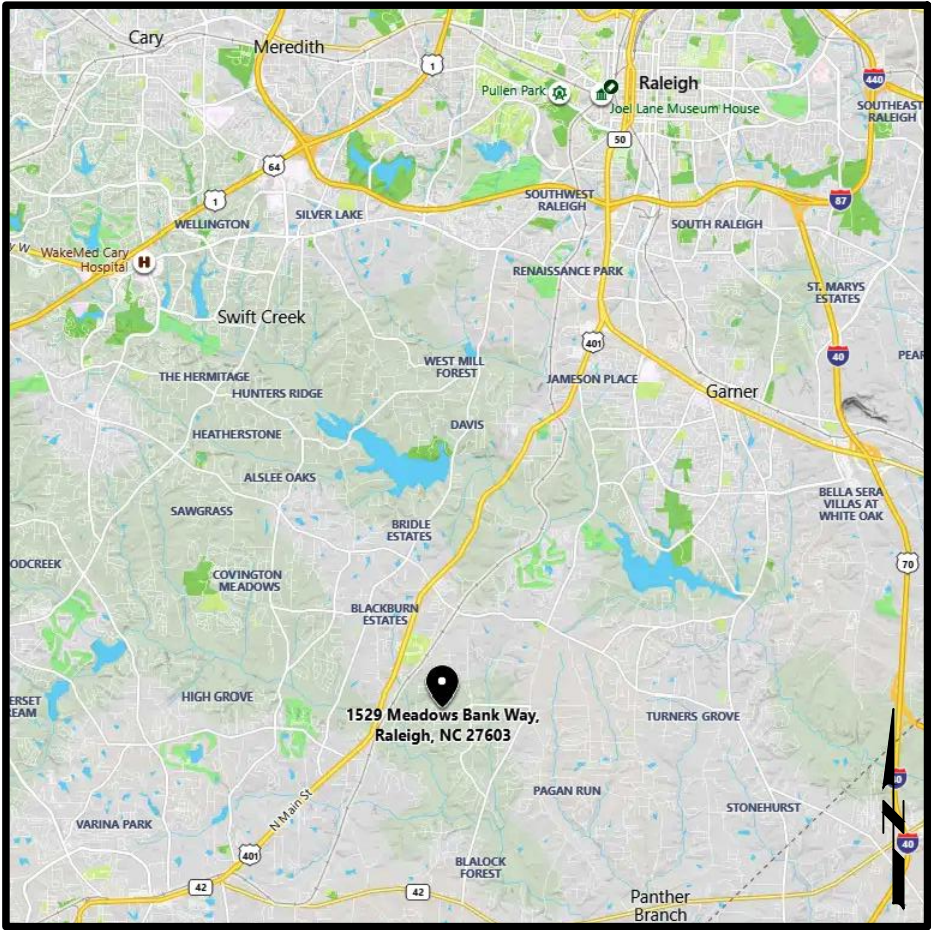


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CARUSO HOMES

1529 MEADOWS OF BANKS WAY (LOT 12 MEADOWS OF BANKS)

PRESSURE MANIFOLD SYSTEM WITH BLOCK PANELS - EOP



VICINITY MAP

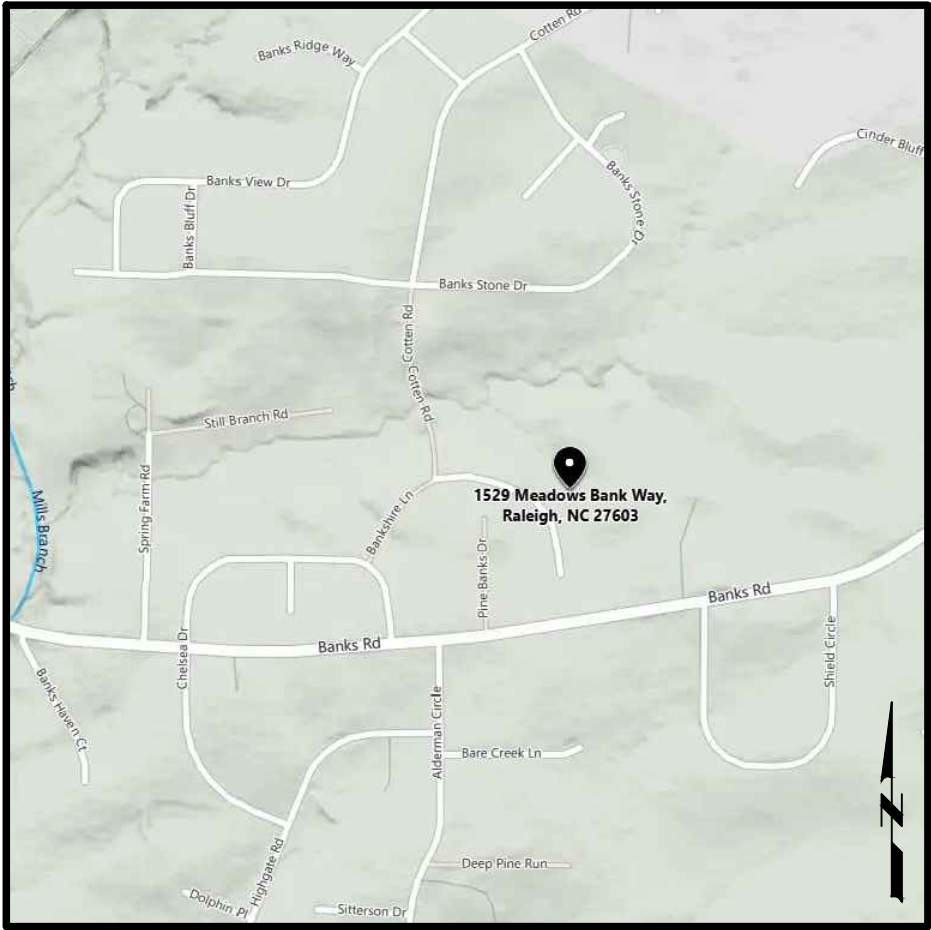
PROJECT No. A73252.00

WAKE COUNTY, NC

PIN# 0698062816

SCHEDULE OF DRAWINGS:

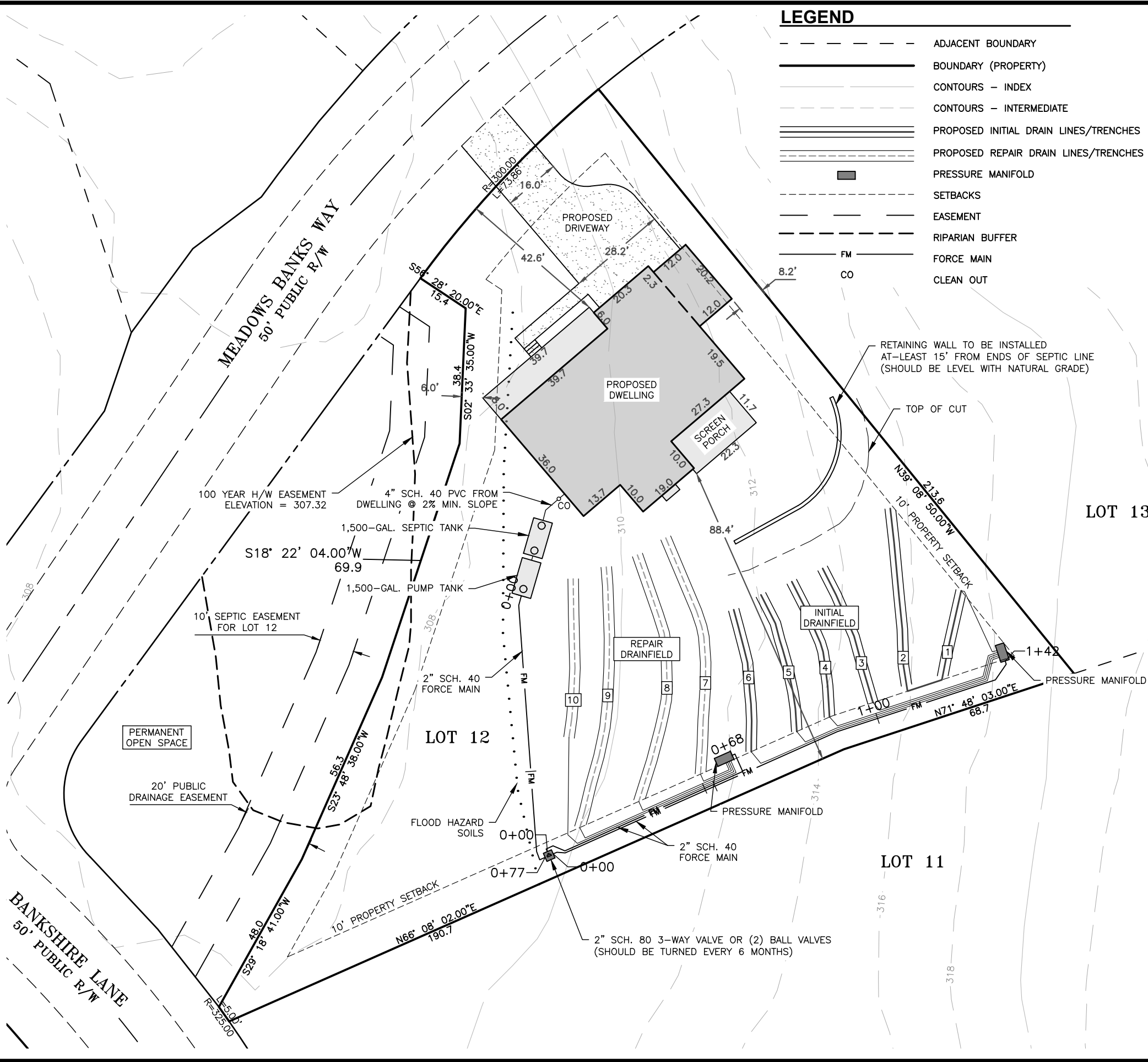
C-100	COVER SHEET
C-101	SITE LAYOUT
C-102	NOTES
C-103	FORCE MAIN PLAN AND PROFILE 1 OF 2
C-104	FORCE MAIN PLAN AND PROFILE 2 OF 2
D-101	DETAILS 1 OF 5
D-102	DETAILS 2 OF 5
D-103	DETAILS 3 OF 5
D-104	DETAILS 4 OF 5
D-105	DETAILS 5 OF 5
E-101	ELECTRICAL DETAILS 1 OF 1



LOCATION MAP



COVER SHEET		C-100	
BY: HGM, AVF		CARUSO HOMES	
JOB #: A73252.00		1529 MEADOWS BANKS WAY (LOT 12 MEADOWS OF BANKS)	
DATE: 05/20/2022		PRESSURE MANIFOLD SYSTEM WITH BLOCK PANELS - EOP	
501 CASCADE POINTE LANE, SUITE 103 CARY, NORTH CAROLINA 27513 P. O. BOX 129		WAKE COUNTY, NC	
MacCONNELL & Associates, P. C.			
MORRISVILLE, NORTH CAROLINA 27660 TEL: (919) 467-1239 FAX: (919) 319-6510			



LEGEND

- ADJACENT BOUNDARY
- BOUNDARY (PROPERTY)
- CONTOURS - INDEX
- CONTOURS - INTERMEDIATE
- PROPOSED INITIAL DRAIN LINES/TRENCHES
- PROPOSED REPAIR DRAIN LINES/TRENCHES
- PRESSURE MANIFOLD
- SETBACKS
- EASEMENT
- RIPARIAN BUFFER
- FM
- CO
- FORCE MAIN
- CLEAN OUT

NOTES

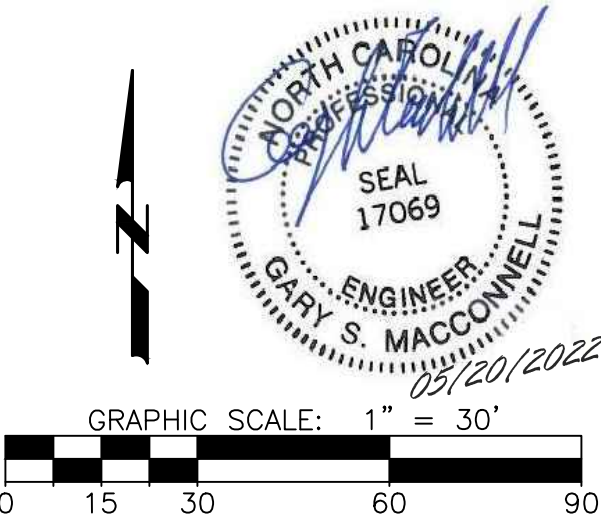
- PARCELS TAKEN FROM WAKE COUNTY GIS. TOPO TAKEN FROM NC FRIS. SITE PLAN AND SOIL INFORMATION PROVIDED BY CENTRAL CAROLINA SOIL CONSULTING, PLLC.
- KEEP TANKS AND DRAIN LINES A MINIMUM OF 10' OFF OF PROPERTY LINES.
- KEEP SUPPLY LINES, PRESSURE MANIFOLD, FORCE MAIN A MINIMUM OF 5' OFF OF PROPERTY LINES.
- INSTALL DRAINLINES ON CONTOUR WITH A MAXIMUM TRENCH DEPTH OF 14" WITH 8" SOIL CAP.
- INSTALLER SHALL CONTACT CENTRAL CAROLINA SOIL CONSULTING, PLLC PRIOR TO CONSTRUCTION FOR SOIL OBSERVATION.

CONTACTS:
JASON HALL - (919) 569-6704
JAMES RICE - (910) 740-3226

DRAIN LINE SEGMENTS (INITIAL)				
LINE #	FLAG COLOR	LENGTH	EXISTING GRADE	TRENCH BOTTOM DEPTH*
1	YELLOW	25'	±317.3'	14" BELOW EGS (±316.1')
2	PINK	52'	±315.9'	14" BELOW EGS (±314.7')
3	BLUE	40'	±315.2'	14" BELOW EGS (±314.0')
4	RED	40'	±314.3'	14" BELOW EGS (±313.1')
5	ORANGE	40'	±313.5'	14" BELOW EGS (±312.3')
6	YELLOW	40'	±312.5'	14" BELOW EGS (±311.3')
TOTALS		237'		

DRAIN LINE SEGMENTS (REPAIR)				
LINE #	FLAG COLOR	LENGTH	EXISTING GRADE	TRENCH BOTTOM DEPTH*
7	PINK	69'	±311.5'	14" BELOW EGS (±310.3')
8	BLUE	72'	±310.6'	14" BELOW EGS (±309.4')
9	RED	74'	±310.0'	14" BELOW EGS (±308.8')
10	ORANGE	45'	±309.6'	14" BELOW EGS (±308.4')
TOTALS		260'		

*DEPTH FROM EXISTING GROUND SURFACE.
PROVIDE MIN.12" SEPARATION FROM SEASONAL SOIL WETNESS.
*TOPO AND PARCELS TAKEN FROM WAKE COUNTY GIS.
*THIS IS NOT A SURVEY.



SITE LAYOUT

C-101

CARUSO HOMES
1529 MEADOWS BANKS WAY
(LOT 12 MEADOWS OF BANKS)

PRESSURE MANIFOLD SYSTEM
WITH BLOCK PANELS - EOP
WAKE COUNTY, NC

BY: HGM, AVF

JOB #: A73252.00

DATE: 05/20/2022

501 CASCADE POINTE LANE, SUITE 103
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P. O. BOX 129

MacCONNELL & Associates, P. C.

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MAINTENANCE SCHEDULE

ITEM	FREQUENCY	TASK
WATER CONSUMPTION	MONTHLY	RECORD TOTAL GALLONS USED FROM METER AT POTABLE WATER SUPPLY SOURCE. PUMP OUT ACCUMULATED GREASE AND DISPOSE OF IN A STATE--PERMITTED MANNER/FACILITY.
SEPTIC TANKS	WEEKLY	CHECK EFFLUENT FILTERS AND CLEAN AS REQ'D.
	MONTHLY	CHECK FOR SOLIDS ACCUMULATION, BLOCKAGES, AND BAFFLE AND/OR EFFLUENT FILTER DAMAGE. CHECK FOR IN/EXFILTRATION OF LIQUID.
	12 MONTHS OR AS REQ'D	PUMP OUT ACCUMULATED SOLIDS AND DISPOSE OF IN A STATE--PERMITTED MANNER/FACILITY.
PUMP TANKS	WEEKLY	CHECK PUMPS FOR FUNCTIONALITY AND ABNORMAL VIBRATIONS. TEST CONTROL AND ALARM FUNCTIONS. RECORD PUMP ELAPSED TIME AND CYCLE COUNTER READINGS.
	MONTHLY	CHECK FOR SOLIDS ACCUMULATION, BLOCKAGES, AND BAFFLE DAMAGE. CHECK FOR IN/EXFILTRATION OF LIQUID.
	12 MONTHS OR AS REQ'D	PUMP OUT ACCUMULATED SOLIDS AND DISPOSE OF IN A STATE--PERMITTED MANNER/FACILITY.
COLLECTION SYSTEM	6 MONTHS OR AS REQ'D	USE CLEAN--OUTS TO CHECK VISUALLY FOR BLOCKAGES. REMOVE AND DISPOSE OF BLOCKED SOLIDS IN A STATE--PERMITTED MANNER/FACILITY.
PRESSURE MANIFOLDS	6 MONTHS OR AS REQ'D	MEASURE AND RECORD PUMP DOSING RATES FOR EACH FIELD. CHECK RESIDUAL PRESSURE AND ADJUST AS NECESSARY TO HEAD OF 3'-0". FLUSH OUT MANIFOLD AS NECESSARY.
DISPOSAL FIELDS	MONTHLY OR AS REQ'D	MOW VEGETATIVE COVER. CHECK FOR EROSION OR SURFACING OR PONDING OF EFFLUENT.
	MONTHLY	WATER LEVELS IN THE FIELD TRENCH OBSERVATION PORTS SHOULD BE INSPECTED/RECORDED.

DOSING CONTROL

INITIAL SYSTEM SHALL DOSE ±2 TIMES PER DAY AT 235 GALLONS PER DOSE OR 8.1 MIN. AT 29.0 GPM.

REPAIR SYSTEM SHALL DOSE ±2 TIMES PER DAY AT 234 GALLONS PER DOSE OR 8.8 MIN. AT 26.8 GPM.

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. DRAWINGS BASED ON SITE SKETCH BY CENTRAL CAROLINA SOIL CONSULTING, PLLC, WAKE COUNTY GIS AND AERIAL PHOTOGRAPHY.

2. THE CONTRACTOR IS REQUIRED TO VERIFY ALL DIMENSIONS, ELEVATIONS, AND UTILITIES BEFORE BEGINNING ANY CONSTRUCTION.

3. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SOIL EROSION AND SEDIMENTATION CONTROL REQUIREMENTS OF THE COUNTY AND STATE.

4. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE OSHA, NCDOT, AND SAFETY REQUIREMENTS OF THE COUNTY AND STATE.

5. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL CONSTRUCTION DAMAGE EXPEDITIOUSLY AND AT NO ADDITIONAL COST TO THE OWNER.

6. FOUR OR SIX--INCH DIAMETER CORRUGATED PLASTIC TUBING SHALL COMPLY WITH ASTM F405 AND G.S. 150B--21.6.

7. NITRIFICATION TRENCH SHALL FOLLOW THE CONTOUR OF THE GROUND.

8. SURFACE WATER RUNOFF AND PONDING SHALL BE PROHIBITED AT ALL TIME.

9. 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.

10. EXISTING WELL TO BE ABANDONED PER REQUIREMENTS OF THE COUNTY OR STATE.

11. ALL SERVICE ACCESS OPENINGS WILL BE A MINIMUM OF 24 INCHES UNLESS OTHERWISE SHOWN.

12. ALL JOINTS (MID--SEAM, TOP--SEAM) SHALL BE SEALED USING CONCRETE SEALANTS BUTYL SEALANT # CS--102 MEETING ASTM C--990.

13. 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

14. ALL PIPE PENETRATIONS THROUGH PRECAST CONCRETE TANKS SHALL BE PRESS--SEAL CAST--A--SEAL 402 RUBBER BOOTS OR EQUAL AND GROUTED.
15. ANY CHANGES TO TANK LAYOUT AND INVERTS MAY BE ADJUSTED AS NECESSARY TO COMPLY WITH ACTUAL FIELD CONDITIONS UPON APPROVAL BY THE ENGINEER.

16. CONTRACTOR SHALL NOTIFY THE ENGINEER WHEN TANK INSTALLATION WILL OCCUR SO FIELD INSPECTION CAN TAKE PLACE.

17. CONTRACTOR SHALL DIVERT SURFACE WATER FROM ALL TANK AREAS. (SEPTIC TANKS, ETC.)

18. VEGETATIVE COVER SHALL BE ESTABLISHED IMMEDIATELY AFTER FIELD INSTALLATION.

19. ALL COMPONENTS TO BE ACCESSIBLE AT GRADE WITHOUT ENTERING INTO THE RISER/TANK.

20. CONTRACTOR MAY USE LARGER TANKS WITH ENGINEER'S APPROVAL. PT DOSE VOLUME ETC. WILL CHANGE.

21. 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.

22. CONCRETE SHALL HAVE A MINIMUM 4,500 PSI AT 28 DAYS. CONCRETE SHALL BE WATERPROOFED WITH BITUMINOUS MASTIC OR OTHER APPROVED COATING SYSTEM.

23. 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.

24. FIELD VERIFY ACCESS RISERS BEFORE ORDERING.

25. VERIFY PUMP PLACEMENT WITH PUMP MANUFACTURER BEFORE ORDERING TANK, RISERS, AND HATCHES.

26. ALL PRESSURE PIPE AND FITTINGS IN TANKS SHALL BE SCH. 80 PVC UNLESS OTHERWISE SHOWN.

27. BALL AND CHECK VALVES SHALL BE RATED AT A MIN. OF 235 PSI.





MacCONNELL
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TEL: (919) 467-1239 FAX: (919) 319-6510

BY: HGM, AVF
JOB #: A73252.00
DATE: 05/20/2022

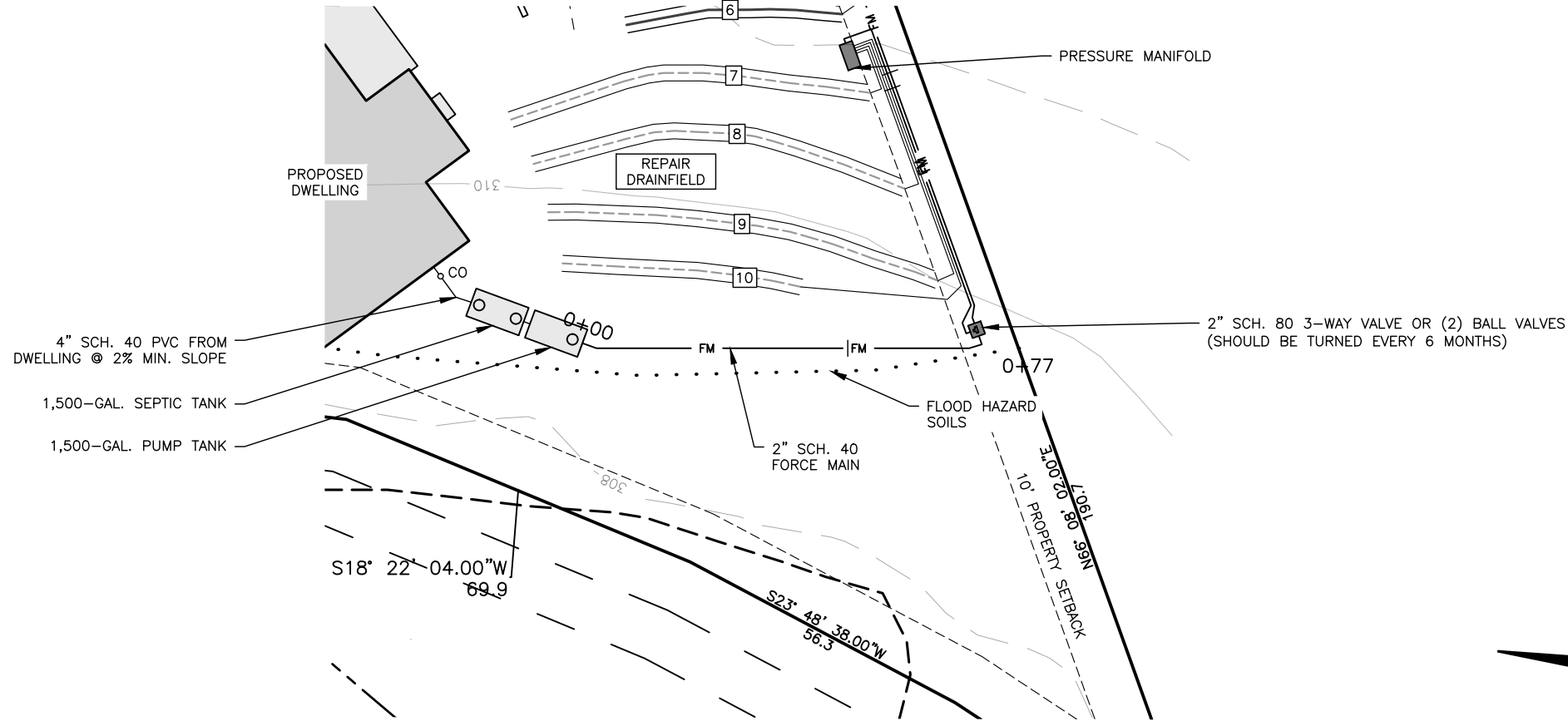
CARUSO HOMES
1529 MEADOWS BANKS WAY
(LOT 12 MEADOWS OF BANKS)

PRESSURE MANIFOLD SYSTEM
WITH BLOCK PANELS - EOP
WAKE COUNTY, NC

NOTES

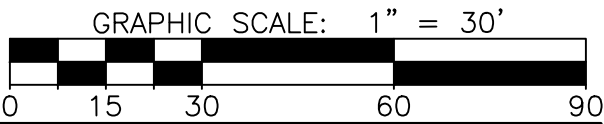
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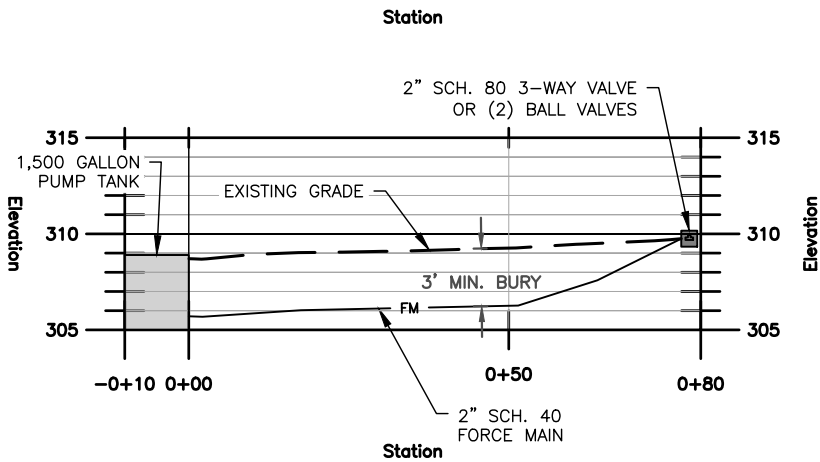


LEGEND

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- PROPOSED INITIAL DRAIN LINES/TRENCHES
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- EASEMENT
- RIPARIAN BUFFER
- FORCE MAIN
- CLEAN OUT



1
C-103
1"=30'
FORCE MAIN PLAN TO 2" SCH. 80 3-WAY VALVE OR (2) BALL VALVES



2
C-103
HORIZONTAL SCALE 1"=30' ; VERTICAL SCALE 1"=10'
FORCE MAIN PROFILE TO 2" SCH. 80 3-WAY VALVE OR (2) BALL VALVES



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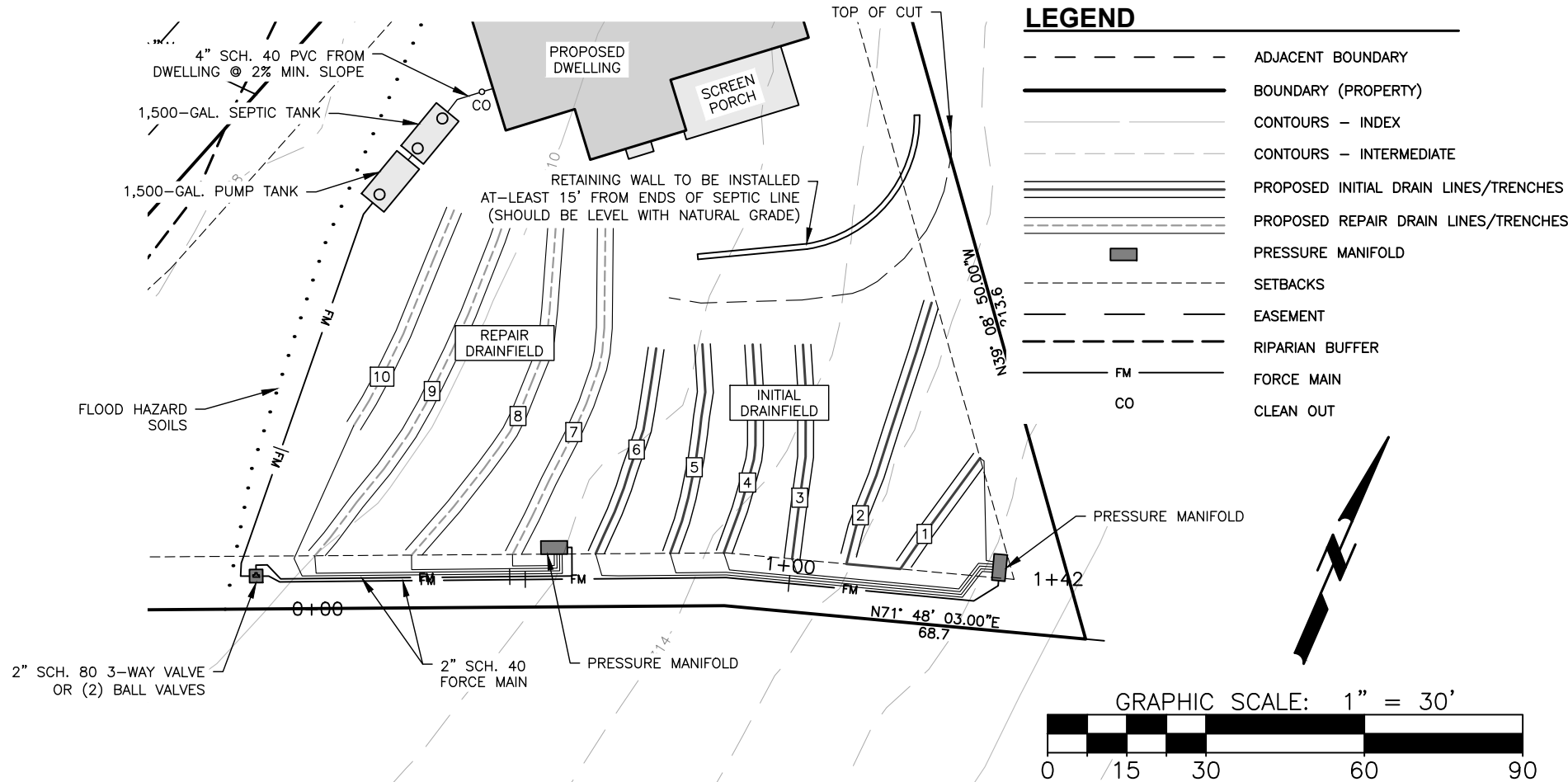
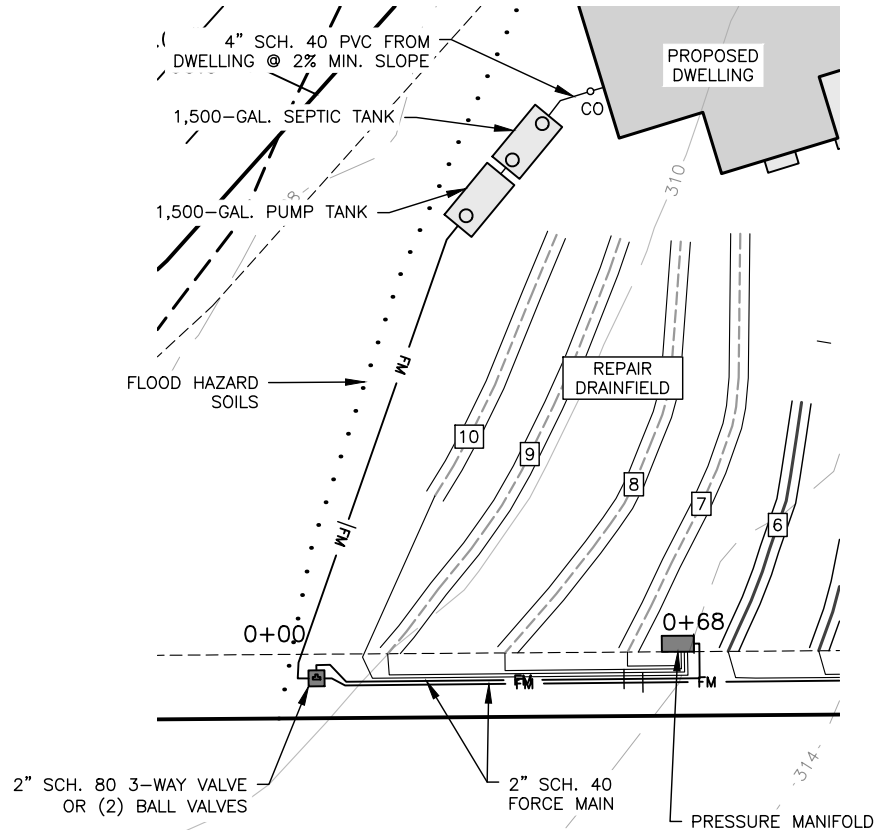
FORCE MAIN
PLAN AND
PROFILE 1 OF 2

CARUSO HOMES
1529 MEADOWS BANKS WAY
(LOT 12 MEADOWS OF BANKS)
PRESSURE MANIFOLD SYSTEM
WITH BLOCK PANELS - EOP
WAKE COUNTY, NC

BY: HGM, AVF
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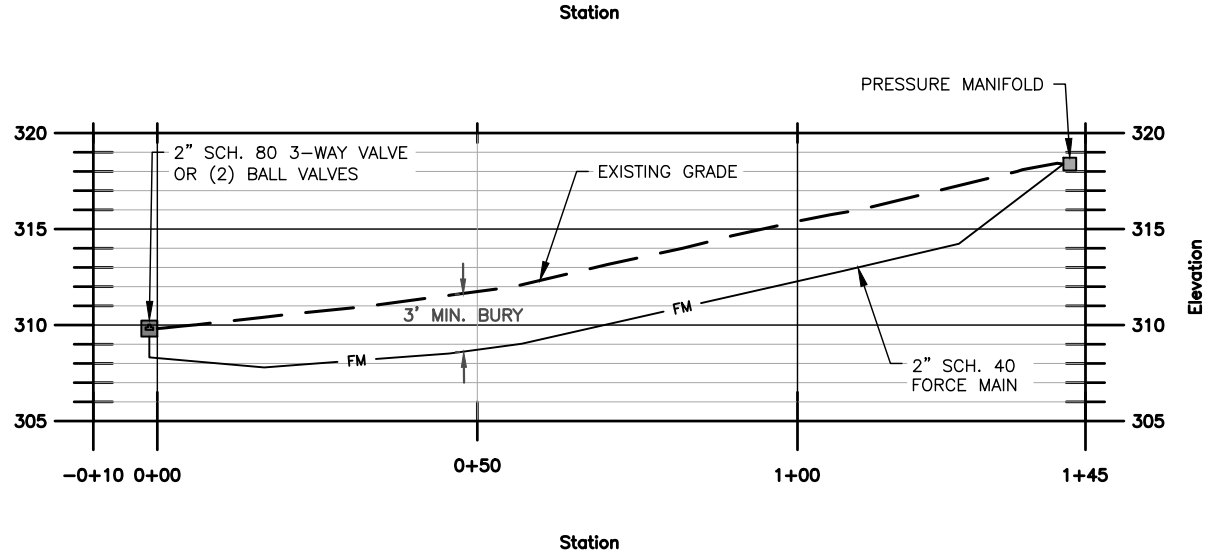
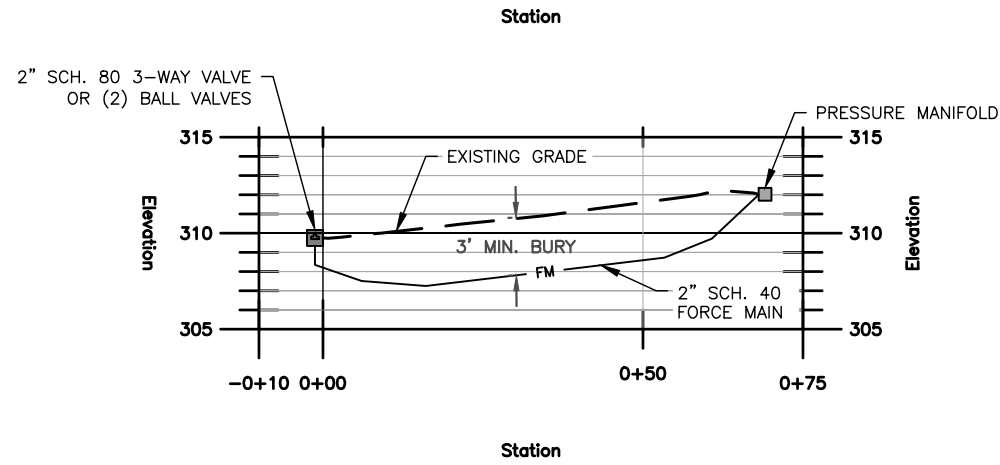
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1 FORCE MAIN PLAN TO PRESSURE MANIFOLD(S)

C-104

1"=30'



2 FORCE MAIN PROFILE TO PRESSURE MANIFOLD(S)

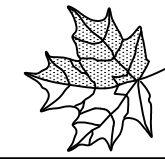
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HORIZONTAL SCALE 1"=30' ; VERTICAL SCALE 1"=10'



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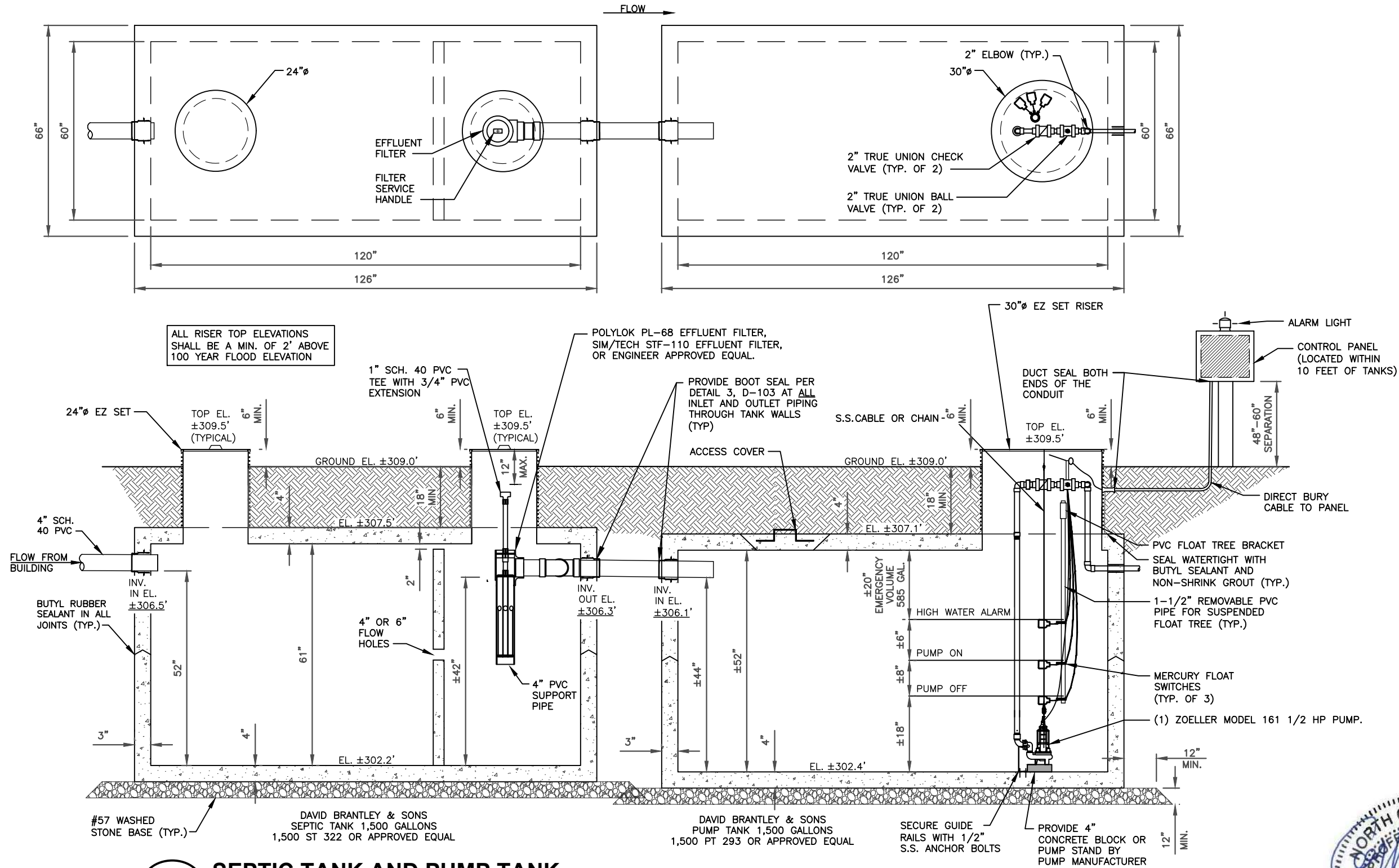
FORCE MAIN
PLAN AND
PROFILE 2 OF 2

CARUSO HOMES
1529 MEADOWS BANKS WAY
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PRESSURE MANIFOLD SYSTEM
WITH BLOCK PANELS - EOP
WAKE COUNTY, NC

BY: HGM, AVF
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C-104

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1 SEPTIC TANK AND PUMP TANK
D-101 NTS



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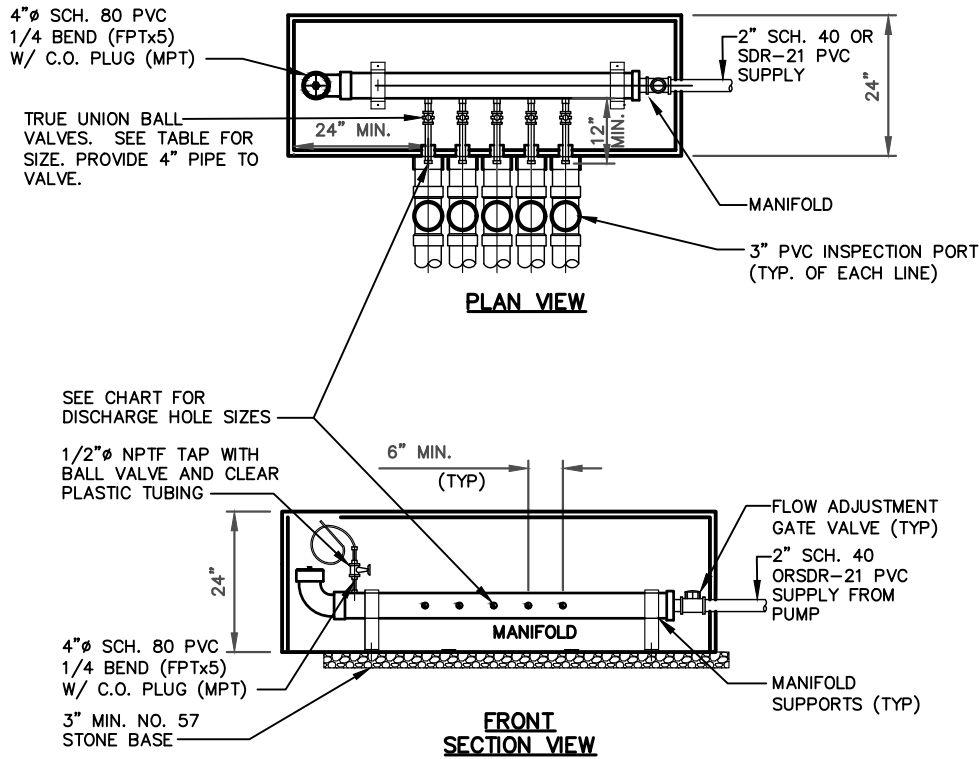
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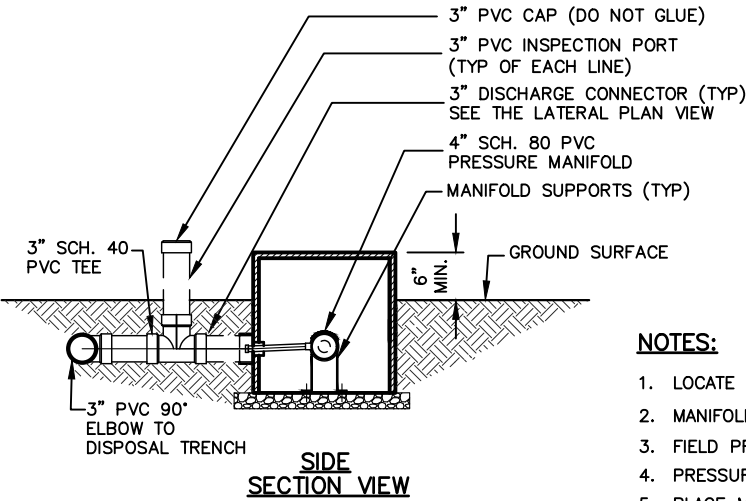
DETAILS - 1 OF 5

D-101



PRESSURE MANIFOLD (INITIAL LINES) TAP CHART				
MANIFOLD TAP	LINES	FLAG COLOR	HOLE SIZES	LENGTH
1	1&2	YELLOW/PINK	1/2" SCH. 40	77'
2	3	BLUE	1/2" SCH. 80	40'
3	4	RED	1/2" SCH. 80	40'
4	5	ORANGE	1/2" SCH. 80	40'
5	6	YELLOW	1/2" SCH. 80	40'

PRESSURE MANIFOLD (REPAIR LINES) TAP CHART				
MANIFOLD TAP	LINES	FLAG COLOR	HOLE SIZES	LENGTH
1	7	PINK	1/2" SCH. 40	69'
2	8	BLUE	1/2" SCH. 40	72'
3	9	RED	1/2" SCH. 40	74'
4	10	ORANGE	1/2" SCH. 80	45'



- NOTES:**
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.

1
D-102

PRESSURE MANIFOLD
NTS

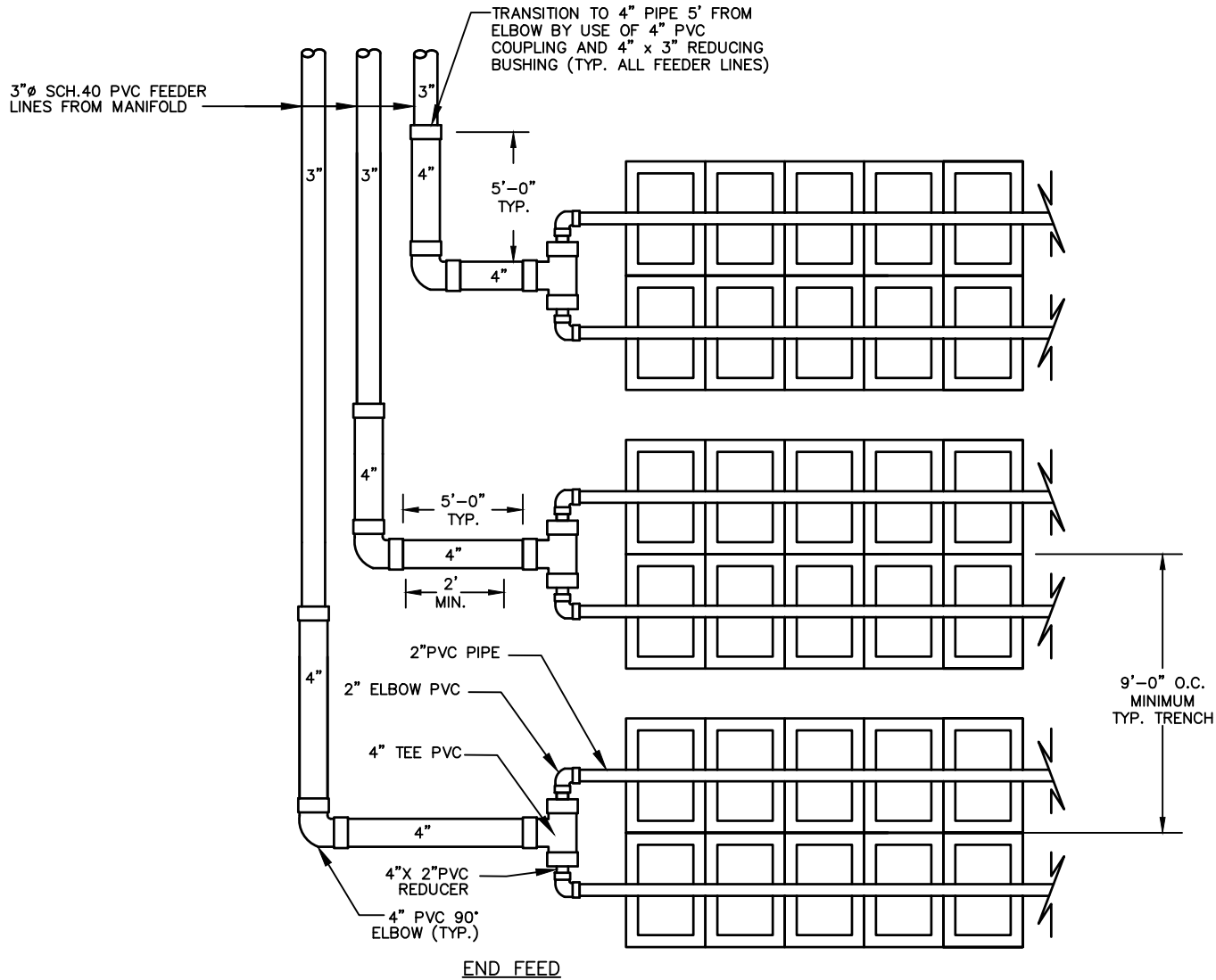


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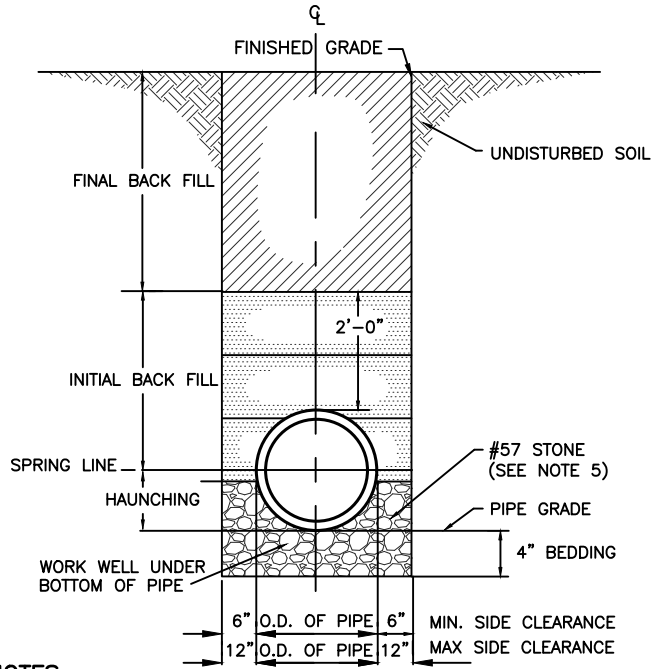
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PRESSURE MANIFOLD SYSTEM
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1
D-103
NTS
LATERAL PLAN VIEW



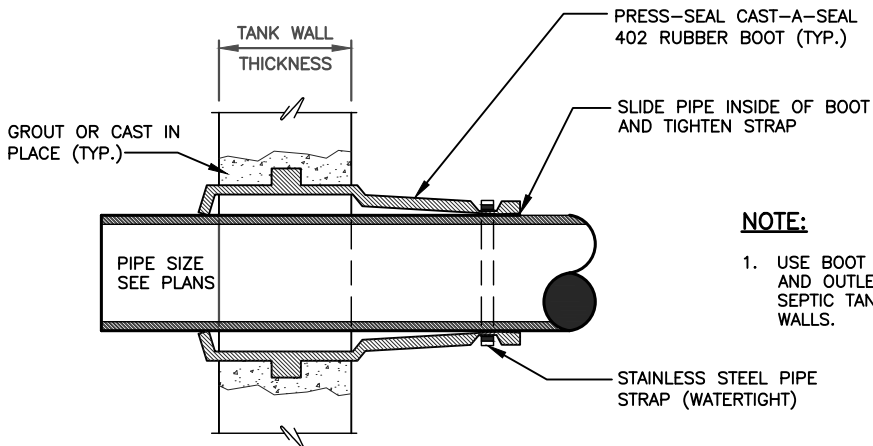
- NOTES:
- FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND THE BRACING.
 - NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.
 - ALL BACK FILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
 - BACK FILL SHALL BE TAMPED IN 6" LAYERS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

2
D-103
NTS
GRAVITY SEWER INSTALLATION DETAIL

TRENCH EXCAVATION LIMITS		
OUTSIDE PIPE Ø	(W) TRENCH WIDTH MAX	(W) TRENCH WIDTH MIN.
≤ 6"	3'-9"	2'-0"
8" TO 10"	3'-9"	2'-2"
12"	3'-9"	PIPE Ø + 2'
14"-16"	4'-2"	PIPE Ø + 2'
18"	4'-4"	PIPE Ø + 2'
20" & 21"	4'-8"	PIPE Ø + 2'
24"	4'-11"	PIPE Ø + 2'
27"	5'-9"	PIPE Ø + 2'
30"	6'-7"	PIPE Ø + 2'
36"	7'-4"	PIPE Ø + 2'
42"	8'-2"	PIPE Ø + 2'
48"	8'-9"	PIPE Ø + 2'
54"	9'-4"	PIPE Ø + 2'
60"	9'-10"	PIPE Ø + 2'
72"	11'-0"	PIPE Ø + 2'
78"	11'-8"	PIPE Ø + 2'
84"	12'-0"	PIPE Ø + 2'
90"	12'-6"	PIPE Ø + 2'
96"	13'-0"	PIPE Ø + 2'
108"	14'-0"	PIPE Ø + 2'

(W) = TRENCH WIDTH AT SPRINGLINE OF PIPE. TRENCH SIDE SLOPES SHALL BE IN ACCORDANCE WITH OSHA REQUIREMENTS. BEGIN SIDE SLOPE, IF USED, APPROX. 18" ABOVE TOP OF PIPE. (TYP. ALL BEDDING TYPES)

DEPTH OF CUT	(S) MAXIMUM PAVEMENT REPLACEMENT WIDTH
0' TO 6'	(S) = (W)+4'
> 6' TO 8'	(S) = (W)+8'
> 8' TO 10'	(S) = (W)+12'
> 10' TO 12'	(S) = (W)+16'

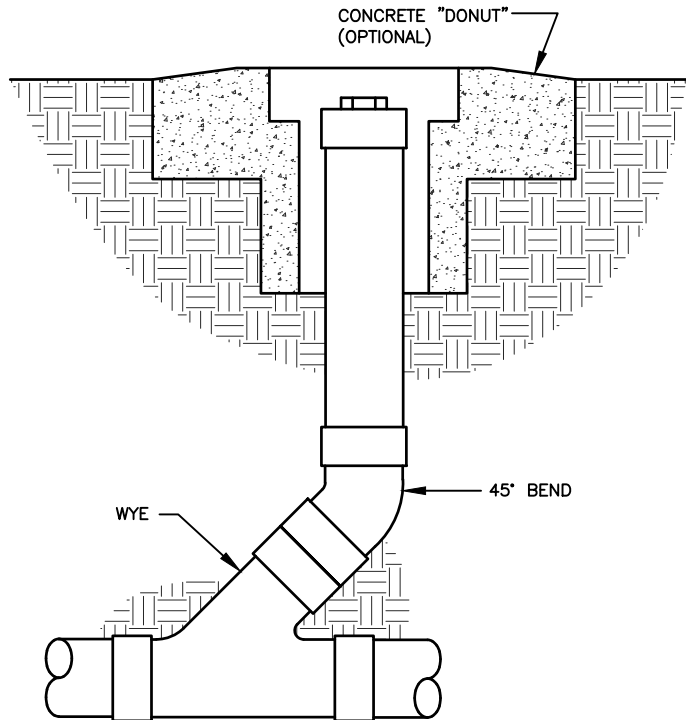


3
D-103
NTS
PIPE THRU TANK PENETRATIONS

- NOTE:
- USE BOOT SEAL ON ALL INLET AND OUTLET PIPING THROUGH SEPTIC TANK AND PUMP TANK WALLS.



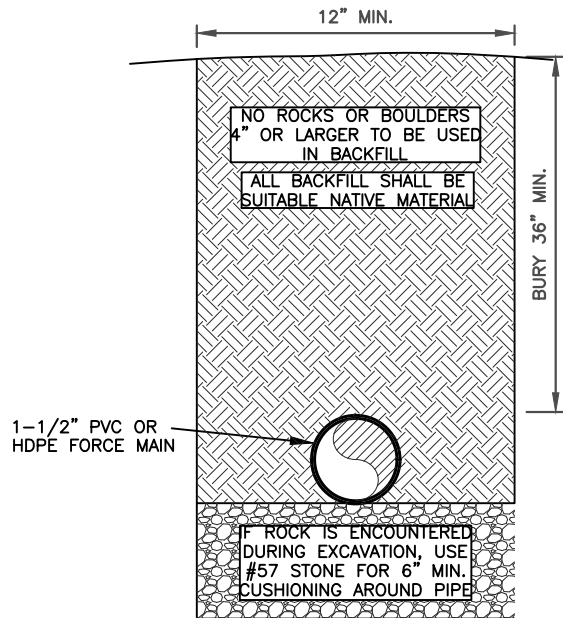
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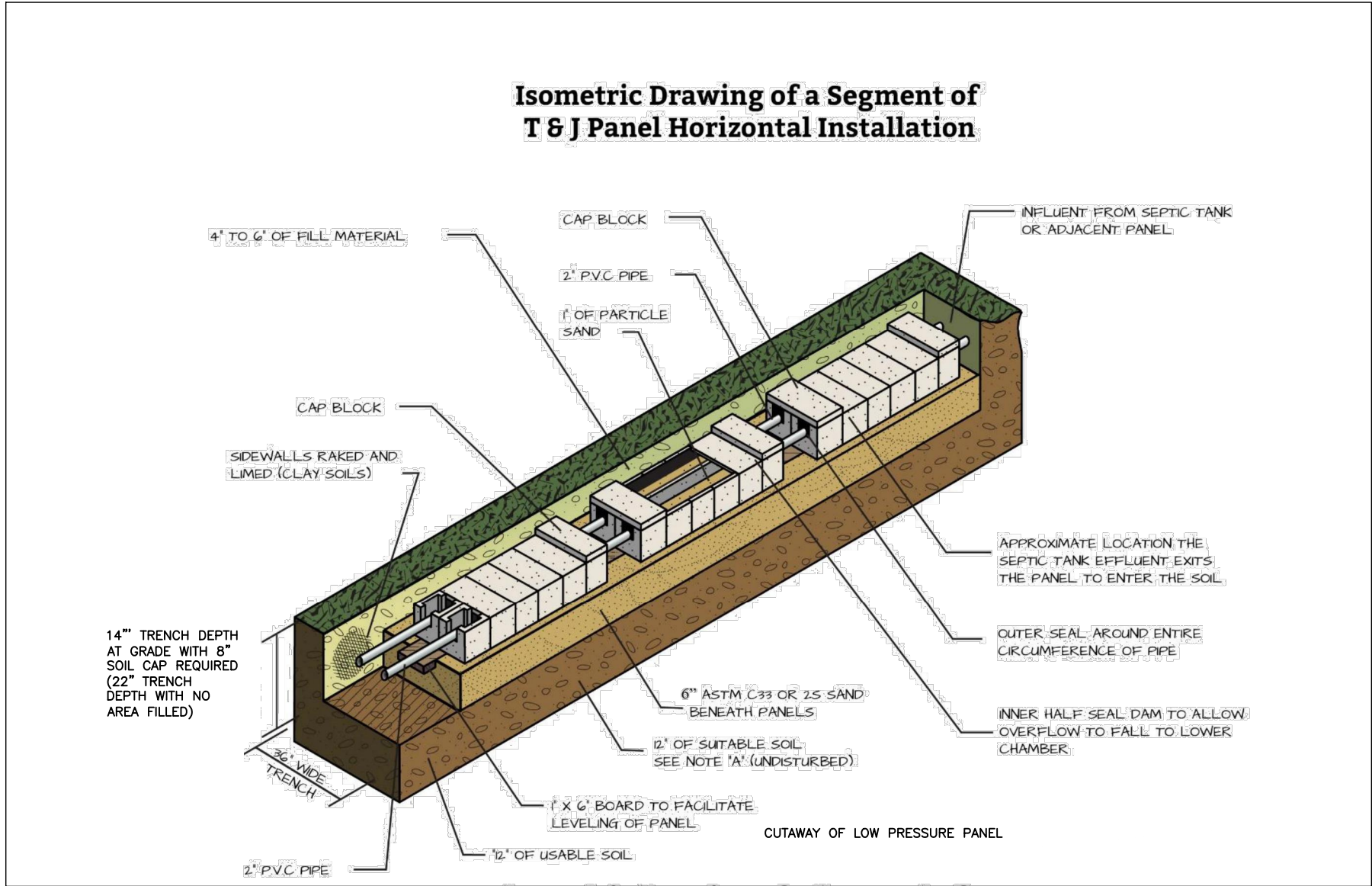
NOTE:

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

1 GRAVITY CLEANOUT
D-104 NTS



2 FORCE MAIN PIPE LAYING TRENCH
D-104 NTS



3 PREFABRICATED PERMEABLE BLOCK PANEL SYSTEM (BY T&J PANELS)
D-104 NTS



MacCONNELL & Associates, P. C.

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CARUSO HOMES
1529 MEADOWS BANKS WAY
(LOT 12 MEADOWS OF BANKS)
PRESSURE MANIFOLD SYSTEM
WITH BLOCK PANELS - EOP
WAKE COUNTY, NC

BY: HGM, AVF
JOB #: A73252.00
DATE: 05/20/2022

DETAILS - 4 OF 5
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Z:\T-Drive (Projects)\Library\2021\A73252.00 - Caruso Homes - MEA Lot 12 - 1529 Meadows Banks Way - 5BR PM & Drip Repair with FRI Drawings\A73252.00 - Details.dwg May 20, 2022 5:29pm

MACCONNELL AND ASSOCIATES, P.C.
LOT 12 MEADOWS OF BANKS SUBDIVISION
PRESSURE MANIFOLD DESIGN - INITIAL

Name: Caruso Homes, Inc. P.I.N. #: 0698062816 D#: N/A

Address: 1529 Meadows Bank Way Wake County, North Carolina Subdiv: Meadows of Banks Lot#: 12

of BDR: 5 Daily Flow: 480 gal/day L.T.A.R.: 0.3 gal/day/sq.ft
Septic Tank: 1500 gals Pump Tank: 1500 gals Sq. Foot: 711 Stone Depth: N/A

Number of Taps: 5 Length of Trenches: 237 ft(See Tap Chart for Details)
Depth of Trenches: 14 in (with 8-in. soil cap) Manifold Length: 48 in
Manifold Diameter: 4 inches Tap Configuration: 6 in spacing 1 side(s) of manifold
Supply Line: length: 219 ft Diameter(Supply Line): 2 in. SCH40 PVC Pipe ID (Inch) 2.047

Friction Loss + Fitting Loss: 5.07 ft(supply line length + 70' for fittings in pump tank)
Design Head: 2 ft Elevation Head: 15.6 ft
Total Head: 22.7 ft Pump to Deliver: 29.0 gals/min at 22.7 ft head

Dosing Volume: 235 gals,
Pump Selection: Drawdown: 235 gals divided by 29.3 gals/in = 8.0 inches head

Pump Selection: As shown on the construction drawings.

TAP CHART

Bench Mark	100.0						Design Head:	2	
Pump Tank Elevation	307.1			Pump Elevation	302.4		Manifold Elevation	318.0	
Line	Color	Rod Read	Relative Elevation	Length	Hole Size	flow/tap	gal/day	Trench Area	LINE/TAR
1&2	Yellow/Pink	1.5	98.5	77	1/2in SCH 40	7.11	117.6	231	0.509
3	Blue	3.9	96.1	40	1/2in SCH 80	5.48	90.6	120	0.755
4	Red	4.6	95.4	40	1/2in SCH 80	5.48	90.6	120	0.755
5	Orange	5.4	94.6	40	1/2in SCH 80	5.48	90.6	120	0.755
6	Yellow	6.6	93.4	40	1/2in SCH 80	5.48	90.6	120	0.755
total				237	gal/min =	29.0		LTAR =	0.300
Gallon per Panel	4.3			Des. Flow	480			(ltar + 5%)	0.315
Dose Volume	235			Pump Run=	16.53		Ezflow	(ltar W/ INNO V)	0.800
Dose Pump Time	8.1			Tank Gal/IN	29.25			(ltar + 5%)	0.840
Drawdown in Inches	8.0			Elev. Head	15.60				
Supply Line Length	219			Velocity fps	2.83				

Comments:

Hydraulic Profile

Manifold Elevation 318.0
Pump Tank Elevation 307.1
Pump Elevation 302.4

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PRESSURE MANIFOLD CALCULATIONS (INITIAL)

MACCONNELL AND ASSOCIATES, P.C.
LOT 12 MEADOWS OF BANKS SUBDIVISION
PRESSURE MANIFOLD DESIGN - REPAIR

Name: Caruso Homes, Inc. P.I.N. #: 0698062816 D#: N/A

Address: 1529 Meadows Bank Way Wake County, North Carolina Subdiv: Meadows of Banks Lot#: 12

of BDR: 5 Daily Flow: 480 gal/day L.T.A.R.: 0.275 gal/day/sq.ft
Septic Tank: 1500 gals Pump Tank: 1500 gals Sq. Foot: 780 Stone Depth: N/A

Number of Taps: 4 Length of Trenches: 260 ft(See Tap Chart for Details)
Depth of Trenches: 14 in (with 8-in soil cap) Manifold Length: 42 in
Manifold Diameter: 4 inches Tap Configuration: 6 in spacing 1 side(s) of manifold
Supply Line: length: 145 ft Diameter(Supply Line): 2 in. SCH40 PVC Pipe ID (Inch) 2.047

Friction Loss + Fitting Loss: 3.26 ft(supply line length + 70' for fittings in pump tank)
Design Head: 2 ft Elevation Head: 9.6 ft
Total Head: 14.9 ft Pump to Deliver: 26.8 gals/min at 14.9 ft head

Dosing Volume: 234 gals,
Pump Selection: Drawdown: 234 gals divided by 29.3 gals/in = 8.0 inches head

TAP CHART

Bench Mark	100.0							Design Head:	2	
Pump Tank Elevation	307.1				Pump Elevation	302.4		Elevation	312.0	
Line	Color	Rod Read	Relative Elevation	Approx. MSL (at grade)	Length	Hole Size	flow/tap	gal/day	Trench Area	LINE/TAR
7	Pink	7.6	92.4	315.2	69	1/2in SCH 40	7.11	127.3	207	0.615
8	Blue	8.4	91.6	309.7	72	1/2in SCH 40	7.11	127.3	216	0.589
9	Red	9.2	90.8	308.2	74	1/2in SCH 40	7.11	127.3	222	0.573
10	Orange	9.6	90.4	306.8	45	1/2in SCH 80	5.48	98.1	135	0.727
	total			feet =	260	gal/min =	26.8		LTAR =	0.275
Gallon per Panel	3.9				Des. Flow	480			(ltar + 5%)	0.289
Dose Volume	234				Pump Run=	17.90			(ltar W/ INNOV)	0.733
Dose Pump Time	8.73				Tank Gal/IN	29.25			(ltar + 5%)	0.770
Drawdown in Inches	8.0				Elev. Head	9.60				
Supply Line Length	145				Velocity fps	2.61				

Comments:

Hydraulic Profile

Manifold Elevation 312.0
Pump Tank Elevation 307.1
Pump Elevation 302.4

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PRESSURE MANIFOLD CALCULATIONS (REPAIR)

DETAILS - 5 OF 5

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MacCONNELL
& Associates, P. C.



NTS



- ## ELECTRICAL DETAILS

E-101

**CARUSO HOMES
1529 MEADOWS BANKS WAY
(LOT 12 MEADOWS OF BANKS)**

**PRESSURE MANIFOLD SYSTEM
WITH BLOCK PANELS - EOP
WAKE COUNTY, NC**

BY:

JOB # HGM, AVF

JOB #: A73050 00

DATE: _____

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