

DELTA CONSERVATION DISTRICT PIONEER TRAIL PARK NEW SANITARY SYSTEM DELTA COUNTY GLADSTONE, MICHIGAN



PROPOSED SEPTIC
FIELD LOCATION

DELTA COUNTY
SOIL CONSERVATION
OFFICE BUILDING

CAMP GROUND
MAINTENANCE
BUILDING

50'x100'
PAVILION

INDEX TO DRAWINGS	
DWG NO.	SHEET DESCRIPTION
G-1	COVER SHEET
C-1	PLAN AND NOTES
C-2	DETAILS AND NOTES
C-3	SECTIONS AND DETAILS
C-4	PARTIAL SANITARY PROFILE
	REV 1 ADDED THIS SHEET

CAMPGROUND INFORMATION

1. 100 EXISTING MODERN CAMP SITES.
2. 80 EXISTING SITES WITH WATER AND ELECTRIC.
3. 6 EXISTING UNTHREADED WATER OUTLETS
4. 2 EXISTING DOMESTIC WELLS
5. 6 EXISTING ON SITE SEPTIC SYSTEMS
6. PROPOSED TOTAL OF 28 NEW MODERN SITES WITH SANITARY CONNECTIONS, 26 GUEST SITES AND 2 HOST CAMP SITES.

REV 1 | 2-18-19 | ADDED CAMPGROUND INFORMATION

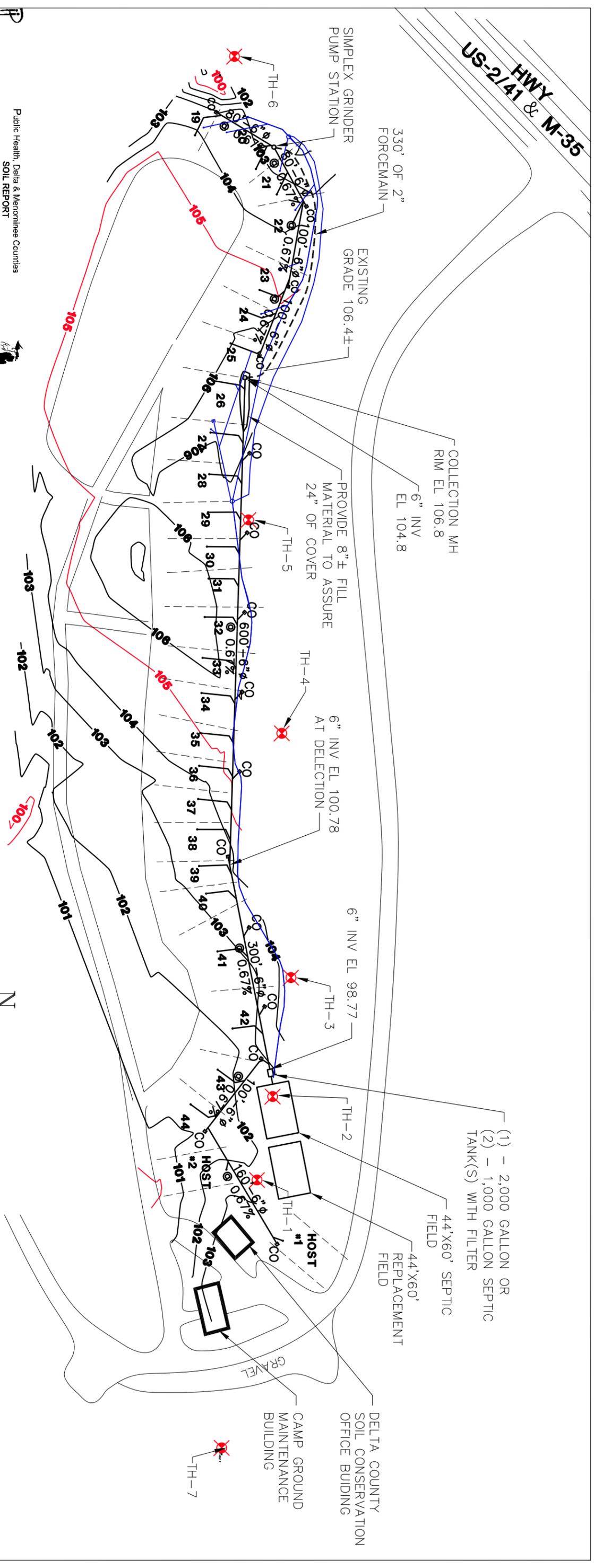


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DWN. BY:	GHB	DRAWING NUMBER:	G-1
DSGN. BY:	BEI	PROJECT #:	18-99-2257
APPD. BY:	DBB	SHT. 1 OF 4	REV. 1
DATE:	11-12-18		
SCALE:	AS NOTED		
CAD NO.	2257 cov		

PIONEER TRAIL PARK – DELTA COUNTY, MICHIGAN
NOT TO SCALE





Public Health, Delta & Menominee Counties
SOIL REPORT

Owner's Name: Delta County Parks/Pioneer Trail Park
 Person Requesting Evaluation: Delta County Parks
 Soil Series: Casswell and Resurrection
 Legal Description: T39N-R22W, Section 7

Date: September 21, 2018
 Tax ID# 21-014-006-048-00
 Age/acreage > 1

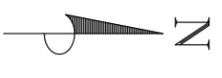
Test Pit #1	Test Pit #2	Test Pit #3	Test Pit #4
Depth (feet)	Depth (feet)	Depth (feet)	Depth (feet)
Soil Type	Soil Type	Soil Type	Soil Type
Limiting Zone (Seasonal High Water Table Observed) (Mottled at 65')	Limiting Zone (Seasonal High Water Table Observed) (Mottled at 94')	Limiting Zone (Seasonal High Water Table Observed) (Mottled at 23')	Limiting Zone (Seasonal High Water Table Observed) (Mottled at 49')
Actual Water Table (Not Observed)	Actual Water Table (Not Observed)	Actual Water Table (Observed Soils at 29')	Actual Water Table (Observed Soils at 49')
Total Depth 72'	Total Depth 79'	Total Depth 48'	Total Depth 48'

Test Pit #5	Test Pit #6	Test Pit #7	Test Pit #8
Depth (feet)	Depth (feet)	Depth (feet)	Depth (feet)
Soil Type	Soil Type	Soil Type	Soil Type
Limiting Zone (Seasonal High Water Table Observed) (Mottled at 37')	Limiting Zone (Seasonal High Water Table Observed) (Mottled at 25')	Limiting Zone (Seasonal High Water Table Observed) (Mottled at 31')	Limiting Zone ()
Actual Water Table (Not Observed)	Actual Water Table (Not Observed)	Actual Water Table (Not Observed)	Actual Water Table ()
Total Depth 85'	Total Depth 25'	Total Depth 88'	Total Depth

NOTE:

1. WATER/SANITARY CROSSINGS: A MINIMUM OF 10' HORIZONTAL AND 18" OF VERTICAL SEPARATION BETWEEN LINES MUST BE PROVIDED.
2. CLEAN-OUTS: SHALL BE PROVIDED AT ALL ENDS, CHANGE IN GRADE, DIAMETER AND ANGLE GREATER THAN 45 DEGREES AND AT INTERVALS NOT GREATER THAN 100.0'.
3. FORCEMAIN: APPROX. 330 LINEAR FEET OF 2" SCH 40 PIPE FROM PUMP STATION TO COLLECTION MANHOLE.
4. GRAVITY PIPING: PVC SCHEDULE 40, ASTM D2729 OR EQUAL AS APPROVED.

PIONEER TRAIL PARK - SANITARY SITE PLAN
 1" = 120'



DWN. BY:	CHB	DRAWING NUMBER:	C-1
DSGN. BY:	BEI	PROJECT #:	18-99-2257
APPD. BY:	DBB	SHT 2 OF 4	REV. 1
DATE:	11-12-18		
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CAD NO.:	2257-C-1		

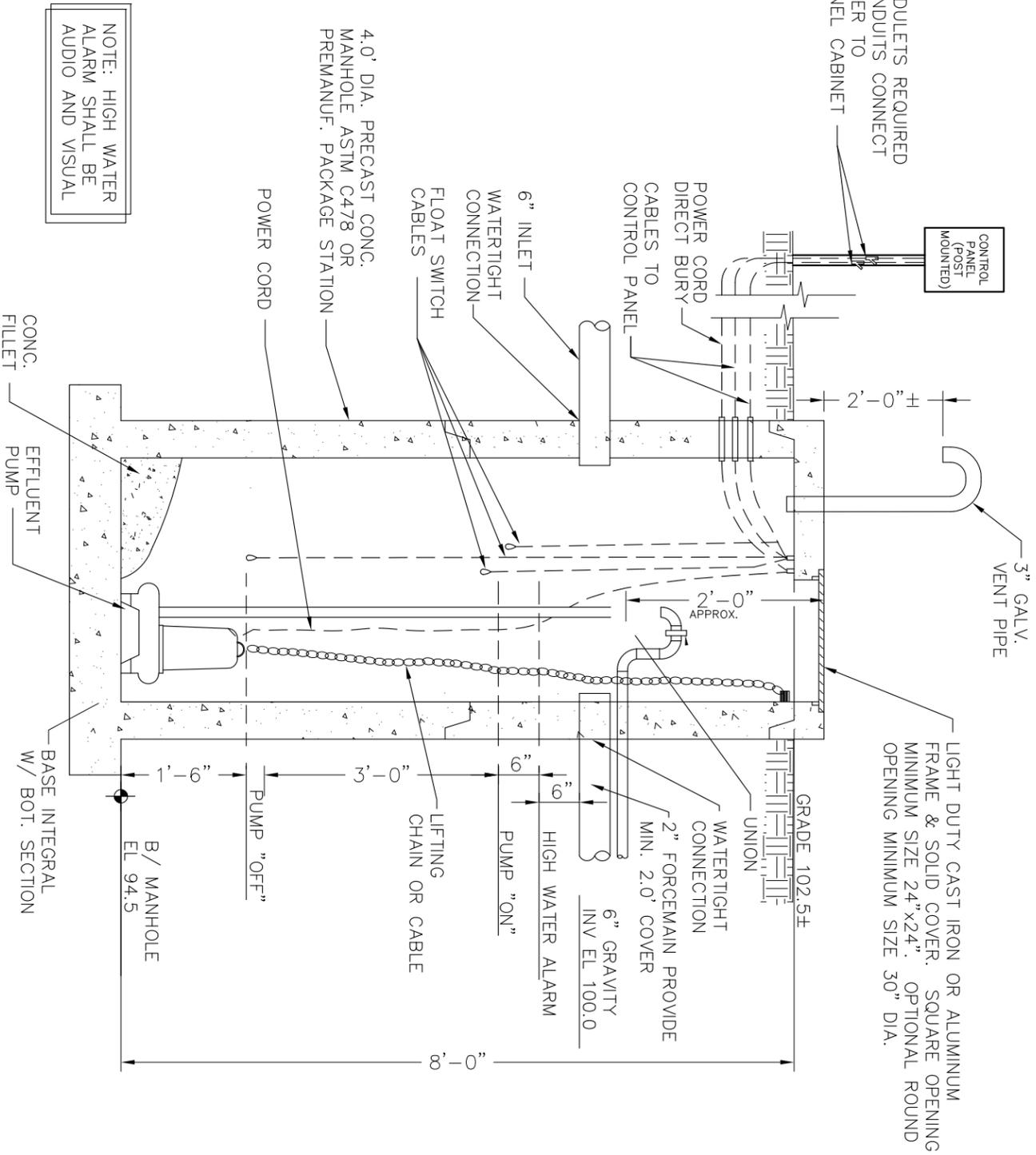
REV 1 2-18-19 REVISED THIS SHEET HOST SITE 1 AND 2

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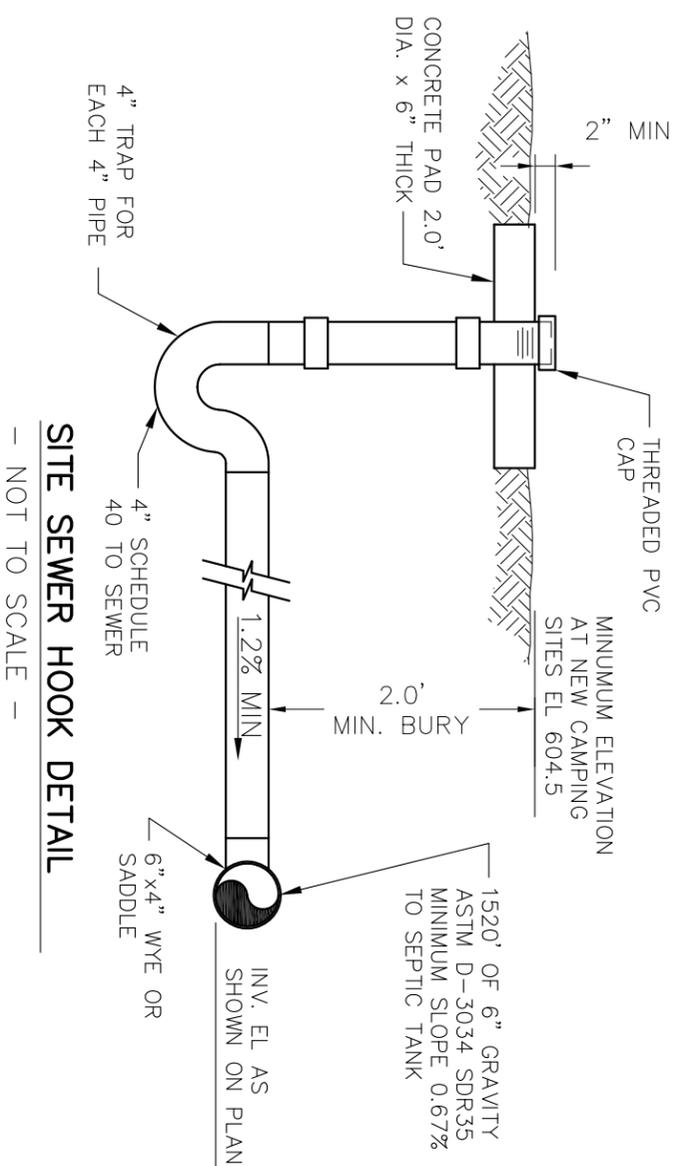
DELTA CONSERVATION DISTRICT
 PIONEER TRAIL PARK
 GLADSTONE, MICHIGAN

DELTA COUNTY SOIL CONSERVATION OFFICE BUILDING
 CAMP GROUND MAINTENANCE BUILDING
 44'X60' SEPTIC FIELD
 44'X60' REPLACEMENT FIELD
 (1) - 2,000 GALLON OR (2) - 1,000 GALLON SEPTIC TANK(S) WITH FILTER

NOTE:
SEALING CONDULETS REQUIRED
IF ELECT. CONDUITS CONNECT
PUMP CHAMBER TO
CONTROL PANEL CABINET

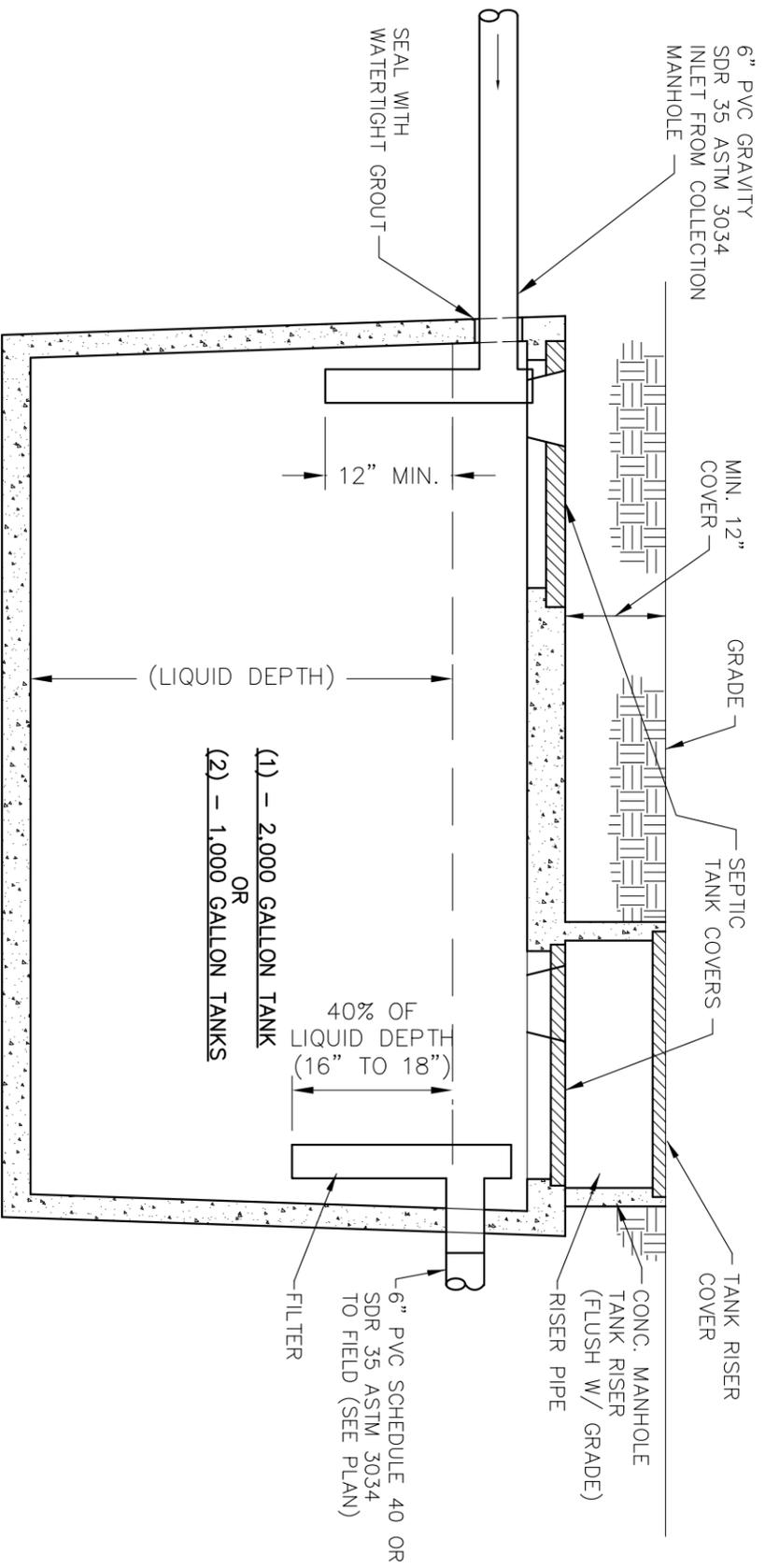


SIMPLEX GRINDER PUMP STATION SECTION
NOT TO SCALE

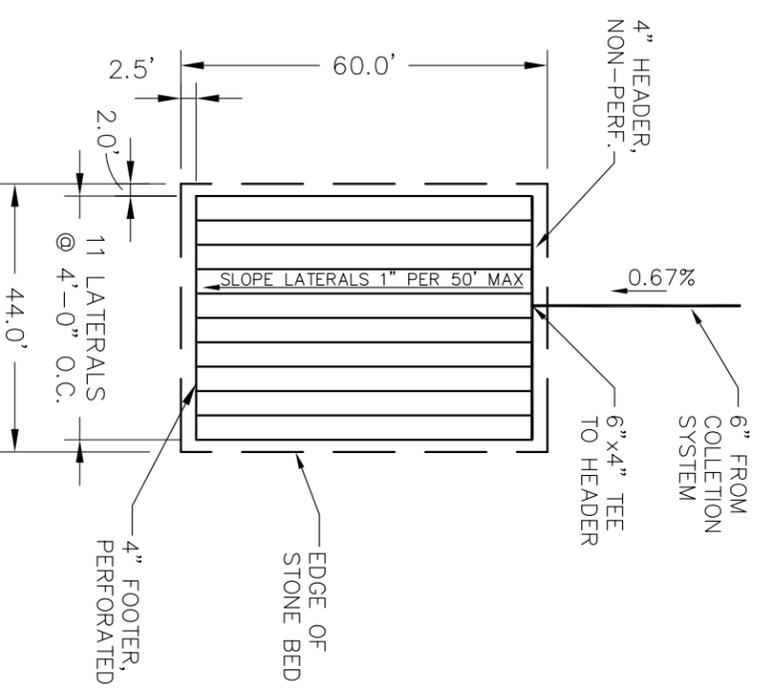


- NOTES:**
1. FLOW RATE: 28 SITES @ 65 GPD PER SITE. TOTAL GALLONS PER DAY 1820.
 2. FIELD SIZE: 1820 GAL/DAY x 0.75 GAL/DAY/SQ FOOT = 2440 SQ FOOT.
 3. REMOVE EXISTING TOP SOIL AND ORGANIC MATTER.
 4. CONFIRM 4.0' OF CLEAN SAND BENEATH PROPOSED TILE FIELD
 5. ALL MATERIAL TO BE REUSED SHALL BE FREE OF TOP SOIL/TREE ROOTS AND ANY ORGANIC MATTER. EXACT LOCATION OF SANITARY DUMP STATION SHALL BE FIELD LOCATED.
 6. ALL PIPE SHALL BE 4" OR 6" PVC SCHEDULE 40 OR ASTM 3034 SDR35.
 7. OWNER SHALL PROVIDE TILE FIELD PROTECTION TO PREVENT VEHICLE TRAFFIC OVER FIELD.
 8. SUBMERSIBLE SEWAGE PUMP SHALL BE 1/2 HP, 115V, SINGLE PHASE WITH 2" DISCHARGE. LIBERTY PUMP MODEL LE51A OR EQUAL.

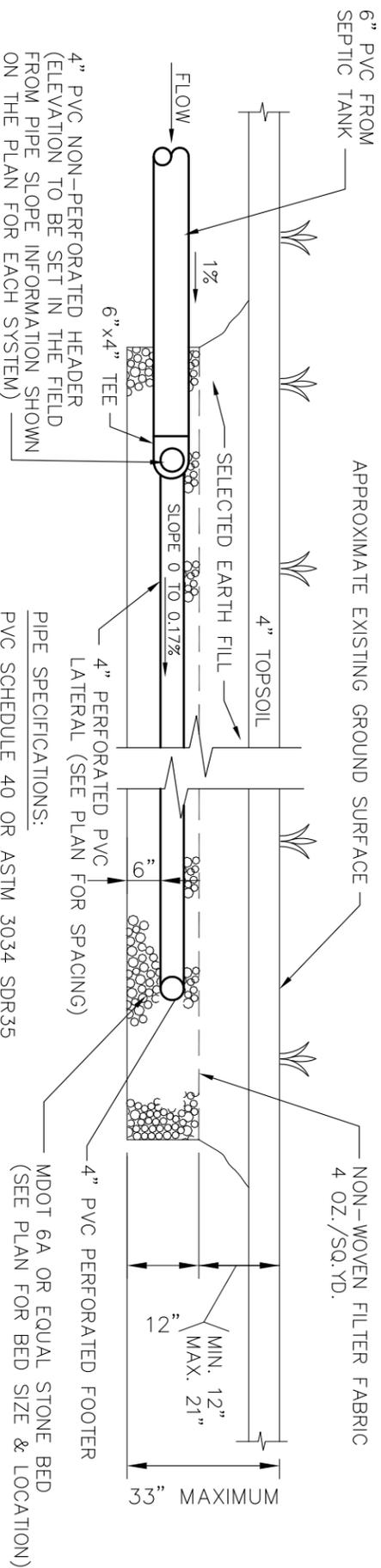
REV 1	2-18-19	REVISED THIS SHEET
BITTNER ENGINEERING, INC.		
113 SOUTH 10TH STREET ESCANABA, MICHIGAN 49829 Phone: 906-789-1511 Email: bittnerengineering@bittnerengineering.com		
DWN BY: CHB	DELTA CONSERVATION DISTRICT	
DSGN BY: BEI	PIONEER TRAIL PARK	
APPD BY: DBB	GLADSTONE, MICHIGAN	
DATE: 11-12-18	DRAWING NUMBER: C-2	
SCALE: AS NOTED	PROJECT #: 18-99-2257	
CAD NO. 2257DETS C2	SHT. 3 OF 4 REV. 1	



PRECAST CONCRETE SEPTIC TANK SECTION
NOT TO SCALE



PROPOSED DRAINFIELD PLAN
NOT TO SCALE



TYPICAL ABSORPTION BED SECTION
NOT TO SCALE

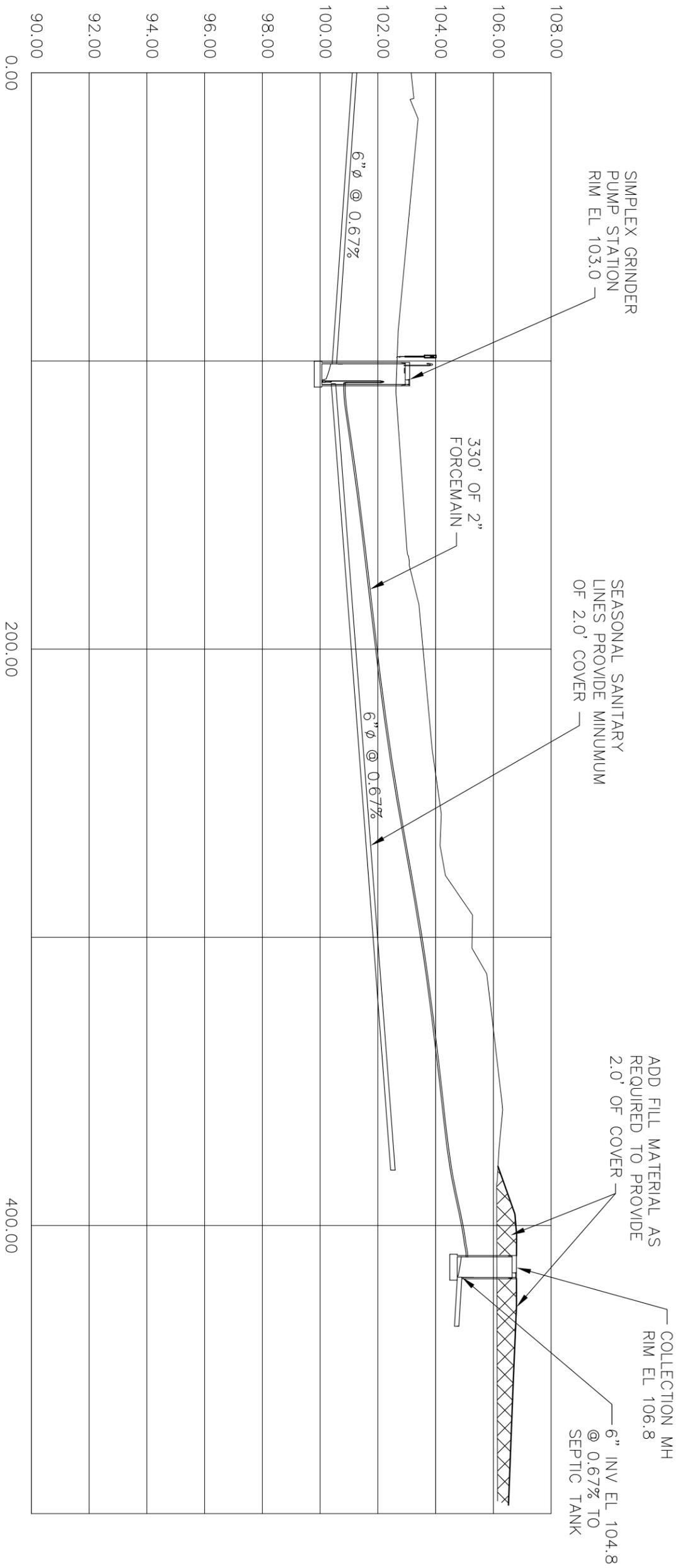
- NOTES:**
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REV 1 2-18-19 REVISED THIS SHEET



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DWN. BY:	GHB	DRAWING NUMBER:	C-3
DSGN. BY:	BEI	PROJECT #:	18-99-2257
APPD. BY:	DBB	SCALE:	AS NOTED
DATE:	11-12-18	CAD NO.:	2257C3
DELTA CONSERVATION DISTRICT PIONEER TRAIL PARK GLADSTONE, MICHIGAN		NEW SANITARY SYSTEM SECTIONS AND DETAILS	
SHT 4 OF 4		REV. 1	



**PARTIAL SANITARY PROFILE
(PUMP STATION TO MANHOLE)**

NOT TO SCALE

REV 1 | 2-18-19 | ADDED THIS SHEET



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DWN BY:	GHB	DRAWING NUMBER:	C-4
DSGN BY:	BEI	PROJECT #:	18-99-2257
APPD BY:	DBB	SHT 5 OF 5	REV. 1
DATE:	2-18-19		
SCALE:	AS NOTED		
CAD NO.	2257 C-4		