

OWNER'S INFORMATION

OWNER: SARAH & GORDON ASTLES
16390 STEVENS CANYON RD.
CUPERTINO, CA 94022

APN: 503-05-040, 041, 043, 044 & 009

REFERENCES

- THIS GRADING AND DRAINAGE PLAN IS SUPPLEMENTAL TO:
- TOPOGRAPHIC SURVEY BY LEA & BRAZE ENGINEERING, INC., ENTITLED: "TOPOGRAPHIC SURVEY" 16390 STEVENS CANYON ROAD CUPERTINO, CA 94022 DATED: JOB# 2181186
 - SITE PLAN BY M DESIGNS ARCHITECTS ENTITLES: "SITE PLAN" 16390 STEVENS CANYON ROAD CUPERTINO, CA 94022
 - SOIL REPORT BY GEOFORENSICS INC. ENTITLED: "GEOTECHNICAL INVESTIGATION FOR PROPOSED BRIDGE REPLACEMENT, DETACHED GARAGE, AND ACCESSORY STRUCTURES" 16390 STEVENS CANYON ROAD CUPERTINO, CA 94022 FILE # 219247 DATE: 4-8-20

THE CONTRACTOR SHALL REFER TO THE ABOVE NOTED SURVEY AND PLAN, AND SHALL VERIFY BOTH EXISTING AND PROPOSED ITEMS ACCORDING TO THEM.

GENERAL INSTALLATION NOTES:

PERMITS: CONSTRUCTION OF THE SEWAGE DISPOSAL SYSTEM SHALL NOT COMMENCE WITHOUT WRITTEN APPROVAL FROM TOWN OF WOODSIDE AND SANTA CLARA COUNTY ENVIRONMENTAL HEALTH SERVICES.

PLAN CHANGES: CHANGES TO THE PLANS OR SPECIFICATIONS SHALL BE MADE ONLY AFTER CONSULTATION WITH AND APPROVAL OF THE DESIGNER AND PERMITTING AGENCY.

INSTALLATION: ALL INSTALLATION WORK SHALL BE IN ACCORDANCE WITH COUNTY OF SANTA CLARA.

LOCATION OF THE SEPTIC TANK AND LEACHING TRENCHES: LOCATIONS SHOWN ON THE PLANS ARE SUBJECT TO ADJUSTMENT IN THE FIELD BY DESIGNER WITH APPROVAL OF THE PERMITTING AGENCY. TRENCHES SHALL BE INSTALLED ALONG LEVEL CONTOUR TO ENSURE THE TRENCH BOTTOM IS MAINTAINED LEVEL THROUGHOUT THE ENTIRE LENGTH. A TRIPOD-MOUNTED LASER SHALL BE REQUIRED ON SITE.

SANTA CLARA COUNTY OWTS SETBACKS:		
MINIMUM DISTANCES (IN FEET) MEASURED FROM:	DISPOSAL FIELD	SEPTIC TANK
ALL WELLS AND SPINGS	100'	100'
WATERCOURSES* (TOP OF BANK)	100'	100'
RESERVOIRS (HIGHWATER MARK)	200'	200'
CUT OR STEEP EMBANKMENTS (TOP OF CUT)	4 X H**	10 FEET
STEEP SLOPES***	4 X H**	10 FEET
DRAINAGE/SWALE	50'	50'
FOUNDATION	10'	5'
PROPERTY LINE	10'	10'
SEPTIC TANKS	6'	N/A
SWIMMING POOL	10'	10'
ROAD EASEMENT, PAVEMENT, OR DRIVEWAY	5'	5'
PONDS AND LANSLIDES	100'	100'

* WATERCOURSE - A RUNNING STREAM FED FROM PERMANENT OR NATURAL SOURCES, INCLUDING RIVERS, CREEKS, RUNS, AND RIVULETS. THERE MUST BE A STREAM, USUALLY FLOWING IN A PARTICULAR DIRECTION (THROUGHOUT IT NEED NOT FLOW CONTINUOUSLY) IN A DEFINITE CHANNEL, HAVING A BED OR BANKS AND USUALLY DISCHARGING INTO SOME STREAM OR BODY OF WATER.

** H EQUALS THE HEIGHT OF CUT OR EMBANKMENT IN FEET. THIS SETBACK DISTANCE REQUIREMENT MUST NOT BE LESS THAN 25 FEET OR MORE THAN 100 FEET.

*** AS DEFINED BY THE REGIONAL WATER QUALITY CONTROL BOARD HAVING JURISDICTION, BUT NOT EXCEEDING 67 PERCENT.

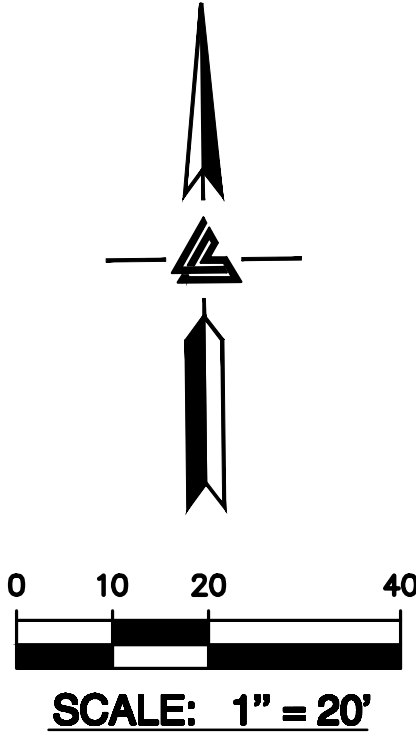
(M) NO PRIVATE SEWAGE DISPOSAL SYSTEM MAY BE APPROVED ON ANY PARCEL OF LAND WHERE PERCOLATION RATE EXCEEDS 120 MIN/INCH OR IS LESS THAN ONE MIN/INCH.

(N) NO PART OF ANY PRIVATE SEWAGE DISPOSAL SYSTEM MAY CROSS ANY PROPERTY LINE.

(O) UPON NOTICE FROM THE DIRECTOR THAT WORK ON THE SEWAGE DISPOSAL SYSTEM IS BEING CONDUCTED IN VIOLATION OF THIS CHAPTER, OR IN AN UNSAFE OR DANGEROUS MANNER, THE WORK MUST BE IMMEDIATELY STOPPED. THE STOP-WORK MUST BE ISSUED TO THE OWNER OF THE PROPERTY INVOLVED, OR THE OWNER'S AGENT, OR THE PERSON DOING THE WORK. IT MUST STATE THE CONDITIONS UNDER WHICH WORK MAY BE RESUMED. NO PRIVATE SEWAGE DISPOSAL SYSTEM MAY BE APPROVED ON ANY PARCEL OF LAND WHERE PERCOLATION RATE EXCEEDS 120 MIN/INCH OR IS LESS THAN ONE MIN/INCH.

TRENCHING NOTE:
ALL TRENCHING FOR THE PROPOSED LEACHFIELDS WITHIN THE DRIPLINES OF ANY SIGNIFICANT TREE WILL BE DONE BY HAND UNDER THE SUPERVISION OF THE PROJECT ARBORIST

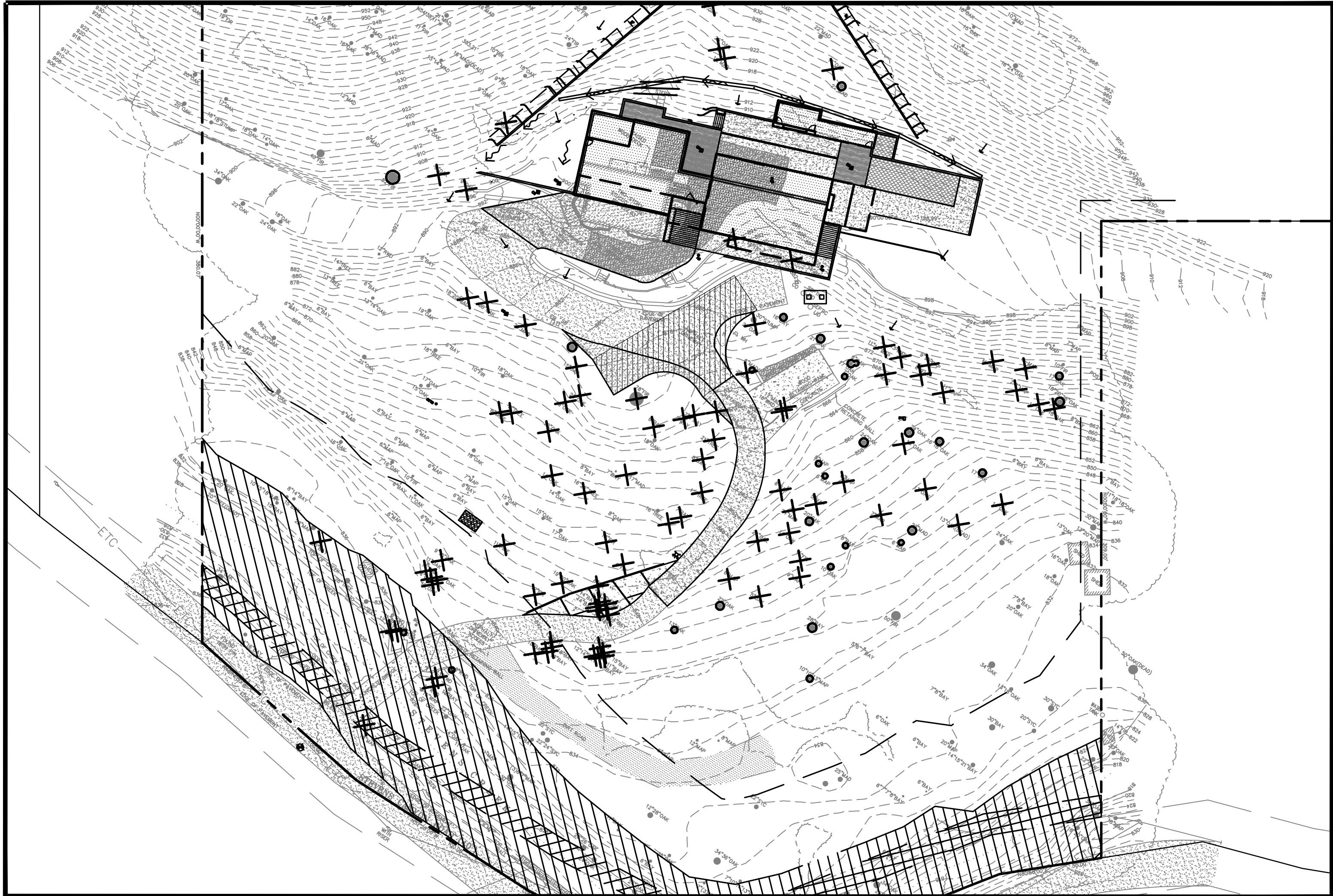
NOTE:
COUNTY REQUIRES LEACH LINES TO BE STAKED OUT BY A SURVEYOR PRIOR TO INSTALLATION. FOR CONSTRUCTION STAKING SCHEDULING OR QUOTATIONS PLEASE CONTACT ALEX ABAYA AT LEA & BRAZE ENGINEERING (510)887-4086 EXT 116. aabaya@leabraz.com



ABBREVIATIONS

AD	AREA DRAIN
BFP	BACKFLOW PREVENTOR
CB	CATCH BASIN
CL	CENTER LINE
CO	CLEANOUT
DIV	DIVERSION VALVE
E	EFFLUENT
ELEV	ELEVATIONS
(E)	EXISTING
FL	FLOW LINE
INV	INVERT ELEVATION
JT	JOINT TRENCH
LNDR	LANDING
MM AX	MAXIMUM
MIN	MINIMUM
(N)	NEW
NTS	NOT TO SCALE
O.C.	ON CENTER
PL	PROPERTY LINE
RIM	RIM ELEVATION
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEANOUT
SSMH	SANITARY SEWER MANHOLE
STD	STANDARD
TW/FG	TOP OF WALL/FINISH GRADE
TYP	TYPICAL
W	WITH
WL	WATER LINE

ENGINEERED PLANS FOR ON-STE WASTEWATER TREATMENT SYSTEM [OWTS] 16390 STEVENS CANYON RD. CUPERTINO, CALIFORNIA



CONVENTIONAL SYSTEM LEACH LINE CALCULATIONS:

PERCOLATION RATE BASED ON FIELD DATA WAS OBSERVED TO BE 7 MPI. IN ACCORDANCE WITH TABLE 1 (SECTION 3 BACK OF PAGE 3-18) OF THE SANTA CLARA COUNTY ONSITE SYSTEMS MANUAL THE APPLICATION RATE IS 1.04 GPD/SQFT.

HOME IS PROPOSED WITH 5 BEDROOMS. THEREFORE, WASTEWATER FLOW IS 800 GAL/DAY PER TABLE 3-1 (SECTION 3) OF THE SANTA CLARA COUNTY ONSITE SYSTEMS MANUAL.

REQUIRED LENGTH CALCULATED BY THE EQUATION SUPPLIED ON PAGE 3-17 OF THE SANTA CLARA COUNTY ONSITE SYSTEMS MANUAL (SECTION 3) THAT STATES:

TRENCH LENGTH = $Q / (R \times A)$
 Q = FLOW RATE (GPD)
 R = WASTEWATER APPLICATION RATE (GPD/SQFT)
 A = TOTAL INFILTRATIVE AREA PER LINEAR FOOT (SQFT) [4 SQFT STANDARD]

REQUIRED TRENCH LENGTH FOR 100% CAPACITY CALCULATION (OWTS ORDINANCE REQUIRES 2 100% FIELD "PRIMARY AND SECONDARY"):
 $800 / (4 \times 1.04) = 144$ FT REQUIRED

TOTAL CONVENTIONAL DISPERSAL TRENCH LENGTH REQUIRED = 288 LINEAR FEET

INFILTRATOR REDUCTION RATIO = 70% OF CONVENTIONAL TRENCH
 $288 \times 70\% = 202$
TOTAL INFILTRATOR = 202 LINEAR FEET

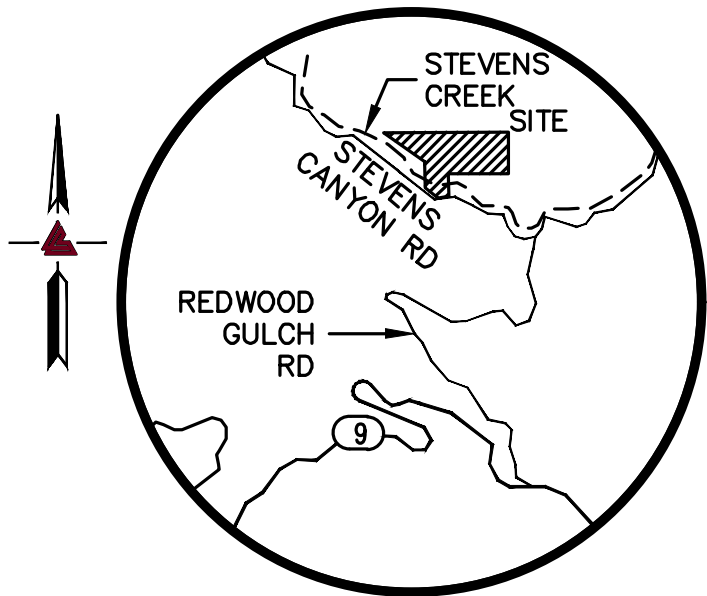
SEE DISPERSAL TRENCH TABLE ON SHEET SS-2 FOR BREAKDOWN OF LEACH LINE LENGTH PROVIDED IN EACH FIELD.

SHEET INDEX:

- SS-1 SEPTIC TITLE SHEET
SS-2 SEPTIC SYSTEM ENGINEERED PLAN
SS-3 SEPTIC SYSTEM DETAILS

AREA BELOW IS FOR SANTA CLARA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH USE ONLY:

PLAN CHECK 09-14-20		JH
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
REVISIONS		BY
JOB NO:		2181105
DATE:		01-20-2020
SCALE:		NTS
DESIGN BY:		JH
CHECKED BY:		PC
SHEET NO:		OWTS SS-1
01		OF 03 SHEETS



VICINITY MAP
NO SCALE

LEGEND

PROPOSED	DESCRIPTION
---	BOUNDARY
---	PRIMARY LEACH LINE
---	EXPANSION LEACH LINE
---	RETAINING WALL
---	LANDSCAPE RETAINING WALL
TL	TIGHTLINE
E	EFFLUENT LINE
---	SET BACK LINE
W	WATER LINE
X	FENCE LINE
P	PRESSURE LINE
JT	JOINT TRENCH
SUB	SUBDRAIN LINE
---	GRADING LIMIT LINE
Div	DIVERSION VALVE
DS	DOWNSPOUT
SSCO	SANITARY SEWER CLEANOUT
BFP	BACKFLOW PREVENTOR
AD	AREA DRAIN
SL	SEPTIC LID
222.57	SPOT ELEVATION
200	CONTOURS

SEPTIC TANK AND DRAINFIELD CONSTRUCTION NOTES:

- INSTALL A 1500-GALLON CONCRETE PRECAST SEPTIC TANK.
- INSTALL GAS-TIGHT RISER TO GRADE.
- INSTALL A LANGLEY HILL QUARRY DIVERSION VALVE.
- INSTALL A DUAL LEACHING SYSTEM SEPARATED BY A DIVERSION VALVE.

STAKING NOTES:

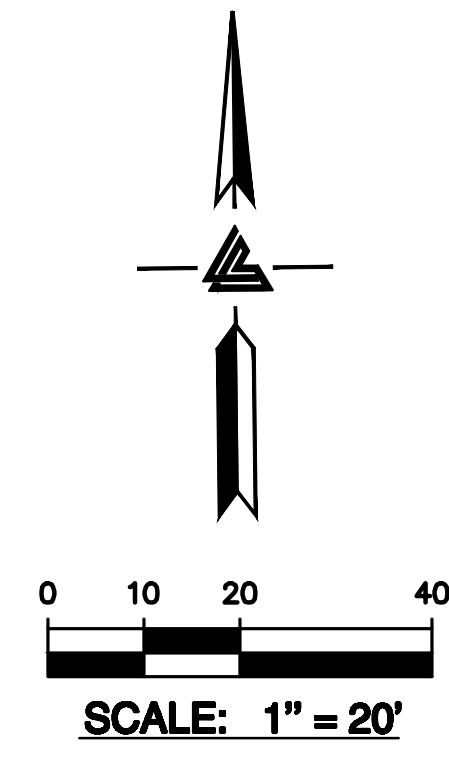
LEA & BRAZE SHALL STAKE OUT PROPOSED SEPTIC SYSTEM FOR VERIFICATION BY SANTA CLARA COUNTY ENVIRONMENTAL HEALTH PRIOR TO SITE INSPECTION



LEA & BRAZE ENGINEERING, INC.
CIVIL ENGINEERS • LAND SURVEYORS
REGIONAL OFFICES:
MAIN OFFICE: 16390 STEVENS CANYON RD. WEST
CUPERTINO, CALIFORNIA 94022
HAYWARD OFFICE: 15000 HAYWARD BLVD. SUITE 100
HAYWARD, CALIFORNIA 94545
(510) 887-4086
WWW.LEABRAZE.COM

ASTLES RESIDENCE
16390 STEVENS CANYON RD.
CUPERTINO, CALIFORNIA
UNINCORPORATED SANTA CLARA COUNTY
503-05-040, 041, 043, 044 & 009

CONVENTIONAL OWTS
TITLE SHEET



- 1 EXISTING SEPTIC TANK (1200-GALLONS) TO BE REMOVED AND DISPOSED OF PER SANTA CLARA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH STANDARD.
- 2 REMOVE (E) INFILTRATOR OBSERVED IN THE FIELD DURING SOIL PROFILE. MAKE AND MODEL NUMBER UNKNOWN. APPROXIMATELY 18" WIDE.
- 3 INSTALL (N) 1500-GALLON PRECAST CONCRETE SEPTIC TANK. SEE DETAIL 3 & 5 ON SHEET SS-3.
- 4 INSTALL PRIMARY AND SECONDARY (N) INFILTRATOR SYSTEM AS SHOWN - SEE DETAIL 4 ON SHEET SS-3.
- 5 PROVIDE TREE PROTECTION FOR TREES TO REMAIN IN ACCORDANCE WITH THE ARBORIST REPORT.

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[4 SQFT STANDARD]

**REQUIRED TRENCH LENGTH FOR 100% CAPACITY CALCULATION (OWTS
ORDINANCE REQUIRES 2 100% FIELD "PRIMARY AND SECONDARY"):
 $600 / (4 * 1.04) = 144$ FT REQUIRED**

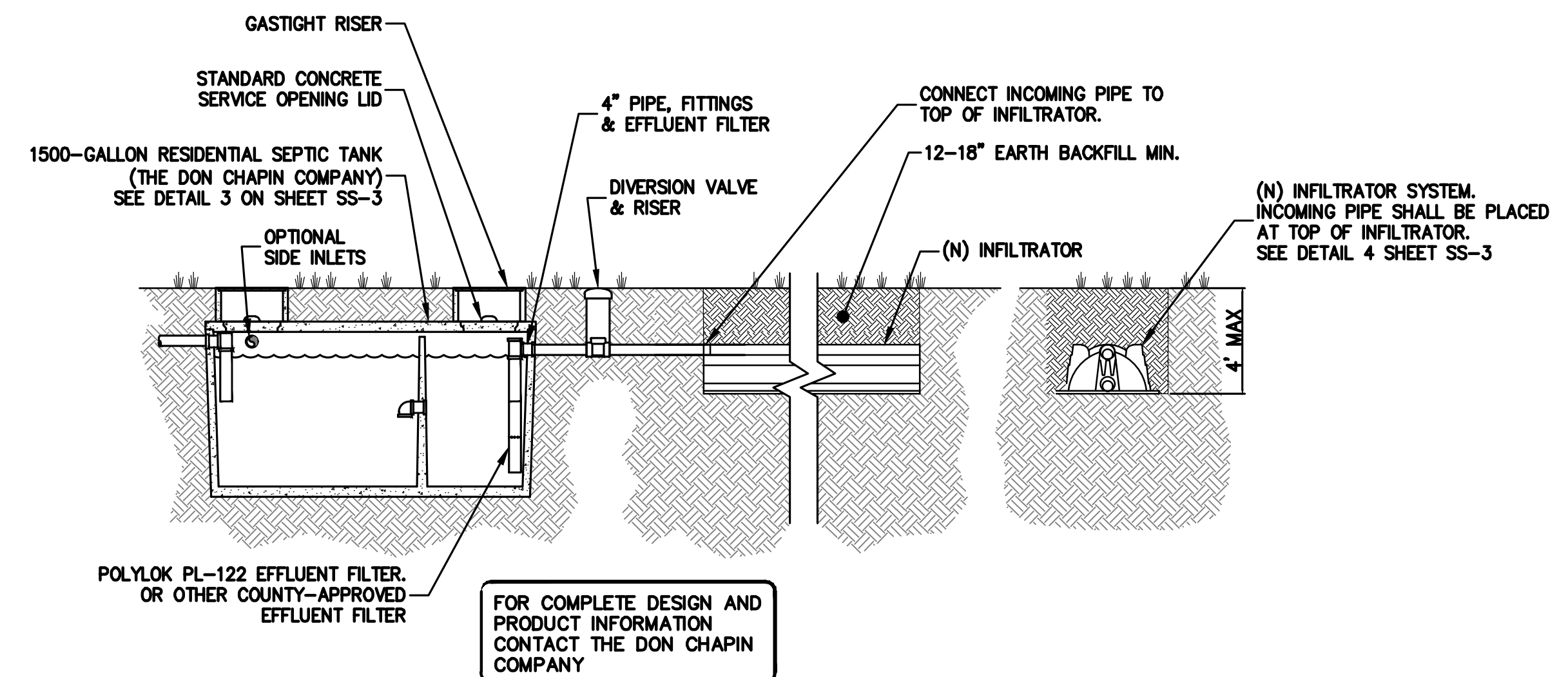
TOTAL CONVENTIONAL DISPERSAL TRENCH LENGTH REQUIRED = 288
LINEAR FEET

INFILTRATOR REDUCTION RATIO = 70% OF CONVENTIONAL TRENCH
 $288 * 70\% = 202$

SEE DISPERSAL TRENCH TABLE ON SHEET SS-2 FOR BREAKDOWN OF
LEACH LINE LENGTH PROVIDED IN EACH FIELD.

#	PRIMARY OR SECONDARY DRAINFIELD LENGTH OF INFILTRATOR
①	PRIMARY 51 LF
②	PRIMARY 51 LF
③	SECONDARY 51 LF
④	SECONDARY 51 LF
TOTAL LENGTH 204 LF	

TREE PROTECTION NOTE:
SEVERED ROOTS 1" OR LARGER TO BE CUT SQUARELY
WITH A SHARP TOOL, COVERED WITH BURLAP, AND
KEPT MOIST UNTIL BACKFILLED. TREE PROTECTION TO
BE IN ACCORDANCE WITH THE ARBORIST REPORT.



LIQUID CAPACITY REQUIRED: 1500 GALLONS (3 BEDROOMS)
DOSING CAPACITY REQUIRED: 150 GALLONS (150 GALLONS/BEDROOM PER SANTA CLARA COUNTY OWTs MANUAL 1500 GALLON MIN. FOR RESIDENTIAL USAGE)
BOX DESIGN LOAD: NON-TRAFFIC, UP TO 3 FEET OF SOIL COVER, MAXIMUM 500 PSF.

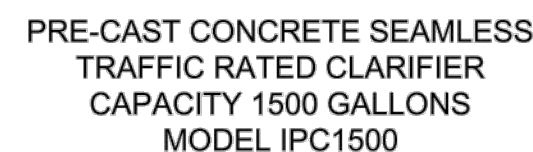
1
SS-2

NTS

SR #: _____ DATE OF INSPECTION: _____
 APN #: 503-05-008, 041, 042, 043, 044 OWNER: _____
 APPLICANT: _____
 SITE ADDRESS: _____
 CONDUCTED BY: _____ CHECKED BY: FL



Rev. 3/3/14



OWNER/APPLICANT: Astles	SR#:	PLN FILE # PLN19-0187
LOCATION: 16390 Stevens Canyon Rd	REHS/RCE: Lea & Braze Engineering	
CONTACT PERSON: John Halbom	PHONE: (408) 965-8478	TEST DATE: 10/24/19

[illegible]

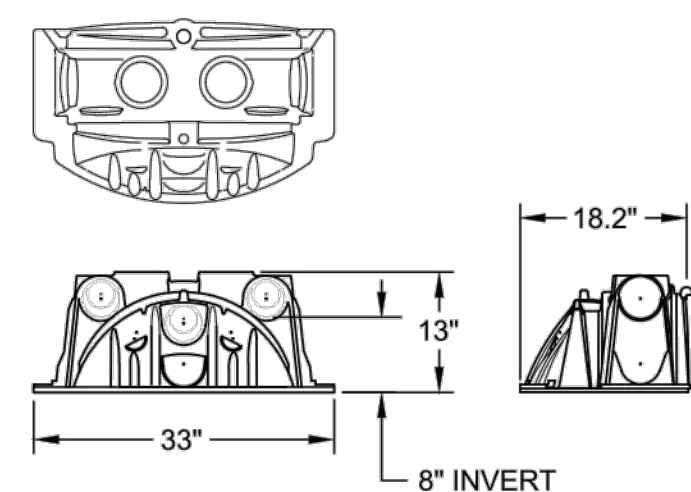
HOLE		1	2	3	4	5	6
Stabilized MPI	R	5.45	1.23	6.49	7.74	6.28	2.86
Adjusted Stabilized MPI	$R_1=R \times 1.4$	7.64	1.87	9.08	10.84	8.79	4.00
Average Adjusted Stabilized MPI	$R_2=(\sum R_i)/\text{Holes}$						6.685245353
# Bedrooms	FOR OFFICE USE ONLY	TANK SIZE (Gall.)			LEACH LINE (feet)		


SS-3 NTS

SS-3	NTS
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SS-3	NTS
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QUICK4 PLUS ALL-IN-ONE 12 END CAP



 <p>INFILTRATOR® Water Technologies</p>		
<p>INFILTRATOR WATER TECHNOLOGIES 4 Business Park Rd. Old Saybrook, CT 06475 (800) 221-4436</p>		
<p>QUICK4 PLUS HIGH CAPACITY CHAMBER PRODUCT SPECIFICATIONS</p>		
<p>Drawn by: EMB</p> <p>Scale: NOT TO SCALE</p>	<p>Checked by: DFH</p>	<p>Date: 05/20/2015</p> <p>Sheet: 1 of 1</p>

FROM SEPTIC TANK

INLET AT 8" SIDE PORT

ESTABLISH VEGETATIVE COVER

4" PVC

NATIVE BACKFILL (TYP.)

CONNECT AT END OF CHAMBER ROW


BOTTOM OF TRENCH ELEVATION PER

13"

36" TRENCH

TO NEXT TRENCH

*NUMBER OF ROWS DETERMINED BY DESIGN
AND CENTER TO CENTER SPACING PER CODE

 <p>INFILTRATOR® Sustainable Solutions</p>		
<p>INFILTRATOR SYSTEMS INC. 4 Business Park Rd. Old Saybrook, CT 06475 (800) 221-4436</p>		
<p>QUICK4 PLUS HIGH CAPACITY CHAMBER SERIAL DISTRIBUTION TYPICAL DETAIL SECTION VIEW</p>		
Drawn by: EMB	Date: 07/16/2013	
Scale: NOT TO SCALE	Checked by: DFH	Sheet: 1 of 1

SS-3 NTS