EOP-PRESSURE MANIFOLD



VICINITY MAP

PROJECT No. A90401.00

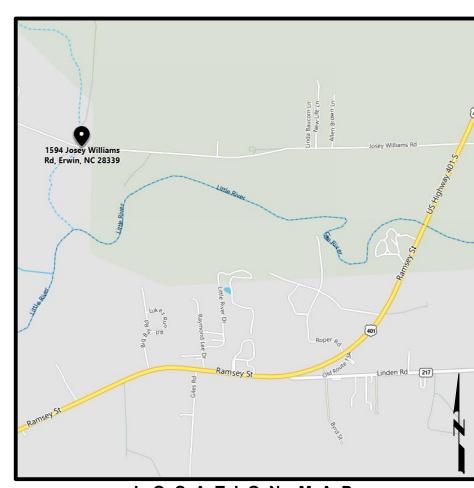
1594 JOSEY WILLIAMS RD. **ERWIN, NC 28339**

HARNETT COUNTY, NC

PIN: 0555-93-1151.000

SCHEDULE OF DRAWINGS:

C-100 C-101 C-102	COVER SHEET SEPTIC SYSTEM LAYOUT GENERAL NOTES
D-101	DETAILS 1 OF 6
D-102	DETAILS 2 OF 6
D-103	DETAILS 3 OF 6
D-104	DETAILS 4 OF 6
D-105	DETAILS 5 OF 6
D-106	DETAILS 6 OF 6
E-101	ELECTRICAL DETAILS

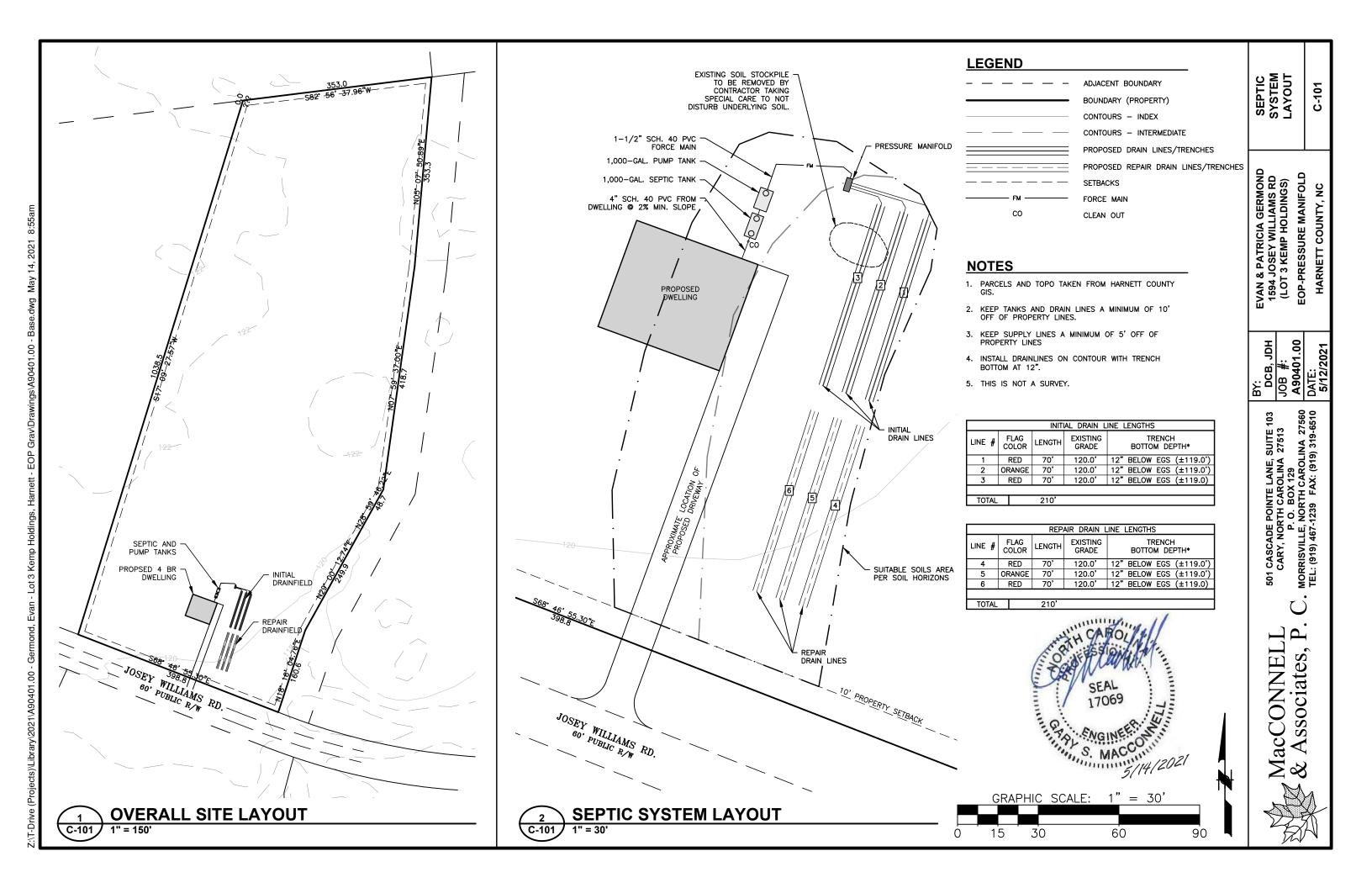


LOCATION MAP



COVER SHEET

MacCONNELL



RECORD TOTAL GALLONS USED FROM METER AT POTABLE WATER SUPPLY SOURCE.

PUMP OUT ACCUMULATED GREASE AND DISPOSE OF IN A STATE-PERMITTED

MANNER/FACILITY.

CHECK EFFLUENT FILTERS AND CLEAN AS REQ'D.

CHECK FOR SOLIDS ACCUMULATION, BLOCKAGES, AND BAFFLE AND/OR EFFLUENT FILTER

DAMAGE. CHECK FOR IN/EXFILTRATION OF LIQUID.

PUMP OUT ACCUMULATED SOLIDS AND DISPOSE OF IN A STATE-PERMITTED

MANNER/FACILITY.

CHECK PUMPS FOR FUNCTIONALITY AND ABNORMAL VIBRATIONS. TEST CONTROL AND ALARM FUNCTIONS. RECORD PUMP ELAPSED TIME AND CYCLE COUNTER READINGS.

CHECK FOR SOLIDS ACCUMULATION, BLOCKAGES, AND BAFFLE DAMAGE. CHECK FOR

PUMP OUT ACCUMULATED SOLIDS AND DISPOSE OF IN A STATE-PERMITTED

OR AS REQ'D USE CLEAN-OUTS TO CHECK VISUALLY FOR BLOCKAGES. REMOVE AND DISPOSE OF 6 MONTHS

BLOCKED SOLIDS IN A STATE-PERMITTED MANNER/FACILITY.

OR AS REQ'D MEASURE AND RECORD PUMP DOSING RATES FOR EACH FIELD. CHECK RESIDUAL 6 MONTHS

PRESSURE AND ADJUST AS NECESSARY TO HEAD OF 3'-0". FLUSH OUT MANIFOLD AS MONTHLY OR

MOW VEGETATIVE COVER. CHECK FOR EROSION OR SURFACING OR PONDING OF AS REQ'D

WATER LEVELS IN THE FIELD TRENCH OBSERVATION PORTS SHOULD BE MONTHI Y INSPECTED/RECORDED.

DOSING CONTROL

COLLECTION

PRESSURE

MANIFOLDS

DISPOSAL FIELDS

SYSTEM

SYSTEM SHALL DOSE ± 2 TIMES PER DAY AT 96 GALLONS PER DOSE OR 4.5 MIN. AT 21.3 GPM.

12 MONTHS

FIELD DOSING OPERATING SEQUENCE

EFFLUENT FROM THE SEPTIC TANKS SHALL ENTER THE FIELD DOSING PUMP TANK, CAUSING THE WATER LEVEL TO RISE. AS THE LEVEL REACHES A FLOAT, DESIGNATED AS THE PUMP ON, A MERCURY SWITCH SHALL CLOSE, INDICATING THAT THE SYSTEM SHALL DOSE THE FIELD UNTIL THE LEVEL REACHES THE PUMP OFF LEVEL.

IF THE WATER LEVEL CONTINUES TO RISE HIGH ENOUGH FOR THE "HIGH WATER ALARM" MERCURY FLOAT SWITCH TO CLOSE, A RELAY SHALL CAUSE A FLASHING RED LIGHT ON THE PANEL FACE TO ENERGIZE, WHICH MAY ONLY BE RESET MANUALLY. ALSO, AN AUDIBLE ALARM WILL BE ENERGIZED.

THE PUMP TANK SHALL CONTAIN ONE PUMP. PUMP SHALL HAVE "HAND-OFF-AUTO" SWITCH, GREEN RUN LIGHT AND ELAPSED TIME METER.

NOTES

- 1. THE CONTRACTOR IS REQUIRED TO VERIFY ALL DIMENSIONS, ELEVATIONS, AND UTILITIES BEFORE BEGINNING ANY
- 2. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SOIL EROSION AND SEDIMENTATION CONTROL REQUIREMENTS OF THE COUNTY AND STATE.
- 3. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE OSHA, NCDOT, AND SAFETY REQUIREMENTS OF THE COUNTY AND
- 4. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL CONSTRUCTION DAMAGE EXPEDITIOUSLY AND AT NO ADDITIONAL COST TO THE OWNER.
- 5. FOUR OR SIX-INCH DIAMETER CORRUGATED PLASTIC TUBING SHALL COMPLY WITH ASTM F405 AND G.S. 150B-21.6.
- 6. NITRIFICATION TRENCH SHALL FOLLOW THE CONTOUR OF THE GROUND.
- 7. SURFACE WATER RUNOFF AND PONDING SHALL BE PROHIBITED AT ALL TIME.
- 8. SOIL COVER SHALL BE PLACED OVER A NITRIFICATION FIELD ONLY AFTER PROPER PREPARATION OF THE ORIGINAL GROUND SURFACE. THE TYPE OF SOIL COVER SHALL BE APPROVED BY THE LOCAL HEALTH DEPARTMENT.
- 9. ALL SERVICE ACCESS OPENINGS WILL BE A MINIMUM OF 24 INCHES UNLESS OTHERWISE SHOWN.
- 10. ALL JOINTS (MID-SEAM, TOP-SEAM) SHALL BE SEALED USING CONCRETE SEALANTS BUTYL SEALANT # CS-102
- 11. TANKS SHALL BE LEAK-TESTED PRIOR TO SYSTEM START UP BY APPLYING A VACUUM OF 5-INCHES OF MERCURY WITH RISER ASSEMBLIES IN PLACE OR A 24-HOUR STATIC WATER TEST, IN ACCORDANCE WITH ASTM STANDARDS
- 12. ALL PIPE PENETRATIONS THROUGH PRECAST CONCRETE TANKS SHALL BE PRESS-SEAL CAST-A-SEAL 402 RUBBER BOOTS OR EQUAL AND GROUTED.
- 13. ANY CHANGES TO TANK LAYOUT AND INVERTS MAY BE ADJUSTED AS NECESSARY TO COMPLY WITH ACTUAL FIELD CONDITIONS UPON APPROVAL BY THE ENGINEER.

- 14. CONTRACTOR SHALL NOTIFY THE ENGINEER WHEN TANK INSTALLATION WILL OCCUR SO FIELD INSPECTION CAN TAKE
- 15. CONTRACTOR SHALL DIVERT SURFACE WATER FROM ALL TANK AREAS. (SEPTIC TANKS, ETC.)
- VEGETATIVE COVER SHALL BE ESTABLISHED IMMEDIATELY AFTER FIELD INSTALLATION.
- 17. ALL COMPONENTS TO BE ACCESSIBLE AT GRADE WITHOUT ENTERING INTO THE RISER/TANK.
- 18. CONTRACTOR MAY USE LARGER TANKS WITH ENGINEER'S APPROVAL. PT DOSE VOLUME ETC. WILL CHANGE.
- 19. PRE-CAST CONCRETE SEPTIC AND PUMP TANKS DIMENSIONS SHOWN ARE BASED ON DAVID BRANTLEY & SONS. OTHER MANUFACTURERS ARE ACCEPTABLE, PROVIDED THEIR PRODUCTS COMPLY WITH APPLICABLE NCDENR-DEH RULES AND HAVE BEEN ASSIGNED A STATE APPROVAL NUMBER.
- 20. CONCRETE SHALL HAVE A MINIMUM 4,500 PSI AT 28 DAYS. CONCRETE SHALL BE WATERPROOFED WITH BITUMINOUS MASTIC OR OTHER APPROVED COATING SYSTEM.
- 21. EXCAVATE AREA FOR SEPTIC AND PUMP TANKS TO FIRM EARTH. LEVEL ON STONE. TANKS SHALL BE CAREFULLY BACKFILLED TO MAXIMUM 95% DENSITY, BACK FILL SHALL DIRECT WATER AWAY FROM ACCESS RISERS. IF MORE THAN 5 FEET OF COVER IS PROPOSED, CONSULT ENGINEER AND TANK MANUFACTURER TO DEVELOP STRUCTURAL AMENDMENTS.
- 22. FIELD VERIFY ACCESS RISERS BEFORE ORDERING.
- 23. VERIFY PUMP PLACEMENT WITH PUMP MANUFACTURER BEFORE ORDERING TANK, RISERS, AND HATCHES.
- 24. ALL PRESSURE PIPE AND FITTINGS IN TANKS SHALL BE SCH. 80 PVC UNLESS OTHERWISE SHOWN.
- 25. BALL AND CHECK VALVES SHALL BE RATED AT A MIN. OF



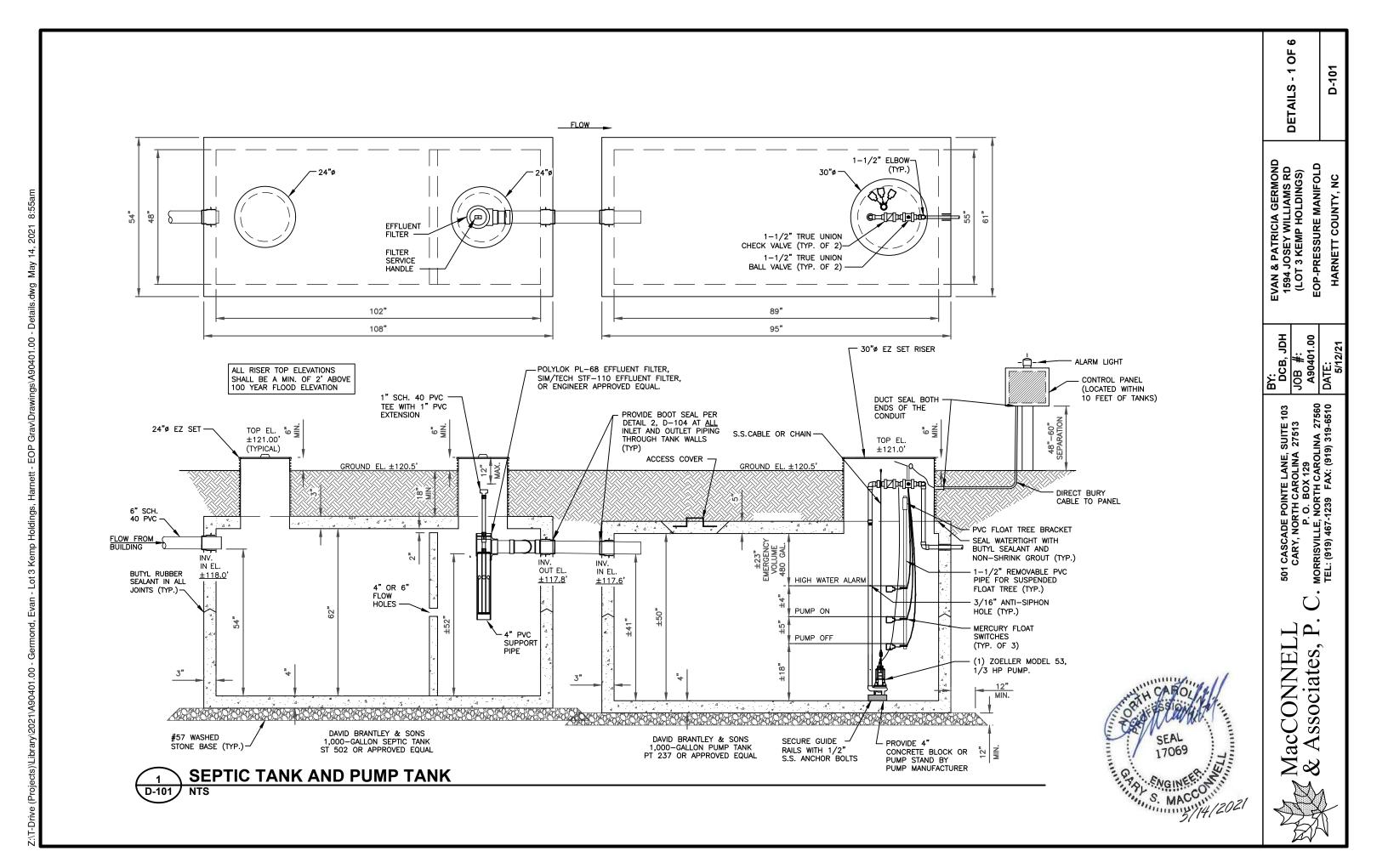
R PATRICIA GERMOND JOSEY WILLIAMS RD 3 KEMP HOLDINGS) MANIFOLD EOP-PRESSURE EVAN & P. 1594 JOS (LOT 3 P.

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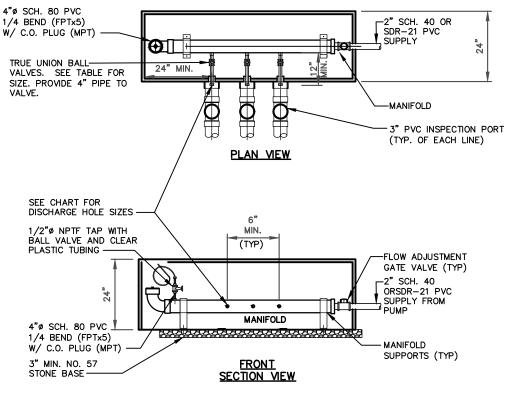


PRESSURE MANIFOLD (INITIAL LINES) TAP CHART

MANIFOLD TAP	LINES	FLAG COLOR	HOLE SIZES	LENGTH
1	1	RED	1/2" SCH. 40	70'
2	2	ORANGE	1/2" SCH. 40	70'
3	3	RED	1/2" SCH. 40	70'

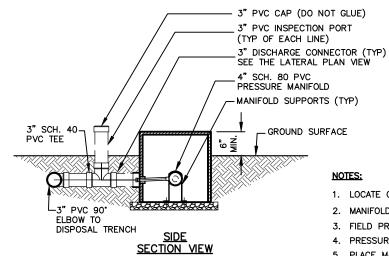
PRESSURE MANIFOLD (REPAIR LINES) TAP CHART

MANIFOLD TAP	LINES	FLAG COLOR	HOLE SIZES	LENGTH
1	4	RED	1/2" SCH. 40	70'
2	5	ORANGE	1/2" SCH. 40	70'
3	6	RED	1/2" SCH. 40	70'



PRESSURE MANIFOLD

D-102



SUPPLY FROM PUMP TANK CONNECTED TO MANIFOLD OPPOSITE END.

- 1. LOCATE CENTERLINE OF BALL VALVE 4" FROM MANIFOLD.
- 2. MANIFOLD DISCHARGE PIPES SHALL EXTEND 2" FROM EDGE OF BOX INTO 3" PVC GRAVITY PIPE.
- 3. FIELD PRESSURE SHALL BE SET TO TWO FEET OF HEAD.
- 4. PRESSURE MANIFOLD SHALL BE CONCRETE OR BY EZ SET, PRESSBOX, OR AN APPROVED EQUAL.
- 5. PLACE MANIFOLD IN CENTER OF BOX.
- 6. ALL FEEDER LINES TO BE INSTALLED ON AT LEAST 1% POSITIVE GRADE.
- 7. CONTRACTOR MAY USE 2 SIDED MANIFOLD AND POSITION MANIFOLD IN FIELD FOR GRAVITY FLOW.



501 CASCADE POINTE LANE, SUITE 103 CARY, NORTH CAROLINA 27513 P. O. BOX 129 MORRISVILLE, NORTH CAROLINA 27560 TEL: (919) 467-1239 FAX: (919) 319-6510 4 MacCONNEL ssociates, Ä 8

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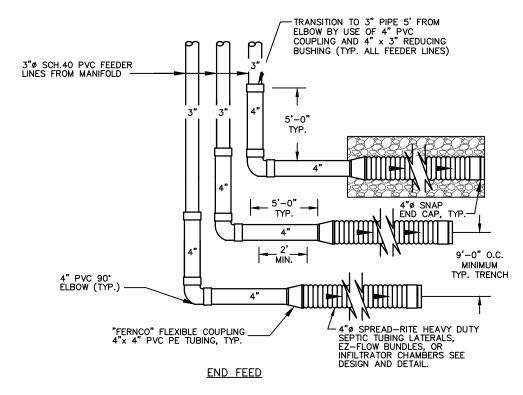
DETAILS

EVAN & PATRICIA GERMOND 1594 JOSEY WILLIAMS RD (LOT 3 KEMP HOLDINGS)

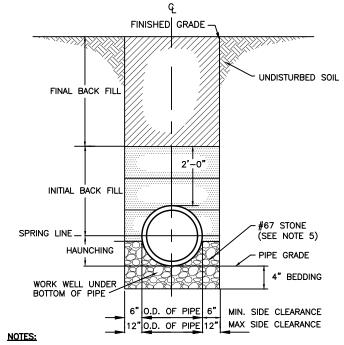
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EOP-PRESSURE MANIFOLD HARNETT COUNTY, NC

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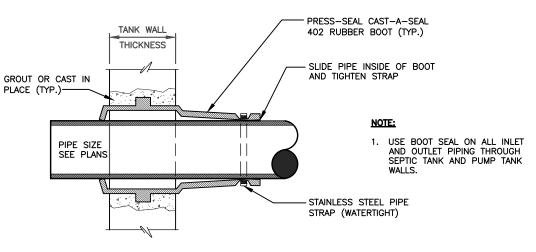


LATERAL PLAN VIEW D-103



- FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND THE BRACING.
- 2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.
- 3. ALL BACK FILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
- 4. BACK FILL SHALL BE TAMPED IN 6" LAYERS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC
- 5. STONE BEDDING TO BE USED IF ROCK IS ENCOUNTERED.









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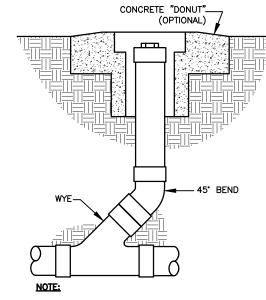
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EOP-PRESSURE MANIFOLD

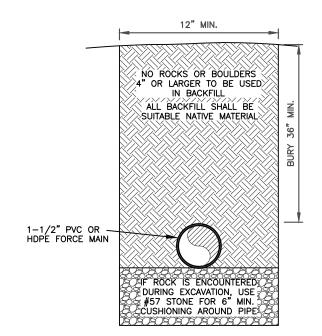
HARNETT COUNTY, NC

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- 1. PIPING TO BE SCH. 40 PVC.
- 2. SEE SITE PLAN FOR PIPE SIZE.









MacCONNELL & Associates, P. Associates,

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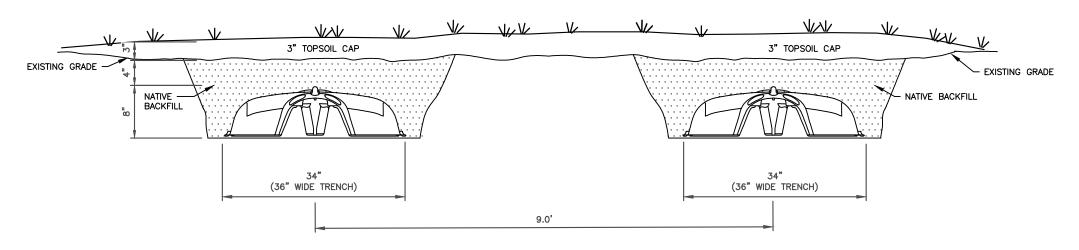
EOP-PRESSURE MANIFOLD HARNETT COUNTY, NC BY: DCB, JDH JOB #: A90401.00

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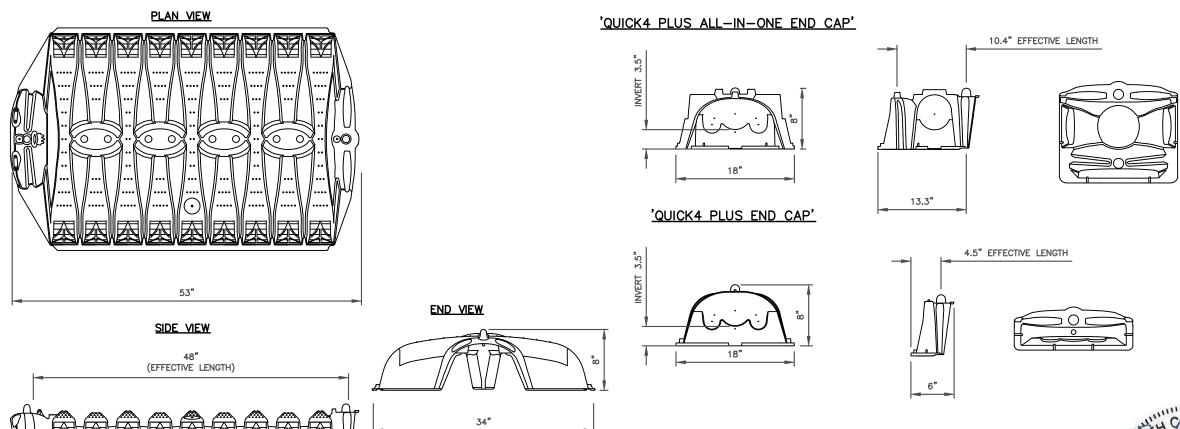
- 4 OF

DETAILS

D-104



INFILTRATOR SYSTEMS INC. QUICK4 STANDARD LOW PROFILE CHAMBER TYPICAL TRENCH DETAIL



INFILTRATOR SYSTEMS INC. QUICK4 STANDARD LOW PROFILE CHAMBER PRODUCT SPECIFICATION D-105



DETAILS HARNETT COUNTY, NC

- 5 OF

EVAN & PATRICIA GERMOND 1594 JOSEY WILLIAMS RD (LOT 3 KEMP HOLDINGS) EOP-PRESSURE MANIFOLD

BY: DCB, JDH JOB #: A90401.00

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MacCONNELL & Associates, P Associates,

MACCONNELL AND ASSOCIATES, P.C. 1594 JOSEY WILLIAMS ROAD PRESSURE MANIFOLD DESIGN - INITIAL

MACCONNELL AND ASSOCIATES, P.C. 1594 JOSEY WILLIAMS ROAD PRESSURE MANIFOLD DESIGN - REPAIR

Name:	<u>Evan</u>	and Patricia	<u>Germond</u>	P.I.N. #:	0555-93-1151		D #:	: <u>N/A</u>		Name:	<u>Evai</u>	n and Patricia (<u>Germond</u>	P.I.N. #:	<u>0555-93-1151</u>		D#	: <u>N/A</u>	
	1504		D 1	CIE			T			Address:	<u>159</u>	4 Josey Williar	ns Road	Subdiv:	<u>0</u>		Lot#	:: <u>0</u>	
Address:		Josey Willian Harnett Cou		Subdiv:			Lot#	:		# of BDR:	<u>4</u>	Hamett Cour Daily Flow:	-	gal/day	L.T.A.R.	: <u>0.80</u>	gal/day/sq.ft		
# of BDR:	4	Daily Flow	<u>480</u>	gal/day	L.T.A.R.:	0.80	gal/day/sq.ft			Septic Tank:	<u>1000</u>	gals	Pump Tank:	<u>1000</u>	gals	Sq. Foot:	<u>630</u>	Stone Depth: N	<u>V/A</u>
Septic Tank:	<u>1000</u>	gals	Pump Tank:	<u>1000</u>	gals	Sq. Foot:	<u>630</u>	Stone Depth: N	<u> </u>	Number of Taps:		<u>3</u>	Length	of Trenches:	210	ft(See Tap	Chart for Detail	ls)	
Number of Taps:		<u>3</u>	Lengtl	h of Trenches:	210	ft(See Tap C	hart for Detail	s)		Depth of Trenches:		<u>12</u>	in	N	Manifold Length	: <u>36</u>	in		
Depth of Trenches	:	<u>12</u>	in	M	anifold Length:	<u>36</u>	in (see comm	ents below)		Manifold Diameter:		4 inches		Tap Configu	ıration: 1/2 in s	pacing	1	side(s) of mani	fold
Manifold Diameter	:	<u>4</u>		Tap Configu	ıration: 1/2 in s	spacing	1	side(s) of manif	fold	Supply Line: length:	:	<u>125</u>	ft	Diamet	er(Supply Line)	: <u>1-1/2 in . SC</u>	H40 PVC Pipe	ID (Inch)	1.61
Supply Line: lengt	h:	<u>40</u>	ft	Diamete	r(Supply Line):	1-1/2 in . SCF	H40 PVC Pipe	ID (Inch)	1.61	Friction Loss + Fitti	ng Loss:		<u>6.23</u>	ft(supply lin	e length + 70' fo	or fittings in	pump tank)		
Friction Loss + Fit	ting Loss:		<u>3.51</u>	ft(supply lin	e length + 70'	for fittings in	pump tank)			Design Head:		<u>2</u>	ft	Devation He	ead:	<u>7.10</u>	ft		
Design Head:		<u>2</u>	ft	Elevation He	ead:	<u>7.10</u>	ft			Total Head:	<u>15.33</u>	ft]	Pump to Deliver	: <u>21.3</u>	gals/min at	<u>15.3</u>	ft head
Total Head:	<u>12.61</u>	ft		P	ump to Deliver:	21.3	gals/min at	12.6	ft head	Dosing Volume:		<u>96</u>	gals,						
Dosing Volume:		<u>96</u>	gals,							Pump Selection: D	rawdown	:96	_gals divided b	by	<u>20.3</u>	gals/in =	<u>4.7</u>	inches head	
Pump Selection:	Drawdown:	96	_gals divided	by	<u>20.3</u>	gals/in =	<u>4.7</u>	inches head											
Down Colordon	A = =1- ==== =																		
Pump Selection:	As shown o	on the constru	ection drawing	<u>s.</u>						D 144	100.0		,	ГАР СНАР	RT		ъ. и	2	
		on the constru		<u>s.</u> TAP CHAR	RT					Bench Mark Pump tank elev	100.0	120 6	ŗ				Design Head: Manifold elev		
Bench Mark	100.0	on the constru		TAP CHAR			Design Head:	2		Bench Mark Pump tank elev. line	100.0 color	120.6 rod read	Elevation**	TAP CHAR Pump elev. length	RT 113.4 hole size	flow/tap	Design Head: Manifold elev. gal/day		LINE LTAR
Bench Mark Pump tank elev.	100.0 120.6			TAP CHAR	113.4	flow/tap	Manifold elev.	120.5	LINELTAR	Pump tank elev.				Pump elev.	113.4	flow/tap 7.1	Manifold elev. gal/day	120.5	LINE LTAR 0.762
Bench Mark	100.0 120.6 color	rod read	Elevation**	TAP CHAR Pump elev. length	113.4 hole size	flow/tap 7.11	Manifold elev. gal/day	120.5 trench area	LINE LTAR 0.762	Pump tank elev.	color	rod read	Elevation**	Pump elev.	113.4 hole size		Manifold elev. gal/day 1 160	120.5 trench area	
Bench Mark Pump tank elev.	100.0 120.6			TAP CHAR	113.4	flow/tap 7.11 7.11	Manifold elev. gal/day 160	120.5	LINE LTAR 0.762 0.762	Pump tank elev. line 4	color Red	rod read 11.0	Elevation** 99.0	Pump elev. length 70	113.4 hole size 1/2in SCH 40	7.1	Manifold elev. gal/day 1 160 1 160	120.5 trench area 210	0.762
Bench Mark Pump tank elev. line	100.0 120.6 color Red	rod read 10.3	Elevation** 99.7	TAP CHAR Pump elev. length 70	113.4 hole size 1/2in SCH 40	7.11	Manifold elev. gal/day 160 160	120.5 trench area 210	0.762	Pump tank elev. line 4 5	color Red Orange	rod read 11.0 11.0 11.0	Elevation ** 99.0 99.0 99.0	Pump elev. length 70 70 70	113.4 hole size 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40	7.1 7.1 7.1	Manifold elev. gal/day 1 160 1 160	120.5 trench area 210 210 210	0.762 0.762 0.762
Bench Mark Pump tank elev. line 1 2	100.0 120.6 color Red Orange	rod read 10.3 10.5	Elevation** 99.7 99.5	TAP CHAR Pump elev. length 70 70	113.4 hole size 1/2in SCH 40 1/2in SCH 40	7.11 7.11	Manifold elev. gal/day 160 160	120.5 trench area 210 210	0.762 0.762	Pump tank elev. line 4 5 6	color Red Orange	rod read 11.0 11.0 11.0 total	Elevation** 99.0 99.0	Pump elev. length 70 70 70 210	113.4 hole size 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 gal/min =	7.1 7.1	Manifold elev. gal/day 1 160 1 160	120.5 trench area 210 210 210 LTAR =	0.762 0.762 0.762 0.80
Bench Mark Pump tank elev. line 1 2 3	100.0 120.6 color Red Orange	rod read 10.3 10.5	Elevation** 99.7 99.5	TAP CHAR Pump elev. length 70 70	113.4 hole size 1/2in SCH 40 1/2in SCH 40	7.11 7.11	Manifold elev. gal/day 160 160	120.5 trench area 210 210	0.762 0.762	Pump tank elev. line 4 5 6	color Red Orange	rod read 11.0 11.0 11.0 11.0 175.0%	Elevation ** 99.0 99.0 99.0	Pump elev. length 70 70 70 210 Des. Flow	113.4 hole size 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 gal/min = 480	7.1 7.1 7.1	Manifold elev. gal/day 1 160 1 160	120.5 trench area 210 210 210 210 LTAR = (ltar + 5%)	0.762 0.762 0.762 0.80 0.84
Bench Mark Pump tank elev. line 1 2 3	100.0 120.6 color Red Orange	rod read 10.3 10.5 10.5 total 70.00%	Elevation** 99.7 99.5 99.5	Pump elev. length 70 70 70 210 Des. Flow	113.4 hole size 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 gal/min = 480	7.11 7.11 7.11	Manifold elev. gal/day 160 160 160	120.5 trench area 210 210 210 210 LTAR = (ltar + 5%)	0.762 0.762 0.762 0.80 0.84	Pump tank elev. line 4 5 6 % of Dose Vol. Dose Volume	color Red Orange	rod read 11.0 11.0 11.0 11.0 total 75.0% 96	Elevation ** 99.0 99.0 99.0	Pump elev. length 70 70 70 210 Des. Flow Pump Run=	113.4 hole size 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 gal/min = 480 22.50	7.1 7.1 7.1	Manifold elev. gal/day 1 160 1 160	120.5 trench area 210 210 210 LTAR = (ltar + 5%) (ltar W/ INO V)	0.762 0.762 0.762 0.80 0.84 1.07
Bench Mark Pump tank elev. line 1 2 3 % of Dose Vol. Dose Volume	100.0 120.6 color Red Orange	rod read 10.3 10.5 10.5 total 70.00% 96	Elevation** 99.7 99.5 99.5	Pump elev. length 70 70 70 210 Des. Flow Pump Run=	113.4 hole size 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 gal/min = 480 22.50	7.11 7.11 7.11	Manifold elev. gal/day 160 160	120.5 trench area 210 210 210 210 LTAR = (ltar + 5%) (ltar W/ INOV)	0.762 0.762 0.762 0.80 0.84 1.07	Pump tank elev. line 4 5 6 % of Dose Vol. Dose Volume Dose Pump Time	color Red Orange	rod read 11.0 11.0 11.0 total 75.0% 96 4.82	Elevation ** 99.0 99.0 99.0	Pump elev. length 70 70 70 210 Des. Flow Pump Run=	113.4 hole size 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 gal/min = 480 22.50 20.26	7.1 7.1 7.1	Manifold elev. gal/day 1 160 1 160	120.5 trench area 210 210 210 210 LTAR = (ltar + 5%)	0.762 0.762 0.762 0.80 0.84
Bench Mark Pump tank elev. line 1 2 3 % of Dose Vol. Dose Volume Dose Pump Time	100.0 120.6 color Red Orange Red	rod read 10.3 10.5 10.5 total 70.00% 96 4.50	Elevation** 99.7 99.5 99.5	Pump elev. length 70 70 70 210 Des. Flow Pump Run= Tank Gal/IN	113.4 hole size 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 gal/min = 480 22.50 20.3	7.11 7.11 7.11	Manifold elev. gal/day 160 160 160	120.5 trench area 210 210 210 210 LTAR = (ltar + 5%)	0.762 0.762 0.762 0.80 0.84	Pump tank elev. line 4 5 6 %of Dose Vol. Dose Volume Dose Pump Time Drawdown in Inches	color Red Orange	rod read 11.0 11.0 11.0 total 75.0% 96 4.82 4.7	Elevation ** 99.0 99.0 99.0	Pump elev. length 70 70 70 210 Des. Flow Pump Run= Tank Gal/IN Elev. Head	113.4 hole size 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 gal/min = 480 22.50 20.26 7.10	7.1 7.1 7.1	Manifold elev. gal/day 1 160 1 160	120.5 trench area 210 210 210 LTAR = (ltar + 5%) (ltar W/ INO V)	0.762 0.762 0.762 0.80 0.84 1.07
Bench Mark Pump tank elev. line 1 2 3 % of Dose Vol. Dose Volume Dose Pump Time Drawdown in Inche	100.0 120.6 color Red Orange Red	rod read 10.3 10.5 10.5 total 70.00% 96 4.50 4.7	Elevation** 99.7 99.5 99.5	Pump elev. length 70 70 70 210 Des. Flow Pump Run= Tank Gal/IN Elev. Head	113.4 hole size 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 gal/min = 480 22.50 20.3 7.1	7.11 7.11 7.11	Manifold elev. gal/day 160 160 160	120.5 trench area 210 210 210 210 LTAR = (ltar + 5%) (ltar W/ INOV)	0.762 0.762 0.762 0.80 0.84 1.07	Pump tank elev. line 4 5 6 % of Dose Vol. Dose Volume Dose Pump Time	color Red Orange	rod read 11.0 11.0 11.0 total 75.0% 96 4.82	Elevation ** 99.0 99.0 99.0	Pump elev. length 70 70 70 210 Des. Flow Pump Run=	113.4 hole size 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 gal/min = 480 22.50 20.26	7.1 7.1 7.1	Manifold elev. gal/day 1 160 1 160	120.5 trench area 210 210 210 LTAR = (ltar + 5%) (ltar W/ INO V)	0.762 0.762 0.762 0.80 0.84 1.07
Bench Mark Pump tank elev. line 1 2 3 % of Dose Vol. Dose Volume Dose Pump Time	100.0 120.6 color Red Orange Red	rod read 10.3 10.5 10.5 total 70.00% 96 4.50	Elevation** 99.7 99.5 99.5	Pump elev. length 70 70 70 210 Des. Flow Pump Run= Tank Gal/IN	113.4 hole size 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 gal/min = 480 22.50 20.3 7.1	7.11 7.11 7.11	Manifold elev. gal/day 160 160 160	120.5 trench area 210 210 210 210 LTAR = (ltar + 5%) (ltar W/ INOV)	0.762 0.762 0.762 0.80 0.84 1.07	Pump tank elev. line 4 5 6 %of Dose Vol. Dose Volume Dose Pump Time Drawdown in Inches Supply Line Length	color Red Orange Red	rod read 11.0 11.0 11.0 total 75.0% 96 4.82 4.7 125	Elevation ** 99.0 99.0 99.0	Pump elev. length 70 70 70 210 Des. Flow Pump Run= Tank Gal/IN Elev. Head	113.4 hole size 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 gal/min = 480 22.50 20.26 7.10	7.1 7.1 7.1	Manifold elev. gal/day 1 160 1 160	120.5 trench area 210 210 210 LTAR = (ltar + 5%) (ltar W/ INO V)	0.762 0.762 0.762 0.80 0.84 1.07
Bench Mark Pump tank elev. line 1 2 3 % of Dose Vol. Dose Volume Dose Pump Time Drawdown in Inche Supply Line Length	100.0 120.6 color Red Orange Red	rod read 10.3 10.5 10.5 total 70.00% 96 4.50 4.7 40	Elevation** 99.7 99.5 99.5	Pump elev. length 70 70 70 210 Des. Flow Pump Run= Tank Gal/IN Elev. Head	113.4 hole size 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 gal/min = 480 22.50 20.3 7.1	7.11 7.11 7.11	Manifold elev. gal/day 160 160 160	120.5 trench area 210 210 210 210 LTAR = (ltar + 5%) (ltar W/ INOV)	0.762 0.762 0.762 0.80 0.84 1.07	Pump tank elev. line 4 5 6 %of Dose Vol. Dose Volume Dose Pump Time Drawdown in Inches Supply Line Length	color Red Orange	rod read 11.0 11.0 11.0 total 75.0% 96 4.82 4.7 125	Elevation ** 99.0 99.0 99.0	Pump elev. length 70 70 70 210 Des. Flow Pump Run= Tank Gal/IN Elev. Head	113.4 hole size 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 gal/min = 480 22.50 20.26 7.10	7.1 7.1 7.1	Manifold elev. gal/day 1 160 1 160	120.5 trench area 210 210 210 LTAR = (ltar + 5%) (ltar W/ INO V)	0.762 0.762 0.762 0.80 0.84 1.07
Bench Mark Pump tank elev. line 1 2 3 % of Dose Vol. Dose Volume Dose Pump Time Drawdown in Inche Supply Line Length Comments:	100.0 120.6 color Red Orange Red	rod read 10.3 10.5 10.5 total 70.00% 96 4.50 4.7 40	Elevation** 99.7 99.5 99.5	Pump elev. length 70 70 70 210 Des. Flow Pump Run= Tank Gal/IN Elev. Head	113.4 hole size 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 gal/min = 480 22.50 20.3 7.1	7.11 7.11 7.11	Manifold elev. gal/day 160 160 160	120.5 trench area 210 210 210 210 LTAR = (ltar + 5%) (ltar W/ INOV)	0.762 0.762 0.762 0.80 0.84 1.07	Pump tank elev. line 4 5 6 %of Dose Vol. Dose Volume Dose Pump Time Drawdown in Inches Supply Line Length	color Red Orange Red	rod read 11.0 11.0 11.0 total 75.0% 96 4.82 4.7 125	Elevation ** 99.0 99.0 99.0	Pump elev. length 70 70 70 210 Des. Flow Pump Run= Tank Gal/IN Elev. Head	113.4 hole size 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 gal/min = 480 22.50 20.26 7.10	7.1 7.1 7.1	Manifold elev. gal/day 1 160 1 160	120.5 trench area 210 210 210 LTAR = (ltar + 5%) (ltar W/ INO V)	0.762 0.762 0.762 0.80 0.84 1.07
Bench Mark Pump tank elev. line 1 2 3 % of Dose Vol. Dose Volume Dose Pump Time Drawdown in Inche Supply Line Length	100.0 120.6 color Red Orange Red	rod read 10.3 10.5 10.5 total 70.00% 96 4.50 4.7 40	Elevation** 99.7 99.5 99.5	Pump elev. length 70 70 70 210 Des. Flow Pump Run= Tank Gal/IN Elev. Head	113.4 hole size 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 gal/min = 480 22.50 20.3 7.1	7.11 7.11 7.11	Manifold elev. gal/day 160 160 160	120.5 trench area 210 210 210 210 LTAR = (ltar + 5%) (ltar W/ INOV)	0.762 0.762 0.762 0.80 0.84 1.07	Pump tank elev. line 4 5 6 % of Dose Vol. Dose Volume Dose Pump Time Drawdown in Inches Supply Line Length Comments: **	color Red Orange Red	rod read 11.0 11.0 11.0 total 75.0% 96 4.82 4.7 125	Elevation** 99.0 99.0 99.0 feet =	Pump elev. length 70 70 70 210 Des. Flow Pump Run= Tank Gal/IN Elev. Head	113.4 hole size 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 gal/min = 480 22.50 20.26 7.10	7.1 7.1 7.1	Manifold elev. gal/day 1 160 1 160	120.5 trench area 210 210 210 LTAR = (ltar + 5%) (ltar W/ INO V)	0.762 0.762 0.762 0.80 0.84 1.07
Bench Mark Pump tank elev. line 1 2 3 % of Dose Vol. Dose Volume Dose Pump Time Drawdown in Inche Supply Line Length Comments: Hydraulic Profile	100.0 120.6 color Red Orange Red	rod read 10.3 10.5 10.5 total 70.00% 96 4.50 4.7 40	Elevation** 99.7 99.5 99.5 feet =	Pump elev. length 70 70 70 210 Des. Flow Pump Run= Tank Gal/IN Elev. Head	113.4 hole size 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 gal/min = 480 22.50 20.3 7.1	7.11 7.11 7.11	Manifold elev. gal/day 160 160 160	120.5 trench area 210 210 210 210 LTAR = (ltar + 5%) (ltar W/ INOV)	0.762 0.762 0.762 0.80 0.84 1.07	Pump tank elev. line 4 5 6 % of Dose Vol. Dose Volume Dose Pump Time Drawdown in Inches Supply Line Length Comments: ** Hydraulic Profile	color Red Orange Red	rod read 11.0 11.0 11.0 total 75.0% 96 4.82 4.7 125	## Pevation** 99.0 99.0 99.0 feet =	Pump elev. length 70 70 70 210 Des. Flow Pump Run= Tank Gal/IN Elev. Head	113.4 hole size 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 gal/min = 480 22.50 20.26 7.10	7.1 7.1 7.1	Manifold elev. gal/day 1 160 1 160	120.5 trench area 210 210 210 LTAR = (ltar + 5%) (ltar W/ INO V)	0.762 0.762 0.762 0.80 0.84 1.07
Bench Mark Pump tank elev. line 1 2 3 % of Dose Vol. Dose Volume Dose Pump Time Drawdown in Inche Supply Line Length Comments:	100.0 120.6 color Red Orange Red	rod read 10.3 10.5 10.5 total 70.00% 96 4.50 4.7 40	Elevation** 99.7 99.5 99.5 feet =	Pump elev. length 70 70 70 210 Des. Flow Pump Run= Tank Gal/IN Elev. Head	113.4 hole size 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 gal/min = 480 22.50 20.3 7.1	7.11 7.11 7.11	Manifold elev. gal/day 160 160 160	120.5 trench area 210 210 210 210 LTAR = (ltar + 5%) (ltar W/ INOV)	0.762 0.762 0.762 0.80 0.84 1.07	Pump tank elev. line 4 5 6 % of Dose Vol. Dose Volume Dose Pump Time Drawdown in Inches Supply Line Length Comments: Hydraulic Profile Manifold Elevation	color Red Orange Red	rod read 11.0 11.0 11.0 total 75.0% 96 4.82 4.7 125	## Pevation** 99.0 99.0 99.0 feet =	Pump elev. length 70 70 70 210 Des. Flow Pump Run= Tank Gal/IN Elev. Head	113.4 hole size 1/2in SCH 40 1/2in SCH 40 1/2in SCH 40 gal/min = 480 22.50 20.26 7.10	7.1 7.1 7.1	Manifold elev. gal/day 1 160 1 160	120.5 trench area 210 210 210 LTAR = (ltar + 5%) (ltar W/ INO V)	0.762 0.762 0.762 0.80 0.84 1.07



PRESSURE MANIFOLD CALCULATIONS (INITIAL)

PRESSURE MANIFOLD CALCULATIONS (REPAIR)

MacCONNELL & Associates, P.

DETAILS - 6 OF

EVAN & PATRICIA GERMOND 1594 JOSEY WILLIAMS RD (LOT 3 KEMP HOLDINGS)

ВҮ: DCB, JDH JOB #: A90401.00

EOP-PRESSURE MANIFOLD

E-101

DEMAND DOSED SIMPLEX CONTROL PANEL

ELECTRICAL SPECIFICATIONS

- PANEL 1121W124H8AC10E15AI7J.
- AND 48" 60" OFF THE FINISHED GRADE TO THE BOTTOM OF THE ENCLOSURE.
- 3. THE ELECTRICIAN SHALL MAKE THE INTERNAL PANEL CONNECTIONS OF THE PUMP AND CONTROL CORDS. CONTROL PANELS WILL CONTAIN A WIRING SCHEMATIC IDENTIFYING ALL TERMINAL CONNECTIONS. THE SYSTEM INSTALLER WILL BUNDLE AND MARK EACH CORD WITH THE APPROPRIATE IDENTIFICATION AND SECURE IN THE ACCESS RISER AT THE PUMP POINT.
- 5. THE CONTROL PANEL REQUIRES A DEDICATED CIRCUIT OF 15 AMPS, 115 VOLTS SUPPLIED FOR THE ALARM/CONTROL SIDE OF THE PANEL.
- ELECTRICIAN AS A CONNECTION BETWEEN THE CONTROL PANEL AND THEIR RESPECTIVE TERMINATION POINTS OUT IN THE TREATMENT AREA.
- 7. ALL OPEN CONDUIT ENDS SHALL HAVE REMOVABLE CLAY TYPE DUCT SEAL EMBEDDED TO PREVENT GASES AND MOISTURE FROM ENTERING THE CONTROL PANEL. DO NOT USE PERMANENT SILICONE OR EXPANDABLE FOAM PRODUCTS.
- 8. ALL PUMP AND FLOAT CONTROL CORDS WILL BE SUPPLIED WITH EITHER 30' OR 50' LEADS. THIS WILL HELP KEEP SPLICES TO A MINIMUM AND SHOULD BE AVOIDED IF AT ALL POSSIBLE. IF A SPLICE MUST BE USED, IT MUST BE MADE ABOVE GRADE IN A PLASTIC NEMA 4X JUNCTION BOX.
- 10. AUDIBLE/VISIBLE ALARMS SHALL BE EXTERNAL TO ANY STRUCTURE.
- 11. PROVIDE DISCONNECT PER N.C.B.C.
- 12. ALL ELECTRICAL INSTALLATION SHALL BE PER N.C.B.C.
- 13. PROVIDE MANUAL TRANSFER SWITCH AND PLUG FOR PORTABLE EMERGENCY

1. CONTROL PANEL(S) WILL BE APPROXIMATELY 12"X10"X6" AND A NEMA 4X, UL RATED ENCLOSURE. PANEL(S) WILL BE SUPPLIED BY SJE RHOMBUS MODEL 112 CONTROL

2. PANEL(S) SHALL BE MOUNTED, BY THE ELECTRICIAN WITHIN 10' OF THE TANK UNITS

4. THE SIMPLEX DEMAND DOSE CONTROL PANEL REQUIRES DEDICATED CIRCUITS OF 15 AMPS, 115 VOLTS, SINGLE PHASE SUPPLIED FOR THE PUMP.

6. A MINIMUM CONDUIT SIZE OF 11/2" SHALL BE FURNISHED AND INSTALLED BY THE

9. ALARMS SHALL BE AUDIBLE AND VISUAL.

GENERATOR. PROVIDE DISCONNECT PER NCBC AND NEC.

ELECTRICAL DETAILS

-101

EOP-PRESSURE MANIFOLD

EVAN & PATRICIA GERMOND 1594 JOSEY WILLIAMS RD (LOT 3 KEMP HOLDINGS)

BY: DCB, JDH JOB #: A90401.00

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