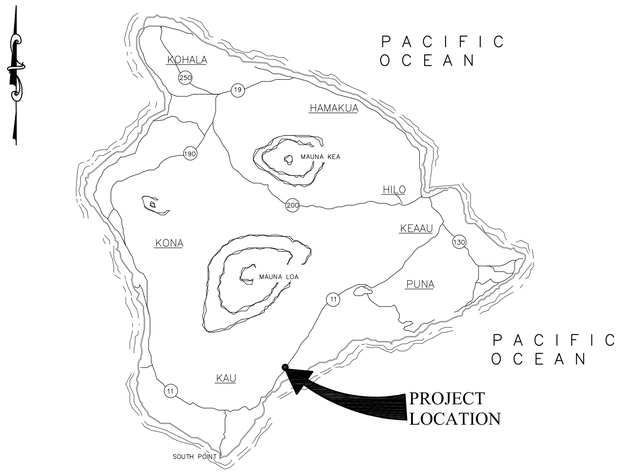
SEPTIC SYSTEM REPAIR PLANS

FOR

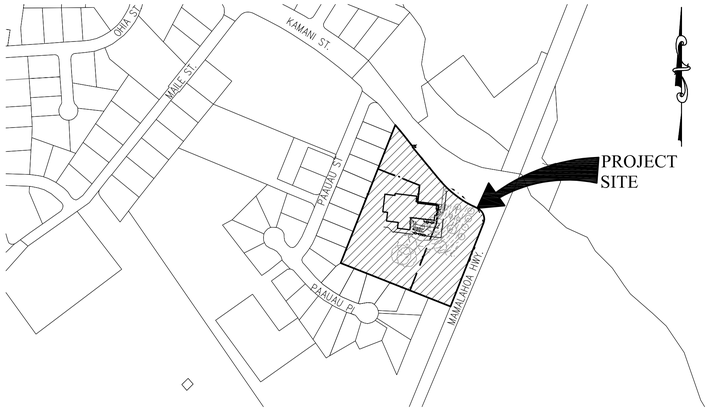
KA'U HOSPITAL

PAHALA, KA'U
ISLAND OF HAWAI'I, HAWAI'I
TMK: (3) 9-6-023: 043



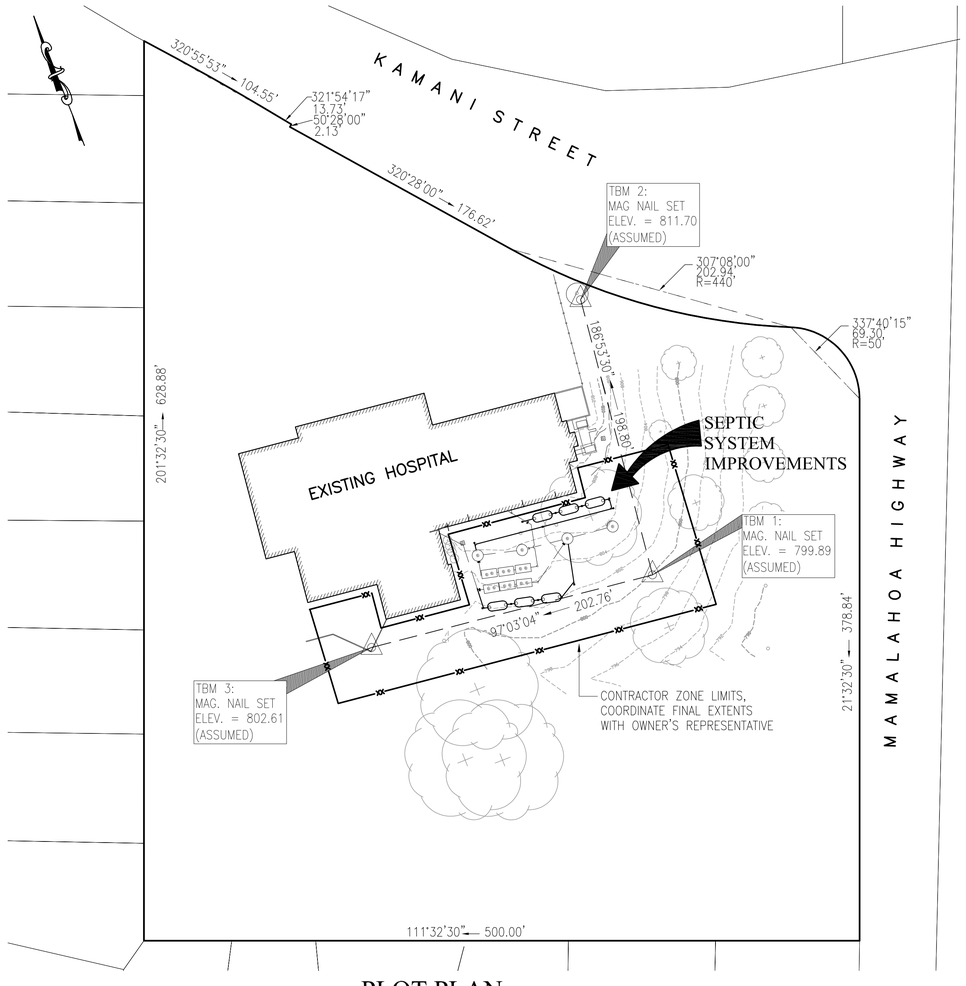
BIG ISLAND MAP (ISLAND OF HAWAI`I)

SCALE: NOT TO SCALE



VICINITY MAP

SCALE: NOT TO SCALE



PLOT PLAN

SCALE: 1" = 50'

CIVIL DRAWING INDEX

DWG. NO.	DESCRIPTION
T-001	TITLE, SHEET INDEX, ISLAND MAP, VICINITY MAP, AND APPROVALS
C-101	CIVIL NOTES, IWS SITE PLAN
C-102	IWS PROFILE
C-201	CIVIL DETAILS

PROJECT TEAM:

OWNER:

HILO MEDICAL CENTER
1190 WAIANUENUE AVE., HILO, HI 96720

ENGINEERING CONSULTANT

ENGINEERING PARTNERS, INC
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Exp. 04/30/22
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THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE

TITLE, DRAWING INDEX, ISLAND MAP, VICINITY MAP, & PLOT PLAN

DATE: JUNE, 2020

REV. REV. REV. REV. REV. REV.

SEPTIC SYSTEM REPAIR PLANS FOR:

KAU HOSPITAL

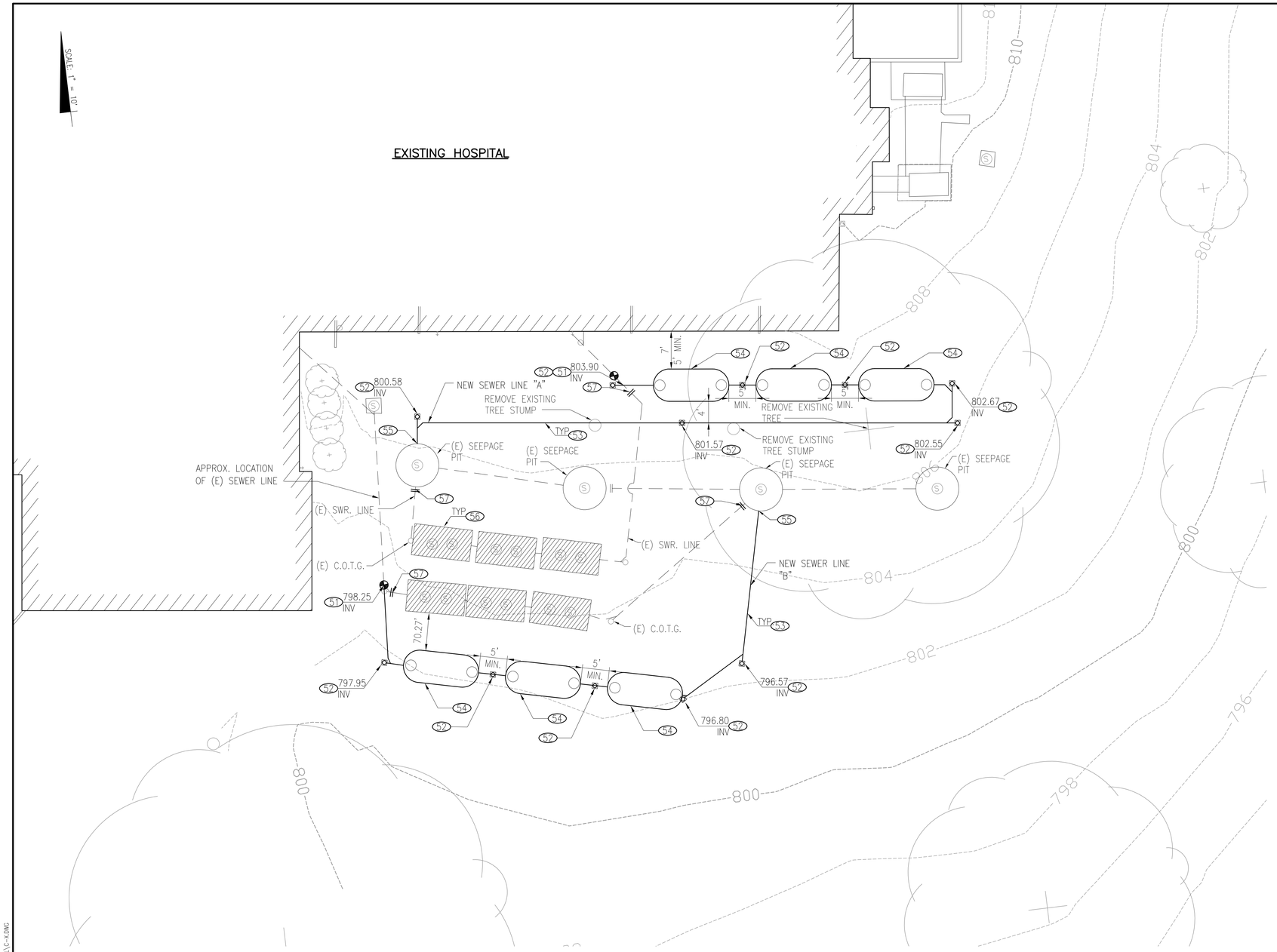
PAHALA, KAU, ISLAND OF HAWAI`I
TMK: (3) 9-6-023 : 043

DRAWN BY:	DESIGNED BY:
RDC	OH
CHECKED BY:	QC'D BY:
YWF	MJG

JOB NO.
12013-19-03

DWG. NO.
T-001

05/27/2020 12:00 pm
M:\JOB PROJECTS\2019 PROJECTS\12013-19-03 KAU HOSP IWS UPGRADE REDESIGN\4-DWG\CIVIL\T-1.DWG



C IWS SITE PLAN
SCALE: 1" = 10'
0 10' 20'

SEPTIC SYSTEM NOTES

1. Owner / contractor revisions to the septic system design including change of location and/or substitution of materials after our submittal to the Department of Health may require an additional fee for revisions and resubmittal to obtain D.O.H. approval.
2. Septic system design is based on current topographic features allowing for minor lot clearing. If lot regrading is done, the function of the system may be affected; therefore the design should be reviewed by the engineer before construction.
3. The depths to the pipe inverts of the septic tank are controlled by topographic features and the invert of the building sewer, which may impact the depths shown on the drawings.
4. Septic tank are to be placed not less than 5' from any structure or property line nor less than 10' from any tree having a trunk diameter of 4" or greater.
5. Septic system shall be located not less than 1,000' from any potable water source serving a public water system.
6. Wastewater disposal system shall be located on the property to maximize the vertical separation distance from the bottom of the leach lines or seepage pit to the seasonal high groundwater level, bedrock, high tide, or other limiting layer, but under no circumstances shall this vertical separation be less than 3 feet. Where water-bearing formations are in danger of contamination, greater vertical separation may be required.
7. Contractor is responsible to notify the engineer one week prior to inspection and 24 hours prior to confirm the inspection time.
8. A minimum of one (1) septic system inspections will be required. Contractor allowing for minor lot clearing. Contractor shall schedule the inspection date with the engineer one week prior to the schedule date and notify the engineer again in 24 hours prior to re-confirm.
   Final inspection – after the tank(s) are in place And exposed.
   Any additional inspections or re-inspection cost required due to incomplete or non-conforming items found shall be paid for by the contractor at a rate of $100 per hour including travel time.

SEPTIC CONST. NOTES

(51) CONNECT NEW SEWER LINE TO EXISTING BUILDING SEWER LINE. CONTRACTOR TO VERIFY THE INVERT AND LOCATION.

(52) CONSTRUCT NON-TRAFFIC RATED CLEANOUT TO GRADE (C.O.T.G) PER DETAIL, MAX. 50' SPACING — 2 / C-201

(53) CONSTRUCT 4" PVC SDR-35 SEWER LINE WITH 2.0% MINIMUM SLOPE, UNLESS OTHERWISE NOTED, PER DETAIL — 1 / C-201

(54) CONSTRUCT 1500 GALLON NON-TRAFFIC RATED FIBERGLASS SEPTIC TANK PER DETAIL — 3 / C-201

(55) CONNECT NEW SEWER LINE TO EXISTING SEEPAGE PIT. PIPE OPENING TO BE GROUTED.

(56) EXISTING SEPTIC TANKS TO BE PUMPED CLEAN AND BACKFILL WITH CLSM AND ABANDONED IN PLACE. EXISTING MANHOLE COVERS TO BE REMOVED. BACKFILL VOIDS WITH COMPACTED NATIVE MATERIAL

(57) CUT CAP, AND ABANDON EXISTING SEWER LINE

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I.W.S. SITE PLAN

DATE: JUNE, 2020
REV.
REV.
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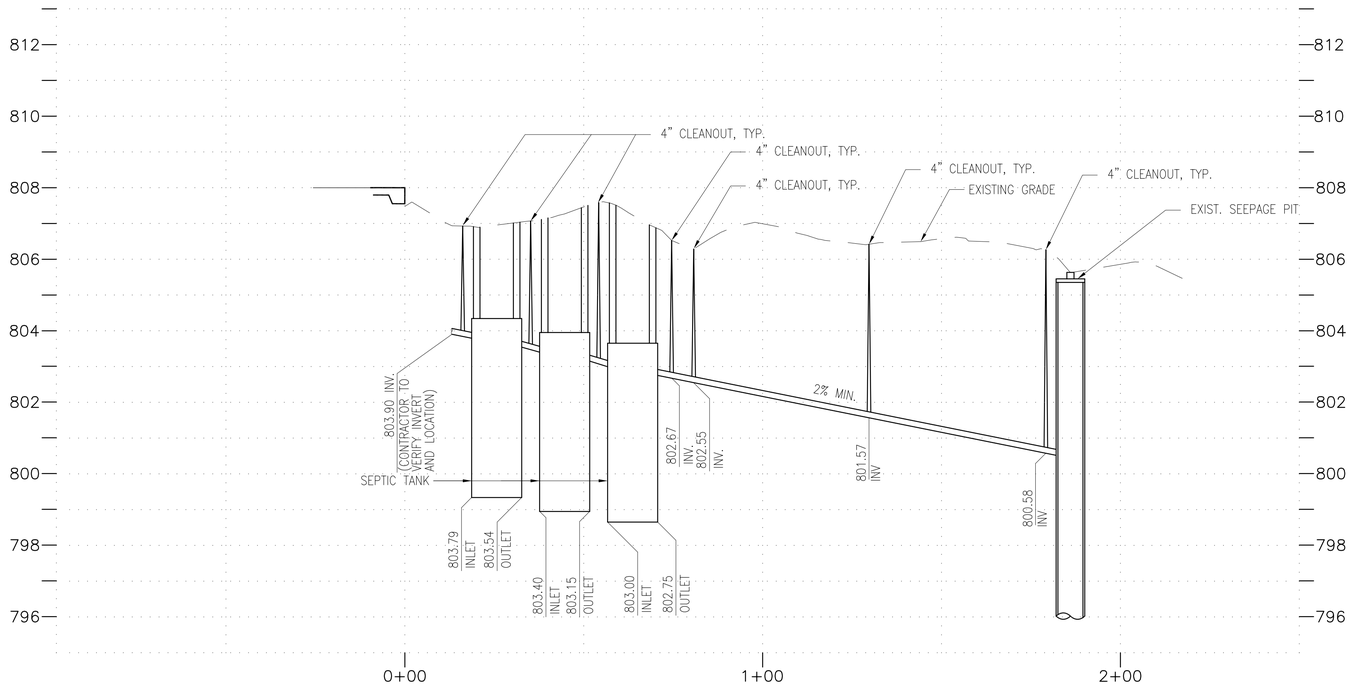
CHECKED BY:	QC'D BY:
YWF	MJG

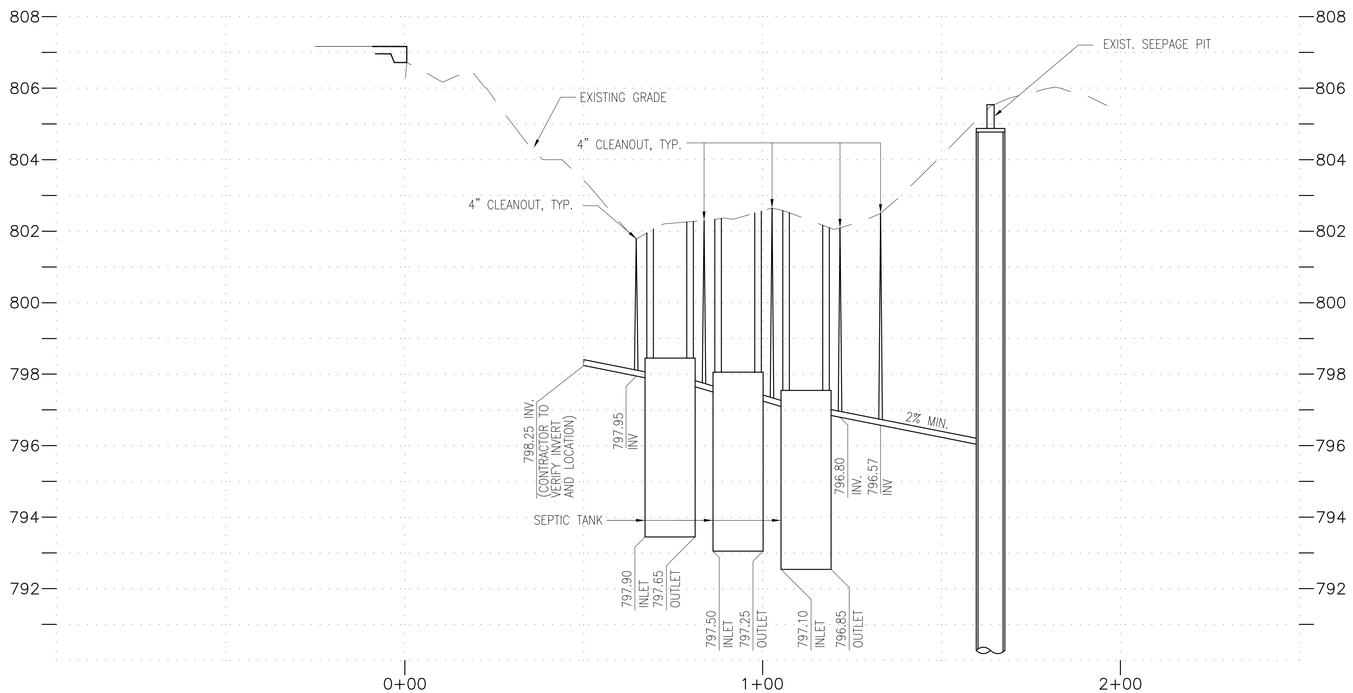
JOB NO. 12013-19-03

DWG. NO. **C-101**



A IWS PROFILE SEWER LINE "A"

SCALE: 1" = 20'



B IWS PROFILE SEWER LINE "B"

SCALE: 1" = 20'

05/22/2020 1:53 pm
M:\CAD PROJECTS\2019 PROJECTS\12013-19-03 KAU HOSP IWS UPGRADE REDESIGN\A-DWG\CIVIL\C-X.DWG

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I.W.S. PROFILE

DATE: JUNE, 2020
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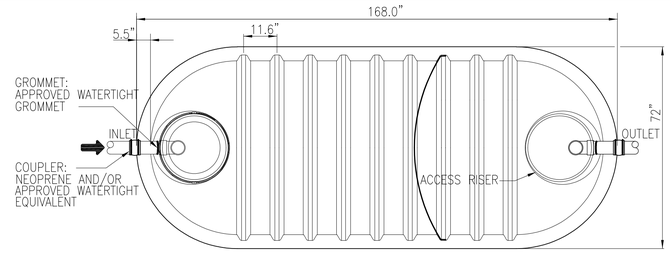
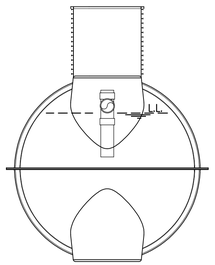
JOB NO. 12013-19-03

DWG. NO. **C-102**

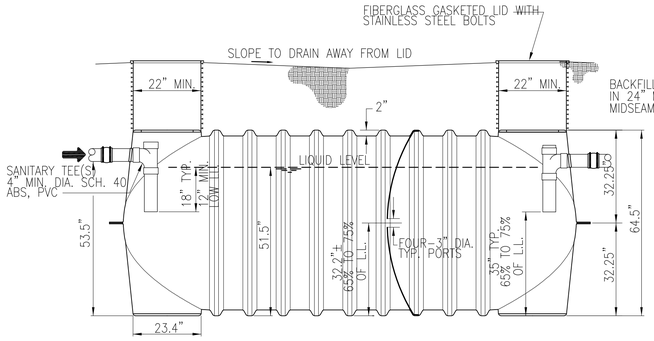


TOP VIEW

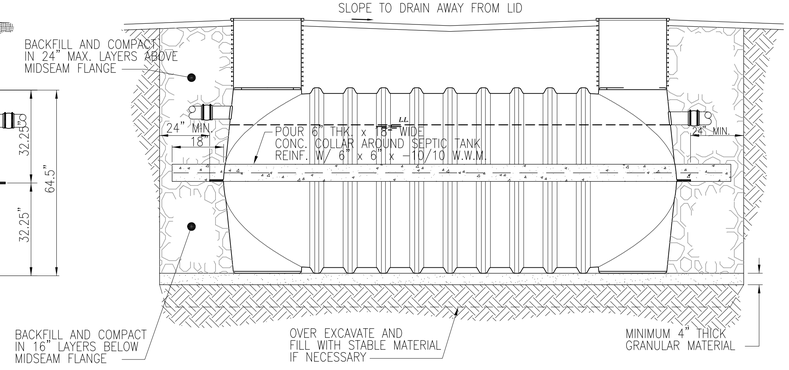


END VIEW

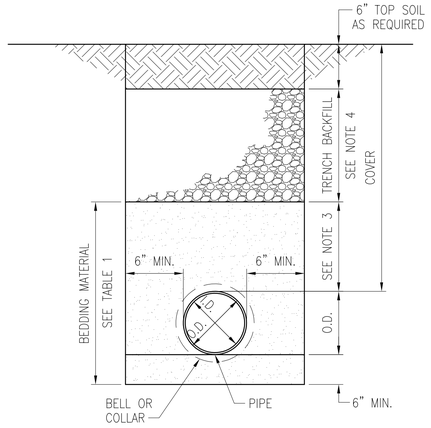
TANK VOLUMES: TOTAL VOLUME: 1,785 GAL±
OPERATING VOLUME : 1,570 GAL.± @ 51-1/2"
UNIT VOLUME AT THE TYPICAL OPERATION DEPTH : 27.5 GAL/IN±



SIDE VIEW 1500 GALLON FIBERGLASS



3 1500 GALLON FIBERGLASS TANK
SCALE: NOT TO SCALE



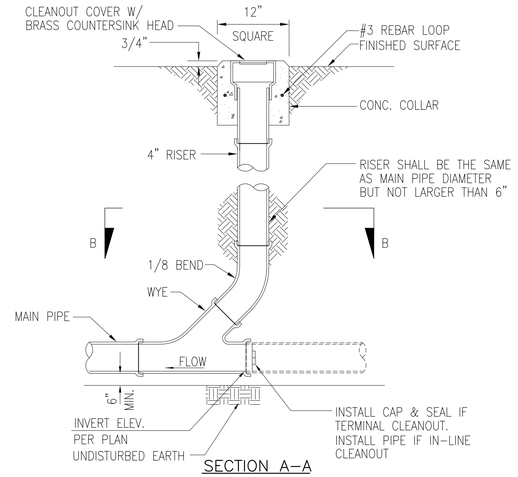
NOTES:

1. THIS TRENCH SECTION APPLIES TO FLEXIBLE PIPES INCLUDING SEWER, STORM DRAIN, AND WATER PIPES. FLEXIBLE PIPE MATERIAL INCLUDES COPPER, CMP, PVC, ABS, AND HDPE.
2. BEDDING MATERIAL ABOVE PIPE SHALL BE 12" HIGH FOR GRANULAR MATERIAL AND 6" HIGH FOR CONCRETE. GRANULAR BEDDING SHALL BE COMPACTED TO 95% MAX. DRY DENSITY.
3. TRENCH BACKFILL SHALL BE 3" MINUS GRANULAR BACKFILL OR SUITABLE NATIVE MATERIAL NO LARGER THAN 6". TRENCH BACKFILL SHALL BE COMPACTED TO 95% MAX. DRY DENSITY.
4. TRAFFIC AREA SHALL INCLUDE BUT NOT BE LIMITED TO PAVED OR UNPAVED ROADWAY, SHOULDER, DRIVEWAY, CART PATH, PARKING, LOADING ZONE, STORAGE AREA AND AREAS NOT PROTECTED FROM TRAFFIC LOAD. NON-TRAFFIC AREA SHALL BE PROTECTED FROM TRAFFIC LOAD BY MEANS OF CONCRETE CURBS, GUARDRAILS, BARRICADE, AND AREAS INACCESSIBLE BY VEHICLES.
5. BEDDING MATERIAL FOR COPPER PIPE SHALL BE #4 SAND OR CONCRETE ONLY.
6 MIN. 6" WIDE WARNING TAPE IDENTIFYING THE BURIED UTILITY SHALL BE PLACED CONTINUOUSLY ALONG THE LENGTH OF THE PIPE JUST BELOW THE SUBBASE OR 12" BELOW THE SURFACE FOR UNPAVED AREAS. FOR METALLIC PIPE, TAPE SHALL BE NON-METALLIC. FOR NON-METALLIC PIPE, TAPE SHALL BE DETECTABLE BY STANDARD, NON-DESTRUCTIVE PIPE DETECTION METHODS.

TABLE 1: BEDDING MATERIAL

DEPTH OF COVER IN FT.	TRAFFIC AREA	NON-TRAFFIC AREA
6" < COVER < 12"	NOT ALLOWED	ALLOWED FOR 6"ø PIPE OR SMALLER ONLY WITH NO. 10 CRUSHED ROCK
12" < COVER < 18"	ALLOWED FOR 6"ø PIPE OR SMALLER ONLY WITH CLASS "C" CONCRETE	NO. 10 CRUSHED ROCK (#4 SAND)
18" < COVER < 24"	CLASS "C" CONCRETE	NO. 10 OR NO. 67 CRUSHED ROCK
COVER > 24"	NO. 10 OR NO. 67 CRUSHED ROCK	NO. 10 OR NO. 67 CRUSHED ROCK

1 FLEXIBLE PIPE TRENCH SECTION
SCALE: NOT TO SCALE



SECTION A-A

2 CLEANOUT TO GRADE (C.O.T.G.)
SCALE: NOT TO SCALE

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JOB NO. 12013-19-03

DWG. NO. **C-201**