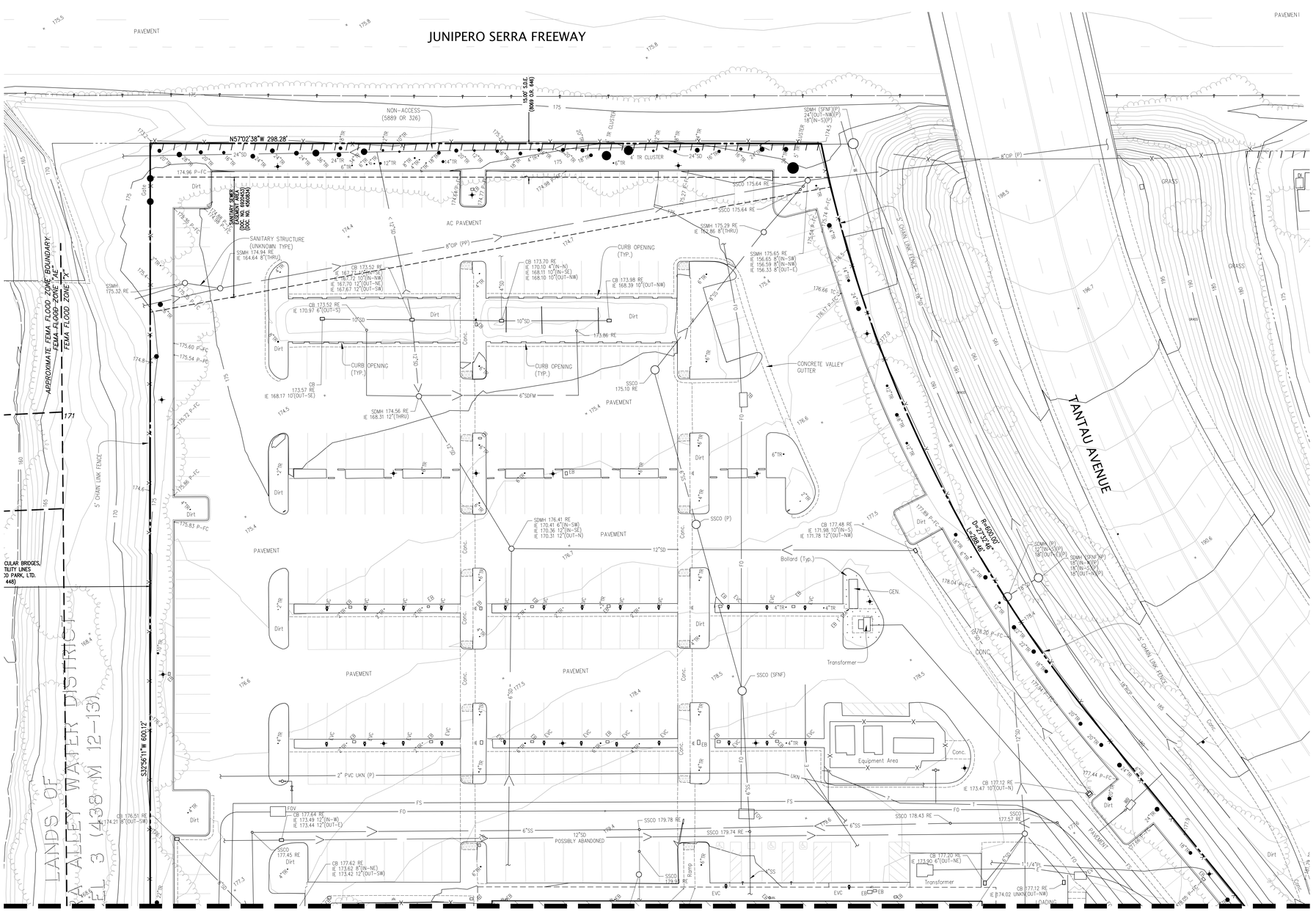

NOTES

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2. ALL DISTANCES AND ELEVATIONS SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.
3. THE TYPES, LOCATIONS, SIZES AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS TOPOGRAPHIC SURVEY WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS AND DEPTHS OF SUCH UNDERGROUND UTILITIES. (A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL KNOWN UNDERGROUND UTILITIES). HOWEVER, THE ENGINEER CAN ASSUME NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF ITS DELINEATION OF SUCH UNDERGROUND UTILITIES WHICH MAY BE ENCOUNTERED, BUT WHICH ARE NOT SHOWN ON THESE DRAWINGS.
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5. THE SUBJECT PROPERTY IS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) FOR SANTA CLARA COUNTY, CALIFORNIA, MAP NUMBER 06085C0209H FOR COMMUNITY NUMBER 060339 (CITY OF CUPERTINO), WITH AN EFFECTIVE DATE OF MAY 18, 2009, AS BEING LOCATED IN FLOOD ZONE "X". ACCORDING TO FEMA THE DEFINITION OF ZONE "X" IS:
   AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

   FEMA BASE FLOOD ELEVATIONS ARE BASED ON NAVD88 DATUM.
6. BENCHMARK: BM 134 (COUNTY OF SANTA CLARA)
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7. BASIS OF BEARINGS:
   THE BEARING OF SOUTH 58°14'37" EAST TAKEN ON THE CENTER LINE OF VALLCO PKWY AS SHOWN ON THAT CERTAIN MAP FILED FOR RECORD ON MARCH 26, 1978, IN BOOK 438 OF MAPS AT PAGES 12 AND 13, OFFICIAL RECORDS OF SANTA CLARA COUNTY WAS TAKEN AS THE BASIS FOR ALL BEARINGS SHOWN HEREON.
8. CORNER RECORD NOTE:
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ABBREVIATIONS

ASPH	ASPHALT	L/S	LANDSCAPE
ASR	AUTOMATIC SPRINKLER RISER	N	NORTH
BD	BRASS DISC	(P)	PER PLAN
BFP	BACK FLOW PREVENTER	PL	PROPERTY LINE
BL	BUILDING	RE	RIM ELEVATION
BLRD	BOLLARD	RCP	REINFORCED CONCRETE PIPE
CB	CATCH BASIN	ROW	RIGHT OF WAY
CLF	CHAIN LINK FENCE	S	SOUTH
CO	CLEANOUT	S.D.E	STORM DRAIN EASEMENT
COMM	COMMUNICATION	SDMH	STORM DRAIN MANHOLE
CONC	CONCRETE	SSCO	SANITARY SEWER CLEANOUT
DI	DRAIN INLET	SSMH	SANITARY SEWER MANHOLE
EB	ELECTRIC BOX	SW	SOUTHWEST
ESMT	EASEMENT	(T)	TOTAL
EV	ELECTRIC VAULT	TW	TOP OF WALL
FC	FACE OF CURB	TELE	TELEPHONE
FD	FOUND	TB	TELEPHONE BOX
FDC	FIRE DEPARTMENT CONNECTION	TD	TRUNCATED DOMES
FF	FINISH FLOOR	TYP.	TYPICAL
FNC	FENCE	UB	UTILITY BOX
FW	FACE OF WALL	W	WEST
GEN.	GENERATOR	WB	WATER BOX
ICP	IRRIGATION CONTROL PEDESTAL	WM	WATER METER
IB	IRRIGATION BOX		
IE	INVERT ELEVATION		
IP	IRON PIPE		
OR	OFFICIAL RECORD		

LEGEND

BUILDING LINE
CENTERLINE
CONCRETE/BLOCK WALL
CONCRETE CURB
CONCRETE CURB & GUTTER
MAJOR CONTOUR LINE
DRIVEWAY
EASEMENT LINE
EDGE OF PAVEMENT
ELECTRIC LINE
FENCE LINE
FIRE SERVICE LINE & VALVE
GAS LINE-VALVE & METER
IRRIGATION WATER LINE
JOINT TRENCH LINE
LOT LINE
MONUMENT/MONUMENT LINE
PROPERTY LINE
RETAINING WALL
RECLAIMED WATER LINE & VALVE
SANITARY SEWER LINE-MANHOLE & CLEANOUT
SIDEWALK
SPOT ELEVATION
STORM DRAIN LINE-MANHOLE & CATCH BASIN
STORM DRAIN LINE-MANHOLE & CATCH BASIN
STREET LIGHT CONDUIT LINE
TELEPHONE LINE
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ACCESSIBLE PARKING SYMBOL
AREA DRAIN
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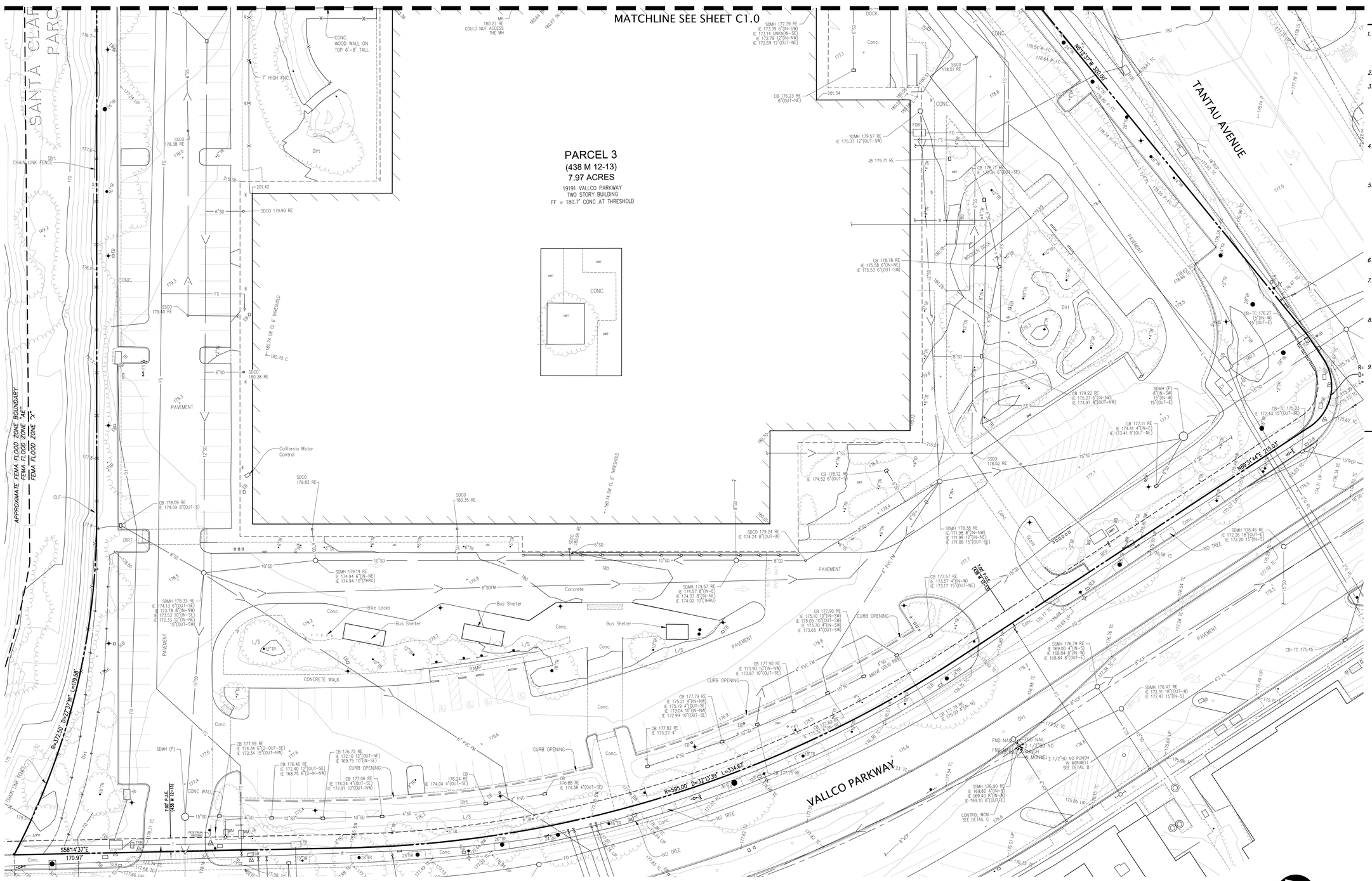
ELECTROLIER
FIRE DEPARTMENT CONNECTION
FIRE HYDRANT
GAS METER
POST INDICATOR VALVE
POWER POLE/JOINT POLE
TRANSFORMER
TRAFFIC SIGN
TREE
UTILITY BOX
UTILITY LINE MARKER
WALK-BOLLARD LIGHT
WATER VALVE

TOPOGRAPHIC SURVEY
Apple, Inc.

09.01.2021

C1.0

KIER+WRIGHT
3350 Scott Boulevard, Building 22 Phone: (408) 727-6665
Santa Clara, California 95054 www.kierwright.com



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CO	CLEANOUT	S.D.E.	STORM DRAIN EASEMENT
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EB	ELECTRIC BOX	SW	SOUTHWEST
ESMT	EASEMENT	(T)	TOTAL
EV	ELECTRIC VAULT	TW	TOP OF WALL
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FD	FOUND	TB	TELEPHONE BOX
FDC	FIRE DEPARTMENT CONNECTION	TD	TRUNCATED DOMES
FF	FINISH FLOOR	TYP.	TYPICAL
FNC	FENCE	UB	UTILITY BOX
FW	FACE OF WALL	W	WEST
GEN.	GENERATOR	WB	WATER BOX
ICP	IRRIGATION CONTROL PEDESTAL	WM	WATER METER
IB	IRRIGATION BOX		
IE	INVERT ELEVATION		
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LEGEND

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CENTERLINE
CONCRETE/BLOCK WALL
CONCRETE CURB
CONCRETE CURB & GUTTER
MAJOR CONTOUR LINE
DRIVEWAY
EASEMENT LINE
EDGE OF PAVEMENT
ELECTRIC LINE
FENCE LINE
FIRE SERVICE LINE & VALVE
GAS LINE-VALVE & METER
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POWER POLE/JOINT POLE
TRANSFORMER
TRAFFIC SIGN
TREE
UTILITY BOX
UTILITY LINE MARKER
WALK-BOLLARD LIGHT
WATER VALVE

TOPOGRAPHIC SURVEY
Apple, Inc.

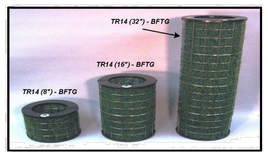
09.01.2021

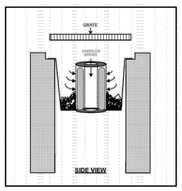
C1.1

KIER+WRIGHT
3350 Scott Boulevard, Building 22 Phone: (408) 727-6665
Santa Clara, California 95054 www.kierwright.com

Catchbasin Insert, Full Capture Device

REM-1 **Triton Bioflex Drop Inlet Trash Guard**
Catchbasin filter insert





Company Contact: Revel Environmental Manufacturing, Inc., Concord, CA Sales contact: Marcel Sloane, (925)-676-4736 Marcel@remfilters.com http://remfilters.com	
Storage capacity: Depends on each catchbasin's configuration, size of filter, etc.	**Replacement Parts:** Available, Replacement Filters
Vendor's maintenance estimate: The filter cleaning process and Bioflex media replacement should take no more than 15 minutes per filter. Maintained when debris accumulates up to 80% of the filter's capacity. Minimum 3 times per year.	**Warranty:** 1 yr, or 6 if REM contracts to do maintenance
Material: High density polyethylene, 304 stainless steel, polyester fiber mesh, coir fibers, water-based latex	**Delivery Time:** Within three weeks from receipt of order
Pricing: See over.	
Installed: Dublin	

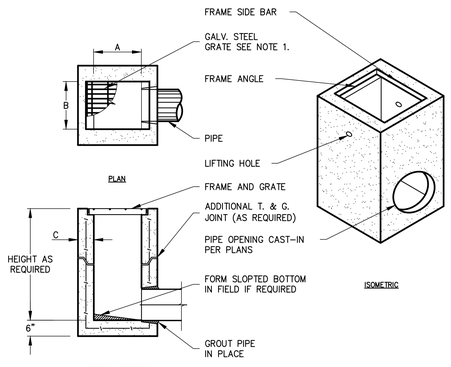
Comments from reference checks

Device effectiveness in capturing trash
Good, effective device in capturing trash (no complaints from the public or flooding occurring in the street).

Maintenance
Maintenance included 3 times a year but at a reasonable price by a contractor. Disposal of filters is an additional maintenance consideration (and an extra service also provided by cleaning contractor

Other
Good customer service from vendor. Easy installation under the vendor's scheduled time quote. Some modifications were needed for installation based on field conditions. Optional hydrocarbon (oil,grease) removal is also available.

TRASH CAPTURE DEVICE
NOT TO SCALE
11

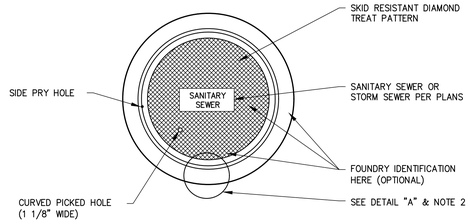


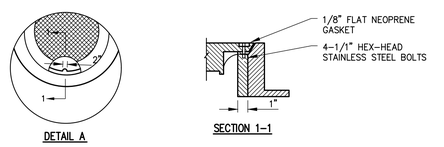
NOTES :
1. FRAMES AND GRATES MAY BE SPECIFIED FOR PEDESTRIAN OR H20 TRAFFIC LOADING. ALL GRATES ARE BICYCLE PROOF. OPTIONAL GRATE LOCKING DEVICE AVAILABLE ON REQUEST SEE DRAWING "LOCK" ON PAGE 1–7 OF THE CENTRAL PRECAST CATALOG. CLOSED–MESH GRATES OR CAST IRON FRAME AND GRATES ARE AVAILABLE ON REQUEST.
2. FOR SURFACE AND DISCHARGE OPTIONS AVAILABLE SEE DRAWING NO. "DI–S0" PAGE 1–6 AND "DI–D0" PAGE 1–5 OF THE CENTRAL PRECAST CATALOG.
3. FRAMES AND GRATES DETAILS SEE PAGES 1–8, 1–9, AND 1–10 OF THE CENTRAL PRECAST CATALOG.
4. WALL THICKNESSES ON ALL D.I.S. CAN BE CHANGED UPON REQUEST. 5. 18" WIDE D.I.'S REPLACE THE OLD 16" WIDE BOX BK & 1K.
5. ALL CATCH BASINS WILL BE OUTFITTED WITH TRASH CAPTURE DEVICES PER DETAIL 11 ON C2.1

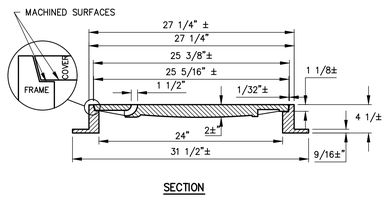
DROP INLET TABLE

MODEL No.	CPC MODEL NAME	A		B		C	
		IN	MM	IN	MM	IN	MM
CB1212	EK	12	300	12	300	4	100
* CB1818	CK*	18	450	18	450	5	125 *
CB1824	1K	18	450	24	600	5	125
* CB2424	2K*	24	600	24	600	5	125 *
CB2430	3K	24	600	30	750	5	125
CB3030	5K	30	750	30	750	6	150
CB2436	1L	24	600	36	900	6	150
CB3636	1M	36	900	36	900	6	150
CB2448	3L	24	600	48	1200	6	150
CB3648	3M	36	900	48	1200	6	150
CB4848	1R	48	1200	48	1200	6	150

CATCH BASIN
NOT TO SCALE
9

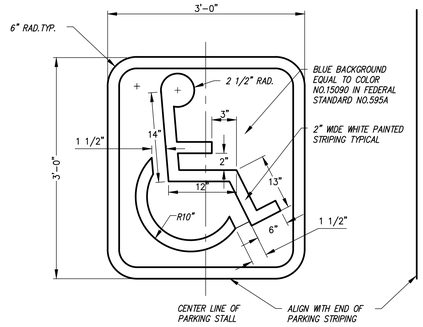




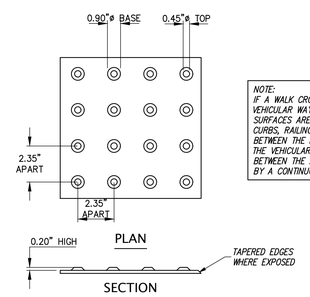


NOTES:
1. MINIMUM WEIGHT OF SET 320 LBS.
2. ADDED BOSS TO FRAME (4 ea.@ 90°) FOR HOLDDOWN BOLTS, PRESSURE TYPE MANHOLES TO BE USED ONLY WHERE CALLED FOR ON THE PLANS.

STANDARD MANHOLE FRAME AND COVER
NOT TO SCALE
10

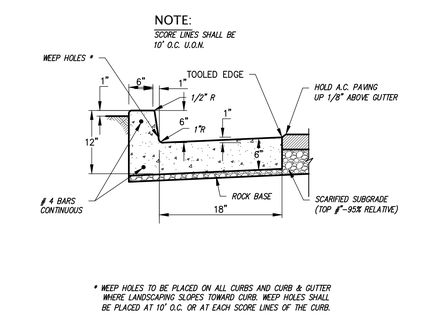


TYPICAL ACCESSIBLE PARKING SYMBOL
NOT TO SCALE
5



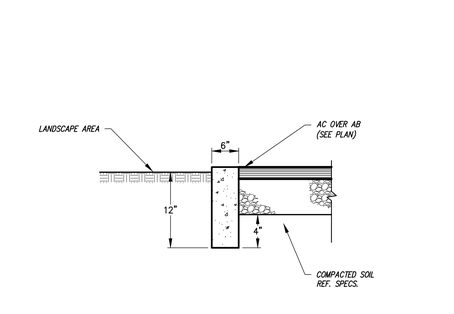
NOTE:
IF A WALK CROSSES OR ADJOINS A VEHICULAR WAY, AND THE WALKING SURFACES ARE NOT SEPARATED BY CURBS, RAILINGS, OR OTHER ELEMENTS BETWEEN THE PEDESTRIAN AREAS AND THE VEHICULAR AREAS, THE BOUNDARY BETWEEN THE AREAS SHALL BE DEFINED BY A CONTINUOUS DETECTABLE WARNING.

TRUNCATED DOMES
NOT TO SCALE
6

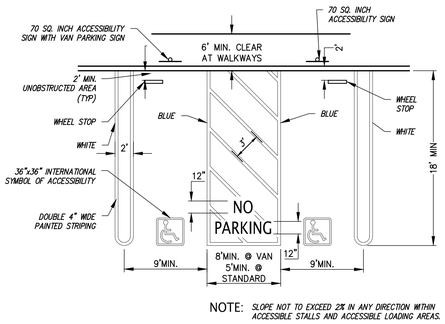


* WEEP HOLES TO BE PLACED ON ALL CURBS AND CURB & GUTTER WHERE LANDSCAPING SLOPES TOWARD CURB. WEEP HOLES SHALL BE PLACED AT 10' O.C. OR AT EACH SCORE LINES OF THE CURB.

CONCRETE CURB & GUTTER
NOT TO SCALE
1



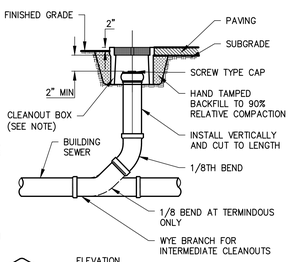
FLUSH CURB
NOT TO SCALE
7



NOTE: *SLOPE NOT TO EXCEED 2% IN ANY DIRECTION WITHIN ACCESSIBLE STALLS AND ACCESSIBLE LOADING AREAS.*

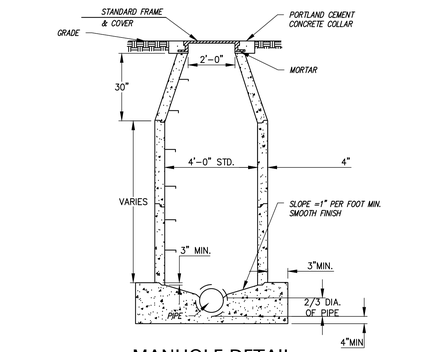
ACCESSIBLE PARKING
NOT TO SCALE
3

1. A RECTANGULAR BOX AS SHOWN ABOVE SHALL BE USED FOR CLEANOUTS THAT ARE CAPPED USING A BANDED RUBBER COUPLING.
2. CIRCULAR BOXES ARE PERMITTED FOR CLEANOUTS THAT ARE CAPPED WITH A SCREW TYPE CAP OR OTHER APPROVED TOP OPENING CAPS.
3. CIRCULAR BOXES INSTALLED IN SIDEWALK AREAS SHALL HAVE A SOLID COVER WITHOUT HOLES. APPROVED CIRCULAR BOXES ARE: CHRISTY VI BOX.
4. APPROVED RECTANGULAR BOXES ARE:
   A) CHRISTY CONCRETE PRODUCT B3 BOX WITH A B3D CONCRETE LID OR A B3C METAL LID. OR
   B) BROOKS PRODUCTS, INC. NO.3 METER BOX WITH A NO.3 HEAVY DUTY CONCRETE LID OR A NO.3 CAST IRON TRAFFIC LID. OR AN APPROVED EQUAL.
5. CONCRETE LIDS ARE ACCEPTABLE FOR USE IN NON VEHICULAR TRAFFIC AREAS, WHILE METAL LIDS MUST BE ELSEWHERE.
6. ALL CLEANOUT BOX LIDS SHALL BE MARKED WITH A LETTER "S" OR THE WORD "SEWER".



TERMINATE CLEANOUT AT CLOSEST JOINT TO SURFACE WITH TEMPORARY PLUG. AFTER ALL BACKFILL IS COMPLETE AND SUB–GRADE MADE IN AREAS TO BE PAVED THE FINAL RISER PIPE AND BOX SHALL BE INSTALLED AS SHOWN.

CLEANOUT TO GRADE
NOT TO SCALE
8



MANHOLE DETAIL
(FOR 24" AND SMALLER DIAMETER PIPE)
NOT TO SCALE
4

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CONCRETE CURB
NOT TO SCALE
2

DETAILS
Apple, Inc.
09.01.2021

C2.0

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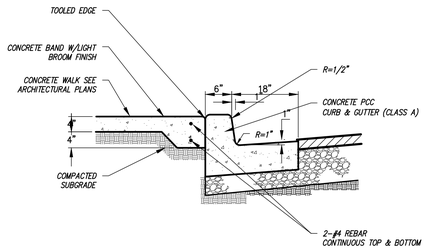
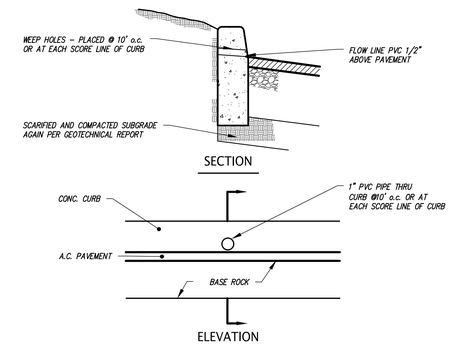
Santa Clara, California 95054 www.kierwright.com



CONCRETE WALK AT CURB & GUTTER

NOT TO SCALE

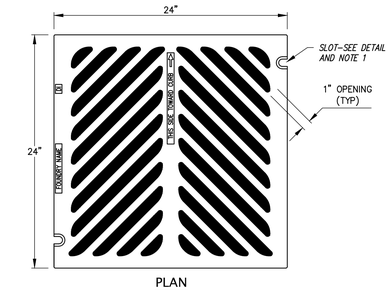
4

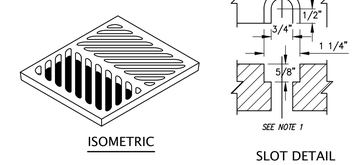


WEEP HOLE

NOT TO SCALE

5





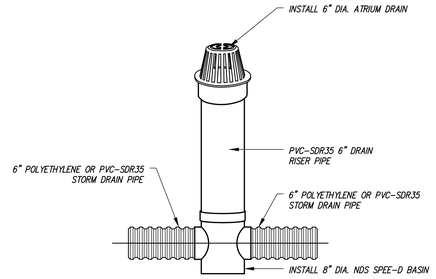
NOTES:

1. WHEN BOLT-DOWN GRATES ARE SPECIFIED IN THE CONTRACT, PROVIDE TWO SLOTS IN THE GRATE THAT ARE VERTICALLY ALIGNED WITH THE HOLES IN THE FRAME. LOCATION OF BOLT-DOWN SLOTS VARIES AMONG DIFFERENT MANUFACTURERS.
2. THE THICKNESS OF THE GRATE SHALL NOT EXCEED 1 5/8".
3. ADAPTED FROM WASHINGTON STATE DEPT. OF TRANSPORTATION STD. PLAN B-30.50-00.
4. MANUFACTURED BY HERN IRON WORKS (COEUR D'ALENE, IDAHO) OR EQUIVALENT

CATCH BASIN GRATE

NOT TO SCALE

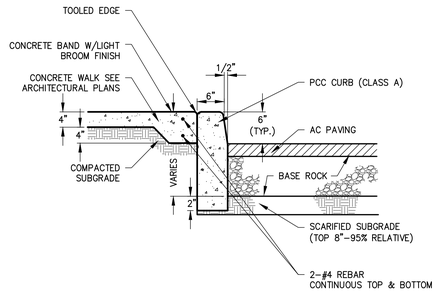
1



NDS ATRIUM DRAIN

NOT TO SCALE

2



CONCRETE WALK AT CURB

NOT TO SCALE

3

DETAILS
Apple, Inc.
09.01.2021

C2.1

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INTERSTATE 280

TANTAU AVENUE

PROPOSED GARAGE

MATCHLINE SEE SHEET C3.1

LEGEND

PROPOSED	EXISTING	
		ASPHALT BERM
		BUILDING LINE
		CENTER LINE
		CONCRETE CURB
		CONCRETE CURB & GUTTER
300	300	CONTOUR LINE
		DRIVEWAY
		EDGE OF PAVEMENT
		FENCE LINE
		LOT LINE
		MONUMENT/MONUMENT LINE
		PROPERTY LINE
		SIDEWALK
+100.00	+ 100.00	SPOT ELEVATION
SD	SD	STORM DRAIN-MANHOLE & CATCH BASIN
		THRU CURB DRAIN
		ELECTROLIER
		PROPOSED BUILDING
		PROPOSED ASPHALT T.I. 6.5

NORTH

0 10 20 40 60

Scale 1" = 20'

ENGINEERED SITE PLAN
Apple, Inc.

09.01.2021

C3.0

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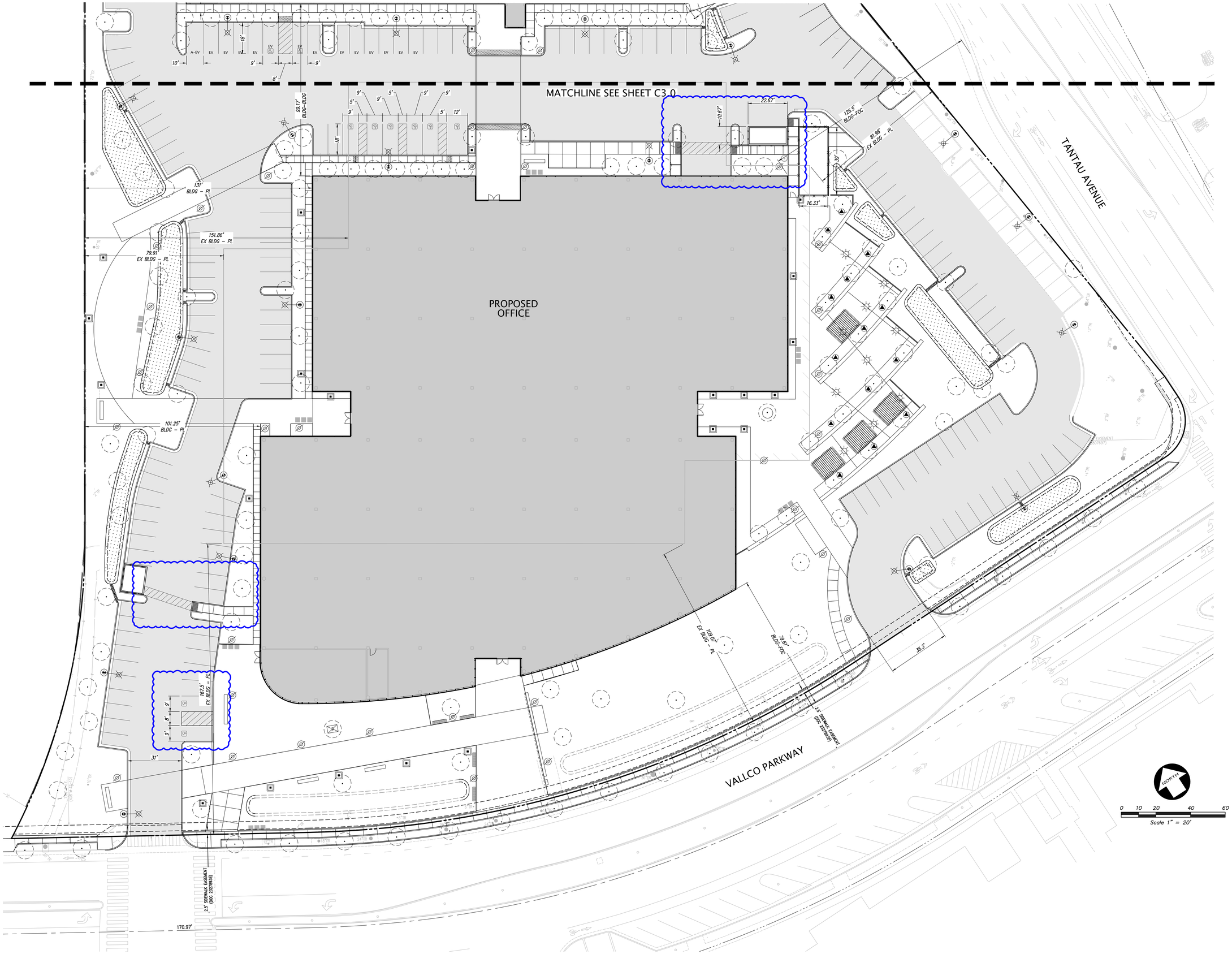

ENGINEERED SITE PLAN
Apple, Inc.

05.23.2022

REGISTERED PROFESSIONAL ENGINEER
NIKHARIOS MATHOO
71236
CIVIL
STATE OF CALIFORNIA

C3.1

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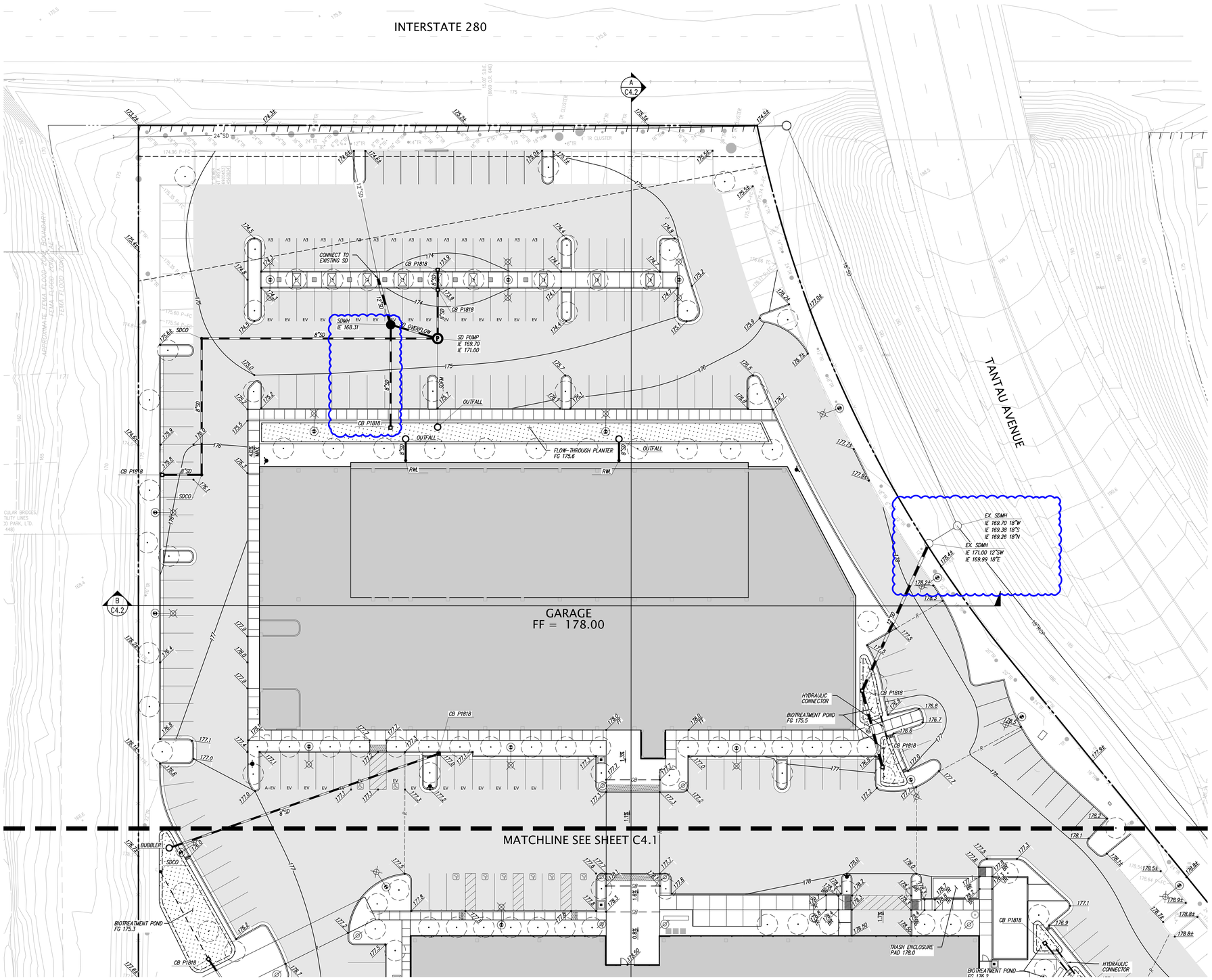

GRADING NOTES

1. ALL GRADING SHALL BE DONE IN ACCORDANCE WITH RECOMMENDATIONS IN THE GEOTECHNICAL AND FOUNDATION INVESTIGATION PREPARED FOR THIS SITE BY XXXX.
2. CONTRACTOR SHALL DETERMINE HIS OWN EARTH QUANTITIES AND BASE HIS BID ACCORDINGLY.
3. TOP OF CURB ELEVATION IS 0.5' ABOVE THE A.C. PAVING AND SPOT ELEVATIONS ARE TO FINISHED SURFACE (UNLESS OTHERWISE NOTED).
4. COMPACTION TO BE DETERMINED USING ASTM D1557, LATEST EDITION LABORATORY TEST PROCEDURE.
5. STORM DRAIN DESIGNATED AS "SD" SHALL BE CLASS III RCP, SDR 35 PVC OR HDPE AS STATED BELOW. PVC AND HDPE PIPES SHALL ONLY BE USED WHEN MINIMUM COVER REQUIREMENTS ARE MET AS SPECIFIED IN THE PVC PIPE BEDDING DETAIL AS SHOWN ON THESE PLANS. SUBSTITUTIONS FOR ANY PIPE WITH A PARTICULAR MATERIAL SPECIFIED ON THIS PLAN SHALL ONLY BE MADE WITH THE WRITTEN APPROVAL OF THE ENGINEER.
6. STORM DRAIN PIPE SHALL BE: 10" DIAMETER AND SMALLER SDR 35 PVC OR HDPE WITH RUBBER GASKETS MEETING ASTM F477. 12" DIAMETER TO BE SDR 35 PVC, CLASS III RCP OR BLUE SEAL HDPE AS MANUFACTURED BY HANCOR WITH WATER TIGHT JOINTS MEETING ASTM F477 AND ASTM D3212. 15" THROUGH 24" DIAMETERS; PIPE TO BE CLASS III RCP OR BLUE SEAL HDPE AS SPECIFIED ABOVE. PIPES LARGER THAN 24" IN DIAMETER SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED. NO MATERIAL SUBSTITUTION SHALL BE ALLOWED FOR DUCTILE IRON PIPE (DIP).
7. ALL UTILITY STRUCTURES INCLUDING, BUT NOT LIMITED TO MANHOLES, CATCH BASINS, WATER VALVES, FIRE HYDRANTS, TELEPHONE AND ELECTRIC VAULTS, AND PULL BOXES, THAT LIE WITHIN THE PUBLIC RIGHT-OF-WAY EASEMENTS OR AREAS AFFECTED BY WORK ON THIS PROJECT SHALL BE ADJUSTED TO GRADE BY THE CONTRACTOR OR THE RESPECTIVE UTILITY COMPANY FOR WHICH THE CONTRACTOR IS RESPONSIBLE TO AFFECT COORDINATION.
8. THE TYPES, LOCATIONS, SIZES AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESES IMPROVEMENT PLANS WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS AND DEPTHS OF SUCH UNDERGROUND UTILITIES. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL KNOWN UNDERGROUND UTILITIES. HOWEVER, THE ENGINEER CAN NOT ASSUME RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF THEIR DELINEATION OF SUCH UNDERGROUND UTILITIES WHICH MAY BE ENCOUNTERED, BUT ARE NOT SHOWN ON THESE DRAWINGS.
9. CONTRACTOR SHALL UNCOVER AND EXPOSE ALL EXISTING UTILITY AND SEWER LINES WHERE THEY ARE TO BE CROSSED, ABOVE OR BELOW, BY THE NEW FACILITY BEING CONSTRUCTED IN ORDER TO VERIFY THE GRADE AND TO ASSURE THAT THERE IS SUFFICIENT CLEARANCE. PIPE SHALL NOT BE STRUNG NOR TRENCHING COMMENCED UNTIL ALL CROSSINGS HAVE BEEN VERIFIED FOR CLEARANCE. IF THE CONTRACTOR FAILS TO FOLLOW THIS PROCEDURE, HE WILL BE SOLELY RESPONSIBLE FOR ANY EXTRA WORK OR MATERIAL REQUIRED IF MODIFICATIONS TO THE DESIGN ARE NECESSARY.
10. THE CONTRACTOR SHALL SET HIS STRING OR WIRE THROUGH AT LEAST THREE GRADE STAKES TO VERIFY GRADE. IF THE STAKES DO NOT PRODUCE A UNIFORM GRADE, NOTIFY THE ENGINEER IMMEDIATELY AND HAVE THE GRADES CHECKED PRIOR THE TRENCHING OR PLACEMENT OF CONCRETE.
11. ADJUSTMENTS TO BUILDING PAD ELEVATIONS OR PARKING LOT GRADES TO ACHIEVE EARTHWORK BALANCE SHALL BE MADE ONLY WITH APPROVAL OF THE ENGINEER.
12. ALL WORK, ON-SITE AND IN THE PUBLIC RIGHT-OF-WAY, SHALL CONFORM TO THE CITY OF MOUNTAIN VIEW STANDARDS AND REQUIREMENTS.

EARTHWORK SUMMARY

CUT: 58,393 CY

FILL: 364 CY

NOTE:

THE EARTHWORK QUANTITIES LISTED ON THESE PLANS ARE STATED ONLY FOR CALCULATION OF GRADING AND BUILDING PERMIT FEES. THESE QUANTITIES DO NOT INCLUDE TRENCH OR FOOTING SPOILS, SHRINK OR SWELL FROM COMPACTING EFFORTS OR OTHER VARIABLES. THE ENGINEER MAKES NO REPRESENTATION THIS SITE WILL BALANCE. THE CONTRACTOR SHALL DETERMINE HIS OWN EARTHWORK QUANTITIES AND BASE HIS BID ACCORDINGLY. ESTIMATED EARTHWORK QUANTITIES ARE BASED ON GRADING WITHIN THE PROJECT PROPERTY.

LEGEND

ASR	AUTOMATIC SPRINKLER RISER
FL	FLOW LINE
FF	FINISH FLOOR
PV	PAVEMENT
RE	RIM ELEVATION
TC	TOP OF CURB
WS	WATER SERVICE
23.8	SPOT ELEVATION
-X-X-X-	EXISTING UTILITY TO BE ABANDONDED BY REMOVAL
FS	FIRE SERVICE
SS	SANITARY SEWER
COTG	CLEANOUT TO GRADE
8"SD	STORM DRAIN LINE
	AREA DRAIN
	STORM DRAIN CATCH BASIN
	STORM DRAIN JUNCTION BOX
	STORM DRAIN MANHOLE
	AUTOMATIC SPRINKLER RISER
	BACK FLOW PREVENTION DEVICE
	FIRE DEPARTMENT CONNECTION
	FIRE HYDRANT & VALVE
	POST INDICATOR VALVE
SSMH	SANITARY SEWER MANHOLE
	SINGLE CHECK VALVE
SDMH	STORM DRAIN MANHOLE
	WATER METER
	PROPOSED BUILDING
	PROPOSED ASPHALT T.I. 6.5

GRADING PLAN
Apple, Inc.

05.23.2022

REGISTERED PROFESSIONAL ENGINEER NERAMOS MATHOU 71236 CIVIL STATE OF CALIFORNIA

C4.0

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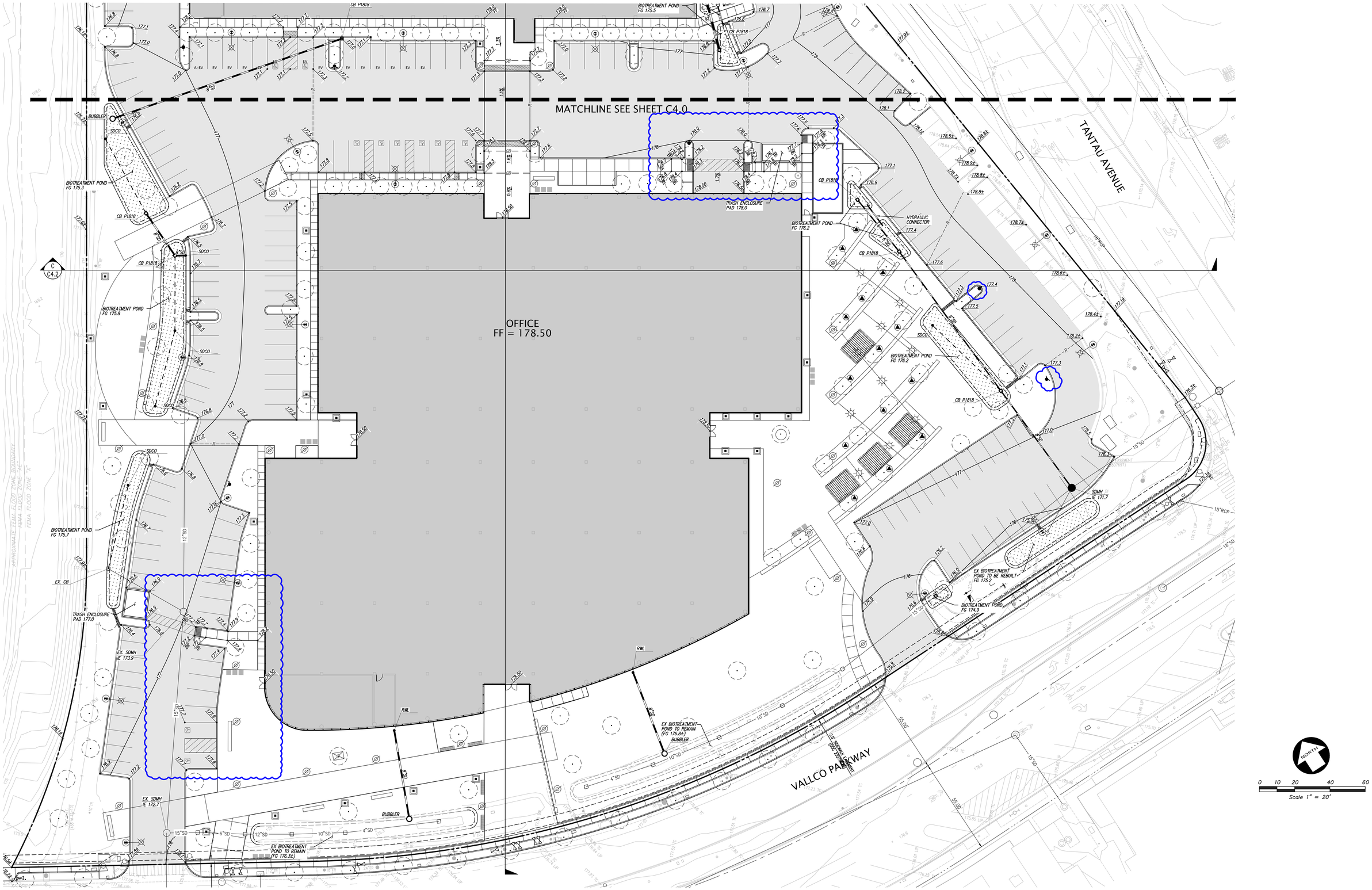

GRADING PLAN
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C4.1

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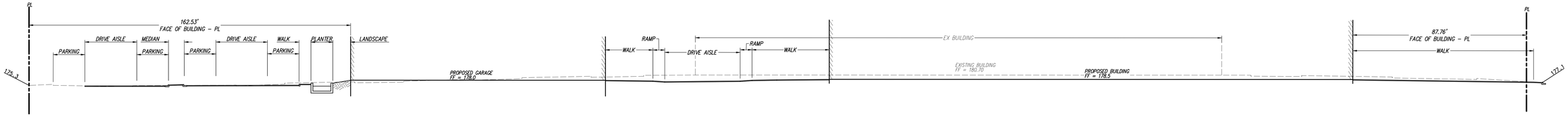
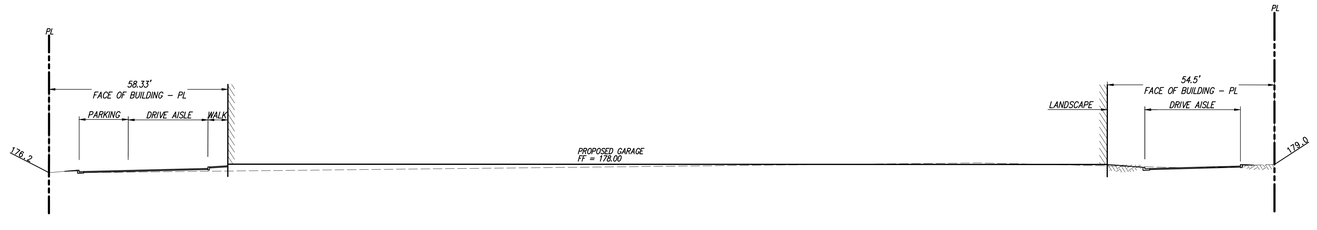
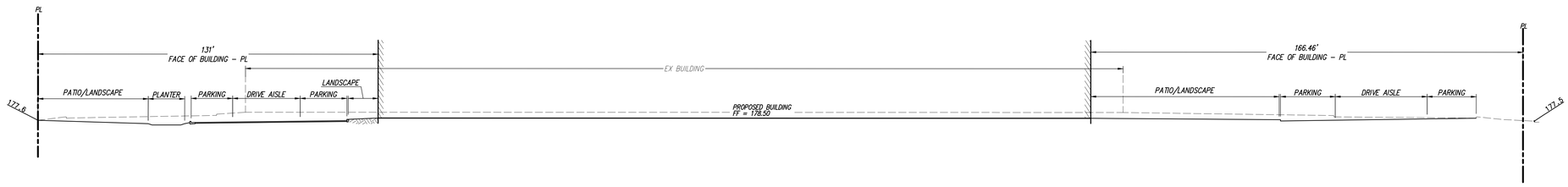


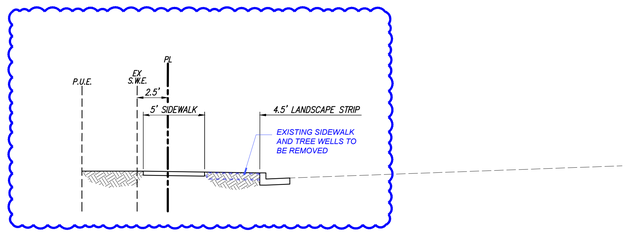
SECTION A–A
1"=20'



SECTION B–B
1"=20'



SECTION C–C
1"=20'



TYPICAL SIDEWALK SECTION – VALLCO PKWY
1"=5'

CROSS SECTIONS
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C4.2

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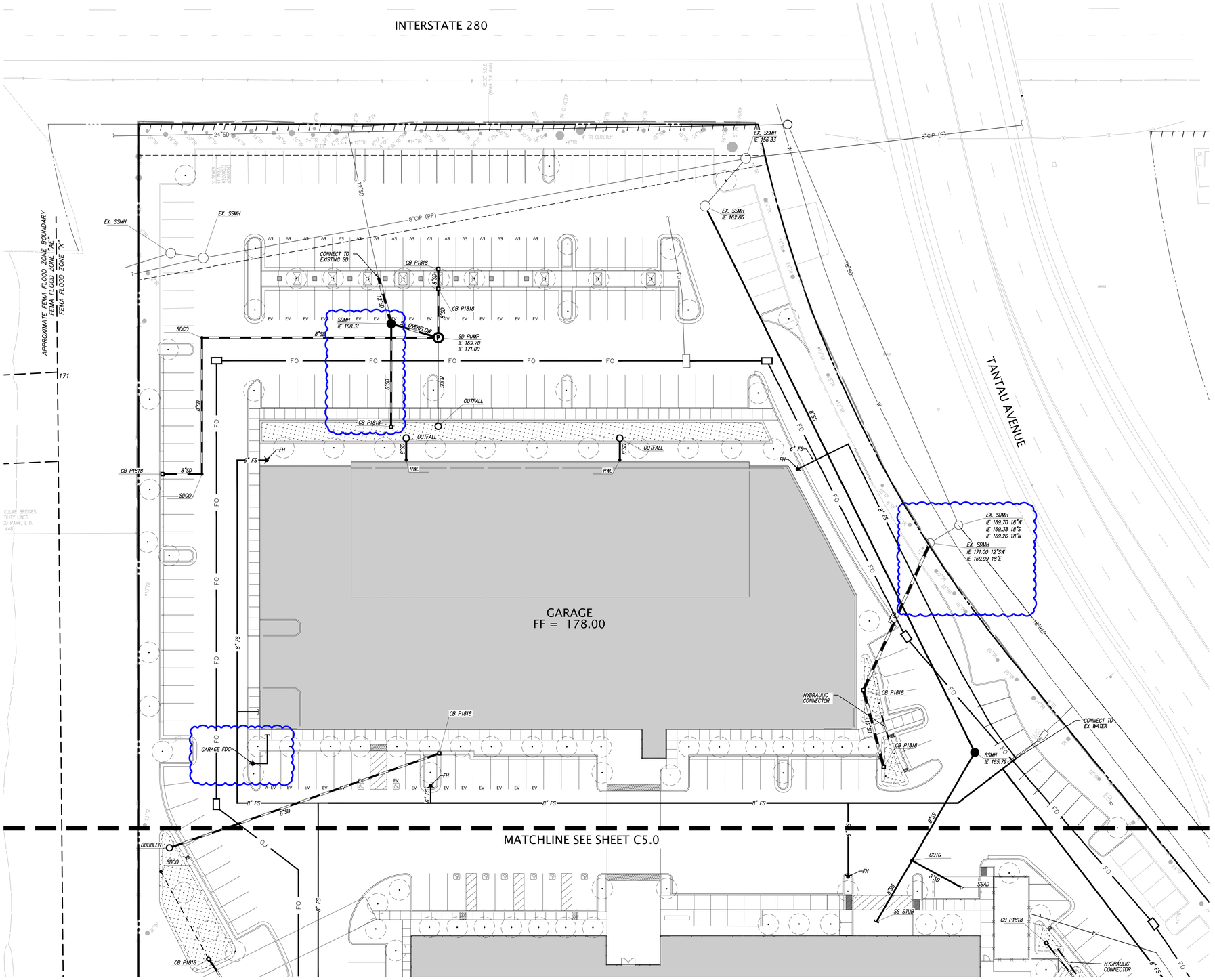

LEGEND

ASR	AUTOMATIC SPRINKLER RISER
FL	FLOW LINE
FF	FINISH FLOOR
PV	PAVEMENT
RE	RIM ELEVATION
TC	TOP OF CURB
WS	WATER SERVICE
23.8	SPOT ELEVATION
X X	EXISTING UTILITY TO BE ABANDONDED BY REMOVAL
FS	FIRE SERVICE
SS	SANITARY SEWER
COTG	CLEANOUT TO GRADE
X"SD	STORM DRAIN LINE
	AREA DRAIN
	STORM DRAIN CATCH BASIN
	STORM DRAIN JUNCTION BOX
	STORM DRAIN MANHOLE
	AUTOMATIC SPRINKLER RISER
	BACK FLOW PREVENTION DEVICE
	FIRE DEPARTMENT CONNECTION
	FIRE HYDRANT & VALVE
	POST INDICATOR VALVE
SSMH	SANITARY SEWER MANHOLE
	SINGLE CHECK VALVE
SDMH	STORM DRAIN MANHOLE
	WATER METER

UTILITY NOTES

1. BACKFILLING AND COMPACTION FOR ALL TRENCHES SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER.
2. CONTRACTOR TO VERIFY ALL EXISTING INVERT ELEVATIONS FOR STORM DRAIN AND SANITARY SEWER CONSTRUCTION PRIOR TO ANY SITE WORK. ALL WORK FOR STORM DRAIN AND SANITARY SEWER INSTALLATION SHALL BEGIN AT THE DOWNSTREAM CONNECTION POINT. THIS WILL ALLOW FOR ANY NECESSARY ADJUSTMENTS TO BE MADE PRIOR TO THE INSTALLATION OF THE ENTIRE LINE. IF THE CONTRACTOR FAILS TO BEGIN AT THE DOWNSTREAM CONNECTION POINT AND WORKS UPSTREAM, HE SHALL PROCEED AT HIS OWN RISK AND BE RESPONSIBLE FOR ANY ADJUSTMENTS NECESSARY.
3. ALL WORK ON-SITE AND IN THE PUBLIC RIGHT OF WAY SHALL CONFORM TO THE CITY OF CUPERTINO STANDARDS AND REQUIREMENTS.
4. GENERAL CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES. PROVIDE 6" MINIMUM BETWEEN PIPES CROSSING ELECTRICAL LINES HORIZONTALLY AND 12" MINIMUM BETWEEN PARALLEL PIPES CROSSING ELECTRICAL LINES.
5. FOR UTILITY MATERIALS AND TYPES, SEE THE PROJECT SPECIFICATIONS IF APPLICABLE AND NOT IDENTIFIED ON THESE PLANS.
6. WATER LINES SHALL BE 12" MINIMUM ABOVE SANITARY SEWER LINE AT ALL CROSSINGS.
7. MINIMUM COVER FOR WATER LINES IS 3.0 FEET.
8. EXISTING STREET LIGHTS ON VALLCO PARKWAY ALONG PROJECT FRONTAGE SHALL BE UPGRADED TO CURRENTLY CITY STANDARDS.
9. ALL CATCH BASINS SHALL BE OUTFITTED WITH TRASH CAPTURE DEVICES PER DETAIL 11 ON SHEET C2.1
10. ANY EXISTING OVERHEAD UTILITIES ON SITE OR ALONG PROJECT FRONTAGE SHALL BE UNDERGROUNDED.

UTILITY PLAN
Apple, Inc.

05.23.2022

REGISTERED PROFESSIONAL ENGINEER — NEKARIOS MATHEW — 71236 — CIVIL — STATE OF CALIFORNIA

C5.0

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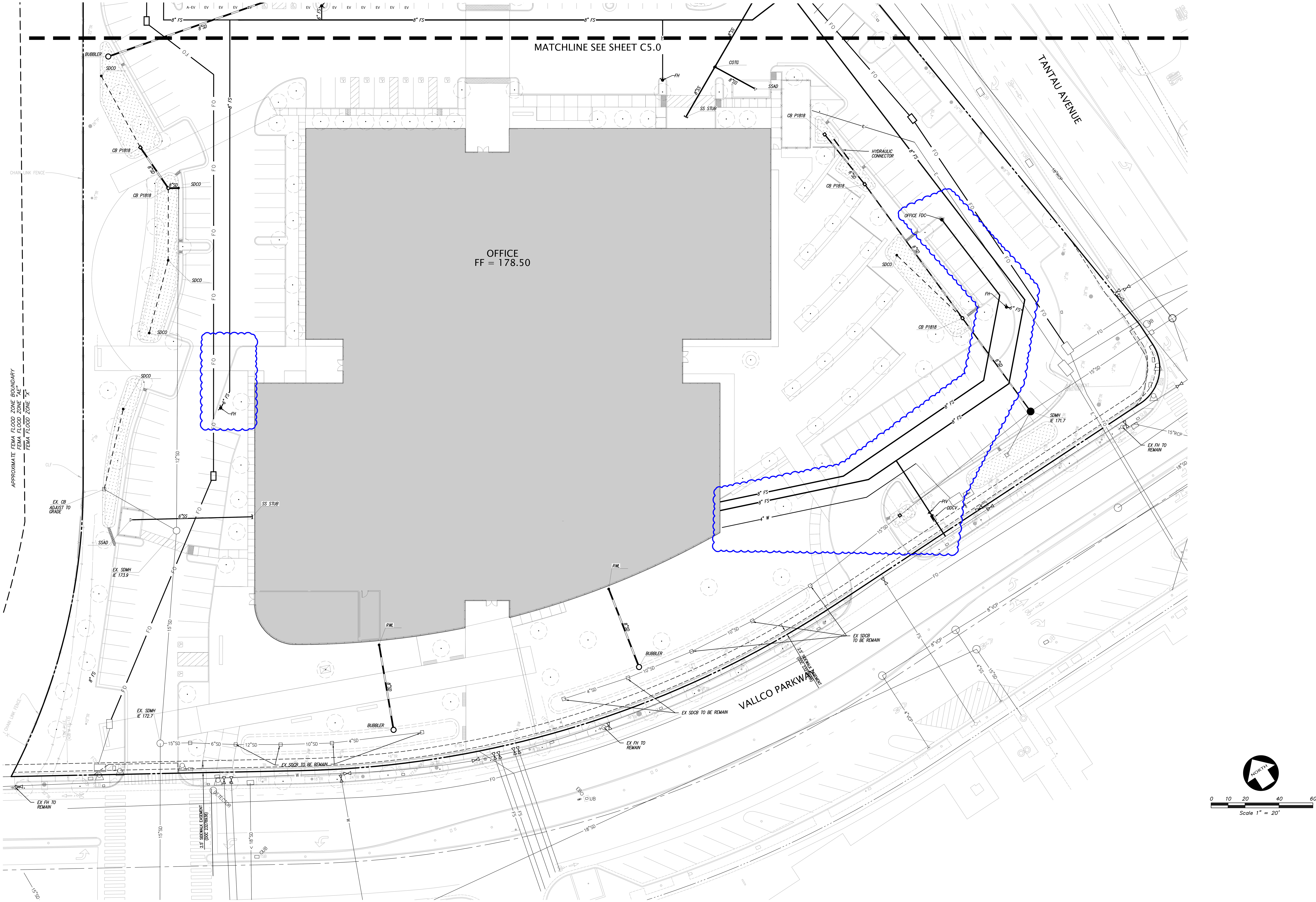

UTILITY PLAN
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05.23.2022

C5.1

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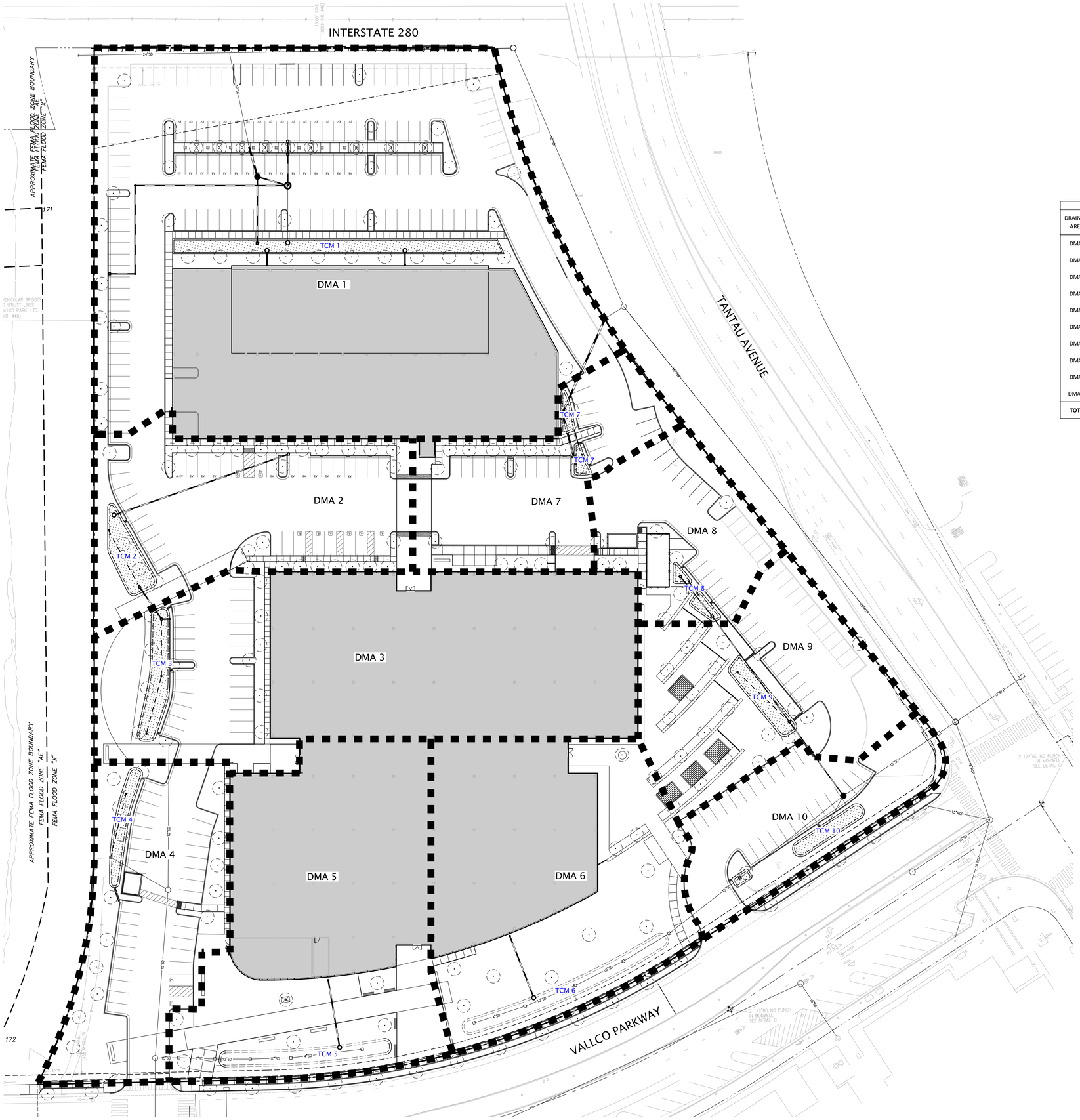

LEGEND

- TRIBUTARY AREA LIMITS
- FLOW THROUGH PLANTER
- BIO-RETENTION TREATMENT AREA
- DMA — DRAINAGE MANAGEMENT AREA
- TCM — TREATMENT CONTROL MEASURE

TREATMENT CONTROL SUMMARY TABLE

DRAINAGE AREAS	DRAINAGE AREA SIZE (SQ.FT)	PERVIOUS SURFACE (SQ.FT)	TYPE OF PERVIOUS SURFACE	IMPERVIOUS SURFACE (SQ.FT)	TYPE OF IMPERVIOUS SURFACE	SIZING METHOD	WATER QUANTITY REQUIRED (SQ.FT)	WATER QUANTITY PROVIDED (SQ.FT)	PONDING DEPTH (IN)	PROPOSED TREATMENT CONTROLS	CONF TO SIZE STANDARDS?
DMA 1	99,159	15,932	LANDSCAPE BIORETENTION	83,227	AC PAVING, CONCRETE, ROOF	COMBINATION FLOW-VOLUME	2,070	2,202	12	TCM 1 FLOW-THROUGH PLANTER	YES
DMA 2	26,453	6,173	LANDSCAPE BIORETENTION	20,280	AC PAVING, CONCRETE	UNIFORM INTENSITY (4% RULE)	1,058	1,228	6	TCM 2 BIOTREATMENT POND	YES
DMA 3	51,210	5,248	LANDSCAPE BIORETENTION	45,962	AC PAVING, CONCRETE, ROOF	COMBINATION FLOW-VOLUME	1,409	1,498	6	TCM 3 BIOTREATMENT POND	YES
DMA 4	23,014	13,153	LANDSCAPE BIORETENTION	9,861	AC PAVING, CONCRETE	COMBINATION FLOW-VOLUME	428	904	6	TCM 4 BIOTREATMENT POND	YES
DMA 5	40,061	7,555	LANDSCAPE BIORETENTION	32,506	AC PAVING, CONCRETE, ROOF	UNIFORM INTENSITY (4% RULE)	1,602	1,649	6	TCM 5 BIOTREATMENT POND	YES
DMA 6	37,390	15,595	LANDSCAPE BIORETENTION	21,795	AC PAVING, CONCRETE, ROOF	UNIFORM INTENSITY (4% RULE)	1,496	1,985	6	TCM 6 BIOTREATMENT POND	YES
DMA 7	18,100	3,560	LANDSCAPE BIORETENTION	14,540	AC PAVING, CONCRETE	COMBINATION FLOW-VOLUME	451	458	6	TCM 7 BIOTREATMENT POND	YES
DMA 8	13,847	3,779	LANDSCAPE BIORETENTION	10,068	AC PAVING, CONCRETE	COMBINATION FLOW-VOLUME	316	396	6	TCM 8 BIOTREATMENT POND	YES
DMA 9	23,038	9,600	LANDSCAPE BIORETENTION	13,438	AC PAVING, CONCRETE	UNIFORM INTENSITY (4% RULE)	922	1,015	6	TCM 9 BIOTREATMENT POND	YES
DMA 10	14,902	5,628	LANDSCAPE BIORETENTION	9,274	AC PAVING, CONCRETE	UNIFORM INTENSITY (4% RULE)	596	831	6	TCM 10 BIOTREATMENT POND	YES
TOTAL	**347,174**	**86,223**		**260,951**			**10,348**	**12,166**			

OVERALL TREATMENT AREA TOTALS

PERVIOUS AND IMPERVIOUS SURFACES COMPARISON TABLE			
	PROJECT PHASE NUMBER: (N/A, 1, 2, 3)		*N/A*
TOTAL SITE (ACRES):	*7.97 AC [347,175 SF]*	TOTAL AREA OF SITE DISTURBED (ACRES):	*7.97*
IMPERVIOUS SURFACES	EXISTING CONDITION OF DISTURBED AREA (SQUARE FEET):	PROPOSED CONDITION OF SITE AREA DISTURBED (SQUARE FEET):	
		REPLACED	NEW
BUILDING FOOTPRINT	74,490	74,490	37,063
STREETS & PARKING	174,480	115,706	0
S/W, PATIOS, PATHS ETC.	33,348	33,693	0
STREETS (PUBLIC)	0	0	0
STREETS (PRIVATE)	0	0	0
TOTAL IMPERVIOUS SURFACES:	*282,318*	*223,889*	*37,063*
PERVIOUS SURFACES			
LANDSCAPED AREAS	64,857	64,857	21,366
PERVIOUS PAVING	0	0	0
OTHER PERVIOUS SURFACES (GREEN ROOF, ETC.)	0	0	0
TOTAL PERVIOUS SURFACES:	*64,857*	*64,857*	*21,366*
TOTAL PROPOSED REPLACED + NEW IMPERVIOUS SURFACES:			*260,952*
TOTAL PROPOSED REPLACED + NEW PERVIOUS SURFACES:			*86,223*

STORMWATER CONTROL PLAN
Apple, Inc.

05.23.2022

REGISTERED PROFESSIONAL ENGINEER NIKHARIOS MATHOO 71236 CIVIL STATE OF CALIFORNIA

C6.0

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Worksheet for Calculating the Combination Flow and Volume Method

1.0 Project Information

1-1	Project Name:	Apple
1-2	City application ID:	Cupertino
1-3	Site Address or APN:	Site Name
1-4	Tract or Parcel Map No:	Parcel Number
1-5	Site Mean Annual Precip. (MAP)[1]	18.0 Inches
	Refer to the Mean Annual Precipitation Map in Appendix D of the C.3 Technical Guidance to determine the MAP, in inches, for the site.	Click here for map
1-6	Applicable Rain Gauge[2]	San Jose Airport (SCVURPPP)
	MAP adjustment factor is automatically calculated as:	1.29

These calculations are based on the combination flow and volume hydraulic sizing method provided in the Alameda, San Mateo, and Santa Clara County C.3 Technical Guidance Manuals. The steps presented below are explained in Chapter 5, Section 5.1 of the guidance manuals.

(The "Site Mean Annual Precipitation (MAP)" is divided by the MAP for the applicable rain gauge, shown in Table 5.2, below.)

2.0 Calculate Percentage of Impervious Surface for Drainage Management Area (DMA)

2-1 Name of DMA: **DMA 1**

For items 2-2 and 2-3, enter the areas in square feet for each type of surface within the DMA.

	Type of Surface	Area of surface type within DMA (Sq. Ft)	Adjust Pervious Surface	Effective Impervious Area
2-2	Impervious Surface	83,227	1.0	83,227
2-3	Pervious Surface*	15,932	0.1	1,593
	Total DMA Area (square feet) =	99,159		

**Self-Treating and Self-Retaining not included*

2-4 ***Total Effective Impervious Area (EIA)*** 84,820 **Square feet**

3.0 Calculate Unit Basin Storage Volume in Inches

Table 5-2: Unit Basin Storage Volumes (in inches) for 80 Percent Capture Using 48-Hour Drawdowns

Applicable Rain Gauge	Mean Annual Precipitation (in)	Unit Basin Storage Volume (in) for Applicable Runoff Coefficients (Calculated for 100% Imperviousness)
San Jose Airport (SCVURPPP)	13.9	0.58
Palo Alto (SCVURPPP)	13.7	0.62
Palo Alto (SMCWPPP)	14.6	0.64
Gilroy (SCVURPPP)	18.2	1.00
Morgan Hill (SCVURPPP)	19.5	1.00
Boulder Creek (SMCWPPP)	55.9	2.04
La Honda (SMCWPPP)	24.4	0.86
Half Moon Bay (SMCWPPP)	25.92	0.82
San Francisco (SMCWPPP)	21	0.73
San Francisco Airport (SMCWPPP)	20.1	0.85
San Francisco Oceanside (SMCWPPP)	19.3	0.72
Oakland Airport (OWPAC)	18.35	1.00

3-1 ***Unit basin storage volume from Table 5.2:*** 0.58 **Inches**
(The coefficient for this method is 1.00, due to the conversion of any landscaping to effective impervious area)

3-2 ***Adjusted unit basin storage volume:*** 0.75 **Inches**
(The unit basin storage volume is adjusted by applying the MAP adjustment factor.)

3-3 ***Required Capture Volume (in cubic feet):*** 5,309 **Cubic feet**
(The adjusted unit basin sizing volume [inches] is multiplied by the size of the DMA and converted to feet)

4.0 Calculate the Duration of the Rain Event

4-1 Rainfall intensity 0.2 **Inches per hour**

4-2 Divide Item 3-2 by Item 4-1 3.76 **Hours of Rain Event Duration**

5.0 Preliminary Estimate of Surface Area of Treatment Measure

5-1 4% of DMA impervious surface 3,393 **Square feet**

5-2 3% of DMA impervious surface 2,545 **Square feet**

5-3 Volume of treated runoff for area in Item 5-2 3,982 **Cubic feet** (Item 5-2 * 5 inches per hour * 1/12 * Item 4-2)

6.0 Initial Adjustment of Depth of Surface Ponding Area

6-1 Subtract Item 5-3 from Item 3-3 1,327 **Cubic feet** (Amount of runoff to be stored in ponding area)

6-2 Divide Item 6-1 by Item 5-2 0.5 **Feet** (Depth of stored runoff in surface ponding area)

6-3 Convert Item 6-2 from ft to inches 6.3 **Inches** (Depth of stored runoff in surface ponding area)

6-4 If ponding depth in Item 6-3 meets your target depth of 6"-12", then Item 7-1 is equal to Item 5-2. If not, continue to Step 7-1.

7.0 Optimize Size of Treatment M 25

7-1 Enter an area larger or smaller than Item 5-2 based off plans. 2070 **Sq.ft.** (enter larger area if you need less ponding depth; smaller for more depth.)

7-2 Volume of treated runoff for area in Item 7-1 3,239 **Cubic feet** (Item 7-1 * 5 inches per hour * 1/12 * Item 4-2)

7-3 Subtract Item 7-2 from Item 3-3 2,070 **Cubic feet** (Amount of runoff to be stored in ponding area)

7-4 Divide Item 7-3 by Item 7-1 1.00 **Feet** (Depth of stored runoff in surface ponding area)

7-5 Convert Item 7-4 from feet to inches 12.0 **Inches** (Depth of stored runoff in surface ponding area)

If the ponding depth in Item 7-5 meets target, stop here. If not, repeat Steps 7-1 through 7-5 until you obtain target depth. If the slope of the drainage area > 1%,

7-6 then 11" will be the max ponding depth (slopes >1% will increase the ponding depth by 0.2 inches).

Worksheet for Calculating the Combination Flow and Volume Method

1.0 Project Information

1-1	Project Name:	Apple
1-2	City application ID:	Cupertino
1-3	Site Address or APN:	Site Name
1-4	Tract or Parcel Map No:	Parcel Number
1-5	Site Mean Annual Precip. (MAP)[1]	18.0 Inches
	Refer to the Mean Annual Precipitation Map in Appendix D of the C.3 Technical Guidance to determine the MAP, in inches, for the site.	Click here for map
1-6	Applicable Rain Gauge[2]	San Jose Airport (SCVURPPP)
	MAP adjustment factor is automatically calculated as:	1.29

These calculations are based on the combination flow and volume hydraulic sizing method provided in the Alameda, San Mateo, and Santa Clara County C.3 Technical Guidance Manuals. The steps presented below are explained in Chapter 5, Section 5.1 of the guidance manuals.

(The "Site Mean Annual Precipitation (MAP)" is divided by the MAP for the applicable rain gauge, shown in Table 5.2, below.)

2.0 Calculate Percentage of Impervious Surface for Drainage Management Area (DMA)

2-1 Name of DMA: **DMA 3**

For items 2-2 and 2-3, enter the areas in square feet for each type of surface within the DMA.

	Type of Surface	Area of surface type within DMA (Sq. Ft)	Adjust Pervious Surface	Effective Impervious Area
2-2	Impervious Surface	45,962	1.0	45,962
2-3	Pervious Surface	5,248	0.1	525
	Total DMA Area (square feet) =	51,210		

2-4 ***Total Effective Impervious Area (EIA)*** 46,487 **Square feet**

3.0 Calculate Unit Basin Storage Volume in Inches

Table 5-2: Unit Basin Storage Volumes (in inches) for 80 Percent Capture Using 48-Hour Drawdowns

Applicable Rain Gauge	Mean Annual Precipitation (in)	Unit Basin Storage Volume (in) for Applicable Runoff Coefficients (Calculated for 100% Imperviousness)
San Jose Airport (SCVURPPP)	13.9	0.58
Palo Alto (SCVURPPP)	13.7	0.62
Palo Alto (SMCWPPP)	14.6	0.64
Gilroy (SCVURPPP)	18.2	1.00
Morgan Hill (SCVURPPP)	19.5	1.00
Boulder Creek (SMCWPPP)	55.9	2.04
La Honda (SMCWPPP)	24.4	0.86
Half Moon Bay (SMCWPPP)	25.92	0.82
San Francisco (SMCWPPP)	21	0.73
San Francisco Airport (SMCWPPP)	20.1	0.85
San Francisco Oceanside (SMCWPPP)	19.3	0.72
Oakland Airport (OWPAC)	18.35	1.00

3-1 ***Unit basin storage volume from Table 5.2:*** 0.58 **Inches**
(The coefficient for this method is 1.00, due to the conversion of any landscaping to effective impervious area)

3-2 ***Adjusted unit basin storage volume:*** 0.75 **Inches**
(The unit basin storage volume is adjusted by applying the MAP adjustment factor.)

3-3 ***Required Capture Volume (in cubic feet):*** 2,910 **Cubic feet**
(The adjusted unit basin sizing volume [inches] is multiplied by the size of the DMA and converted to feet)

4.0 Calculate the Duration of the Rain Event

4-1 Rainfall intensity 0.2 **Inches per hour**

4-2 Divide Item 3-2 by Item 4-1 3.76 **Hours of Rain Event Duration**

5.0 Preliminary Estimate of Surface Area of Treatment Measure

5-1 4% of DMA impervious surface 1,859 **Square feet**

5-2 3% of DMA impervious surface 1,395 **Square feet**

5-3 Volume of treated runoff for area in Item 5-2 2,182 **Cubic feet** (Item 5-2 * 5 inches per hour * 1/12 * Item 4-2)

6.0 Initial Adjustment of Depth of Surface Ponding Area

6-1 Subtract Item 5-3 from Item 3-3 727 **Cubic feet** (Amount of runoff to be stored in ponding area)

6-2 Divide Item 6-1 by Item 5-2 0.5 **Feet** (Depth of stored runoff in surface ponding area)

6-3 Convert Item 6-2 from ft to inches 6.3 **Inches** (Depth of stored runoff in surface ponding area)

6-4 If ponding depth in Item 6-3 meets your target depth of 6"-12", then Item 7-1 is equal to Item 5-2. If not, continue to Step 7-1.

7.0 Optimize Size of Treatment M 25

7-1 Enter an area larger or smaller than Item 5-2 1409 **Sq.ft.** (enter larger area if you need less ponding depth; smaller for more depth.)

7-2 Volume of treated runoff for area in Item 7-1 2,205 **Cubic feet** (Item 7-1 * 5 inches per hour * 1/12 * Item 4-2)

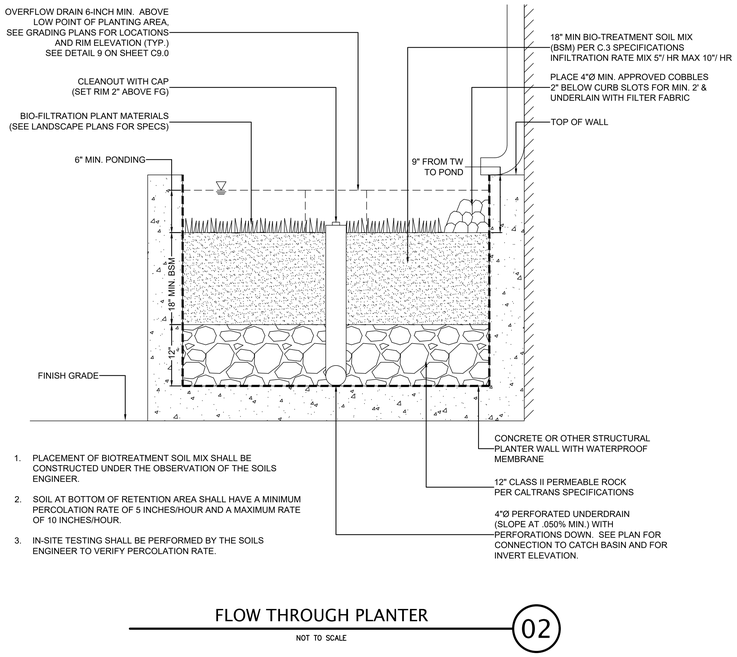
7-3 Subtract Item 7-2 from Item 3-3 705 **Cubic feet** (Amount of runoff to be stored in ponding area)

7-4 Divide Item 7-3 by Item 7-1 0.50 **Feet** (Depth of stored runoff in surface ponding area)

7-5 Convert Item 7-4 from feet to inches 6.0 **Inches** (Depth of stored runoff in surface ponding area)

If the ponding depth in Item 7-5 meets target, stop here. If not, repeat Steps 7-1 through 7-5 until you obtain target depth. If the slope of the drainage area > 1%,

7-6 then 11" will be the max ponding depth (slopes >1% will increase the ponding depth by 0.2 inches).



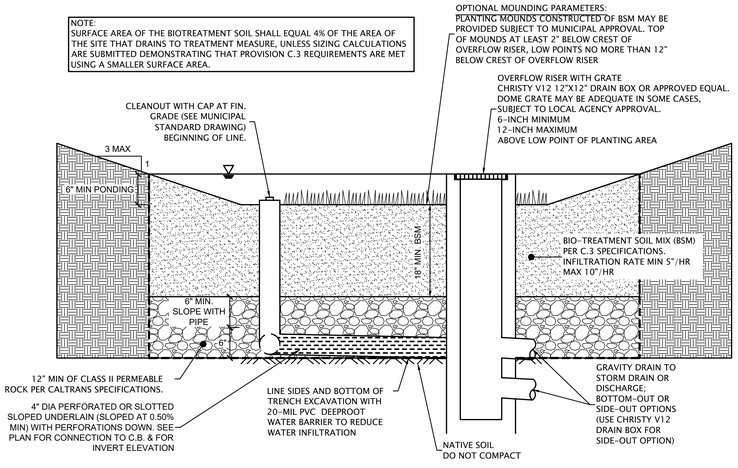
1. PLACEMENT OF BIOTREATMENT SOIL MIX SHALL BE CONSTRUCTED UNDER THE OBSERVATION OF THE SOILS ENGINEER.
2. SOIL AT BOTTOM OF RETENTION AREA SHALL HAVE A MINIMUM PERCOLATION RATE OF 5 INCHES/HOUR AND A MAXIMUM RATE OF 10 INCHES/HOUR.
3. IN-SITE TESTING SHALL BE PERFORMED BY THE SOILS ENGINEER TO VERIFY PERCOLATION RATE.

FLOW THROUGH PLANTER
NOT TO SCALE
02

STORMWATER CONTROL NOTES

1. THE EXISTING SITE SOILS CONSIST OF CLAY (TYPE D) SOILS.
2. POTENTIAL POLLUTANTS INCLUDE MOTOR VEHICLE LUBRICANTS, COOLANTS, DISC BRAKE DUST, LITTER AND DEBRIS. POLLUTANT SOURCE AREAS INCLUDE THE ASPHALT CONCRETE PARKING LOT AND DRIVE AISLES, THE ROOF OF THE BUILDING, AND THE SITE STORM DRAIN INLETS. ALL INLETS WILL BE MARKED "NO DUMPING - DRAINS TO BAY". THE PARKING LOT SHALL BE SWEPT REGULARLY TO PREVENT THE ACCUMULATION OF LITTER AND DEBRIS.
3. BIOTREATMENT SIZING IS BASED ON UNIFORM INTENSITY METHOD (THE SIMPLIFIED SIZING METHOD) PER SCVURPPP HANDBOOK CHAPTER 5. FINAL SIZING MAY BE BASED ON EITHER THE SIMPLIFIED SIZING METHOD OR COMBINATION FLOW/VOLUME METHODS ALLOWED IN CHAPTER 5.
4. BIOTREATMENT AREA SHOWN ARE SCHEMATIC AND WILL BE ADJUSTED DURING FINAL DESIGN.
5. ALL TREES SHOWN IN PONDS WILL CONFORM TO THE DESIGNATED SPECIES ALLOWED IN TABLE D-1 BY THE C.3 STORMWATER CONTROL DESIGN MANUAL. ALL PONDS HAVE BEEN ADEQUATELY SIZED TO ACCOMMODATE THE TREES SHOWN.
6. STORMWATER IS INTENDED TO ENTER BIOTREATMENT AREAS FROM PAVED AREAS VIA SURFACE FLOW. DOWNSPOUTS WILL BE DISCONNECTED AND DISCHARGE TO ADJACENT BIOTREATMENT PONDS.

NOTE:
SURFACE AREA OF THE BIOTREATMENT SOIL SHALL EQUAL 4% OF THE AREA OF THE SITE THAT DRAINS TO TREATMENT MEASURE. UNLESS SIZING CALCULATIONS ARE SUBMITTED DEMONSTRATING THAT PROVISION C.3 REQUIREMENTS ARE MET USING A SMALLER SURFACE AREA.



Worksheet for Calculating the Combination Flow and Volume Method

1.0 Project Information

1-1	Project Name:	Apple
1-2	City application ID:	Cupertino
1-3	Site Address or APN:	Site Name
1-4	Tract or Parcel Map No:	Parcel Number
1-5	Site Mean Annual Precip. (MAP)[1]	18.0 Inches
	Refer to the Mean Annual Precipitation Map in Appendix D of the C.3 Technical Guidance to determine the MAP, in inches, for the site.	Click here for map
1-6	Applicable Rain Gauge[2]	San Jose Airport (SCVURPPP)
	MAP adjustment factor is automatically calculated as:	1.29

These calculations are based on the combination flow and volume hydraulic sizing method provided in the Alameda, San Mateo, and Santa Clara County C.3 Technical Guidance Manuals. The steps presented below are explained in Chapter 5, Section 5.1 of the guidance manuals.

(The "Site Mean Annual Precipitation (MAP)" is divided by the MAP for the applicable rain gauge, shown in Table 5.2, below.)

2.0 Calculate Percentage of Impervious Surface for Drainage Management Area (DMA)

2-1 Name of DMA: **DMA 4**

For items 2-2 and 2-3, enter the areas in square feet for each type of surface within the DMA.

	Type of Surface	Area of surface type within DMA (Sq. Ft)	Adjust Pervious Surface	Effective Impervious Area
2-2	Impervious Surface	13,153	1.0	13,153
2-3	Pervious Surface	9,861	0.1	986
	Total DMA Area (square feet) =	23,014		

2-4 ***Total Effective Impervious Area (EIA)*** 14,139 **Square feet**

3.0 Calculate Unit Basin Storage Volume in Inches

Table 5-2: Unit Basin Storage Volumes (in inches) for 80 Percent Capture Using 48-Hour Drawdowns

Applicable Rain Gauge	Mean Annual Precipitation (in)	Unit Basin Storage Volume (in) for Applicable Runoff Coefficients (Calculated for 100% Imperviousness)
San Jose Airport (SCVURPPP)	13.9	0.58
Palo Alto (SCVURPPP)	13.7	0.62
Palo Alto (SMCWPPP)	14.6	0.64
Gilroy (SCVURPPP)	18.2	1.00
Morgan Hill (SCVURPPP)	19.5	1.00
Boulder Creek (SMCWPPP)	55.9	2.04
La Honda (SMCWPPP)	24.4	0.86
Half Moon Bay (SMCWPPP)	25.92	0.82
San Francisco (SMCWPPP)	21	0.73
San Francisco Airport (SMCWPPP)	20.1	0.85
San Francisco Oceanside (SMCWPPP)	19.3	0.72
Oakland Airport (OWPAC)	18.35	1.00

3-1 ***Unit basin storage volume from Table 5.2:*** 0.58 **Inches**
(The coefficient for this method is 1.00, due to the conversion of any landscaping to effective impervious area)

3-2 ***Adjusted unit basin storage volume:*** 0.75 **Inches**
(The unit basin storage volume is adjusted by applying the MAP adjustment factor.)

3-3 ***Required Capture Volume (in cubic feet):*** 885 **Cubic feet**
(The adjusted unit basin sizing volume [inches] is multiplied by the size of the DMA and converted to feet)

4.0 Calculate the Duration of the Rain Event

4-1 Rainfall intensity 0.2 **Inches per hour**

4-2 Divide Item 3-2 by Item 4-1 3.76 **Hours of Rain Event Duration**

5.0 Preliminary Estimate of Surface Area of Treatment Measure

5-1 4% of DMA impervious surface 566 **Square feet**

5-2 3% of DMA impervious surface 424 **Square feet**

5-3 Volume of treated runoff for area in Item 5-2 664 **Cubic feet** (Item 5-2 * 5 inches per hour * 1/12 * Item 4-2)

6.0 Initial Adjustment of Depth of Surface Ponding Area

6-1 Subtract Item 5-3 from Item 3-3 221 **Cubic feet** (Amount of runoff to be stored in ponding area)

6-2 Divide Item 6-1 by Item 5-2 0.5 **Feet** (Depth of stored runoff in surface ponding area)

6-3 Convert Item 6-2 from ft to inches 6.3 **Inches** (Depth of stored runoff in surface ponding area)

6-4 If ponding depth in Item 6-3 meets your target depth of 6"-12", then Item 7-1 is equal to Item 5-2. If not, continue to Step 7-1.

7.0 Optimize Size of Treatment M 25

7-1 Enter an area larger or smaller than Item 5-2 428 **Sq.ft.** (enter larger area if you need less ponding depth; smaller for more depth.)

7-2 Volume of treated runoff for area in Item 7-1 670 **Cubic feet** (Item 7-1 * 5 inches per hour * 1/12 * Item 4-2)

7-3 Subtract Item 7-2 from Item 3-3 215 **Cubic feet** (Amount of runoff to be stored in ponding area)

7-4 Divide Item 7-3 by Item 7-1 0.50 **Feet** (Depth of stored runoff in surface ponding area)

7-5 Convert Item 7-4 from feet to inches 6.0 **Inches** (Depth of stored runoff in surface ponding area)

If the ponding depth in Item 7-5 meets target, stop here. If not, repeat Steps 7-1 through 7-5 until you obtain target depth. If the slope of the drainage area > 1%,

7-6 then 11" will be the max ponding depth (slopes >1% will increase the ponding depth by 0.2 inches).

Worksheet for Calculating the Combination Flow and Volume Method

1.0 Project Information

1-1	Project Name:	Apple
1-2	City application ID:	Cupertino
1-3	Site Address or APN:	Site Name
1-4	Tract or Parcel Map No:	Parcel Number
1-5	Site Mean Annual Precip. (MAP)[1]	18.0 Inches
	Refer to the Mean Annual Precipitation Map in Appendix D of the C.3 Technical Guidance to determine the MAP, in inches, for the site.	Click here for map
1-6	Applicable Rain Gauge[2]	San Jose Airport (SCVURPPP)
	MAP adjustment factor is automatically calculated as:	1.29

These calculations are based on the combination flow and volume hydraulic sizing method provided in the Alameda, San Mateo, and Santa Clara County C.3 Technical Guidance Manuals. The steps presented below are explained in Chapter 5, Section 5.1 of the guidance manuals.

(The "Site Mean Annual Precipitation (MAP)" is divided by the MAP for the applicable rain gauge, shown in Table 5.2, below.)

2.0 Calculate Percentage of Impervious Surface for Drainage Management Area (DMA)

2-1 Name of DMA: **DMA 7**

For items 2-2 and 2-3, enter the areas in square feet for each type of surface within the DMA.

	Type of Surface	Area of surface type within DMA (Sq. Ft)	Adjust Pervious Surface	Effective Impervious Area
2-2	Impervious Surface	14,540	1.0	14,540
2-3	Pervious Surface	3,560	0.1	356
	Total DMA Area (square feet) =	18,100		

2-4 ***Total Effective Impervious Area (EIA)*** 14,896 **Square feet**

3.0 Calculate Unit Basin Storage Volume in Inches

Table 5-2: Unit Basin Storage Volumes (in inches) for 80 Percent Capture Using 48-Hour Drawdowns

Applicable Rain Gauge	Mean Annual Precipitation (in)	Unit Basin Storage Volume (in) for Applicable Runoff Coefficients (Calculated for 100% Imperviousness)
San Jose Airport (SCVURPPP)	13.9	0.58
Palo Alto (SCVURPPP)	13.7	0.62
Palo Alto (SMCWPPP)	14.6	0.64
Gilroy (SCVURPPP)	18.2	1.00
Morgan Hill (SCVURPPP)	19.5	1.00
Boulder Creek (SMCWPPP)	55.9	2.04
La Honda (SMCWPPP)	24.4	0.86
Half Moon Bay (SMCWPPP)	25.92	0.82
San Francisco (SMCWPPP)	21	0.73
San Francisco Airport (SMCWPPP)	20.1	0.85
San Francisco Oceanside (SMCWPPP)	19.3	0.72
Oakland Airport (OWPAC)	18.35	1.00

3-1 ***Unit basin storage volume from Table 5.2:*** 0.58 **Inches**
(The coefficient for this method is 1.00, due to the conversion of any landscaping to effective impervious area)

3-2 ***Adjusted unit basin storage volume:*** 0.75 **Inches**
(The unit basin storage volume is adjusted by applying the MAP adjustment factor.)

3-3 ***Required Capture Volume (in cubic feet):*** 932 **Cubic feet**
(The adjusted unit basin sizing volume [inches] is multiplied by the size of the DMA and converted to feet)

4.0 Calculate the Duration of the Rain Event

4-1 Rainfall intensity 0.2 **Inches per hour**

4-2 Divide Item 3-2 by Item 4-1 3.76 **Hours of Rain Event Duration**

5.0 Preliminary Estimate of Surface Area of Treatment Measure

5-1 4% of DMA impervious surface 596 **Square feet**

5-2 3% of DMA impervious surface 447 **Square feet**

5-3 Volume of treated runoff for area in Item 5-2 699 **Cubic feet** (Item 5-2 * 5 inches per hour * 1/12 * Item 4-2)

6.0 Initial Adjustment of Depth of Surface Ponding Area

6-1 Subtract Item 5-3 from Item 3-3 233 **Cubic feet** (Amount of runoff to be stored in ponding area)

6-2 Divide Item 6-1 by Item 5-2 0.5 **Feet** (Depth of stored runoff in surface ponding area)

6-3 Convert Item 6-2 from ft to inches 6.3 **Inches** (Depth of stored runoff in surface ponding area)

6-4 If ponding depth in Item 6-3 meets your target depth of 6"-12", then Item 7-1 is equal to Item 5-2. If not, continue to Step 7-1.

7.0 Optimize Size of Treatment M 25

7-1 Enter an area larger or smaller than Item 5-2 451 **Sq.ft.** (enter larger area if you need less ponding depth; smaller for more depth.)

7-2 Volume of treated runoff for area in Item 7-1 706 **Cubic feet** (Item 7-1 * 5 inches per hour * 1/12 * Item 4-2)

7-3 Subtract Item 7-2 from Item 3-3 227 **Cubic feet** (Amount of runoff to be stored in ponding area)

7-4 Divide Item 7-3 by Item 7-1 0.50 **Feet** (Depth of stored runoff in surface ponding area)

7-5 Convert Item 7-4 from feet to inches 6.0 **Inches** (Depth of stored runoff in surface ponding area)

If the ponding depth in Item 7-5 meets target, stop here. If not, repeat Steps 7-1 through 7-5 until you obtain target depth. If the slope of the drainage area > 1%,

7-6 then 11" will be the max ponding depth (slopes >1% will increase the ponding depth by 0.2 inches).

Worksheet for Calculating the Combination Flow and Volume Method

1.0 Project Information

1-1	Project Name:	Apple
1-2	City application ID:	Cupertino
1-3	Site Address or APN:	Site Name
1-4	Tract or Parcel Map No:	Parcel Number
1-5	Site Mean Annual Precip. (MAP)[1]	18.0 Inches
	Refer to the Mean Annual Precipitation Map in Appendix D of the C.3 Technical Guidance to determine the MAP, in inches, for the site.	Click here for map
1-6	Applicable Rain Gauge[2]	San Jose Airport (SCVURPPP)
	MAP adjustment factor is automatically calculated as:	1.29

These calculations are based on the combination flow and volume hydraulic sizing method provided in the Alameda, San Mateo, and Santa Clara County C.3 Technical Guidance Manuals. The steps presented below are explained in Chapter 5, Section 5.1 of the guidance manuals.

(The "Site Mean Annual Precipitation (MAP)" is divided by the MAP for the applicable rain gauge, shown in Table 5.2, below.)

2.0 Calculate Percentage of Impervious Surface for Drainage Management Area (DMA)

2-1 Name of DMA: **DMA 8**

For items 2-2 and 2-3, enter the areas in square feet for each type of surface within the DMA.

	Type of Surface	Area of surface type within DMA (Sq. Ft)	Adjust Pervious Surface	Effective Impervious Area
2-2	Impervious Surface	10,068	1.0	10,068
2-3	Pervious Surface	3,779	0.1	378
	Total DMA Area (square feet) =	13,847		

2-4 ***Total Effective Impervious Area (EIA)*** 10,446 **Square feet**

3.0 Calculate Unit Basin Storage Volume in Inches

Table 5-2: Unit Basin Storage Volumes (in inches) for 80 Percent Capture Using 48-Hour Drawdowns

Applicable Rain Gauge	Mean Annual Precipitation (in)	Unit Basin Storage Volume (in) for Applicable Runoff Coefficients (Calculated for 100% Imperviousness)
San Jose Airport (SCVURPPP)	13.9	0.58
Palo Alto (SCVURPPP)	13.7	0.62
Palo Alto (SMCWPPP)	14.6	0.64
Gilroy (SCVURPPP)	18.2	1.00
Morgan Hill (SCVURPPP)	19.5	1.00
Boulder Creek (SMCWPPP)	55.9	2.04
La Honda (SMCWPPP)	24.4	0.86
Half Moon Bay (SMCWPPP)	25.92	0.82
San Francisco (SMCWPPP)	21	0.73
San Francisco Airport (SMCWPPP)	20.1	0.85
San Francisco Oceanside (SMCWPPP)	19.3	0.72
Oakland Airport (OWPAC)	18.35	1.00

3-1 ***Unit basin storage volume from Table 5.2:*** 0.58 **Inches**
(The coefficient for this method is 1.00, due to the conversion of any landscaping to effective impervious area)

3-2 ***Adjusted unit basin storage volume:*** 0.75 **Inches**
(The unit basin storage volume is adjusted by applying the MAP adjustment factor.)

3-3 ***Required Capture Volume (in cubic feet):*** 654 **Cubic feet**
(The adjusted unit basin sizing volume [inches] is multiplied by the size of the DMA and converted to feet)

4.0 Calculate the Duration of the Rain Event

4-1 Rainfall intensity 0.2 **Inches per hour**

4-2 Divide Item 3-2 by Item 4-1 3.76 **Hours of Rain Event Duration**

5.0 Preliminary Estimate of Surface Area of Treatment Measure

5-1 4% of DMA impervious surface 418 **Square feet**

5-2 3% of DMA impervious surface 313 **Square feet**

5-3 Volume of treated runoff for area in Item 5-2 490 **Cubic feet** (Item 5-2 * 5 inches per hour * 1/12 * Item 4-2)

6.0 Initial Adjustment of Depth of Surface Ponding Area

6-1 Subtract Item 5-3 from Item 3-3 163 **Cubic feet** (Amount of runoff to be stored in ponding area)

6-2 Divide Item 6-1 by Item 5-2 0.5 **Feet** (Depth of stored runoff in surface ponding area)

6-3 Convert Item 6-2 from ft to inches 6.3 **Inches** (Depth of stored runoff in surface ponding area)

6-4 If ponding depth in Item 6-3 meets your target depth of 6"-12", then Item 7-1 is equal to Item 5-2. If not, continue to Step 7-1.

7.0 Optimize Size of Treatment M 25

7-1 Enter an area larger or smaller than Item 5-2 316 **Sq.ft.** (enter larger area if you need less ponding depth; smaller for more depth.)

7-2 Volume of treated runoff for area in Item 7-1 494 **Cubic feet** (Item 7-1 * 5 inches per hour * 1/12 * Item 4-2)

7-3 Subtract Item 7-2 from Item 3-3 159 **Cubic feet** (Amount of runoff to be stored in ponding area)

7-4 Divide Item 7-3 by Item 7-1 0.50 **Feet** (Depth of stored runoff in surface ponding area)

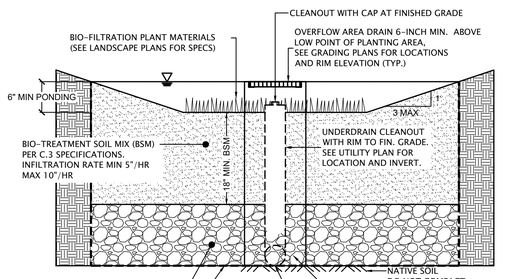
7-5 Convert Item 7-4 from feet to inches 6.1 **Inches** (Depth of stored runoff in surface ponding area)

If the ponding depth in Item 7-5 meets target, stop here. If not, repeat Steps 7-1 through 7-5 until you obtain target depth. If the slope of the drainage area > 1%,

7-6 then 11" will be the max ponding depth (slopes >1% will increase the ponding depth by 0.2 inches).

BIOTREATMENT POND (LINED) PROFILE VIEW

NOT TO SCALE



BIOTREATMENT POND (LINED) SECTION VIEW

NOT TO SCALE

BIOTREATMENT POND
NOT TO SCALE
01

STORMWATER CONTROL NOTES & DETAILS
Apple, Inc.

09.01.2021

C6.1

KIER+WRIGHT
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