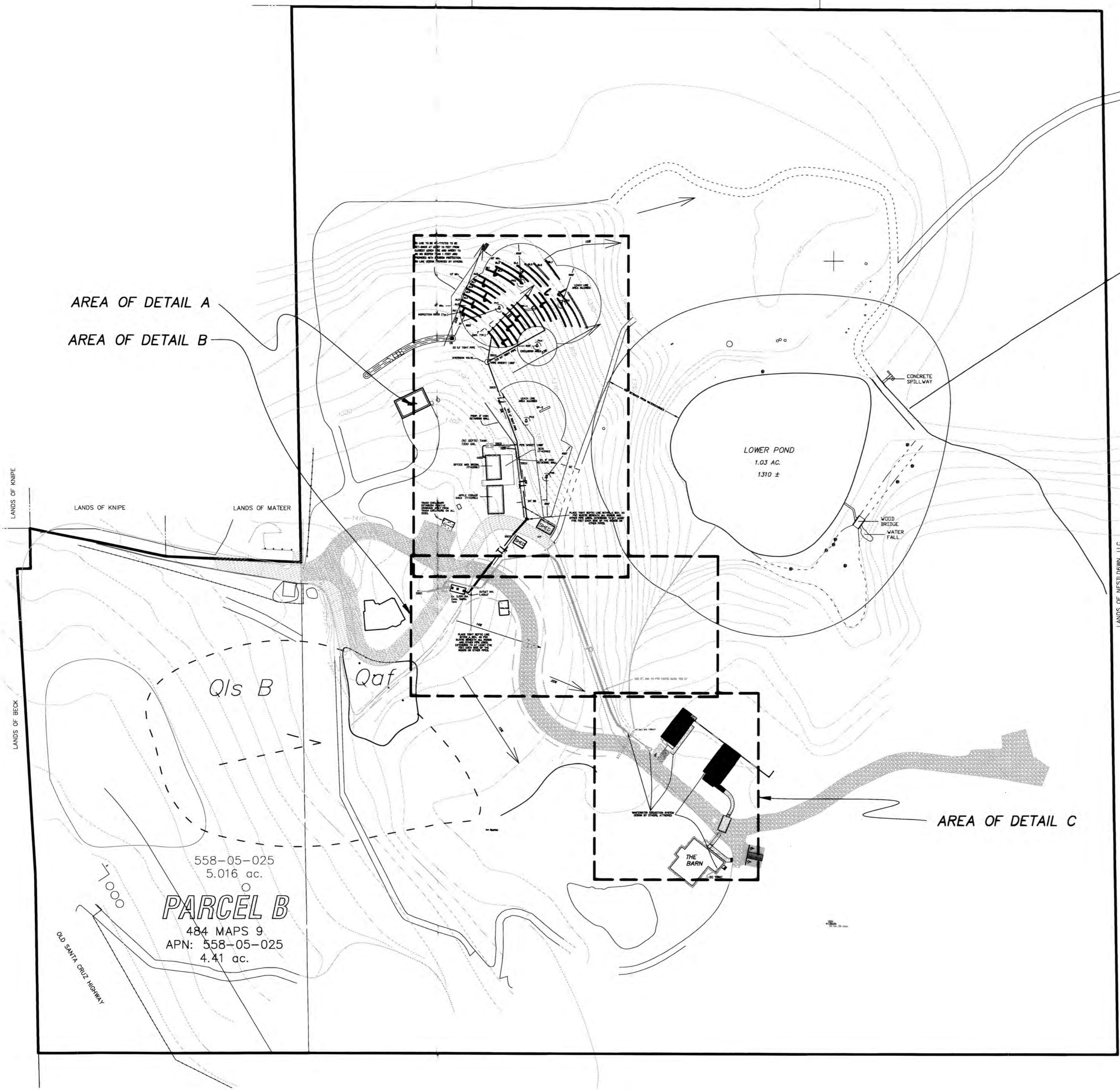


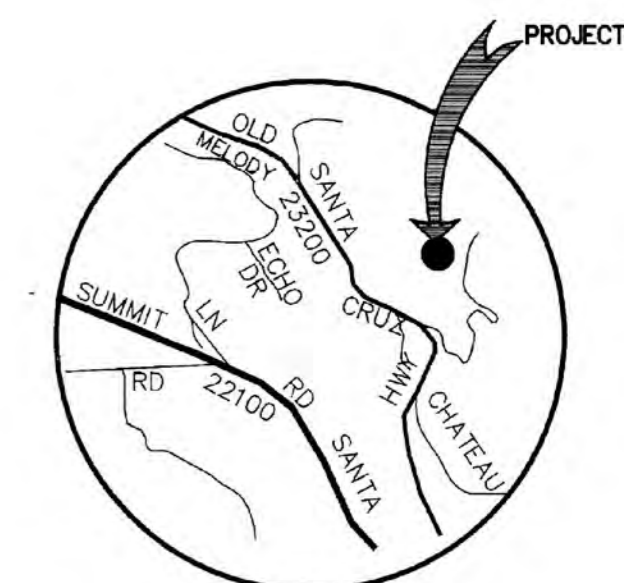
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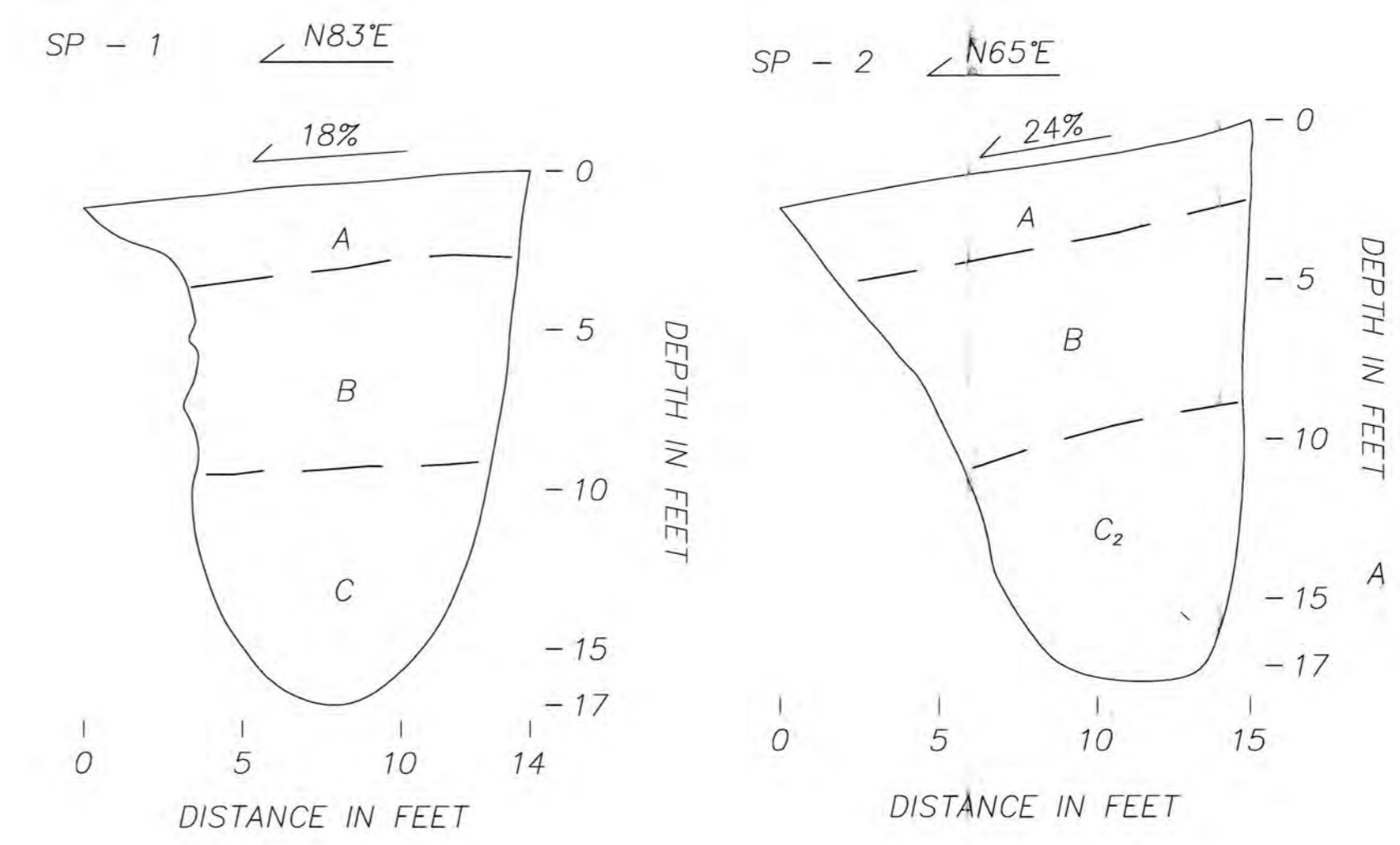
NESTLDOWN, LLC
SITE MAP

SEWAGE SYSTEM REVIEW
SANTA CLARA COUNTY
DEPARTMENT OF ENVIRONMENTAL HEALTH
Project Description: *Sanitary sewer system, catchment, and treatment facility for Nestldown, LLC, 22420 Old Santa Cruz Highway, Los Gatos, CA 95030.*
APPROVAL RECOMMENDED
With existing system # 6031/01K - *Revised field*
Install/modify system per plan (describe below)
[OK] by permit from Environmental Health
New off-lot office building tank
New 300' x 700' x 4' tank
F.E.H.S. DP *Revised* - Date: *8/14/15*
Not A Sewage system Permit

62924286
Date: *8/14/15* No. *63266*
APPROVED as corrected *7*
SANTA CLARA COUNTY
Department of Environmental Health
By: *DP* *Revised* *8/14/15* F.E.H.S. No. *2252*



VICINITY MAP
NTS



SOILS PROFILE EXPLANATION

A - Silty clay, grayish brown, dry to slightly damp with depth, moderate to high plasticity, stiff; A=soils horizon.

B - Sandy clay with low plasticity grading to clayey sand with depth, predominantly reddish-brown, slightly damp, stiff to medium dense with depth; B=soils horizon.

C - Fine- to very fine-grained sand with minor clay, slightly damp to damp, medium dense: about 1/3 of it breaks into subrounded clasts, the rest disintegrates to cascading fine- to very fine grained sand with some orange limonite stain.

C₂ - More larger clasts, to cobble size, still sub-rounded, takes some effort to break by hand and displays relict bedrock structure within; minor limited zones of light gray to about 2/3 to 1 foot across due to differential weathering.

ASSOCIATED TERRA CONSULTANTS, Inc.

Client: Nestldown File# 175042
Address: 22420 Old Santa Cruz Hwy, Los Gatos Date: 24-Sep-14
Contact: Nicole H. Duarte Phone: 408-868-1067 / 408-590-8312

Client: Nestldown File# 175042
Address: 22420 Old Santa Cruz Hwy, Los Gatos Date: 16-Oct-14
Contact: Nicole H. Duarte Phone: 408-868-1067 / 408-590-8312

Hole# 1	Heading	Diameter 4"		Water Level		Elapsed Time In Minutes	Depth In Inches	Soil Type	Percolation Rate M/PI
		Start	Finish	Start	Finish				
1	1000	1030	46.750	54.000	30	7.250	4.14		
2	1030	1100	48.250	54.000	30	5.750	5.22		
3	1100	1130	40.750	48.000	30	7.250	4.14		
4	1130	1200	48.000	54.000	30	6.000	5.00		
5	1200	1230	48.125	54.000	30	5.875	5.11		
6	1230	1300	42.000	48.250	30	6.250	4.80		
7	1300	1330	47.625	53.250	30	5.625	5.33		
Stabilized Rate:		5.08		Adjustment Factor: 1.4		Adjusted Stabilized Rate:		7.11	

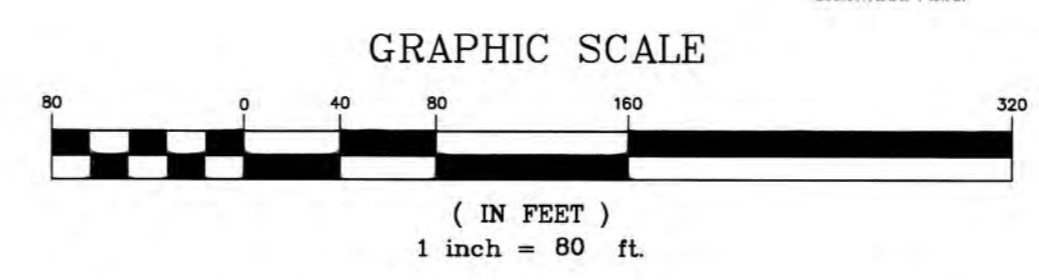
Hole# 4	Heading	Diameter 4"		Water Level		Elapsed Time In Minutes	Depth In Inches	Soil Type	Percolation Rate M/PI
		Start	Finish	Start	Finish				
1	1368	1428	30.000	28.750	30	1.250	24.00		
2	1428	1459	29.875	29.250	30	0.625	48.00		
3	1501	1531	29.675	29.375	30	0.300	60.00		
4	1533	1603	30.000	29.625	30	0.375	80.00		
5	1605	1635	30.000	29.875	30	0.125	240.00		
6	1638	1708	30.125	29.625	30	0.500	60.00		
7	1710	1740	29.875	29.500	30	0.375	80.00		
Stabilized Rate:		126.67		Adjustment Factor: 1.4		Adjusted Stabilized Rate:		FAIL	

Hole# 2	Heading	Diameter 4"		Water Level		Elapsed Time In Minutes	Depth In Inches	Soil Type	Percolation Rate M/PI
		Start	Finish	Start	Finish				
1	1098	1109	52.375	57.500	30	5.125	5.85		
2	1109	1159	51.750	55.875	30	4.125	7.27		
3	1159	1209	52.000	59.625	30	4.625	6.49		
4	1209	1239	52.625	59.500	30	3.875	7.74		
5	1239	1309	48.750	54.000	30	5.250	5.71		
6	1309	1339	51.500	59.250	30	4.750	6.32		
7	1339	1429	50.500	55.250	30	4.750	6.32		
Stabilized Rate:		6.12		Adjustment Factor: 1.4		Adjusted Stabilized Rate:		8.56	

Hole# 5	Heading	Diameter 4"		Water Level		Elapsed Time In Minutes	Depth In Inches	Soil Type	Percolation Rate M/PI
		Start	Finish	Start	Finish				
1	1410	1440	24.500	19.250	30	5.250	5.71		
2	1441	1511	24.625	20.875	30	3.750	8.00		
3	1512	1542	24.750	21.500	30	3.250	9.23		
4	1543	1613	24.625	21.500	30	3.125	9.80		
5	1617	1647	24.500	21.750	30	2.750	10.91		
6	1650	1720	25.000	22.000	30	3.000	10.00		
7	1723	1753	24.625	21.750	30	2.875	10.43		
Stabilized Rate:		10.45		Adjustment Factor: 1.4		Adjusted Stabilized Rate:		14.63	

Hole# 3	Heading	Diameter 4"		Water Level		Elapsed Time In Minutes	Depth In Inches	Soil Type	Percolation Rate M/PI
		Start	Finish	Start	Finish				
1	1025	1055	48.000	52.500	30	4.500	6.67		
2	1055	1125	49.125	52.250	30	3.125	9.60		
3	1125	1155	49.250	51.250	30	2.000	15.00		
4	1155	1225	49.750	52.625	30	2.875	10.43		
5	1225	1255	48.000	51.000	31	3.000	10.33		
6	1255	1325	50.125	53.125	30	3.000	10.00		
7	1325	1355	49.000	51.875	30	2.875	10.43		
Stabilized Rate:		10.26		Adjustment Factor: 1.4		Adjusted Stabilized Rate:		14.38	

Hole# 6	Heading	Diameter 4"		Water Level		Elapsed Time In Minutes	Depth In Inches	Soil Type	Percolation Rate M/PI
		Start	Finish	Start	Finish				
1	1419	1449	27.000	25.250	30	1.750	17.14		
2	1450	1520	27.000	25.750	30	1.250	24.00		
3	1521	1591	27.000	25.750	30	1.250	24.00		
4	1593	1623	27.000	25.750	30	1.250	24.00		
Stabilized Rate:		24.00		Adjustment Factor: 1.4		Adjusted Stabilized Rate:		33.60	



Designed:	No.	Revision	Date	By
RH	1	ADDED SWALE AND SD LINE	12/16/14	DD
DD	2	CHANGE SD LINE FOR SETBACK	01/08/2015	DD
RH	3	ADD FORCE MAIN	04/30/2015	RH
11/05/14	4	ERRATA	05/29/2015	RH

ASSOCIATED TERRA CONSULTANTS, Inc.
Engineering Geology/Soils Engineering/Hydrogeology
1725 DELL AVENUE, CAMPBELL, CA 95008
Phone: 408-866-1067 Fax: 408-866-1047

PROPOSED SEPTIC SYSTEM DESIGN
LANDS OF NESTLDOWN, LLC
22420 OLD SANTA CRUZ HIGHWAY
SANTA CLARA COUNTY, CALIFORNIA



Project Number: 175061
Scale: AS INDICATED
SHEET 1 OF 3

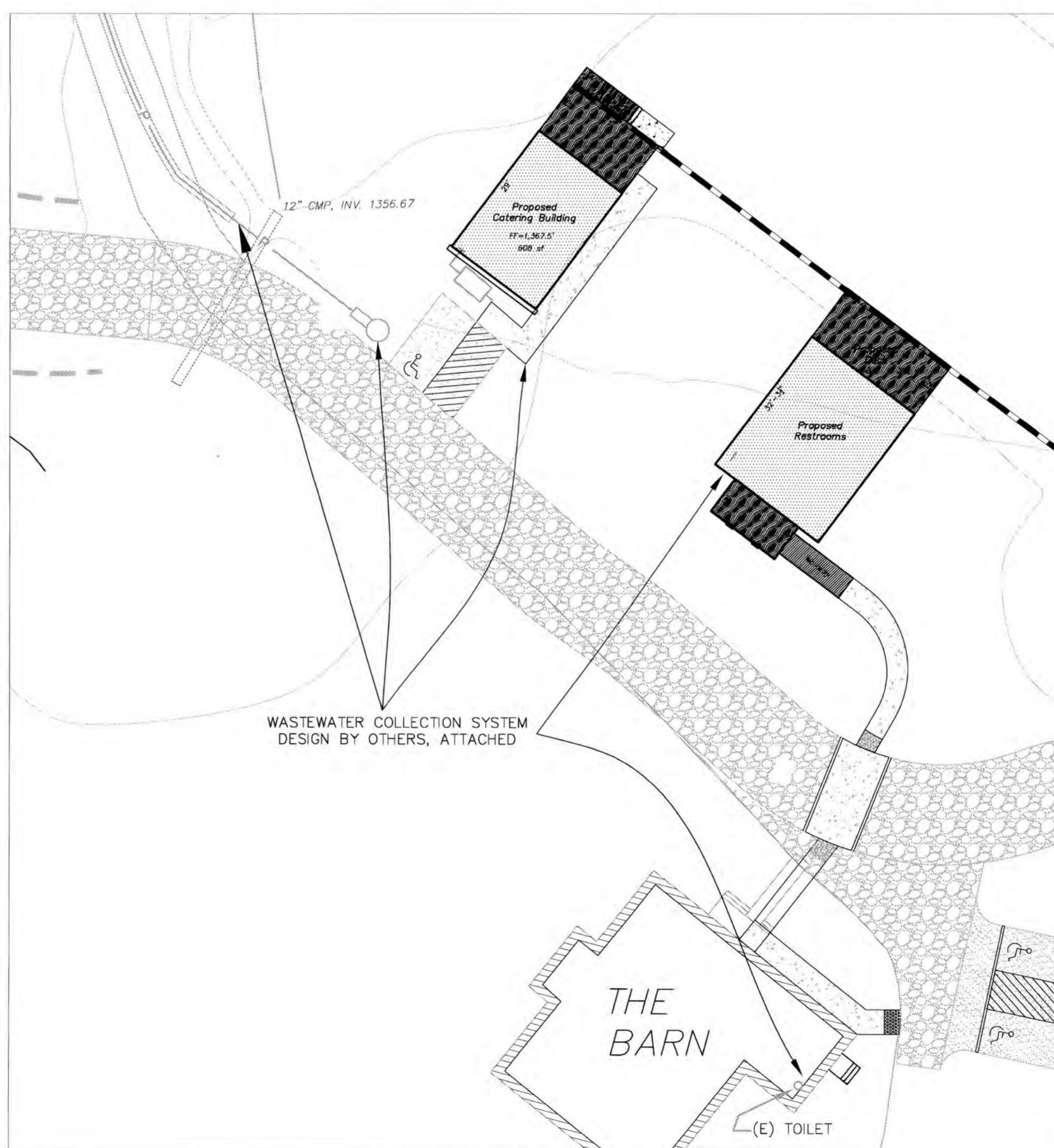
SD LINE TO BE RE-ROUTED TO BE SET-BACK AT LEAST 10 FEET FROM CLOSEST LEACH LINE AND INVERT TO BE NO DEEPER THAN 1 FOOT AND PROVIDED WITH EROSION PROTECTION. SD LINE DESIGN PROVIDED BY OTHERS.



DETAIL A

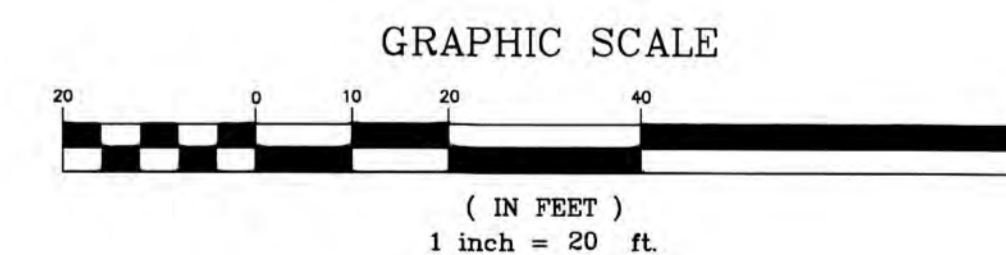


DETAIL B



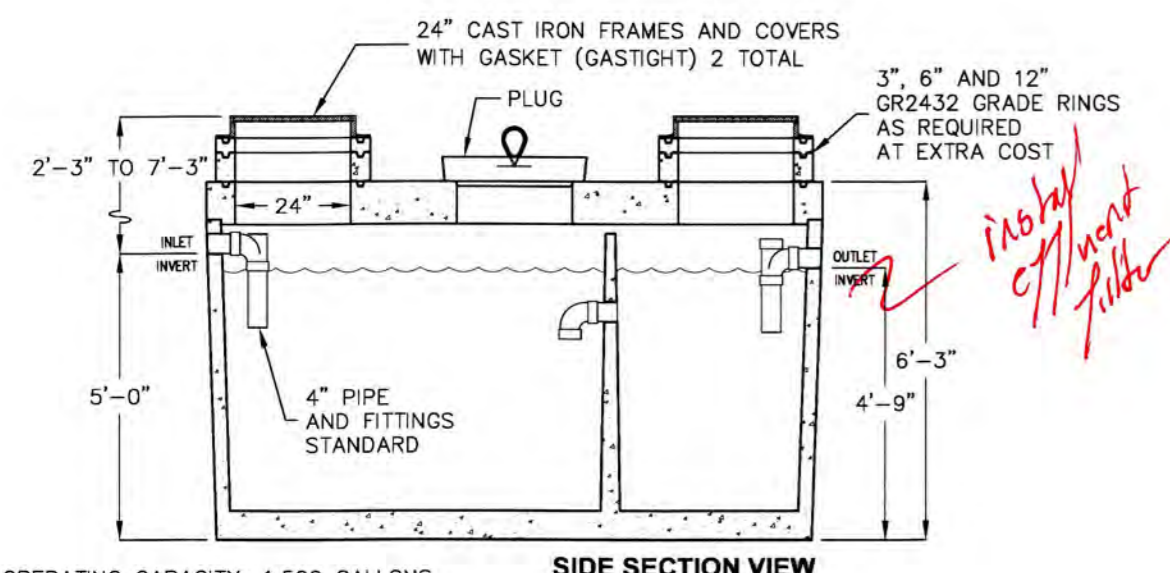
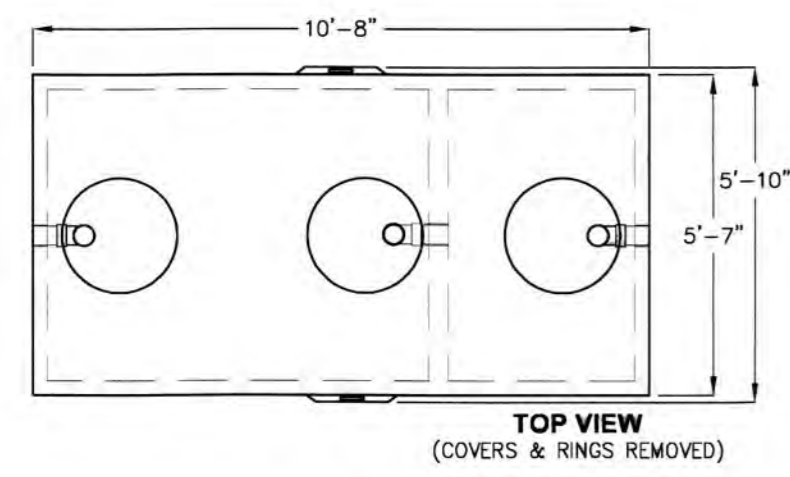
DETAIL C

NO SPRING USED FOR WATER SUPPLY OR WELL WITHIN 400 FEET OF PROPOSED SEPTIC DRAIN FIELD(S)



ASSOCIATED TERRA CONSULTANTS, Inc.			
Engineering Geology/Soils Engineering/Hydrogeology 1725 DELL AVENUE, CAMPBELL, CA 95008 Phone: 408-866-1067 Fax: 408-866-1047			
Designed:	NO.	REVISIONS	Date By
Drawn By:	DD	▲ ADDED SWALE AND SD LINE	12/16/14 DD
Checked:	RH	▲ CHANGE SD LINE FOR SETBACK	01/08/2015 DD
		▲ ADD FORCE MAIN	04/30/2015 RH
Date:	11/05/14	▲ ERRATA	05/29/2015 RH
PROPOSED SEPTIC SYSTEM DESIGN			SHEET 2 OF 3 Scale: AS INDICATED
LANDS OF NESTLDOWN, LLC			
22420 OLD SANTA CRUZ HWY SANTA CLARA COUNTY, CALIFORNIA			

**1500 GALLON
COMMERCIAL SEPTIC TANK**
MODEL JP1500EE-ST
LISTED BY UPC*



OPERATING CAPACITY: 1,500 GALLONS.

DESIGN LOAD: H-20 TRAFFIC WITH DRY SOIL CONDITIONS (WATER LEVEL BELOW TANK) AND 1'-6" EARTH COVER.

SUITABLE SUB-BASE BEDDED WITH GRANULAR MATERIAL SHALL BE PREPARED TO HANDLE ANTICIPATED LOADS.

FOR COMPLETE DESIGN AND PRODUCT INFORMATION CONTACT JENSEN PRECAST.

MINIMUM EXCAVATION
6'-10" x 11'-8"
x REQ'D DEPTH

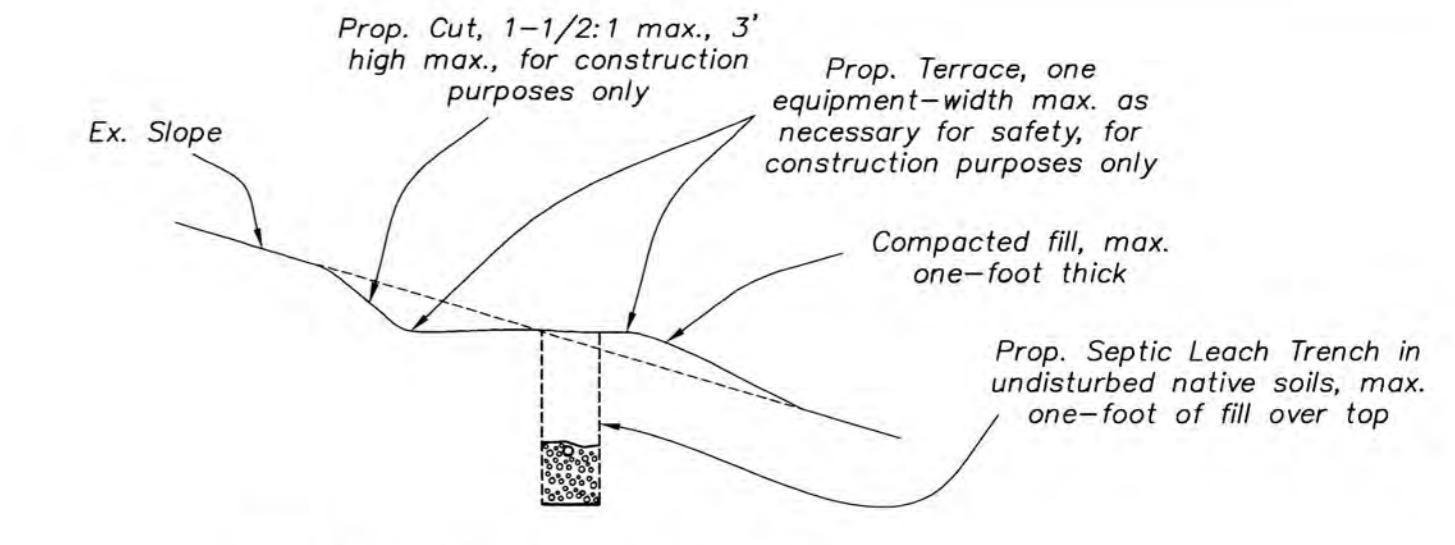
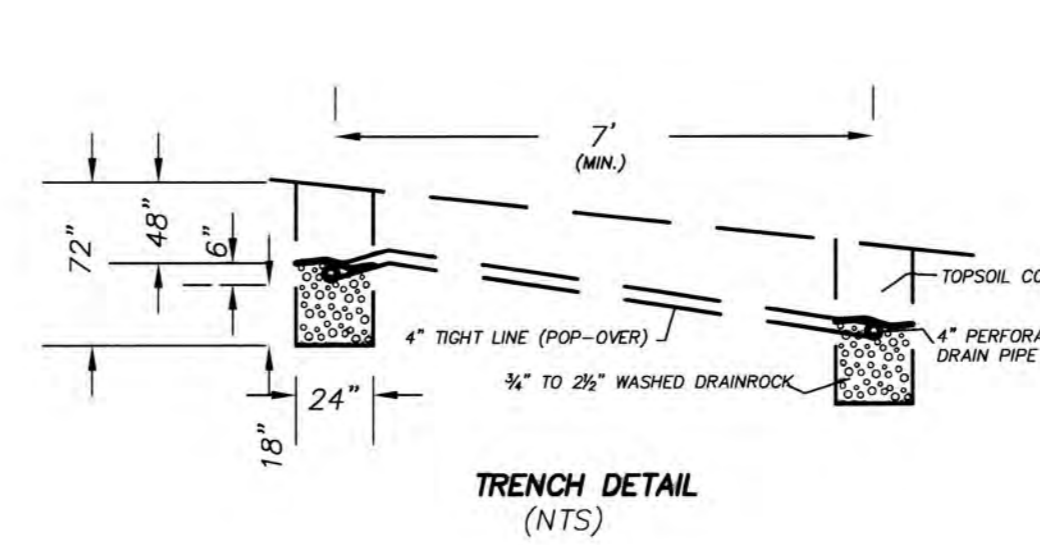
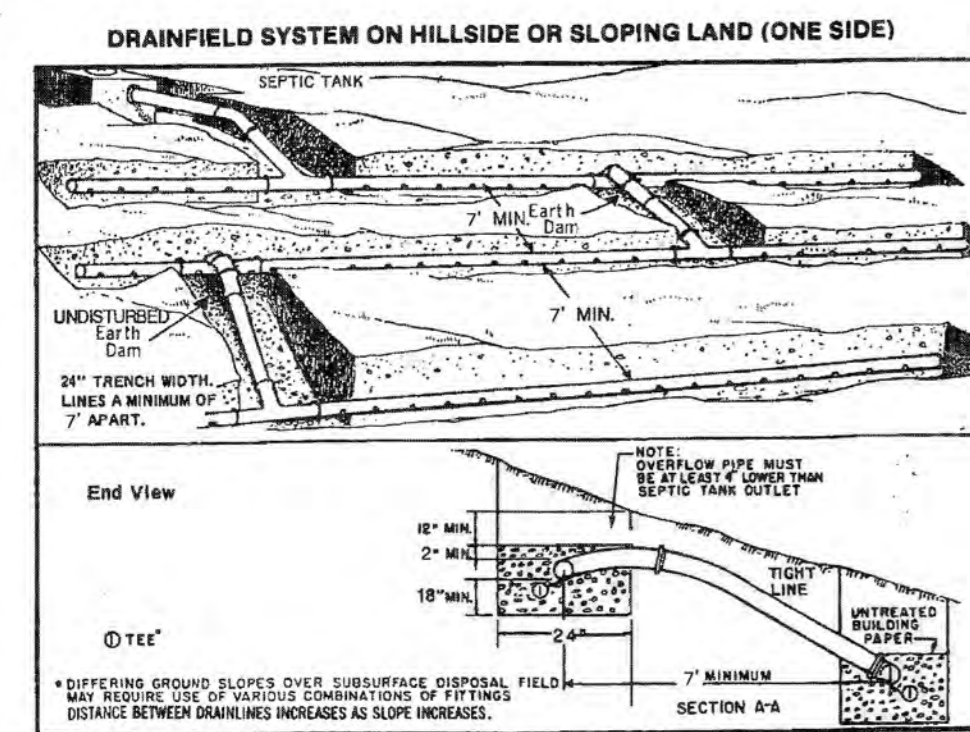
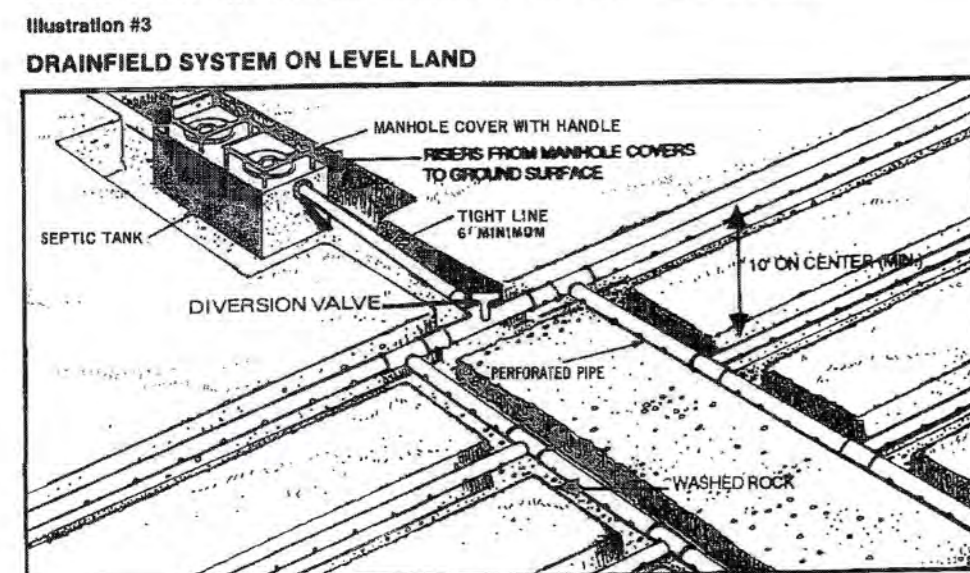


OR EQUIVALENT

Jensen Precast reserves the right to make changes to product design and/or dimensions without notice. Please contact Jensen Precast whenever necessary for confirmation or advice on product design.

2/7/08
JP1500EE-ST-NOCCAL-1.1.dwg
© 2008 Jensen Precast

Illustration #3 shows typical drainline installations for level land and hillside or sloping land.



SEPTIC FIELD LAYOUT (PRIMARY)			
LINE LABEL	LENGTH (FT) FIELD A	LINE LABEL	LENGTH (FT) FIELD B
1	100	1	67
2	100	2	80
3	100	3	87
4	100	4	92
5	100	5	91
6	100	6	92
7	100	7	94
		8	97
TOTAL	700	TOTAL	700

LEACHLINE TABLE

LEACHFIELD TRENCH LENGTH REQUIRED BY COUNTY IS 1,016 LINEAR FEET. 384 LINEAR FEET EXTRA TO BE INSTALLED BY OWNER FOR POSSIBLE FUTURE EXPANSION, FOR A TOTAL OF 700' + 700' = 1,400'.

NESTLDOWN WASTE WATER CALCULATIONS AND SEPTIC SYSTEM SIZING (PROVIDED BY OWNER)

STRUCTURE	NUMBER OF PEOPLE	WATER FIXTURE	FLOW (GPD)	NUMBER OF HOURS	TOTAL FLOW (GPD)			
BARN BATHROOM FACILITY	200	4 WOMENS TOILETS	3		600			
		2 MENS TOILETS						
		2 URINALS						
		5 HANDSINKS						
		2 USES PER DAY				1 MDP SINK	15	30
TOTAL					630			
CATERING BUILDING	5	3 COMP SINK	42	4	168			
		HAND SINK	5	4	20			
		PREP SINK	5	4	20			
		MDP SINK	15	4	60			
TOTAL					268			
BRIDAL/OFFICE BUILDING	6	HALF BATH	3		18			
		MAKEUP SINK	5	4	20			
TOTAL					38			
FUTURE TEA HOUSE	100	TWO HALF BATHS	3	6	300			
		1 HAND SINK				5	6	30
		1 COFFEE SINK				5	6	30
		1 MDP SINK				15		15
TOTAL					375			
STAFF BUILDING	11		10	1 DAY	110			
TOTAL					110			
PROJECT TOTAL					1421			

CONDITIONS
1. BARN HALF BATH AND HOMESTYLE KITCHEN FOR OWNERS PRIVATE USE AND MINIMAL USE. NOT USED FOR COMMERCIAL EVENTS.
TOTAL WASTE WATER OF 1421 GALLONS PER DAY WITH APPLICATION RATE OF 0.70 = 2,030/4 = 508 FEET PER LEACH FIELD. 508 FEET PER LEACH FIELD X 2 LEACHFIELDS = 1016 FEET OF LEACH FIELD REQUIRED TOTAL.



Designed:	No	Revision	Date	By
RH	1	ADDED SWALE AND SD LINE	12/16/14	DD
Drawn By:	2	CHANGE SD LINE FOR SETBACK	01/08/2015	DD
Checked:	3	ADD FORCE MAIN	05/29/2015	RH
Date:			11/05/14	

ASSOCIATED TERRA CONSULTANTS, Inc.
Engineering Geology/Soils Engineering/Hydrogeology
1725 DELL AVENUE, CAMPBELL, CA 95008
Phone: 408-866-1067 Fax: 408-866-1047

DETAILS
LANDS OF NESTLDOWN, LLC
22420 OLD SANTA CRUZ HIGHWAY
SANTA CLARA COUNTY, CALIFORNIA

Project Number:
175061
Scale:
AS INDICATED
SHEET 3 OF 3

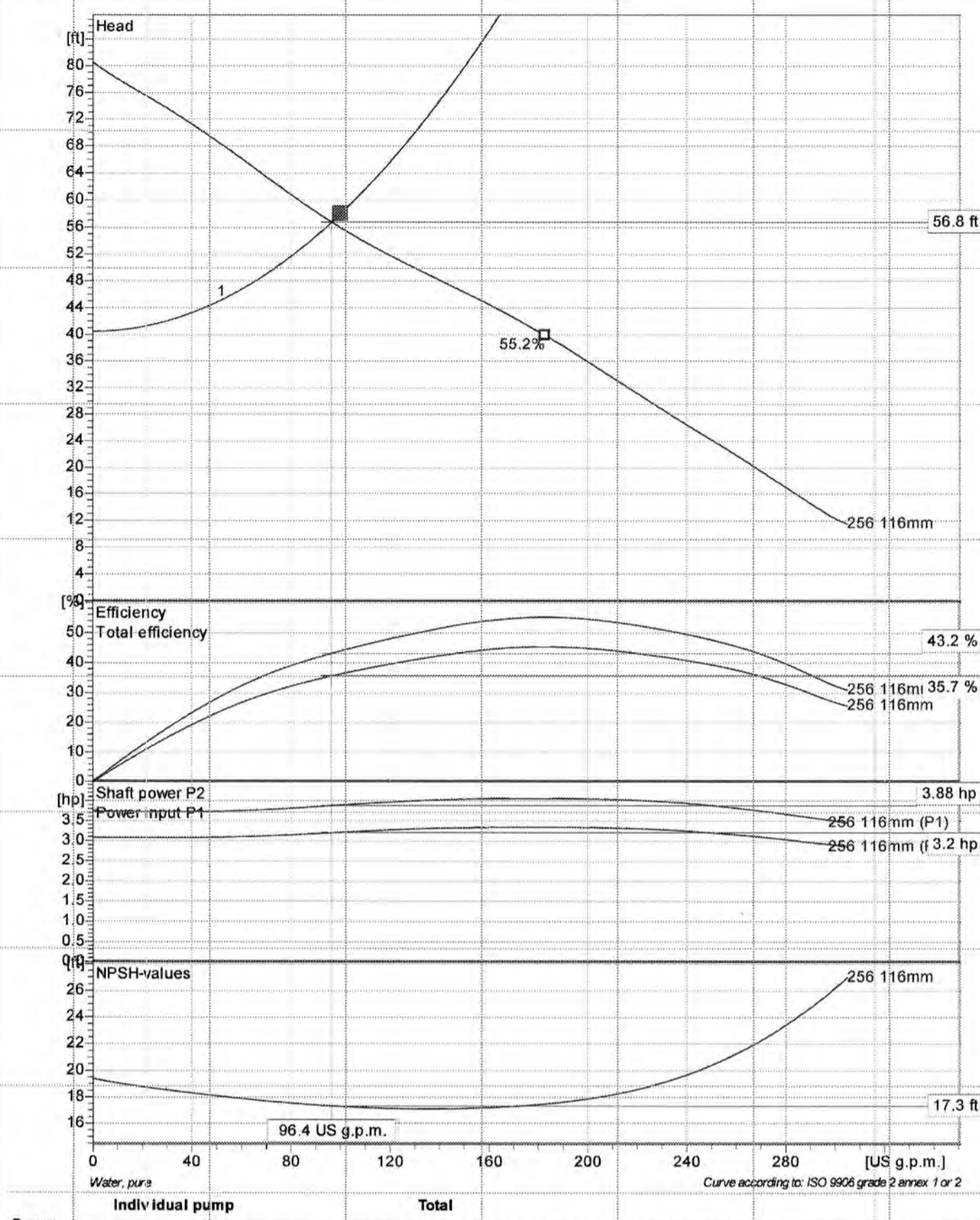
Wy'east Engineering
 784 Northridge Center, Suite 229
 Salinas, California 93906
 (831)443-5514 • (FAX)444-9490

HEADLOSS CALCULATIONS
 Project: **Nestlown Ranch Wastewater Force Main**
 Date: 4/22/2015
 Scenario: 100-gpm, 3-inch PVC

Flow Data		Topographic Head (HT)		Data to be Added									
Q =	100 gpm	Lift Sta Low Level	1359.51-ft MSL										
Static P =	0.22-cfs	Septic Tank Elev	1400.0-ft MSL										
		H ₁ =	40.5-ft										
Pipe Materials $h_f = 0.2083(100/C)^{1.85}(q^{1.85}/d^{4.8655})$													
Pipe	ID	C	V	H _f /100-ft	L	H _f	Adjustment for Tables C = 100'	Results					
3" PVC	3	140	4.54	2.67	475	12.69	Pipe Material	C Factor					
6" PVC	6	140	1.13	0.09			ACP	150					
8" PVC	8	140	0.64	0.02			Copper	140					
10" PVC	10	140	0.41	0.01			CIP/DIP	130					
12" PVC	12	140	0.28	0.00			PVC/PET	140					
							Concrete	120					
							GIP	100					
Total Pipeline Losses						12.69							
Headloss of Fittings													
$H_f = kV^2/2g$													
Fitting	D (in)	V (ft/sec)	k	H _f (feet)	Fitting Count	Total H _f	Valve	D (in)	Velocity (ft/sec)	k	H _f (feet)	Valve Count	Total H _f
90° or Tee	3	4.54	1.25	0.40	5.00	2.00	Gate	4	2.55	0.14	0.01		
	6	1.13	1.25	0.05				6	1.13	0.12			
	8	0.64	1.25	0.02				8	0.64	0.11			
	10	0.41	1.25	0.01				10	0.41	0.11			
	12	0.28	1.25					12	0.28	0.10			
45°	3	4.54	0.31	0.21	4.00	0.84	BFV	4	2.55	0.77	0.08		
	6	1.13	0.31	0.01				6	1.13	0.68	0.01		
	8	0.64	0.31					8	0.64	0.63			
	10	0.41	0.31					10	0.41	0.63			
	12	0.28	0.31					12	0.28	0.35			
22.5"	4	2.55	0.08	0.02			Globe	3	4.54	5.80	1.86		
	6	1.13	0.08				Check	6	1.13	5.10	1.0		
	8	0.64	0.08					8	0.64	4.80	0.03		
	10	0.41	0.08					10	0.41	4.80	0.01		
	12	0.28	0.08					12	0.28	4.40	0.01		
11.25"	4	2.55	0.02				Swing	4	2.55	1.50	0.15		
	6	1.13	0.02					6	1.13	1.50	0.03		
	8	0.64	0.02					8	0.64	1.50	0.01		
	10	0.41	0.02					10	0.41	1.50			
	12	0.28	0.02					12	0.28	1.30			
Total Fittings Losses						2.84	Plug	2	10.21	0.31	0.50		
Total Headlosses							Thru	2	1/2	6.54	0.32	0.21	
Pipelines						12.69		3	4.54	0.32	0.10	1.00	
Fittings						2.84		4	2.55	0.31	0.03		
Valves						1.96		6	1.13	0.27	0.01		
Total						17.49		8	0.64	0.25			
1-H_f by fitting or valve								10	0.41	0.25			
Practical Hydraulics - Simon, 1976, pg 59-62								12	0.28	0.23			
2- Hazen-Williams C values												1.96	
Practical Hydraulics - Simon, 1976, pg 445													

xylem
 Let's Solve Water

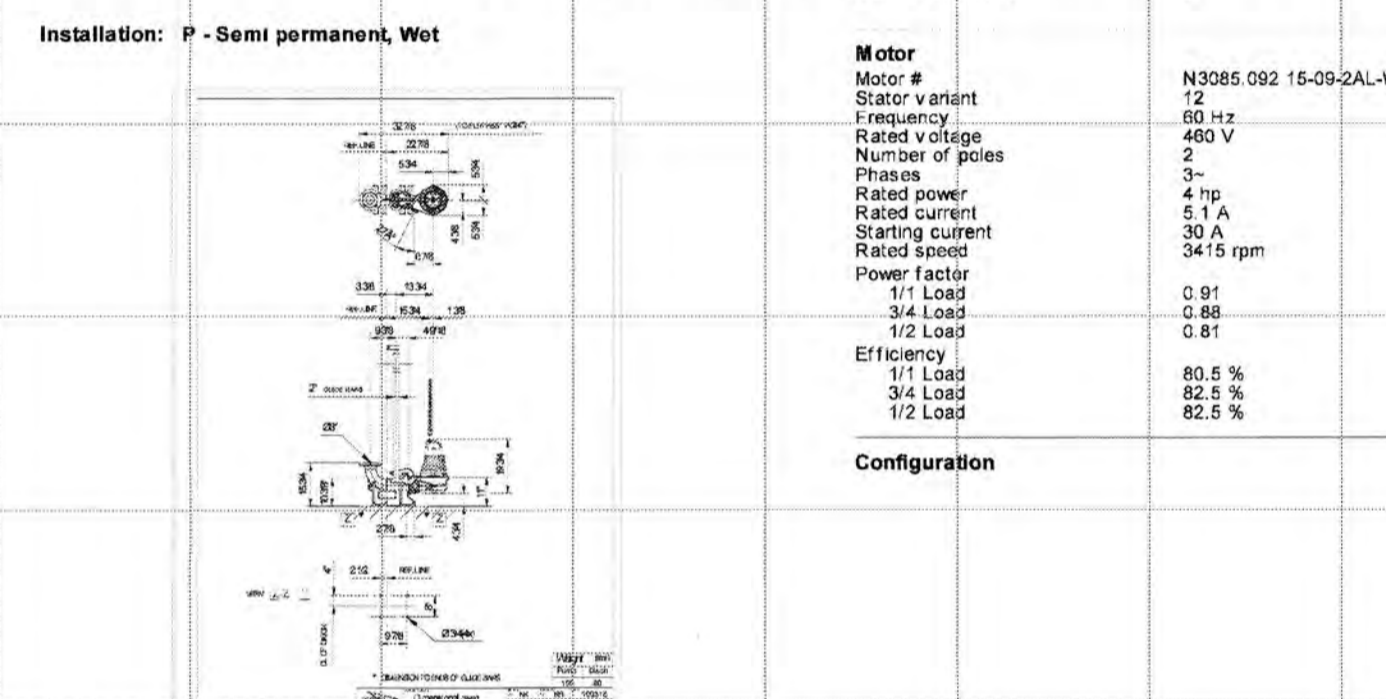
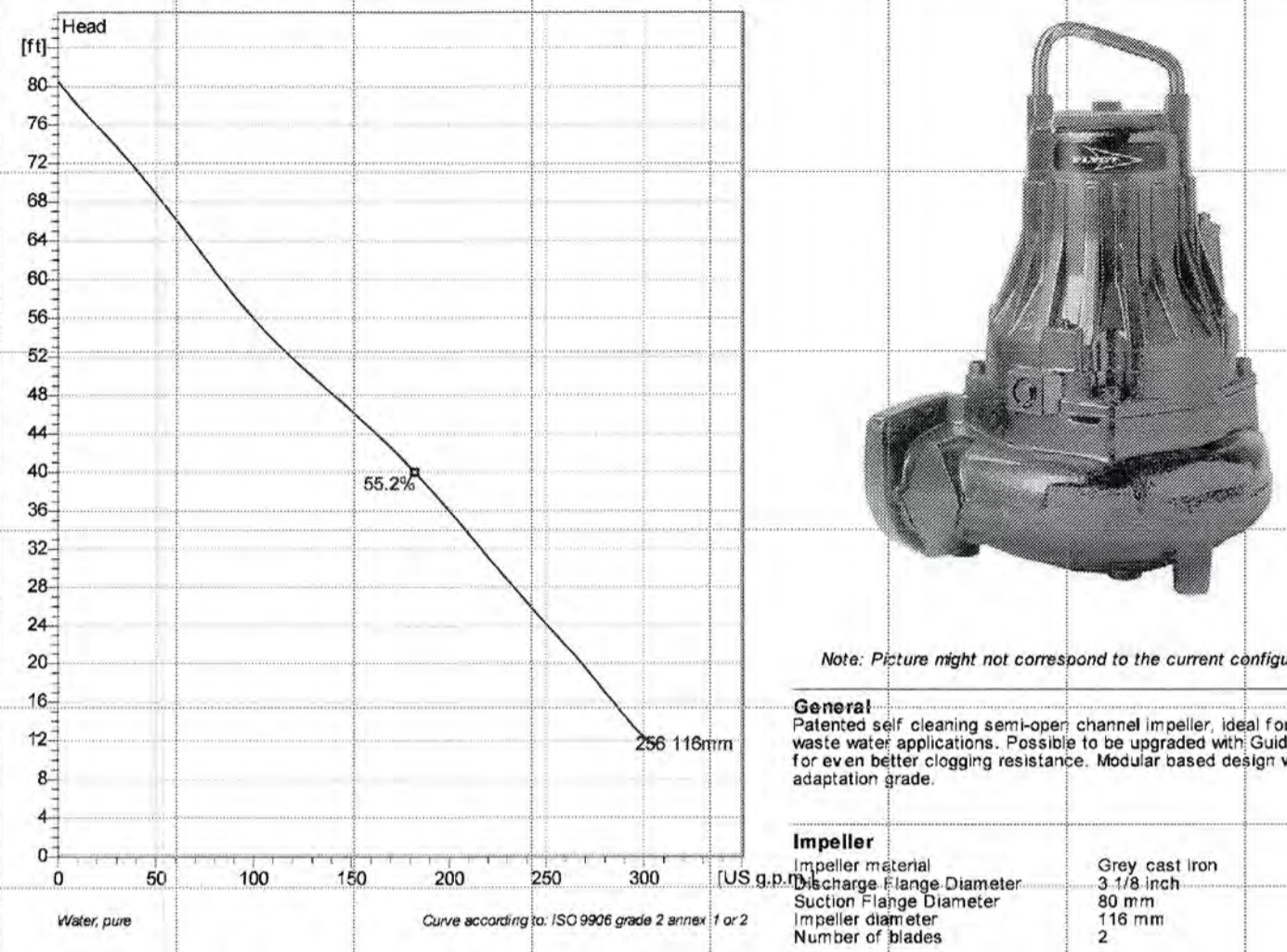
NP 3085 SH 3~ 256
 Duty Analysis



Flow	Head	Shaft power	Pump eff.	Specific energy	NPSHr
96.4 US g.p.m.	56.8 ft	3.2 hp	43.2%	500 W/US MG	17.3 ft

xylem
 Let's Solve Water

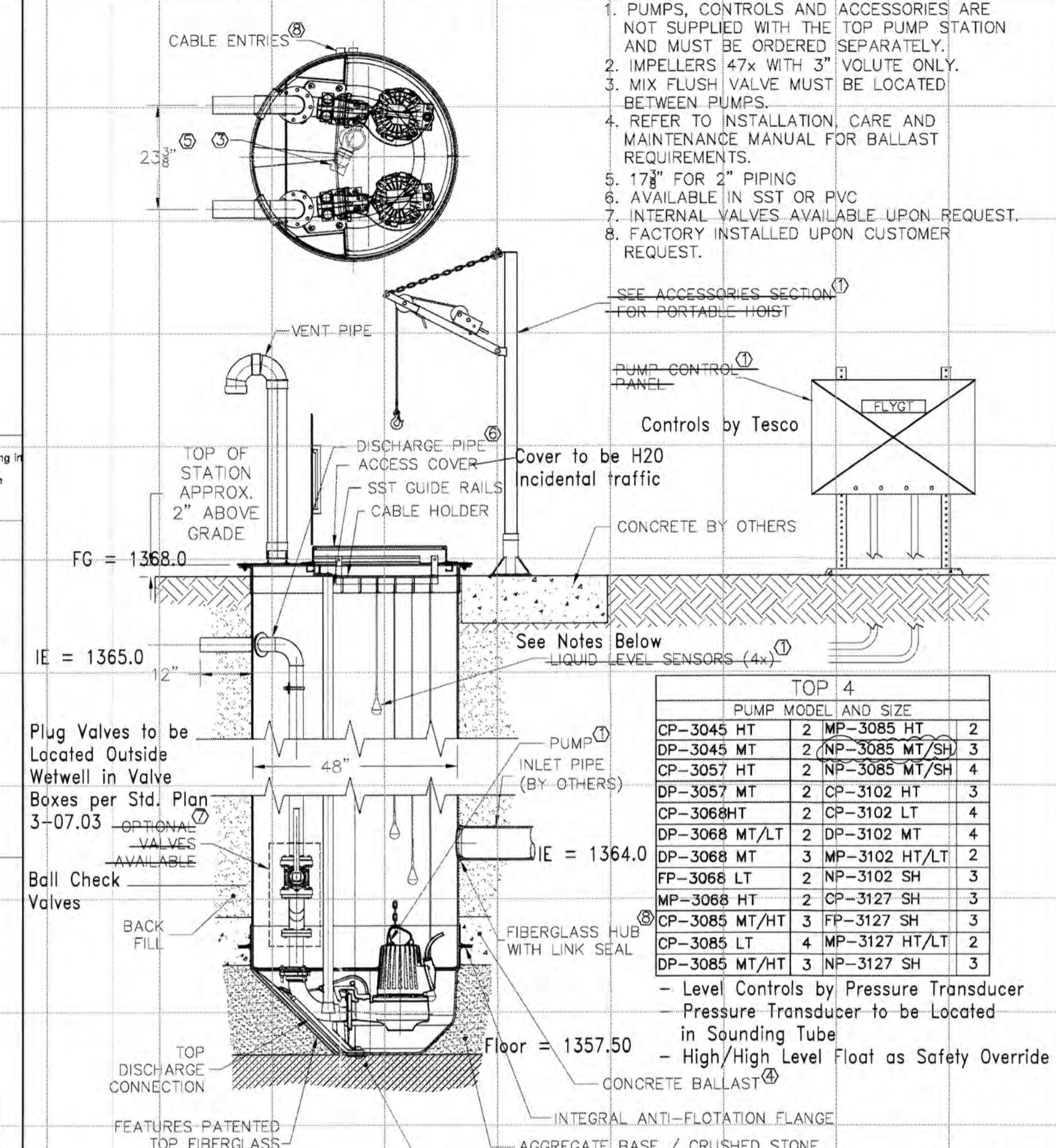
NP 3085 SH 3~ 256
 Technical specification



Flow	Head	Shaft power	Pump eff.	Specific energy	NPSHr
96.4 US g.p.m.	56.8 ft	3.2 hp	43.2%	500 W/US MG	17.3 ft

FLYGT
 a xylem brand
 Issued: 5/13 Supersedes: 3/08

TOP 4 (Duplex Station)
 (Fiberglass Station - 3045 thru 3127)



TOP 4 PUMP MODEL AND SIZE

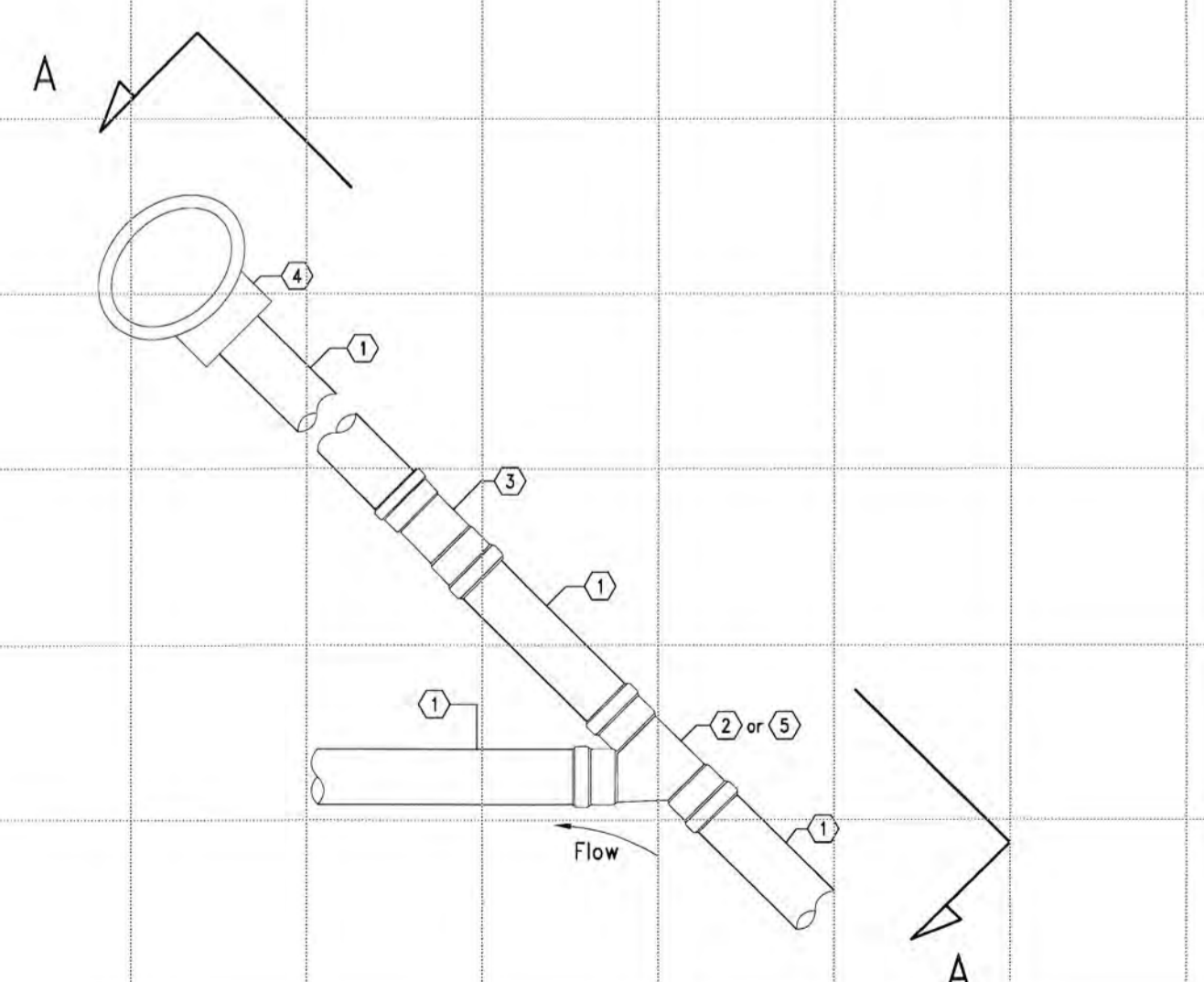
Model	Size	Quantity	
CP-3045 HT	2	MP-3085 HT	2
DP-3045 MT	2	NP-3085 MT/SH	3
CP-3057 HT	2	CP-3102 HT	3
DP-3068 HT	2	DP-3102 MT	4
CP-3068 HT	2	CP-3102 LT	4
DP-3068 MT/LT	2	DP-3102 HT/LT	4
CP-3068 LT	2	NP-3102 HT/LT	2
FP-3068 LT	2	CP-3127 SH	3
MP-3068 HT	2	CP-3127 SH	3
CP-3085 MT/HT	4	MP-3127 HT/LT	2
DP-3085 MT/HT	3	NP-3127 SH	3

1 TOTAL DYNAMIC HEAD CALCULATIONS
 SCALE: NTS

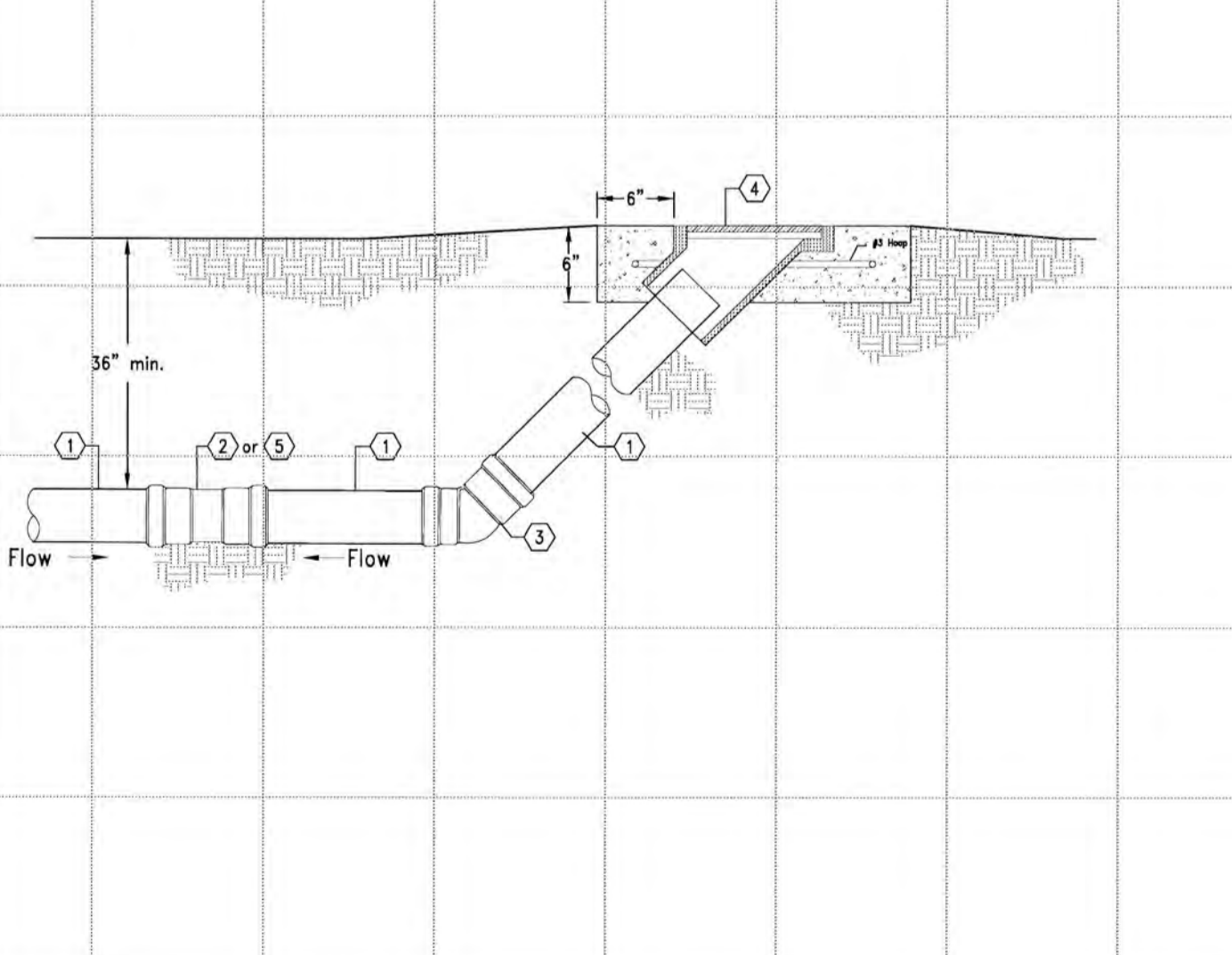
2 FLYGT N 3085SH CURVES
 SCALE: NTS

3 FLYGT N 3085SH PUMP DETAILS
 SCALE: NTS

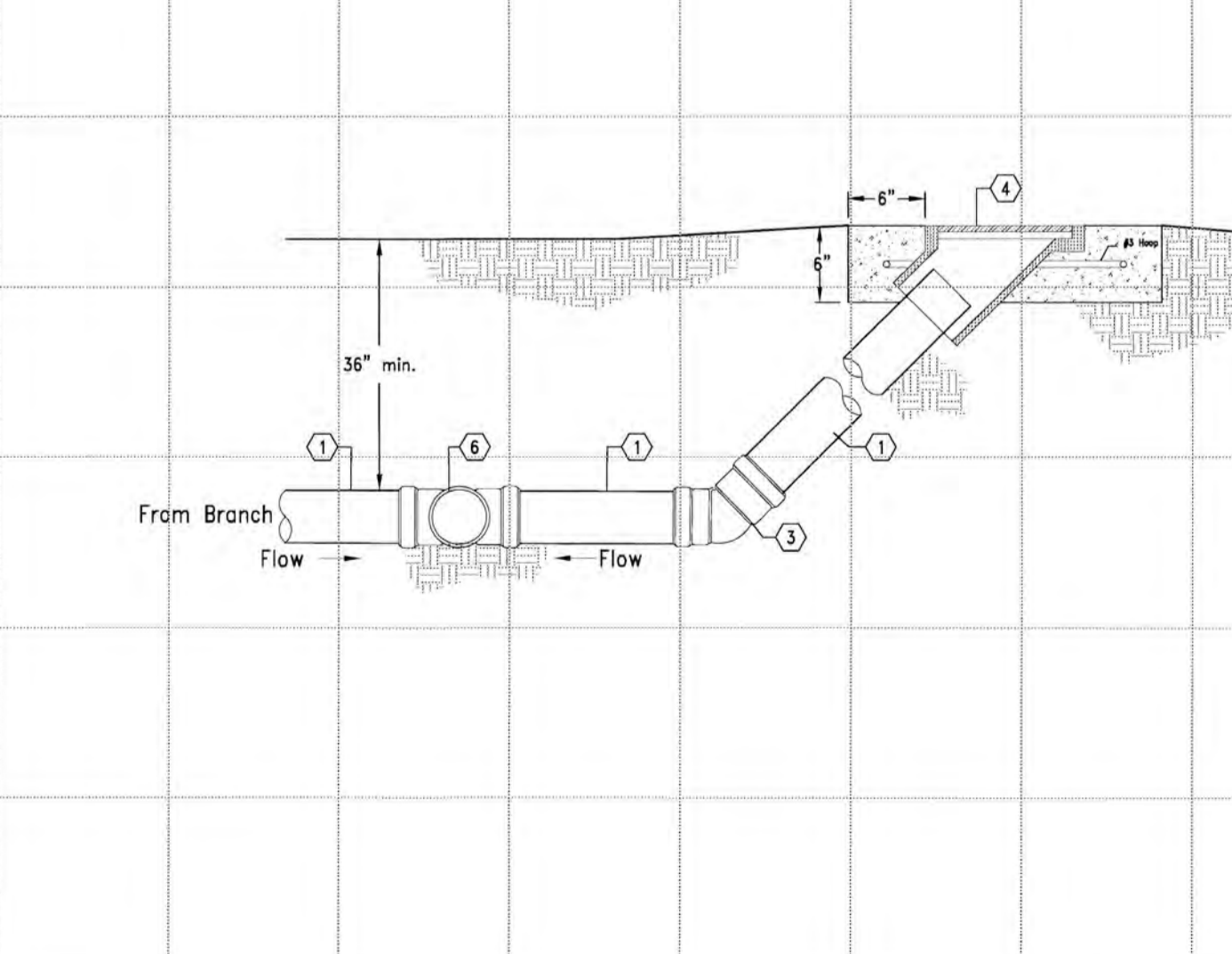
4 FLYGT TOP4 PACKAGED LIFT STATION
 SCALE: NTS



5 CHANGE IN DIRECTION CLEANOUT PLAN
 SCALE: NTS



6 CHANGE IN DIRECTION CLEANOUT SECTION A-A
 SCALE: NTS

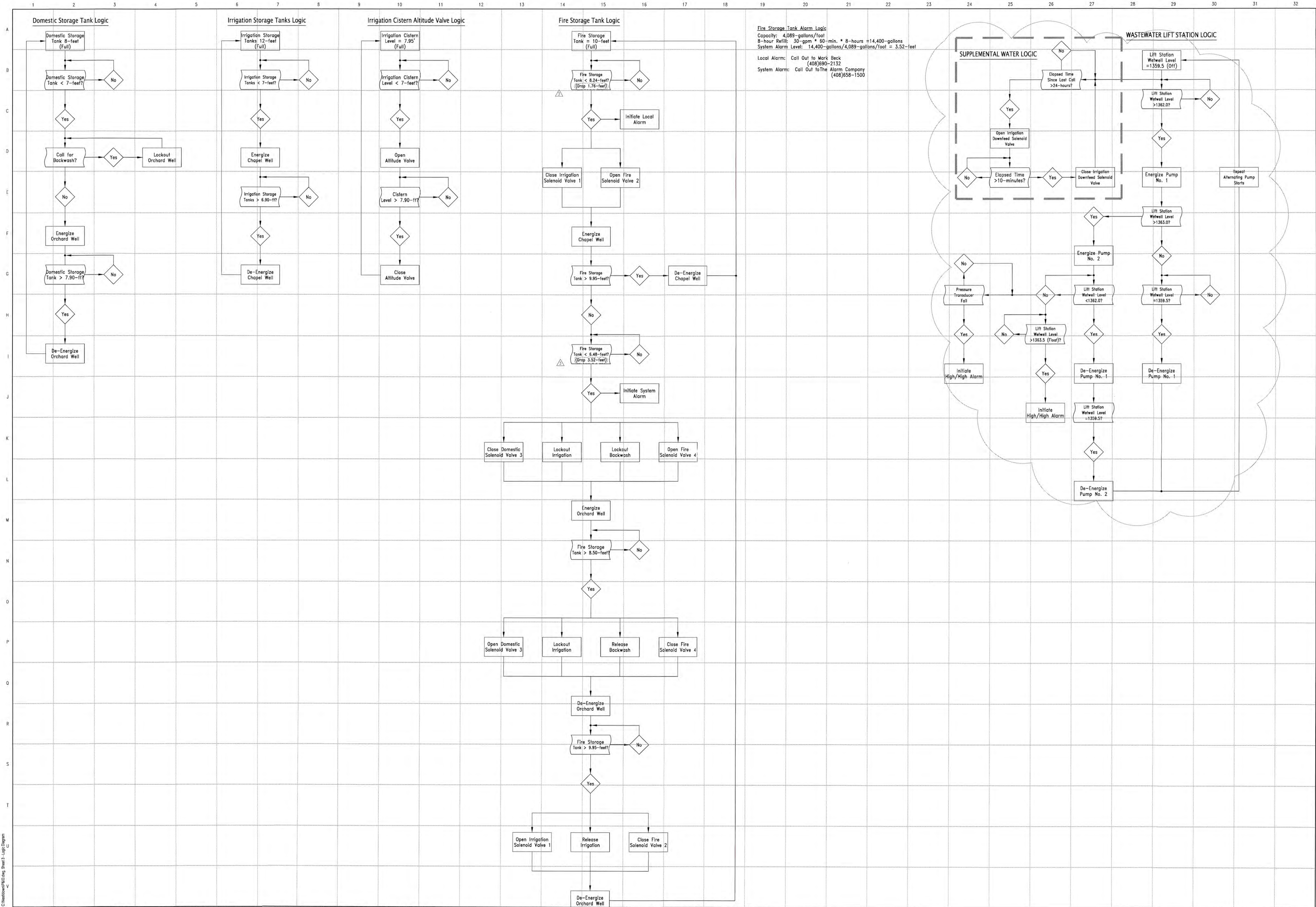


7 BRANCH CLEANOUT SECTION A-A
 SCALE: NTS

WASTEWATER MECHANICAL SCHEDULE

ID	DESCRIPTION
1	4" PVC (SDR35)
2	4" x 4" x 4" PVC Wye (SDR35 - Gasketed)
3	4" x 4" x 4" PVC Tee (SDR35 - Gasketed)
4	6" Clean Out Frame and Cover (Phoenix P-7103 or Approved Substitute)
5	4" x 4" x 4" PVC Tee (SDR35 - Gasketed)
6	4" x 4" x 4" x 4" PVC Cross (SDR35 - Gasketed) (Specified Fittings Part No. 2604)

Date: _____
 Revision _____
WY'EAST ENGINEERING
 784 Northridge Center, Suite 229
 Salinas, CA 93906
 (831)443-5514 • (FAX)444-9490
 Professional Engineer
 No. C43774
 Exp. 12/31/15
NESTLDOWN RANCH LLC
 175 Dell Avenue
 Campbell, California 95008
 (408)690-3123
 Date: May 2015
 Scale: 1"=10'H, 1"=1'V
 Drawn: DRA
 Job: 14-020
 Sheet 1 of 2



Fire Storage Tank Alarm Logic:
 Capacity: 4,089-gallons/foot
 8-hour Refill: 30-gpm * 60-min. * 8-hours = 14,400-gallons
 System Alarm Level: 14,400-gallons/4,089-gallons/foot = 3.52-feet

Local Alarm: Call Out to Mark Beck (408)690-2132
 System Alarm: Call Out to The Alarm Company (408)658-1500

Date:	September 2014
Scale:	none
Drawn:	DRB
Job:	14-020
Sheet:	3 of 15

MR. MARK BECK
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NESTLIDOWN RANCH
 Water System Improvements
 Logic Diagrams

C:\nestl\14-020\14-020-03-Logic Diagrams
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