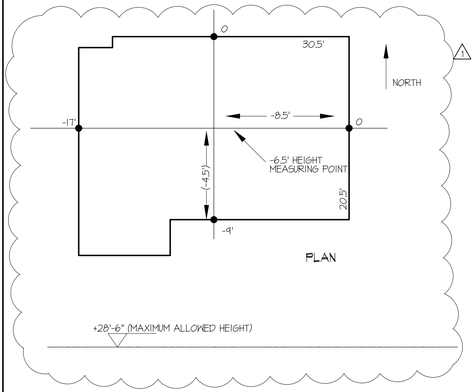
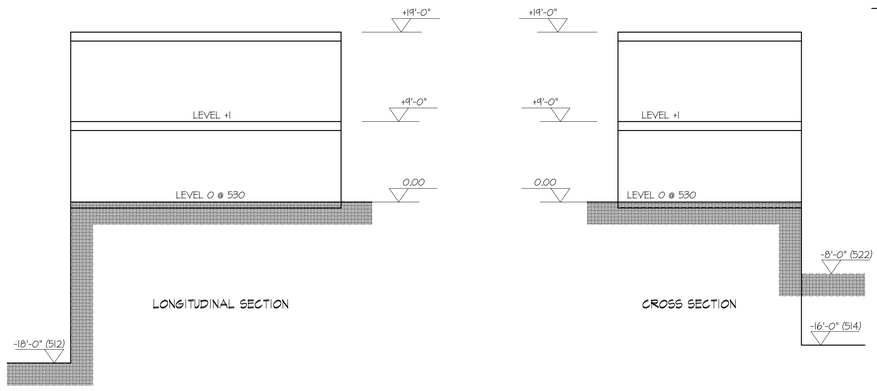
KHANDARE RESIDENCE

17025 McGILL ROAD, SARATOGA, CA 95070 (UNINCORPORATED)

SITE PLAN PERMIT APPLICATION



HEIGHT ANALYSIS GARAGE



PROJECT DATA

A. GENERAL DATA

1. ADDRESS: 17025 McGILL ROAD, SARATOGA, CA 95070
2. ASSESSOR'S PARCEL NUMBER: 517-24-024
3. LOT AREA: 435,600 SQ.FT. = 10 AC.

B. PLANNING DATA

ZONING: HS
UNDER 30% SLOPE
SETBACKS FRONT = 30'
SIDE = 30'
BACK = 30'
HEIGHT LIMITATION: 32.5' PROPOSED HEIGHT: 32.5'
PROPOSED SINGLE FAMILY RESIDENCE, 3 STORIES, 2,500 SQ.FT.+/- + 800 SQ.FT. BASEMENT.
PROPOSED 2 CAR GARAGE, DETACHED STRUCTURE, 2 STORIES, +/-1,200 SQ.FT.
SEWER: DRIP SEPTIC SYSTEM

C. CODES

THE FOLLOWING CODES APPLY:
2019 CALIFORNIA SINGLE FAMILY BUILDING CODE, INCLUDING CHAPTER 7A, 2019 CALIFORNIA FIRE CODE, 2019 CALIFORNIA PLUMBING CODE, 2019 CALIFORNIA MECHANICAL CODE, 2019 CALIFORNIA ELECTRICAL CODE, 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE, COUNTY OF SANTA CLARA CODES AND REGULATIONS.

D. FIRE

PARCEL LOCATED WITHIN SRA AND WUI-HIGH.
PROPOSED PROJECT WILL HAVE AN APPROVED AUTOMATIC SPRINKLER SYSTEM FOR THE RESIDENCE AND DETACHED GARAGE

PROJECT DIRECTORY

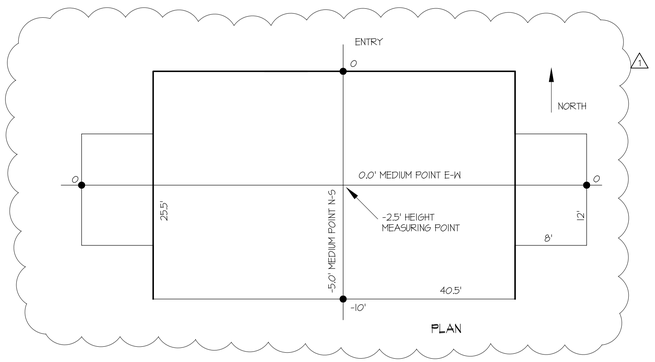
OWNER	**MILIND KHANDARE & NEHA DOBHAL** 560 HOPE STREET, #27 MOUNTAIN VIEW, CA, 94041	312.607.9870 nk.milind@gmail.com
ARCHITECT	**DAN IONESCU ARCHITECTS & PLANNERS** 1611 BOREL PLACE, SUITE 230 SAN MATEO, CA 94402	650.570.6681 diones@diap.com
CIVIL	**OSUNA ENGINEERING, INC.** 117 BERNAL ROAD, SUITE 70-336 SAN JOSE, CA 95119	408 772 4381 info@osunaengineering.com
GEOTECHNICAL	**ROMIG ENGINEERS** 1390 EL CAMINO REAL, SECOND FLOOR SAN CARLOS, CA 94070	650 591 5224 www.romigengineering.com
WASTEWATER	**BIOSPHERE CONSULTING** 1315 KING STREET, SANA CRUZ, CA 95060	831 430 9116 www.biosphere-consulting.com

DRAWING INDEX

ARCHITECTURAL

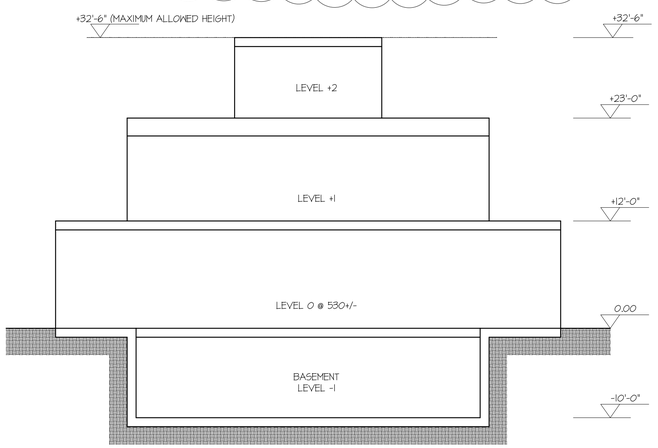
WASTEWATER SYSTEM

CIVIL

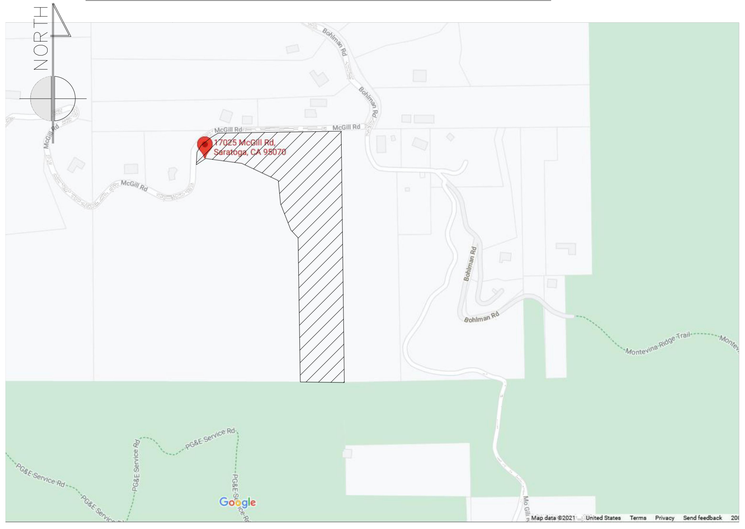


HEIGHT ANALYSIS RESIDENCE

MAXIMUM ALLOWED HEIGHT: 35'-0"
MAXIMUM ALLOWED HEIGHT FOR THIS LOCATION: 32'-6"
PROPOSED RESIDENCE HEIGHT: 32'-6"



VICINITY MAP



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ARCHITECTURE
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HISTORIC REHABILITATION
CONSTRUCTION MANAGEMENT
WWW.DIAP.COM
1611 BOREL PLACE, #230, SAN MATEO, CA 94402
TEL.: (650) 570-6681 FAX.: (650) 570-6540

KHANDARE RESIDENCE

LOCATION
17025 McGILL RD.
SARATOGA CA 95070

PROJECT PHASE: SITE PLAN PERMIT
JOB NO.: 2003

COVER SHEET

SCALE: N/A
DATE: JULY 2021

ISSUES / REVISIONS

1 9-10-21 CITY COMMENTS-PLANNING
2 11-22-21 COUNTY CIVIL COMMENTS

A-0

ABBREVIATIONS

@	AT
#	NUMBER
X < Y	"X" LESS THAN "Y"
A > B	"A" GREATER THAN "B"
AB	ANCHOR BOLT
A/C	AIR CONDENSER
ACOUS	ACOUSTICAL
AD	AREA DRAIN
ADJ	ADJUSTIBLE OR ADJACENT
AFF	ABOVE FINISHED FLOOR
AGGR	AGGREGATE
AL	ALUMINUM
ANOD	ANODIZED
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASB	ASBESTOS
ASPH	ASPHALT
AVE	AVENUE
BD	BOARD
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
BOT	BOTTOM
BU	BUILT-UP
C	COMPACT CAR PARKING SPACE
CAB	CABINET
CB	CATCH BASIN
CER	CERAMIC
CG	CORNER GUARD
CIP	CAST IN PLACE
CL	CENTERLINE OR CLOSET
CLF	CHAIN LINK FENCE
CLG	CEILING
CLKG	CAULKING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
CT	COOKTOP OR CERAMIC TILE
CTR	CENTER
D	DRYER
DB	DRY BAR
DBL	DOUBLE
DEPT	DEPARTMENT
DEG	DEGREES
DET	DETAIL
DF	DRINKING FOUNTAIN OR DOUGLAS FIR
DIA	DIAMETER
DIM	DIMENSION
DISP	DISPENSER
DMPPG	DAMPPROOFING
DN	DOWN
DR	DOOR
DS	DOWNSPOUT
DSP	DRY STAND PIPE
DW	DISHWASHER
DWG	DRAWING
DWR	DRAWER
(E)	EXISTING
E	EAST OR EGRESS
EA	EACH
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATION
EMER	EMERGENCY
ENCL	ENCLOSURE
ENG	ENGINEER
EP	ELECTRICAL PANELBOARD
EQ	EQUAL
EQPT	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EXP	EXPANSION
EXPO	EXPOSED
EXT	EXTERIOR
FA	FIRE ALARM
FAU	FORCED AIR UNIT
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FGL	FIXED GLASS
FF	FINISHED FLOOR
FHC	FIRE HOSE CABINET
FIN	FINISH
FL	FLOOR
FLASH	FLASHING
FLUOR	FLUORESCENT
FO	FACE OF
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOS	FACE OF STUD
FP	FIREPLACE
FPRF	FIREPROOFING
FT	FIRE RESISTIVE FOOT OR FEET
FTG	FOOTING
FURR	FURRING
G	GAS
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR OR GYPSUM BOARD
GC	GENERAL CONTRACTOR
GD	GARBAGE DISPOSAL
GL	GLASS
GND	GROUND
GR	GRADE
GSF	GLASS SQUARE FEET
GSM	GALVANIZED SHEET METAL
GYP BD	GYPSUM BOARD
H	HANDICAP PARKING SPACE, HOOD, HYDRANT, OR HIGH
HC	HANDICAP, HOLLOW CORE, OR HOSE CABINET
HD	HEADER
HDWD	HARDWOOD
HDWR	HARDWARE
HHP	HYDRONIC HEAT PUMP
HT	HEIGHT
HM	HOLLOW METAL
HP	HEAT PUMP
HORIZ	HORIZONTAL
HR	HOUR
ID	INSIDE DIAMETER OR INSIDE DIMENSION
INSUL	INSULATION
INT	INTERIOR
JAN	JANITOR
JT	JOINT
KIT	KITCHEN
KP	KICK PLATE
L	LINEN CLOSET
LA	LANDSCAPE ARCHITECT
LAB	LABORATORY
LAM	LAMINATE
LAV	LAVATORY
LKR	LOCKER
LT	LIGHT
LT WGT	LIGHT WEIGHT
M	MICROWAVE
MAX	MAXIMUM
MC	MEDICINE CABINET
MECH	MECHANICAL
MEMB	MEMBRANE
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLDG	MOULDING
MO	MASONRY OPENING
MTD	MOUNTED
MTL	METAL
MUL	MULLION
N	NORTH OR NON-RATED
N/A	NOT APPLICABLE
NA	NOT AVAILABLE
N/C	NON COMBUSTIBLE
NIC	NOT IN CONTRACT
NOM	NOMINAL
NR	NON-RATED
NSF	NET SQUARE FEET
NTS	NOT TO SCALE
O	OVEN
O/	OVER
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OVERFLOW
OFF	OFFICE
OH	OVERHANG
OPG	OPENING
OPP	OPPOSITE
ORD	ORDINANCE
P	POLE OR PANTRY
PA	PLANNING APPROVAL
PB	PARTICLE BOARD
PL	PLATE OR PROPERTY LINE
P LAM	PLASTIC LAMINATE
PLAS	PLASTIC
PLYWD	PLYWOOD
PR	PAIR
PRCST	PRECAST
PT	POINT, PRESSURE TREATED, OR POST TENSIONED
PTD	PAPER TOWEL DISPENSER
PTN	PARTITION
PW	PLUMBING WALL
QT	QUARRY TILE
R	RISER OR REFRIGERATOR
RAD	RADIUS
RD	ROOF DRAIN
REF	REFERENCE
REFR	REFRIGERATOR
REINF	REINFORCEMENT
REQ'D	REQUIRED
RES	RESERVED
RESIL	RESILIENT
REV	REVERSE
RF	RESILIENT FLOORING
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RWL	RAIN WATER LEADER
S	SOUTH OR SHELF
S & P	SHELF AND POLE
SB	SPLASH BLOCK
SC	SOLID CORE
SCD	SEE CIVIL DRAWINGS
SCHED	SCHEDULE
SD	SMOKE DETECTOR OR SOAP DISPENSER
SEC	SECTION
SH	SOAP HOLDER
SHR	SHOWER
SHT	SHEET
SHTG	SHEATHING
SIM	SIMILAR
SL	SLIDING
SLD	SEE LANDSCAPE DRAWINGS
SMD	SEE MECHANICAL DRAWINGS
SND	SANITARY NAPKIN DISPENSER
SOG	SLAB ON GRADE
SP	SUMP PUMP
SPD	SEE PLUMBING DRAWINGS
SPEC	SPECIFICATION
SQ	SQUARE
SSD	SEE STRUCTURAL DRAWINGS
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRL	STRUCTURAL
SUBFLR	SUBFLOOR
SUSP	SUSPENDED
SYM	SYMMETRICAL
SW	SHEARWALL
T	TILE, TREAD, TOP, OR TRANSFORMER
T & G	TONGUE AND GROOVE
TB	TOWEL BAR
TC	TOP OF CURB
TD	TRENCH DRAIN, TIE DOWN
TEL	TELEPHONE
TER	TERRAZZO
TH	TOWNHOUSE
THK	THICK
THR	THRESHOLD
T.O.	TOP OF
TOL	TOLERANCE
TOP	TOP OF PLATE
TOS	TOP OF STRUCTURAL SLAB
TOW	TOP OF WALL
TP	TOP OF PAVEMENT
TPD	TOILET PAPER DISPENSER
TRANS	TRANSPARENT
TV	TELEVISION
TYP	TYPICAL
UNF	UNFINISHED
UON	UNLESS OTHERWISE NOTED
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
W	WEST, WASHER, WATER OR WIDE
W/	WITH
WC	WATER CLOSET
WD	WOOD
WH	WATER HEATER
W X H	WIDTH BY HEIGHT
W/O	WITHOUT
WO	WHERE OCCURS
WP	WATERPROOF OR WORKING POINT
WR	WATER RESISTANT
WNDW	WINDOW
WSCT	WAINSCOT
WSP	WET STAND PIPE
WT	WEIGHT
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH

SYMBOLS

PLAN, SECTION, DETAIL NUMBER
SHEET ON WHICH IT OCCURS

SECTION CUT, DETAIL NUMBER
SHEET ON WHICH IT OCCURS

EXTERIOR ELEVATION NUMBER
SHEET OON WHICH IT OCCURS

INTERIOR ELEVATION NUMBER
SHEET ON WHICH IT OCCURS

DETAIL NUMBER
SHEET ON WHICH IT OCCURS

REVISION NUMBER

DOOR TYPE

WINDOW TYPE / LOUVER TYPE

FINISH TYPE

GRIDLINE IDENTIFICATION

ROOM NUMBER

REVISION CLOUD

ELEVATION CHANGE
@ TOPPING SLAB

ELEVATION CHANGE
(NOTED IN PLAN)
@ STRUCTURAL SLAB

CEILING HEIGHT

WASHER

DRYER

HEAT PUMP

WATER HEATER

ELECTRICAL PANEL BOARD

FLOOR DRAIN

SLOPE INDICATION

SMOKE DETECTOR

THERMOSTAT

DATUM ELEVATION

NORTH ARROW W/
PROJECT NORTH

SPOT ELEVATION

MAJOR PENETRATION THROUGH FLOOR

CENTERLINE

DISABBLED DESIGNATION

EARTH

CONCRETE (@ DETAIL SCALES)

PLUMBING WALL

ROUGH WOOD - CONTINUOUS

ROUGH WOOD - BLOCKING

FINISH WOOD

INSULATION - BATT

INSULATION - RIGID

PLYWOOD

GYPSUM BOARD

CONCRETE

2X WOOD STUD WALL

GRAVEL

DROPPED CEILING

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TEL.: (650) 570-6681 FAX.: (650) 570-6540

KHANDARE RESIDENCE

LOCATION
17025 McGILL RD.
SARATOGA CA 95070

PROJECT PHASE
SITE PLAN PERMIT

JOB NO.
2003

SYMBOLS & ABBREVIATIONS

SCALE
1"=100'

DATE
JULY 2021

ISSUES / REVISIONS

A-0.1

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REGISTERED PROFESSIONAL ARCHITECT
DAN M. IONESCU
No. C12154
Exp. 3/28/23
STATE OF CALIFORNIA

KHANDARE RESIDENCE

LOCATION
17025 McGILL RD.
SARATOGA CA 95070

PROJECT PHASE	JOB NO.
SITE PLAN PERMIT	2003

SITE PLAN

SCALE	DATE
1"=100'	JULY 2021

ISSUES / REVISIONS

A-1

POLE

TANK

526.1

531.3

526.5

530

528.3

PROPERTY LINE

(E) WELL

528.8

529.2

EX. POWER POLE

SET-BACK LINE

SET-BACK LINE

PROPERTY LINE

ABOVE GROUND WATER TANKS & HYDRANT
TO COMPLY WITH CFMO-W1, W4 & W5

DENSE BRUC

396 530.23 EOP
430 524.40 EOP
431 526.10 EOP
421 526.79 EOP
390 527.63 EOP
391 528.38 EOP
392 528.85 EOP
393 526.13 EOP
394 527.68 EOP
395 527.22 EOP
372 527.04 EOP
373 526.90 EOP
374 525.03 EOP
375 523.75 EOP
376 522.24 EOP
377 521.43 EOP
378 519.91 EOP
379 518 EOP
237 511.40 GAS 90
399 524.03 EOP
398 525.37 EOP
397 526.49 EOP
389 527.32 EOP
388 527.82 EOP
387 528.00 EOP
386 528.21 EOP
385 528.13 EOP
384 527.68 EOP
371 526.91 EOP
370 526.30 EOP
369 524.93 EOP
368 523.89 EOP
367 523.17 EOP
366 521.64 EOP
365 520.68 EOP
364 619.74 EOP

526 524 522 520 518 516 514 512 510 500 490 480 470

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KHANDARE RESIDENCE

LOCATION
17025 McGILL RD.
SARATOGA CA 95070

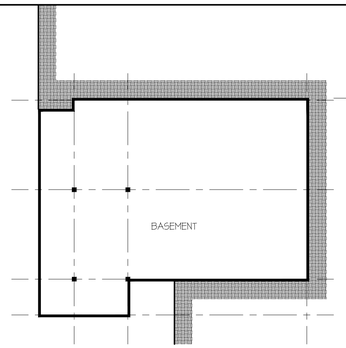
PROJECT PHASE: SITE PLAN PERMIT
JOB NO.: 2003

ENLARGED SITE PLAN

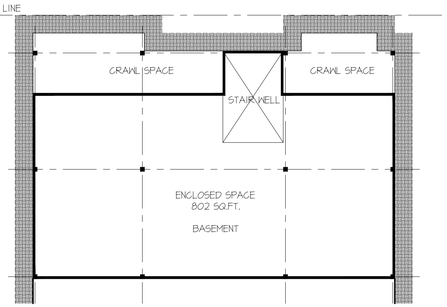
SCALE: 1"=10'
DATE: JULY 2021

ISSUES / REVISIONS
1 9-10-21 CITY COMMENTS-PLANNING

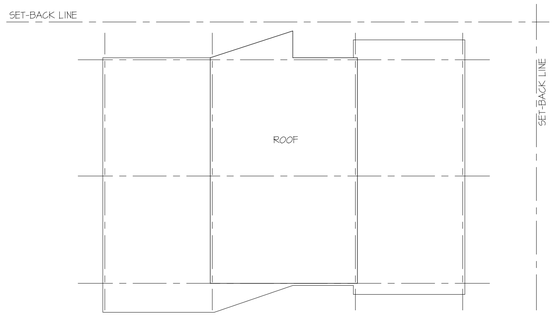
A-2



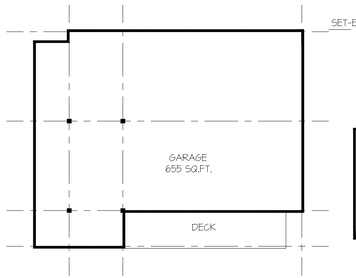
GARAGE BUILDING
LEVEL -1



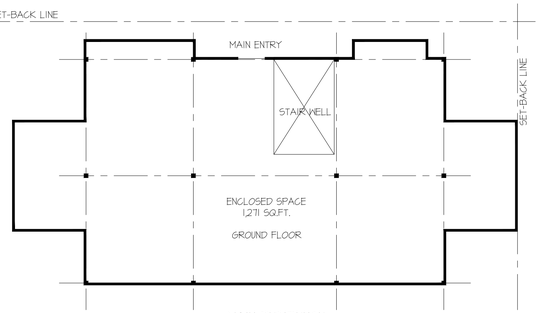
MAIN RESIDENCE
LEVEL -1



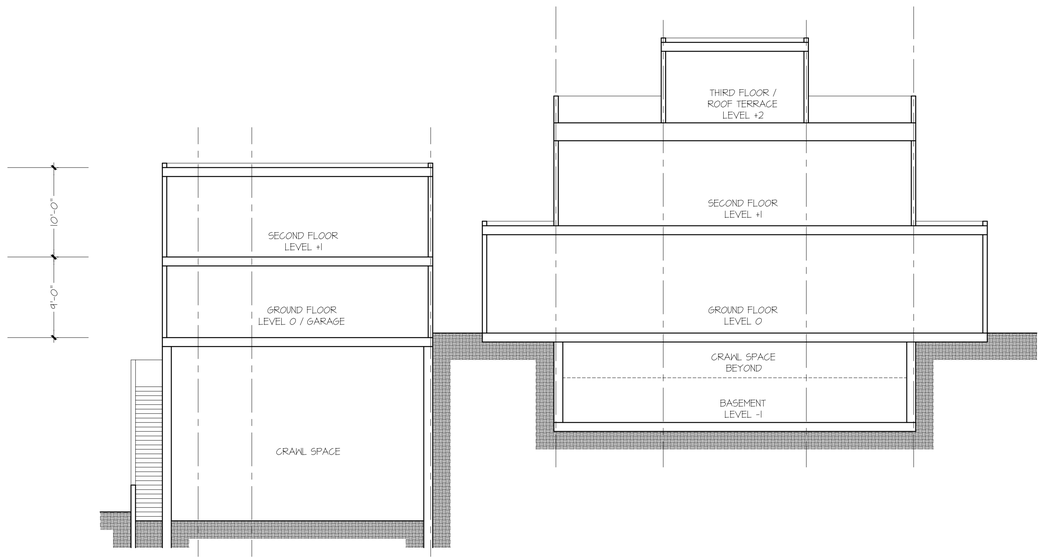
MAIN RESIDENCE
ROOF OVER LEVEL +2



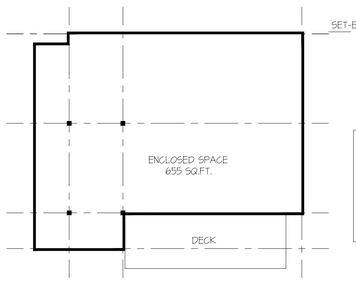
GARAGE BUILDING
LEVEL 0



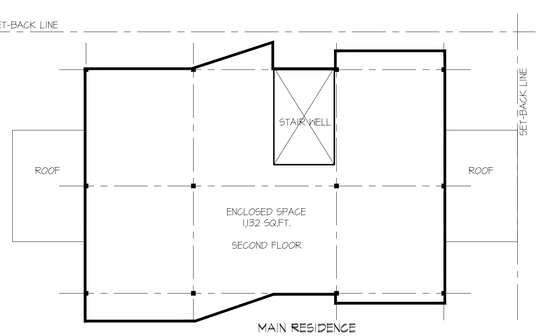
MAIN RESIDENCE
LEVEL 0



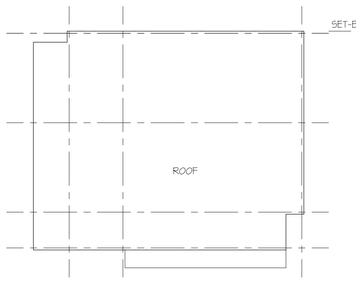
SECTION 1 RESIDENCE & GARAGE
WEST-EAST



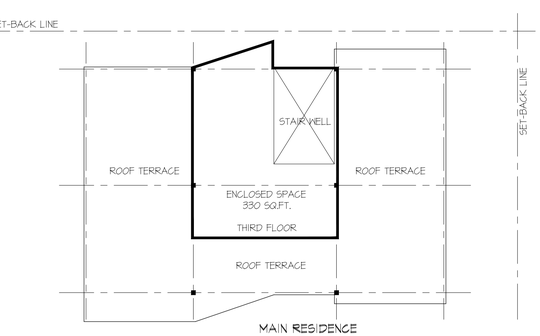
GARAGE BUILDING
LEVEL +1



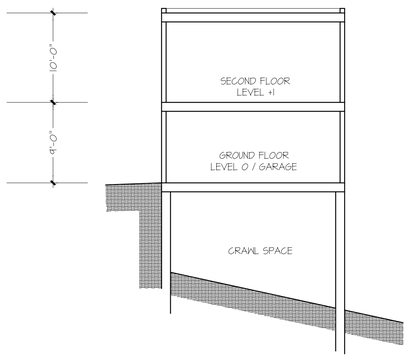
MAIN RESIDENCE
LEVEL +1



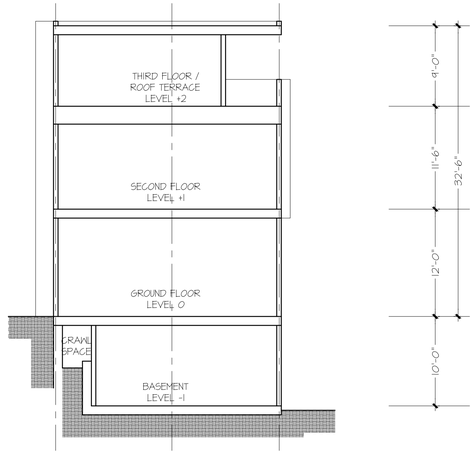
GARAGE BUILDING
ROOF



MAIN RESIDENCE
LEVEL +2



SECTION 2 GARAGE
NORTH-SOUTH



SECTION 3 RESIDENCE
NORTH-SOUTH

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KHANDARE RESIDENCE

LOCATION
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SARATOGA CA 95070

PROJECT PHASE
SITE PLAN PERMIT

JOB NO.
2003

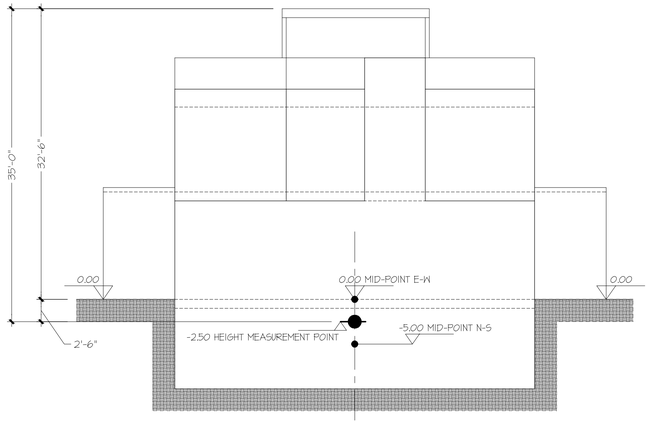
PLANS &
SECTIONS
SCHEMATICS

SCALE
1/8"=1'-0"

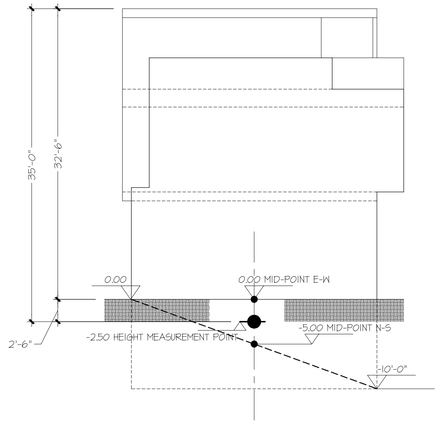
DATE
JULY 2021

ISSUES / REVISIONS

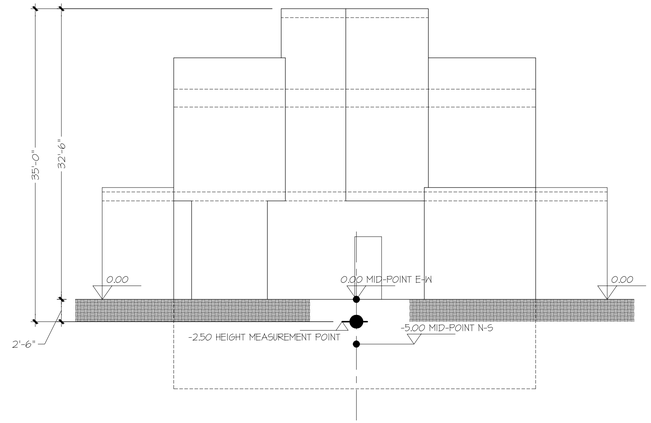
A3



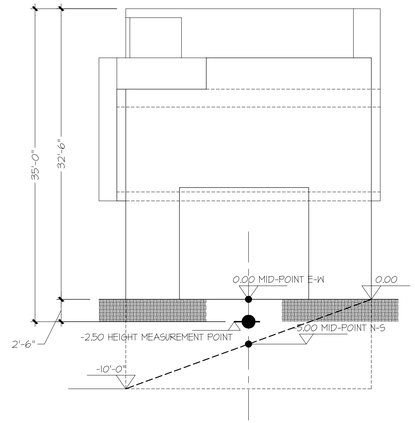
RESIDENCE
SOUTH ELEVATION



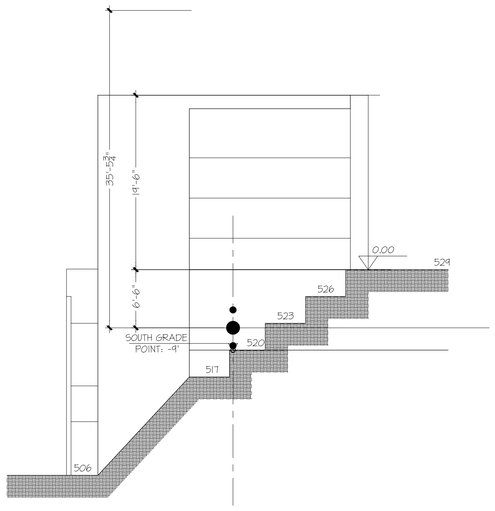
RESIDENCE
WEST ELEVATION



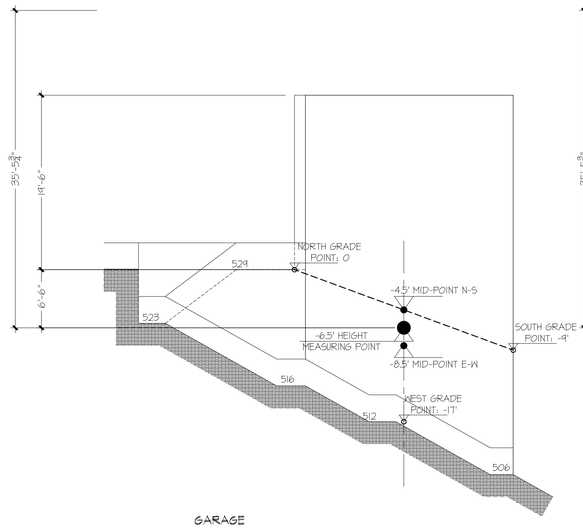
RESIDENCE
NORTH ELEVATION



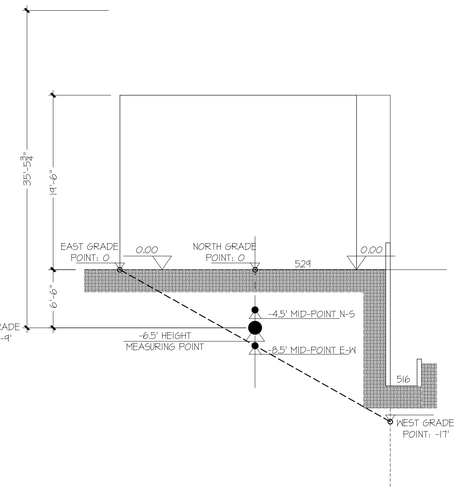
RESIDENCE
EAST ELEVATION



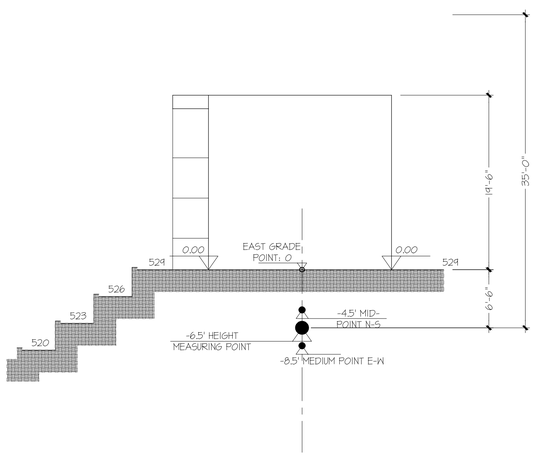
GARAGE
SOUTH ELEVATION



GARAGE
WEST ELEVATION



GARAGE
NORTH ELEVATION



GARAGE
EAST ELEVATION

DIAP
DAN IONESCU ARCHITECTS & PLANNERS
SAN FRANCISCO BAY AREA

ARCHITECTURE
PLANNING
URBAN DESIGN
INTERIOR DESIGN
HISTORIC REHABILITATION
CONSTRUCTION MANAGEMENT

WWW.DIAP.COM

1611 BOREL PLACE, #230, SAN MATEO, CA 94402
TEL.: (650) 570-6681 FAX.: (650) 570-6540

DAN M. IONESCU
No. C12154
Exp. 3/28/23
REGISTERED PROFESSIONAL ARCHITECT
STATE OF CALIFORNIA

KHANDARE RESIDENCE

LOCATION
17025 McGILL RD.
SARATOGA CA 95070

PROJECT PHASE
SITE PLAN PERMIT

JOB NO.
2003

ELEVATIONS SCHEMATICS

SCALE
1/8"=1'-0"

DATE
JULY 2021

ISSUES / REVISIONS

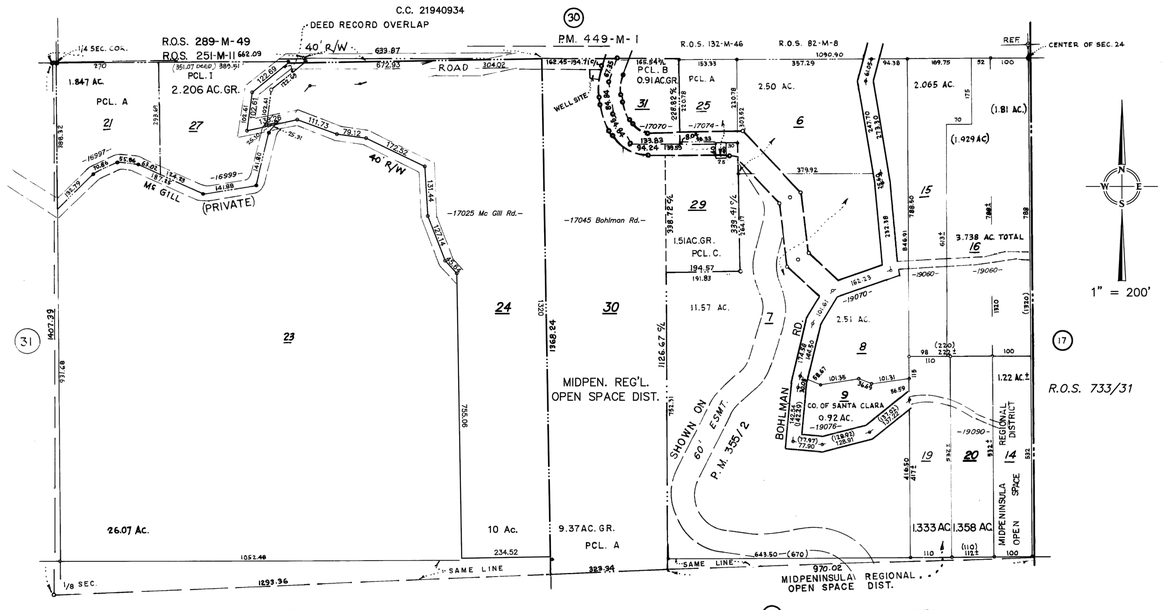
1 9-10-21 CITY COMMENTS-PLANNING

A4

OFFICE OF COUNTY ASSESSOR — SANTA CLARA COUNTY, CALIFORNIA

BOOK	PAGE
517	24

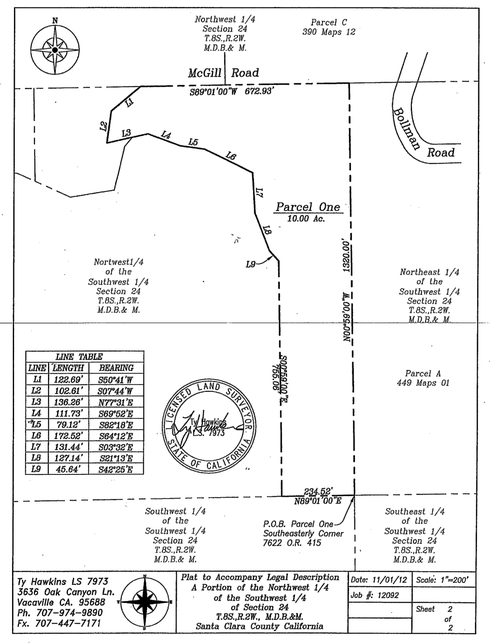
N.1/2 OF S.W.1/4 OF SEC. 24, T.8S., R.2W.



NOTE:
ALL ROADS ARE PRIVATE LANES. THEIR LOCATIONS ARE UNCERTAIN, EXCEPT THOSE CENTERED ON PROPERTY LINES. TRA DET. MAP 089

LAWRENCE E. STONE — ASSESSOR
Cadastral map for assessment purposes only.
Compiled under R. & T. Code, Sec. 327.
Effective Roll Year 2020–2021

EXHIBIT 'B'



LINE TABLE		
LINE	LENGTH	BEARING
L1	122.69'	S50°41'W
L2	102.61'	S07°44'W
L3	136.26'	N77°31'E
L4	111.73'	S89°52'E
L5	79.13'	S82°18'E
L6	172.52'	S64°12'E
L7	131.44'	S03°32'E
L8	127.14'	S21°13'E
L9	45.64'	S42°25'E

Ty Hawkins LS 7973 3636 Oak Canyon Ln. Vacaville CA. 95688 Ph. 707-974-9890 Fx. 707-447-7171	Plat to Accompany Legal Description A Portion of the Northwest 1/4 of the Southwest 1/4 of Section 24 T.8S.,R.2W., M.D.B.&M. Santa Clara County California	Date: 11/01/12 Job #: 12092 Sheet 2 of 2

EXHIBIT "A"

LEGAL DESCRIPTION

TRACT A:

PARCEL ONE:

A portion of the Northwest ¼ of the Southwest ¼ of Section 24, Township 8 South, Range 2 West, Mount Diablo Base and Meridian, and being more particularly described as follows:

Beginning at the Southeasterly corner of that certain 40 acre parcel of land, as described in the Deed from George C. Carrick, et al, to Roman T. Chavez, et al, dated December 23, 1966, recorded January 25, 1967 in Book 7622 of Official Records, at page 415, Santa Clara County Records; thence from said point of beginning along the Easterly line of said 40 acre parcel of land, North 0° 59' West, 1320.00 feet to a ¾ inch iron pipe at the Northwesterly corner thereof; thence along the Northerly line of said 40 acre parcel of land, South 89° 01' West, 672.93 feet to a ¾ inch iron pipe; thence leaving said Northerly line, the following courses and distances:

South 50° 41' West, 122.69 feet to a ¾ inch iron pipe;
thence South 7° 44' West, 102.61 feet to a ¾ inch iron pipe;
thence North 77° 31' East, 136.26 feet to a ¾ inch iron pipe;
thence South 89° 52' East, 111.73 feet to a ¾ inch iron pipe;
thence South 82° 18' East, 79.12 feet to a ¾ inch iron pipe;
thence South 64° 12' East, 172.52 feet to a ¾ inch iron pipe;
thence South 3° 32' East, 131.44 feet to a ¾ inch iron pipe;
thence South 21° 13' East, 127.14 feet to a ¾ inch iron pipe;
thence South 42° 25' East, 45.64 feet to a point;
thence South 0° 59' East, 755.06 feet to a point on the Southerly line of said 40 acre parcel of land, above referred to; thence along the Southerly line of said 40 acre parcel of land, North 89° 01' East, 234.52 feet to the point of beginning, containing 10.00 acres of land, more or less.

LICENSED LAND SURVEYOR TY HAWKINS No. 7973 STATE OF CALIFORNIA

Sheet 1 of 2

RECORDING REQUESTED BY:
County of Santa Clara

RETURN TO:
Santa Clara County Planning Office
7th Floor, East Wing
70 West Hedding Street
San Jose, CA 95110
(408) 299-5770

CONFORMED COPY: This document has not been compared with the original.
SANTA CLARA COUNTY CLERK-RECORDER

Doc#: 21940934
11/07/2012 8:23 AM

CERTIFICATE OF COMPLIANCE
For One Parcel of Land

Owner(s) of Property: Arshad Khan, Nitin K. Gupta and Gazala Khan

Notice is hereby given pursuant to Section 66499.35 of the Government Code of the State of California that the real property described in "Exhibit A" and "Exhibit B", attached hereto and made a part hereof, complies with the provisions of Division 2 of Title 7 of said Government Code, cited as the Subdivision Map Act, and all local ordinances enacted pursuant thereto.

This certificate relates only to issues of compliance or noncompliance with the Subdivision Map Act and local ordinances enacted pursuant thereto. The parcel described herein may be sold, leased or financed without further compliance with the Subdivision Map Act or any local ordinance enacted pursuant thereto. Development of the parcel may require issuance of a permit or permits or other grant or grants of approval.

County File Number: 10367-12CC
Assessor Parcel Number: 517-24-024

Date: Approved By: Carolyn T. Walsh
Carolyn T. Walsh, Principal Planner
County of Santa Clara

State of California)
County of Santa Clara)

On Nov 6, 2012, before me, Michael Dolan, the undersigned Notary Public, personally appeared Carolyn T. Walsh, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Michael Dolan

MICHAEL DOLAN
COMM. NO. 1935495
NOTARY PUBLIC - CALIFORNIA
SANTA CLARA COUNTY
COMM. EXPIRES JUNE 4, 2015

DIAP
DAN IONESCU ARCHITECTS & PLANNERS
SAN FRANCISCO BAY AREA
ARCHITECTURE
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REGISTERED PROFESSIONAL ARCHITECT DAN M. IONESCU No. C12154 Exp. 3/28/23 STATE OF CALIFORNIA

KHANDARE RESIDENCE

LOCATION
17025 McGILL RD.
SARATOGA CA 95070

PROJECT PHASE: SITE PLAN PERMIT
JOB NO.: 2003

ASSESSOR PARCEL MAP & LEGAL LOT CREATION

SCALE: N/A
DATE: JULY 2021

ISSUES / REVISIONS

A-5

COUNTY OF SANTA CLARA
General Construction Specifications

GENERAL CONDITIONS

1. ALL CONSTRUCTION WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE SOILS AND/OR GEOTECHNICAL REPORT PREPARED BY ROMIG ENGINEERS, 1390 EL CAMINO REAL, SECOND FLOOR, SAN CARLOS, CA 94070, TEL 650-591-5224, PROJECT NO. 5340-1A AND DATED JUNE 30, 2021, THIS REPORT IS SUPPLEMENTED BY: 1) THESE PLANS AND SPECIFICATIONS, 2) THE COUNTY OF SANTA CLARA STANDARD DETAILS. 3) THE COUNTY OF SANTA CLARA STANDARD SPECS, 4) STATE OF CALIFORNIA STANDARD DETAILS, 5) STATE OF CALIFORNIA STANDARD SPECIFICATIONS. IN THE EVENT OF CONFLICT THE FORMER SHALL TAKE PRECEDENCE OVER THE LATTER. THE PERFORMANCE AND COMPLETION OF ALL WORK MUST BE TO THE SATISFACTION OF THE COUNTY.
2. DEVELOPER IS RESPONSIBLE FOR INSTALLATION OF THE IMPROVEMENTS SHOWN ON THESE PLANS AND HE OR HIS SUCCESSOR PROPERTY OWNERS ARE RESPONSIBLE FOR THEIR CONTINUED MAINTENANCE.
3. DEVELOPER SHALL BE RESPONSIBLE FOR CORRECTION OF ANY ERRORS OR OMISSIONS IN THESE PLANS. THE COUNTY SHALL BE AUTHORIZED TO REQUIRE DISCONTINUANCE OF ANY WORK AND SUCH CORRECTION AND MODIFICATION OF PLANS AS MAY BE NECESSARY TO COMPLY WITH COUNTY STANDARDS OR CONDITIONS OF DEVELOPMENT APPROVAL.
4. DEVELOPER SHALL OBTAIN ENCROACHMENT PERMITS FROM THE SANTA CLARA VALLEY WATER DISTRICT AND CALIFORNIA DEPARTMENT OF TRANSPORTATION WHERE NEEDED. COPIES OF THESE PERMITS SHALL BE KEPT AT THE JOB SITE FOR REVIEW BY THE COUNTY'S INSPECTOR.
5. DEVELOPER SHALL REMOVE OR TRIM ALL TREES TO PROVIDE AN UNOBSTRUCTED FIFTEEN (15) FOOT VERTICAL CLEARANCE FOR ROADWAY AREA.
6. THIS PLAN AUTHORIZES THE REMOVAL OF ONLY THOSE TREES WITH TRUNK DIAMETERS GREATER THAN 12 INCHES MEASURED 4.5 FEET ABOVE THE GROUND THAT ARE SHOWN TO BE REMOVED UNLESS AN AMENDED PLAN IS APPROVED OR A SEPARATE TREE REMOVAL PERMIT IS OBTAINED FROM THE PLANNING OFFICE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT REMOVAL OF ADDITIONAL TREES HAS BEEN PERMITTED.
7. DEVELOPER SHALL PROVIDE ADEQUATE DUST CONTROL AS REQUIRED BY THE COUNTY INSPECTOR.
8. ALL PERSONS MUST COMPLY WITH SECTION 4442 OF THE PUBLIC RESOURCES CODE AND SECTION 13005 OF THE HEALTH AND SAFETY CODE RELATING TO THE USE OF SPARK ARRESTERS.
9. UPON DISCOVERING OR UNEARTHING ANY BURIAL SITE AS EVIDENCED BY HUMAN SKELETAL REMAINS OR ARTIFACTS, THE PERSON MAKING SUCH DISCOVERY SHALL IMMEDIATELY NOTIFY THE COUNTY CORONER AT (4008) 454-2520 AND LAND DEVELOPMENT ENGINEERING OFFICE AT (408) 299-5730. NO FURTHER DISTURBANCE OF THE SITE MAY BE MADE EXCEPT AS AUTHORIZED BY THE LAND DEVELOPMENT OFFICE IN ACCORD WITH PROVISIONS OF THIS ORDINANCE (COUNTY ORDINANCE CODE SECTION B6-18).
10. THESE PLANS ARE FOR THE WORK DESCRIBED IN THE SCOPE OF WORK ONLY. A SEPARATE PERMIT WILL BE REQUIRED FOR THE SEPTIC LINE CONSTRUCTION.
11. ANY DEVIATION FROM THESE APPROVED PLANS SHALL BE RE-APPROVED IN WRITING BY THE COUNTY ENGINEER PRIOR TO CONSTRUCTION.

CONSTRUCTION STAKING

1. THE DEVELOPER'S ENGINEER IS RESPONSIBLE FOR THE INITIAL PLACEMENT AND REPLACEMENT OF CONSTRUCTION GRADE STAKES. THE STAKES ARE TO BE ADEQUATELY IDENTIFIED, LOCATED, STABILIZED, ETC. FOR THE CONVENIENCE OF CONTRACTORS. LATERAL OFFSET OF STAKES SET FOR CURBS AND GUTTERS SHALL NOT EXCEED 2 1/2 FEET FROM BACK OF CURB.
2. ANY PROPERTY LINE STAKES OR ROAD MONUMENTS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY DEVELOPER'S ENGINEER AND LICENSED LAND SURVEYOR.
3. PROPERTY LINE STAKING MUST BE PERFORMED BY THE PROJECT ENGINEER OR LAND SURVEYOR TO ESTABLISH OR RE-ESTABLISH THE PROJECT BOUNDARY AND SHALL BE INSPECTED BY THE COUNTY INSPECTOR PRIOR TO THE BEGINNING OF THE WORK.
4. PROPER CONSTRUCTION STAKES SHALL BE SET IN THE FIELD BY THE PROJECT ENGINEER OR LAND SURVEYOR AND VERIFIED BY THE COUNTY INSPECTOR PRIOR TO THE COMMENCEMENT OF GRADING.

CONSTRUCTION INSPECTION

1. CONTRACTOR SHALL NOTIFY PERMIT INSPECTION UNIT, SANTA CLARA COUNTY PRIOR TO COMMENCING WORK AND FOR FINAL INSPECTION OF WORK AND SITE.
2. THE COUNTY REQUIRES A MINIMUM OF 24 HOURS ADVANCE NOTICE FOR GENERAL INSPECTION, 48 HOURS FOR ASPHALT CONCRETE INSPECTION.
3. INSPECTION BY SANTA CLARA COUNTY SHALL BE LIMITED TO INSPECTION OF MATERIALS AND PROCESSES OF CONSTRUCTION TO OBSERVE THEIR COMPLIANCE WITH PLANS & SPECIFICATIONS BUT DOES NOT INCLUDE RESPONSIBILITY FOR THE SUPERINTENDENT OF CONSTRUCTION, SITE CONDITIONS, EQUIPMENT OR PERSONNEL. CONTRACTOR SHALL NOTIFY THE COUNTY LAND DEVELOPMENT INSPECTOR AT PHONE (408) 299-6868 AT LEAST 24 HOURS PRIOR TO COMMENCING WORK AND FOR FINAL INSPECTION OF WORK AND SITE.
4. DEVELOPER AND/OR HIS AUTHORIZED REPRESENTATIVE MUST SUBMIT WRITTEN REQUEST FOR FINAL INSPECTION AND ACCEPTANCE. SAID REQUEST SHALL BE DIRECTED TO THE INSPECTION OFFICE NOTED ON THE PERMIT FORM.
5. THE CONTRACTOR SHALL PROVIDE TO THE COUNTY CONSTRUCTION INSPECTOR WITH PAD ELEVATION AND LOCATION CERTIFICATES, PREPARED BY THE PROJECT ENGINEER OR LAND SURVEYOR, PRIOR TO COMMENCEMENT OF THE BUILDING FOUNDATION.

SITE PREPARATION (CLEARING AND GRUBBING)

1. EXISTING TREES AUTHORIZED FOR REMOVAL, ROOTS, AND FOREIGN MATERIAL IN AREAS TO BE IMPROVED WILL BE REMOVED TO AN AUTHORIZED DISPOSAL SITE AS FOLLOWS:
   A) TO A MINIMUM DEPTH OF TWO FEET BELOW THE FINISHED GRADE OF PROPOSED ROADWAYS (EITHER PRIVATE OR TO BE DEDICATED TO PUBLIC USE)
   B) FROM AREAS AFFECTED BY THE PROPOSED GRADING EXCEPT WHERE NOTED ON THE PLANS.
2. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO MOVE OR RELOCATE UTILITY POLES AND OTHER OBSTRUCTIONS IN THE WAY OF CONSTRUCTION.

UTILITY LOCATION, TRENCHING & BACKFILL

1. CONTRACTOR SHALL NOTIFY USA (UNDERGROUND SERVICE ALERT) AT 1-800-277-2600 A MINIMUM OF 24 HOURS BEFORE BEGINNING UNDERGROUND WORK FOR VERIFICATION OF THE LOCATION OF UNDERGROUND UTILITIES.
2. ACCURATE VERIFICATION AS TO SIZE, LOCATION, AND DEPTH OF EXISTING UNDERGROUND CONDUITS OR FACILITIES SHALL BE THE INDIVIDUAL CONTRACTORS RESPONSIBILITY. PLAN LOCATIONS ARE APPROXIMATE AND FOR GENERAL INFORMATION ONLY.
3. ALL UNDERGROUND INSTALLATIONS SHALL BE IN PLACE AND THE TRENCH BACKFILLED AND COMPACTED BEFORE PLACING AGGREGATE BASE MATERIAL OR SURFACE STRUCTURES. SURFACING MAY BE DONE IF THE UTILITY COMPANY CONCERNED INDICATES BY LETTER THAT IT WILL BORE. UNLESS SPECIFICALLY AUTHORIZED BY THE COUNTY, GAS AND WATER MAINS SHALL BE INSTALLED OUTSIDE THE PAVED AREAS.
4. TRENCH BACKFILL IN EXISTING PAVEMENT AREAS SHALL BE SAND MATERIAL IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE STATE SPECIFICATIONS. THE STRUCTURAL SECTION FOR TRENCH REPLACEMENT SHALL CONSIST OF NOT LESS THAN 12 INCHES OF APPROVED AGGREGATE BASE MATERIAL COMPACTED TO A RELATIVE COMPACTION OF AT LEAST 95% AND 4 INCHES OF HOT ASPHALT CONCRETE PLACED IN TWO LIFTS. TRENCH RESTORATION FOR HIGHER TYPE PAVEMENTS SHALL BE MADE IN KIND OR AS DIRECTED BY THE COUNTY.
5. TRENCH BACKFILL IN NEW CONSTRUCTION AREAS SHALL BE SAND MATERIAL COMPACTED TO A RELATIVE COMPACTION OF AT LEAST 90%. THE REQUIREMENT FOR SELECT MATERIAL MAY BE WAIVED BY COUNTY IF THE NATIVE SOIL IS SUITABLE FOR USE AS TRENCH BACKFILL BUT THE COMPACTION REQUIREMENTS WILL NOT BE THEREBY WAIVED.
6. BACKFILL AND TRENCH RESTORATION REQUIREMENTS SHALL APPLY AS MINIMUM STANDARDS TO ALL UNDERGROUND FACILITIES INSTALLED BY OTHER FIRMS OR PUBLIC AGENCIES.

RETAINING WALLS

1. REINFORCED CONCRETE AND CONCRETE MASONRY UNIT RETAINING WALLS SHALL HAVE FOUNDATION AND REINFORCEMENT INSPECTED BY THE COUNTY ENGINEERING INSPECTOR AND ENGINEER OF RECORD PRIOR TO POURING THE FOUNDATION AND FORMING THE WALL.
2. SEGMENTAL BLOCK RETAINING WALLS SHALL HAVE FOUNDATION AND REINFORCEMENT INSPECTED BY THE COUNTY ENGINEERING INSPECTOR.

REVISED 10/27/2015

GRADING

1. EXCAVATED MATERIAL SHALL BE PLACED IN THE FILL AREAS DESIGNATED OR SHALL BE HAULED AWAY FROM THE SITE TO A COUNTY APPROVED DISPOSAL SITE. WHERE FILL MATERIAL IS TO BE PLACED ON NATURAL GROUND, IS SHALL BE STRIPPED OF ALL VEGETATION. TO ACHIEVE A PROPER BOND WITH THE FILL MATERIAL, THE SURFACE OF THE GROUND SHALL BE SCARIFIED TO DEPTH OF 6" BEFORE FILL IS PLACED. WHERE NATURAL GROUND IS STEEPER THAN 5:1, IT SHALL BE BENCHED AND THE FILL KEYED IN TO ACHIEVE STABILITY. WHERE NEW FILL IS TO BE PLACED ON EXISTING FILL THE EXISTING FILL SHALL BE REMOVED UNTIL MATERIAL COMPACTED TO 90% RELATIVE COMPACTION IS EXPOSED. THEN THE NEW FILL MATERIAL SHALL BE PLACED AS PER THESE CONSTRUCTION NOTES. FILL MATERIAL SHALL BE PLACED IN UNIFORM LIFTS NOT EXCEEDING 6" IN UNCOMPACTED THICKNESS. BEFORE COMPACTION BEGINS, THE FILL SHALL BE BROUGHT TO A WATER CONTENT THAT WILL PERMIT PROPER COMPACTION BY EITHER 1) AERATING THE FILL IF IT IS TOO WET OR 2) MOISTENING THE FILL WITH WATER IF IT IS TOO DRY. EACH LIFT SHALL BE THOROUGHLY MIXED BEFORE COMPACTION TO ENSURE A UNIFORM DISTRIBUTION OF MOISTURE.
2. EXCESS CUT MATERIAL SHALL NOT BE SPREAD OR STOCKPILED ON THE SITE.
3. SURPLUS EARTH FILL MATERIAL SHALL BE PLACED IN A SINGLE (8" MAX) THICK LAYER COMPACTED TO WITHSTAND WEATHERING IN THE AREA(S) DELINEATED ON THE PLAN.
4. NO ORGANIC MATERIAL SHALL BE PLACED IN ANY FILL. NO TREES SHALL BE REMOVED OUTSIDE OF CUT, FILL OR ROADWAY AREAS.
5. THE UPPER 6" OF SUBGRADE BELOW DRIVEWAY ACCESS ROAD OR PARKING AREA SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY.
6. MAXIMUM CUT SLOPE SHALL BE 2 HORIZONTAL TO 1 VERTICAL. MAXIMUM FILL SLOPE SHALL BE 2 HORIZONTAL TO 1 VERTICAL.

EARTHWORK QUANTITIES

DESCRIPTION		EARTHWORK QUANTITIES ALL			EARTHWORK QUANTITIES EXCLUDING EXEMPT		MAXIMUM DEPTHS	
		CUT (-)	FILL (+)	EXEMPT?	CUT (-)	FILL (+)	CUT (-)	FILL (+)
		CY	CY	YES/NO	CY	CY	FT	FT
BUILDING EXEMPT	MAIN HOUSE PAD (POLYLINES 5' FROM BUILDING)	340	23	YES			-9.4	5.1
	POOL	51	11	YES			-7.3	3.4
	GARAGE PAD (POLYLINES 5' FROM BUILDING)	0	297	YES			0.0	19.5
SITE WORK	DRIVEWAY	1	72	NO	1	72	-1.0	9.8
	STORM SYSTEM	147	0	NO	147	0	-5.0	0.0
	WALKS/PATIO/DECK	145	235	NO	145	235	-9.0	8.7
	LANDSCAPE	51	144	NO	51	144	-2.6	8.7
TOTALS:		735	782		**344**	**451**	<- EXEMPT TOTALS	
TOTAL NET IMPORT: IMPORT (+) / EXPORT (-)		47		CUBIC YARDS (IN-PLACE)	**107**		CUBIC YARDS (IN-PLACE)	

EXCESS MATERIAL SHALL BE OFF HAULED TO A COUNTY APPROVED DUMP SITE.

7. NOTIFY SOILS ENGINEER TWO (2) DAYS PRIOR TO COMMENCEMENT OF ANY GRADING WORK TO COORDINATE THE WORK IN THE FIELD.
8. ALL MATERIALS FOR FILL SHOULD BE APPROVED BY THE SOILS ENGINEER BEFORE IT IS BROUGHT TO THE SITE.
9. THE UPPER 6" OF THE SUBGRADE SOIL SHALL BE SCARIFIED, MOISTURE CONDITIONED AND COMPACTED TO A MINIMUM RELATIVE COMPACTION OF 95%
10. ALL AGGREGATE BASE MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% RELATIVE COMPACTION.
11. THE GEOTECHNICAL PLAN REVIEW LETTER MUST BE REVIEWED AND APPROVED BY THE COUNTY GEOLOGIST PRIOR TO FINAL APPROVAL BY THE COUNTY ENGINEER FOR BUILDING OCCUPANCY.
12. THE PROJECT GEOTECHNICAL ENGINEER SHALL PERFORM COMPACTION TESTING AND PRESENT THE RESULTS TO THE COUNTY ENGINEERING INSPECTOR PRIOR TO THE CONSTRUCTION OF ANY PAVED AREA.
13. GRADING WORK BETWEEN OCTOBER 15TH AND APRIL 15TH IS AT THE DISCRETION OF THE SANTA CLARA COUNTY GRADING OFFICIAL.
14. TOTAL DISTURBED AREA FOR THE PROJECT ____________________________SF.
15. WDID NO.________________________.
16. THE INSPECTOR MAY VERIFY THAT A VALID NOTICE OF INTENT (NOI) HAS BEEN ISSUED BY THE STATE AND THAT A CURRENT AND UP TO DATE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS AVAILABLE ON SITE.

TREE PROTECTION

1. FOR ALL TREES TO BE RETAINED WITH A CANOPY IN THE DEVELOPMENT AREA OR INTERFACES WITH THE LIMITS OF GRADING FOR ALL PROPOSED DEVELOPMENT ON SITE, THE TREES SHALL BE PROTECTED BY THE PLACEMENT OF RIGID TREE PROTECTIVE FENCING, CONSISTENT WITH THE COUNTY INTEGRATED LANDSCAPE GUIDELINES, AND INCLUDE THE FOLLOWING:
   A. FENCING SHOULD BE PLACED ALONG THE OUTSIDE EDGE OF THE DRIPLINE OF THE TREE OR GROVE OF TREES.
   B. THE FENCING SHALL BE MAINTAINED THROUGHOUT THE SITE CONSTRUCTION PERIOD AND SHALL BE INSPECTED PERIODICALLY FOR DAMAGE AND PROPER FUNCTION.
   C. FENCING SHALL BE REPAIRED, AS NECESSARY, TO PROVIDE A PHYSICAL BARRIER FROM CONSTRUCTION ACTIVITIES.
   D. SIGNAGE STATING, "WARNING- THIS FENCING SHALL NOT BE REMOVED WITHOUT PERMISSION FROM THE SANTA CLARA COUNTY PLANNING OFFICE (408) 299-5770. COUNTY OF SANTA CLARA TREE PROTECTION MEASURES MAY BE FOUND AT http://www.sccplanning.gov." SHALL BE PLACED ON THE TREE PROTECTIVE FENCING UNTIL FINAL OCCUPANCY.
2. PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITY, TREE PROTECTIVE FENCING SHALL BE SECURELY IN PLACED AND INSPECTED BY THE LAND DEVELOPMENT ENGINEERING INSPECTOR.
3. SEE EXISTING TREE PROTECTION DETAILS FOR MORE INFORMATION.

ACCESS ROADS AND DRIVEWAYS

1. DRIVEWAY LOCATIONS SHALL BE AS SHOWN ON THE IMPROVEMENT PLANS WITH CENTERLINE STATIONING. THE MINIMUM CONCRETE THICKNESS SHALL BE 6 INCHES THROUGHOUT (WITH A MAXIMUM APPROACH SLOPE OF 1 1/4 INCHES PER FOOT).
2. ALL DRIVEWAY OR COMMON ACCESS ROAD SECTIONS IN EXCESS OF 15 LONGITUDINAL SLOPE MUST BE PAVED WITH A MINIMUM 2-INCH ASPHALT LIFT OR FULL DEPTH CONCRETE LIFT PRIOR TO ANY COMBUSTIBLE FRAMING.
3. THE OWNER AND PRIME CONTRACTOR ARE RESPONSIBLE FOR MAINTAINING PROJECT SITE ACCESS AND NEIGHBORHOOD ACCESS FOR EMERGENCY VEHICLES AND LOCAL RESIDENTS.
4. ROADWAYS DESIGNATED AS NOT COUNTY MAINTAINED ROADS AS SHOWN ON THE PLAN WILL NOT BE ELIGIBLE FOR COUNTY MAINTENANCE UNTIL THE ROADWAYS ARE IMPROVED (AT NO COST TO THE COUNTY) TO THE PUBLIC MAINTENANCE ROAD STANDARDS APPROVED BY THE BOARD OF SUPERVISORS AND IN EFFECT AT SUCH TIME THAT THE ROADWAYS ARE CONSIDERED FOR ACCEPTANCE INTO THE COUNTY'S ROAD SYSTEM.
5. ALL WORK IN THE COUNTY ROAD RIGHT-OF-WAY REQUIRES AN ENCROACHMENT PERMIT FROM THE ROADS AND AIRPORTS DEPARTMENT. EACH INDIVIDUAL ACTIVITY REQUIRES A SEPARATE PERMIT - I.E. CABLE, ELECTRICAL, GAS, SEWER, WATER, RETAINING WALLS, DRIVEWAY APPROACHES, FENCES, LANDSCAPING, TREE REMOVAL, STORM DRAINAGE IMPROVEMENTS, ETC..

STREET LIGHTING

1. PACIFIC GAS & ELECTRIC ELECTROLIER SERVICE FEE SHALL BE PAID BY THE DEVELOPER AND/OR HIS AUTHORIZED REPRESENTATIVE.

SANITARY SEWER

1. THE SANITARY SEWER AND WATER UTILITIES SHOWN ON THESE PLANS ARE NOT PART OF THIS GRADING PERMIT AND ARE SHOWN FOR REFERENCE ONLY.
2. ALL MATERIALS AND METHODS OF CONSTRUCTION OF SANITARY SEWERS SHALL CONFORM TO THE SPECIFICATIONS OF THE JURISDICTION INVOLVED. INSPECTION OF SANITARY SEWER WORK SHALL BE DONE BY SAID JURISDICTION.

PORTLAND CEMENT CONCRETE

1. CONCRETE USED FOR STRUCTURAL PURPOSES SHALL BE CLASS "A" (6 SACK PER CUBIC YARD) AS SPECIFIED IN THE STATE STANDARD SPECIFICATIONS. CONCRETE PLACED MUST DEVELOP A MINIMUM STRENGTH FACTOR OF 2800 PSI IN A SEVEN-DAY PERIOD. THE CONCRETE MIX DESIGN SHALL BE UNDER THE CONTINUAL CONTROL OF THE COUNTY INSPECTOR.

AIR QUALITY, LANDSCAPING AND EROSION CONTROL

1. WATER ALL ACTIVE CONSTRUCTION AREAS AT LEAST TWICE DAILY.
2. COVER ALL TRUCKS HAULING SOIL, SAND, AND OTHER LOOSE MATERIALS OR REQUIRE ALL TRUCKS TO MAINTAIN AT LEAST TWO FEET OF FREEBOARD.
3. PAVE, APPLY WATER THREE TIMES DAILY, OR APPLY (NON-TOXIC) SOIL STABILIZERS ON ALL UNPAVED ACCESS ROADS, PARKING AREAS AND STAGING AREAS AT CONSTRUCTION SITES.
4. SWEEP DAILY (WITH WATER SWEEPERS) ALL PAVED ACCESS ROADS, PARKING AREAS AND STAGING AREAS AT CONSTRUCTION SITES. THE USE OF DRY POWDER SWEEPING IS PROHIBITED.
5. SWEEP STREETS DAILY (WITH WATER SWEEPERS) IF VISIBLE SOIL MATERIAL IS CARRIED ONTO ADJACENT PUBLIC STREETS. THE USE OF DRY POWDER SWEEPING IS PROHIBITED.
6. ALL CONSTRUCTION VEHICLES, EQUIPMENT AND DELIVERY TRUCKS SHALL HAVE A MAXIMUM IDLING TIME OF 5 MINUTES (AS REQUIRED BY THE CALIFORNIA AIRBORNE TOXIC CONTROL MEASURE TITLE 13, SECTION 2485 OF CALIFORNIA CODE OF REGULATIONS (CCR)). ENGINES SHALL BE SHUT OFF IF CONSTRUCTION REQUIRES LONGER IDLING TIME UNLESS NECESSARY FOR PROPER OPERATION OF THE VEHICLE.
7. ALL VEHICLE SPEEDS ON UNPAVED ROADS SHALL BE LIMITED TO 15 MILES PER HOUR.
8. ALL CONSTRUCTION EQUIPMENT SHALL BE MAINTAINED AND PROPERLY TUNED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. ALL EQUIPMENT SHALL BE CHECKED BY A CERTIFIED MECHANIC AND DETERMINED TO BE RUNNING IN PROPER CONDITION PRIOR TO OPERATION.
9. POST A SIGN THAT IS AT LEAST 32 SQUARE FEET MINIMUM 2 INCHES LETTER HEIGHT VISIBLE NEAR THE ENTRANCE OF CONSTRUCTION SITE THAT IDENTIFIES THE FOLLOWING REQUIREMENTS. OBTAIN ENCROACHMENT PERMIT FOR SIGN FROM ROADS DEPARTMENT OR OTHER APPLICABLE AGENCY IF REQUIRED.
   A. 15 MILES PER HOUR (MPH) SPEED LIMIT
   B. 5 MINUTES MAXIMUM IDLING TIME OF VEHICLES
   C. TELEPHONE NUMBER TO CONTACT THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT REGARDING DUST COMPLAINTS. NOTE PHONE NUMBER OF THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT AIR POLLUTION COMPLAIN HOTLINE OF 1-800-334-6367.
10. ALL FILL SLOPES SHALL BE COMPACTED AND LEFT IN A SMOOTH AND FIRM CONDITION CAPABLE OF WITHSTANDING WEATHERING.
11. ALL EXPOSED DISTURBED AREAS SHALL BE SEEDED WITH BROME SEED SPREAD AT THE RATE OF 5 LB. PER 1000 SQUARE FEET (OR APPROVED EQUAL). SEEDING AND WATERING SHALL BE MAINTAINED AS REQUIRED TO ENSURE GROWTH.
12. ALL DITCHES SHALL BE LINED PER COUNTY STANDARD SD8.
13. ALL STORM DRAINAGE STRUCTURES SHALL BE INSTALLED WITH EFFECTIVE ENTRANCE & OUTFALL EROSION CONTROLS E.G. SACKED CONCRETE RIP-RAP. ENERGY DISSIPATERS SHALL BE INSTALLED AT ALL DITCH OUTFALLS. WHERE OUTFALLS ARE NOT INTO AN EXISTING CREEK OR WATER COURSE, RUNOFF SHALL BE RELEASED TO SHEET FLOW.
14. PRIOR TO GRADING COMPLETION AND RELEASE OF THE BOND, ALL GRADED AREAS SHALL BE RESEEDED IN CONFORMANCE WITH THE COUNTY GRADING ORDINANCE TO MINIMIZE THE VISUAL IMPACTS OF THE GRADE SLOPES AND REDUCE THE POTENTIAL FOR EROSION OF THE SUBJECT SITE.
15. PERMANENT LANDSCAPING SHOWN ON THE ATTACHED LANDSCAPE PLAN MUST BE INSTALLED AND FIELD APPROVED BY THE COUNTY PLANNING OFFICE PRIOR TO FINAL APPROVAL BY THE COUNTY ENGINEER, AND FINAL OCCUPANCY RELEASE BY THE BUILDING INSPECTION OFFICE.
16. THE OWNER SHALL PREPARE AND PRESENT A WINTERIZATION REPORT TO THE COUNTY INSPECTOR FOR REVIEW PRIOR TO OCTOBER 15TH OF EVERY YEAR.
17. THE OWNER, CONTRACTOR, AND ANY PERSON PERFORMING CONSTRUCTION ACTIVITIES SHALL INSTALL AND MAINTAIN CONSTRUCTION BEST MANAGEMENT PRACTICES (BMPS) ON THE PROJECT SITE AND WITHIN THE SANTA CLARA COUNTY ROAD RIGHT-OF-WAY THROUGHOUT THE DURATION OF THE CONSTRUCTION AND UNTIL THE ESTABLISHMENT OF PERMANENT STABILIZATION AND SEDIMENT CONTROL TO PREVENT THE DISCHARGE OF POLLUTANTS INCLUDING SEDIMENT, CONSTRUCTION MATERIALS, EXCAVATED MATERIALS, AND WASTE INTO THE SANTA CLARA COUNTY RIGHT-OF-WAY, STORM SEWER WATERWAYS, ROADWAY INFRASTRUCTURE. BMPS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING;
   A. PREVENTION OF POLLUTANTS IN STORM WATER DISCHARGES FROM THE CONSTRUCTION SITE AND THE CONTRACTOR'S MATERIAL AND EQUIPMENT LAYDOWN / STAGING AREAS.
   B. PREVENTION OF TRACKING OF MUD, DIRT, AND CONSTRUCTION MATERIALS ONTO THE PUBLIC ROAD RIGHT-OF-WAY.
   C. PREVENTION OF DISCHARGE OF WATER RUN-OFF DURING DRY AND WET WEATHER CONDITIONS ONTO THE PUBLIC ROAD RIGHT-OF-WAY.
18. THE OWNER, CONTRACTOR, AND ANY PERSON PERFORMING CONSTRUCTION ACTIVITIES SHALL ENSURE THAT ALL TEMPORARY CONSTRUCTION FACILITIES, INCLUDING BUT NOT LIMITED TO CONSTRUCTION MATERIALS, DELIVERIES, HAZARDOUS AND NON-HAZARDOUS MATERIAL STORAGE, EQUIPMENT, TOOLS, PORTABLE TOILETS, CONCRETE WASHOUT, GARBAGE CONTAINERS, LAYDOWN YARDS, SECONDARY CONTAINMENT AREAS, ETC. ARE LOCATED OUTSIDE THE SANTA CLARA COUNTY ROAD RIGHT-OF-WAY.
19. EROSION CONTROL PLAN IS A GUIDE AND SHALL BE AMENDED AS NECESSARY TO PREVENT EROSION AND ILLICIT DISCHARGES ON A YEAR AROUND BASIS, DEPENDING ON THE SEASON, WEATHER, AND FIELD CONDITIONS. EROSION CONTROL MEASURES IN ADDITION TO THOSE NOTED IN THE PERMITTED PLANS MAY BE NECESSARY. FAILURE TO INSTALL SITE SITE AND SITUATIONALY APPROPRIATE EROSION CONTROL MEASURES MAY RESULT IN VIOLATIONS, FINES, AND A STOPPAGE OF WORK.

STORM DRAINAGE AND STORMWATER MANAGEMENT

1. DEVELOPER IS RESPONSIBLE FOR ALL NECESSARY DRAINAGE FACILITIES WHETHER SHOWN ON THE PLANS OR NOT AND HE OR HIS SUCCESSOR PROPERTY OWNERS ARE RESPONSIBLE FOR THE ADEQUACY AND CONTINUED MAINTENANCE OF THESE FACILITIES IN A MANNER WHICH WILL PRECLUDE ANY HAZARD TO LIFE, HEALTH, OR DAMAGE TO ADJOINING PROPERTY, CONSISTENT WITH NPDES PERMIT CAS612008 / ORDER NO. R2-2009-0047 AND NPDES PERMIT CAS000004/ ORDER NO. 2013-0001-DWQ.
2. DROP INLETS SHALL BE COUNTY STANDARD TYPE 5 UNLESS OTHERWISE NOTED ON THE PLANS. THE DEVELOPER'S ENGINEER SHALL BE RESPONSIBLE FOR THE PROPER LOCATION OF DROP INLETS. WHERE STREET PROFILE GRADE EXCEEDS 6% DROP INLETS SHALL BE SET AT 500 ANGLE CURB LINE TO ACCEPT WATER OR AS SHOWN ON THE PLANS.
3. WHERE CULVERTS ARE INSTALLED THE DEVELOPER SHALL BE RESPONSIBLE FOR GRADING THE OUTLET DITCH TO DRAIN TO AN EXISTING SWALE OR TO AN OPEN AREA FOR SHEET FLOW.
4. UPON INSTALLATION OF DRIVEWAY CONNECTIONS, PROPERTY OWNERS SHALL PROVIDE FOR THE UNINTERRUPTED FLOW OF WATER IN ROADSIDE DITCHES.
5. THE COUNTY SHALL INSPECT UNDERGROUND DRAINAGE IMPROVEMENTS AND STORMWATER MANAGEMENT FEATURES PRIOR TO BACKFILL.

AS-BUILT PLANS STATEMENT

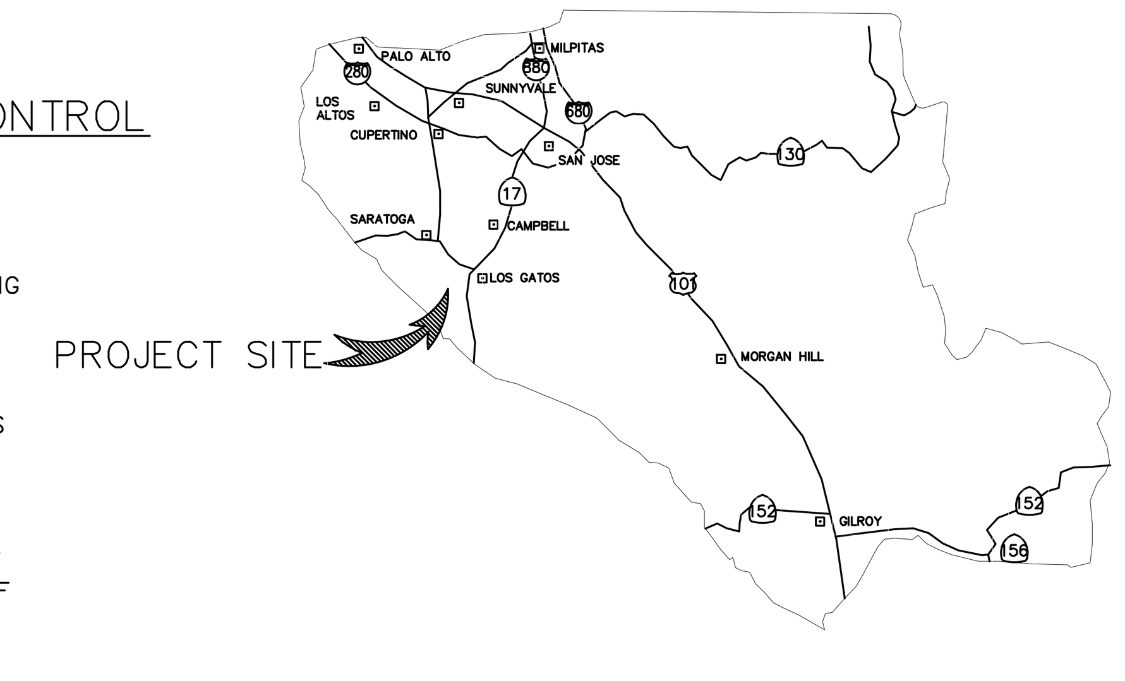
THIS IS A TRUE COPY OF THE AS-BUILT PLANS. THERE (___ WERE) (___ WERE NOT) MINOR FIELD CHANGES - MARKED WITH THE SYMBOL (^). THERE (___WERE) (___ WERE NOT) PLAN REVISIONS INDICATING SIGNIFICANT CHANGES REVIEWED BY THE COUNTY ENGINEER AND MARKED WITH THE SYMBOL △.

DATE ____________ SIGNATURE ____________

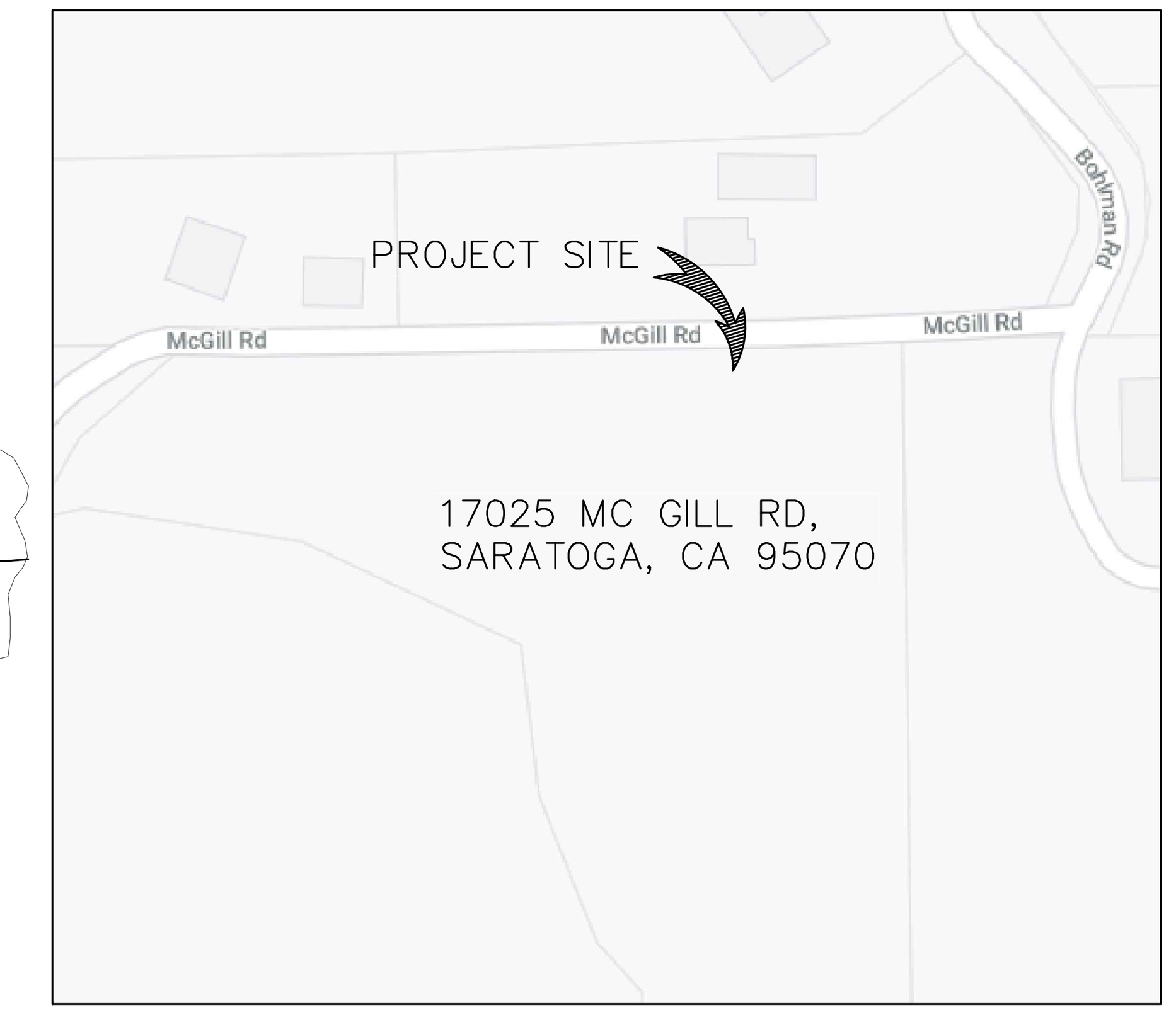
NOTE: THIS STATEMENT IS TO BE SIGNED BY THE PERSON AUTHORIZED BY THE COUNTY ENGINEER TO PERFORM THE INSPECTION WORK. A REPRODUCIBLE COPYOF THE AS-BUILT PLANS MUST BE FURNISHED TO THE COUNTY ENGINEER AFTERCONSTRUCTION.

GEOTECHNICAL ENGINEER OBSERVATION

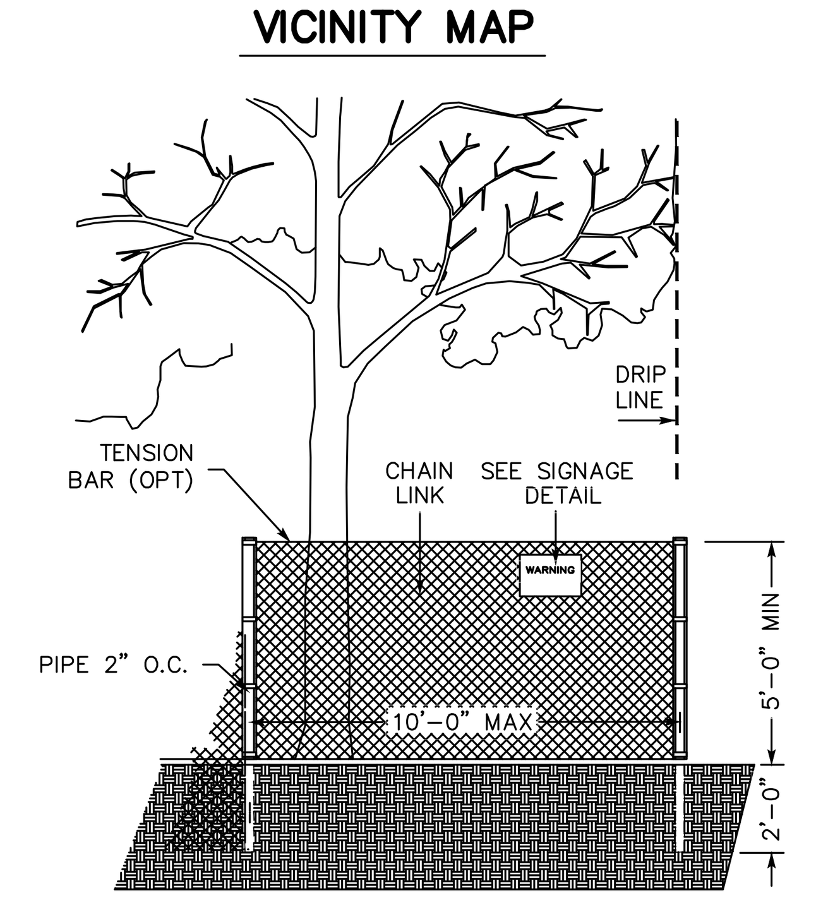
1. A CONSTRUCTION OBSERVATION LETTER FROM THE RESPONSIBLE GEOTECHNICAL ENGINEER AND ENGINEERING GEOLOGIST DETAILING CONSTRUCTION OBSERVATIONS AND CERTIFYING THAT THE WORK WAS DONE IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL AND GEOLOGIC REPORTS SHALL BE SUBMITTED PRIOR TO THE GRADING COMPLETION AND RELEASE OF THE BOND.



COUNTY LOCATION MAP



VICINITY MAP



EXISTING TREE PROTECTION DETAILS

1. PRIOR TO THE COMMENCEMENT OF ANY GRADING, TREE PROTECTIVE FENCING SHALL BE IN PLACE IN ACCORDANCE WITH THE TREE PRESERVATION PLAN AND INSPECTED BY A CERTIFIED ARBORIST. THE ARBORIST SHALL MONITOR CONSTRUCTION ACTIVITY TO ENSURE THAT THE TREE PROTECTION MEASURES ARE IMPLEMENTED AND ADHERED TO DURING CONSTRUCTION. THIS CONDITION SHALL BE INCORPORATED INTO THE GRADING PLANS.
2. FENCE SHALL BE MINIMUM 5 FEET TALL CONSTRUCTED OF STURDY MATERIAL (CHAIN-LINK OR EQUIVALENT STRENGTH/ DURABILITY).
3. FENCE SHALL BE SUPPORTED BY VERTICAL POSTS DRIVEN 2 FEET (MIN) INTO THE GROUND AND SPACED NOT MORE THAN 10 FEET APART.
4. TREE FENCING SHALL BE MAINTAINED THROUGHOUT THE SITE DURING THE CONSTRUCTION PERIOD, INSPECTED PERIODICALLY FOR DAMAGE AND PROPER FUNCTION, REPAIRED AS NECESSARY TO PROVIDE A PHYSICAL BARRIER FROM CONSTRUCTION ACTIVITIES, AND REMAIN IN PLACE UNTIL THE FINAL INSPECTION.
5. A SIGN THAT INCLUDES THE WORDS, "WARNING: THIS FENCE SHALL NOT BE REMOVED WITHOUT THE EXPRESSED PERMISSION OF THE SANTA CLARA COUNTY PLANNING OFFICE," SHALL BE SECURELY ATTACHED TO THE FENCE IN A VISUALLY PROMINENT LOCATION.

SURVEY MONUMENT PRESERVATION

1. THE LANDOWNER / CONTRACTOR MUST PROTECT AND ENSURE THE PERPETUATION OF SURVEY MONUMENTS AFFECTED BY CONSTRUCTION ACTIVITIES.
2. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL LOCATE, STAKE, AND FLAG OR OTHERWISE IDENTIFY WITH PAINT OR OTHER MARKINGS ALL PERMANENT SURVEY MONUMENTS OF RECORD AND ANY UNRECORDED MONUMENTS THAT ARE DISCOVERED THAT ARE WITHIN 50 FEET OF THE CONSTRUCTION ACTIVITY.
3. THE LANDOWNER, CONTRACTOR AND/OR ANY PERSON PERFORMING CONSTRUCTION ACTIVITIES THAT WILL OR MAY DISTURB AN EXISTING MONUMENT, CORNER STAKE, OR ANY OTHER PERMANENT SURVEYED MONUMENT SHALL CAUSE TO HAVE A LICENSED LAND SURVEYOR OR CIVIL ENGINEER, AUTHORIZED TO PRACTICE SURVEYING, ENSURE THAT A CORNER RECORD AND/OR RECORD OF SURVEY ARE FILED WITH THE COUNTY SURVEYOR'S OFFICE PRIOR TO DISTURBING SAID MONUMENTS AND RESET PERMANENT MONUMENT(S) IN THE SURFACE OF THE NEW CONSTRUCTION OR SET A WITNESS MONUMENT(S) TO PERPETUATE THE LOCATION IF ANY PERMANENT MONUMENT COULD BE DESTROYED, DAMAGED, COVERED, DISTURBED, OR OTHERWISE OBLITERATED. THE LICENSED LAND SURVEYOR OR CIVIL ENGINEER SHALL FILE A CORNER RECORD OR RECORD OF SURVEY WITH COUNTY SURVEYOR PRIOR TO FINAL ACCEPTANCE OF THE PROJECT BY THE LAND DEVELOPMENT ENGINEERING INSPECTOR.

ABBREVATIONS

AC = ASPHALT CONCRETE
AD = AREA DRAIN
BC = BEGIN CURVE
BS = BOTTOM OF STAIR
BU = BUBBLE UP
BVC = BEGIN VERTICAL CURVE
BRW = BOTTOM OF RETAINING WALL
CB = CATCH BASIN
CL = CENTERLINE
CO = CLEANOUT
DS = DOWNSPOUT WITH SPLASH BOX
EC = END CURVE
ELEV. = ELEVATION
EVC = END VERTICAL CURVE
EX. = EXISTING
F/C = FACE OF CURB
FF = FINISHED FLOOR ELEVATION
FH = FIRE HYDRANT
FL = FLOW LINE
GB = GRADE BREAK
GFF = GARAGE FINISH FLOOR
HP = HIGH POINT
HC = HANDICAP UNIT
INV = INVERT
LP = LOW POINT
PAD = PAD ELEVATION
PCC = PORTLAND CEMENT CONCRETE
PL = PROPERTY LINE
PV = PAVEMENT GRADE
PVC = POLYVINYL CHLORIDE PIPE
PVI = POINT OF VERTICAL INTERSECTION
RCP = REINFORCED CONCRETE PIPE
ROW = RIGHT OF WAY
S=.004> SLOPE
SD = STORM DRAIN
SDMH = STORM DRAIN MANHOLE
SG = SUBGRADE ELEVATION
SS = SANITARY SEWER
SSMH = SANITARY SEWER MANHOLE
STA = STATION
TC = TOP OF CURB
TF = TOP OF FENCE
TRW = TOP OF RETAINING WALL
TS = TOP OF STAIR
TW = TOP OF WALL
VCP = VITRIFIED CLAY PIPE
WM = WATER METER
WV = WATER VALVE

COUNTY OF SANTA CLARA DEPT. OF ROADS AND AIRPORTS	
ISSUED BY: ____________	DATE: ____________
ENCROACHMENT PERMIT NO. ____________	

NO WORK SHALL BE DONE IN THE COUNTY'S RIGHT-OF-WAY WITHUOT AN ENCROACHEMENT PERMIT, INCLUDING THE STAGING OF CONSTRUCTION MATERIAL AND THE PLACEMENT OF PORTABLE TOILETS.

COUNTY OF SANTA CLARA LAND DEVELOPMENT ENGINEERING & SURVEYING	
GRADING / DRAINAGE PERMIT NO. ____________	
ISSUED BY: ____________	DATE: ____________

ENGINEER'S STATEMENT

I HEREBY STATE THAT THESE PLANS ARE IN COMPLIANCE WITH ADOPTED COUNTY STANDARDS, THE APPROVED TENTATIVE MAP (OR PLAN) AND CONDITIONS OF APPROVAL PERTAINING THERETO DATED FILE(S) NO. ________

DATE 11/18/21 ____________ SIGNATURE

70829
R.C.E. NO.

6-30-23
EXPIRATION DATE

COUNTY ENGINEER'S NOTE

ISSUANCE OF A PERMIT AUTHORIZING CONSTRUCTION DOES NOT RELEASE THE DEVELOPER, PERMITTEE OF ENGINEER FROM RESPONSIBILITY FOR THE CORRECTION OF ERRORS OR OMISSIONS CONTAINED IN THE PLANS. IF, DURING THE COURSE OF CONSTRUCTION, THE PUBLIC INTEREST REQUIRES A MODIFICATION OF (OR DEPARTURE FROM) THE SPECIFICATIONS OF THE PLANS, THE COUNTY SHALL HAVE THE AUTHORITY TO REQUIRE THE SUSPENSION OF WORK, AND THE NECESSARY MODIFICATION OR DEPARTURE AND TO SPECIFY THE MANNER IN WHICH THE SAME IS TO BE MADE.

DATE ____________

CHRISTOPHER L. FREITAS
42107 — 3/31/20
R.C.E. NO. — EXPIRATION DATE

McGILL ROAD PRELIMINARY GRADING PLAN LANDS OF KHANDARE

SCOPE OF WORK

1. THE DEVELOPER IS RESPONSIBLE FOR THE INSTALLATION OF THE WORK PROPOSED ON THE EROSION CONTROL PLAN. THE ENGINEER OF RECORD IS RESPONSIBLE FOR THE DESIGN OF THE EROSION CONTROL PLANS AND ANY MODIFICATIONS OF THE EROSION COTROL PLANS TO PREVENT ILLICIT DISCHARGES FROM THE SITE DURING CONSTRUCTION.

1. CLEAR, GRUB AND GRADE THE SITE
2. CONSTRUCTION OF NEW DRIVEWAY
3. CONSTRUCTION OF DRAINAGE FACILITIES
4. UNDERGROUND UTILITIES
5. LANDSCAPING

LEGEND

DESCRIPTION	*SYMBOL*
BOUNDARY LINE	
LOT LINE	
EASEMENT LINE	
SIDEWALK	
WOOD FENCE	— X — X —
CHAIN LINK FENCE	
RETAINING WALL	
DRIVEWAY DRAIN INLET	
AREA DRAIN	
DROP INLET	
MONUMENT	
FIRE HYDRANT	
ELECTROLIER	
WATER METER	
AC UNIT	
SANITARY SEWER LATERAL	
STORM DRAIN	— SD —
SANITARY SEWER	— SS —
STREET LIGHT CONDUITS	— SL —
WATER	— W —
JOINT TRENCH	— JT —
HOUSE SERVICE	— SVC —
SLOPE ARROW	
EXISTING CONTOUR	- - - 100 - - -
PROPOSED CONTOUR	— (100) —
OVERLAND RELEASE	
DIRECTION OF SURFACE DRAINAGE	
5% SLOPE AWAY FROM BUILDING	>>

SHEET INDEX

ENGINEER'S NAME: PORFIRIO OSCAR OSUNA

ADDRESS: 117 BERNAL RD, #70-336
SAN JOSE, CA 95119

PHONE NO. 408-772-4381
EMAIL: info@osunaengineering.com

Revision 1	*APN* 517-24-024	*Sheet* C0 *of* 18
Revision 2	*Co. File*	
Revision 3		

APPLICANT: ____________ ROAD: ________________ COUNTY FILE NO.: _____-__-__-_____

NOTES:

1. DISTANCES AND DIMENSIONS ARE SHOWN IN FEET AND DECIMALS THEREOF.
2. THE DISTINCTIVE BORDER LINE DENOTES THE BOUNDARY.
3. ANY TREES SPECIES NAMES ARE APPROXIMATE, AND LABELED BY THEIR COMMON NAME TO THE BEST OF OUR KNOWLEDGE. IT IS NOT BASED ON AN ARBORIST REPORT.
4. TOPOGRAPHY SHOWN ON THIS MAP REPRESENTS THE SURFACE FEATURES ONLY.
5. UNLESS SPECIFIED ON THIS MAP, LOCATIONS OF THE UNDERGROUND AND OVERHEAD UTILITIES ARE NEITHER INTENDED NOR IMPLIED. FOR THE LOCATIONS OF UNDERGROUND UTILITIES CALL "USA" (1-800-642-2440).
6. A CONDITION OF TITLE REPORT WAS PROVIDED BY THE OWNER. CONDITION OF TITLE REPORT, PREPARED BY FIDELITY NATIONAL TITLE INSURANCE COMPANY. GUARANTEE NO. FSBC-TO21001710 DATED OCTOBER 22, 2021.

NOTES:

1. DISTANCES AND DIMENSIONS ARE SHOWN IN FEET AND DECIMALS THEREOF.
2. THE DISTINCTIVE BORDER LINE DENOTES THE BOUNDARY.

REFERENCES:

R1	PARCEL MAP	449-M-1
R2	GRANT DEED	FILE NO. 4404-2313745

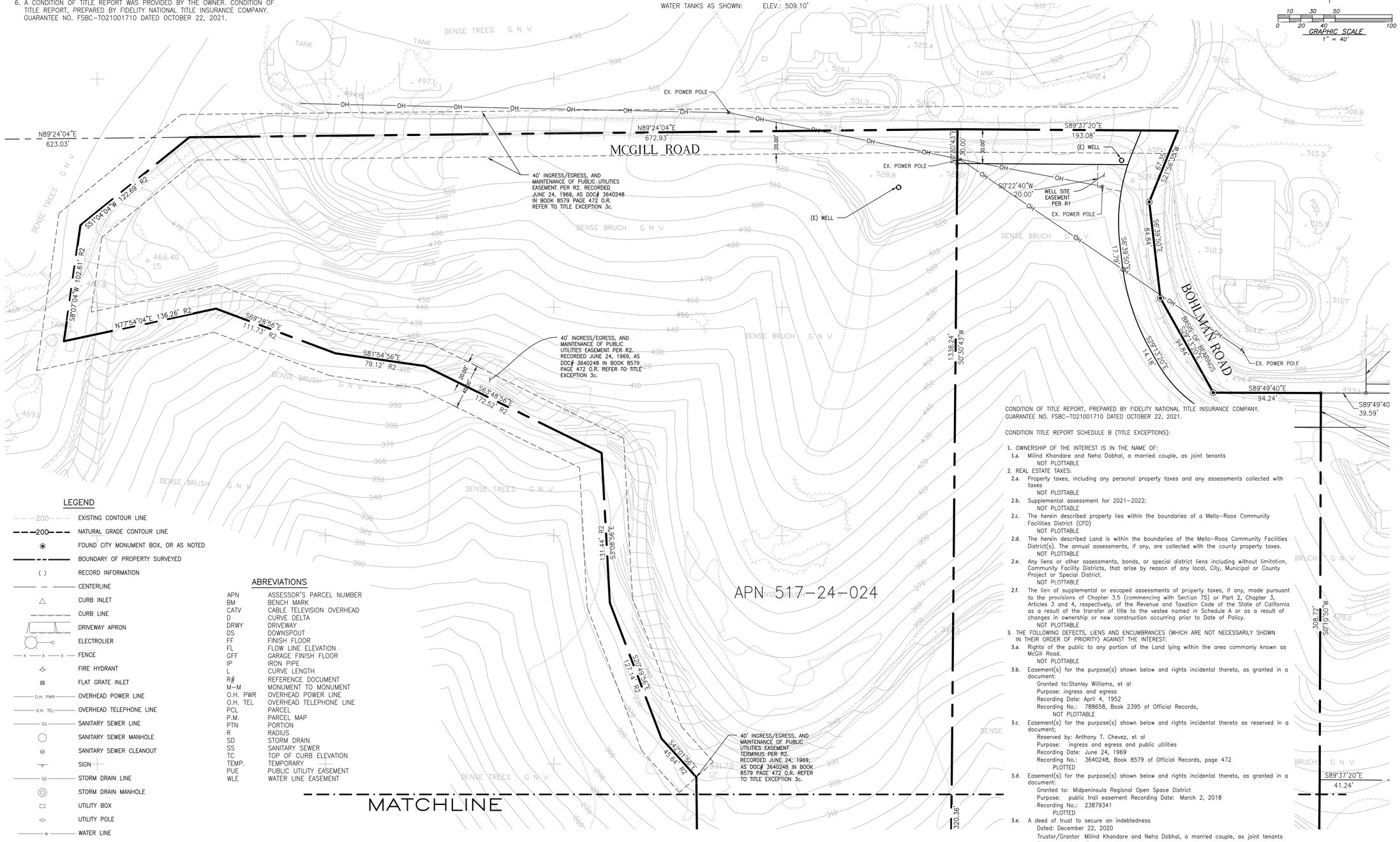
THE BEARING SOUTH 29°13'20" EAST OF THE CENTER LINE OF BOLLMAN ROAD AS SHOWN ON THAT MAP OF PARCEL MAP FILED FOR RECORD IN BOOK 449 OF MAPS PAGE 1, SANTA CLARA COUNTY RECORDS, AND AS FOUND MONUMENTED, WAS TAKEN AS THE BASIS OF BEARING FOR THIS SURVEY.

BENCH MARK

DESCRIPTION: ASSUMED BENCHMARK, SPIKE AT FLIGHT MARKER, NEAR THE WATER TANKS AS SHOWN: ELEV.: 509.10'

N

GRAPHIC SCALE
0 10 20 30 40 50 100
1" = 40'



LEGEND

200	EXISTING CONTOUR LINE
200	NATURAL GRADE CONTOUR LINE
	FOUND CITY MONUMENT BOX, OR AS NOTED
	BOUNDARY OF PROPERTY SURVEYED
( )	RECORD INFORMATION
	CENTERLINE
	CURB INLET
	CURB LINE
	DRIVEWAY APRON
	ELECTROLIER
X X X	FENCE
	FIRE HYDRANT
	FLAT GRATE INLET
O.H. PWR	OVERHEAD POWER LINE
O.H. TEL	OVERHEAD TELEPHONE LINE
SS	SANITARY SEWER LINE
	SANITARY SEWER MANHOLE
	SANITARY SEWER CLEANOUT
	SIGN
SD	STORM DRAIN LINE
	STORM DRAIN MANHOLE
	UTILITY BOX
	UTILITY POLE
W	WATER LINE
	WATER METER
	WATER VALVE
EM	ELECTRIC METER
WH	WATER HEATER
G	GAS

ABREVIATIONS

APN	ASSESSOR'S PARCEL NUMBER
BM	BENCH MARK
CATV	CABLE TELEVISION OVERHEAD
D	CURVE DELTA
DRWY	DRIVEWAY
DS	DOWNSPOUT
FF	FINISH FLOOR
FL	FLOW LINE ELEVATION
GFF	GARAGE FINISH FLOOR
IP	IRON PIPE
L	CURVE LENGTH
R#	REFERENCE DOCUMENT
M-M	MONUMENT TO MONUMENT
O.H. PWR	OVERHEAD POWER LINE
O.H. TEL	OVERHEAD TELEPHONE LINE
PCL	PARCEL
P.M.	PARCEL MAP
PTN	PORTION
R	RADIUS
SD	STORM DRAIN
SS	SANITARY SEWER
TC	TOP OF CURB ELEVATION
TEMP.	TEMPORARY
PUE	PUBLIC UTILITY EASEMENT
WLE	WATER LINE EASEMENT

CONDITION OF TITLE REPORT, PREPARED BY FIDELITY NATIONAL TITLE INSURANCE COMPANY. GUARANTEE NO. FSBC-TO21001710 DATED OCTOBER 22, 2021.

CONDITION TITLE REPORT SCHEDULE B (TITLE EXCEPTIONS):

1. OWNERSHIP OF THE INTEREST IS IN THE NAME OF:
   1.a. Milind Khandare and Neha Dobhal, a married couple, as joint tenants
   NOT PLOTTABLE
2. REAL ESTATE TAXES:
   2.a. Property taxes, including any personal property taxes and any assessments collected with taxes
   NOT PLOTTABLE
   2.b. Supplemental assessment for 2021-2022:
   NOT PLOTTABLE
   2.c. The herein described property lies within the boundaries of a Mello-Roos Community Facilities District (CFD)
   NOT PLOTTABLE
   2.d. The herein described Land is within the boundaries of the Mello-Roos Community Facilities District(s). The annual assessments, if any, are collected with the county property taxes.
   NOT PLOTTABLE
   2.e. Any liens or other assessments, bonds, or special district liens including without limitation, Community Facility Districts, that arise by reason of any local, City, Municipal or County Project or Special District.
   NOT PLOTTABLE
   2.f. The lien of supplemental or escaped assessments of property taxes, if any, made pursuant to the provisions of Chapter 3.5 (commencing with Section 75) or Part 2, Chapter 3, Articles 3 and 4, respectively, of the Revenue and Taxation Code of the State of California as a result of the transfer of title to the vestee named in Schedule A or as a result of changes in ownership or new construction occurring prior to Date of Policy.
   NOT PLOTTABLE
3. THE FOLLOWING DEFECTS, LIENS AND ENCUMBRANCES (WHICH ARE NOT NECESSARILY SHOWN IN THEIR ORDER OF PRIORITY) AGAINST THE INTEREST:
   3.a. Rights of the public to any portion of the Land lying within the area commonly known as McGill Road.
   NOT PLOTTABLE
   3.b. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
   Granted to:Stanley Williams, et al
   Purpose: ingress and egress
   Recording Date: April 4, 1952
   Recording No.: 788658, Book 2395 of Official Records,
   NOT PLOTTABLE
   3.c. Easement(s) for the purpose(s) shown below and rights incidental thereto as reserved in a document;
   Reserved by: Anthony T. Chevez, et al
   Purpose: ingress and egress and public utilities
   Recording Date: June 24, 1969
   Recording No.: 3640248, Book 8579 of Official Records, page 472
   PLOTTED
   3.d. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
   Granted to: Midpeninsula Regional Open Space District
   Purpose: public trail easement Recording Date: March 2, 2018
   Recording No.: 23879341
   PLOTTED
   3.e. A deed of trust to secure an indebtedness
   Dated: December 22, 2020
   Trustor/Grantor Milind Khandare and Neha Dobhal, a married couple, as joint tenants
   Trustee: Olivia Todd
   Beneficiary: U.S. Bank National Association
   Recording Date: December 31, 2020
   Recording No.: 24771104
   NOT PLOTTABLE
   3.f. Water rights, claims or title to water, whether or not disclosed by the public records.
   NOT PLOTTABLE
   3.g. Any easements not disclosed by the public records as to matters affecting title to real property, whether or not said easements are visible and apparent.
   NOT PLOTTABLE

REVISIONS | BY | CITY | DATE

PROFESSIONAL LAND SURVEYOR
PORFIRIO OSCAR OSUNA
No. 8921
Exp. 9-30-22
STATE OF CALIFORNIA

P. Oscar Osuna
PORFIRIO OSCAR OSUNA
PLS 8921 EXP. 9-30-22

OSUNA ENGINEERING INC.
Planning | Surveying | Civil Engineering
CONSULTING CIVIL ENGINEERS & LAND SURVEYORS
117 BERNAL RD. STE. 70-336
SAN JOSE, CA 95119
TEL. (408) 772-4381
Info@osunaengineering.com

PRELIMINARY BOUNDARY & TOPOGRAPHIC SURVEY
17025 MCGILL ROAD
APN: 517-24-024
SARATOGA, CALIFORNIA

Project No.: XXXX | Drawn By: OO | Checked: OO | Date: 12/14/21

SHEET
BT1
OF 2 SHEETS

NOTES:

1. DISTANCES AND DIMENSIONS ARE SHOWN IN FEET AND DECIMALS THEREOF.
2. THE DISTINCTIVE BORDER LINE DENOTES THE BOUNDARY.

REFERENCES:

R1	PARCEL MAP	449-M-1
R2	GRANT DEED	FILE NO. 4404-2313745

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BENCH MARK

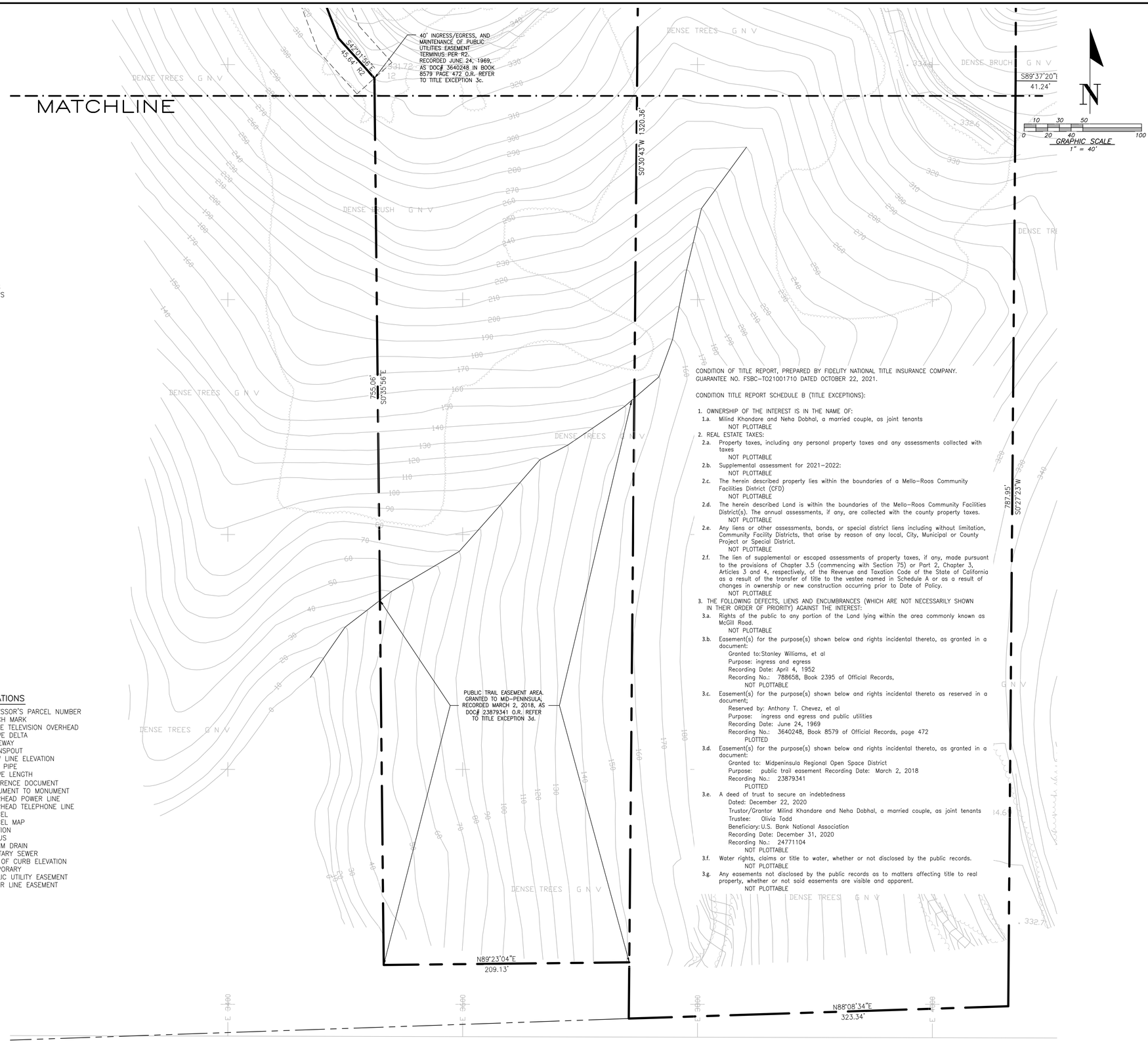
DESCRIPTION: ASSUMED BENCHMARK, SPIKE AT FLIGHT MARKER, NEAR THE WATER TANKS AS SHOWN: ELEV.: 509.10'

LEGEND

- EXISTING CONTOUR LINE
- NATURAL GRADE CONTOUR LINE
- FOUND CITY MONUMENT BOX, OR AS NOTED
- BOUNDARY OF PROPERTY SURVEYED
- ( ) RECORD INFORMATION
- CENTERLINE
- CURB INLET
- CURB LINE
- DRIVEWAY APRON
- ELECTROLIER
- FENCE
- FIRE HYDRANT
- FLAT GRATE INLET
- O.H. PWR — OVERHEAD POWER LINE
- O.H. TEL — OVERHEAD TELEPHONE LINE
- SS — SANITARY SEWER LINE
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEANOUT
- SIGN
- SD — STORM DRAIN LINE
- STORM DRAIN MANHOLE
- UTILITY BOX
- UTILITY POLE
- W — WATER LINE
- WATER METER
- WATER VALVE
- ELECTRIC METER
- WATER HEATER
- GAS

ABREVIATIONS

APN	ASSESSOR'S PARCEL NUMBER
BM	BENCH MARK
CATV	CABLE TELEVISION OVERHEAD
D	CURVE DELTA
DRWY	DRIVEWAY
DS	DOWNSPOUT
FL	FLOW LINE ELEVATION
IP	IRON PIPE
L	CURVE LENGTH
R#	REFERENCE DOCUMENT
M-M	MONUMENT TO MONUMENT
O.H. PWR	OVERHEAD POWER LINE
O.H. TEL	OVERHEAD TELEPHONE LINE
PCL	PARCEL
P.M.	PARCEL MAP
PTN	PORTION
R	RADIUS
SD	STORM DRAIN
SS	SANITARY SEWER
TC	TOP OF CURB ELEVATION
TEMP.	TEMPORARY
PUE	PUBLIC UTILITY EASEMENT
WLE	WATER LINE EASEMENT



CONDITION OF TITLE REPORT, PREPARED BY FIDELITY NATIONAL TITLE INSURANCE COMPANY. GUARANTEE NO. FSBC-TO21001710 DATED OCTOBER 22, 2021.

CONDITION TITLE REPORT SCHEDULE B (TITLE EXCEPTIONS):

1. OWNERSHIP OF THE INTEREST IS IN THE NAME OF:
   - 1.a. Milind Khandare and Neha Dobhal, a married couple, as joint tenants
     NOT PLOTTABLE
2. REAL ESTATE TAXES:
   - 2.a. Property taxes, including any personal property taxes and any assessments collected with taxes
     NOT PLOTTABLE
   - 2.b. Supplemental assessment for 2021-2022:
     NOT PLOTTABLE
   - 2.c. The herein described property lies within the boundaries of a Mello-Roos Community Facilities District (CFD)
     NOT PLOTTABLE
   - 2.d. The herein described Land is within the boundaries of the Mello-Roos Community Facilities District(s). The annual assessments, if any, are collected with the county property taxes.
     NOT PLOTTABLE
   - 2.e. Any liens or other assessments, bonds, or special district liens including without limitation, Community Facility Districts, that arise by reason of any local, City, Municipal or County Project or Special District.
     NOT PLOTTABLE
   - 2.f. The lien of supplemental or escaped assessments of property taxes, if any, made pursuant to the provisions of Chapter 3.5 (commencing with Section 75) or Part 2, Chapter 3, Articles 3 and 4, respectively, of the Revenue and Taxation Code of the State of California as a result of the transfer of title to the vestee named in Schedule A or as a result of changes in ownership or new construction occurring prior to Date of Policy.
     NOT PLOTTABLE
3. THE FOLLOWING DEFECTS, LIENS AND ENCUMBRANCES (WHICH ARE NOT NECESSARILY SHOWN IN THEIR ORDER OF PRIORITY) AGAINST THE INTEREST:
   - 3.a. Rights of the public to any portion of the Land lying within the area commonly known as McGill Road.
     NOT PLOTTABLE
   - 3.b. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
     Granted to:Stanley Williams, et al
     Purpose: ingress and egress
     Recording Date: April 4, 1952
     Recording No.: 788658, Book 2395 of Official Records,
     NOT PLOTTABLE
   - 3.c. Easement(s) for the purpose(s) shown below and rights incidental thereto as reserved in a document;
     Reserved by: Anthony T. Chevez, et al
     Purpose: ingress and egress and public utilities
     Recording Date: June 24, 1969
     Recording No.: 3640248, Book 8579 of Official Records, page 472
     PLOTTED
   - 3.d. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
     Granted to: Midpeninsula Regional Open Space District
     Purpose: public trail easement Recording Date: March 2, 2018
     Recording No.: 23879341
     PLOTTED
   - 3.e. A deed of trust to secure an indebtedness
     Dated: December 22, 2020
     Trustor/Grantor Milind Khandare and Neha Dobhal, a married couple, as joint tenants
     Trustee: Olivia Todd
     Beneficiary: U.S. Bank National Association
     Recording Date: December 31, 2020
     Recording No.: 24771104
     NOT PLOTTABLE
   - 3.f. Water rights, claims or title to water, whether or not disclosed by the public records.
     NOT PLOTTABLE
   - 3.g. Any easements not disclosed by the public records as to matters affecting title to real property, whether or not said easements are visible and apparent.
     NOT PLOTTABLE

REVISIONS | BY | CITY | DATE

PROFESSIONAL LAND SURVEYOR
PORFIRIO OSCAR OSUNA
No. 8921
Exp. 9-30-22
STATE OF CALIFORNIA

P. Oscar Osuna
PORFIRIO OSCAR OSUNA
PLS 8921 EXP. 9-30-22

OSUNA ENGINEERING INC.
Planning | Surveying | Civil Engineering
CONSULTING CIVIL ENGINEERS & LAND SURVEYORS
117 BERNAL RD. STE. 70-336
SAN JOSE, CA 95119
TEL. (408) 772-4381
Info@osunaengineering.com

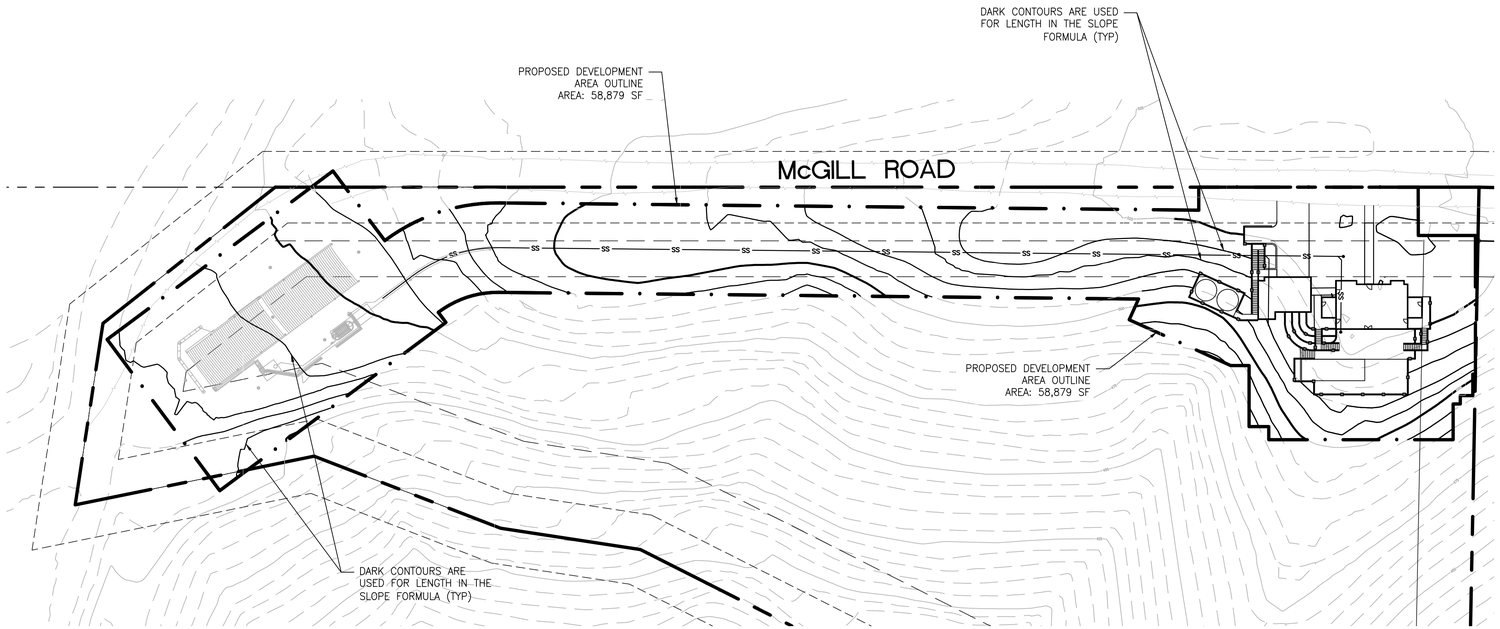
PRELIMINARY BOUNDARY & TOPOGRAPHIC SURVEY

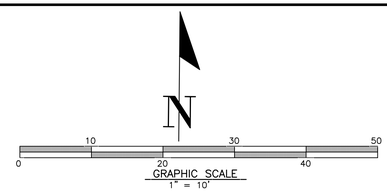
17025 MCGILL ROAD
APN: 517-24-024

SANTA CLARA CALIFORNIA

Project No.: XXXX	Drawn By:	O.O.	Checked: O.O.	Date: 12/14/21

SHEET
BT2
OF 2 SHEETS





Property Address: 17025 McGill Rd
Saratoga, CA
APN: 517-24-024

Prepared By: Oscar Osuna, PE, PLS
President
OSUNA ENGINEERING INC.

SLOPE CALCULATIONS

COUNTOUR	LENGTH 1	LENGTH 2	LENGTH 3	LENGTH 4	SUB-TOTALS
530	25	75	6		106
525	40	29		36	105
520	49	29		154	232
515	54	41		158	253
510	28	117	34	207	386
505	29	4	171	154	358
500	134	64		231	429
495	68	41	30	84	223
490	20	12	11	59	102
485	66				66
480	104				104
475	121				121
470	142				142
465	195				195
460	98				98
455	74				74
450	10				10
					0
					0
					2898 FT

S=PERCENT (%) SLOPE = (I * L*100)/A

I =	INTERVAL OF CONTOURS	5
L =	LENGTH OF SUM OF CONTOURS	2898 FT
A =	PROPOSED DEVELOPMENT AREA	58879 SF

SO:

S = 24.6 %

APPROVED FOR ISSUANCE
REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERING

BY	CITY	DATE	REVISIONS

REGISTERED PROFESSIONAL ENGINEER
PORFIRIO OSCAR OSUNA
No. 70829
Exp. 6-30-23
CIVIL
STATE OF CALIFORNIA

PORFIRIO OSCAR OSUNA
RCE 70829 EXP. 6-30-19

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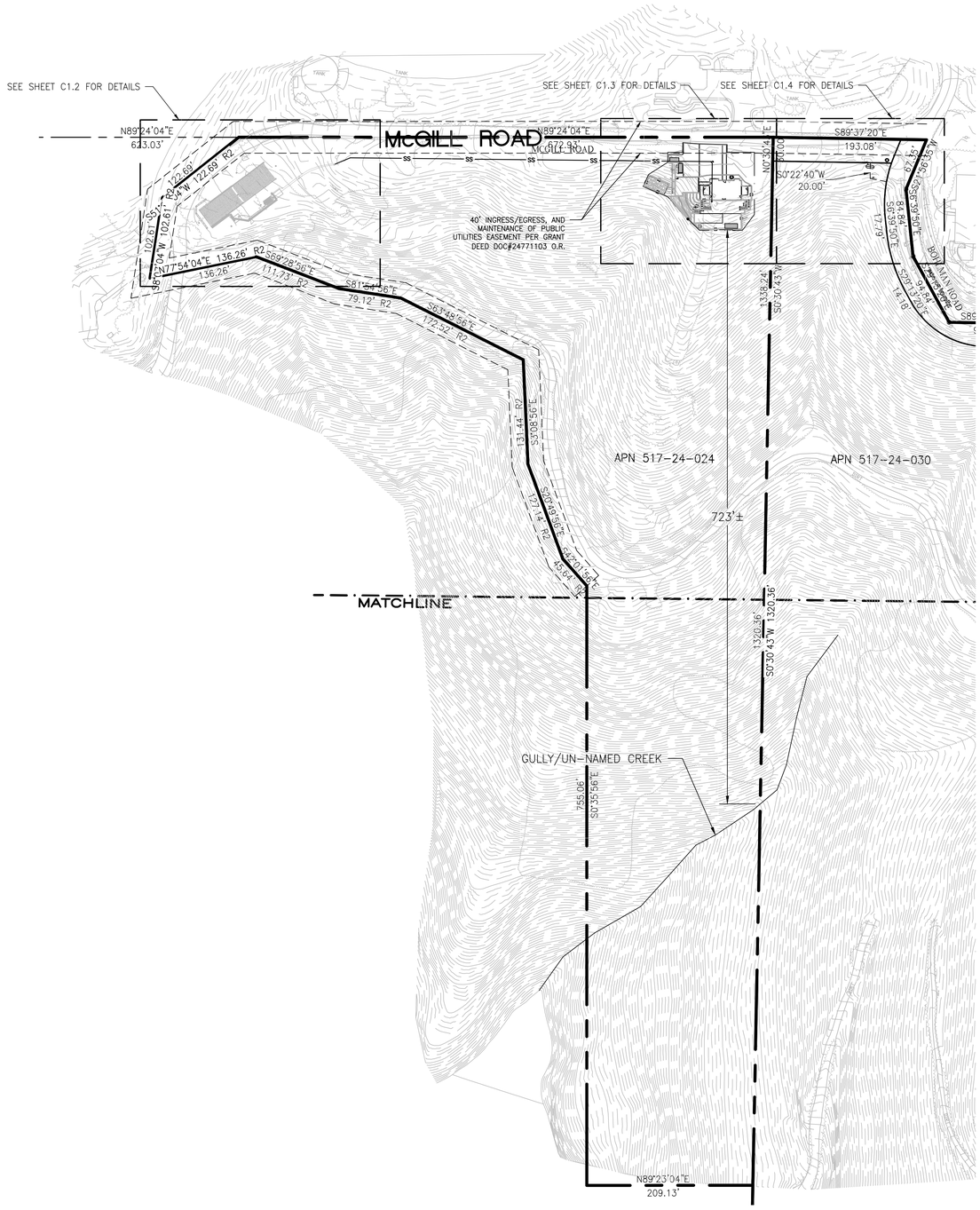
CONSULTING CIVIL ENGINEERS & LAND SURVEYORS
117 BERNAL RD. STE. 70-336
SAN JOSE, CA 95119
TEL. (408) 772-4381
Info@osunaengineering.com

PRELIMINARY
GRADING & DRAINAGE PLAN
SITE PLAN - AVERAGE SLOPE
17025 MC GILL RD
SARATOGA, CALIFORNIA

Project No.: 2143 | Designed: T.N./O.O. | Checked: O.O | Date: 10/08/21

SHEET
C1.0
OF 18 SHEETS

CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND, THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.



N

20 60 100
0 40 80 200
GRAPHIC SCALE
1" = 80'

BY	CITY	DATE	REVISIONS

REGISTERED PROFESSIONAL ENGINEER
PORFIRIO OSCAR OSUNA
No. 70829
Exp. 6-30-23
CIVIL
STATE OF CALIFORNIA
07-13-2020
PORFIRIO OSCAR OSUNA
RCE 70829 EXP. 6-30-23

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PRELIMINARY
GRADING & DRAINAGE PLAN

17025 MC GILL RD

CALIFORNIA

Project No.: 2143	Designed: T.N./O.O.	Checked: O.O	Date: 10/18/21

SHEET
C1.1
OF 18 SHEETS

APPROVED FOR ISSUANCE
REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERING

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N89°24'04"E
623.03'

40' INGRESS/EGRESS, AND MAINTENANCE OF PUBLIC UTILITIES EASEMENT PER GRANT DEED DOC#24771103 O.R.

N

GRAPHIC SCALE
1" = 10'
0 10 20 30 40 50

McGILL ROAD

SEPTIC SYSTEM
(DESIGN BY OTHERS)
NO GRADING

122.69'
S51°04'04"W 122.69' R2

102.61'
S8°07'04"W 102.61' R2

N77°54'04"E 136.26' R2
136.26'

S69°28'56"E
111.73' R2

TANKS

APPROVED FOR ISSUANCE
REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERING

REVISIONS	BY	CITY	DATE

REGISTERED PROFESSIONAL ENGINEER
PORFIRIO OSCAR OSUNA
No. 70829
Exp. 6-30-23
CIVIL
STATE OF CALIFORNIA

07-13-2020

P. Oscar Osuna

PORFIRIO OSCAR OSUNA
RCE 70829 EXP. 6-30-23

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PRELIMINARY
GRADING & DRAINAGE PLAN

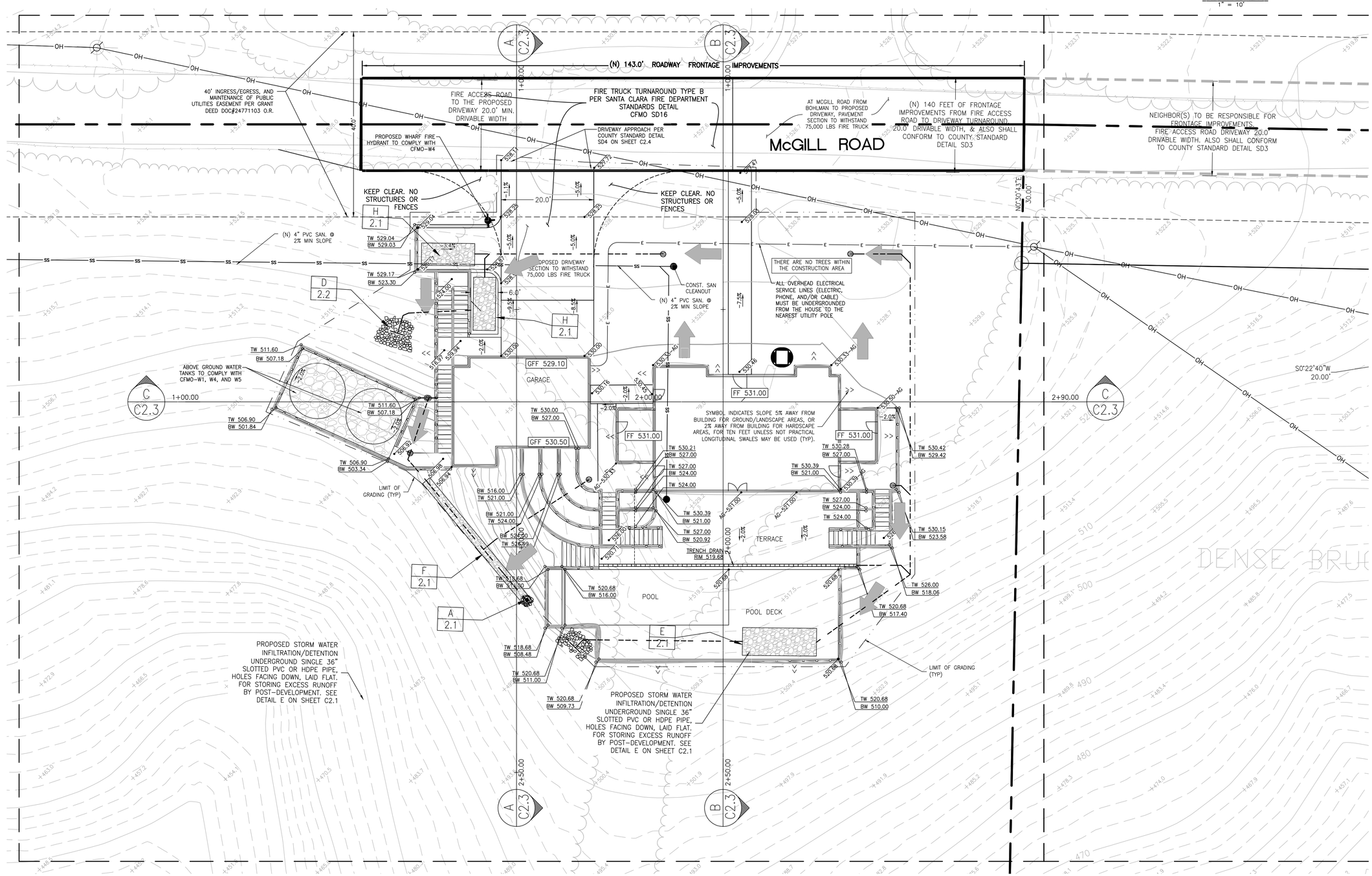
17025 MC GILL RD

SARATOGA, CALIFORNIA

Project No.: 2143 | Designed: T.N./O.O | Checked: O.O | Date: 11/18/21

SHEET
C1.2
OF 18 SHEETS

CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.



APPROVED FOR ISSUANCE
REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERING

REVISIONS | BY | CITY | DATE

REGISTERED PROFESSIONAL ENGINEER
PORFIRIO OSCAR OSUNA
No. 70829
Exp. 6-30-23
CIVIL
STATE OF CALIFORNIA
07-13-2020
PORFIRIO OSCAR OSUNA
RCE 70829 EXP. 6-30-23

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PRELIMINARY
GRADING & DRAINAGE PLAN

17025 MC GILL RD
SARATOGA, CALIFORNIA

Project No.: 2143 | Designed: T.N./O.O. | Checked: O.O. | Date: 11/18/21

SHEET
C1.3
OF 18 SHEETS

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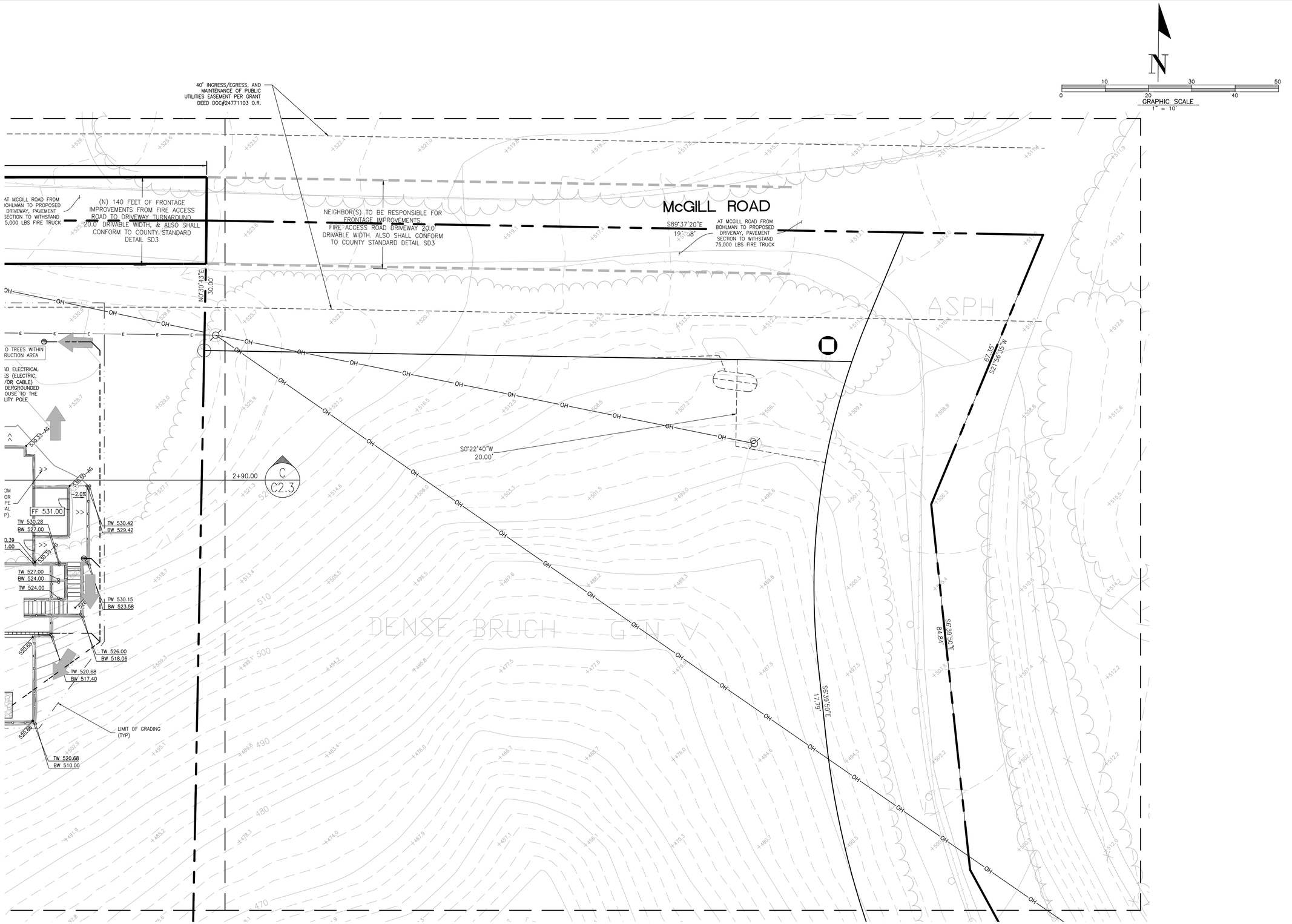

APPROVED FOR ISSUANCE
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BY	CITY	DATE	REVISIONS

REGISTERED PROFESSIONAL ENGINEER
PORFIRIO OSCAR OSUNA
No. 70829
Exp. 6-30-23
CIVIL
STATE OF CALIFORNIA
07-13-2020
PORFIRIO OSCAR OSUNA
RCE 70829 EXP. 6-30-23

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PRELIMINARY
GRADING & DRAINAGE PLAN

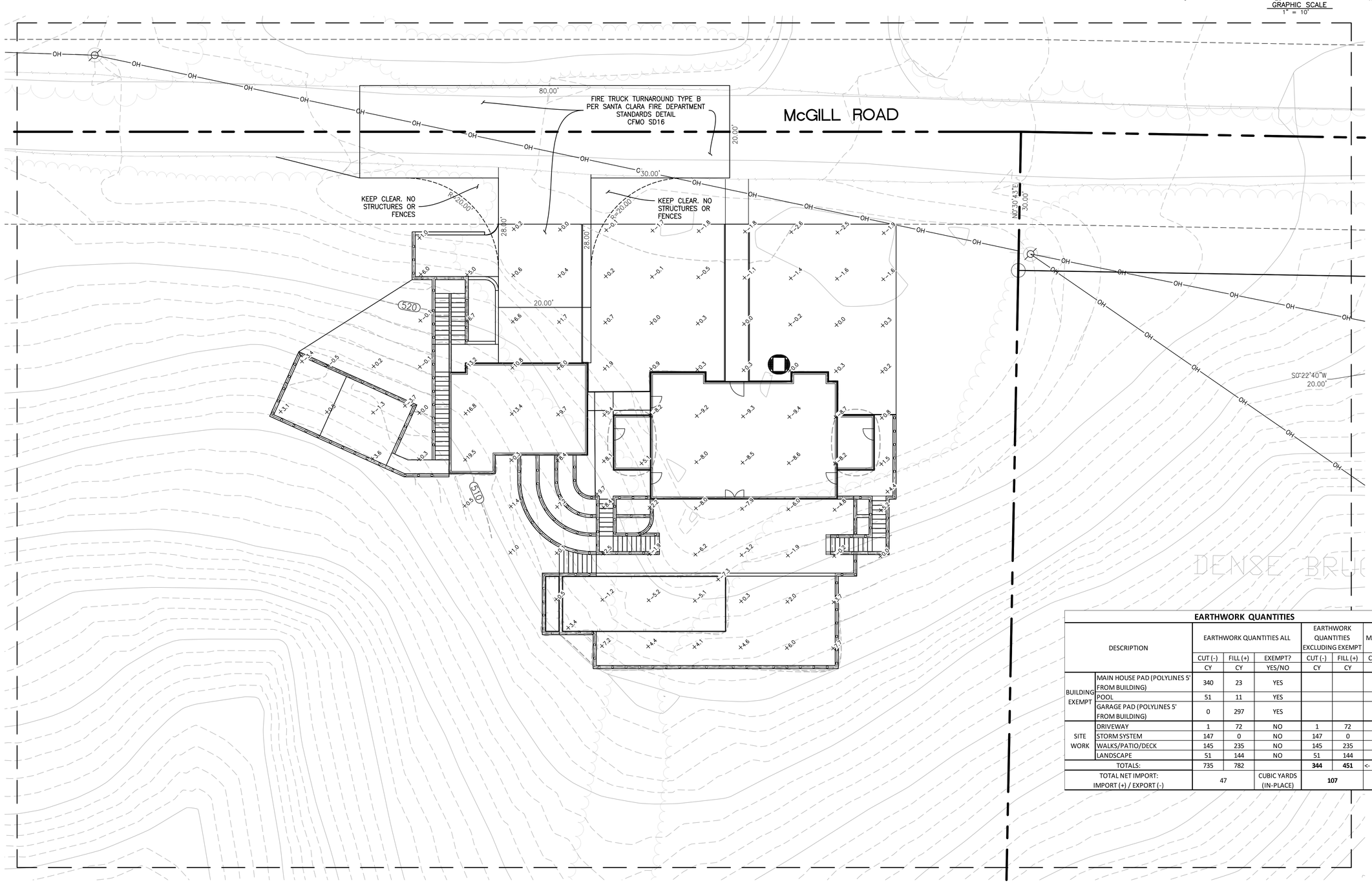
17025 MC GILL RD

SAN JOSE, CALIFORNIA

Project No.: 2143 | Designed: T.N./O.O. | Checked: O.O | Date: 11/18/21

SHEET
C1.4
OF 18 SHEETS

CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING COMPLIANCE WITH ALL HEALTH AND SAFETY REQUIREMENTS OF ALL REGULATORY AGENCIES. CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.



EARTHWORK QUANTITIES

DESCRIPTION		EARTHWORK QUANTITIES ALL			EARTHWORK QUANTITIES EXCLUDING EXEMPT		MAXIMUM DEPTHS	
		CUT (-)	FILL (+)	EXEMPT?	CUT (-)	FILL (+)	CUT (-)	FILL (+)
		CY	CY	YES/NO	CY	CY	FT	FT
BUILDING EXEMPT	MAIN HOUSE PAD (POLYLINES 5' FROM BUILDING)	340	23	YES			-9.4	5.1
	POOL	51	11	YES			-7.3	3.4
	GARAGE PAD (POLYLINES 5' FROM BUILDING)	0	297	YES			0.0	19.5
SITE WORK	DRIVEWAY	1	72	NO	1	72	-1.0	9.8
	STORM SYSTEM	147	0	NO	147	0	-5.0	0.0
	WALKS/PATIO/DECK	145	235	NO	145	235	-9.0	8.7
	LANDSCAPE	51	144	NO	51	144	-2.6	8.7
TOTALS:		735	782		**344**	**451**	<- EXEMPT TOTALS	
TOTAL NET IMPORT: IMPORT (+) / EXPORT (-)		47		CUBIC YARDS (IN-PLACE)	**107**		CUBIC YARDS (IN-PLACE)	

APPROVED FOR ISSUANCE
REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERING

REVISIONS | BY | CITY | DATE

REGISTERED PROFESSIONAL ENGINEER
PORFIRIO OSCAR OSUNA
No. 70829
Exp. 6-30-23
CIVIL
STATE OF CALIFORNIA
07-13-2020
PORFIRIO OSCAR OSUNA
RCE 70829 EXP. 6-30-23

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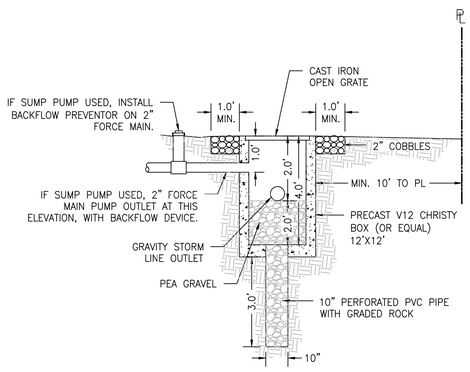
SAN JOSE, CA 95119
TEL. (408) 772-4381
Info@osunaengineering.com

PRELIMINARY
GRADING & DRAINAGE PLAN
EARTHWORK QUANTITIES

ADDRESS
SAN JOSE, CALIFORNIA

Project No.: XXXX | Designed: J.O | Checked: O.O | Date: 10/28/21

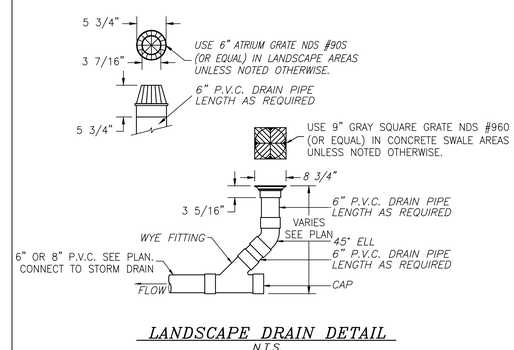
SHEET
C1.5
OF 18 SHEETS



BUBBLER BOX DETAIL
N.T.S.

N.T.S.

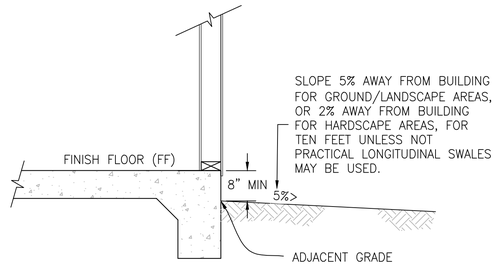
A BUBBLER BOX DETAIL



LANDSCAPE DRAIN DETAIL
N.T.S.

B AREA DRAIN DETAIL

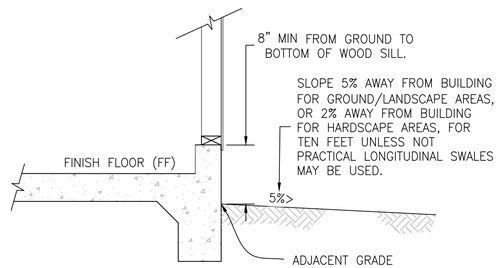
NOTE: ALL GRADING IS BASED OFF OF THIS ARCHITECTURAL SECTION. THE ADJACENT GRADE AND FF DIMENSIONS SHOWN HERE MUST BE KEPT. NOTIFY THE ENGINEER BEFORE MAKING ANY CHANGES.



N.T.S.

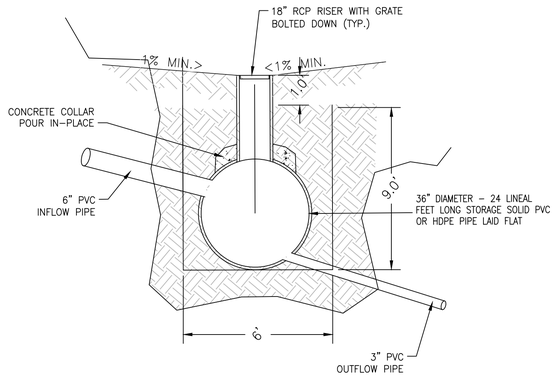
C TYPICAL FOUNDATION/FF/GROUND SECTION

NOTE: ALL GRADING IS BASED OFF OF THIS ARCHITECTURAL SECTION. THE ADJACENT GRADE AND GFF DIMENSIONS SHOWN HERE MUST BE KEPT. NOTIFY THE ENGINEER BEFORE MAKING ANY CHANGES.

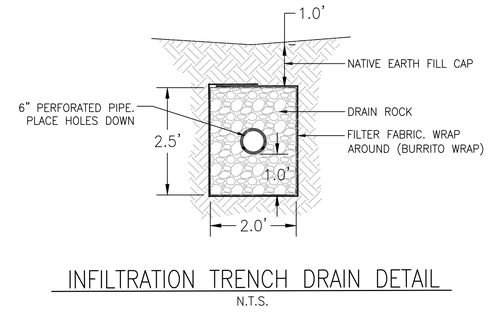


N.T.S.

D TYPICAL FOUNDATION/GFF/GROUND SECTION

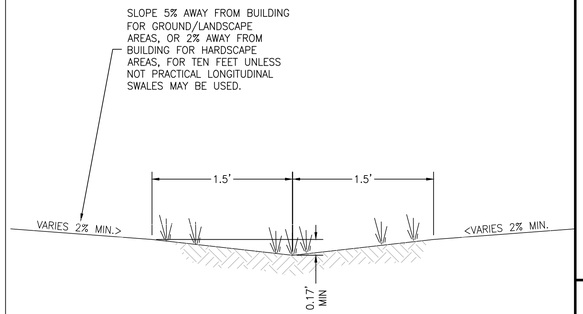


E STORM INFILTRATION/RETENTION DETAIL



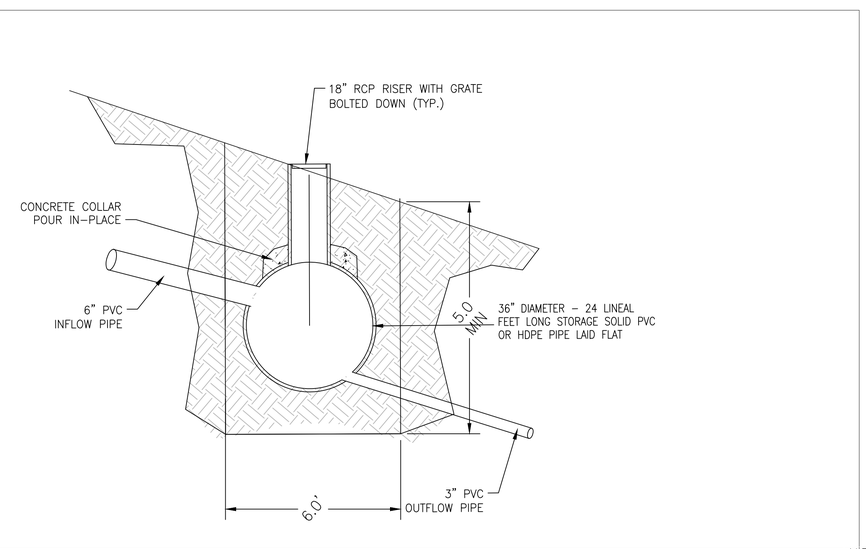
INFILTRATION TRENCH DRAIN DETAIL
N.T.S.

F LANDSCAPE DRAIN/TRENCH DETAIL



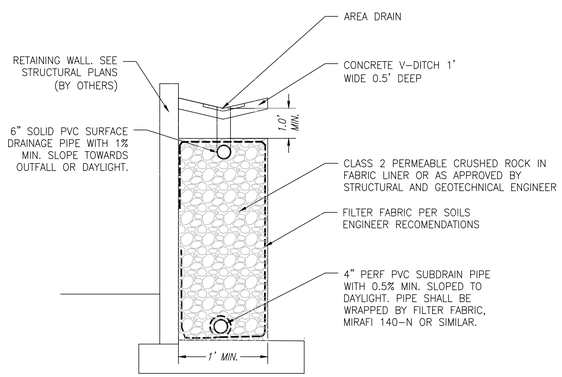
N.T.S.

G EARTHEN SWALE DETAIL

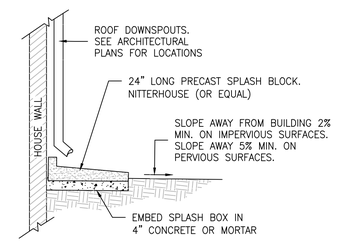


N.T.S.

H STORM INFILTRATION/RETENTION DETAIL



I CONCRETE V-DITCH



SPLASH BLOCK/DOWNSPOUT DETAIL
N.T.S.

N.T.S.

J SPLASH BLOCK/DOWNSPOUT DETAIL

BY	CITY	DATE	REVISIONS

REGISTERED PROFESSIONAL ENGINEER
PORFIRIO OSCAR OSUNA
No. 70829
Exp. 6-30-23
CIVIL
STATE OF CALIFORNIA

07-13-2020

PORFIRIO OSCAR OSUNA
RCE 70829 EXP. 6-30-23

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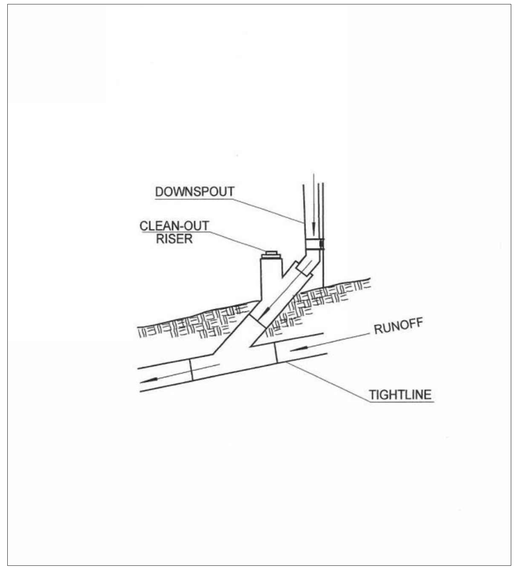
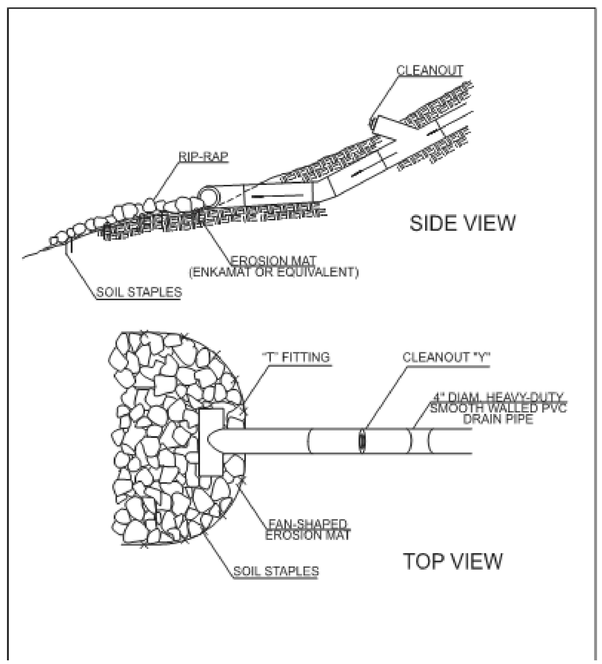
PRELIMINARY
GRADING & DRAINAGE PLAN
CONSTRUCTION DETAILS
17025 MC GILL RD
SARATOGA, CALIFORNIA

Project No.: 2143 | Designed: T.N./O.O. | Checked: O.O | Date: 11/18/21

SHEET
C2.1
OF 18 SHEETS



A DOWNSPOUT CONNECTION DETAIL



D "T" OUTFALL DETAIL

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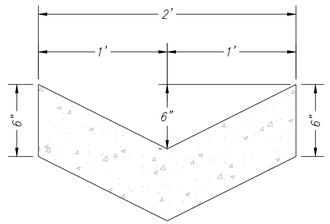
B NOT USED



CONCRETE V-DITCH

E CONCRETE V-DITCH

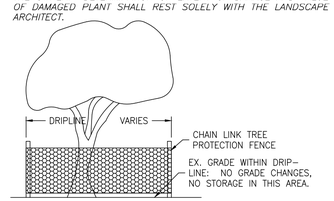
NOTES FOR PROTECTION OF EXISTING PLANTS TO REMAIN:

A. DO NOT STORE MATERIALS OR EQUIPMENT, PERMIT BURNING, OPERATE, OR PARK EQUIPMENT UNDER THE BRANCHES OF ANY EXISTING PLANT TO REMAIN EXCEPT AS ACTUALLY REQUIRED FOR CONSTRUCTION IN THOSE AREAS.

B. PROVIDE BARRICADES, FENCES, OR OTHER BARRIERS AS NECESSARY AT THE DRIP LINE TO PROTECT EXISTING PLANTS TO REMAIN FROM DAMAGE DURING CONSTRUCTION.

C. NOTIFY THE LANDSCAPE ARCHITECT IN ANY CASE WHERE CONTRACTOR FEELS GRADING OR OTHER CONSTRUCTION CALLED FOR BY CONTRACT DOCUMENTS MAY DAMAGE EXISTING PLANTS TO REMAIN.

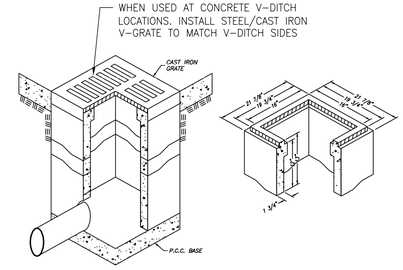
D. IF EXISTING PLANTS TO REMAIN ARE DAMAGED DURING CONSTRUCTION, CONTRACTOR SHALL REPLACE SUCH PLANTS OF THE SAME SPECIES AND SIZE AS THOSE DAMAGED AT NO COST TO THE OWNER. DETERMINATION OF EXTENT OF DAMAGE AND VALUE OF DAMAGED PLANT SHALL REST SOLELY WITH THE LANDSCAPE ARCHITECT.



TREE PROTECTION DETAIL

J TREE PROTECTION

N.T.S.

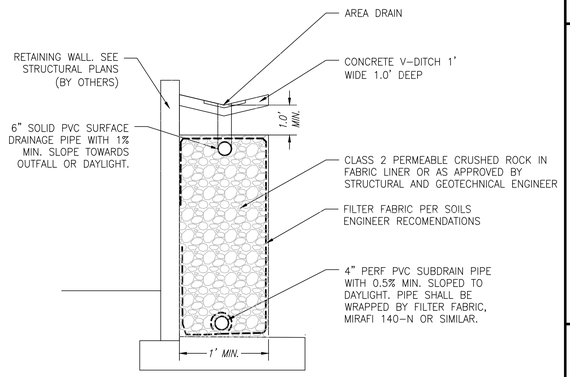


FLAT GRATE INLET
CHRISTY V-64 DRAIN BOX
18 3/8" x 18 3/8" OR EQUAL

N.T.S.

N.T.S.

C FLAT GRATE INLET



N.T.S.

F SUBDRAIN DETAIL

N.T.S.

H NOT USED

						REVISIONS
						DATE
						CITY
						BY
◁	◁	◁	◁	◁		

REGISTERED PROFESSIONAL ENGINEER
PORFIRIO OSCAR OSUNA
No. 70829
Exp. 6-30-23
CIVIL
STATE OF CALIFORNIA

PORFIRIO OSCAR OSUNA
RCE 70829 EXP. 6-30-23

OSUNA ENGINEERING INC.
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CONSULTING CIVIL ENGINEERS & LAND SURVEYORS
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SAN JOSE, CA 95119
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info@osunaengineering.com

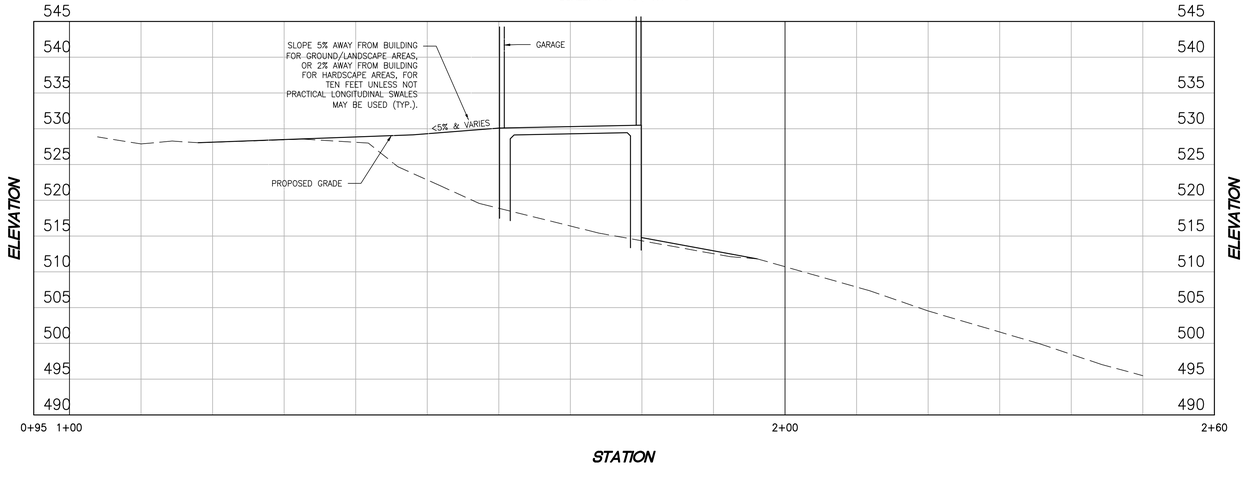
PRELIMINARY
GRADING & DRAINAGE PLAN
CONSTRUCTION DETAILS
17025 MC GILL RD
SARATOGA, CALIFORNIA

Project No.: 2143 | Designed: T.N./O.O. | Checked: O.O. | Date: 11/18/21

SHEET
C2.2
OF 18 SHEETS

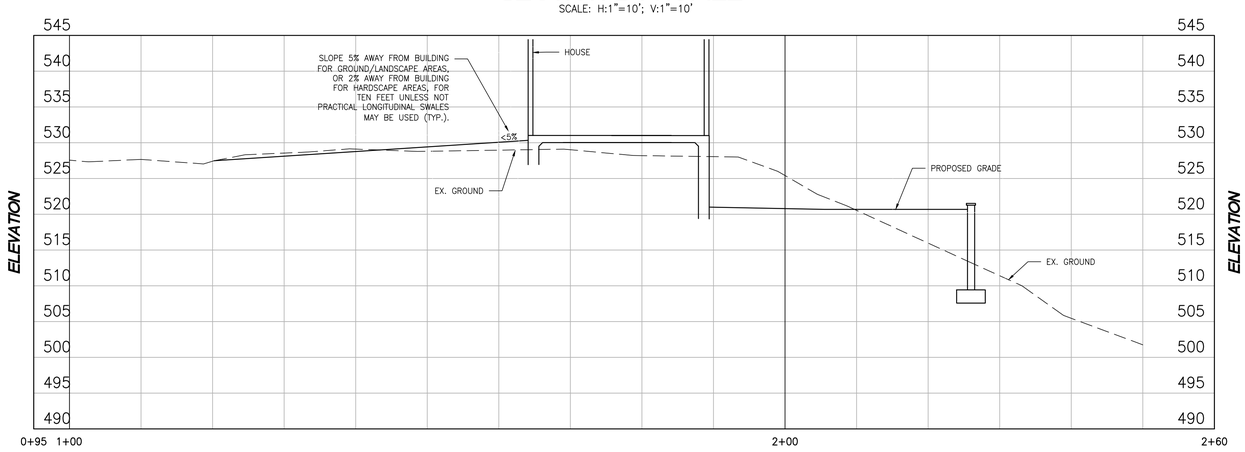
SECTION A PROFILE

SCALE: H:1"=10'; V:1"=10'



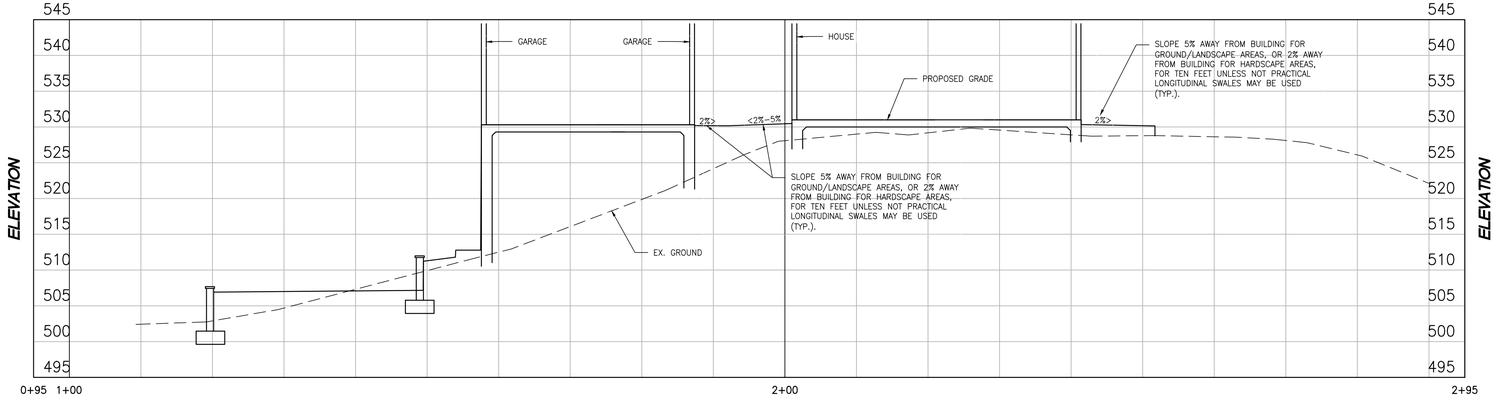
SECTION B PROFILE

SCALE: H:1"=10'; V:1"=10'



SECTION C PROFILE

SCALE: H:1"=10'; V:1"=10'



BY	CITY	DATE	REVISIONS

REGISTERED PROFESSIONAL ENGINEER
PORFIRIO OSCAR OSUNA
No. 70829
Exp. 6-30-23
CIVIL
STATE OF CALIFORNIA

PORFIRIO OSCAR OSUNA
RCE 70829 EXP. 6-30-23

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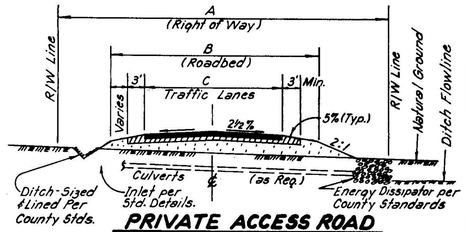
PRELIMINARY
GRADING & DRAINAGE PLAN
CONSTRUCTION DETAILS
17025 MC GILL RD
SARATOGA, CALIFORNIA

Project No.: 2143 | Designed: T.N./O.O. | Checked: O.O. | Date: 11/18/21

SHEET
C2.3
OF 18 SHEETS



PRIVATE ACCESS ROAD

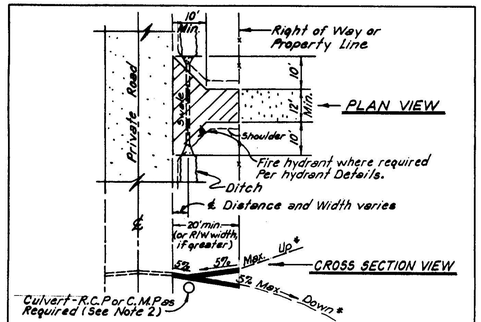
(Two or More lots) Non-Hillside

TYPE OF ROAD	MINIMUMS A	B	C
ONE-WAY LOOP (Turnouts as specified)	40'	20'	14'
2 & 3 LOTS (Ultimate Development)	60'	24'	18'
4 OR MORE LOTS (Ultimate Development)	60'	30' w/ 36'	18'
HALF-ROAD (Initial Construction)	40'	24'	18'
EMERGENCY ACCESS ROAD (with turnouts)	30'	15'	12'

NOTES

(1) Road may be uncrowned with 2½% complete cross slope where side slope is 5% or greater.
(2) Roads serving 4 or more lots are to be designed for future upgrading to County maintained standards unless specifically exempt by County Surveyor.
(3) Base & surfacing to be 2½" asphalt on 4" aggregate base except as otherwise specified by County Surveyor.
(4) Construct roadbed above natural ground in flood prone and drainage problem areas; for further design & construction information see manual section entitled "Policies and Standards for Roads."

Approved: Date:	COUNTY OF SANTA CLARA
Manager / County Surveyor Land Dev., Engineering & Surveying	ENVIRONMENTAL MANAGEMENT / GENERAL SERVICES AGENCY
No. / Revision / Date	PRIVATE ACCESS ROAD (Non-Hillside Conditions) — SD 3



DRIVEWAY APPROACH

Connection to Private Road

* Maximum grade as per Fire Marshal

NOTES

(1) Culvert plus swale shall accommodate maximum flow. Minimum culvert size to be 12". Culvert shall extend 1' beyond each toe of shoulder. Provide headwalls and/or rip-rap as required. C.M.P. to be not less than 14 gauge.
(2) Culvert may be omitted where no roadside ditch exists with written approval of County Surveyor.
(3) Driveway approach base & paving to be same as or better than ultimate private road base & pavement.
(4) See Driveway section (this manual) for more information.

Approved: Date:	COUNTY OF SANTA CLARA
Manager / County Surveyor Land Dev., Engineering & Surveying	ENVIRONMENTAL MANAGEMENT / GENERAL SERVICES AGENCY
No. / Revision / Date	DRIVEWAY APPROACH (PRIVATE ROAD) — SD 4

REVISIONS | BY | CITY | DATE

REGISTERED PROFESSIONAL ENGINEER
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STATE OF CALIFORNIA

P. Oscar Osuna
PORFIRIO OSCAR OSUNA
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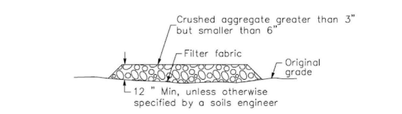
PRELIMINARY
GRADING & DRAINAGE PLAN
COUNTY STANDARD DETAILS
17025 MC GILL RD
SANTA CLARA CALIFORNIA

Project No.: 2143 | Designed: T.N./O.O. | Checked: O.O. | Date: 11/18/21

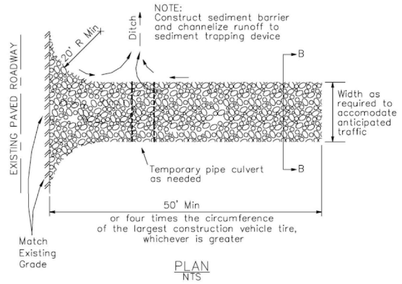
SHEET
C2.4
OF 18 SHEETS

3 Stabilized Construction Entrance/Exit

CASQA Detail TC-1



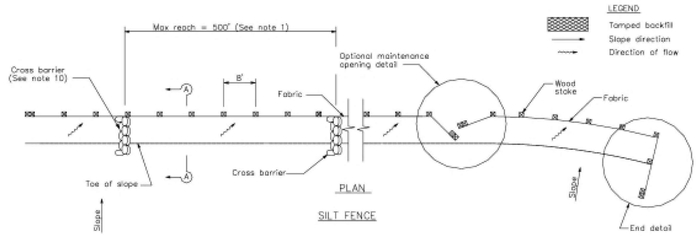
SECTION B–B
NTS



PLAN
NTS

1 Silt Fence

CASQA Detail SE-1

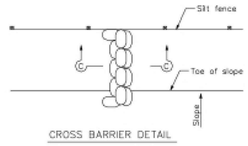


PLAN

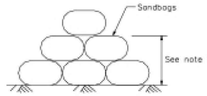
SILT FENCE

NOTES

1. Construct the length of each reach so that the change in base elevation along the reach does not exceed 1/3 the height of the linear barrier, in no case shall the reach length exceed 500'.
2. The last 8'–0" of fence shall be turned up slope.
3. Stake dimensions are nominal.
4. Dimension may vary to fit field condition.
5. Stakes shall be spaced at 8'–0" maximum and shall be positioned on downstream side of fence.
6. Stakes to overlap and fence fabric to fold around each stake one full turn. Secure fabric to stake with 4 staples.
7. Stakes shall be driven tightly together to prevent potential flow–through of sediment at joint. The tops of the stakes shall be secured with wire.
8. For end stake, fence fabric shall be folded around two stakes one full turn and secured with 4 staples.
9. Minimum 4 staples per stake. Dimensions shown are typical.
10. Cross barriers shall be a minimum of 1/3 and a maximum of 1/2 the height of the linear barrier.
11. Maintenance openings shall be constructed in a manner to ensure sediment remains behind silt fence.
12. Joining sections shall not be placed at sump locations.
13. Sandbag rows and layers shall be offset to eliminate gaps.



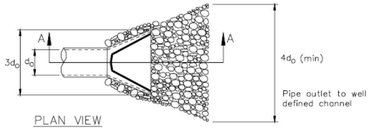
CROSS BARRIER DETAIL



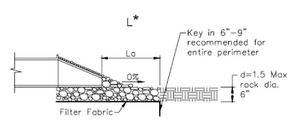
SECTION C–C

4 Velocity Dissipation Devices

CASQA Detail EC-10



PLAN VIEW

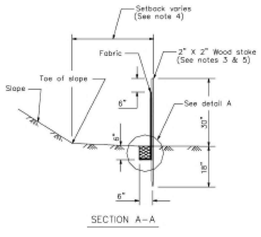


SECTION A–A

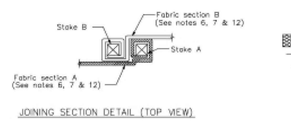
* Length per ABAG Design Standards

2 Silt Fence

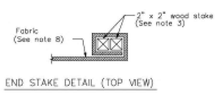
CASQA Detail SE-1



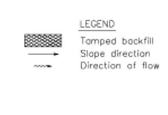
SECTION A–A

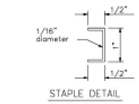


JOINING SECTION DETAIL (TOP VIEW)

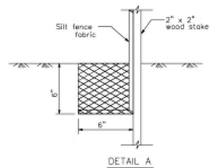


END STAKE DETAIL (TOP VIEW)

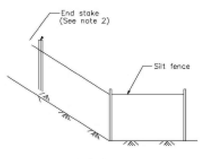




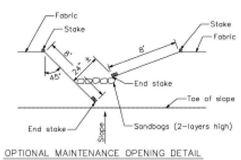
STAPLE DETAIL
(SEE NOTE 9)



DETAIL A



END DETAIL



OPTIONAL MAINTENANCE OPENING DETAIL
(SEE NOTE 11)

Source for Graphics: California Stormwater BMP Handbook, California Stormwater Quality Association, January 2003.
Available from www.cabmphandbooks.com.

STANDARD BEST MANAGEMENT PRACTICE NOTES

1. Solid and Demolition Waste Management: Provide designated waste collection areas and containers on site away from streets, gutters, storm drains, and waterways, and arrange for regular disposal. Waste containers must be watertight and covered at all times except when waste is deposited. Refer to Erosion & Sediment Control Field Manual, 4th Edition (page C3) or latest.
2. Hazardous Waste Management: Provide proper handling and disposal of hazardous wastes by a licensed hazardous waste material hauler. Hazardous wastes shall be stored and properly labeled in sealed containers constructed of suitable materials. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-5 to C-6) or latest.
3. Spill Prevention and Control: Provide proper storage areas for liquid and solid materials, including chemicals and hazardous substances, away from streets, gutters, storm drains, and waterways. Spill control materials must be kept on site where readily accessible. Spills must be cleaned up immediately and contaminated soil disposed properly. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-7 to C-8, C-13 to C-14) or latest.
4. Vehicle and Construction Equipment Service and Storage: An area shall be designated for the maintenance, where on-site maintenance is required, and storage of equipment that is protected from stormwater run-on and runoff. Measures shall be provided to capture any waste oils, lubricants, or other potential pollutants and these wastes shall be properly disposed of off site. Fueling and major maintenance/repair, and washing shall be conducted off-site whenever feasible. Refer to Erosion & Sediment Control Field Manual, 4th Edition (page C9) or latest.
5. Material Delivery, Handling and Storage: In general, materials should not be stockpiled on site. Where temporary stockpiles are necessary and approved by the County, they shall be covered with secured plastic sheeting or tarp and located in designated areas near construction entrances and away from drainage paths and waterways. Barriers shall be provided around storage areas where materials are potentially in contact with runoff. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-11 to C-12) or latest.
6. Handling and Disposal of Concrete and Cement: When concrete trucks and equipment are washed on-site, concrete wastewater shall be contained in designated containers or in a temporary lined and watertight pit where wasted concrete can harden for later removal. If possible have concrete contractor remove concrete wash water from site. In no case shall fresh concrete be washed into the road right-of-way. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-15 to C-16) or latest.
7. Pavement Construction Management: Prevent or reduce the discharge of pollutants from paving operations, using measures to prevent run-on and runoff pollution and properly disposing of wastes. Avoid paving in the wet season and reschedule paving when rain is in the forecast. Residue from saw-cutting shall be vacuumed for proper disposal. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-17 to C-18) or latest.
8. Contaminated Soil and Water Management: Inspections to identify contaminated soils should occur prior to construction and at regular intervals during construction. Remediating contaminated soil should occur promptly after identification and be specific to the contaminant identified, which may include hazardous waste removal. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-19 to C-20) or latest.
9. Sanitary/Septic Water Management: Temporary sanitary facilities should be located away from drainage paths, waterways, and traffic areas. Only licensed sanitary and septic waste haulers should be used. Secondary containment should be provided for all sanitary facilities. Refer to Erosion & Sediment Control Field Manual, 4th Edition (page C-21) or latest.
10. Inspection & Maintenance: Areas of material and equipment storage sites and temporary sanitary facilities must be inspected weekly. Problem areas shall be identified and appropriate additional and/or alternative control measures implemented immediately, within 24 hours of the problem being identified.

STANDARD EROSION CONTROL NOTES

1. Sediment Control Management:

   Tracking Prevention & Clean Up: Activities shall be organized and measures taken as needed to prevent or minimize tracking of soil onto the public street system. A gravel or proprietary device construction entrance/exit is required for all sites. Clean up of tracked material shall be provided by means of a street sweeper prior to an approaching rain event, or at least once at the end of each workday that material is tracked, or, more frequently as determined by the County Inspector. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages B-31 to B-33) or latest.

   Storm Drain Inlet and Catch Basin Inlet Protection: All inlets within the vicinity of the project and within the project limits shall be protected with gravel bags placed around inlets or other inlet protection. At locations where exposed soils are present, staked fiber roles or staked silt fences can be used. Inlet filters are not allowed due to clogging and subsequent flooding. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages B-49 to B-51) or latest.

   Storm Water Runoff: No storm water runoff shall be allowed to drain in to the existing and/or proposed underground storm drain system or other above ground watercourses until appropriate erosion control measures are fully installed.

   Dust Control: The contractor shall provide dust control in graded areas as required by providing wet suppression or chemical stabilization of exposed soils, providing for rapid clean up of sediments deposited on paved roads, furnishing construction road entrances and vehicle wash down areas, and limiting the amount of areas disturbed by clearing and earth moving operations by scheduling these activities in phases.

   Stockpiling: Excavated soils shall not be placed in streets or on paved areas. Borrow and temporary stockpiles shall be protected with appropriate erosion control measures(tarps, straw bales, silt fences, ect.) to ensure silt does not leave the site or enter the storm drain system or neighboring watercourse.

2. Erosion Control: During the rainy season, all disturbed areas must include an effective combination of erosion and sediment control. It is required that temporary erosion control measures are applied to all disturbed soil areas prior to a rain event. During the non-rainy season, erosion control measures must be applied sufficient to control wind erosion at the site.
3. Inspection & Maintenance: Disturbed areas of the Project's site, locations where vehicles enter or exit the site, and all erosion and sediment controls that are identified as part of the Erosion Control Plans must be inspected by the Contractor before, during, and after storm events, and at least weekly during seasonal wet periods. Problem areas shall be identified and appropriate additional and/ or alternative control measures implemented immediately, within 24 hours of the problem being identified.
4. Project Completion: Prior to project completion and signoff by the County Inspector, all disturbed areas shall be reseeded, planted, or landscaped to minimize the potential for erosion on the subject site.
5. It shall be the Owner's/Contractor's responsibility to maintain control of the entire construction operation and to keep the entire site in compliance with the erosion control plan.
6. Erosion and sediment control best management practices shall be operable year round or until vegetation is fully established on landscaped surfaces.

Project Information

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

BMP-1

APPROVED FOR ISSUANCE
REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERING

REVISIONS | BY | CITY | DATE

REGISTERED PROFESSIONAL ENGINEER
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No. 70829
Exp. 6-30-23
CIVIL
STATE OF CALIFORNIA
07-13-2020
PORFIRIO OSCAR OSUNA
RCE 70829 EXP. 6-30-23

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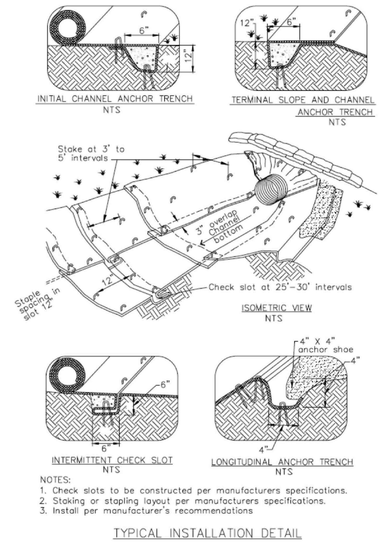
PRELIMINARY
GRADING & DRAINAGE PLAN
COUNTY BMP-1
17025 MC GILL RD
SARATOGA, CALIFORNIA

Project No.: 2143 | Designed: T.N./O.O. | Checked: O.O. | Date: 11/18/21

SHEET
C3.1
OF 18 SHEETS

7 Geotextiles and Mats

CASQA Detail EC-7

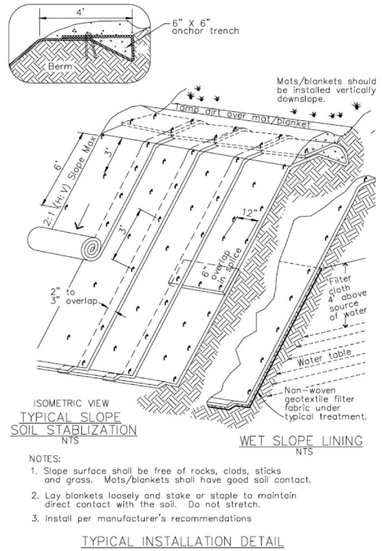


NOTES:
1. Check slots to be constructed per manufacturers specifications.
2. Staking or stapling layout per manufacturers specifications.
3. Install per manufacturer's recommendations

TYPICAL INSTALLATION DETAIL

5 Geotextiles and Mats

CASQA Detail EC-7

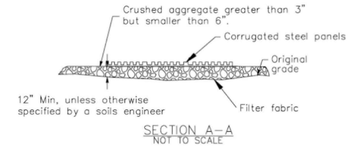


NOTES:
1. Slope surface shall be free of rocks, clods, sticks and grass. Mats/blankets shall have good soil contact.
2. Lay blankets loosely and stake or staple to maintain direct contact with the soil. Do not stretch.
3. Install per manufacturer's recommendations

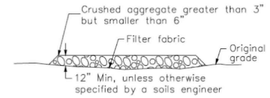
TYPICAL INSTALLATION DETAIL

3 Entrance/Outlet Tire Wash

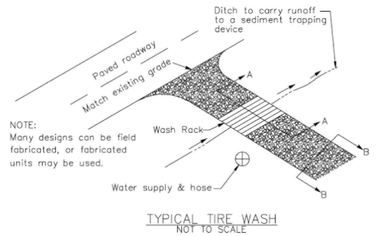
CASQA Detail TC-3



SECTION A–A
NOT TO SCALE



SECTION B–B
NTS

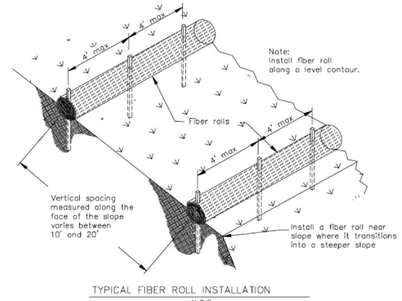


NOTE:
Many designs can be field fabricated, or fabricated units may be used.

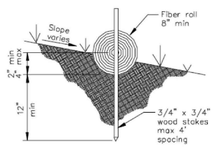
TYPICAL TIRE WASH
NOT TO SCALE

1 Fiber Rolls

CASQA Detail SE-5



TYPICAL FIBER ROLL INSTALLATION
N.T.S.

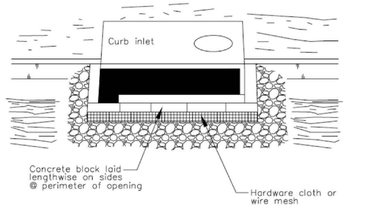


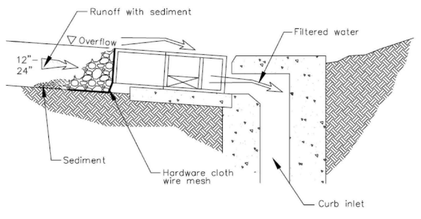
ENTRENCHMENT DETAIL
N.T.S.

APPROVED FOR ISSUANCE
REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERING

8 Storm Drain Inlet Protection

CASQA Detail SE-10

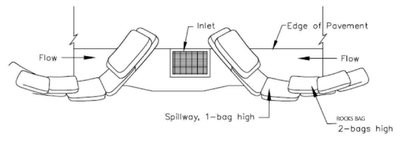




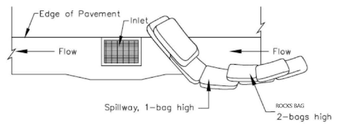
DI PROTECTION – TYPE 4
NOT TO SCALE

6 Storm Drain Inlet Protection

CASQA Detail SE-10



TYPICAL PROTECTION FOR INLET ON SUMP



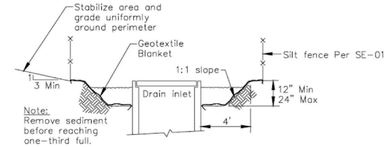
TYPICAL PROTECTION FOR INLET ON GRADE

NOTES:
1. Intended for short–term use.
2. Use to inhibit non–storm water flow.
3. Allow for proper maintenance and cleanup.
4. Bags must be removed after adjacent operation is completed
5. Not applicable in areas with high silts and clays without filter fabric.

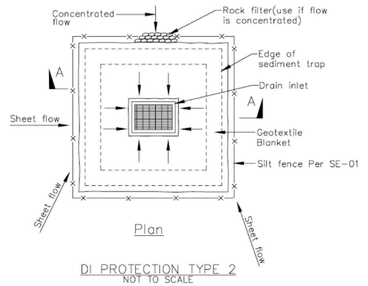
DI PROTECTION TYPE 3
NOT TO SCALE

4 Storm Drain Inlet Protection

CASQA Detail SE-10



Section A–A



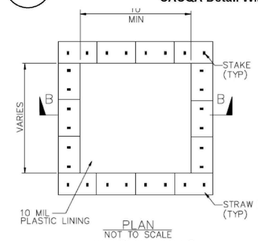
Plan

DI PROTECTION TYPE 2
NOT TO SCALE

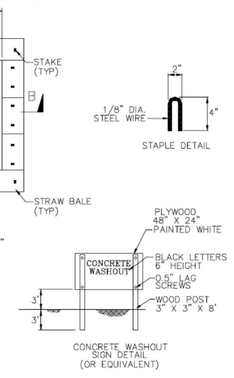
Notes
1. For use in cleared and grubbed and in graded areas.
2. Shape basin so that longest inflow area faces longest length of trap.
3. For concentrated flows, shape basin in 2:1 ratio with length oriented towards direction of flow.

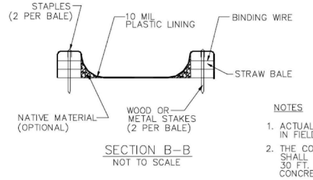
2 Concrete Waste Management

CASQA Detail WM-8



PLAN
NOT TO SCALE
TYPE "ABOVE GRADE" WITH STRAW BALES





SECTION B–B
NOT TO SCALE

NOTES
1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

Source for Graphics: California Stormwater BMP Handbook, California Stormwater Quality Association, January 2003.
Available from www.cabmphandbooks.com.

Project Information

Best Management Practices and Erosion Control Details Sheet 2
County of Santa Clara

BMP-2

REVISIONS | BY | CITY | DATE

REGISTERED PROFESSIONAL ENGINEER
PORFIRIO OSCAR OSUNA
No. 70829
Exp. 6-30-23
CIVIL
STATE OF CALIFORNIA
07-13-2020
PORFIRIO OSCAR OSUNA
RCE 70829 EXP. 6-30-23

OSUNA ENGINEERING INC.
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117 BERNAL RD. STE. 70–336
SAN JOSE, CA 95119
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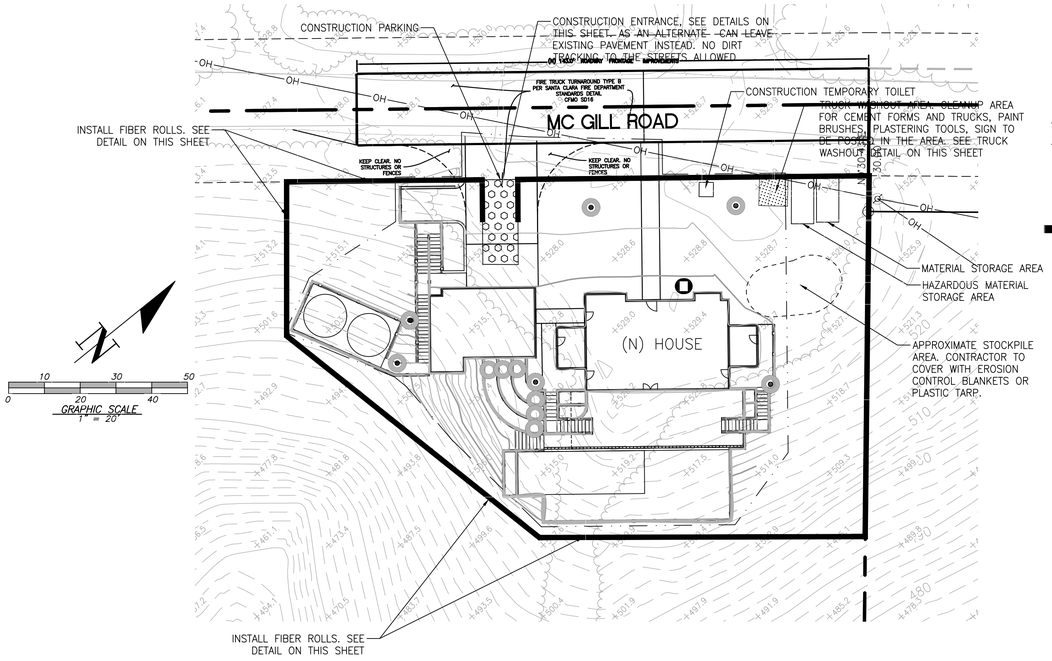
Info@osunaengineering.com

PRELIMINARY
GRADING & DRAINAGE PLAN
COUNTY BMP-2
17025 MC GILL RD
CALIFORNIA

Project No.: 2143 | Designed: TN/OO | Checked: OO | Date: 11/18/21

SHEET
C3.2
OF 18 SHEETS



LEGEND

PROPOSED	DESCRIPTION
	SITE BOUNDARY
	STABILIZED CONSTRUCTION ENTRANCE 2"–3" ROCK (MIN)
	FIBER ROLL
	ROCK BAG CHECK DAMS
	INLET PROTECTION

MAINTENANCE NOTES

MAINTENANCE IS TO BE PERFORMED AS FOLLOWS:

1. REPAIR DAMAGES CAUSED BY SOIL EROSION OR CONSTRUCTION AT THE END OF EACH WORKING DAY.
2. SWALES SHALL BE INSPECTED PERIODICALLY AND MAINTAINED AS NEEDED.
3. SEDIMENT TRAPS, BERMS, AND SWALES ARE TO BE INSPECTED AFTER EACH STORM AND REPAIRS MADE AS NEEDED.
4. SEDIMENT SHALL BE REMOVED AND SEDIMENT TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO A DEPTH OF 1 FOOT.
5. SEDIMENT REMOVED FROM TRAP SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
6. RILLS AND GULLIES MUST BE REPAIRED.

EROSION & SEDIMENT CONTROL NOTES

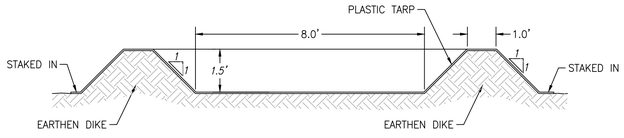
1. NOT USED
2. THE DEVELOPER IS RESPONSIBLE FOR ENSURING THAT ALL CONTRACTORS AND SUBCONTRACTORS ARE AWARE OF ALL STORM WATER QUALITY MEASURES AND IMPLEMENT SUCH MEASURES. FAILURE TO COMPLY WITH THE APPROVED CONSTRUCTION BEST MANAGEMENT PRACTICES WILL RESULT IN THE ISSUANCE OF CORRECTION NOTICES, CITATIONS, AND/OR STOP ORDERS.
3. ANY VEHICLE OR EQUIPMENT WASHING/STEAM CLEANING MUST BE DONE AT AN APPROPRIATELY EQUIPPED FACILITY WHICH DRAINS TO THE SANITARY SEWER. OUTDOOR WASHING MUST BE MANAGED IN SUCH A WAY THAT THERE IS NO DISCHARGE OF SOAPS, SOLVENTS, CLEANING AGENTS OR OTHER POLLUTANTS TO THE STORM DRAINS. WASH WATER SHALL DISCHARGE TO THE SANITARY SEWER, SUBJECT TO REVIEW AND APPROVAL OF UNION SANITARY DISTRICT.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LITTER CONTROL AND SWEEPING OF ALL PAVED SURFACES DURING CONSTRUCTION.
5. THE FACILITIES SHOWN ON THIS PLAN ARE DESIGNED TO CONTROL EROSION AND SEDIMENT DURING THE RAINY SEASON, OCTOBER 1 TO APRIL 15. EROSION CONTROL MEASURES ARE TO BE FUNCTIONAL PRIOR TO OCTOBER 1ST OF ANY YEAR GRADING OPERATIONS HAVE LEFT AREAS UNPROTECTED FROM EROSION.
6. ALL ON–SITE STORM DRAINS SHALL BE CLEANED IMMEDIATELY BEFORE THE START OF THE RAINY SEASON BEGINNING ON OCTOBER 1ST EACH YEAR, SUBJECT TO THE REVIEW OF THE BUILDING/ENGINEERING INSPECTOR.
7. IF RAINY WEATHER BECOMES IMMINENT, GRADING OPERATIONS SHALL BE STOPPED AND EROSION CONTROL MEASURES SHALL BE IMPLEMENTED TO PROTECT DISTURBED AREAS.
8. DURING THE RAINY SEASON, ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT LADEN RUNOFF TO ANY STORM DRAIN SYSTEM.
9. CONSTRUCTION ENTRANCES SHALL BE INSTALLED PER SANTA CLARA COUNTY BMP SHEET 1.
10. INLETS NOT USED IN CONJUNCTION WITH EROSION CONTROL MEASURES ARE TO BE BLOCKED UNLESS THE AREA DRAINED IS UNDISTURBED OR STABILIZED.
11. BORROW AREAS AND TEMPORARY STOCKPILES SHALL BE PROTECTED WITH APPROPRIATE EROSION CONTORL MEASURES TO THE SATISFACTION OF THE COUNTY ENGINEER.
12. NO STRAW BALES OR SILT FENCES SHALL BE USED AS EROSION CONTROL MEASURES. SILT FENCES MAY ONLY BE USED AS A PHYSICAL BARRIER TO PREVENT VEHICULAR AND PEDESTRIAN TRAFFIC FROM USING NON–APPROVED ACCESS POINTS (E.G. – ALONG RIGHT–OF–WAY).
13. ALL DISTURBED AREAS INCLUDING FLAT PADS ARE TO BE TREATED WITH STRAW AND TACKIFIER AT A RATE OF 2 TONS PER ACRE APPROXIMATELY 3 INCHES THICK.

SUPPLEMENTAL EROSION & SEDIMENT CONTROL NOTES

1. SEE STANDARD EROSION & SEDIMENT CONTROL NOTES ABOVE.
2. THE FACILITIES SHOWN ON THIS PLAN ARE DESIGNED TO CONTROL EROSION AND SEDIMENT DURING THE RAINY SEASON, OCTOBER 1 TO APRIL 15. FACILITIES ARE TO BE OPERABLE PRIOR TO OCTOBER 1 OF ANY YEAR. GRADING OPERATIONS DURING THE RAINY SEASON WHICH LEAVE DENUDED SLOPES SHALL BE PROTECTED WITH EROSION CONTROL MEASURES IMMEDIATELY FOLLOWING GRADING ON THE SLOPES.
3. CONSTRUCTION ENTRANCES SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF GRADING. ALL CONSTRUCTION TRAFFIC ENTERING ONTO THE PAVED ROADS MUST CROSS THE STABILIZED CONSTRUCTION ENTRANCE WAYS.
4. CONTRACTOR SHALL MAINTAIN STABILIZED ENTRANCE AT EACH VEHICLE ACCESS POINT TO EXISTING PAVED STREETS. ANY MUD OR DEBRIS TRACKED ONTO PUBLIC STREETS AND/OR PRIVATE ROADS SHALL BE REMOVED DAILY AND AS REQUIRED BY THE COUNTY. TRACKING TO PUBLIC STREETS AND/OR PRIVATE ROADS NOT ALLOWED.
5. INLET PROTECTION SHALL BE INSTALLED AT OPEN INLETS TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM. INLETS NOT USED IN CONJUNCTION WITH EROSION CONTROL ARE TO BE BLOCKED TO PREVENT ENTRY OF SEDIMENT.
6. THIS EROSION AND SEDIMENT CONTROL PLAN MAY NOT COVER ALL THE SITUATIONS THAT MAY ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. VARIATIONS AND ADDITIONS MAY BE MADE TO THIS PLAN IN THE FIELD. NOTIFY THE COUNTY REPRESENTATIVE OF ANY FIELD CHANGES.
7. TO PREVENT EROSION, BEFORE SEPTEMBER 20, ALL SLOPES 3:1 OR STEEPER & GREATER THAN 3 FEET HIGH SHALL BE HYDROSEEDED ACCORDING TO THE FOLLOWING OR OTHER MIXTURE APPROVED BY THE COUNTY:

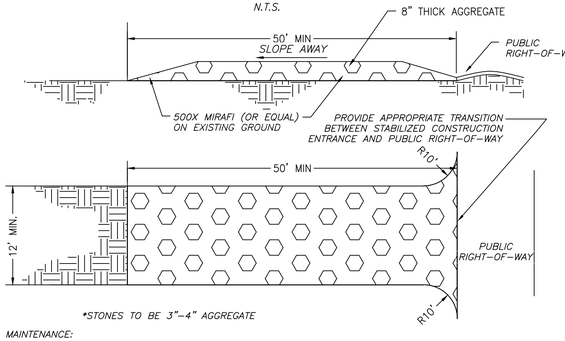
BLANDO BROME . . . . . 30 LB/ACRE
ANNUAL RYEGRASS . . . . . 20 LB/ACRE
16–20–0 FERTILIZER . . . 500 LB/ACRE
STRAW MULCH . . . . . 3000 LB/ACRE

NOTES:
1. PROTECT ALL INLETS IN THE PUBLIC STREETS SURROUNDING THE SITE.
2. ALL ON–SITE LANDSCAPE AREA DRAINS TO BE CAPPED OR PROTECTED UNTIL LANDSCAPING IS FINISHED.



CONCRETE TRUCK WASHOFF AREA

N.T.S.



MAINTENANCE:

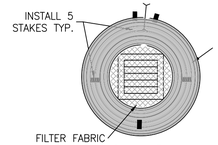
THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEAN OUT ANY MEASURES USED TO TRAP SEDIMENT.

ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS–OF–WAY SHALL BE REMOVED IMMEDIATELY.

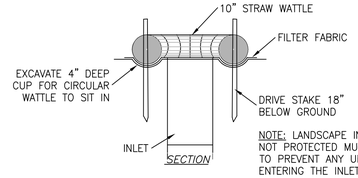
WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS–OF–WAY. THIS SHALL BE DONE AT AN AREA STABILIZED WITH CRUSHED STONE, WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

STABILIZED CONSTRUCTION ENTRANCE

N.T.S.



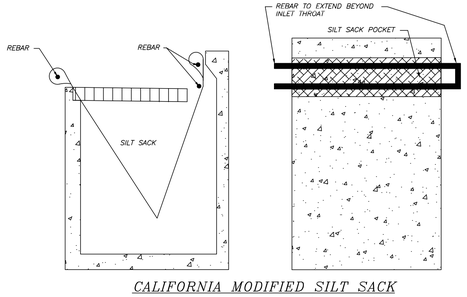
PLAN VIEW



NOTE: LANDSCAPE INLETS THAT ARE NOT PROTECTED MUST BE CAPPED TO PREVENT ANY UNTREATED FLOW ENTERING THE INLET

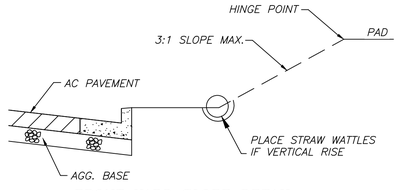
ALTERNATE FIBER ROLL INLET PROTECTION MAY BE USED IN LANDSCAPE AREA DRAINS

N.T.S.



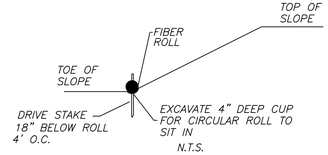
CALIFORNIA MODIFIED SILT SACK

REED & GRAHAM, INC. (OR EQUAL)
BEFORE & AFTER STREETS ARE PAVED



FRONT YARD SLOPE DETAIL AFTER STREET ARE PAVED

N.T.S.



N.T.S.

FIBER ROLL INSTALLATION DETAIL

APPROVED FOR ISSUANCE
REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERING

REVISIONS | BY | CITY | DATE

REGISTERED PROFESSIONAL ENGINEER
PORFIRIO OSCAR OSUNA
No. 70829
Exp. 6-30-23
CIVIL
STATE OF CALIFORNIA
07-13-2020
PORFIRIO OSCAR OSUNA
RCE 70829 EXP. 6-30-23

OSUNA ENGINEERING INC.
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117 BERNAL RD. STE. 70-336
SAN JOSE, CA 95119
TEL. (408) 772-4381
Info@osunaengineering.com

PRELIMINARY
GRADING & DRAINAGE PLAN
EROSION CONTROL
17025 MC GILL RD
SARATOGA, CALIFORNIA

Project No.: 2143 | Designed: T.N./O.O. | Checked: O.O. | Date: 11/18/21

SHEET
C3.3
OF 18 SHEETS

Notes for Figure 6H-6—Typical Application 6
Shoulder Work with Minor Encroachment

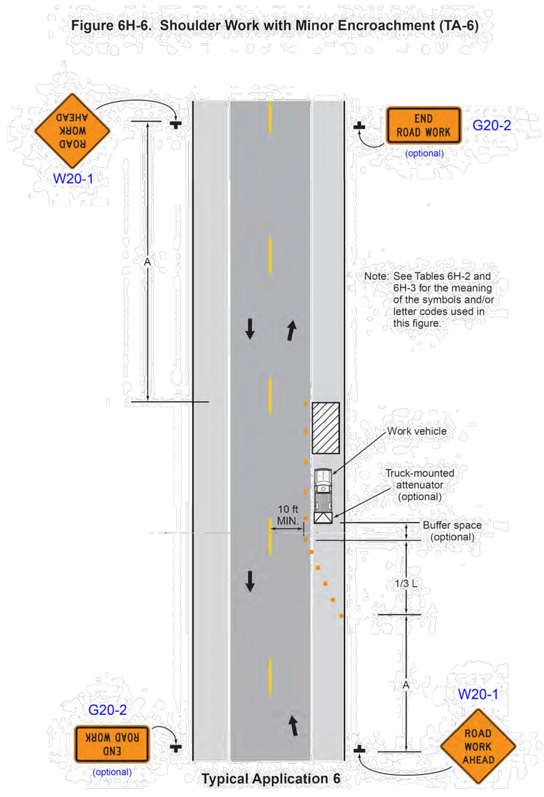
Guidance:
1. All lanes should be a minimum of 10 feet in width as measured to the near face of the channelizing devices.
2. The treatment shown should be used on a minor road having low speeds. For higher-speed traffic conditions, a lane closure should be used.

Option:
3. For short-term use on low-volume, low-speed roadways with vehicular traffic that does not include longer and wider heavy commercial vehicles, a minimum lane width of 9 feet may be used.
4. Where the opposite shoulder is suitable for carrying vehicular traffic and of adequate width, lanes may be shifted by use of closely-spaced channelizing devices, provided that the minimum lane width of 10 feet is maintained.
5. Additional advance warning may be appropriate, such as a ROAD NARROWS sign.
6. Temporary traffic barriers may be used along the work space.
7. The shadow vehicle may be omitted if a taper and channelizing devices are used.
8. A truck-mounted attenuator may be used on the shadow vehicle.
9. For short-duration work, the taper and channelizing devices may be omitted if a shadow vehicle with activated high-intensity rotating, flashing, oscillating, or strobe lights is used.
10. Vehicle hazard warning signals may be used to supplement high-intensity rotating, flashing, oscillating, or strobe lights.

Standard:
11. Vehicle-mounted signs shall be mounted in a manner such that they are not obscured by equipment or supplies. Sign legends on vehicle-mounted signs shall be covered or turned from view when work is not in progress.
12. Shadow and work vehicles shall display high-intensity rotating, flashing, oscillating, or strobe lights.
13. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.

Guidance:
14. All advance warning signs should be placed so that the path of travel for bicycles is not blocked, while maintaining visibility for road users.
15. When existing accommodations for bicycle travel are disrupted or closed in a long-term duration project (see Section 6G.02) and the roadway width is inadequate for allowing bicyclists and motor vehicles to travel side by side, the Bicycle Warning (W11-1) sign and the SHARE THE ROAD (W16-1P) plaque should be used to advise motorists of the presence of bicyclists in the travel way lanes.
16. Except for short durations and mobile operations, when a highway shoulder is occupied and bicyclists would be sharing a lane with vehicular traffic, as a result of the TTC zone, speed reduction countermeasures should be used to reduce traffic speeds in the TTC zone. Refer to Sections 6C.01 and 6D.03.
17. Except for short durations and mobile operations, when a highway shoulder is occupied and bicyclists would be sharing a lane with vehicular traffic, as a result of the TTC zone, before narrowing the outside lane other measures such as widening the outside shoulder to allow bicyclists and motor vehicles to travel side by side through the TTC zone should be considered.
18. If traffic volumes make it feasible, the two left lanes should be merged into one lane to avoid using the shoulder as a traveled way lane and allowing continued use for emergency purposes and bicycle travel.
19. When existing accommodations for bicycle travel are disrupted or closed in a long-term duration project (see Section 6G.02) and the roadway width is inadequate for allowing bicyclists and motor vehicles to travel side by side, a separate path should be considered for bicyclists.

Figure 6H-6. Shoulder Work with Minor Encroachment (TA-6)



Typical Application 6

NO.	REVISIONS	BY	DATE	APP'D

COUNTY OF SANTA CLARA ROADS AND AIRPORTS DEPARTMENT

DESIGNED 5-2015 DATE
DRAWN 5-2015 DATE
CHECKED 5-2015 DATE
SUBMITTED:
APPROVED:

STANDARD TRAFFIC CONTROL PLANS - LOCAL SHOULDER WORK

DRAWING No. TCP
SHT No. of
WORK ORDER No. xx | ADVERTISEMENT DATE: | CONTRACT No. | FILE No. | Scale

APPROVED FOR ISSUANCE
REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERING

REVISIONS	BY	CITY	DATE

REGISTERED PROFESSIONAL ENGINEER
PORFIRIO OSCAR OSUNA
No. 70829
Exp. 6-30-23
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07-13-2020
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SAN JOSE, CA 95119
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PRELIMINARY
GRADING & DRAINAGE PLAN
TRAFFIC CONTROL PLAN
17025 MC GILL RD
SAN JOSE CALIFORNIA

Project No.: 2143 | Designed: T.N./O.O. | Checked: O.O | Date: 11/18/21

SHEET
C4
OF 18 SHEETS

AREA DATA

a. Enter the Project Phase Number (1, 2, 3, etc. or N/A if Not Applicable):			N/A	
b. Total area of site:	9.6155	acres	418,850	sq. ft
c. Total area of site that will be disturbed:	0.2584	acres	11,255	sq. ft

COMPARISON OF IMPERVIOUS AND PERVIOUS AREAS AT PROJECT SITE:

d. IMPERVIOUS AREAS - IA	Pre-Project Existing IA sq. ft.	Existing IA Retained As-Is[1] sq. ft.	Existing IA Replaced with IA[2] sq. ft.	New IA Created[2] sq. ft.	Total Post Project IA sq. ft.
Site Totals					
Total IA	d.1 0	d.2 0	d.3 0	d.4 6,555	d.5 (d.2+d.3+d.4) 6,555
Total New and Replaced IA			d.6 (d.3+d.4) 6,555		
Public Street Totals					
Total Public Streets IA3	d.8 0	d.9 0	d.10 0	d.11 0	d.12 (d.9+d.10+d.11) 0
Total New and Replaced Public Streets IA			d.13 (d.10+d.11) 0		
Total Site and Public Streets IA	d.14 (d.1+d.8) 0				d.15 (d.5+d.12) 6,555
Percent Replacement of IA in Redevelopment Projects (d.3÷d.1) x 100:					d.16 #DIV/0!

e. PERVIOUS AREAS - PA	Pre-Project Existing PA sq. ft.		Total Post Project PA sq. ft.
Total PA4	e.1 11,255		e.2 4,700

f. Total Area (IA + PA)	f.1 (d.14+e.1) 11,255		f.2 (d.15+e.2) 11,255

I. PRE-DEVELOPMENT CONDITIONS

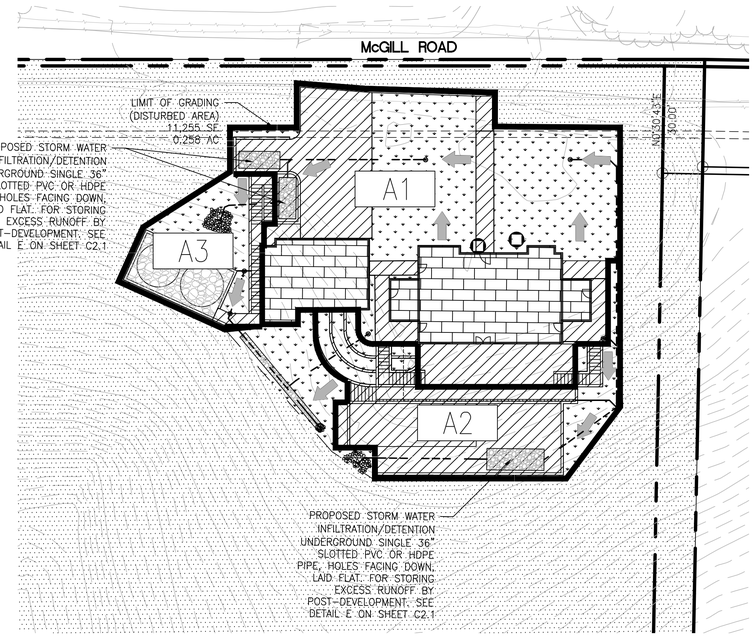
From Table B-1 County Drainage Manual						Pre-Development Peak Runoff Rate - 10 year			
Find rainfall depth $X_{T,D}$ (and intensity) for the 10-yr storm						$Q_{pre} = C * I * A$			Q_{pre}
Watershed	T (min)	$A_{T,D}$	$B_{T,D}$	Tc (min)	Depth XT,D AT,D + (BT,D MAP)	Intensity $I_{T,D}$ XT,D / D	C	I (in/hr)	A (acres)	(cfs)
PRE-A1	10	0.258682	0.003569	11.18	0.4131	2.22	0.30	2.22	0.147	**0.10**
	11.18	0.267210	0.003838							
	15	0.294808	0.004710							
PRE-A2	10	0.258682	0.003569	11.35	0.4157	2.20	0.30	2.20	0.068	**0.04**
	11.35	0.268429	0.003877							
	15	0.294808	0.004710							
PRE-A3	10	0.258682	0.003569	11.28	0.4146	2.21	0.30	2.21	0.029	**0.02**
	11.28	0.267898	0.003860							
	15	0.294808	0.004710							

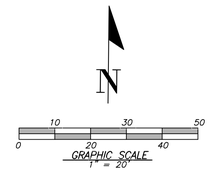
From Table B-1 County Drainage Manual						Pre-Development Peak Runoff Rate - 100 year			
Find rainfall depth $X_{T,D}$ (and intensity) for the 100-yr storm						$Q_{pre} = C * I * A$			Q_{pre}
Watershed	T (min)	$A_{T,D}$	$B_{T,D}$	Tc (min)	Depth XT,D AT,D + (BT,D MAP)	Intensity $I_{T,D}$ XT,D / D	C	I (in/hr)	A (acres)	(cfs)
PRE-A1	10	0.315263	0.007312	11.18	0.6150	3.30	0.30	3.30	0.147	**0.15**
	11.18	0.340308	0.007228							
	15	0.421360	0.006957							
PRE-A2	10	0.315263	0.007312	11.35	0.6181	3.27	0.30	3.27	0.068	**0.07**
	11.35	0.343888	0.007216							
	15	0.421360	0.006957							
PRE-A3	10	0.315263	0.007312	11.28	0.6167	3.28	0.30	3.28	0.029	**0.03**
	11.28	0.342329	0.007221							
	15	0.421360	0.006957							

II. POST-DEVELOPMENT CONDITIONS

From Table B-1 County Drainage Manual						Post-Development Peak Runoff Rate - 10 year			
Find rainfall depth $X_{T,D}$ (and intensity) for the 10-yr storm						$Q_{post} = C * I * A$			Q_{post}
Watershed	T (min)	$A_{T,D}$	$B_{T,D}$	Tc (min)	Depth XT,D AT,D + (BT,D MAP)	Intensity $I_{T,D}$ XT,D / D	C	I (in/hr)	A (acres)	(cfs)
POST-A1	10	0.258682	0.003569	11.80	0.4229	2.15	0.66	2.15	0.147	**0.21**
	11.80	0.271700	0.003980							
	15	0.294808	0.004710							
POST-A2	10	0.258682	0.003569	10.43	0.4011	2.31	0.81	2.31	0.068	**0.13**
	10.43	0.261758	0.003666							
	15	0.294808	0.004710							
POST-A3	10	0.258682	0.003569	10.40	0.4007	2.31	0.43	2.31	0.029	**0.03**
	10.40	0.261590	0.003661							
	15	0.294808	0.004710							

From Table B-1 County Drainage Manual						Post-Development Peak Runoff Rate - 100 year			
Find rainfall depth $X_{T,D}$ (and intensity) for the 100-yr storm						$Q_{post} = C * I * A$			Q_{post}
Watershed	T (min)	$A_{T,D}$	$B_{T,D}$	Tc (min)	Depth XT,D AT,D + (BT,D MAP)	Intensity $I_{T,D}$ XT,D / D	C	I (in/hr)	A (acres)	(cfs)
POST-A1	10	0.315263	0.007312	11.80	0.6265	3.19	0.66	3.19	0.147	**0.31**
	11.80	0.353494	0.007184							
	15	0.421360	0.006957							
POST-A2	10	0.315263	0.007312	10.43	0.6010	3.46	0.81	3.46	0.068	**0.19**
	10.43	0.324296	0.007282							
	15	0.421360	0.006957							
POST-A3	10	0.315263	0.007312	10.40	0.6006	3.46	0.43	3.46	0.029	**0.04**
	10.40	0.323804	0.007283							
	15	0.421360	0.006957							





STORMWATER LEGEND

- LANDSCAPE – SELF TREATING AREAS
- LANDSCAPE
- SIDEWALK
- ROOF TOP
- GRAVEL/INFILTRATION TRENCH

Storm Storage Calulations - ASCE Method

Watershed	T (Min)	100-yr Depth $A_{T,D}$	$B_{T,D}$	MAP	Depth (in)	Volume In (ft^3)	Volume Out Q_{pre} (cfs)	Volume Out (ft^3)	Storage (ft^3)	Volume Requiered	Notes
PRE-A1	5	0.269993	0.003580	38	0.406033	176	0.10	29	147		WILL PROVIDE UNDERGROUND STORM PIPE/INFILTATION TRENCH RETENTION THAT HAS A CAPICITY TO 500 CF. SEE SIZEING ON STEP 7 BELOW.
	10	0.315263	0.007312	38	0.593119	257	0.10	59	199		
	15	0.421360	0.006957	38	0.685726	298	0.10	88	**209**		
	30	0.553934	0.009857	38	0.9285	403	0.10	177	227		
Vs.	60	0.626608	0.019201	38	1.356246	589	0.10	353	236	<---- Volume Required	
	120	0.732944	0.036193	38	2.108278	915	0.10	706	209		
	180	0.816471	0.051981	38	2.791749	1212	0.10	1059	153		
POST-A1	360	0.776677	0.101053	38	4.616691	2004	0.10	2119	-115		
	720	0.821859	0.162184	38	6.984851	3032	0.10	4238	-1205		
	1440	0.814046	0.243391	38	10.062904	4369	0.10	8475	-4107		
PRE-A2	5	0.269993	0.003580	38	0.406033	96	0.04	13	82		
	10	0.315263	0.007312	38	0.593119	140	0.04	27	**113**		
	15	0.421360	0.006957	38	0.685726	161	0.04	40	121		
	30	0.553934	0.009857	38	0.9285	218	0.04	80	138		
Vs.	60	0.626608	0.019201	38	1.356246	319	0.04	161	158		
	120	0.732944	0.036193	38	2.108278	496	0.04	322	174	<---- Volume Required	
	180	0.816471	0.051981	38	2.791749	657	0.04	483	174		
POST-A2	360	0.776677	0.101053	38	4.616691	1086	0.04	966	120		
	720	0.821859	0.162184	38	6.984851	1643	0.04	1931	-288		
	1440	0.814046	0.243391	38	10.062904	2367	0.04	3862	-1495		
PRE-A3	5	0.269993	0.003580	38	0.406033	25	0.02	6	19		
	10	0.315263	0.007312	38	0.593119	36	0.02	11	**24**	<---- Volume Required	
	15	0.421360	0.006957	38	0.685726	41	0.02	17	24		
	30	0.553934	0.009857	38	0.9285	56	0.02	34	22		
Vs.	60	0.626608	0.019201	38	1.356246	82	0.02	69	13		
	120	0.732944	0.036193	38	2.108278	127	0.02	138	-11		
	180	0.816471	0.051981	38	2.791749	169	0.02	207	-38		
POST-A3	360	0.776677	0.101053	38	4.616691	279	0.02	414	-135		
	720	0.821859	0.162184	38	6.984851	422	0.02	827	-405		
	1440	0.814046	0.243391	38	10.062904	608	0.02	1654	-1047		

APPROVED FOR ISSUANCE
REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERING

REVISIONS | BY | CITY | DATE

REGISTERED PROFESSIONAL ENGINEER
PORFIRIO OSCAR OSUNA
No. 70829
Exp. 6-30-23
CIVIL
STATE OF CALIFORNIA
07-13-2020
PORFIRIO OSCAR OSUNA
RCE 70829 EXP. 6-30-23

OSUNA ENGINEERING INC.
Planning | Surveying | Civil Engineering
CONSULTING CIVIL ENGINEERS & LAND SURVEYORS
117 BERNAL RD. STE. 70-336
SAN JOSE, CA 95119
TEL. (408) 772-4381
Info@osunaengineering.com

PRELIMINARY
GRADING & DRAINAGE PLAN
CONCEPTUAL STORM PLAN
17025 MC GILL RD
CALIFORNIA

Project No.: 2143 | Designed: T.N./O.O. | Checked: O.O | Date: 11/18/21

SHEET
C5
OF 18 SHEETS

OSUNA ENGINEERING INC.
Planning | Surveying | Civil Engineering

HYDROLOGY REPORT

SINGLE FAMILY HOME

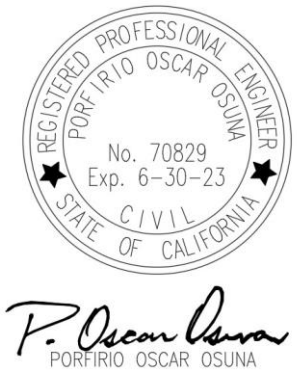
17025 MCGILL ROAD

SARATOGA, CALIFORNIA

APN: 517-24-024

October 6, 2021

OWNER/DEVELOPER:
Milind Khandare
nk.milind@gmail.com



Compiled by: P. Oscar Osuna, PE, PLS, M.S.

OSUNA ENGINEERING INC.
A California Corporation
Consulting Civil Engineers

117 Bernal Rd, #70-336
San Jose, California 95119
Telephone: (408) 721-2100

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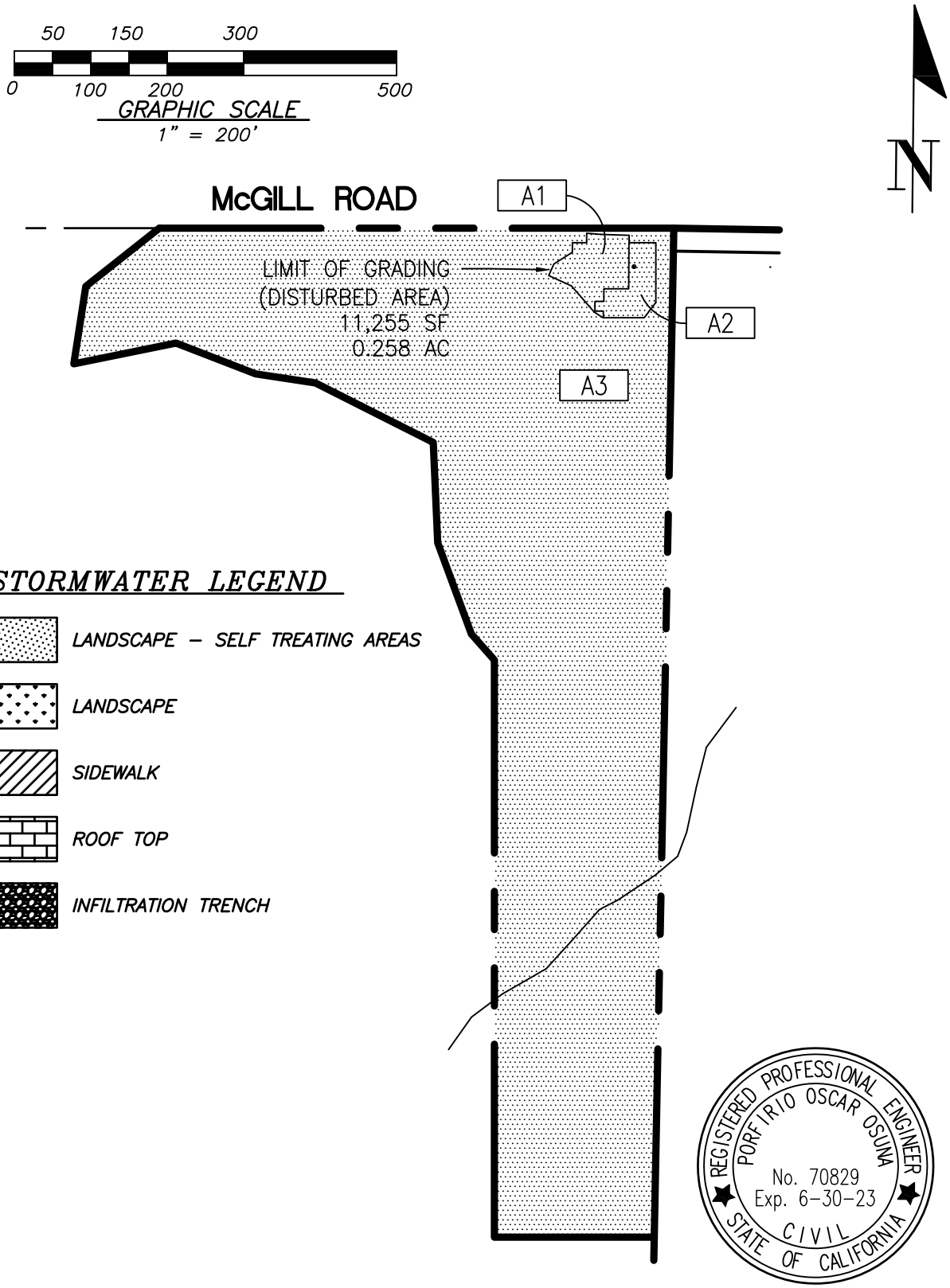
I. Watershed Map – Existing Conditions



REGISTERED PROFESSIONAL ENGINEER
PORFIRIO OSCAR OSUNA
No. 70829
Exp. 6-30-23
CIVIL
STATE OF CALIFORNIA

P. Oscar Osuna

PORFIRIO OSCAR OSUNA

70829

PRE-DEVELOPMENT AREA MAP TO ACCOMPANY STORM CALCS.
17025 MCGILL ROAD
SARATOGA, CALIFORNIA

DATE:	10/06/21
SCALE:	1"=200'
DRAWN BY:	O.O.
CHECKED BY:	O.O.
JOB NO.:	2143

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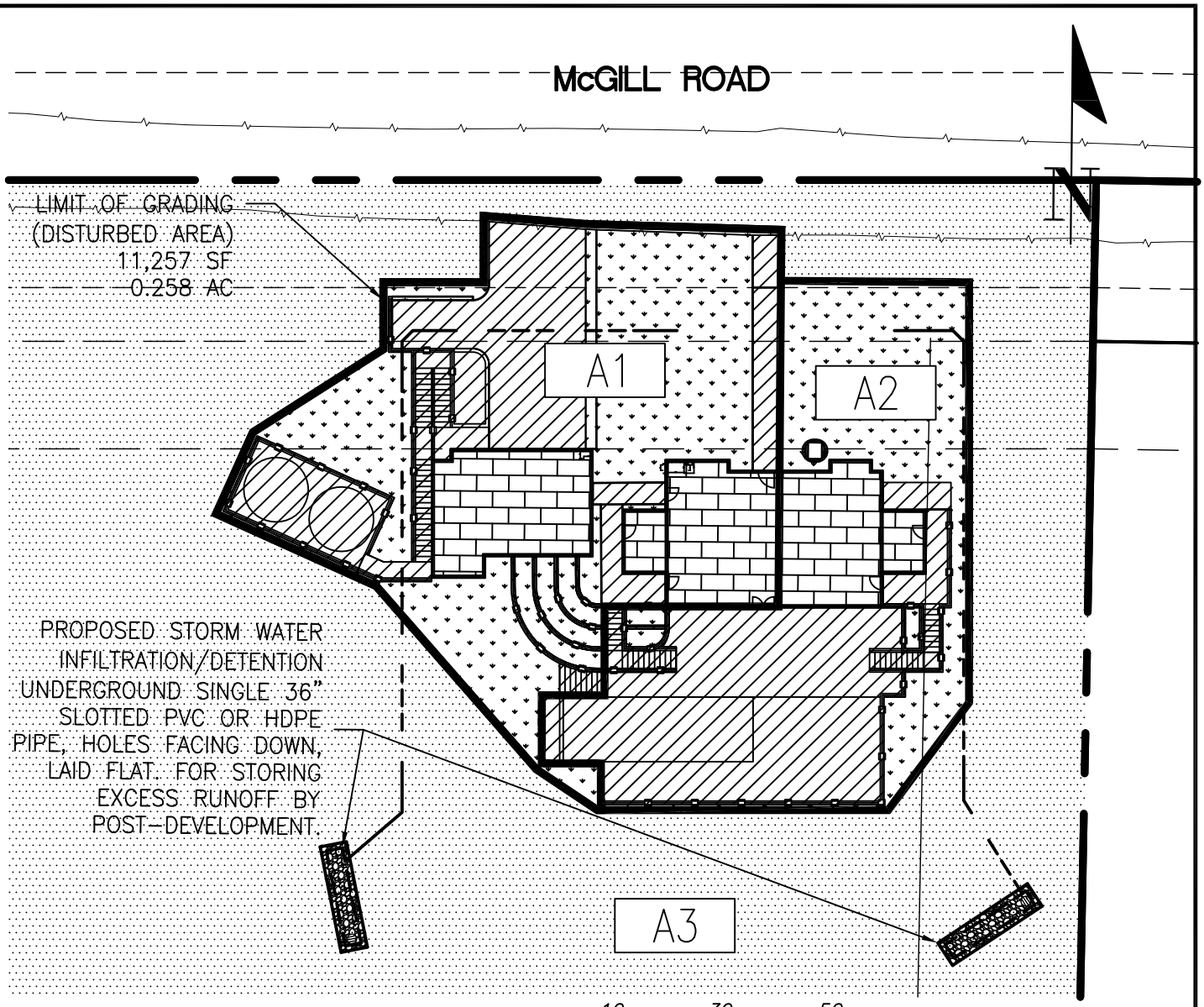
SAN JOSE, CA 95119 Info@osunaengineering.com

II. Watershed Map – Proposed Conditions



STORMWATER LEGEND

- LANDSCAPE – SELF TREATING AREAS
- LANDSCAPE
- SIDEWALK
- ROOF TOP
- INFILTRATION TRENCH

10 30 50

0 20 40 100

GRAPHIC SCALE

1" = 30'

REGISTERED PROFESSIONAL ENGINEER
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No. 70829
Exp. 6-30-23
CIVIL
STATE OF CALIFORNIA

P. Oscar Osuna

PORFIRIO OSCAR OSUNA

70829

POST-DEVELOPMENT AREA MAP TO ACCOMPANY STORM CALCS.

17025 MCGILL ROAD

SARATOGA, CALIFORNIA

DATE:	10/06/21
SCALE:	1"=20'
DRAWN BY:	J.C.
CHECKED BY:	O.O.
JOB NO.:	2143

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SAN JOSE, CA 95119 Info@osunaengineering.com

III. Narrative & Pre-Development Versus Post-Development Storm Water Calculations Tables

Storm Storage Calculations - County of Santa Clara Drainage Manual Method
Rational Method

Project Name:	Lands of Khandare	Prepared by:	J.C.
Site Location:	17025 Mcgill Road	Checked by:	O.O.
	Saratoga, CA	Job No:	2143
		Date:	10/6/2021

Drainage Narrative

We have been tasked to provide hydrology/hydraulics calculations for both the pre-developed and post-developed conditions, and to size a storm storage device that can hold the excess runoff created by the post-development condition. A new house is being proposed to be built on the 9.616 acre lot, the new development will disturb about 0.258 acre of the Lot. The new development Improvements will include new impervious areas, such as, House, Driveway, and Hardscape (walks, patios, etc) areas. Our storm design proposes to direct the storm runoff to a storm pipe/trench detention system to mitigate the excess runoff created by the proposed development. The current Land is vacant.

STEP 1:

PRE-DEVELOPMENT WATERSHEDS

			IMPERVIOUS AREAS							PERVIOS AREAS		
WATERSHED ID	TOTAL AREA (SF)	TOTAL AREA (ACRES)	ROOFS	DRIVEWAYS & PARKING AREAS	SIDEWALK, PATIO, & POOL AREAS	GROSS DRIVEWAYS & SIDEWALKS SEMI-PERVIOUS SURFACES	% OF PERVIOUSNESS	NET IMPERVIOUS OF SEMI-IMPERVIOS AREAS	TOTAL IMPERVIOUS AREAS	LANDSCAPE AREAS	NET PERVIOUS OF SEMI-IMPERVIOS AREAS	TOTAL PERVIOUS AREAS
PRE-A1	6552	0.150	0	0	0	0	50%	0	0	6552	0	6552
PRE-A2	4703	0.108	0	0	0	0	50%	0	0	4703	0	4703
PRE-A3		0.000	0	0	0	0	50%	0	0	0	0	0
TOTALS:	**11,255**	**0.258**							**0**			**11,255**

POST-DEVELOPMENT WATERSHEDS

			IMPERVIOUS AREAS							PERVIOS AREAS		
WATERSHED ID	TOTAL AREA (SF)	TOTAL AREA (ACRES)	ROOFS	DRIVEWAYS & PARKING AREAS	SIDEWALK & PATIO AREAS	GROSS DRIVEWAYS & SIDEWALKS SEMI-PERVIOUS SURFACES	% OF PERVIOUSNESS	NET IMPERVIOUS OF SEMI-IMPERVIOS AREAS	TOTAL IMPERVIOUS AREAS	LANDSCAPE AREAS	NET PERVIOUS OF SEMI-IMPERVIOS AREAS	TOTAL PERVIOUS AREAS
POST-A1	6552	0.150	1288	996	1302	0	50%	0	3586	2966	0	2966
POST-A2	4703	0.108	606	0	2363	0	50%	0	2969	1734	0	1734
POST-A3		0.000	0	0	0	0	50%	0	0	0	0	0
POST-A4		0.000	0	0	0	0	50%	0	0	0	0	0
POST-A5		0.000	0	0	0	0	50%	0	0	0	0	0
TOTALS:	**11,255**	**0.258**							**6,555**			**4,700**

PORFIRIO OSCAR OSUNA 70829

STEP 2:

Weighted Coefficient Calculations (C)							
Watershed ID	Description	Total Area (sf)	Total Pervious (sf)	Total Impervious (sf)	Cp Pervious (Coeff.)	Ci Impervious (Coeff.)	Cw weighted (Coeff)
PRE-A1	Pre-Development	6,552	6,552	0	0.30	0.95	**0.30**
POST-A1	Post-Development	6,552	2,966	3,586	0.30	0.95	**0.66**
PRE-A2	Pre-Development	4,703	4,703	0	0.30	0.95	**0.30**
POST-A2	Post-Development	4,703	1,734	2,969	0.30	0.95	**0.71**
PRE-A3	Pre-Development	0	0	0	0.30	0.95	
POST-A3	Post-Development	0	0	0	0.30	0.95	

STEP 3:

Time of Concentration Calculations			
Time of Concentration using Kirpich Formula Tc=0.0078*((L^2/S))^0.385 + 10			
Watershed	L Max. Length of Travel (ft/ft)	S Effective Slope Along L (ft/ft)	Tc Time of Concentration (min)
PRE-A1	140.000	0.100	10.85
POST-A1	140.000	0.100	10.85
PRE-A2	115.000	0.100	10.73
POST-A2	115.000	0.100	10.73
PRE-A3	100.000	0.005	12.08
POST-A3	100.000	0.100	10.66

Rainfall Information			
Per SCVURPP Handbook Fig. B-1 and Per the County Drainage Manual		Mean Annual Precipitation (Inches)	Soil Texture (NRCS)
		38	B
		MAP	Loam

STEP 4:

I. PRE-DEVELOPMENT CONDITIONS

From Table B-1 County Drainage Manual							Pre-Development Peak Runoff Rate - 10 year			
Find rainfall depth $X_{T,D}$ (and intensity) for the 10-yr storm							Q_{pre} = C * I * A			Q_{pre}
Watershed	T (min)	$A_{T,D}$	$B_{T,D}$	Tc (min)	Depth XT,D AT,D + (BT,D MAP)	Intensity $i_{T,D}$ XT,D / D	C	I (in/hr)	A (acres)	(cfs)
PRE-A1	10	0.258682	0.003569	10.85	0.4078	2.26	0.30	2.26	0.150	**0.10**
	10.85	0.264826	0.003763							
	15	0.294808	0.004710							
PRE-A2	10	0.258682	0.003569	10.73	0.4059	2.27	0.30	2.27	0.108	**0.07**
	10.73	0.263963	0.003736							
	15	0.294808	0.004710							
PRE-A3	10	0.258682	0.003569	12.08	0.4274	2.12	0.00	2.12	0.000	**0.00**
	12.08	0.273708	0.004044							
	15	0.294808	0.004710							

From Table B-1 County Drainage Manual							Pre-Development Peak Runoff Rate - 100 year			
Find rainfall depth $X_{T,D}$ (and intensity) for the 100-yr storm							Q_{pre} = C * I * A			Q_{pre}
Watershed	T (min)	$A_{T,D}$	$B_{T,D}$	Tc (min)	Depth XT,D AT,D + (BT,D MAP)	Intensity $i_{T,D}$ XT,D / D	C	I (in/hr)	A (acres)	(cfs)
PRE-A1	10	0.315263	0.007312	10.85	0.6089	3.37	0.30	3.37	0.150	**0.15**
	10.85	0.333308	0.007252							
	15	0.421360	0.006957							
PRE-A2	10	0.315263	0.007312	10.73	0.6067	3.39	0.30	3.39	0.108	**0.11**
	10.73	0.330771	0.007260							
	15	0.421360	0.006957							
PRE-A3	10	0.315263	0.007312	12.08	0.6316	3.14	0.00	3.14	0.000	**0.00**
	12.08	0.359392	0.007164							
	15	0.421360	0.006957							

STEP 5:

II. POST-DEVELOPMENT CONDITIONS

From Table B-1 County Drainage Manual							Post-Development Peak Runoff Rate - 10 year			
Find rainfall depth $X_{T,D}$ (and intensity) for the 10-yr storm							Q_{post} = C * I * A			Q_{post}
Watershed	T (min)	$A_{T,D}$	$B_{T,D}$	Tc (min)	Depth XT,D AT,D + (BT,D MAP)	Intensity $i_{T,D}$ XT,D / D	C	I (in/hr)	A (acres)	(cfs)
POST-A1	10	0.258682	0.003569	10.85	0.4078	2.26	0.66	2.26	0.150	**0.22**
	10.85	0.264826	0.003763							
	15	0.294808	0.004710							
POST-A2	10	0.258682	0.003569	10.73	0.4059	2.27	0.71	2.27	0.108	**0.17**
	10.73	0.263963	0.003736							
	15	0.294808	0.004710							
POST-A3	10	0.258682	0.003569	10.66	0.4047	2.28	0.00	2.28	0.000	**0.00**
	10.66	0.263424	0.003719							
	15	0.294808	0.004710							

From Table B-1 County Drainage Manual							Post-Development Peak Runoff Rate - 100 year			
Find rainfall depth $X_{T,D}$ (and intensity) for the 100-yr storm							Q_{post} = C * I * A			Q_{post}
Watershed	T (min)	$A_{T,D}$	$B_{T,D}$	Tc (min)	Depth XT,D AT,D + (BT,D MAP)	Intensity $i_{T,D}$ XT,D / D	C	I (in/hr)	A (acres)	(cfs)
POST-A1	10	0.315263	0.007312	10.85	0.6089	3.37	0.66	3.37	0.150	**0.33**
	10.85	0.333308	0.007252							
	15	0.421360	0.006957							
POST-A2	10	0.315263	0.007312	10.73	0.6067	3.39	0.71	3.39	0.108	**0.26**
	10.73	0.330771	0.007260							
	15	0.421360	0.006957							
POST-A3	10	0.315263	0.007312	10.66	0.6053	3.41	0.00	3.41	0.000	**0.00**
	10.66	0.329189	0.007265							
	15	0.421360	0.006957							

STEP 6:

Storm Storage Calulations - ASCE Method											
Watershed	T (Min)	100-yr Depth $A_{T,D}$	$B_{T,D}$	MAP	Depth (in)	Volume In (ft^3)	Volume Out Q_{pre} (cfs)	(ft^3)	Storage (ft^3)	Volume Requiered	Notes
PRE-A1	5	0.269993	0.003580	38	0.406033	179	0.10	31	148		
	10	0.315263	0.007312	38	0.593119	261	0.10	61	200		
	15	0.421360	0.006957	38	0.685726	302	0.10	92	**210**		
	30	0.553934	0.009857	38	0.9285	408	0.10	183	225		
Vs.	60	0.626608	0.019201	38	1.356246	597	0.10	366	230	**<---- Volume Required**	WILL PROVIDE UNDERGROUND STORM PIPE/INFILTATION TRENCH RETENTION THAT HAS A CAPICITY TO 235 CF. SEE SIZEING ON STEP 7 BELOW.
	120	0.732944	0.036193	38	2.108278	928	0.10	733	195		
	180	0.816471	0.051981	38	2.791749	1228	0.10	1099	129		
POST-A1	360	0.776677	0.101053	38	4.616691	2031	0.10	2198	-167		
	720	0.821859	0.162184	38	6.984851	3073	0.10	4396	-1323		
	1440	0.814046	0.243391	38	10.062904	4427	0.10	8792	-4365		
PRE-A2	5	0.269993	0.003580	38	0.406033	137	0.07	22	115		
	10	0.315263	0.007312	38	0.593119	200	0.07	44	**156**		
	15	0.421360	0.006957	38	0.685726	231	0.07	66	165		
	30	0.553934	0.009857	38	0.9285	313	0.07	132	181		
Vs.	60	0.626608	0.019201	38	1.356246	457	0.07	265	193	**<---- Volume Required**	WILL PROVIDE UNDERGROUND STORM PIPE/INFILTATION TRENCH RETENTION THAT HAS A CAPICITY TO 235 CF. SEE SIZEING ON STEP 7 BELOW.
	120	0.732944	0.036193	38	2.108278	711	0.07	529	182		
	180	0.816471	0.051981	38	2.791749	941	0.07	794	147		
POST-A2	360	0.776677	0.101053	38	4.616691	1557	0.07	1588	-31		
	720	0.821859	0.162184	38	6.984851	2355	0.07	3176	-821		
	1440	0.814046	0.243391	38	10.062904	3393	0.07	6352	-2959		

STEP 7:

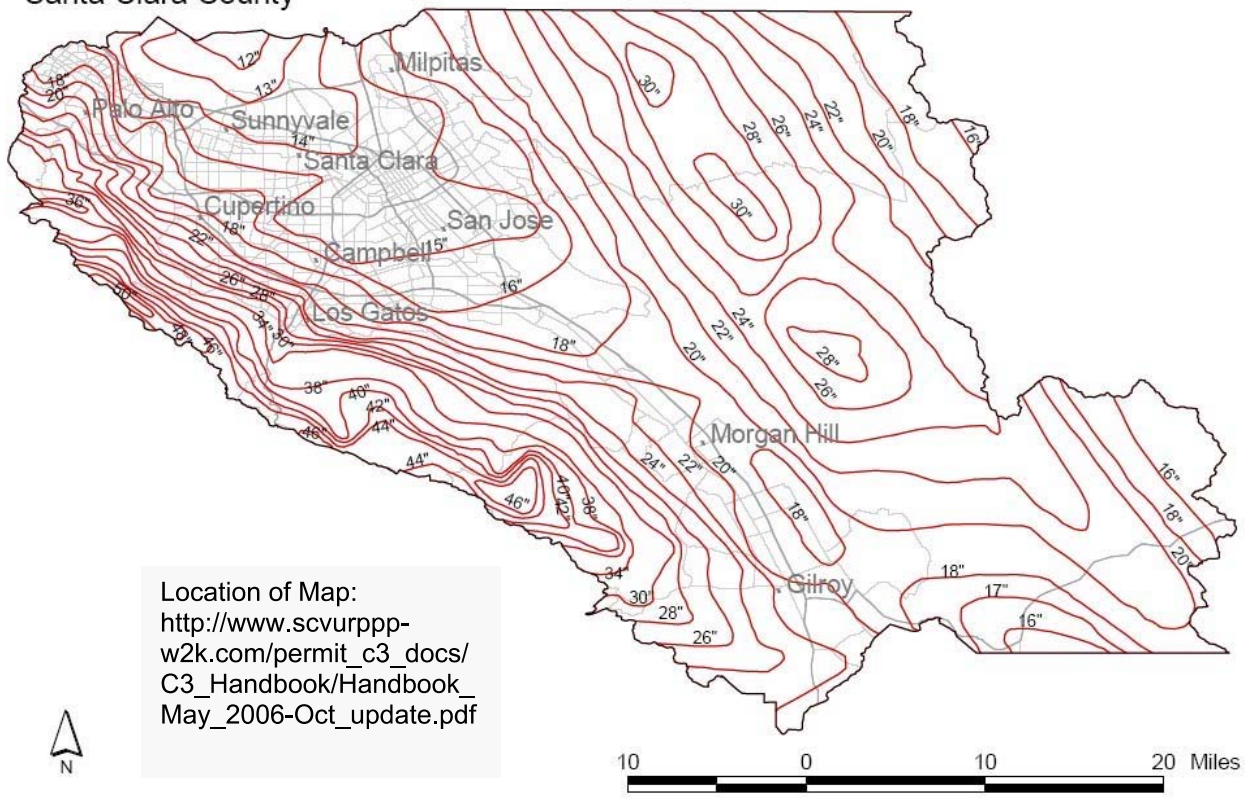
Retention Device Sizeing															
Watershed	Description	Pipe Storage No. of Barrels	Dia (ft)	Length (ft)	Area (sf)	Pipe Volume (cf)	Trench Storage Width (ft)	Depth (ft)	Length (ft)	Area Gross (sf)	Area Net (-pipe sf) (sf)	Trench Volume Gross (cf)	Void Ratio (Coeff.)	Trench Volume Net (cf)	Total Combined Volume (cf)
PRE-A1 Vs. POST-A1	Gravel Trench/Pipe Retention System	1	3.00	18.00	7.07	127.23	5.00	5.00	20.00	25.00	17.93	358.63	0.30	107.59	**235**
PRE-A2 Vs. POST-A2	Gravel Trench/Pipe Retention System	1	3.00	18.00	7.07	127.23	5.00	5.00	20.00	25.00	17.93	358.63	0.30	107.59	**235**
#REF! Vs. #REF!	Gravel Trench/Pipe Retention System	0	0.00	0.00	0.00	0.00	0.00	5.00	17.00	0.00	0.00	0.00	0.30	0.00	**0**

STEP 8:

Storm Storage Infitration Calculations (72-hour drawdown)			
Description	Ponding Depth (in)	Time required to drawdown (hrs)	Minimum Infiltration Rate required (in/hr)
	60	72	**0.833**

IV. Support Documents

Figure A-2
Mean Annual Precipitation Map
Santa Clara County



SOURCE: Santa Clara Valley Water District, Mean Annual Precipitation Map, San Francisco & Monterey Bay Region, 1998

Figure A-2: Mean Annual Precipitation, Santa Clara County

SAN FRANCSICO
SOUTH BAY

PALO ALTO

MOUNTAIN VIEW

LOS ALTOS

LOS ALTOS HILLS

PALO ALTO

SUNNYVALE

SANTA CLARA

SAN JOSE

MILPITAS

CUPERTINO

CAMPBELL

SARATOGA

MONTE SERENO

LOS GATOS

MORGAN HILL

12

13

14

15

16

18

20

22

24

26

28

30

34

38

Figure B-1
Soil Texture and Mean Annual Precipitation Depths for the Santa Clara Basin

Legend

Soil Texture
(NRCS Hydrologic Soil Group)

- Clay (D)
- Sandy Clay (D)
- Clay Loam (D)
- Silt Loam (B)
- Loam (B)

- Street or Highway
- Stream
- Jurisdictional Boundary
- Rain Gage
- Mean Annual Precipitation Depths (Inches)

Data Source: Santa Clara Valley Water District
Revised March 2004

N

0 1 2 3 4 5 Miles

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

B. APPENDIX B

IDF Curves

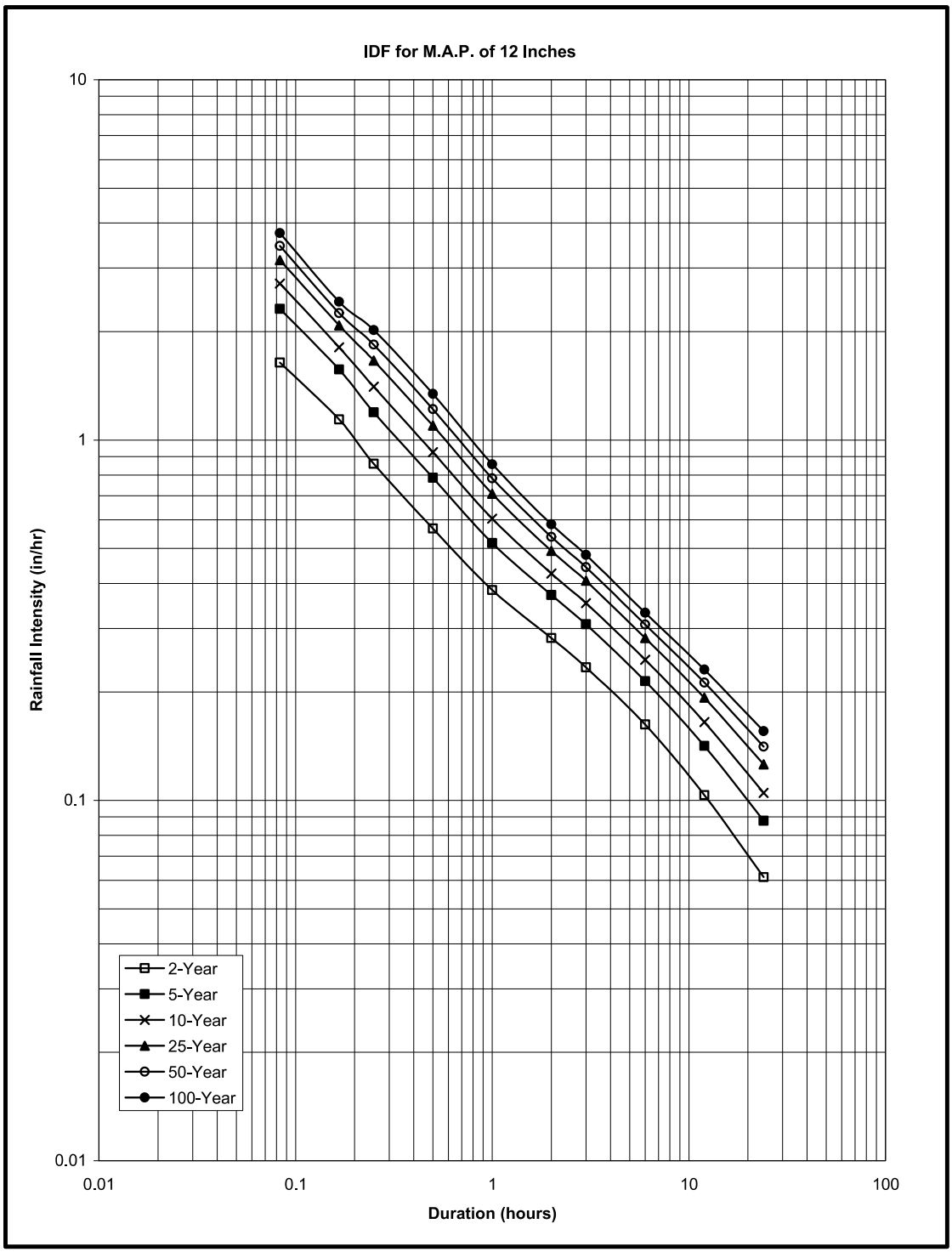


Figure B-1: IDF for M.A.P. of 12 Inches

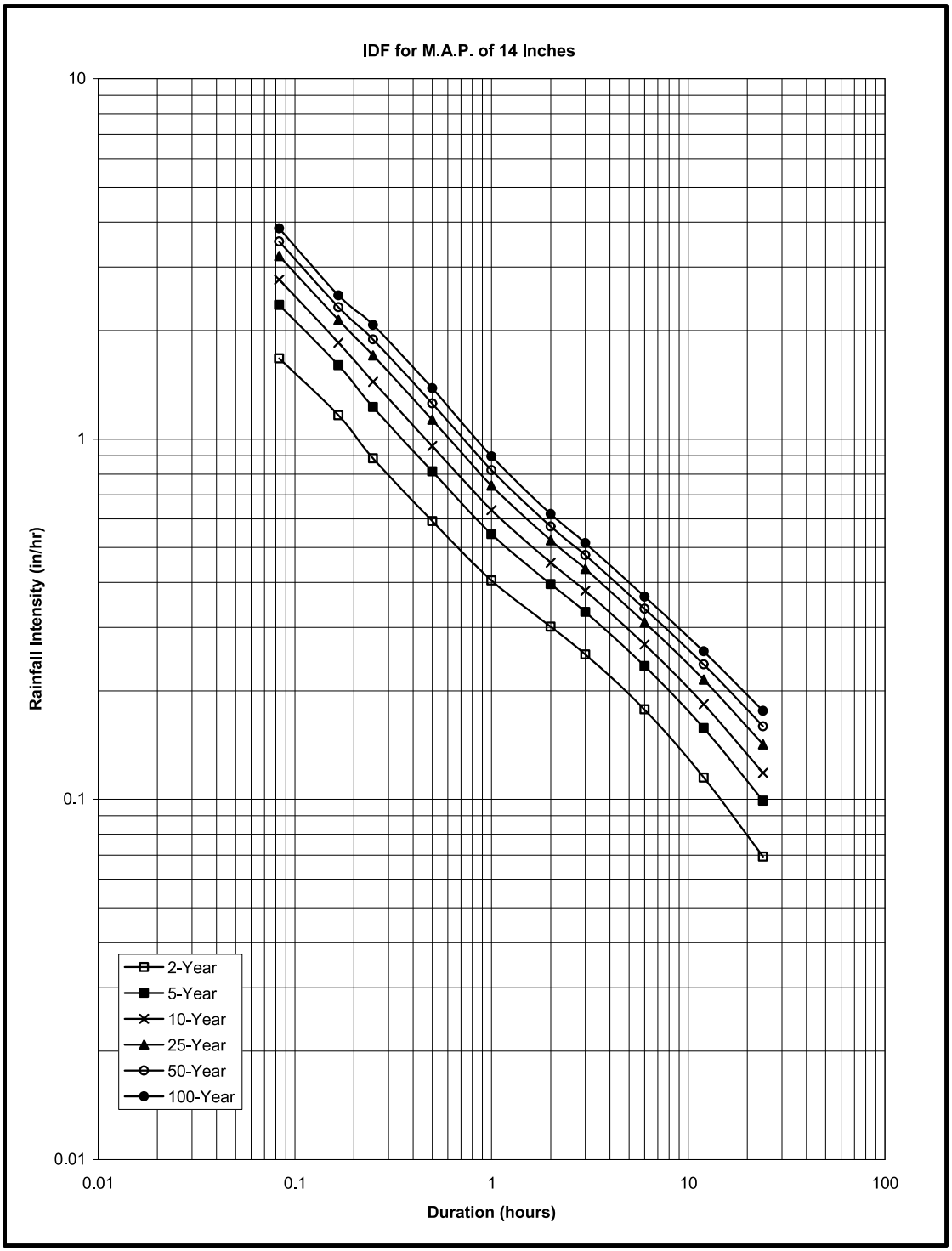


Figure B-2: IDF for M.A. P. of 14 Inches

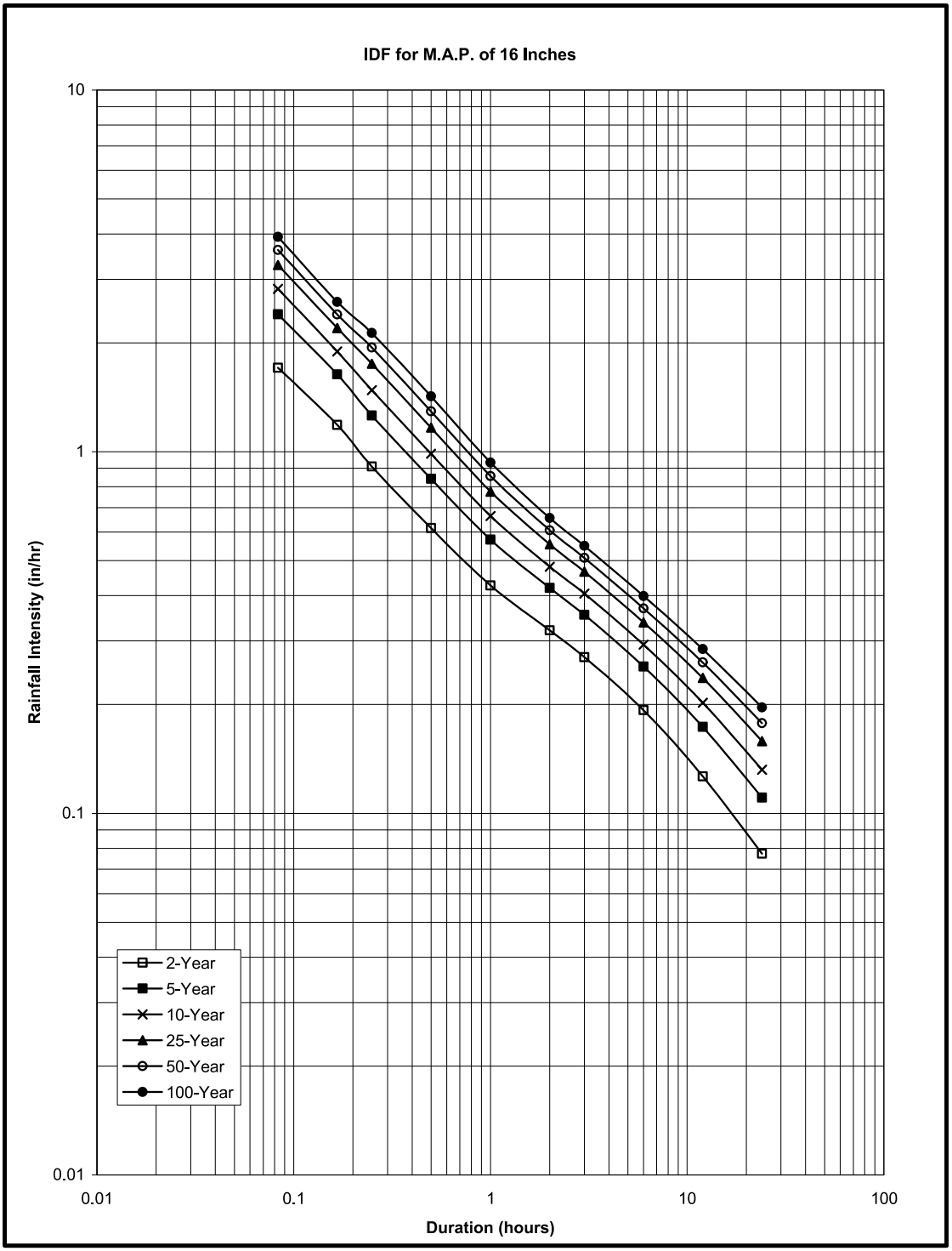


Figure B-3: IDF for M.A.P. of 16 Inches

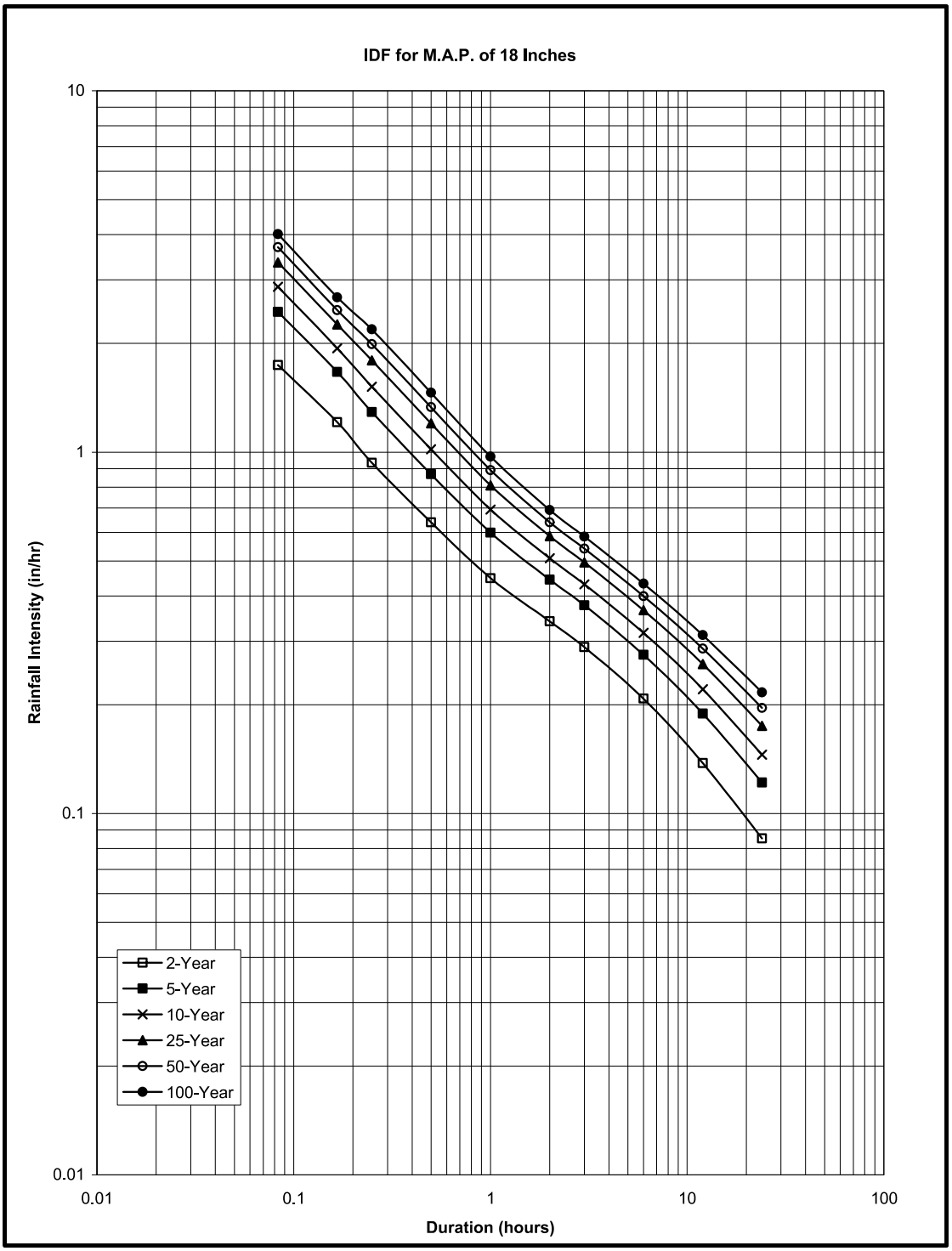


Figure B-4: IDF for M.A. P. of 18 Inches

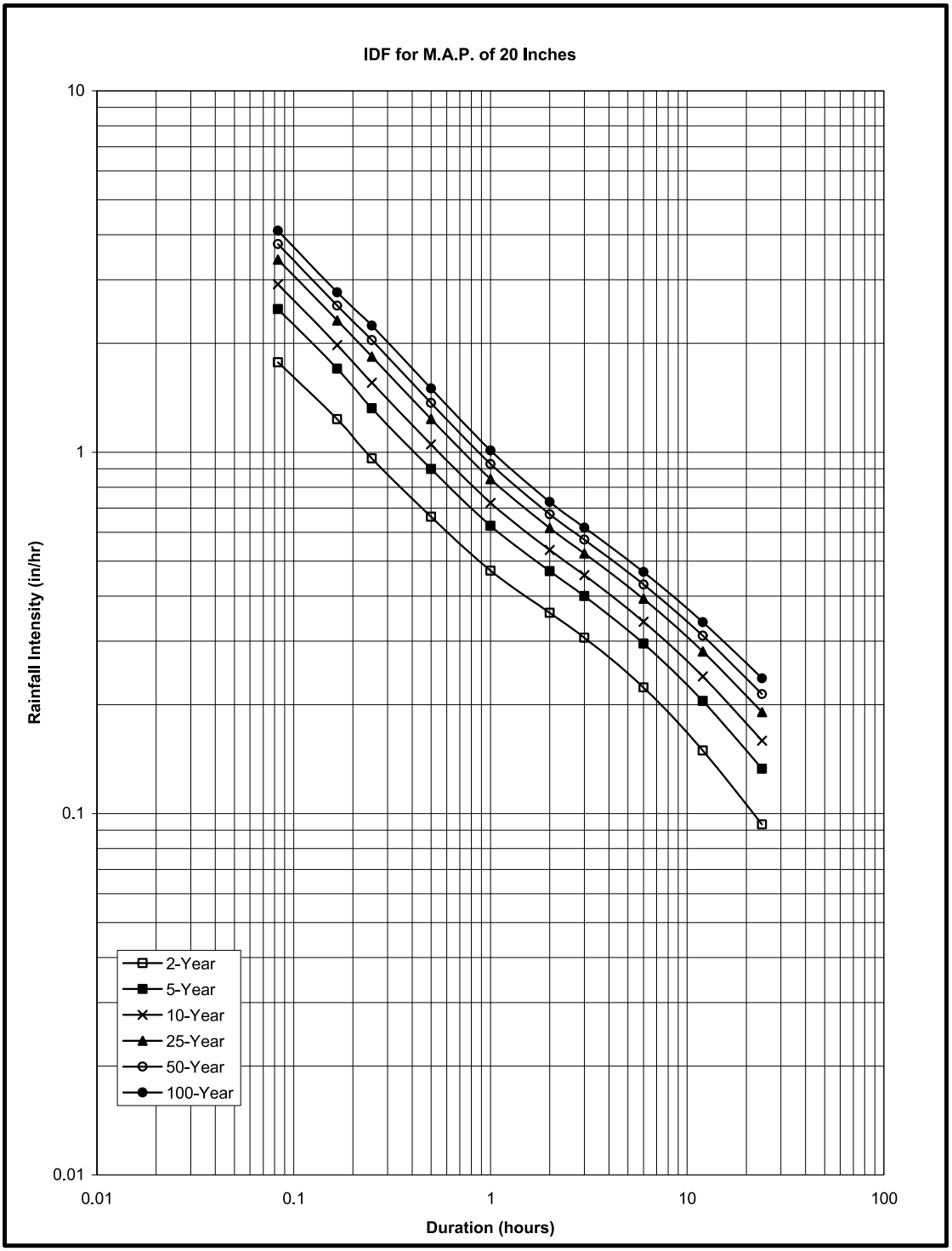


Figure B-5: IDF for M.A.P. of 20 Inches

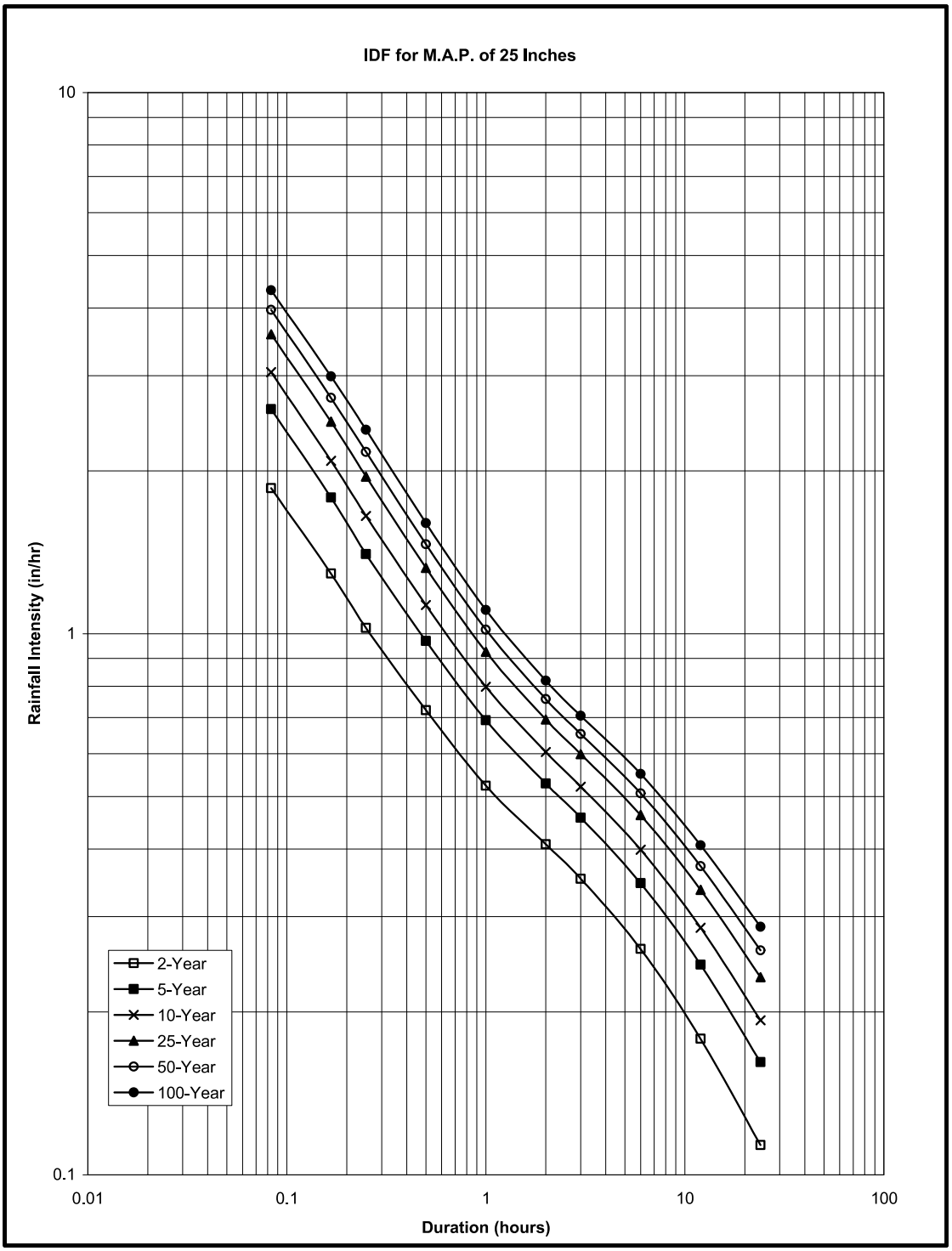


Figure B-6: IDF for M.A.P. of 25 Inches

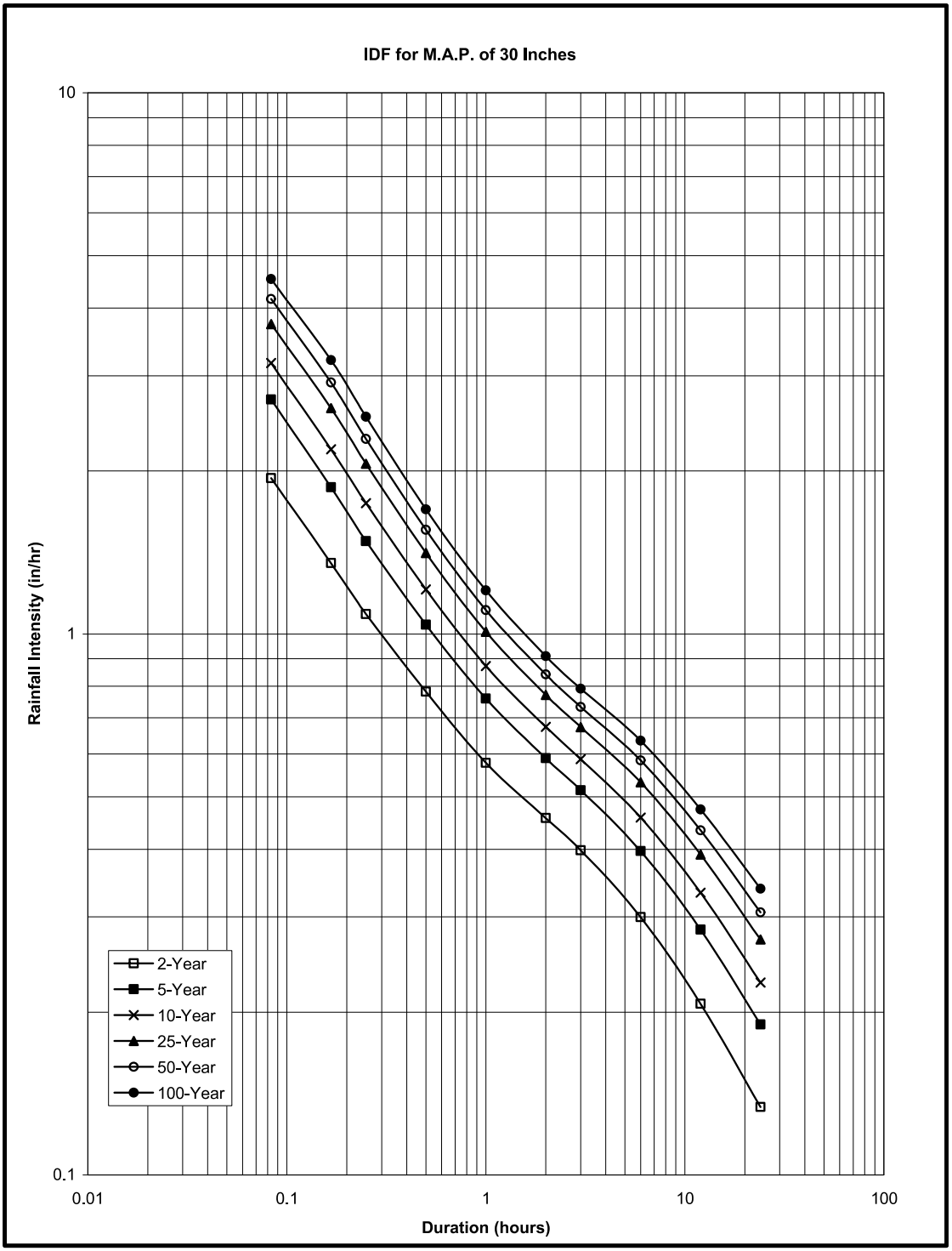


Figure B-7: IDF for M.A. P. of 30 Inches

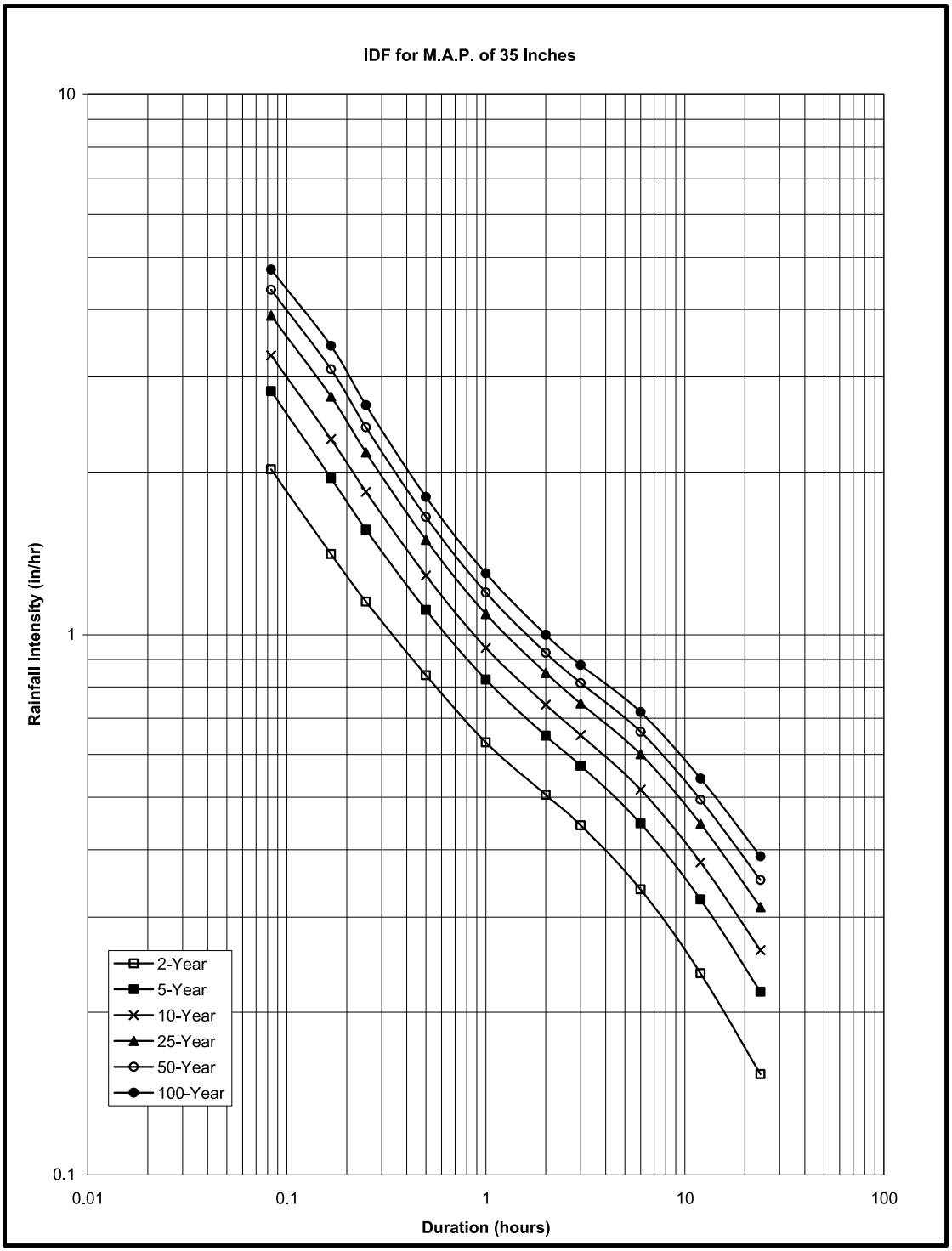


Figure B-8: IDF for M.A.P. of 35 Inches

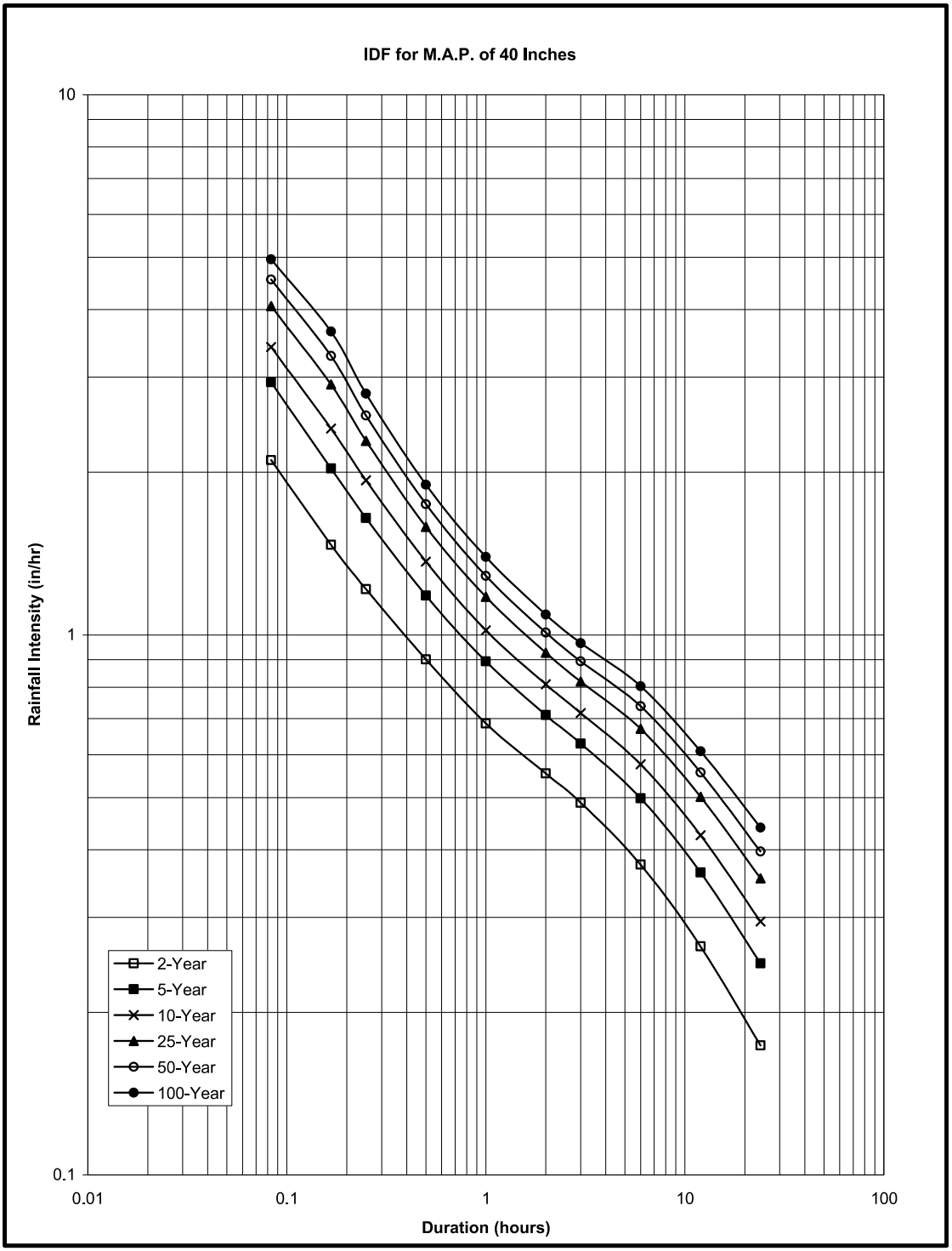


Figure B-9: IDF for M.A.P. of 40 Inches

Table B-1: Parameters $A_{T,D}$ and $B_{T,D}$ for TDS Equation

2-YR RETURN PERIOD		
5-min	0.120194	0.001385
10-min	0.166507	0.001956
15-min	0.176618	0.003181
30-min	0.212497	0.005950
1-hr	0.253885	0.010792
2-hr	0.330848	0.019418
3-hr	0.374053	0.027327
6-hr	0.425178	0.045735
12-hr	0.409397	0.069267
24-hr	0.314185	0.096343
48-hr	0.444080	0.134537
72-hr	0.447104	0.159461
5-YR RETURN PERIOD		
5-min	0.170347	0.001857
10-min	0.228482	0.002758
15-min	0.250029	0.004036
30-min	0.307588	0.007082
1-hr	0.357109	0.013400
2-hr	0.451840	0.024242
3-hr	0.512583	0.034359
6-hr	0.554937	0.060859
12-hr	0.562227	0.094871
24-hr	0.474528	0.136056
48-hr	0.692427	0.187173
72-hr	0.673277	0.224003
10-YR RETURN PERIOD		
5-min	0.201876	0.002063
10-min	0.258682	0.003569
15-min	0.294808	0.004710
30-min	0.367861	0.007879
1-hr	0.427723	0.014802
2-hr	0.522608	0.027457
3-hr	0.591660	0.038944
6-hr	0.625054	0.070715
12-hr	0.641638	0.111660
24-hr	0.567017	0.162550
48-hr	0.832445	0.221820
72-hr	0.810509	0.265469

Table B-2: Parameters $A_{T,D}$ and $B_{T,D}$ for TDS Equation

Return Period/Duration	$A_{T,D}$	$B_{T,D}$
25-YR RETURN PERIOD		
5-min	0.230641	0.002691
10-min	0.287566	0.004930
15-min	0.348021	0.005594
30-min	0.443761	0.008719
1-hr	0.508791	0.016680
2-hr	0.612629	0.031025
3-hr	0.689252	0.044264
6-hr	0.693566	0.083195
12-hr	0.725892	0.132326
24-hr	0.675008	0.195496
48-hr	0.989588	0.264703
72-hr	0.967854	0.316424
50-YR RETURN PERIOD		
5-min	0.249324	0.003241
10-min	0.300971	0.006161
15-min	0.384016	0.006315
30-min	0.496301	0.009417
1-hr	0.568345	0.017953
2-hr	0.672662	0.033694
3-hr	0.754661	0.048157
6-hr	0.740666	0.092105
12-hr	0.779967	0.147303
24-hr	0.747121	0.219673
48-hr	1.108358	0.295510
72-hr	1.075643	0.353143
100-YR RETURN PERIOD		
5-min	0.269993	0.003580
10-min	0.315263	0.007312
15-min	0.421360	0.006957
30-min	0.553934	0.009857
1-hr	0.626608	0.019201
2-hr	0.732944	0.036193
3-hr	0.816471	0.051981
6-hr	0.776677	0.101053
12-hr	0.821859	0.162184
24-hr	0.814046	0.243391
48-hr	1.210895	0.325943
72-hr	1.175000	0.389038

Table F-1: Manning's Roughness Coefficients for Closed Conduits and Open Channels

Conveyance Material	Manning's n-value
Closed Conduits	
Concrete	
1. Precast or cast-in-place	0.013-0.015
2. Steel troweled or smooth-form finish	0.014-0.016
3. Wood float or broomed finish; including pneumatically applied mortar	0.014-0.017
Corrugated Metal Pipe	
1. Plain	0.022-0.026
2. Paved invert	0.018-0.022
3. Spun asphalt lined	0.011-0.015
Plastic (HDPE, PVC)	0.008-0.015
Vitrified Clay	0.011-0.015
Steel, coated	0.010-0.017
Brick	0.013-0.017
Open Channels	
Excavated or Dredged	
1. Earth, straight and uniform	0.020-0.030
2. Earth, winding and fairly uniform	0.025-0.040
3. Rock, smooth and uniform	0.025-0.033
4. Rock, jagged and irregular	0.035-0.045
5. With short grass, few weeds	0.022-0.033
6. Unmaintained, abundant vegetation as tall as flow depth	0.050-0.140
Lined	
1. Asphalt	0.013-0.017
2. Brick	0.011-0.018
3. Concrete	0.011-0.020
4. Riprap or rubble	0.020-0.035
5. Sack concrete riprap/Grouted rock riprap	0.028-0.032
6. With short grass, few weeds	0.022-0.033
7. Unmaintained, abundant vegetation as tall as flow depth	0.050-0.140
Natural Stream Channels	
1. Clean, straight bank, full stage no rifts or deep pools	0.025-0.033
2. Same as (1), but some weeds and stones	0.030-0.040
3. Clean, winding, some pools and shoals	0.033-0.045
4. Same as (3), lower stages, more ineffective slope and sections	0.040-0.055
5. Same as (3), some weeds and stones	0.035-0.050
6. Same as (5), some stony sections	0.045-0.060
7. Sluggish river reaches, rather weedy or with very deep pools	0.050-0.080
8. Very weedy reaches, trees or underbrush	0.075-0.150

NOTES:

WASTEWATER DESIGN FLOW IS 600 GPD.
BASED ON PROPOSED 5 BEDROOM SINGLE FAMILY RESIDENCE

(1) 4" ABS GRAVITY SEWER LINE WITH MINIMUM 2% GRADIENT AND 2-WAY CLEANOUTS SPACE 50' APART MIN.

(2) 1,500 GALLON ORENCO™ FRP PROCESSING TANK WITH ADVANTEX AX20 WASTEWATER TREATMENT SYSTEM (SEE DETAIL)

(3) 2,000 GALLON CHAPIN CONCRETE PUMP TANK WITH OSI PF1010 DISCHARGE PUMP

(4) VERICOMM® CONTROL PANEL. REQUIRES ONE 20 AMP 120 VOLT CIRCUIT AND TWO 20 AMP 230 VOLT CIRCUITS, AND AN ACTIVE CAT 5 DATA LINE FOR PANEL TELEMETRY.
A REMOTE AUDIBLE/VISIBLE ALARM PANEL, TYPE 4X ENCLOSURE FOR OUTDOOR USE, SHALL BE INSTALLED AT HOUSE SITE. ORENCO PRODUCT CODE: AMSENTII-W

(5) HEADWORKS VALVE BOX ASSEMBLY (SEE DETAIL)

(6) ZONE VALVE BOX PROVIDING AUTOMATIC DIVERSION BETWEEN PRIMARY AND SECONDARY DRAINFIELD ZONES WITH TWO SOLENOID VALVES AND 50 PSI PRESSURE REGULATOR. (SEE DETAIL)

(7) MID-FIELD (ZONE) CHECK VALVE WITH AIR VACUUM RELIEF VALVE INSTALLED DOWNSLOPE IN 7"-ROUND VALVE BOX (TYP.) 8X. (SEE DETAIL)
NOTE: MAKE CERTAIN THAT CHECK VALVES ON SUPPLY AND RETURN HEADER MANIFOLDS ARE POSITIONED BETWEEN CORRELATIVE DRIP TUBE LATERALS.)

(8) AIR VACUUM RELIEF VALVE 4X (THREE IN 7" ROUND VALVE BOX (TYP. - SEE DETAIL)

(9) GEOFLOW SUBSURFACE DRIP DISPERSAL SYSTEM (**ZONE 1 PRIMARY** AND **ZONE 2 SECONDARY**) WITH A TOTAL OF 2,500 LINEAR FEET OF GEOFLOW WASTEFLOW PC SUBSURFACE DRIP TUBING WITH LATERALS SPACED 12" APART (0.53 GPH DRIP EMITTERS SPACED 12" APART) COVERING A TOTAL OF 2,500 SQUARE FEET RESULTING IN A SOIL APPLICATION RATE OF 0.48 GPD/SF BASED ON A PEAK DESIGN FLOW RATE OF 600 GPD DOSED TO A SINGLE 1,250 SQUARE FOOT ZONE.

(10) DRIP FIELD FLUSH VALVE BOX PROVIDING AUTOMATIC FIELD FLUSH WITH ONE SOLENOID VALVE, TWO CHECK VALVES AND ONE AIR VACUUM RELIEF VALVE (SEE DETAIL)

(11) 48 LF TRENCH WITH 12 QUICK4 EQUALIZER 24 LOW-PROFILE INFILTRATOR CHAMBERS AND END CAPS. 1" SCH 40 PVC DRIP FIELD FLUSH RETURN LINE PLUMBED TO DISCHARGE INTO 4" CAPPED INSPECTION RISER PIPE. A SECOND 4" CAPPED INSPECTION RISER SHALL ALSO BE INSTALLED IN LAST CHAMBER.

(12) 3'-DEEP INSPECTION WELL 6X (SEE DETAIL)

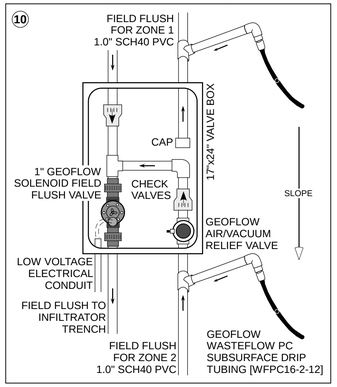
(13) INSTALL A WATER LINE AND HOSE BIB (PER CALIFORNIA PLUMBING CODE) POSITIONED GREATER THAN 10' FROM THE TANKS. THIS HOSE BIB IS FOR USE WHEN SERVICING THE SYSTEM.

(14) DESIGNATED FUTURE DRIP EXPANSION AREA (375 SF PER ZONE. 750 SF TOTAL) TO ACCOMMODATE THE POTENTIAL FUTURE 2 BEDROOM ADU (300 GPD)

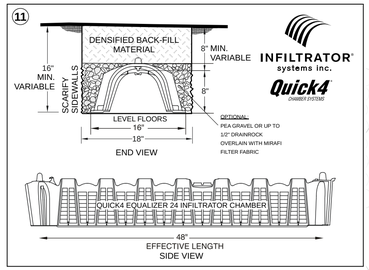
IMPORTANT! SPECIFIED WASTEWATER DRAINFIELD DISPERSAL AREAS SHALL BE FENCED OFF PRIOR TO ANY SITE DEVELOPMENT IN ORDER TO PROHIBIT ANY GRADING EQUIPMENT OR STAGING OF MATERIALS IN THESE AREAS. IT IS IMPORTANT THAT THE NATURAL SOIL CONDITIONS IN THESE AREAS BE PRESERVED FOR PROPER FUNCTION OF THE SHALLOW SOIL DISCHARGE SYSTEM. DO NOT ALLOW SOILS IN THESE AREAS TO BE COMPACTED. DO NOT ROUTE UTILITY TRENCHES THROUGH THE PROPOSED DRAINFIELDS. ALL STORMWATER LINES, INLETS/OUTLETS AND DRAINAGEWAYS SHALL MAINTAIN THE REQUIRED DEH SETBACKS TO THE PROPOSED DRAINFIELDS.

ALL BUILDING PLANS PREPARED FOR THE PROJECT SHOULD INCLUDE THIS NOTE.

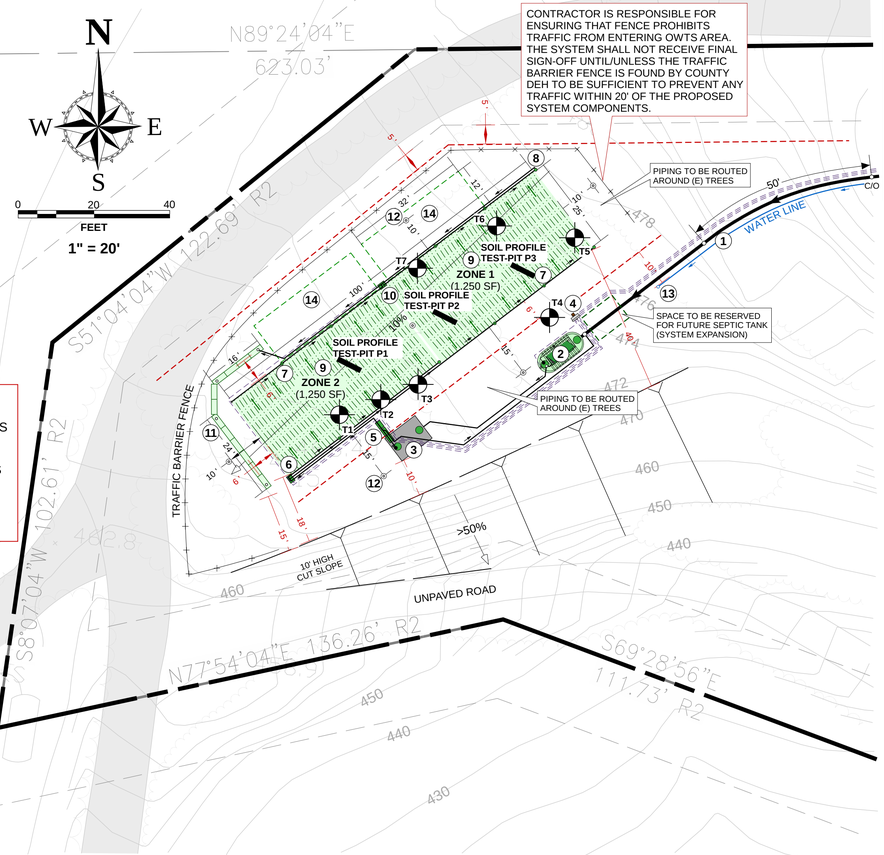
FIELD FLUSH VALVE BOX DETAIL



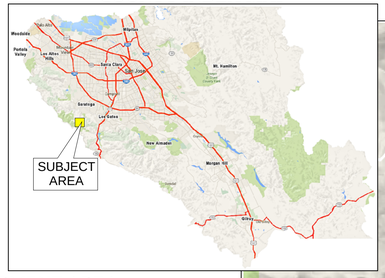
INFILTRATOR QUICK4 EQUALIZER 24 LOW PROFILE DRAINFIELD TRENCH CONSTRUCTION DETAIL



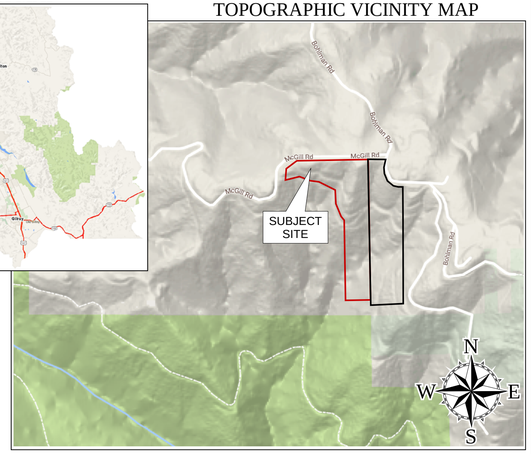
NOTE: THIS MAP WAS PREPARED SOLELY FOR THE PURPOSES OF THE SEPTIC SYSTEM DESIGN AND SHOULD NOT BE CONSTRUED AS SUFFICIENT FOR OTHER PURPOSES. LOCATIONS ARE APPROXIMATE. BIOSPHERE CONSULTING, INC SHALL NOT BE HELD RESPONSIBLE FOR ANY DAMAGE CAUSED TO UTILITIES DURING CONSTRUCTION.



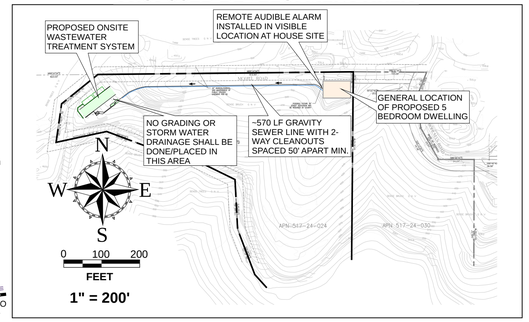
COUNTY INDEX MAP



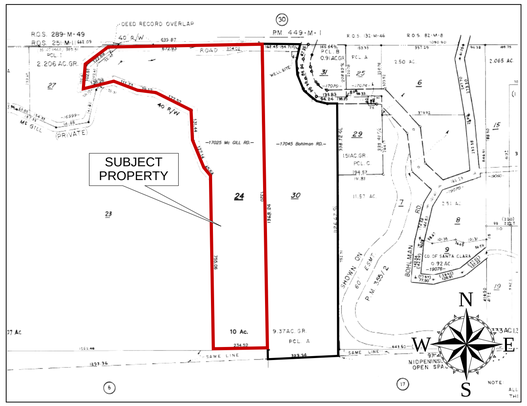
TOPOGRAPHIC VICINITY MAP



PROPOSED DEVELOPMENT AREA



PARCEL INDEX MAP



Soil Profile Test Data
Owner: Gazala Khan & Nitin Gupta
17025 McGill Rd., Saratoga, CA
APN 517-24-024

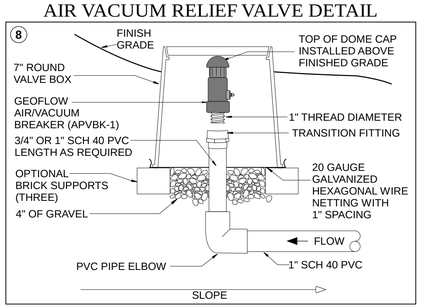
Test Conducted on 10/6/2015
By Chris Day, R.E.H.S. Tel. 650-293-1045
Witnessed by: Darius Haghighi, R.E.H.S.
Santa Clara County EH

Soil Profile Test Hole #1	Depth: 4 ft.
0-48"	Decomposed Sandstone / Clay Sand
	Roots Coarse & Medium
	Pores Coarse & Common
	Weak Subangular Structure
	Approximately 75% Rock
	Dry Condition of Soil
	Color Light Tan
	No Mottling

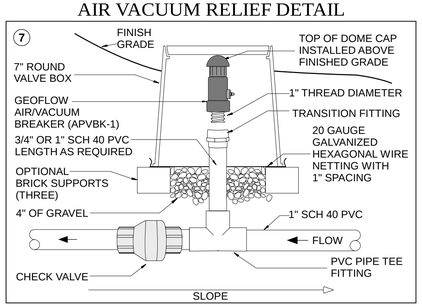
Soil Profile Test Hole #2	Depth: 1 ft.
2-12"	Fractured Shale / Rock Patch

Soil Profile Test Hole #3	Depth: 4 ft.
0-24"	Decomposed Sandstone / Clay Sand
	Roots Fine & Medium
	Pores Coarse & Common
	Weak Subangular Structure
	Approximately 60% Rock
	Dry Condition of Soil
	Color Light Tan
	No Mottling
24-36"	Fractured Shale / Rock Patch
36-48"+/-	Decomposed Sandstone / Clay Sand
	Roots Fine & Few
	Pores Coarse & Common
	Weak Subangular Structure
	Approximately 75% Rock
	Dry Condition of Soil
	Color Light Tan
	No Mottling

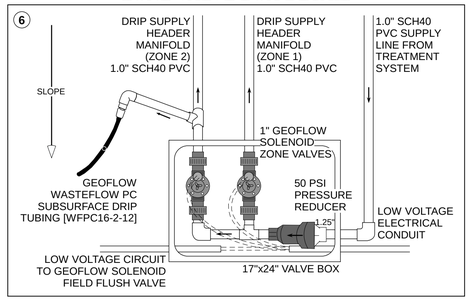
AIR VACUUM RELIEF VALVE DETAIL



MID-FIELD CHECK VALVE AND AIR VACUUM RELIEF DETAIL



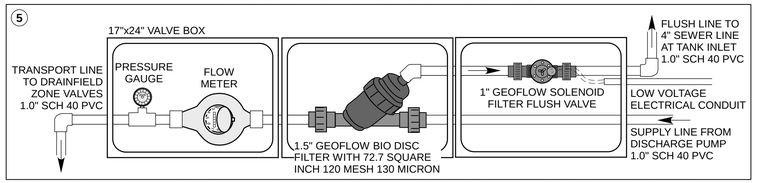
ZONE VALVE BOX DETAIL



SOIL PERCOLATION SUMMARY TABLE 10-13-15

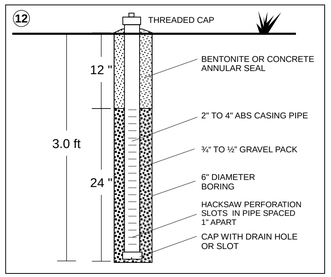
Percolation Hole (T#)		T1	T2	T3	T4	T5	T6	T7
Depth		2'	1'	1.5'	1.5'	2'	1'	1'
Stabilized MPI	R	9	7	19	6	76	16	8
Adjusted Stabilized MPI	R_1=R x 1.4	13	10	27	8	106	22	11
Avg. Adj. Stabilized MPI	R_2=(ΣR$_1$)/ #Holes							28 MPI = 0.7 GPD / SF
# Bedrooms:	FOR OFFICE USE ONLY	TANK SIZE (Gal)				Leach Line (Ft)		

HEADWORKS VALVE BOX DETAIL



NOTE: THE BOTTOM OF ALL VALVE BOXES SHALL BE SECURELY WRAPPED WITH 20-GAUGE, GALVANIZED HEXAGONAL WIRE NETTING WITH 1" TO 1-1/2" SPACING TO PREVENT BURROWING ANIMALS FROM ENTERING AND FILLING THE VALVE BOXES.

INSPECTION WELL CONSTRUCTION DETAIL



COUNTY E.H. ACCEPTANCE/APPROVAL STAMPS

BioSphere Consulting Incorporated
Alternative Wastewater System Design
• Site Evaluation & Mapping
• Soil Analysis & Percolation Testing
• New Development, Upgrade & Repairs
• Residential & Commercial
1315 King Street
Santa Cruz, CA 95060
Tel: (831) 430-9116
www.biosphere-consulting.com

ONSITE WASTEWATER TREATMENT SYSTEM DESIGN

Project Location:	17025 McGill Rd, Saratoga, California	[Santa Clara County]
Property Owner:	Milind Khandare	
Mailing Address:	560 Hope St, Apt 27, Mountain View, CA 94041	
Owner Phone #:	(312) 607-9870	email: nk.milind@gmail.com
Date: 05/03/18	**By:** Andrew Brownstone	Sheet: **1** OF 2
REVISION: 06/04/18 03/12/21	**Job No.:** 21006	**APN: 517-24-024**

PROFESSIONAL GEOLOGIST — ANDREW BROWNSTONE No. 7453 Exp. 12/31/21 — STATE OF CALIFORNIA

PROJECT DESCRIPTION

An onsite wastewater system specifying enhanced treatment using alternative technology is proposed to serve new development of a five bedroom dwelling to be constructed at 17025 McGill Rd, Saratoga in Santa Clara County, California. An "alternative" system with subsurface drip dispersal is specified to provide supplemental treatment of the wastewater discharged on the site to address the limiting soil conditions and adjacent steep slopes on the subject property.

CONSTRAINTS & DESIGN CRITERIA

- The proposed AdvanTex™ wastewater treatment and dispersal system is designed to serve a 5 bedroom dwelling with a design wastewater flow of 600 gallons per day (gpd) per County DEH guidelines.
- Soil profiles logged and recorded in the proposed drainfield area did not exhibit any evidence of seasonally high groundwater conditions. Seasonally high groundwater is estimated to occur at greater than 5' below grade.
- No wells, springs or watercourses are situated within 100' of the proposed Onsite Wastewater Treatment System.

SPECIFICATIONS

1. Building Sewer Lines, & Proposed Processing Tank.
   - 1.1. A 4" ABS building sewer line shall be installed to convey all raw sewage from dwelling to the processing tank. All gravity sewer piping must maintain a minimum 2% continuous gradient. ***All wastewater including graywater shall be discharged to the processing tank.***
   - 1.2. Locate a 2-way, 4" ABS cleanout fittings on the building sewer to facilitate snaking and line location.
   - 1.3. A 1,500 gallon, watertight, Fiberglass Reinforced Polyester (FRP) tank, from Orenco Systems®, Inc.(OSI), is specified for use as a processing tank with the proposed AdvanTex™ (Mode 1) treatment system. The tank shall have 24" diameter OSI access risers with fiberglass, bolt-down lids (brown). The tank shall be installed according to the manufacturers guidelines including the 6" concrete collar above tank flange to prevent floatation. Tanks sufficiently close to roadway for pumper truck to access.
   - 1.4. The tank hole shall be excavated so that the tank sits level. Install the access risers with a watertight joint using the adhesives supplied by manufacturer.
   - 1.5. Install the tank inlet fitting with a watertight joint. Cap off or use a test plug on this fitting and fill the tank with clean water 2" above the joint between the riser and the tank top. Repair any leaks.
   - 1.6. Obtain a watertight tank inspection by EH and the designer or distributor with 24 hours notice to each.
   - 1.7. Install the recirculating splitter valve (RSV) in the outlet side of the tank according to the installation manual instructions.
2. AdvanTex™ Treatment System
   - 2.1. An AdvanTex™ treatment system includes a Biotube® pump package for recirculation, RSV, split-flow tee, a AX20 packed-bed filter pod(s) and a telemetry-enabled VeriComm® control panel.
   - 2.2. Install the AdvanTex™ system according to the installation instructions and in the location shown on the plan. *The filter pod shall be installed with the lid (brown) 2"-4" above final grade. A more shallow burial is possible, but only if approved by the property owner.*
   - 2.3. The pressurized transport pipe from the recirc. pump to the filter pod shall be 1.0" schedule 40 PVC. This pressurized line shall be plumbed to the side of the pod opposite of the 2" gravity drain (vent side)
   - 2.4. The filtrate gravity return pipe from the filter pod to the RSV and on to the discharge pump basin shall be 2" schedule 40 PVC. ***Assure continuous fall on the return piping as venting through this pipe is critical.***
   - 2.5. Test the squirt height on the filter pod. It should be approximately 3'-4' high.
3. Discharge Pump Tank and Filtrate Pumping
   - 3.1. A 2,000 gallon Chapin concrete pump tank shall be installed adjacent to the processing tank.
   - 3.2. The pump tank shall be installed according to the manufacturer's instructions and be made watertight.
   - 3.3. Install the pump and float tree according to the instructions provided by manufacturer/dealer.
   - 3.4. A 1 hp OSI high head effluent pump (PF1010) is specified for pressurized dispersal discharge.
   - 3.5. The filtrate transport pipe to dispersal system shall be 1.0" schedule 40 PVC.
4. Subsurface Drip Dispersal System
   - 4.1. Approximately 2,500 lineal feet of Geoflow PC drip tubing (with 0.5gph emitters spaced 12" apart) shall be installed with a minimum of 12" lateral spacing covering an area of at least 2,500 square feet in the configuration shown on the plan. The drip field shall be divided evenly into two zones. The 12 air/vacuum relief valves specified shall be supplied by Geoflow. An additional 750 square feet of area shall be reserved and designated as future drip expansion to accommodate a potential future 2 bedroom ADU.
   - 4.2. The drip dispersal field shall be installed according to the instructions in the Geoflow installation manual. Installer shall assure that each drip lateral be installed in such a manner as to reduce the potential of low head drainage as described in the installation manual. The actual location and layout of the dispersal field may vary per owner's, landscaper's or installer's discretion with approval by designer.
   - 4.3. The drip tubing lines shall be buried 8"-10" deep and spaced no closer than 12" apart. The supply header shall be installed 12" - 18" below grade. It may be easier to install the drip tubing first, and the supply and return headers afterwards. Great care must be taken to keep dirt out of the drip tubing and supply and return piping. All piping shall be thoroughly flushed and pressure tested prior to use.
   - 4.4. The drip field flush return line is specified to be routed to a 48'-long trench with 12 Quick4 Equalizer 24 Infiltrator chambers.
   - 4.5. All pressurized piping shall be schedule 40 PVC and labelled according to current UPC requirements "treated wastewater - do not drink". Pressure piping shall be pressure-rated to 150 psi and solvent welded.
   - 4.6. Concrete thrust blocks, or equivalent restraint, shall be provided at sharp changes in piping direction.
   - 4.7. Drainfield shall meet Santa Clara County guidelines for Tree Protection and Preservation for Land Use Applications. Refer to the Santa Clara County Ordinance C-16 Tree Preservation Removal.
5. Installer Qualifications and Responsibilities
   - 5.1. The system installer shall be licensed by the State of California, Department of Consumer Affairs, to install septic systems. Installer certification is required by the local AdvanTex™ dealer. The installer is required to fully read and understand the AdvanTex™ and Geoflow manuals prior to the commencement of work.
   - 5.2. All piping shall conform to the current edition of the Plumbing Code.
   - 5.3. The installer shall be responsible for locating any property lines, underground utilities or piping. Any damage to these facilities shall be the responsibility of the installer.
   - 5.4. Installer shall be responsible for assuring that traffic barrier prevents encroachment closer than 20' from proposed OWTS components.
   - 5.5. A pre-construction conference with designer, inspector and dealer/service provider shall be arranged prior to the commencement of work. Pre-construction conference should include construction procedures, staking or marking of the drip lines, supply and return piping, pump system and appurtenances to be provided. Construction inspections, watertight tank test inspection, AdvanTex™ installation inspection, and final operation of system shall be made by designer (BioSphere Consulting) or local distributor and system service provider and the County of Santa Clara Department of Environmental Health (408-918-3400). Construction inspection should include inspection of the following: water tightness of effluent dosing (pump) tank, drip field layout, piping materials and installation, and all associated valves and connections, hydraulic testing of the drip system and functionality and setting of all control devices. Final inspection shall be performed in order to verify that all construction elements are in conformance with the approved plans, specifications, and manufacturer recommendations; all inspection wells are installed; and erosion control has been completed. The installer shall give at least 24 hours notice to each party for all inspections. Designer shall provide final installation approval letter and as-built drawings per DEH requirements.
6. Electrical Work
   - 6.1. The VeriComm® control panel shall be installed in the location shown on the map ***with the bottom of the panel box at 51" from the ground surface.***
   - 6.2. One, 20 amp, 120V electrical circuit and two 20 amp, 230V electrical circuits shall be extended to the VeriComm® panel in a single conduit. Underground circuits in separate conduits shall be installed from the panel to the recirculation pump and discharge pump. A separate underground conduit containing a live CAT5 phone line shall be installed to the VeriComm® panel. The system will not be final led until everything (including panel telemetry) is functional.
   - 6.3. All work shall conform to the California Electrical Code and the contractor shall be responsible for obtaining any electrical permits required.
7. Site Clean up and Erosion Control Measures
   - 7.1. All excavated areas shall be smoothed and all construction debris shall be removed from the site.
   - 7.2. All disturbed soils shall be seeded and mulched. Erosion Control Mix seed shall be used at the coverage recommended on the package for all disturbed soil.
   - 7.3. Straw shall be used to cover all disturbed soil.
   - 7.4. PER DIVISION C12, CHAPTER III OF THE COUNTY CODE (Sec. C12-513. Temporary erosion control.) "The permittee and any person(s) doing, causing or directing the grading shall install and maintain all precautionary measures necessary to protect adjacent watercourses and public or private property from damage by erosion, flooding, or deposition of mud or debris originating from the site. Precautionary measures must include provisions of properly designed erosion prevention and sediment control measures, so that downstream properties are not affected by upstream erosion or sediment transport by stormwater."

PUMP SELECTION CHART

Khandare

Parameters

Discharge Assembly Size	1.00	inches
Transport Length	1	feet
Transport Pipe Class	40	
Transport Line Size	1.00	inches
Distributing Valve Model	None	
Max Elevation Lift	1	feet
Design Flow Rate	11	gpm
Flow Meter	None	inches
'Add-on' Friction Losses	244.7	feet

Calculations

Transport Velocity	4.1	fps

Frictional Head Losses

Loss through Discharge	3.9	feet
Loss in Transport	0.1	feet
Loss through Valve	0.0	feet
Loss through Flowmeter	0.0	feet
'Add-on' Friction Losses	244.7	feet

Pipe Volumes

Vol of Transport Line	0.0	gals

Minimum Pump Requirements

Design Flow Rate	11.0	gpm
Total Dynamic Head	249.8	feet

PumpData

PF1010 High Head Effluent Pump
10 GPM, 1HP
230V 1Ø 60Hz

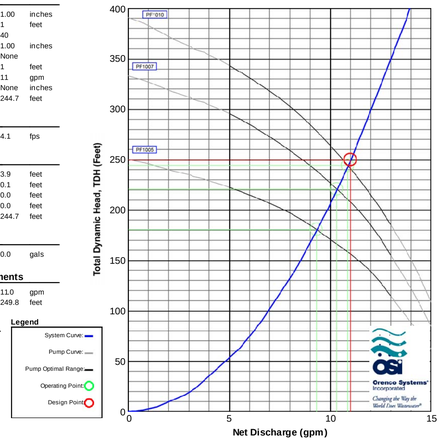
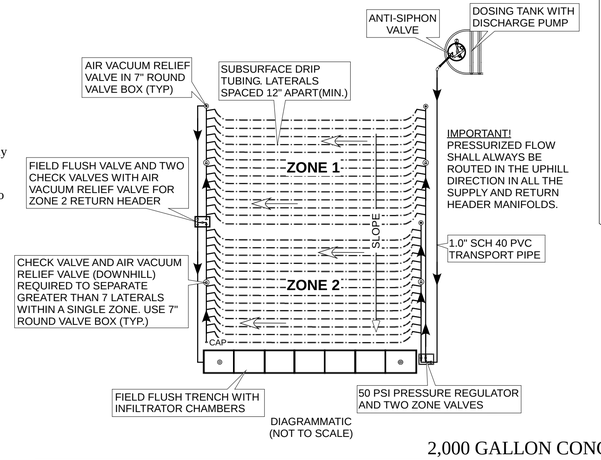


TABLE DD-2. DRIP DISPERSAL SYSTEM MANAGEMENT REQUIREMENTS

	WORK	FREQUENCY
Inspection	• Conduct routine visual observations of drip field, downslope area and surroundings for wet areas, pipe leaks or damage, soil erosion, drainage issues, abnormal vegetation, gophers or other problems. • Conduct routine physical inspections of system components, including valves, filters, and headworks box(es). • Perform special inspections of drip field at time of any landscaping work or other digging in drip field area. • Perform inspections of dosing pump(s) and appurtenances (per O&M manual and Performance Evaluation Guidelines, Part 5 of this Manual). • Record observations.	• Every 6 to 12 months.
Maintenance	• Manually remove and clean filter. • Clean and check operation of pressure reducing valves. • Clean flush valves and vacuum release valves.	• Clean filter every 6 months. • Other maintenance annually.
Water Monitoring & Sampling	• Measure and record water levels in dispersal field monitoring wells, as applicable, per permit requirements. • Obtain and analyze water samples from dispersal field monitoring wells, as applicable, per permit requirements.	• According to permit conditions, if applicable.
Reporting	• Report findings to DEH per permit requirements. • Standard report to include dates, monitoring well and other data collected, work performed, corrective actions taken, and performance summary. • Report public health/water quality emergency to DEH immediately.	• According to permit conditions, typically every 1 to 2 years, depending on systems size, usage, history, location.

DRIP FIELD PLUMBING SCHEMATIC



DIAGRAMMATIC (NOT TO SCALE)

GEOFLOW SUBSURFACE DRIP

FIELD FLOW

Job Description:	*Khandare*
Contact:	*Milind Khandare*
Prepared by:	*Andrew Brownstone*
Date:	*22-Feb-18*

Please fill in the shaded areas and drop down menus:

This spreadsheet is a **guide** for **small** systems with **residential** waste & is not a complete hydraulic design.

Worksheet 1- Field Flow

Total field

Total Quantity of effluent to be disposed per day	600	gallons / day
Hydraulic loading rate	0.48	gallons / sq.ft. / da
Minimum Dispersal Field Area	1,250	square ft.
Total Dispersal Field Area	1,250	square ft.

Flow per zone

Number of Zones	1	zone(s)
Dispersal area per zone	1,250	square ft.
Choose line spacing between WASTEFLOW lines	1	ft.
Choose emitter spacing between WASTEFLOW emitt	1	ft.
Total linear ft per zone (minimum required)	1,250	ft. per zone
Total number of emitters per zone	1,250	emitters per zone
Select Wasteflow dripline (16mm)	Wasteflow PC - 1/2gph	dripline
	Wasteflow Classic	
	Wasteflow PC - 1/2gph	
	Wasteflow PC - 1 gph	
Pressure at the beginning of the dripfield	50	psi
Feet of Head at the beginning of the dripfield	115.5	ft.
What is the flow rate per emitter in gph?	0.53	gph
Dose flow per zone	**11.04**	**gpm**

If required, choose flush velocity	0.5	ft/sec
How many lines of WASTEFLOW per zone?	50	lines
Fill in the actual length of longest dripline lateral	25	ft.
Flush flow required at the end of each dripline	0.37	gpm
Total Flow required to achieve flushing velocity	18.50	gpm
Total Flow per zone- worst case scenario	**29.54**	**gpm**

Select Filters and zone valves

Select Filter Type	BioDisc Filter	
Recommended Filter (item no.)	BioDisc Filter-150	1.5in < 30 gpm
Select Zone Valve Type	Electric Solenoid	-
Recommended Zone Valve (item no.)	3.5	0

Dosing

Number of doses per day / zone:	12	doses
Timer ON. Pump run time per dose/zone:	4.32	mins:secs
Timer OFF. Pump off time between doses	1.55	hrs:mins
Per Zone - Pump run time per day/zone:	0.54	hrs:mins
All Zones - Number of doses per day / all zones	12	doses / day

PUMP SIZING

Job Description:	*Khandare*
Contact:	*Milind Khandare*
Prepared by:	*Andrew Brownstone*
Date:	*2/22/2018*

Please fill in the shaded areas and drop down menus:

This spreadsheet is a guide for small systems with residential waste & is not a complete hydraulic design.

Pressure losses may be grossly overstated, particularly if designing with WASTEFLOW Classic. The letters on the diagram(right) match the letters in section 2 below.

Worksheet - Pump Sizing

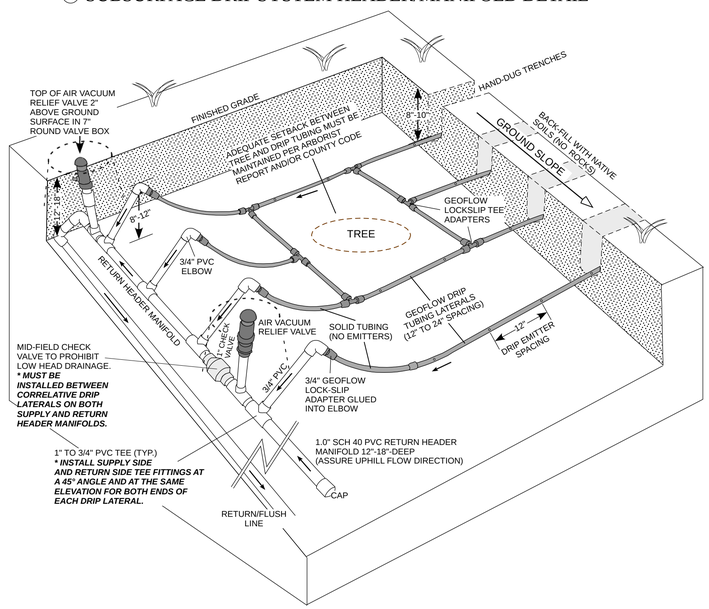
Section 1 - Summary from Worksheet 1

Flow required to dose field	11.04	gpm
Flow required to flush field	18.50	gpm
Flow required to dose & flush field	29.54	gpm
Filter	BioDisc Filter-150	
No. of Zones	1	zones
Zone valve	3.50	
Dripline	Wasteflow PC - 1/2gph	
Dripline longest lateral	25.00	ft.

Section 2

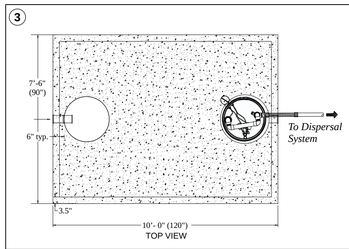
	Ft of head	Pressure
A. Flush line - Losses through return line		
Select Pipe from dropdown menu	PVC schedule 40	
Select Flush Line Diameter	1" inch	
Length of return line	160 ft.	
Equivalent length of fittings	40 ft.	
Elevation change. (if downhill enter 0)	**0** ft.	
Pressure loss in 100 ft of pipe	19.67 ft.	8.52 psi
Total pressure loss from end of dripline to return tank	*39.3 ft.*	17.03 psi
B. Dripline - Losses through Wasteflow dripline		
Length of longest dripline lateral	**25** ft.	
Minimum dosing pressure required at end of dripline	69.30 ft.	30.00 psi
Loss through dripline during flushing	0.32 ft.	0.14 psi
Total minimum required dripline pressure	69.62 ft.	30.14 *psi*
A+B. Minimum Pressure required at beginning of dripfield		
CALCULATED pressure required at beginning of drip	*108.97 ft.*	47.17 *psi*
SPECIFIED pressure at beginning of dripfield (from v	**115.5 ft.**	50.00 *psi*
Great! SPECIFIED Pressure is greater than CALCULATED Pressure requirement. Go to next step		
C. Drip components - Losses through headworks		
Filter	11.6 ft.	5.00 psi
Zone valve pressure loss (not in diagram)	7.00 ft.	- psi
Flow meter pressure loss (not in diagram)	5.00 ft.	2.16 psi
Other pressure losses	ft.	- psi
Total loss through drip components	**23.55 ft.**	7.16 psi
D. Supply line - Minimum Pressure head required to get from pump tank to top of dripfield		
Select Pipe from dropdown menu	PVC schedule 40	
Select Supply line diameter	1" inch	
Length of supply line	160 ft.	
Equivalent length of fittings	40 ft.	
Height from pump to tank outlet	5 ft.	
Elevation change. (if downhill enter 0)	7 ft.	
Pressure loss/gain in 100 ft. of pipe	46.80 ft.	20.26 psi
Total gain or loss from pump to field	***105.6 ft.***	45.72 psi
Total dynamic head	**244.7 ft.**	105.91 *psi*
Pump capacity * - Field Flush Flow	**29.5 gpm**	105.91 *psi*
-Field Dose Flow	**11.0 gpm**	
-Filter Flush Flow	**- gpm**	- *psi*
Pump Model Number		
Volts / Hp / phase		

9 SUBSURFACE DRIP SYSTEM HEADER/MANIFOLD DETAIL



2,000 GALLON CONCRETE PUMP TANK DETAIL

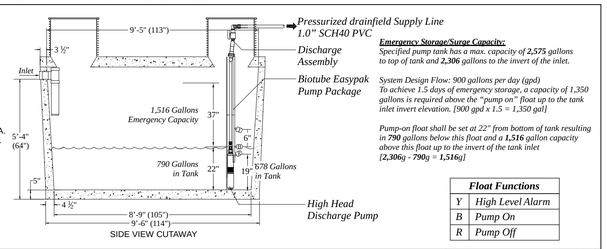
3



NOTES:

1) EXCAVATION SPECIFICATIONS:
   LENGTH 11' - 0"
   WIDTH 9' - 0"
   DEPTH BELOW INLET 5' - 4"
2) DON CHAPIN PRE-CAST MAY MAKE CHANGES TO THE DESIGN AND OR TO THE DIMENSIONS WITHOUT NOTICE. PLEASE CONTACT DON CHAPIN PRE-CAST WHENEVER NECESSARY TO CONFIRM DESIGN CRITERIA.
3) CERTIFIED ENGINEERING IS AVAILABLE UPON REQUEST.
4) THIS IS ALSO AVAILABLE AS AN H20 RATED ASSEMBLY.
5) INTEGRAL TOP TO BODY DESIGN.

PUMP TANK SHALL HAVE NO BAFFLE.
TANK SHALL BE CAST WITH 24" DIAM. ORENCO RISER ADAPTERS INSTEAD OF CONCRETE PLUGS.
TYPICAL GRAVITY FLOW OUTLET SHALL NOT BE CAST INTO TANK.



Emergency Storage/Surge Capacity:
Specified pump tank has a max. capacity of ***2,575*** *gallons to top of tank and* ***2,306*** *gallons to the invert of the inlet.*

System Design Flow: 900 gallons per day (gpd)
To achieve 1.5 days of emergency storage, a capacity of 1,350 gallons is required above the "pump on" float up to the tank inlet invert elevation. [900 gpd x 1.5 = 1,350 gal]

Pump-on float shall be set at 22" from bottom of tank resulting in 790 gallons below this float and a ***1,516*** *gallon capacity above this float up to the invert of the tank inlet*
*[****2,306****g -* ***790****g =* ***1,516****g]*

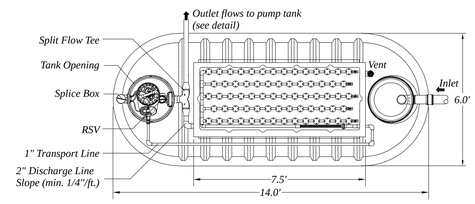
Float Functions	
Y	*High Level Alarm*
B	*Pump On*
R	*Pump Off*

PRE-CAST CONCRETE WATER TIGHT HOLDING/PUMP TANK
CAPACITY 2000 GALLONS (MODEL IPS2000H)

DON CHAPIN PRE-CAST

ADVANTEX AX-20 DETAIL

2

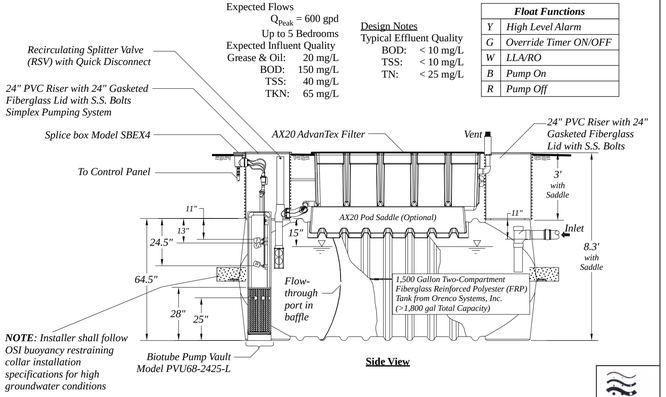


Top View

Expected Flows
Q_{Peak} = 600 gpd
Up to 5 Bedrooms
Expected Influent Quality
Grease & Oil: 20 mg/L
BOD: 150 mg/L
TSS: 40 mg/L
TKN: 65 mg/L

Design Notes
Typical Effluent Quality
BOD: < 10 mg/L
TSS: < 10 mg/L
TN: < 25 mg/L

Float Functions	
Y	*High Level Alarm*
G	*Override Timer ON/OFF*
W	*LLA/RO*
B	*Pump On*
R	*Pump Off*



Side View

AdvanTex AX20 Mode 1B
w/1,500 Gallon Fiberglass Tank

SYSTEM OPERATION AND MAINTENANCE

- The owner should read and operate the system according to the AdvanTex™ & Geoflow operation and maintenance literature.
- Orenco requires biannual maintenance servicing of the AdvanTex™ by a qualified technician.
- County Environmental Health will issue an OWTS Annual Operating Permit and requires that the property owner maintain a system service agreement/contract with a qualified third-party service provider. This requirement will be placed on the title deed for the property.
- The drip fields shall be automatically flushed one zone at a time every 12 months at a minimum. This is done by the control panel software. No drip zone should be left dormant (un-dosed) for more than a few weeks at a time.
- The treatment tank is alive with important microorganisms. Do not add any materials (paint thinner, paint, motor oil, unused medicine, etc.) that may disrupt the biologic treatment process. The primary tank should be pumped when the total of the scum/sludge thickness is greater than 1/3 of the total liquid level depth.
- DO NOT ROUTE WATER SOFTENER BACKFLUSH DISCHARGE TO TREATMENT SYSTEM! This discharge may be routed directly to a drainfield trench or an approved dispersal field.
- Repair all plumbing leaks (especially toilet leaks) promptly.

COUNTY E.H. ACCEPTANCE/APPROVAL STAMPS

PROFESSIONAL GEOLOGIST
ANDREW BROWNSTONE
No. 7453
Exp. 12/31/21
STATE OF CALIFORNIA

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www.biosphere-consulting.com

ONSITE WASTEWATER TREATMENT SYSTEM DESIGN

Project Location:	17025 McGill Rd, Saratoga, California	[Santa Clara County]	
Property Owner:	Milind Khandare		
Mailing Address:	560 Hope St, Apt 27, Mountain View, CA 94041		
Owner Phone #:	(312) 607-9870	email: tk.milind@gmail.com	
Date: 05/03/18	**By:** Andrew Brownstone		Sheet:
REVISION: 06/04/18 03/12/21	**Job No.:** 21006	**APN: 517-24-024**	**2** OF 2