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REV	DATE	DESCRIPTION
0	5/13/24	PERMIT SUBMITTAL

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DRAWN BY: -
REVIEWED BY: -
SBMT BY: -
CLIENT PROJECT NO.: -
PLOT DATE: May 13, 2024
PLOT SCALE: AS SHOWN
3:44 PM
PROJECT NUMBER: 23107
FILE NAME: GALES FERRY - WWTP.DWG

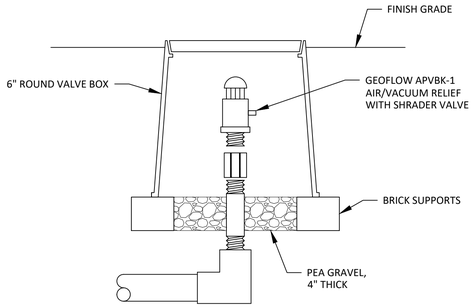
GALES FERRY

TANK DETAILS

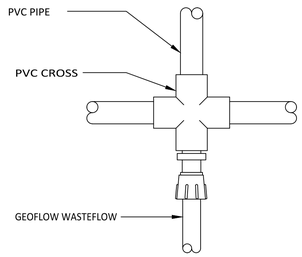
19 & 29 MILITARY HIGHWAY,
GALES FERRY, TOWN OF LEDYARD,
NEW LONDON COUNTY, CONNECTICUT

MAP 91, LOT 39

WW 4.0



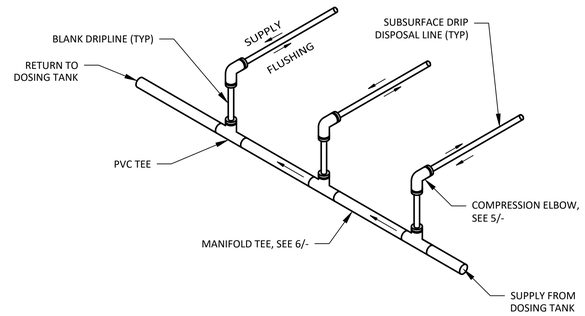
1" AIR/VACUUM BREAKER
NTS
1



PVC CROSS, COMPRESSION
NTS
2

NOTES:

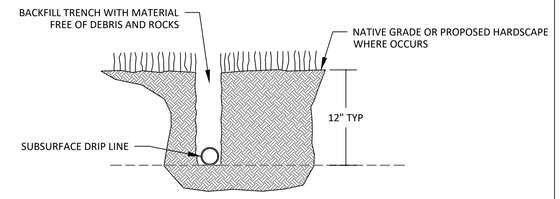
1. 2 FOOT MINIMUM SEPARATION FROM THE MANIFOLD/FLUSH LINE TO THE FIRST EMITTER SHALL BE PROVIDED
2. INSTALL COMPACTED SECTION BETWEEN SUPPLY AND DRIP AREA



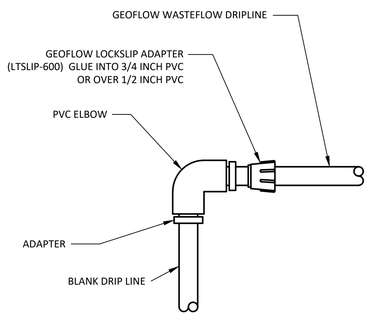
SUPPLY/FLUSHING MANIFOLD
NTS
3

NOTES:

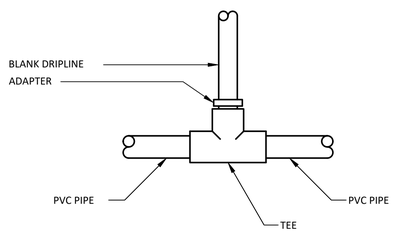
1. DRIP TUBING TO BE PLACED BELOW FROST LINE.
2. TRENCHED IN PLACE OR PLOW INSTALLATION PER MANUFACTURER RECOMMENDATIONS.
3. DRIP TUBING INSTALLED IN COLD WEATHER ENVIRONMENT, SEE ADDITIONAL NOTES AND REQUIREMENTS ON SHEET WW1.2.



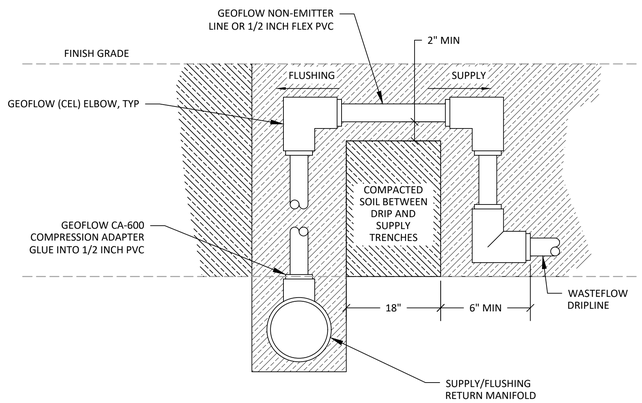
DRIP LINE TRENCH
NTS
4



MANIFOLD ELBOW CONNECTION
NTS
5



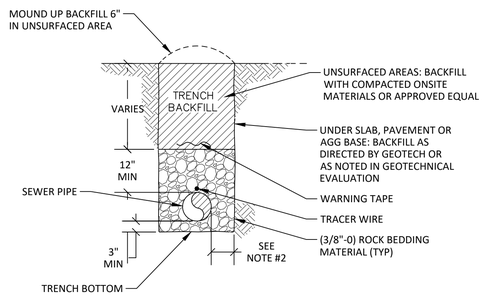
MANIFOLD TEE
NTS
6



DRIP DISTRIBUTION (SECTION)
NTS
7

NOTES:

1. WHEN TRENCH BOTTOM IS UNSTABLE, OVER EXCAVATE TO FIRM AND UNYIELDING SOIL AND INSTALL ADDITIONAL BEDDING MATERIAL.
2. PIPE DIAMETER 18" OR LESS: 6" MIN, 9" MAX
3. WITH MULTIPLE PIPES, PROVIDE 3" MIN HORIZONTAL SEPARATION BETWEEN PIPES CARRYING SIMILAR FLUIDS



UTILITY TRENCH (TYP)
NTS
8

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REV	DATE	DESCRIPTION
0	5/13/24	PERMIT SUBMITTAL

DESIGN BY: -
DRAWN BY: -
REVIEWED BY: -
SBMT BY: -
CLIENT PROJECT NO.: -
PLOT DATE: May 13, 2024
PLOT SCALE: AS SHOWN
3:44 PM
PROJECT NUMBER: 23107
FILE NAME: GALES FERRY - WWTP.DWG

GALES FERRY

SUBFURFACE DRIP DETAILS

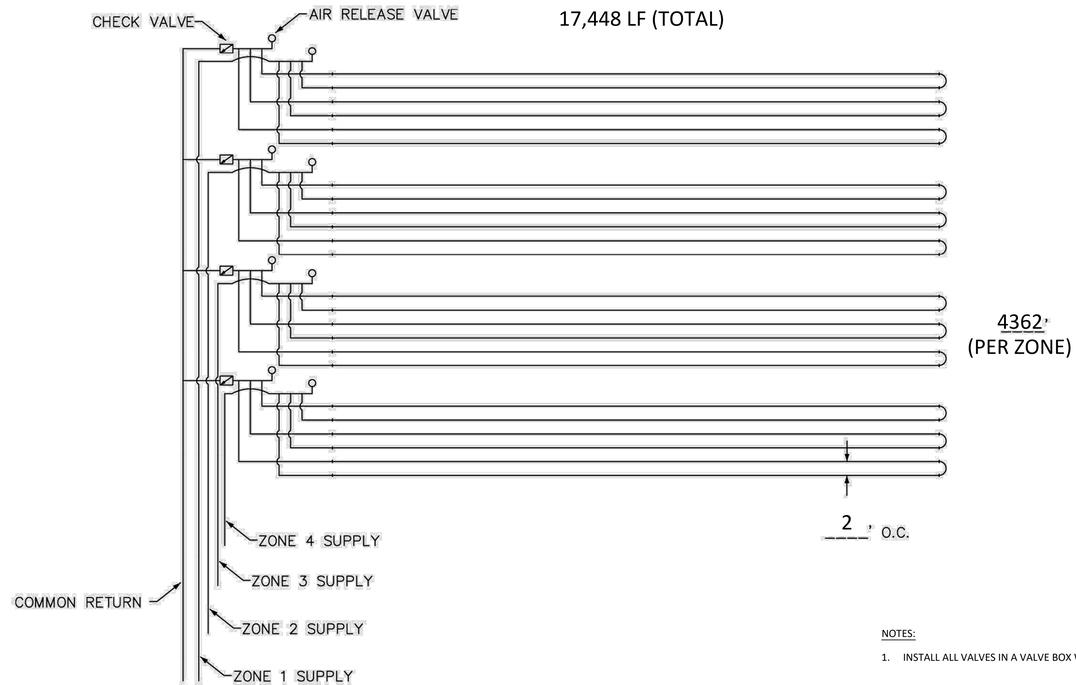
19 & 29 MILITARY HIGHWAY,
GALES FERRY, TOWN OF LEDYARD,
NEW LONDON COUNTY,CONNECTICUT

MAP 91, LOT 39

WW 4.1

AMERICAN
Manufacturing Company, Inc.

STANDARD 4 ZONE LAYOUT



NOTES:

1. INSTALL ALL VALVES IN A VALVE BOX WITH LID FOR OPERATION ACCESSIBILITY.

1-800-345-3132 www.americanonsite.com

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REV	DATE	DESCRIPTION
0	5/13/24	PERMIT SUBMITTAL

DESIGN BY: -	REVIEWED BY: -	CLIENT PROJECT NO.: -	
DRAWN BY: -	PLOT DATE: May 13, 2024		
SBMT BY: -	PLOT SCALE: AS SHOWN	3:44 PM	PROJECT NUMBER: 23107
FILE NAME: GALES FERRY - WWTP.DWG			

GALES FERRY

PERC-RITE STANDARD 4-ZONE LAYOUT

19 & 29 MILITARY HIGHWAY,
GALES FERRY, TOWN OF LEDYARD,
NEW LONDON COUNTY,CONNECTICUT

MAP 91, LOT 39

WW 4.2

NOTES

1. ALL CONTROL PANELS SHALL BE NEMA RATED FOR THE ENVIRONMENT IN WHICH THEY ARE PLACED. ALL CONDUITS THAT ARE CONNECTED TO AREAS THAT CAN POTENTIALLY CONDENSE WATER (HIGH HUMIDITY TANK HEAD SPACES AS ONE EXAMPLE) SHALL BE FILLED WITH AN APPROVED VAPOR SEALANT TO PROTECT WATER FROM ENTERING THE CONTROL PANEL.

ELECTRICAL SPECIFICATIONS	
VOLTAGE	480VY 3 WIRE
PHASE	3Ø
FREQUENCY	60Hz
FULL LOAD AMPS	66A
MAIN DISCONNECT SIZE	100A
MAIN OVERCURRENT PROTECTION RATING	100A
SCCR SYMMETRICAL (kAMPS)	10
SYSTEM APPROVAL AND CLASSIFICATION	N/A
PANEL APPROVAL AND CLASSIFICATION	MET GP TO UL508A
ELECTRICAL INSTALL SPECIFICATIONS	RIGID ALUMINUM CONDUIT THWN POWER CONDUCTORS
WIRE SPECIFICATIONS	2020 NEC COMPLIANT

System Electrical Loads

Project Information

Project Name			
2107472			
System Voltage	System Phase	Transformer Required?	Size (kVA)
480	3	Yes	5

Motors - 3ph @ Sys Volts

Device	HP	Amps	Demand	kVA
B-0301	7.50	11.00	1.0	9.14
B-0302 STDBY	7.50	11.00	0.0	0.00
B-0501	10.00	14.00	1.0	11.64
B-0502 STDBY	10.00	14.00	0.0	0.00
P-0301	0.50	1.10	1.0	0.91
P-0302 STDBY	0.50	1.10	0.0	0.00
P-0401	3.00	4.80	1.0	3.99
P-0402	5.00	7.60	1.0	6.32
P-0403 STDBY	5.00	7.60	0.0	0.00
P-0501	3.00	4.80	1.0	3.99
P-0502 STDBY	3.00	4.80	0.0	0.00
B-0601	10.00	14.00	1.0	11.64
B-0602 STDBY	10.00	14.00	0.0	0.00
P-0702 STDBY	1.50	3.00	0.0	0.00
P-0801	0.50	1.10	1.0	0.91

Motors - 1ph @ 120

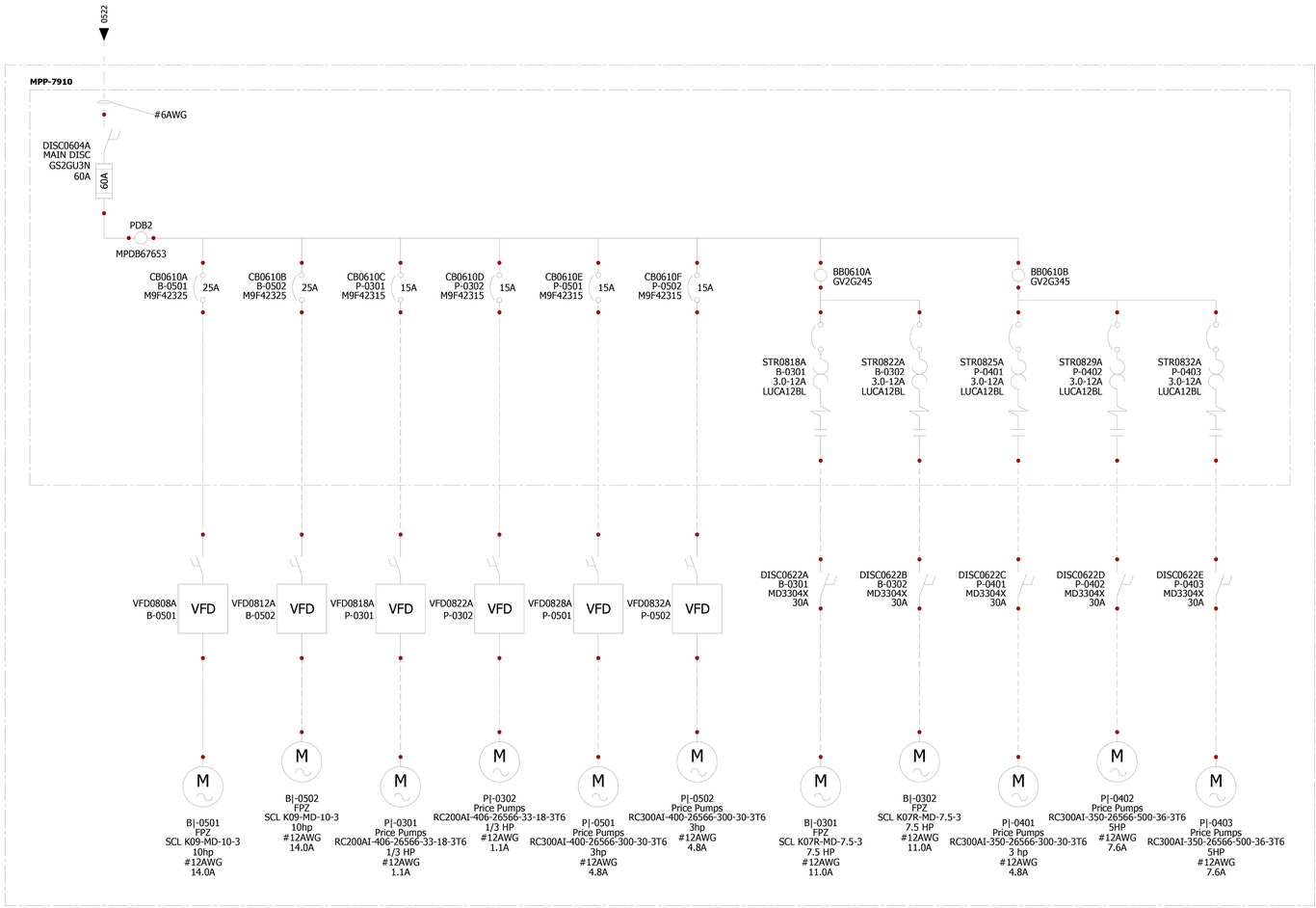
Device	HP	Amps	Demand	kVA
P-0703		1.50	1.0	0.18
P-6101		0.21	1.0	0.03
P-6102		0.21	1.0	0.03
P-6103		0.21	1.0	0.03
P-6104		1.50	1.0	0.18
P-6105		1.50	1.0	0.18

Misc - 1ph @ 120

Device		Amps	Demand	kVA
Convenience Receptacle		12.00	1.0	1.44
Control Power		9.00	1.0	1.08
UV-0701		3.36	1.0	0.40
UV-0702		3.36	1.0	0.40
UV-0703		3.36	1.0	0.40
UV-0704 STDBY		3.36	0.0	0.00
			1.0	0.00
			1.0	0.00
kVA Total				52.9

Calculation and Selection	
System FLA	63.6
System FLA x 125%	79.5
Disconnect Size	100
Fuse Size	100

SYSTEM ELECTRICAL LOADS (1)
SCALE: NONE



SKID-7910: GENERAL PURPOSE

SINGLE LINE DIAGRAM - SKID 7910 (2)
SCALE: NONE

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REV	DATE	DESCRIPTION
0	5/13/24	PERMIT SUBMITTAL

DESIGN BY: -
DRAWN BY: -
SRMT BY: -
REVIEWED BY: -
CLIENT PROJECT NO.: -
PLOT DATE: May 13, 2024
PLOT SCALE: AS SHOWN
PROJECT NUMBER: 23107
FILE NAME: GALES FERRY - WWTP.DWG

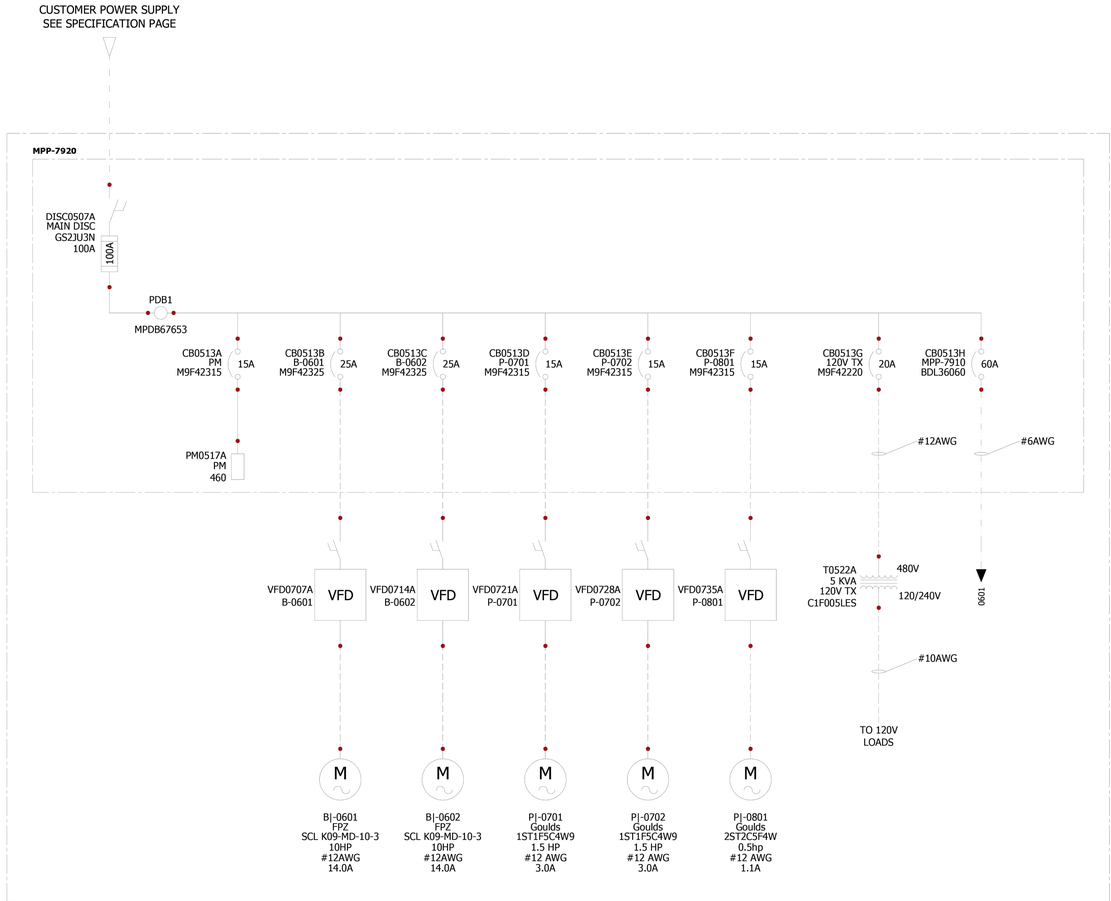
GALES FERRY

ELECTRICAL LOAD & SINGLE LINE DIAGRAMS

19 & 29 MILITARY HIGHWAY,
GALES FERRY, TOWN OF LEDYARD,
NEW LONDON COUNTY,CONNECTICUT

MAP 91, LOT 39

WW 5.0



SKID-7920: GENERAL PURPOSE

SINGLE LINE DIAGRAM - SKID 7920 (1)

SCALE: NONE

epiccleantec

REV	DATE	DESCRIPTION
0	5/13/24	PERMIT SUBMITTAL

DESIGN BY: -
DRAWN BY: -
REVIEWED BY: -
SBMT BY: -
CLIENT PROJECT NO.: -
PLOT DATE: May 13, 2024 3:44 PM
PROJECT NUMBER: 23107
PLOT SCALE: AS SHOWN
FILE NAME: GALES FERRY - WWTP.DWG

GALES FERRY

ELECTRICAL LOAD & SINGLE LINE DIAGRAMS

19 & 29 MILITARY HIGHWAY,
GALES FERRY, TOWN OF LEDYARD,
NEW LONDON COUNTY,CONNECTICUT

MAP 91, LOT 39

WW 5.1

CONTROL WIRING LEGEND	
BLACK:	POWER
RED:	120VAC CONTROL
WHITE:	NEUTRAL
BLUE:	+24VDC & IS WIRING
BLU/WHT:	0VDC
YELLOW:	INTERLOCKS

PLC0711A

PLC

TM241CE40T

PLC0711B

PLC0711C

PLC0711D

TM3DM24RG

TM3AI8G

TM3AI8G

OIT0724A

CR3000-10000-00420

Name: PLC0711A PLC
Address: TBD
SNM: TBD
Ethernet

TM241CE40T

Name: OIT0724A HMI
Address: TBD
SNM: TBD
Ethernet

CR3000-10000-00420

Name: ETH0722A
Address:
SNM:
Ethernet Switch

1085255

0815

ETH0722A
1085255

ETH0732A
EC71330

Name: ETH0732A
Address: TBD
SNM: TBD
Ethernet Switch

EC71330

ETH0735A
17-110024

Name: ETH0735A ETHERNET
RJ45

17-110024

SKID-7920: GENERAL PURPOSE

VFD0707A

Name: VFD0707A B-0601
Address: TBD
SNM: TBD
Ethernet

FC202P7K5T4E66H2XGX3SXSXXXXAXBXCXXXXDX

VFD0714A

Name: VFD0714A B-0602
Address: TBD
SNM: TBD
Ethernet

FC202P7K5T4E66H2XGX3SXSXXXXAXBXCXXXXDX

VFD0721A

Name: VFD0721A P-0701
Address: TBD
SNM: TBD
Ethernet

FC202P1K1T4E66H2XGX3SXSXXXXAQBXCXXXXDX

VFD0728A

Name: VFD0728A P-0702
Address: TBD
SNM: TBD
Ethernet

FC202P1K1T4E66H2XGX3SXSXXXXAQBXCXXXXDX

VFD0735A

Name: VFD0735A P-0801
Address: TBD
SNM: TBD
Ethernet

FC202PK75T4E66H2XGX3SXSXXXXAQBXCXXXXDX

COMMUNICATION DIAGRAM

SCALE: NONE

1

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REV	DATE	DESCRIPTION
0	5/13/24	PERMIT SUBMITTAL

DESIGN BY: -
DRAWN BY: -
REVIEWED BY: -
SBMT BY: -
CLIENT PROJECT NO.:
PLOT DATE: May 13, 2024
PLOT SCALE: AS SHOWN
PROJECT NUMBER: 23107
FILE NAME: GALES FERRY - WWTP.DWG

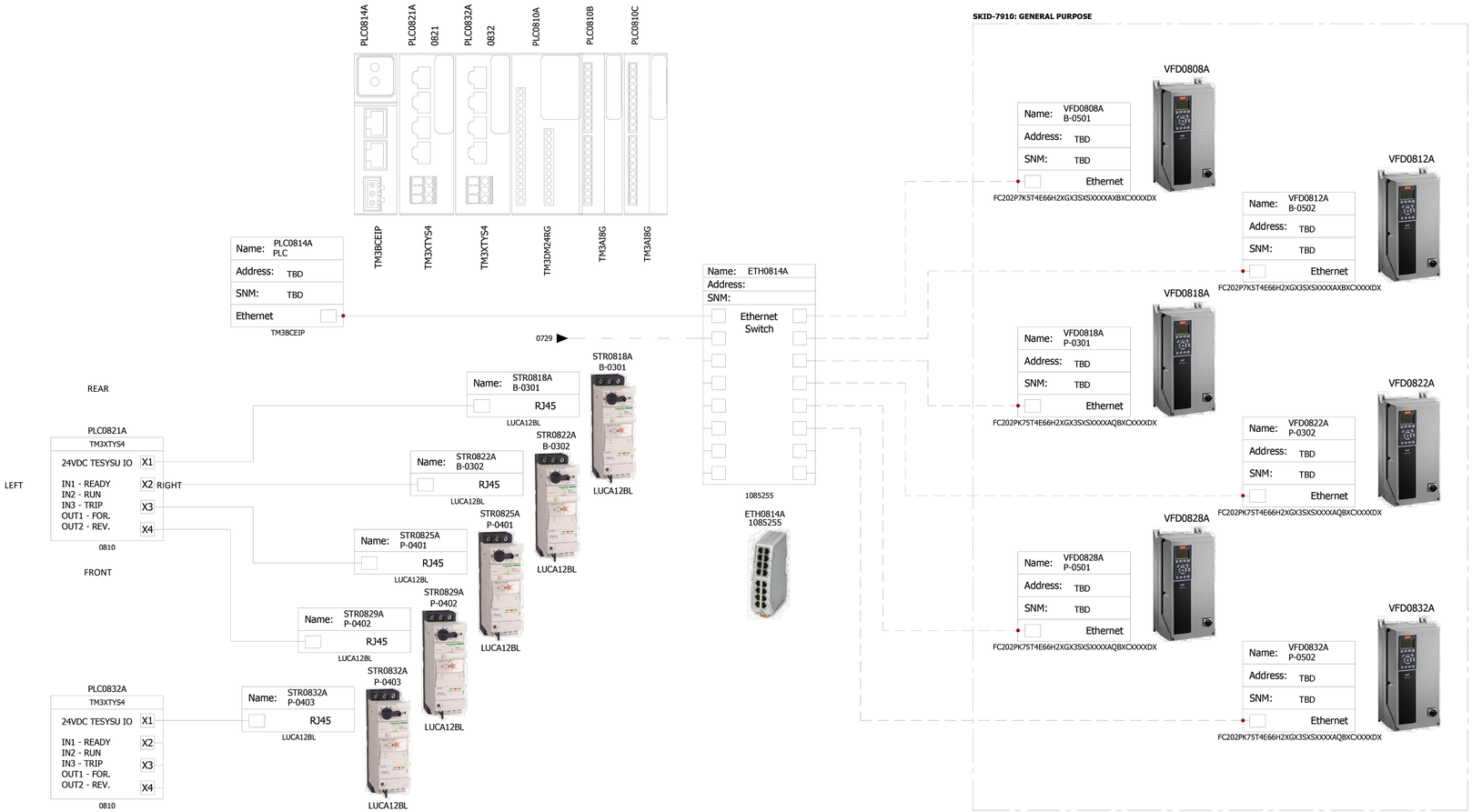
GALES FERRY

ELECTRICAL LOAD & SINGLE LINE DIAGRAMS

19 & 29 MILITARY HIGHWAY,
GALES FERRY, TOWN OF LEDYARD,
NEW LONDON COUNTY,CONNECTICUT

MAP 91, LOT 39

WW 5.2



RTU COMMUNICATION DIAGRAM

SCALE: NONE

1

REV	DATE	DESCRIPTION
0	5/13/24	PERMIT SUBMITTAL

DESIGN BY:	-
DRAWN BY:	-
SRMT BY:	-
REVIEWED BY:	-
PLOT DATE:	May 13, 2024 3:44 PM
PLOT SCALE:	AS SHOWN
CLIENT PROJECT NO.:	-
PROJECT NUMBER:	23107
FILE NAME:	GALES FERRY - WWTP.DWG

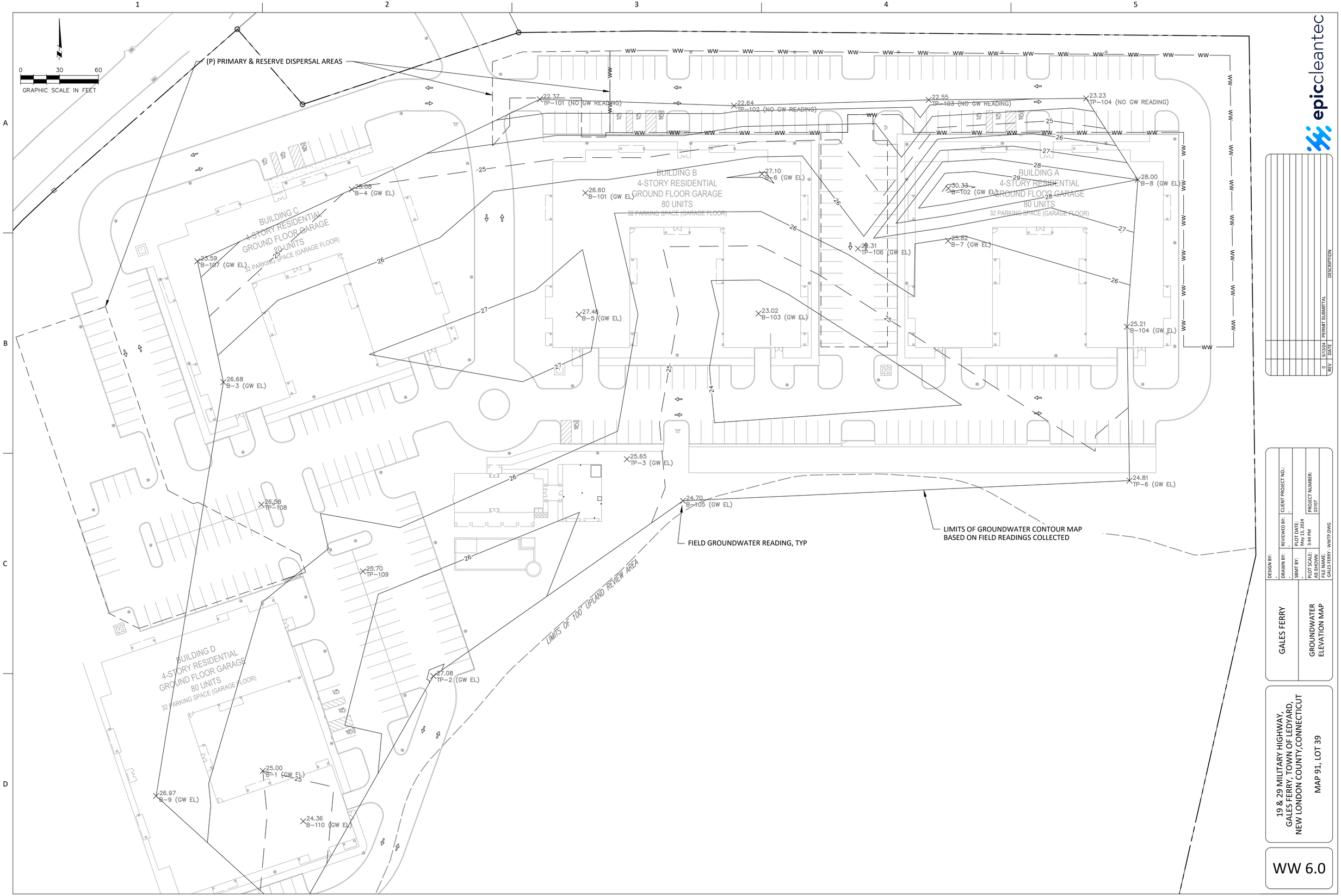
GALES FERRY

ELECTRICAL LOAD & SINGLE LINE DIAGRAMS

19 & 29 MILITARY HIGHWAY,
GALES FERRY, TOWN OF LEDYARD,
NEW LONDON COUNTY,CONNECTICUT

MAP 91, LOT 39

WW 5.3



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REV	DATE	DESCRIPTION
0	5/13/24	PERMIT SUBMITTAL

DESIGN BY: -	REVIEWED BY: -	CLIENT PROJECT NO.: -	
DRAWN BY: -	PLOT DATE: May 13, 2024	PROJECT NUMBER: 23107	
SBMT BY: -	PLOT SCALE: AS SHOWN	3:44 PM	
	FILE NAME: GALES FERRY - WWTP.DWG		

GALES FERRY

GROUNDWATER ELEVATION MAP

19 & 29 MILITARY HIGHWAY,
GALES FERRY, TOWN OF LEDYARD,
NEW LONDON COUNTY,CONNECTICUT

MAP 91, LOT 39

WW 6.0