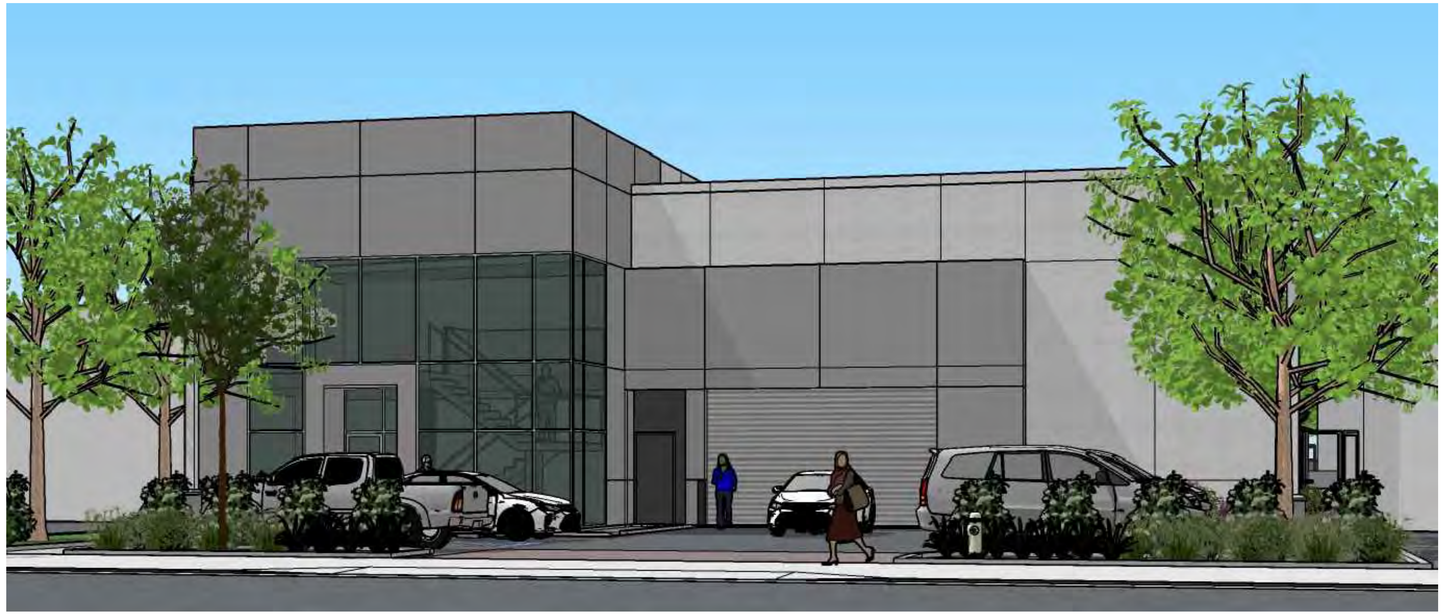
NORTHWEST PERSPECTIVE FROM WEST EL CAMINO REAL

TOYOTA SUNNYVALE

RECON CENTER REMODEL + EXPANSION

WEST ELEVATION

SOUTH (ALLEY) ELEVATION FROM WEST



WEST EL CAMINO REAL ELEVATION FROM EAST

WEST EL CAMINO REAL ELEVATION FROM NORTH WEST

PROJECT SUMMARY

Removal of the existing 4,047 s.f. North shop building plus 399 s.f. mezzanine and 2,570 s.f. South auto body shops (7,016 s.f. total) to be replaced with a new one story 8,767 s.f. Vehicle Reconditioning Service Center with 2,231 s.f. mezzanine and new trash enclosure.
10,998 s.f. total area. Use to be Auto Service.

ASSESSOR'S PARCEL #s: 201-19-036

ZONING: C2/ECR

GROSS LOT AREA: 22,497 s.f.
NET LOT AREA (INCL. NEW PEDESTRIAN REALM): 20,216 s.f.

EXISTING NET LOT AREA: 20,825 s.f.
EXISTING BUILDING AREA: 7,016 s.f.

EXISTING FLOOR AREA:

2,570 s.f.	SOUTH SHOP
4,047 s.f.	NORTH SHOP
399 s.f.	NORTH SHOP MEZZANINE
7,016 s.f.	TOTAL (31.8% LOT COVERAGE, 34.2% FAR)

PROPOSED FLOOR AREA:

8,767 s.f.	NEW SHOP
+ 2,231 s.f.	NEW MEZZANINE
10,998 s.f.	TOTAL (43.4% LOT COVERAGE, 54.4% FAR)

EXISTING BUILDING MAX HEIGHT: 18'-8"
NEW BUILDING MAX HEIGHT: 30'-0"

DIRECTORY

BUSINESS OWNER
Toyota Sunnyvale
898 W. El Camino Real
Sunnyvale, CA 94087
P (408) 245-6640

PROPERTY OWNER
Price-Simms, Inc.
Adam Simms
135 E. Sir Francis Drake Blvd.
Larkspur, CA 94939
P (415) 438-7129

PROJECT MANAGER
Integrity Design & Construction Services
P.O Box 1171
Solana Beach, CA 92075
P (949) 322-9196
www.integritydcs.com

ARCHITECT
TWM Architects & Planners
1011 C Street
San Rafael, CA 94901
P (415) 472-5770
www.twmarchitects.com

CIVIL ENGINEER
Civil Engineering Associates, Inc.
2055 Gateway Place, Suite 550
San Jose, CA 95110
P (408) 453-1066
www.ceainc.net

LANDSCAPE ARCHITECT
MacNair Landscape Architecture
P.O. Box 251
Kenwood, CA
P (707) 833-2288
www.macnairlandscapes.com

DRAWING INDEX

TWM Architects + Planners
1011 C Street, San Rafael, CA 94901
TEL 415-472-5770
FAX 415-472-5846
www.twmarchitects.com

TOYOTA SUNNYVALE RECON CENTER REMODEL + EXPANSION

928 West El Camino Real, Sunnyvale, CA 94087
APN 201-19-036

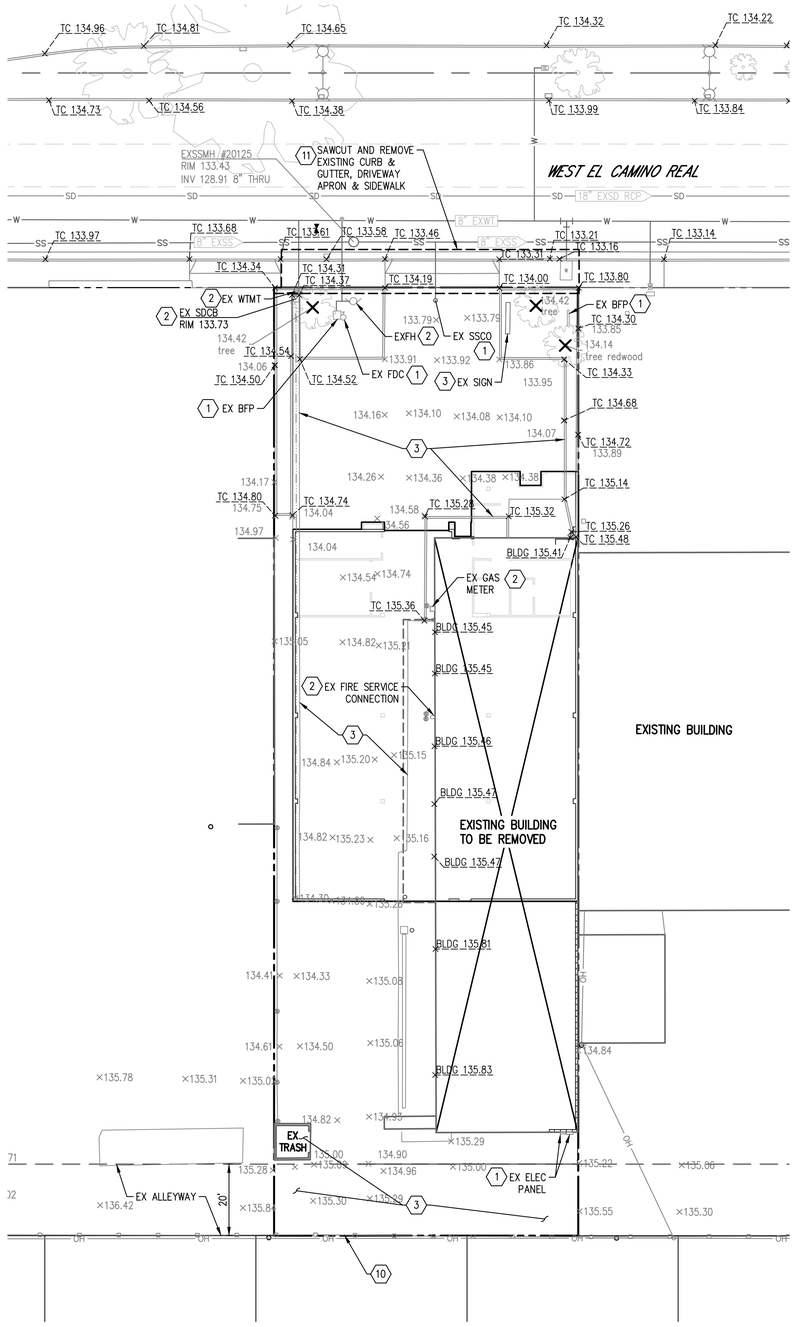
COVER SHEET

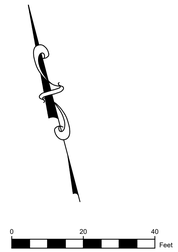
A0

SCALE: N.A.
DATE: DECEMBER 11 2020

TWM NO: 14-107.1

PLANNING SUBMITTAL - SUPPLEMENT - 11 DECEMBER 2020





SHEET INDEX

NOTES

1. PRESERVE AND PROTECT IDENTIFIED EXISTING SITE UTILITY.
2. DEMOLISH AND REMOVE IDENTIFIED EXISTING SITE UTILITY. COORDINATE WITH THE APPLICABLE UTILITY SERVICE PROVIDED FOR REQUIRED DISCONNECT PRIOR TO PERFORMING ANY DEMOLITION.
3. DEMOLISH ALL IDENTIFIED STRUCTURES AND SURFACE IMPROVEMENTS INCLUDING CURBS, WALKS, DRAINAGE CHANNELS, ASPHALT PARKING LOT AND ASSOCIATED APPURTENANCES.
4. ALL NOTED EXISTING UTILITY LOCATIONS ARE BASED ON AVAILABLE RECORD INFORMATION AND WILL NEED TO BE FIELD VERIFIED THROUGH THE UNDER GROUND SERVICE ALERT (USA) PROCESS PRIOR TO STATING ANY DEMOLITION WORK.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING ITEMS TO BE REMOVED PRIOR TO FURNISHING PROPOSAL FOR DEMOLITION.
6. IT SHALL BE THE DEVELOPER'S RESPONSIBILITY TO OBTAIN ALL NECESSARY PERMITS FOR DEMOLITION.
7. CONTRACTOR SHALL CONTACT BAY AREA AIR QUALITY CONTROL FOR THE "J" NUMBER AND FURNISH IT TO THE DEVELOPER.
8. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN DUST CONTROL AND CLEANUP AS REQUIRED BY THE CITY OF SUNNYVALE.
9. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE LEAD SURVEY AND ASBESTOS SURVEY FROM THE DEVELOPER AND COMPLETE ALL NECESSARY RECOMMENDATIONS PER SAID REPORTS.
10. PERIMETER FENCING SHALL REMAIN, EXCEPT AS NOTED.
11. CONTRACTOR SHALL BE RESPOSIBLE TO OBTAIN ANY REQUIRED ENCROACHMENT PERMIT FROM CALTRANS FOR WORK BEYOND THE LIP OF GUTTER

LEGEND

EXISTING	DESCRIPTION
	BOUNDARY
	PROPERTY LINE
	CENTER LINE
	CURB, GUTTER, SIDEWALK & DRIVEWAY
EXSS SS	SANITARY SEWER PIPE & MANHOLE
EXSD	STORM DRAIN PIPE & MANHOLE
EXWT	WATER MAIN
OH	OVERHEAD LINE
	CURB INLET
	FIELD INLET
	FIRE HYDRANT
	POWER POLE
	ELECTROLIER
	MISSION BELL ELECTROLIER
	SIGN
	ACCESS RAMP
	EXISTING TREE TO BE REMOVED

BENCHMARK:
CITY OF SUNNYVALE BM #71
BRASS DISC IN TOP OF CURB NEXT TO WHEEL CHAIR RAMP AT THE NORTHEAST CURB RETURN, INTERSECTION OF EL CAMINO REAL AND MARY AVENUE .
ELEV. 135.564 NAVD 88

NO.	DATE	REVISIONS	BY

Civil Engineering Associates
Civil Engineers • Planners • Surveyors
2055 Gateway Place
Suite 550
San Jose, CA 95110
T.: (408) 453-1066

PREPARED FOR:
TOYOTA OF SUNNYVALE
898 W EL CAMINO REAL
SUNNYVALE, CA 94087
(408) -

SUNNYVALE TOYOTA
SPECIAL DEVELOPMENT PACKAGE
EXISTING CONDITIONS AND DEMOLITION PLAN
928 W. EL CAMINO REAL
SUNNYVALE RECONDITIONING BUILDING CALIFORNIA

DATE	12/08/2020
SCALE	SEE PLAN
DESIGNED	AT
DRAWN	LRN
JOB NO.	19-105
SHEET	C1
OF	SHEETS

LEGEND

EXISTING	DESCRIPTION
	BOUNDARY
	EXISTING LOT LINE
	CENTER LINE
	EXISTING EASEMENT LINE
	ACCESSIBLE PATH OF TRAVEL
	EMERGENCY EGRESS PATHWAY
	HANDICAP PARKING STALL
	PERVIOUS WALKWAY
	STORMWATER TREATMENT
	PERVIOUS PARKING AREA

SITE DATA:

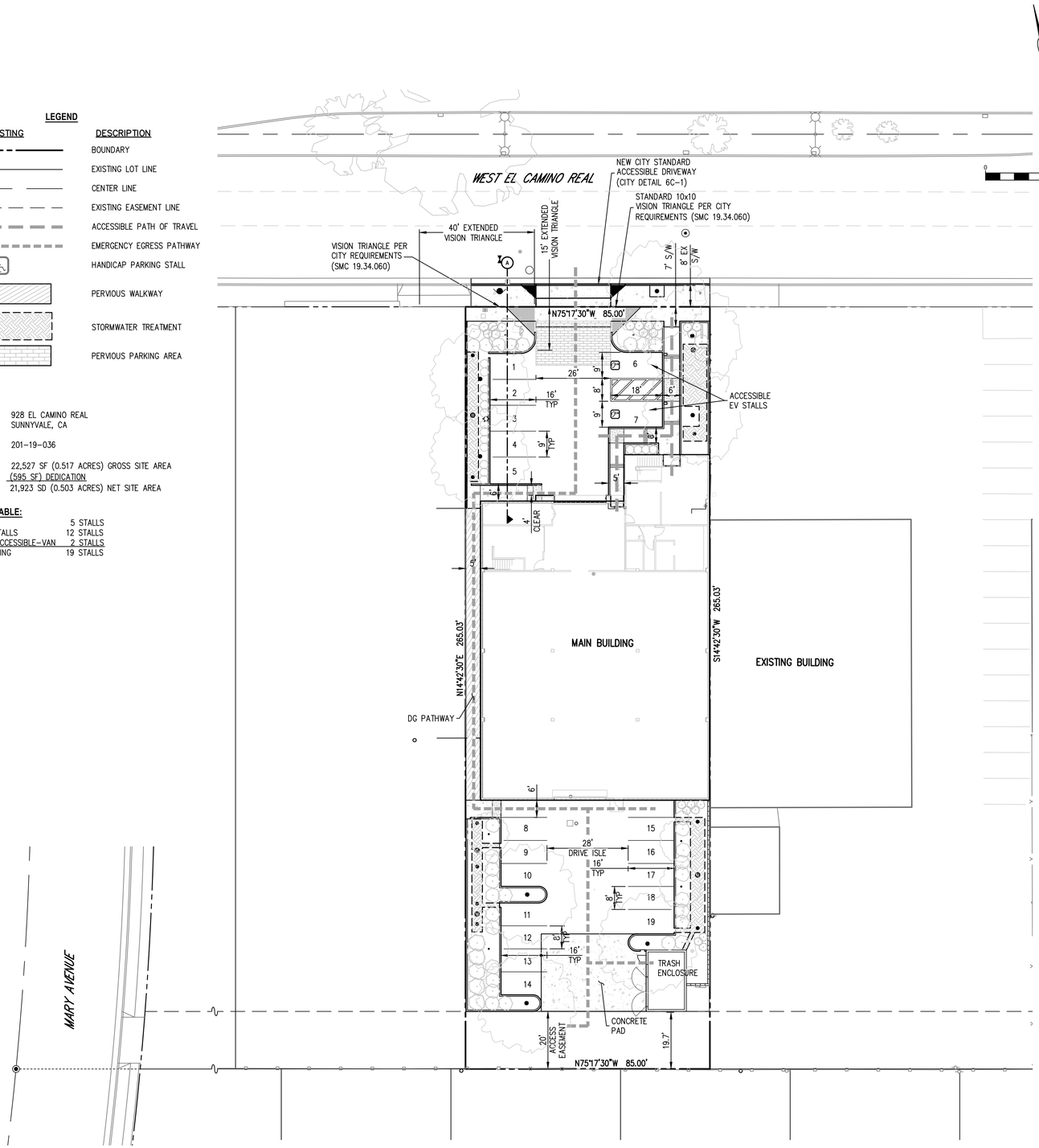
ADDRESS 928 EL CAMINO REAL
SUNNYVALE, CA

APN 201-19-036

AREA 22,527 SF (0.517 ACRES) GROSS SITE AREA
(595 SF) DEDICATION
21,923 SD (0.503 ACRES) NET SITE AREA

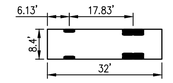
PARKING TABLE:

STANDARD	5 STALLS
COMPACT STALLS	12 STALLS
HANDICAP ACCESSIBLE-VAN	2 STALLS
TOTAL PARKING	19 STALLS

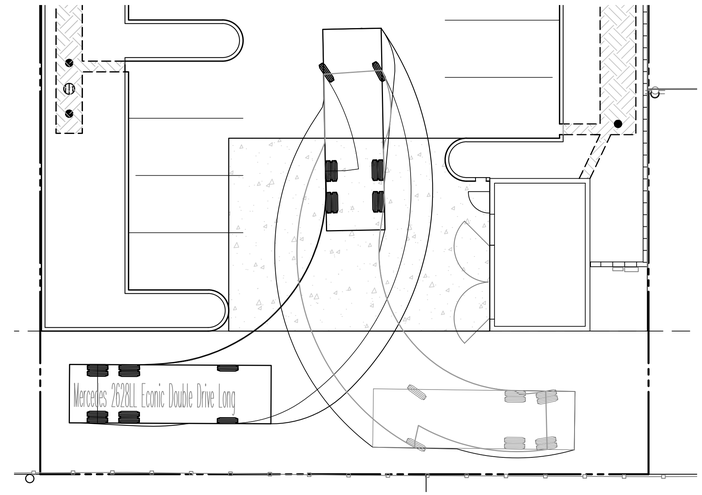


TRASH SERVICE ACCESS LEGEND AND NOTES

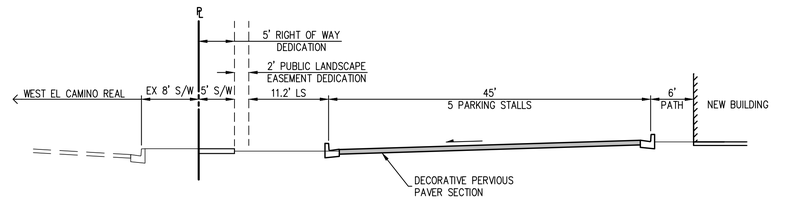
- 64 GALLONS YARD TRIMMING CART (2'-4" W x 2'-4" D x 3'-3" H)
- 64 GALLONS RECYCLING CART (2'-7" W x 3' D x 3'-5" H)
- 43 GALLONS TRASH CART (2'-1" W x 2'-1" D x 3'-6" H)



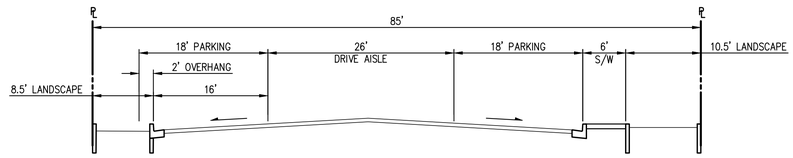
SUNNYVALE GARBAGE TRUCK DIMENSIONS



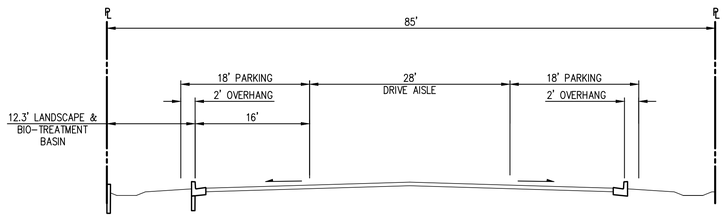
TRASH TRUCK TURNING TEMPLATE



SECTION - A
SCALE 1"=10'



SECTION AT FRONT PARKING
SCALE 1"=10'



SECTION AT REAR PARKING
SCALE 1"=10'

BASIS OF BEARINGS

THE BEARING NORTH 75°17'30" WEST AS FOUND MONUMENTED ON BLAIR AVENUE AND AS SHOWN ON THAT CERTAIN SUBDIVISION MAP ENTITLED "TRACT NO. 1342 – LA LINDA PARK" FILED FOR RECORD NOVEMBER 3, 1954 IN BOOK 53 OF MAPS AT PAGES 20-21, SANTA CLARA COUNTY RECORDS, WAS TAKEN AS THE BASIS OF BEARINGS FOR THIS SURVEY.

NO.	DATE	REVISIONS	BY

Civil Engineering Associates
Civil Engineers • Planners • Surveyors
2055 Gateway Place
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San Jose, CA 95110
T: (408) 453-1066

PREPARED FOR:
TOYOTA OF SUNNYVALE
898 W EL CAMINO REAL
SUNNYVALE, CA 94087
(408) -

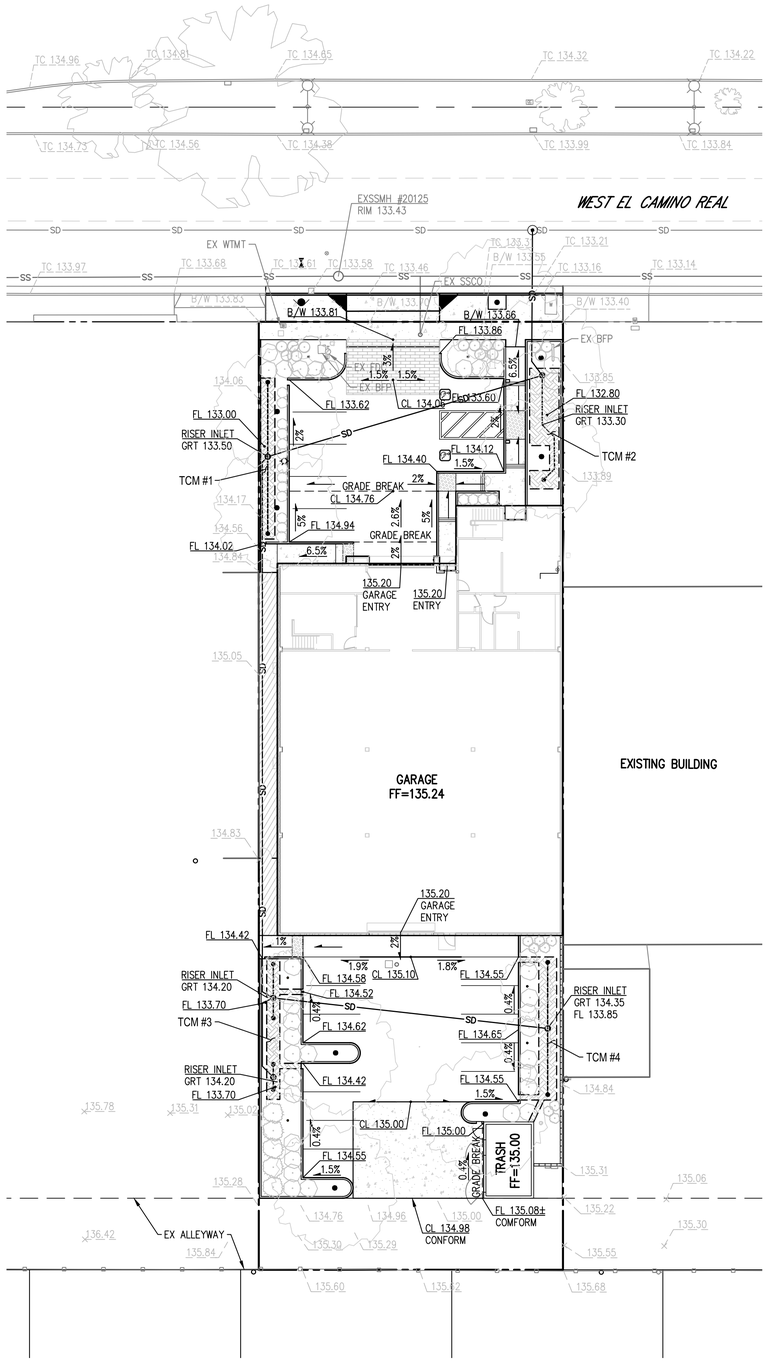
SUNNYVALE TOYOTA SPECIAL DEVELOPMENT PACKAGE RECONDITIONING BUILDING SUNNYVALE CALIFORNIA

CONCEPTUAL SITE PLAN
928 W. EL CAMINO REAL

DATE	12/08/2020
SCALE	SEE PLAN
DESIGNED	AT
DRAWN	LRN
JOB NO.	19-105
SHEET	C2
OF	SHEETS

ABBREVIATIONS

AB	AGGREGATE BASE
ABND	ABANDON
AC	ASPHALT CONCRETE
AD	AREA DRAIN
AP	ANGLE POINT
APN	ASSESSORS PARCEL NUMBER
ARV	AIR RELEASE VALVE
ASB	AGGREGATE SUBBASE
AU	ACCESSIBLE UNIT
BC	BEGIN CURVE
BK	BOOK
BW	BOTTOM OF WALL
B/W	BACK OF WALK
BFP	BACK FLOW PREVENTOR
BOL	BOLLARD
BLDG	BUILDING
BRK	BRICK
BS	BOTTOM OF STEP
C&G	CURB & GUTTER
CB	CATCH BASIN
CEN	CENTER
CL	CENTERLINE
CLF	CHAIN LINK FENCE
CO	CLEAN OUT
CONC	CONCRETE
CONST	CONSTRUCT
COR	CORNER
CR	CURB RAMP
DC	DEPRESSED CURB
DI	DRAINAGE INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DBL	DOUBLE
DS	DOWNSPOUT
DW	DRIVEWAY
EC	END CURVE
ESMT	EASEMENT
ELEC	ELECTRICAL
ELECT	ELECTROLIER
ENCL	ENCLOSURE
ENCR	ENCROACHING
EP	EDGE OF PAVEMENT
ER	END OF RETURN
EX	EXISTING
FB	FLUSH BAND
FD	FOUND
FDC	FIRE DEPARTMENT CONNECTION
FC	FACE OF CURB
FEN	FENCE
FF	FINISH FLOOR
FFG	FINISH FLOOR GARAGE
FG	FINISH GRADE
FH	FIRE HYDRANT
FI	FIELD INLET
FL	FLOWLINE
FS	FIRE SERVICE
F/W	FRONT OF WALK
GB	GRADE BREAK
GFF	GARAGE FINISH FLOOR
GL	GARAGE LIP
GRT	GRATE
GV	GAS VALVE
HP	HIGH POINT
IM	IMAGE
INT	INTERSECTION
INV	INVERT
IP	IRON PIPE
JP	JOINT POLE
JT	JOINT TRENCH
LAT	LATERAL
LP	LOW POINT
LS	LANDSCAPE
MH	MANHOLE
M	MAPS
MEAS	MEASURED
MON	MONUMENT
OR	OFFICIAL RECORDS
P	PAD
PG	PAGE
PLNT	PLANTER
PT	POINT
PIV	POST INDICATOR VALVE
PL	PROPERTY LINE
PP	POWER POLE
PS	PROTECTIVE SLOPE
PVC	POLYVINYL CHLORIDE PIPE
RC	ROLLED CURB
RCE	REGISTERED CIVIL ENGINEER
RCP	REINFORCED CONCRETE PIPE
RE	REEL
R&R	REMOVE AND REPLACE
RW	RECYCLED WATER
R/W	RIGHT OF WAY
SD	STORM DRAIN
SER	SERVICE
SS	SANITARY SEWER
SLB	STREET LIGHT BOX
STD	STANDARD
SQ	SQUARE
S/W	SIDEWALK
TC	TOP OF CURB
TDC	TOP OF DEPRESSED CURB
TEL	TELEPHONE
TG	TOP OF GUTTER
TRC	TOP OF ROLLED CURB
TS	TOP STEP
TSB	TRAFFIC SIGNAL BOX
TW	TOP OF WALL
TYP	TYPICAL
UB	UTILITY BOX
UTIL	UTILITY
VCP	VITRIFIED CLAY PIPE
VLT	VAULT
WB	WATER BOX
WM	WATER METER
WT	WATER
WV	WATER VALVE
WD	WOOD
XING	CROSSING



0 20 40 Feet

LEGEND

TO BE CONSTRUCTED	EXISTING	DESCRIPTION
		BOUNDARY
		CENTER LINE
		EASEMENT LINE
		CURB, GUTTER, SIDEWALK & DRIVEWAY
		ACCESSIBLE RAMP
		WATER VALVE
		CURB INLET
		FIELD INLET
		& AREA DRAIN
		FIRE HYDRANT
W ARV	W ARV	WATER METER & AIR RELEASE VALVE
		POWER POLE
		ELECTROLIER
		SURVEY MONUMENT
		SIGN
0.5%		DIRECTION OF FLOW & GRADIENT
		DIRECTION OF FLOW
		PERVIOUS PARKING AREA
		PERVIOUS WALKWAY
C.O. RISER INLET		STORMWATER TREATMENT

BENCHMARK:
CITY OF SUNNYVALE BM #71
BRASS DISC IN TOP OF CURB NEXT TO WHEEL CHAIR RAMP AT THE NORTHEAST CURB RETURN, INTERSECTION OF EL CAMINO REAL AND MARY AVENUE .
ELEV. 135.564

NO.	DATE	REVISIONS	BY

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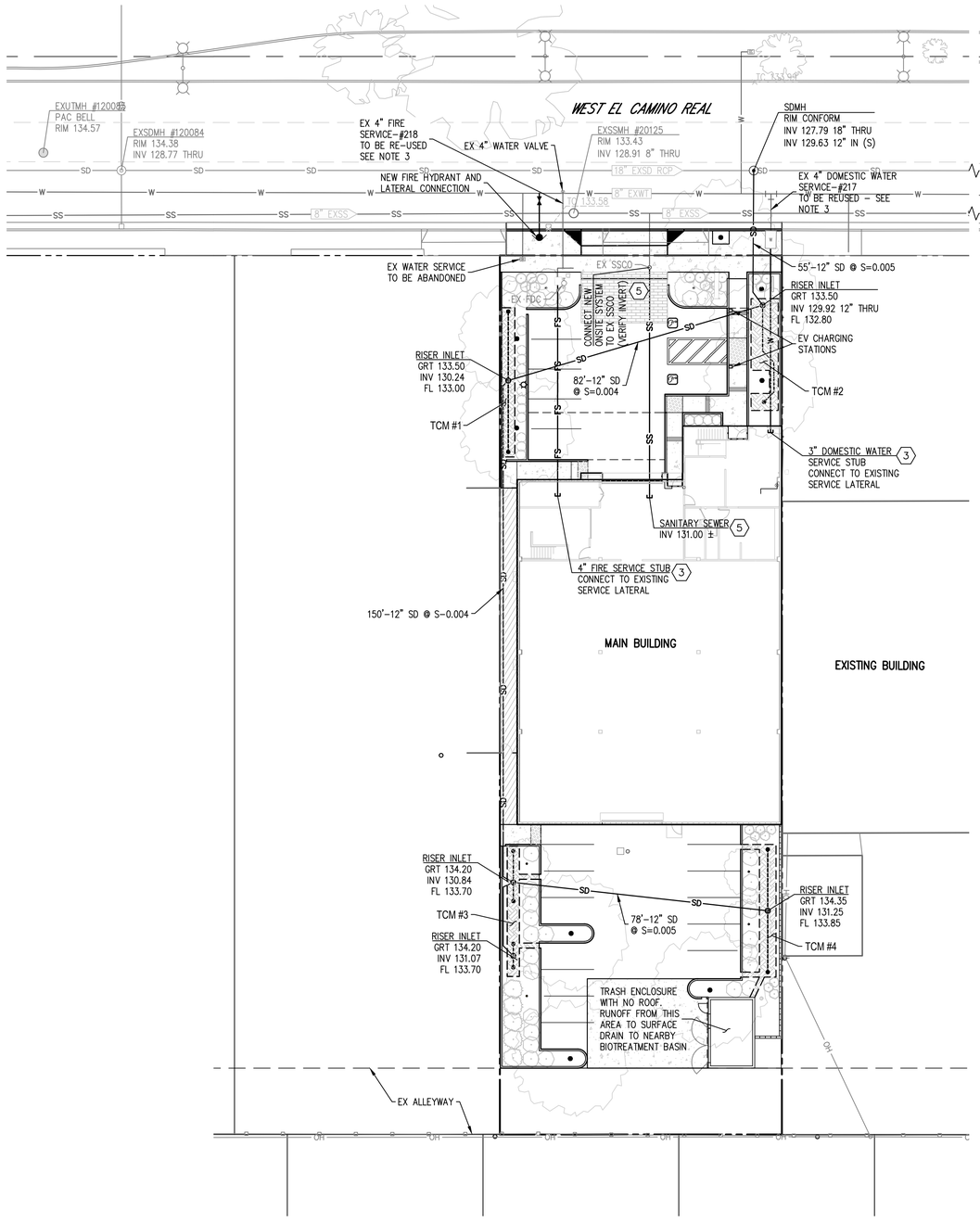
SUNNYVALE, CA 94087
(408) -

SUNNYVALE TOYOTA SPECIAL DEVELOPMENT PACKAGE SUNNYVALE RECONDITIONING BUILDING CALIFORNIA

CONEPTUAL GRADING PLAN
928 W. EL CAMINO REAL

DATE	12/08/2020
SCALE	SEE PLAN
DESIGNED	AT
DRAWN	LRN
JOB NO.	19-105
SHEET	C3
OF	SHEETS



LEGEND

TO BE CONSTRUCTED	EXISTING	DESCRIPTION
		BOUNDARY
		PROPERTY LINE
		RIGHT OF WAY
		CENTER LINE
		EASEMENT LINE
		CURB, GUTTER, SIDEWALK & DRIVEWAY
		ACCESSIBLE RAMP
SS	SS	SANITARY SEWER PIPE & MANHOLE
SD	SD	STORM DRAIN PIPE & MANHOLE
WT W	W	WATER MAIN & VALVE
RW RW	RW	RECYCLED WATER MAIN & VALVE
OH	OH	OVERHEAD LINE
		CURB INLET
		FIELD INLET
SD SD	SD SD	AREA DRAIN PIPE & AREA DRAIN
		FIRE HYDRANT
W ARV	W ARV	WATER METER & AIR RELEASE VALVE
		POWER POLE
		ELECTROLIER
		SURVEY MONUMENT
		SIGN
0.5%		DIRECTION OF FLOW & GRADIENT
		DIRECTION OF FLOW
		PERVIOUS PARKING AREA
		PERVIOUS WALKWAY
C.O. RISER INLET		STORMWATER TREATMENT BASIN

NOTES

1. THE OVERALL STORM CONVEYANCE SYSTEM WAS CALCULATED ASSUMING THE 10 YEAR STORM EVENT
2. ALL DRY UTILITY DESIGNS ARE BY OTHERS
3. EXISTING WATER SERVICES (BOTH FIRE AND DOMESTIC CONNECTIONS) PROPOSED TO BE PRESERVED AND RE–USED APPROVAL FOR THE USE OF THESE EXISTING SERVICES IS SUBJECT TO TESTING PER CITY OF SUNNYVALE REQUIREMENTS.
4. IRRIGATION SERVICE IS PROPOSED TO BRANCH OFF OF THE EXISTING DOMESTIC WATER SERVICE WITH A SEPARATE BACKFLOW PREVENTION DEVICE.
5. PROPOSED SANITARY CONNECTION TO BE VERIFIED. APPROVAL OF USE OF EXISTING SANITARY LATERAL IS SUBJECT TO VIDEO INSPECTION AND CONFIRMATION OF INVERT ELEVATION.

NO.	DATE	REVISIONS	BY

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898 W EL CAMINO REAL
SUNNYVALE, CA 94087
(408) -

SUNNYVALE TOYOTA SPECIAL DEVELOPMENT PACKAGE

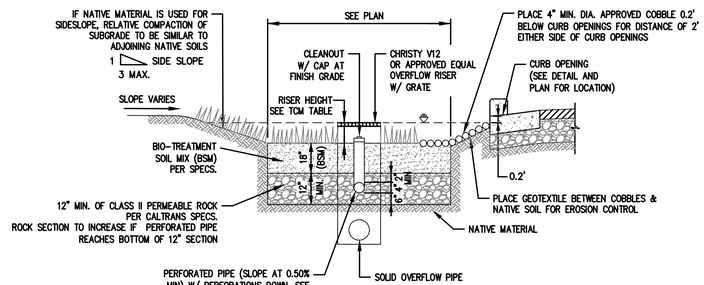
CONCEPTUAL UTILITY PLAN
928 W. EL CAMINO REAL

SUNNYVALE RECONDITIONING BUILDING CALIFORNIA

DATE	12/08/2020
SCALE	SEE PLAN
DESIGNED	AT
DRAWN	LRN
JOB NO.	19–105
SHEET	C4
OF	SHEETS

TABLE 1
ROUTINE MAINTENANCE ACTIVITIES FOR BIORETENTION AREAS

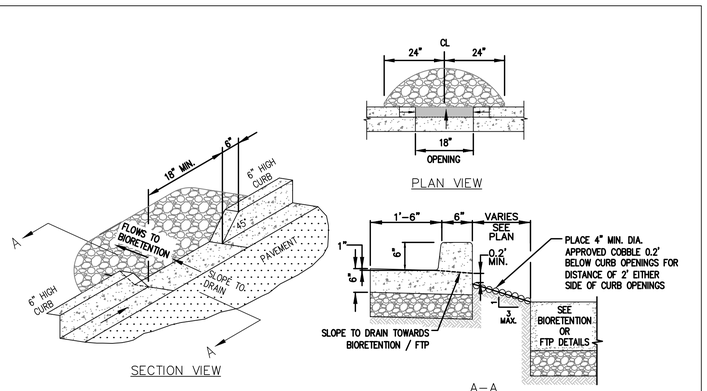
NO.	MAINTENANCE TASK	FREQUENCY OF TASK
1	REMOVE OBSTRUCTIONS, WEEDS, DEBRIS AND TRASH FROM BIORETENTION AREA AND ITS INLETS AND OUTLETS; AND DISPOSE OF PROPERLY.	QUARTERLY, OR AS NEEDED AFTER STORM EVENTS
2	INSPECT BIORETENTION AREA FOR STANDING WATER. IF STANDING WATER DOES NOT DRAIN WITHIN 2-3 DAYS, TILL AND REPLACE THE SURFACE BIOTREATMENT SOIL WITH THE APPROVED SOIL MIX AND REPLANT.	QUARTERLY, OR AS NEEDED AFTER STORM EVENTS
3	CHECK UNDERDRAINS FOR CLOGGING. USE THE CLEANOUT RISER TO CLEAN ANY CLOGGED UNDERDRAINS.	QUARTERLY, OR AS NEEDED AFTER STORM EVENTS
4	MAINTAIN THE IRRIGATION SYSTEM AND ENSURE THAT PLANTS ARE RECEIVING THE CORRECT AMOUNT OF WATER (IF APPLICABLE).	QUARTERLY
5	ENSURE THAT THE VEGETATION IS HEALTHY AND DENSE ENOUGH TO PROVIDE FILTERING AND PROTECT SOILS FROM EROSION. PRUNE AND WEED THE BIORETENTION AREA. REMOVE AND/OR REPLACE ANY DEAD PLANTS.	ANNUALLY, BEFORE THE WET SEASON BEGINS
6	USE COMPOST AND OTHER NATURAL SOIL AMENDMENTS AND FERTILIZERS INSTEAD OF SYNTHETIC FERTILIZERS, ESPECIALLY IF THE SYSTEM USES AN UNDERDRAIN.	ANNUALLY, BEFORE THE WET SEASON BEGINS
7	CHECK THAT MULCH IS AT APPROPRIATE DEPTH (2 - 3 INCHES PER SOIL SPECIFICATIONS) AND REPLENISH AS NECESSARY BEFORE WET SEASON BEGINS. IT IS RECOMMENDED THAT 2" – 3" OF ARBOR MULCH BE REAPPLIED EVERY YEAR.	ANNUALLY, BEFORE THE WET SEASON BEGINS
8	INSPECT THE ENERGY DISSIPATION AT THE INLET TO ENSURE IT IS FUNCTIONING ADEQUATELY, AND THAT THERE IS NO SCOUR OF THE SURFACE MULCH. REMOVE ACCUMULATED SEDIMENT.	ANNUALLY, BEFORE THE WET SEASON BEGINS
9	INSPECT OVERFLOW PIPE TO ENSURE THAT IT CAN SAFELY CONVEY EXCESS FLOWS TO A STORM DRAIN. REPAIR OR REPLACE DAMAGED PIPING.	ANNUALLY, BEFORE THE WET SEASON BEGINS
10	REPLACE BIOTREATMENT SOIL AND MULCH, IF NEEDED. CHECK FOR STANDING WATER, STRUCTURAL FAILURE AND CLOGGED OVERFLOWS. REMOVE TRASH AND DEBRIS. REPLACE DEAD PLANTS.	
11	INSPECT BIORETENTION AREA USING THE ATTACHED INSPECTION CHECKLIST.	ANNUALLY, BEFORE THE WET SEASON



SIZING METHOD: FLOW–COMBO

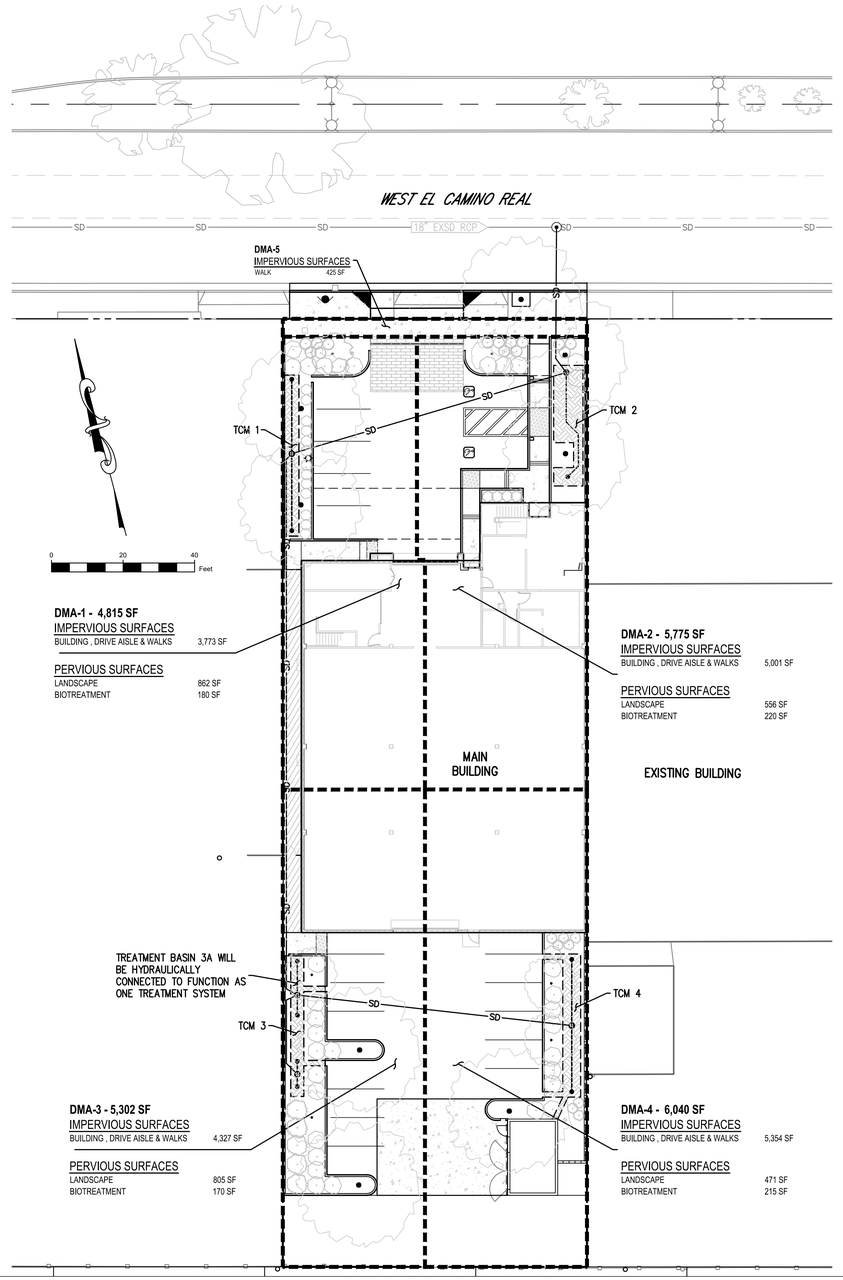
BIORETENTION BASIN W/O LINER

N.T.S.



CURB OPENING

N.T.S.



NOTES

1. PROPERTY INFORMATION

   SITE AREA = 22,527 SF – GROSS SITE AREA
   <595 SF> – DEDICATION
   21,932 SF – NET SITE AREA

2. EXISTING ONSITE IMPERVIOUS AREA = 21,313 S.F. (0.489 AC)
3. EXISTING ONSITE PERVIOUS AREA = 1,214 S.F. (0.028 AC)
4. PROPOSED ONSITE IMPERVIOUS AREA = 18,345 S.F. (0.421 AC)
5. PROPOSED ONSITE PERVIOUS AREA = 3,587 S.F. (0.082 AC)
6. THERE IS A 10.8% (2,373 S.F.) INCREASE OF PERVIOUS SURFACE AREA FOR THIS PROJECT.
7. RECEIVING SYSTEM FOR THE STORM WATER: CITY OF SUNNYVALE STORM WATER COLLECTION SYSTEM AND ULTIMATELY TO THE SAN FRANCISCO BAY – SOUTH VIA THE SUNNYVALE WEST OUTFALL.
8. THE ENTIRE NET SITE AREA 0.503 ACRES (21,932 S.F.)– OF THE SITE'S STORM WATER RUNOFF WILL BE DIRECTED TO BIOTREATMENT BASINS FOR TREATMENT.
9. THE OVERALL STORM CONVEYANCE SYSTEM WAS CALCULATED ASSUMING THE 10–YEAR STORM EVENT.
10. POLLUTANTS THAT MAY PRESENT AT THIS SITE AS A RESULT OF THIS DEVELOPMENT INCLUDE: SEDIMENTS, METALS, NUTRIENTS, BACTERIA, OIL, GREASE, AND ORGANIC COMPOUNDS. THE MAJORITY OF THE POLLUTANT SOURCES WILL BE LANDSCAPE AREAS AND ROOF SURFACES. RUNOFF FROM THESE AREAS WILL BE DIRECTED TO VEGETATED BIOTREATMENT BASINS.
11. THE FOLLOWING SOURCE CONTROL MEASURES WILL BE IMPLEMENTED WITHIN THE PROJECT SITE TO LIMIT THE GENERATION, DISCHARGE AND RUNOFF OF POLLUTANTS INTO THE STORM COLLECTION SYSTEM.
    - ALL AUTOMOTIVE MAINTENANCE BAYS WILL BE COVERED
    - BENEFICIAL LANDSCAPING.
    - MAINTENANCE (PAVEMENT SWEEPING, CATCH BASIN CLEANING, GOOD HOUSEKEEPING.
    - STORM DRAIN LABELING.
12. THE FOLLOWING SITE DESIGN MEASURES WILL BE IMPLEMENTED WITHIN THE PROJECT SITE TO LIMIT THE GENERATION, DISCHARGE AND RUNOFF OF POLLUTANTS INTO THE STORM COLLECTION SYSTEM.
    - MINIMIZE IMPERVIOUS SURFACE
    - DISCONNECT DOWNSPOUTS
13. A SWPPP PERMIT WILL NOT BE REQUIRED FOR THIS PROJECT AS THE AREA OF DISTURBANCE > 1 ACRE.
14. THE PARTY RESPONSIBLE FOR THE OPERATIONS AND MAINTENANCE OF THE STORMWATER CONTROL PLAN IS: TOYOTA OF SUNNYVALE ATTN: MIKE SHUM

LEGEND

- BIOTREATMENT AREAS
- PERVIOUS WALKWAY SURFACE
- DECORATIVE PERVIOUS PAVEMENT
- DMA BOUNDARY
- DMA — DRAINAGE MANAGEMENT AREA
- TCM — TREATMENT CONTROL MEASURE

Project Impervious Surface Data:

Description	Existing sq. ft.	Proposed sq. ft.
Impervious surface area (includes land covered by buildings, sheds, patios/covers, parking lots, streets, sidewalks, paved walkways and driveways)	21,313 sq. ft.	18,777 sq. ft.
Pervious Area (includes landscaping, pervious pavement, and natural buffer areas)	1,214 sq. ft.	3,750 sq. ft.
Total Project Area (a + b)	22,527 sq. ft.	22,527 sq. ft.
Percent Impervious (a ÷ c)x100	94.6 %	83.4 %
Percent Pervious (b÷ c) x 100	5.4 %	16.6 %
Impervious created or added		0 sq. ft.
Impervious area replaced		18,777 sq. ft.
Percent Replacement of existing impervious surface area ($g \div a_{(existing)}$) x 100 Note: if this value exceeds 50%, C.3 requirements apply to the entire site.		88.1 %
Estimated area of land disturbed during construction (includes clearing, grading or excavating)		22,527 sq. ft.

STANDARD STORMWATER CONTROL NOTES:

- STANDING WATER SHALL NOT REMAIN IN THE TREATMENT MEASURES FOR MORE THAN FIVE DAYS. TO PREVENT MOSQUITO GENERATION. SHOULD ANY MOSQUITO ISSUES ARISE, CONTACT THE SANTA CLARA VALLEY VECTOR CONTROL DISTRICT (DISTRICT). MOSQUITO LARVICIDES SHALL BE APPLIED ONLY WHEN ABSOLUTELY NECESSARY, AS INDICATED BY THE DISTRICT, AND THEN ONLY BY A LICENSED PROFESSIONAL OR CONTRACTOR. CONTACT INFORMATION FOR THE DISTRICT IS PROVIDED BELOW.
- DO NOT USE PESTICIDES OR OTHER CHEMICAL APPLICATIONS TO TREAT DISEASED PLANTS, CONTROL WEEDS OR REMOVED UNWANTED GROWTH. EMPLOY NON-CHEMICAL CONTROLS (BIOLOGICAL, PHYSICAL AND CULTURAL CONTROLS) TO TREAT A PEST PROBLEM. PRUNE PLANTS PROPERLY AND AT THE APPROPRIATE TIME OF YEAR. PROVIDE ADEQUATE IRRIGATION FOR LANDSCAPE PLANTS. DO NOT OVER WATER.

TREATMENT CONTROL MEASURE SUMMARY TABLE

DRAINAGE MANAGEMENT AREA	TCM#	LOCATION	TYPE OF TREATMENT USED	LID or NON-LID	SIZING METHOD	DRAINAGE AREA (SF)	IMPERVIOUS SURFACE (SF)	PERVIOUS SURFACE (SF)	BIORETENTION AREA REQUIRED (SF)	BIORETENTION AREA PROVIDED (SF)
1	1	ONSITE	BIOTREATMENT BASIN	LID	4% METHOD	4815	3773	1042	151	180
2	2	ONSITE	BIOTREATMENT BASIN	LID	4% METHOD	5775	5001	774	200	221
3	3	ONSITE	BIOTREATMENT BASIN	LID	4% METHOD	5302	4217	1085	169	162
4	4	ONSITE	BIOTREATMENT BASIN	LID	4% METHOD	6040	5354	686	214	215
5		OFFSITE	ROADWAY PROJECT	N/A	N/A	595	432	163	N/A	N/A
TOTAL						22527	18777	3750	734	778

NO.	DATE	REVISIONS	BY

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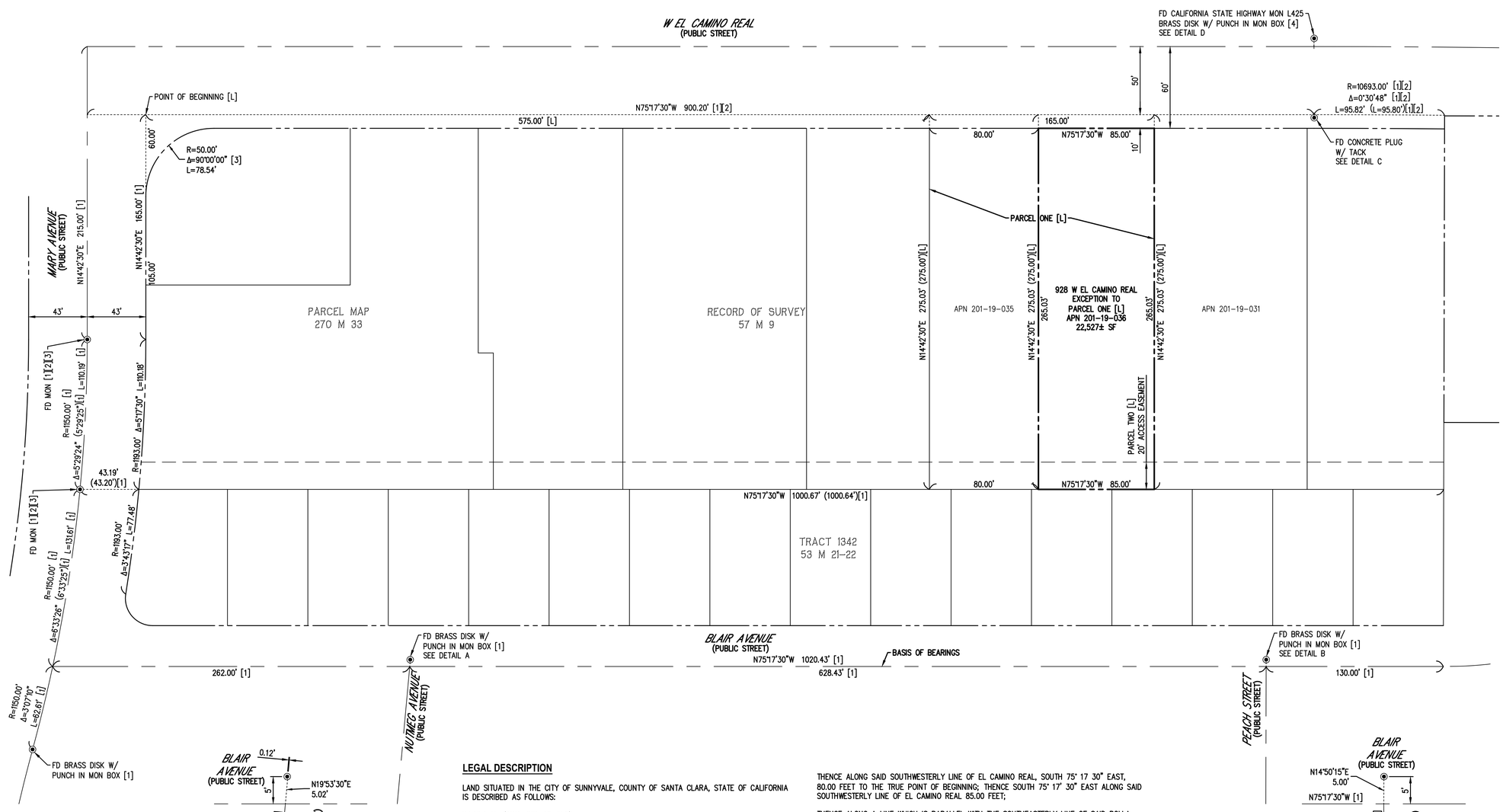
T.: (408) 453-1066

PREPARED FOR:
TOYOTA OF SUNNYVALE
898 W EL CAMINO REAL
SUNNYVALE, CA 94087
(408) -

SUNNYVALE TOYOTA SPECIAL DEVELOPMENT PACKAGE CALIFORNIA
STORMWATER MANAGEMENT PLAN
928 W. EL CAMINO REAL
SUNNYVALE RECONDITIONING BUILDING

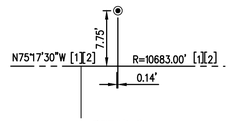
DATE	12/08/2020
SCALE	SEE PLAN
DESIGNED	AT
DRAWN	YN
JOB NO.	19–105

SHEET C5 OF SHEETS



DETAIL A
1"=10'

DETAIL D
1"=10'



DETAIL C
1"=10'

DETAIL B
1"=10'

LEGAL DESCRIPTION

LAND SITUATED IN THE CITY OF SUNNYVALE, COUNTY OF SANTA CLARA, STATE OF CALIFORNIA IS DESCRIBED AS FOLLOWS:

PARCEL B: (APN: 201-19-036)

PARCEL ONE:

THE SOUTHEASTERLY 85.00 FEET, FRONT AND REAR MEASUREMENTS, OF THE FOLLOWING DESCRIBED PROPERTY:

BEGINNING AT THE MOST EASTERLY CORNER OF THE PARCEL OF LAND CONVEYED BY SANTA CLARA INVESTMENT CORPORATION, A CORPORATION, TO EZIO C. ROLLA, ET UX, BY DEED DATED MAY 4, 1955 AND RECORDED MAY 5, 1955 IN BOOK 3160 OF OFFICIAL RECORDS, AT PAGE 556, BEING A POINT ON THE SOUTHWESTERLY LINE OF EL CAMINO REAL, AS IT NOW EXISTS, DISTANT THEREON SOUTH 75° 18' 30" EAST, 575 FEET FROM THE POINT OF INTERSECTION THEREOF WITH THE SOUTHEASTERLY LINE OF MARY AVENUE, AS SHOWN ON THE MAP ENTITLED, "TRACT NO. 1342 LA LINDA PARK," WHICH MAP WAS FILED FOR RECORD IN THE OFFICE OF THE RECORDER OF THE COUNTY OF SANTA CLARA, STATE OF CALIFORNIA ON NOVEMBER 3, 1954 IN BOOK 53 OF MAPS, AT PAGES 20 AND 21; THENCE ALONG SAID SOUTHWESTERLY LINE OF EL CAMINO REAL, SOUTH 75° 17' 30" EAST 165 FEET; THENCE ALONG A LINE WHICH IS PARALLEL WITH THE SOUTHEASTERLY LINE OF SAID ROLLA PARCEL, SOUTH 14° 42' 30" WEST, 275 FEET TO A POINT ON THE SOUTHWESTERLY LINE OF THE PARCEL OF LAND CONVEYED BY D'ARRIGO BROS. CO. OF CALIFORNIA, A CORPORATION, TO SANTA CLARA INVESTMENT CORPORATION, A CORPORATION, BY DEED DATED APRIL 12, 1954 AND RECORDED APRIL 14, 1954 IN BOOK 2853 OF OFFICIAL RECORDS, AT PAGE 326; THENCE ALONG SAID SOUTHWESTERLY LINE NORTH 75° 17' 30" WEST, 165 FEET TO THE MOST SOUTHERLY CORNER OF SAID ROLLA PARCEL; THENCE ALONG SAID SOUTHEASTERLY LINE OF SAID ROLLA PARCEL, NORTH 14° 42' 30" EAST, 275 FEET TO THE POINT OF BEGINNING.

EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF SUNNYVALE, A MUNICIPAL CORPORATION, BY DEED RECORDED APRIL 21, 1975 IN BOOK B369, PAGE 706, OFFICIAL RECORDS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE MOST EASTERLY CORNER OF THE PARCEL OF LAND CONVEYED BY SANTA CLARA INVESTMENT CORPORATION, A CORPORATION, TO EZIO C. ROLLA, ET UX, BY DEED DATED MAY 4, 1955, AND RECORDED MAY 5, 1955, IN BOOK 3160 OF OFFICIAL RECORDS, AT PAGE 556, BEING A POINT ON THE SOUTHWESTERLY LINE OF EL CAMINO REAL, AS IT NOW EXISTS, DISTANT THEREON SOUTH 75° 18' 30" EAST, 575 FEET FROM THE POINT OF INTERSECTION THEREOF WITH THE SOUTHEASTERLY LINE OF MARY AVENUE, AS SHOWN ON THE MAP ENTITLED, "TRACT NO. 1342 LA LINDA PARK", WHICH MAP WAS FILED FOR RECORD IN THE OFFICE OF THE RECORDER OF THE COUNTY OF SANTA CLARA, STATE OF CALIFORNIA, ON NOVEMBER 3, 1954, IN BOOK 53 OF MAPS, AT PAGES 20 AND 21.

THENCE ALONG SAID SOUTHWESTERLY LINE OF EL CAMINO REAL, SOUTH 75° 17 30" EAST, 80.00 FEET TO THE TRUE POINT OF BEGINNING; THENCE SOUTH 75° 17' 30" EAST ALONG SAID SOUTHWESTERLY LINE OF EL CAMINO REAL 85.00 FEET;

THENCE ALONG A LINE WHICH IS PARALLEL WITH THE SOUTHEASTERLY LINE OF SAID ROLLA PARCEL, SOUTH 14° 42' 30" WEST, 10.00 FEET TO A LINE PARALLEL WITH AND DISTANT SOUTHWESTERLY, MEASURED AT RIGHT ANGLES, 10.00 FEET FROM SAID SOUTHWESTERLY LINE OF EL CAMINO REAL;

THENCE NORTH 75° 17' 30" WEST ALONG SAID PARALLEL LINE 85.00 FEET;

THENCE ALONG THE SAID SOUTHEASTERLY LINE OF SAID ROLLA PARCEL, NORTH 14° 42' 30" EAST, 10.00 FEET TO THE TRUE POINT OF BEGINNING.

PARCEL TWO:

A NON-EXCLUSIVE EASEMENT APPURTENANT TO AND FOR THE BENEFIT OF THE HEREINBEFORE DESCRIBED PARCEL OF LAND, FOR THE PURPOSE OF INGRESS AND EGRESS AND FOR THE INSTALLATION AND MAINTENANCE OF PUBLIC UTILITIES OVER A STRIP OF LAND WITH A UNIFORM WIDTH OF 20 FEET THE SOUTHWESTERLY LINE OF WHICH IS DESCRIBED AS FOLLOWS:

BEGINNING AT THE POINT OF INTERSECTION OF THE EASTERLY LINE OF MARY AVENUE, AS SHOWN ON THE MAP ENTITLED, "TRACT NO. 1342 LA LINDA PARK", WHICH MAP WAS FILED FOR RECORD IN THE OFFICE OF THE RECORDER OF THE COUNTY OF SANTA CLARA, STATE OF CALIFORNIA, ON NOVEMBER 3, 1954 IN BOOK 53 OF MAPS, AT PAGES 20 AND 21, WITH THE SOUTHWESTERLY LINE OF SAID PARCEL SO CONVEYED TO SANTA CLARA INVESTMENT CORPORATION; THENCE ALONG SAID SOUTHWESTERLY LINE, SOUTH 75° 17' 30" EAST, 580.00 FEET TO THE MOST WESTERLY CORNER OF THE PARCEL OF LAND HEREINBEFORE DESCRIBED AND THE TERMINUS OF SAID EASEMENT.

BASIS OF BEARINGS

THE BEARING NORTH 75°17'30" WEST AS FOUND MONUMENTED ON BLAIR AVENUE AND AS SHOWN ON THAT CERTAIN SUBDIVISION MAP ENTITLED "TRACT NO. 1342 – LA LINDA PARK" FILED FOR RECORD NOVEMBER 3, 1954 IN BOOK 53 OF MAPS AT PAGES 20–21, SANTA CLARA COUNTY RECORDS, WAS TAKEN AS THE BASIS OF BEARINGS FOR THIS SURVEY.

MAP REFERENCES

[1] TRACT 1342 – 53 M 21–22

[2] RECORD OF SURVEY – 57 M 9

[3] PARCEL MAP – 270 M 33

[4] CALIFORNIA STATE HIGHWAY MONUMENT MAP – S–193.2

[L] LEGAL DESCRIPTION PER TITLE REPORT BY TSI TITLE COMPANY OF CALIFORNIA, INC., ORDER NUMBER 63802278 DATED OCTOBER 2, 2017

LEGEND

- BOUNDARY LINE
- RIGHT-OF-WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- BOUNDARY TIE
- ◉ FOUND MONUMENT (AS NOTED)
- (23.23') RECORD DATA
- [1] REFERENCE NUMBER

NO.	DATE	REVISIONS	BY

Civil Engineering Associates
Civil Engineers • Planners • Surveyors
2055 Gateway Place
Suite 550
San Jose, CA 95110
T: (408) 453-1066

PREPARED FOR:
TOYOTA OF SUNNYVALE
898 W EL CAMINO REAL
SUNNYVALE, CA 94087
(408) -

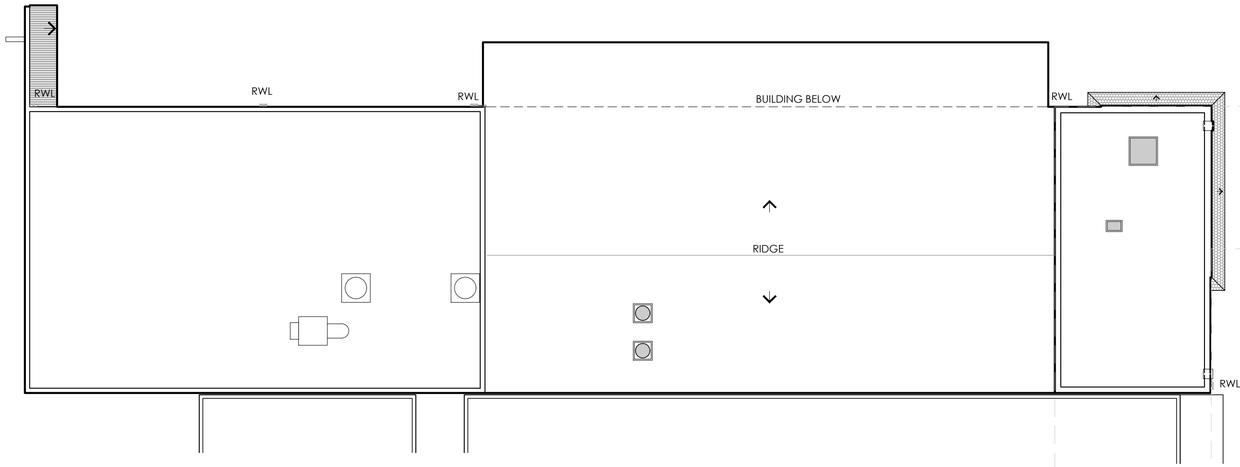
SUNNYVALE TOYOTA — SPECIAL DEVELOPMENT PACKAGE

BOUNDARY EXHIBIT
928 W. EL CAMINO REAL

SUNNYVALE — RECONDITIONING BUILDING — CALIFORNIA

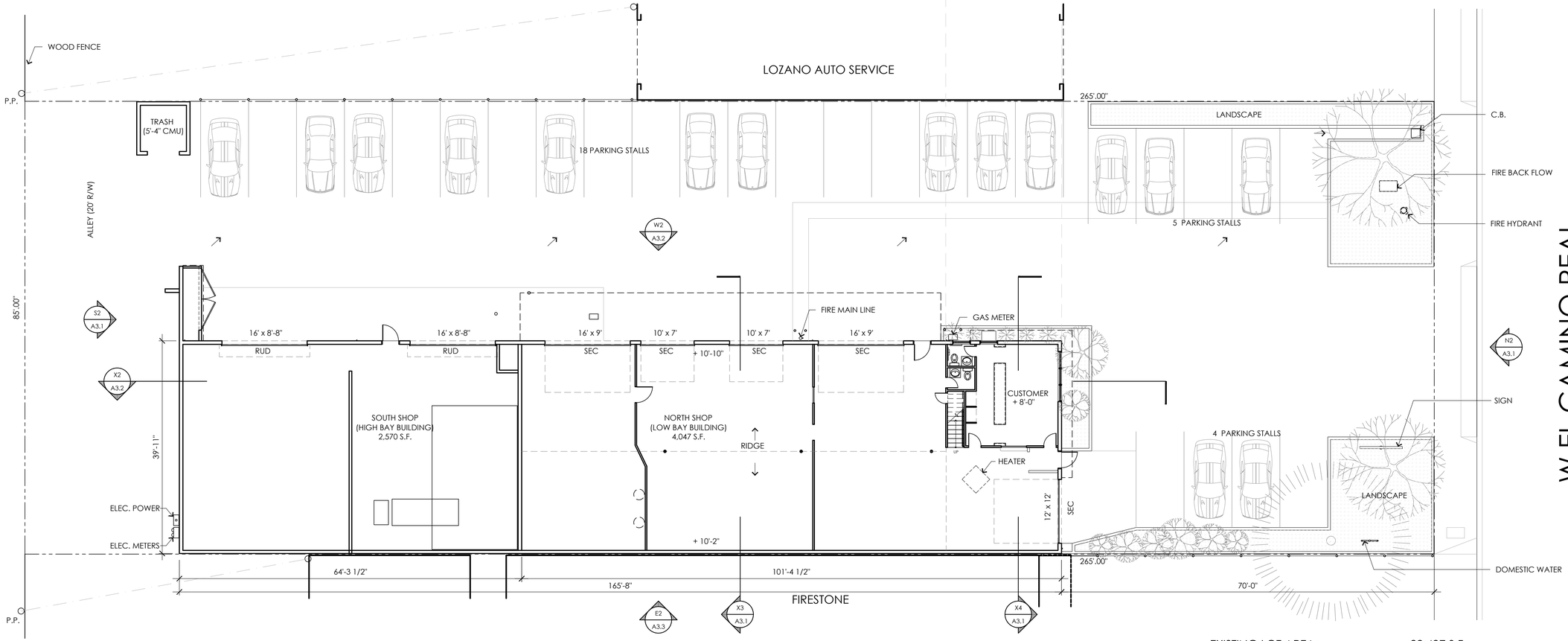
DATE	12/08/2020
SCALE	SEE PLAN
DESIGNED	ENG
DRAWN	CAD
JOB NO.	19-105

SHEET C6 OF SHEETS



EXISTING ROOF PLAN

EXISTING MEZZANINE PLAN



EXISTING SITE + FLOOR PLAN

EXISTING LOT AREA:	22,497 S.F.
EXISTING BUILDING AREA:	7,016 S.F.
EXISTING LANDSCAPE AREA:	1,440 S.F.

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TOYOTA SUNNYVALE RECON CENTER REMODEL + EXPANSION

928 West El Camino Real, Sunnyvale, CA 94087
APN 201-19-036

PLANS - EXISTING

A1.0

SCALE: 1"=10'
DATE: DECEMBER 11 2020

TWM NO: 14-107.1

PLANNING SUBMITTAL - SUPPLEMENT - 11 DECEMBER 2020

GENERAL NOTES:

1. ALL UTILITIES, INCLUDING BOUNDARY LINES AND SERVICE DROPS, ARE REQUIRED TO BE PLACED UNDERGROUND, EXCEPT AS EXEMPTED IN SUNNYVALE MUNICIPAL CODE 19.38.

2. NO STREET PARKING + LOADING PERMITTED. NO OVERNIGHT DELIVERIES. DELIVERIES TO BE DONE DURING HOURS OF OPERATION, MONDAY - SATURDAY 7A - 6P.

KEYNOTES:

(1) NEW ACCESSIBLE DRIVEWAY PER CITY DETAIL 6C-1 - S.C.D.

(2) PARKING ON W EL CAMINO REAL TO REMOVED FOR BICYCLE LANE INSTALLATION. PARKING REMOVAL SIGN TO BE POSTED.

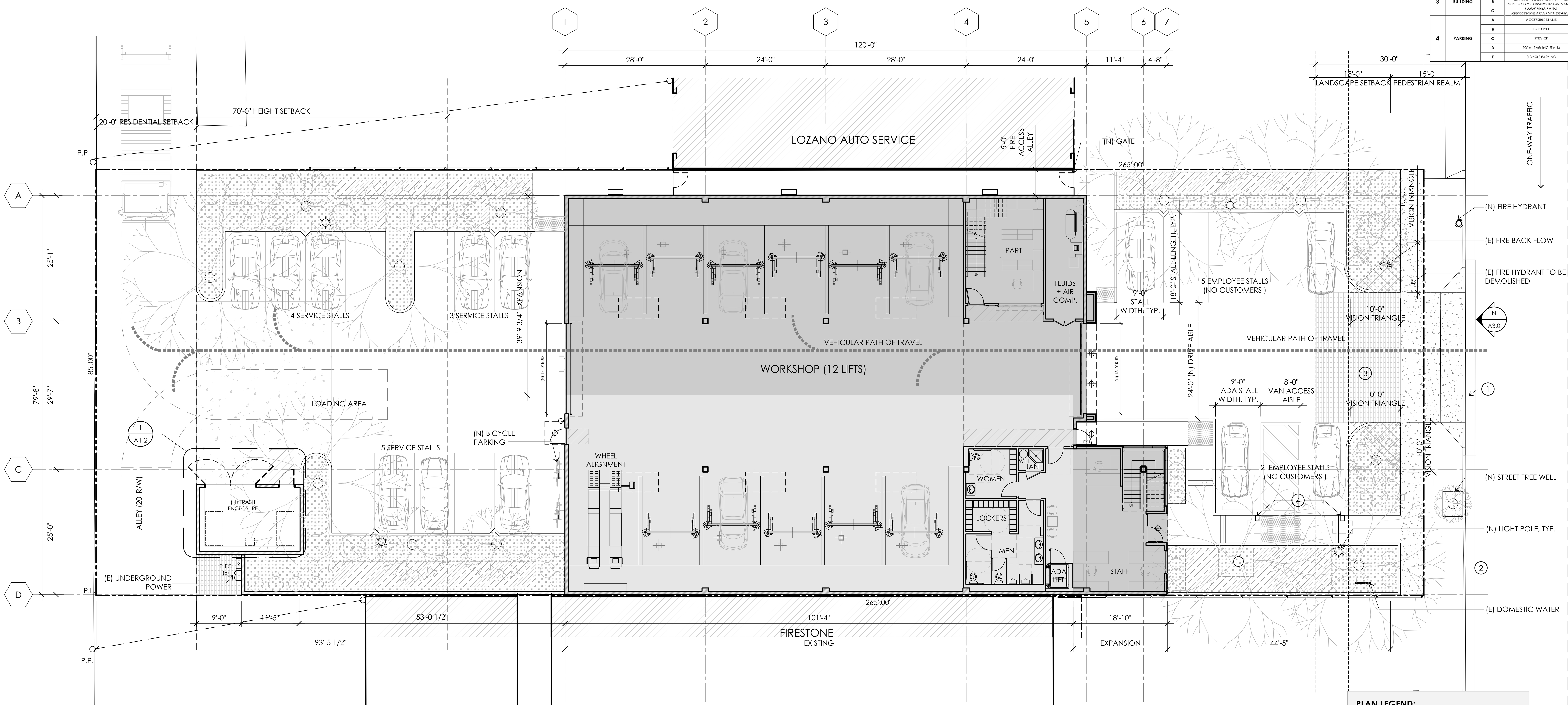
(3) PERVIOUS PAVERS

(4) EV CHARGERS

TOYOTA SUNNYVALE RECON CENTER REMODEL + EXPANSION

PROJECT OVERVIEW

NO.	AREA	REF.	DESCRIPTION	AREA (S.F. - U.N.O.) EXISTING	PROPOSED	ALLOWABLE
1	GENERAL	A	APN 201-19-036	--	--	--
		B	AUTOMOBILE SERVICE	NO CHANGE	NO CHANGE	--
		C	ZONED C-2 / ECR	NO CHANGE	NO CHANGE	--
		D	FRONT SETBACK	70'-0"	44'-5"	15'-0" MIN.
		E	LEFT SIDE SETBACK *(FACING PROPERTY)*	2"	2"	0
		F	RIGHT SIDE SETBACK *(FACING PROPERTY)*	44'-11"	5'-0"	0
		G	REAR SETBACK	21'-0"	93'-5 1/2"	20'-0" MIN.
		H	MAXIMUM HEIGHT	18'-8"	30'-0"	30'-0" MAX
2	SITE	A	EXISTING TOTAL LOT AREA *(0.52 ACRES)*	22,525	NO CHANGE	1 ACRE MIN
		B	NET LOT AREA *(TOTAL LOT AREA - EASEMENT AREA)*	20,825	20,215.0	
		C	TOTAL BUILDING AREA	6,671	8,767	--
		D	TOTAL LOT COVERAGE *(BUILDING AREA / NET LOT AREA)*	32.03%	43.37%	35% MAX
		E	TOTAL LANDSCAPE AREA *(PLANTERS + PERVIOUS PAVERS + WALKWAYS)*	1,440	4,100	--
		F	LANDSCAPE - NET LOT AREA RATIO	6.91%	20.28%	20% MIN
		G	LANDSCAPE - PARKING LOT RATIO	10.50%	60.50%	20% MIN.
		H	TOTAL IMPERVIOUS AREA	21,313	18,345	--
		I	PARKING LOT SHADING AREA *(TREE SHADE)*	--	3,500	--
		I	PARKING LOT SHADING RATIO	--	51.65%	50% IN 15 YRS.
3	BUILDING	A	GROSS FLOOR AREA	7,106	10,998	--
		B	BUILDING FLOOR AREA INCREASE *(SHOP + OFFICE EXPANSION + MEZZANINE)*	--	3,892	--
		C	FLOOR AREA RATIO *(GROSS FLOOR AREA / NET LOT AREA)*	34.12%	54.41%	--
4	PARKING	A	ACCESSIBLE STALLS	0	2	--
		B	EMPLOYEE	27	10	--
		C	SERVICE	--	7	--
		D	TOTAL PARKING STALLS	27	19	41
		E	BICYCLE PARKING	0	2	2



LIGHT FIXTURE LEGEND:

- POLE LIGHT
- CANOPY
- WALL PACK

(SEE SHEET A4.1 - SITE LIGHTING)

PLAN LEGEND:

- REMODEL
- EXPANSION
- LANDSCAPE
- NEW CMU WALLS
- VISION TRIANGLE
- 1-HR WALL
- PATH OF TRAVEL
- DEMOLISHED ELEMENTS

NORTH

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TOYOTA SUNNYVALE RECON CENTER REMODEL + EXPANSION

928 West El Camino Real, Sunnyvale, CA 94087
APN 201-19-036

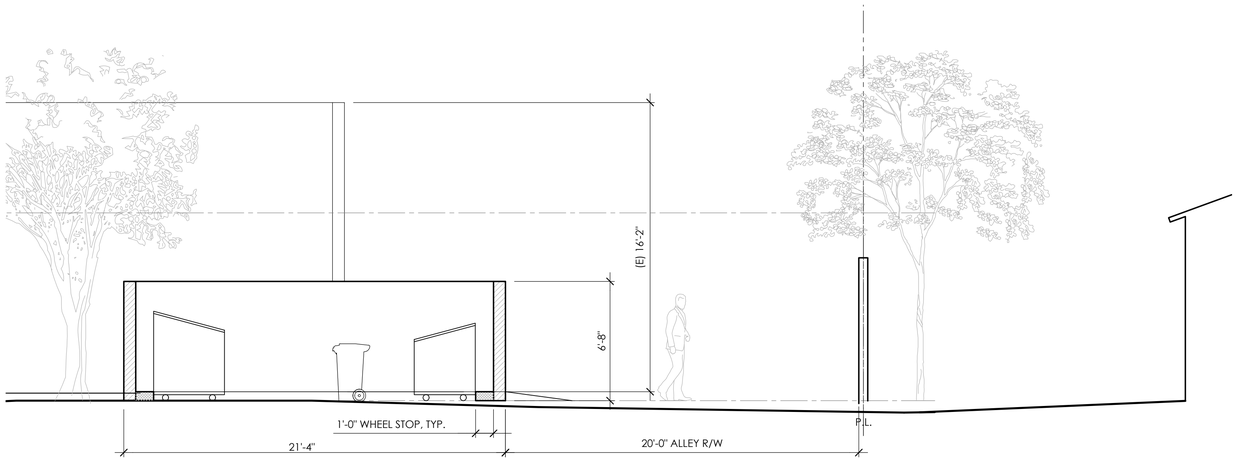
SITE PLAN - PROPOSED

SCALE: 1"=10'
DATE: DECEMBER 11 2020

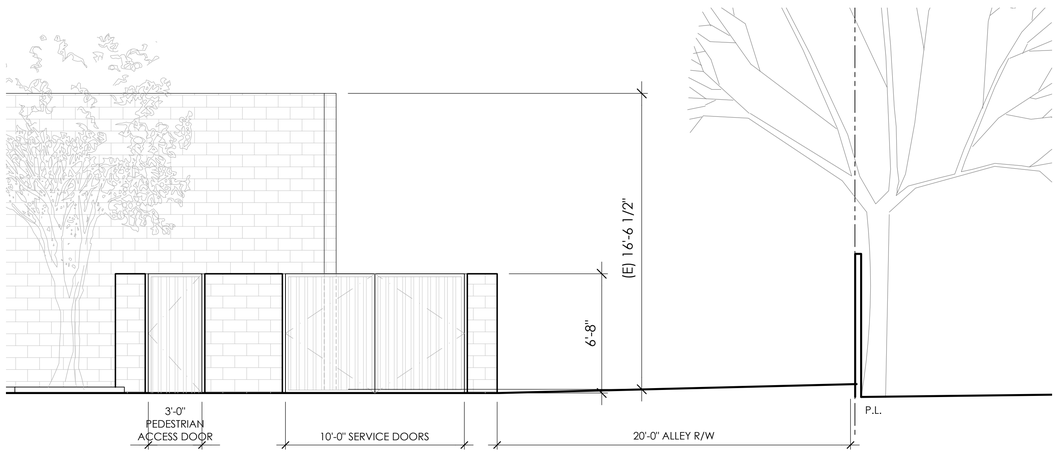
A1.1

TWM NO: 14-107.1

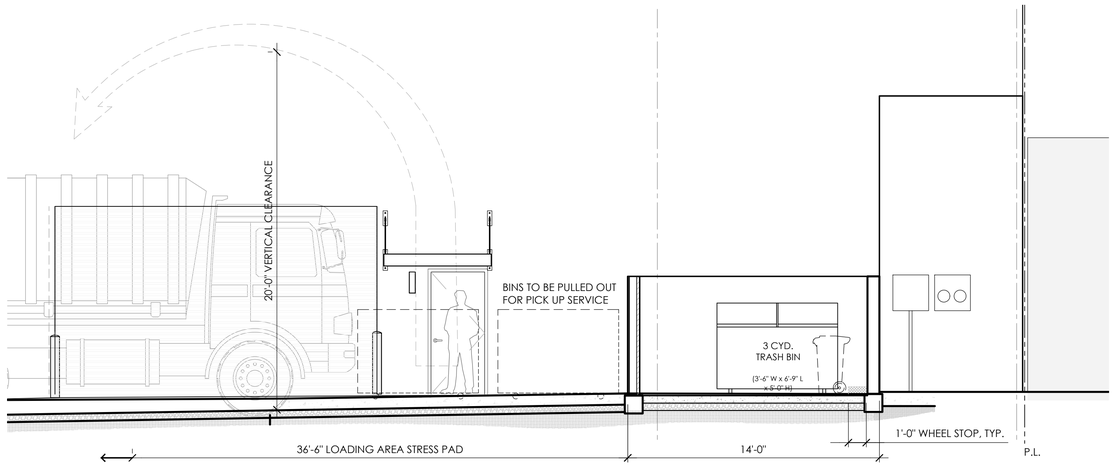
PLANNING SUBMITTAL - SUPPLEMENT - 11 DECEMBER 2020



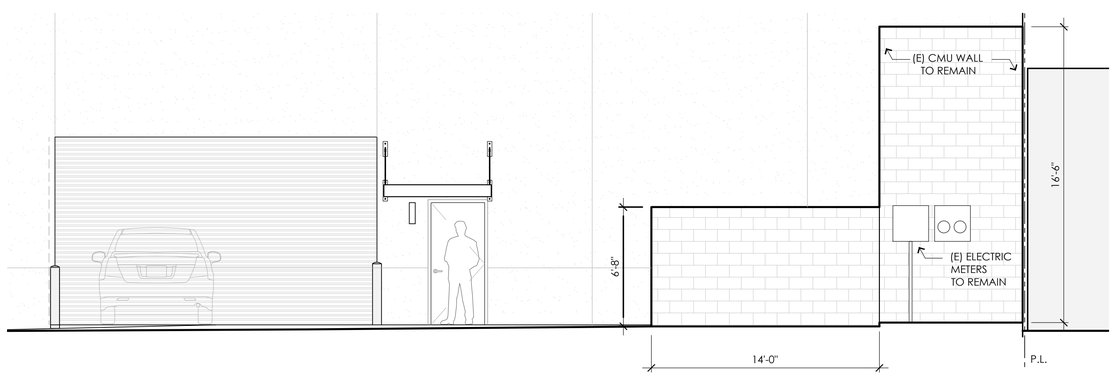
5 - SECTION



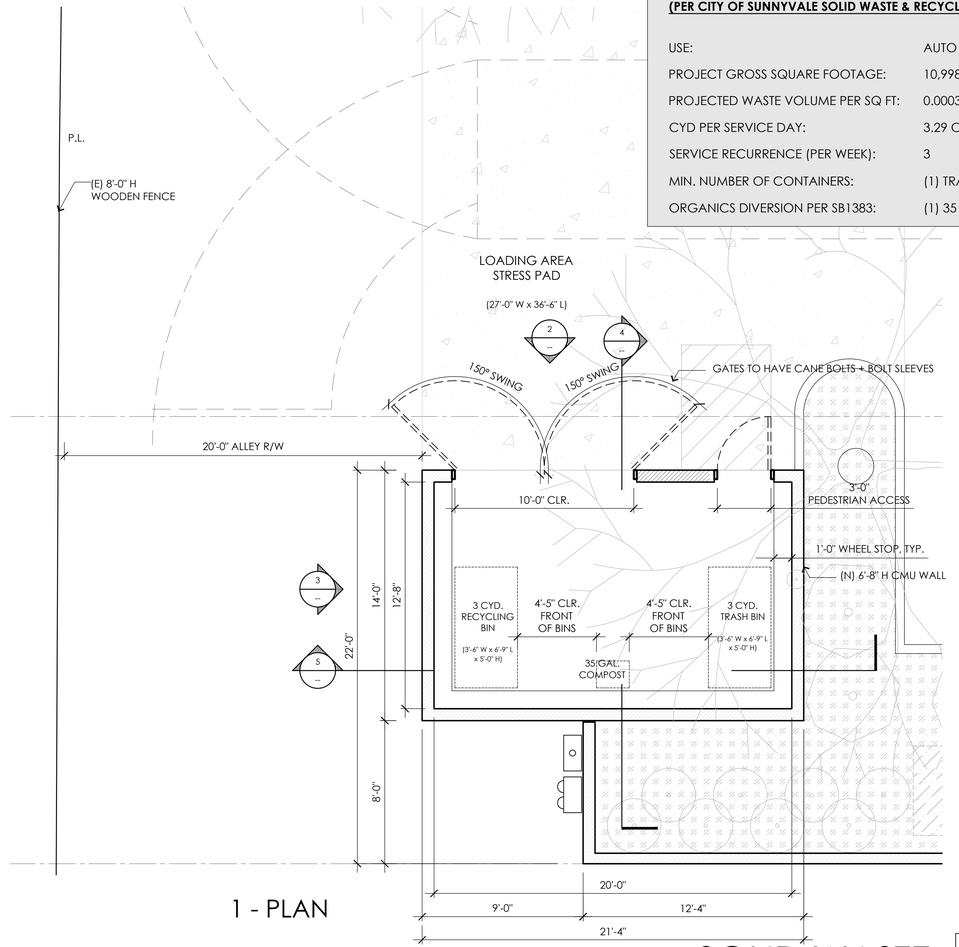
2 - ELEVATION



4 - SECTION



3 - ELEVATION



1 - PLAN

WASTE FACILITY ENCLOSURE CALCULATION
(PER CITY OF SUNNYVALE SOLID WASTE & RECYCLING FACILITY GUIDELINES)

USE:	AUTO SERVICE
PROJECT GROSS SQUARE FOOTAGE:	10,998 SF
PROJECTED WASTE VOLUME PER SQ FT:	0.0003 CYD/SQFT
CYD PER SERVICE DAY:	3.29 CYD
SERVICE RECURRENCE (PER WEEK):	3
MIN. NUMBER OF CONTAINERS:	(1) TRASH / (1) RECYCLING
ORGANICS DIVERSION PER SB1383:	(1) 35 GAL. COMPOST BIN

TWM Architects + Planners
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www.twmarchitects.com

TOYOTA SUNNYVALE RECON CENTER REMODEL + EXPANSION

928 West El Camino Real, Sunnyvale, CA 94087
APN 201-19-036

SOLID WASTE FACILITY - PROPOSED

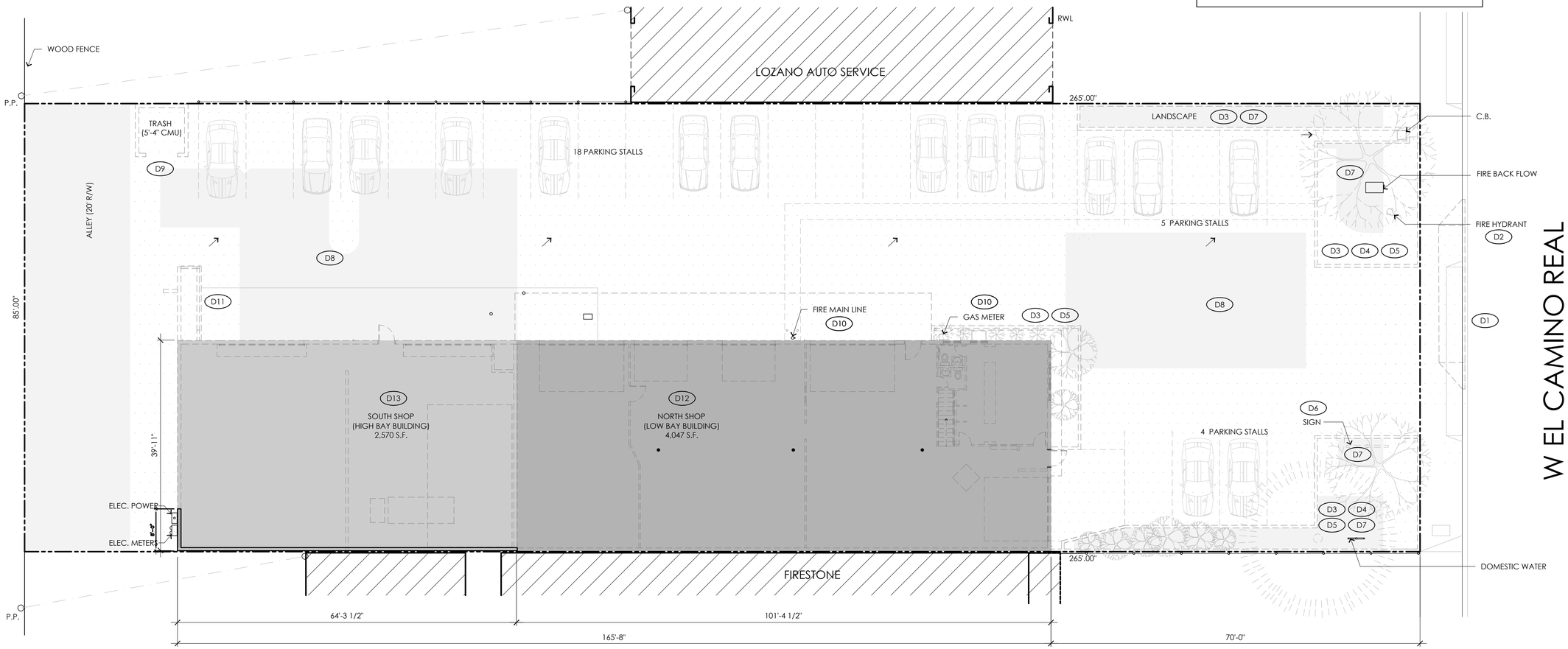
A1.2

SCALE: 1/4"=1'-0"
DATE: DECEMBER 11 2020

TWM NO: 14-107.1

DEMOLITION PLAN KEYNOTES

- D1 CUT + REPLACE EXISTING DRIVEWAY APRON TO NEW CITY STANDARD ACCESSIBLE DRIVEWAY.
- D2 REMOVE EXISTING FIRE HYDRANT.
- D3 REMOVE EXISTING CURBS.
- D4 REMOVE + REPAVE PLANTING AREA PER PLAN.
- D5 REMOVE ALL EXISTING VEGETATION.
- D6 REMOVE EXISTING SIGNAGE.
- D7 PLANTING AREA TO REMAIN.
- D8 ASPHALT TO REMAIN.
- D9 REMOVE EXISTING CMU AT TRASH ENCLOSURE.
- D10 UTILITY LINES TO BE PLACED UNDERGROUND.
- D11 REMOVE EXISTING CMU WALL + STORAGE SHED.
- D12 NORTH SHOP - REMOVE ENTIRE BUILDING.
- D13 SOUTH SHOP - REMOVE ENTIRE BUILDING LESS THE 16 FOOT HIGH EAST WALL AND 8 FEET OF THE SOUTH WALL, EAST END FOR THE UTILITY BOXES.



EXISTING SITE + FLOOR PLAN

LEGEND

- PROPERTY LINE
- (E) NORTH SHOP TO BE REMOVED
- (E) SOUTH SHOP TO BE REMOVED - LESS EAST WALL + SOUTH PARTIAL
- SITE WORK TO REMAIN
- AREA OF WORK
- TO BE DEMOLISHED
- XX KEYNOTE - REFERS TO THIS SHEET ONLY

NORTH

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TOYOTA SUNNYVALE RECON CENTER REMODEL + EXPANSION

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APN 201-19-036

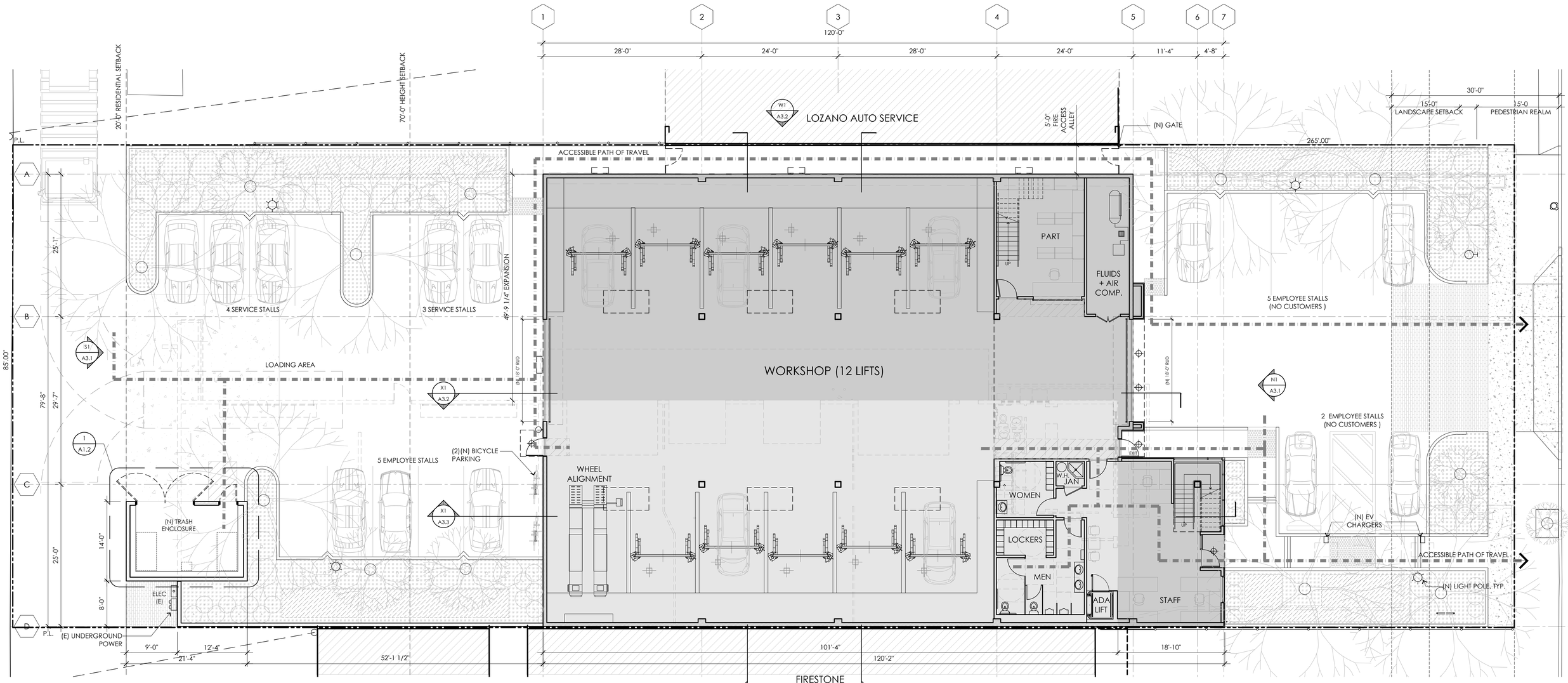
DEMOLITION PLAN

A1.3

SCALE: 1"=10'
DATE: DECEMBER 11 2020

TWM NO: 14-107.1

PLANNING SUBMITTAL - SUPPLEMENT - 11 DECEMBER 2020



ALLOWABLE BUILDING AREA AND HEIGHT

CBC CODE ANALYSIS: VB CONSTRUCTION / 1 STORY / 2019 CBC

GROUPS (MIXED): S-1 (S"ORAGE / PARK NG AN) SERV CE - CBC 311.2)
S-2 (S"ORAGE / VIETAL PARTS - CBC 311.3)

OCCUPANCY SEPARATION: S-1:S-2 = 1-HR SEPARATION REQUIRED (CBC TABLE 508.4)

BUILDING TYPES: S-1 VB (S) SERVICE - SPRINKLERED
S-2 VB (S) PAR'S - SPRINKLERED

ALLOWABLE HEIGHT: S-1 VB (S) 60 FEET (TABLE 504.3)
S-2 VB (S) 60 FEET

BUILDING AREA AND USE:

BUILDING	S-1 (S1)	S-2 (S1)	GROSS AREA	
SERVICE - OFFICE	9227	0	9227	
PAR'S	0	1771	1771	
TOTAL	9227	1771	10998	GROSS AREA
	83.9%	16.1%		% of GROSS

ALLOWABLE AREA (S.F.)
PER CBC Table 506.2:

	S-1 VB (S1)	S-2 VB (S1)		
B - S-1 MIXED OCCUPANCY	36,000	54,000	PER FLOOR	CBC TABLE 506.2
FRON"AGE INCREASE CBC 506.3	-	12,960	PER FLOOR	
TOTAL ALLOWABLE MIXED-OCCUPANCY	36,000	66,960	PER FLOOR	
2 STORY IN CREASE	1	1		
ALLOWABLE FLOOR AREA	36,000	66,960	TOTAL	
NET AREA	9,227	1,771		
% NET AREA / AL..OWABLE AREA	25.6%	2.6%	TOTAL	
	28.3%	% TOTAL ALLOWABLE AREA		

LIGHT FIXTURE LEGEND:

- POLE LIGHT
- CANOPY
- WALL PACK

(SEE SHEET A4.1 - SITE LIGHTING)

PLAN LEGEND:

- REMODEL
- EXPANSION
- LANDSCAPE
- BIORETENTION AREA
- NEW CMU WALLS
- VISION TRIANGLE
- 1-HR WALL
- PATH OF TRAVEL
- DEMOLISHED WALLS

NORTH

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TOYOTA SUNNYVALE RECON CENTER REMODEL + EXPANSION

FIRST FLOOR PLAN - PROPOSED

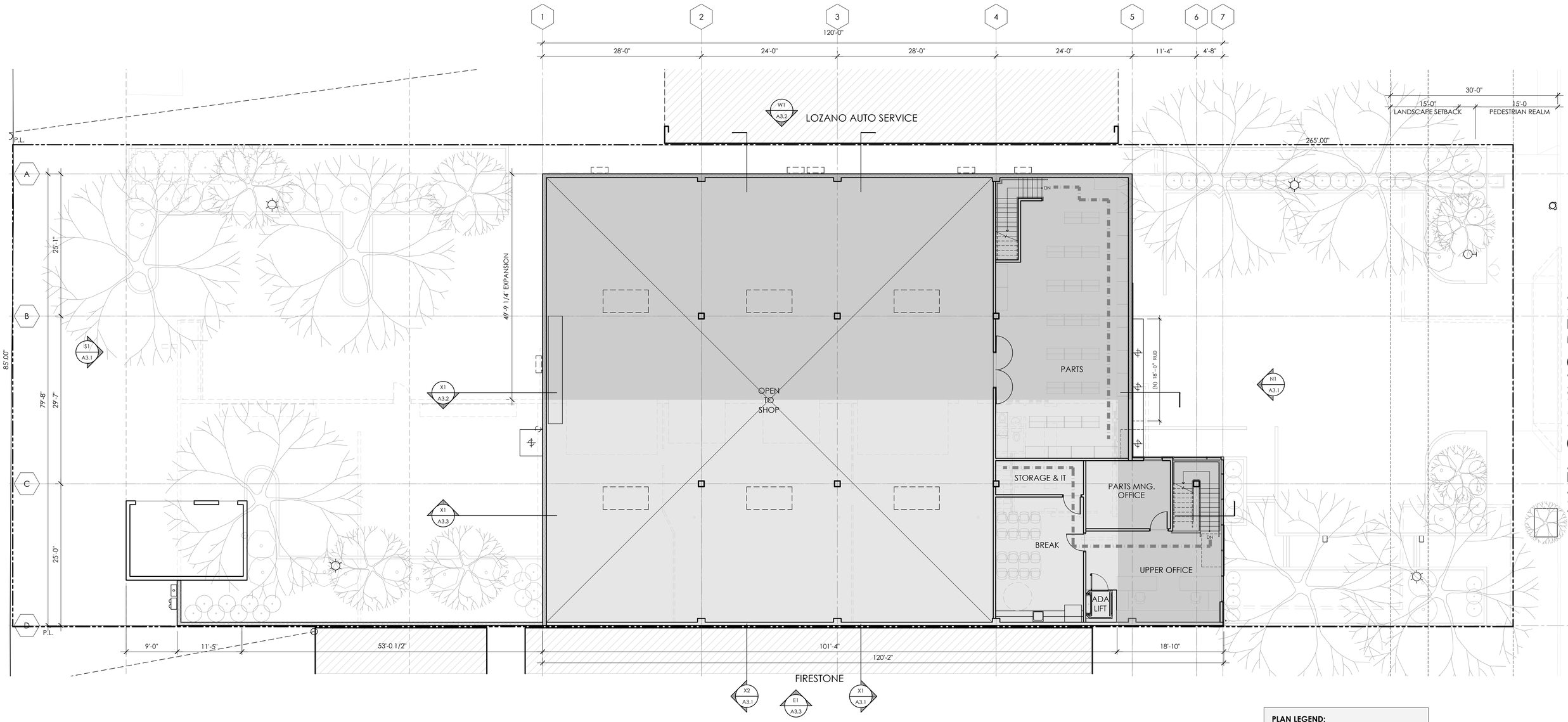
928 West El Camino Real, Sunnyvale, CA 94087
APN 201-19-036

A2.1

SCALE: 1/8"=1'-0"
DATE: DECEMBER 11 2020

TWM NO: 14-107.1

PLANNING SUBMITTAL - SUPPLEMENT - 11 DECEMBER 2020



LIGHT FIXTURE LEGEND:

- POLE LIGHT
- CANOPY
- WALL PACK

(SEE SHEET A4.1 - SITE LIGHTING)

PLAN LEGEND:

- REMODEL
- EXPANSION
- LANDSCAPE
- NEW CMU WALLS
- VISION TRIANGLE
- 1-HR WALL
- PATH OF TRAVEL
- DEMOLISHED WALLS

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TOYOTA SUNNYVALE RECON CENTER REMODEL + EXPANSION

MEZZANINE PLAN - PROPOSED

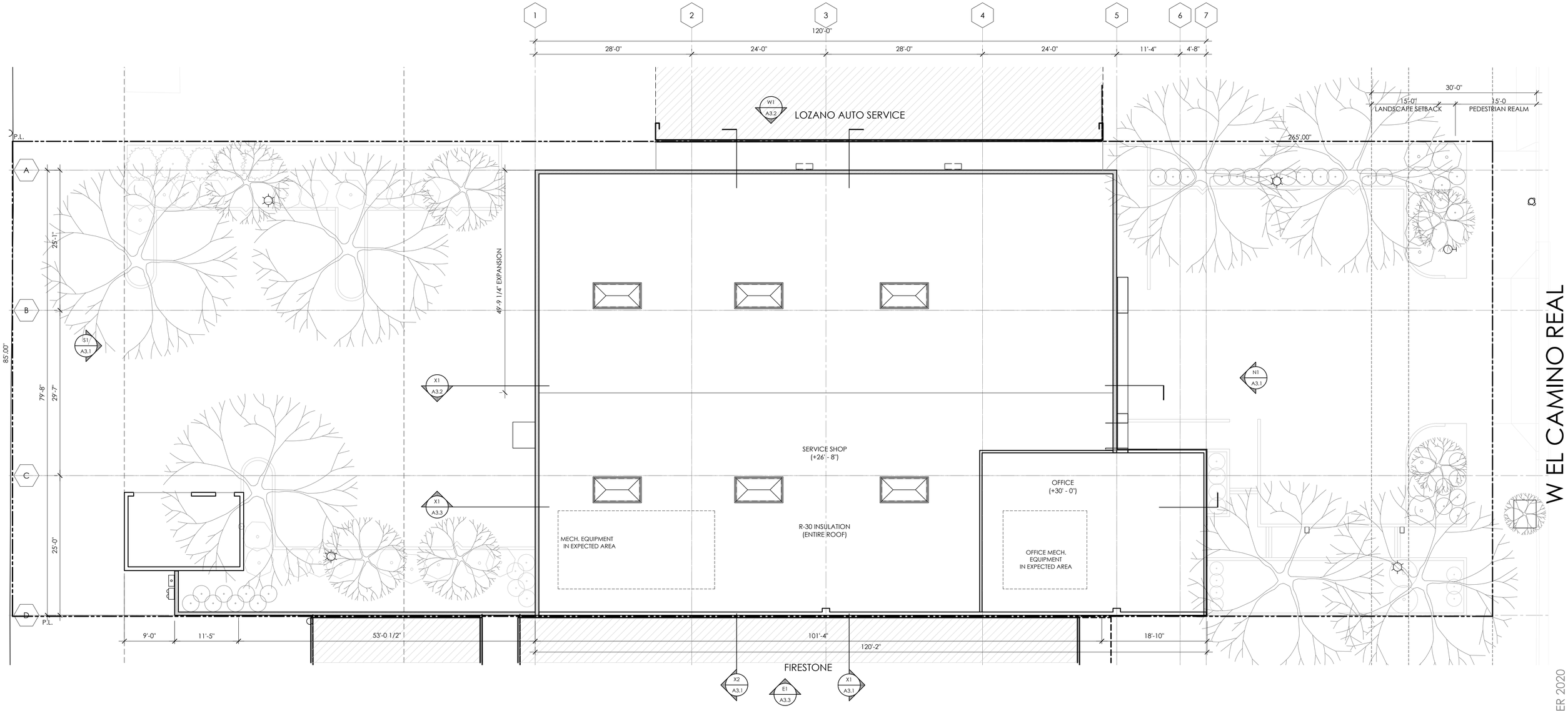
928 West El Camino Real, Sunnyvale, CA 94087
APN 201-19-036

A2.2

SCALE: 1/8"=1'-0"
DATE: DECEMBER 11 2020

TWM NO: 14-107.1

PLANNING SUBMITTAL - SUPPLEMENT - 11 DECEMBER 2020



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TOYOTA SUNNYVALE RECON CENTER REMODEL + EXPANSION

928 West El Camino Real, Sunnyvale, CA 94087
APN 201-19-036

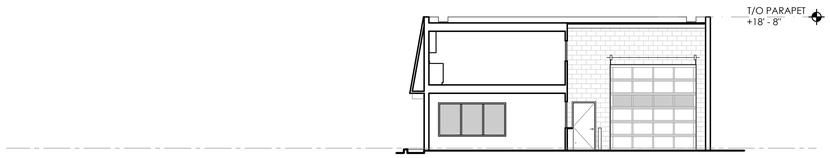
ROOF PLAN - PROPOSED

A2.3

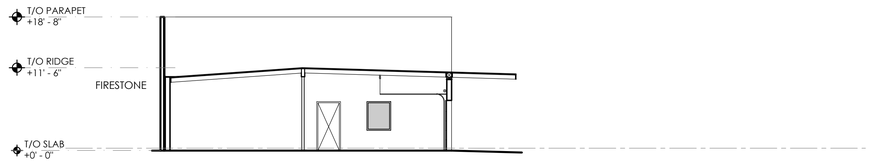
SCALE: 1/8"=1'-0"
DATE: DECEMBER 11 2020

TWM NO: 14-107.1

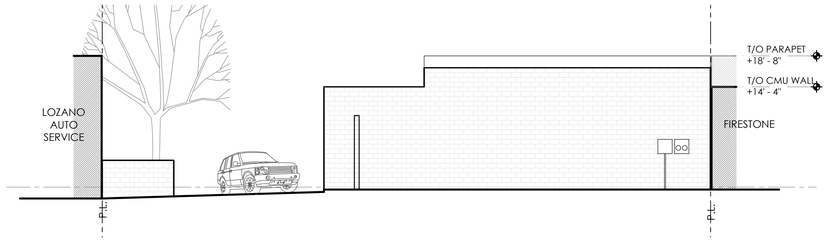
PLANNING SUBMITTAL - SUPPLEMENT - 11 DECEMBER 2020



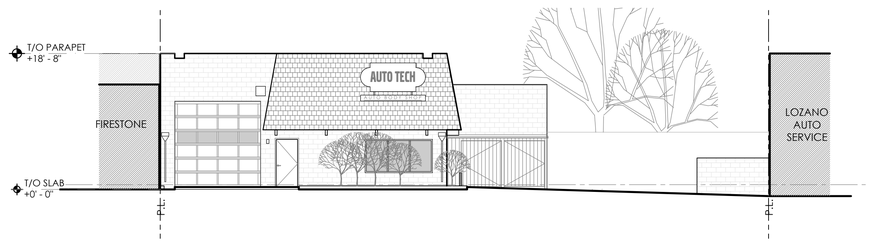
X4 - CROSS SECTION - EXISTING



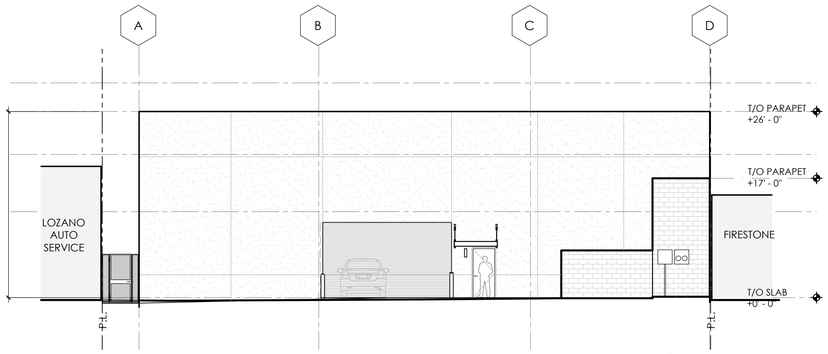
X3 - CROSS SECTION - EXISTING



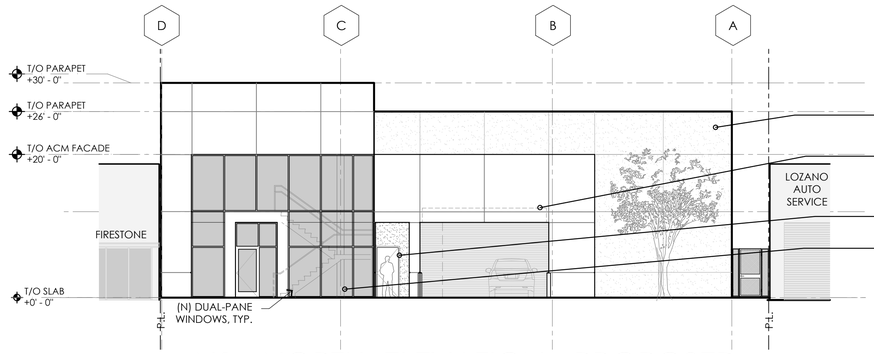
S2 - SOUTH ELEVATION - EXISTING



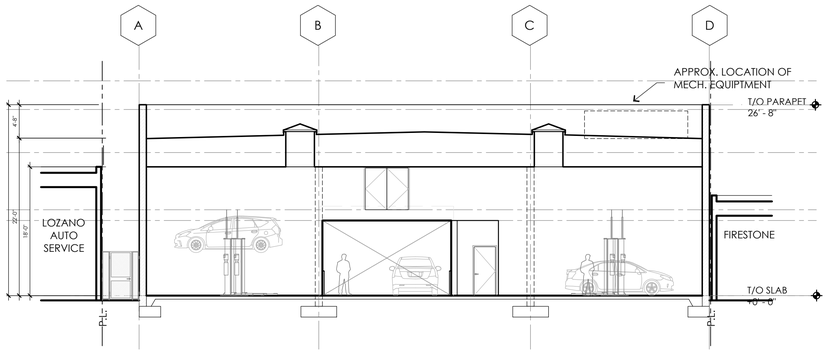
N2 - NORTH ELEVATION - EXISTING



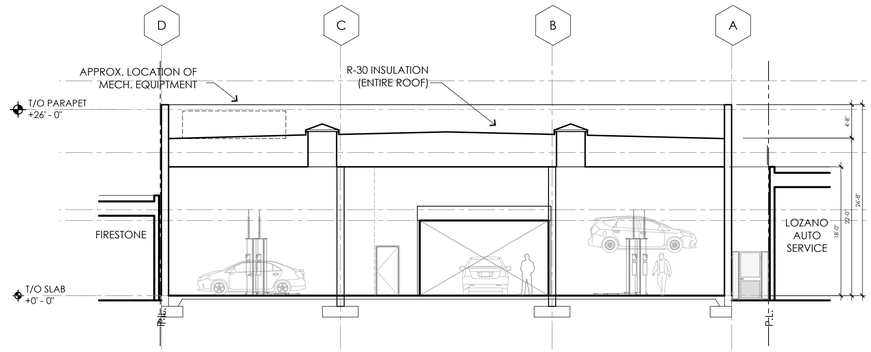
S1 - SOUTH ELEVATION - PROPOSED



N1 - NORTH ELEVATION - PROPOSED



X2 - CROSS SECTION - PROPOSED



X1 - CROSS SECTION - PROPOSED

NEW EXTERIOR MATERIALS:

1. CEMENT PLASTER - TOYOTA LIGHT GREY
2. ACM (ALUMINUM COMPOSITE MATERIAL) - TOYOTA SILVER WITH TOYOTA RED ACCENT
3. DOORS AND ENTRY - TOYOTA MEDIUM GREY
4. STOREFRONT GLASS - CLEAR
5. SIGNAGE - NONE

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TOYOTA SUNNYVALE RECON CENTER REMODEL + EXPANSION

928 West El Camino Real, Sunnyvale, CA 94087
APN 201-19-036

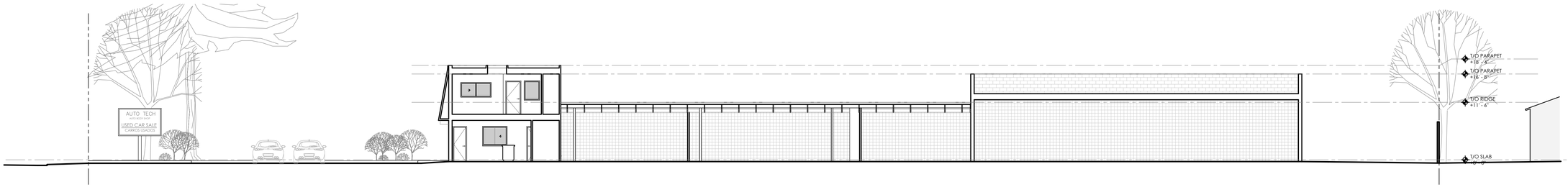
ELEVATIONS + SECTIONS
- NORTH + SOUTH

A3.1

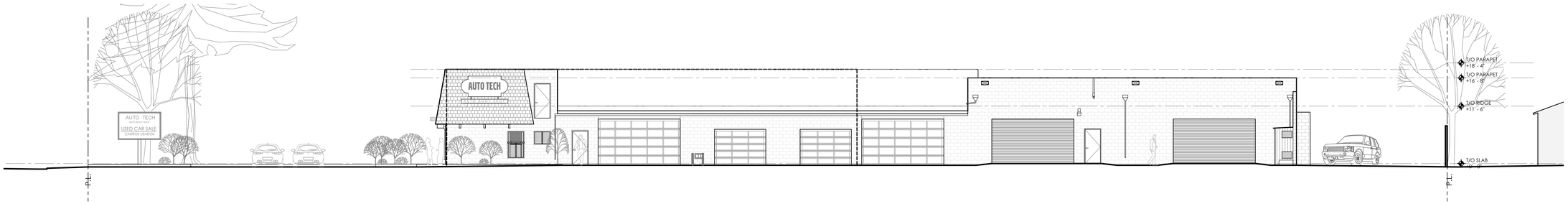
SCALE: 1"=10'
DATE: DECEMBER 11 2020

TWM NO: 14-107.1

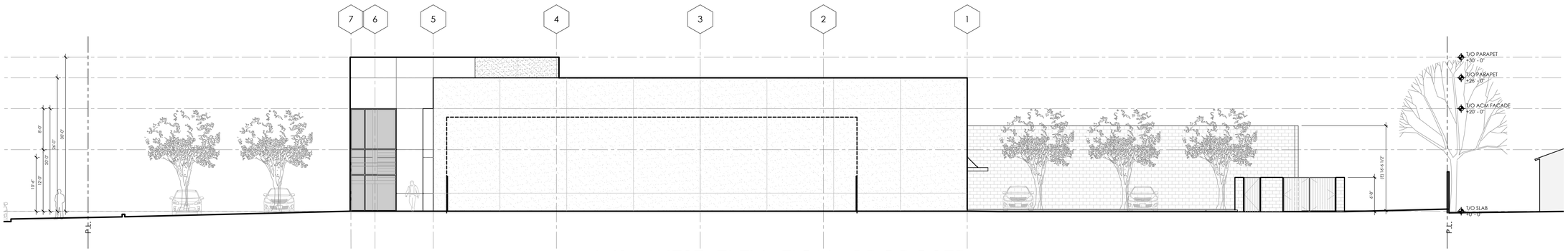
PLANNING SUBMITTAL - SUPPLEMENT - 11 DECEMBER 2020



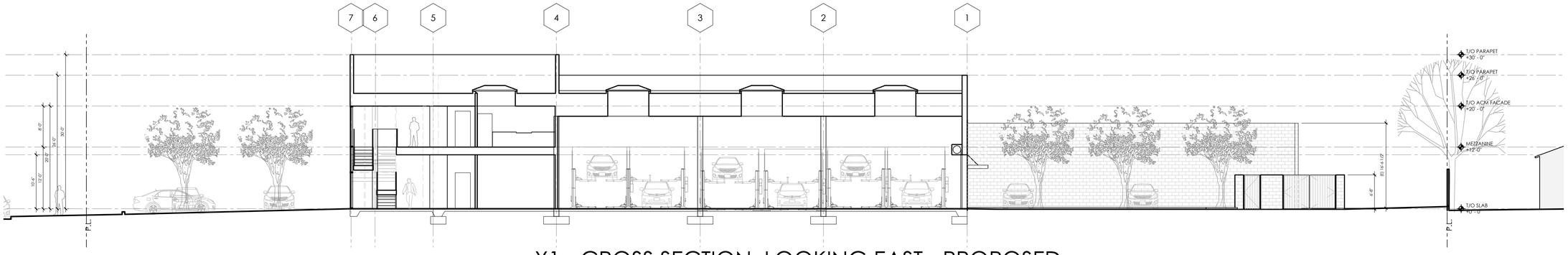
X2 - CROSS SECTION LOOKING EAST - EXISTING



W2 - WEST ELEVATION - EXISTING



W1 - WEST ELEVATION - PROPOSED



X1 - CROSS SECTION LOOKING EAST - PROPOSED

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TOYOTA SUNNYVALE RECON CENTER REMODEL + EXPANSION

ELEVATIONS + SECTIONS - WEST

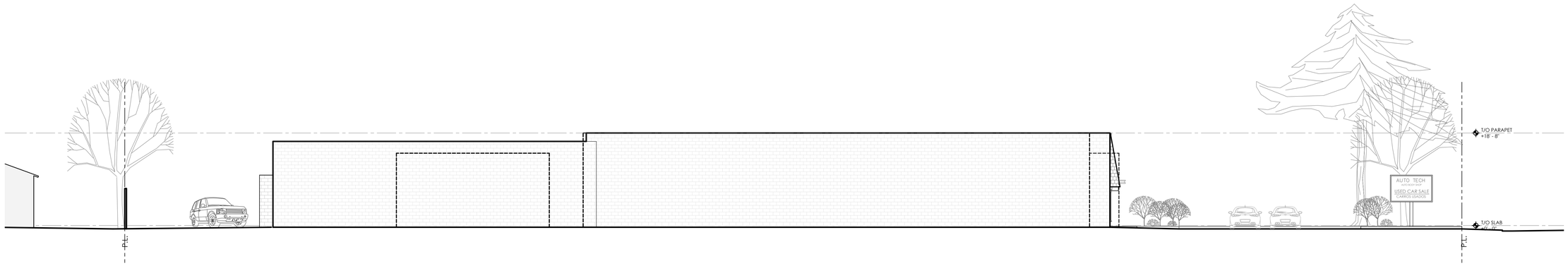
928 West El Camino Real, Sunnyvale, CA 94087
APN 201-19-036

A3.2

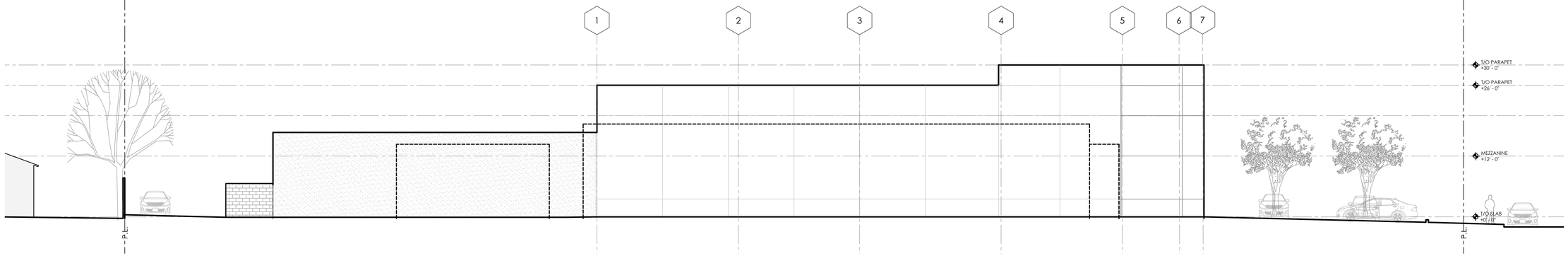
SCALE: 1"=10'
DATE: DECEMBER 11 2020

TWM NO: 14-107.1

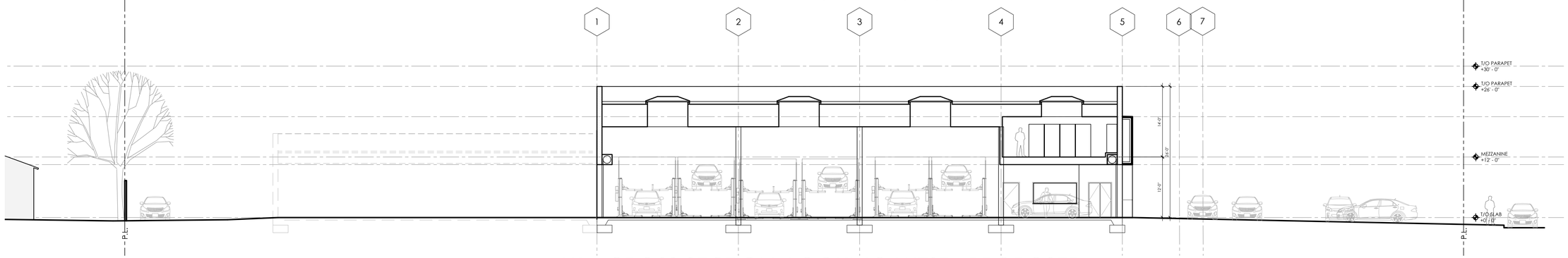
PLANNING SUBMITTAL - SUPPLEMENT - 11 DECEMBER 2020



E2 - EAST ELEVATION - EXISTING



E1 - EAST ELEVATION - PROPOSED



X1 - CROSS SECTION LOOKING WEST - PROPOSED

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TOYOTA SUNNYVALE RECON CENTER REMODEL + EXPANSION

928 West El Camino Real, Sunnyvale, CA 94087
APN 201-19-036

ELEVATIONS + SECTIONS - EAST

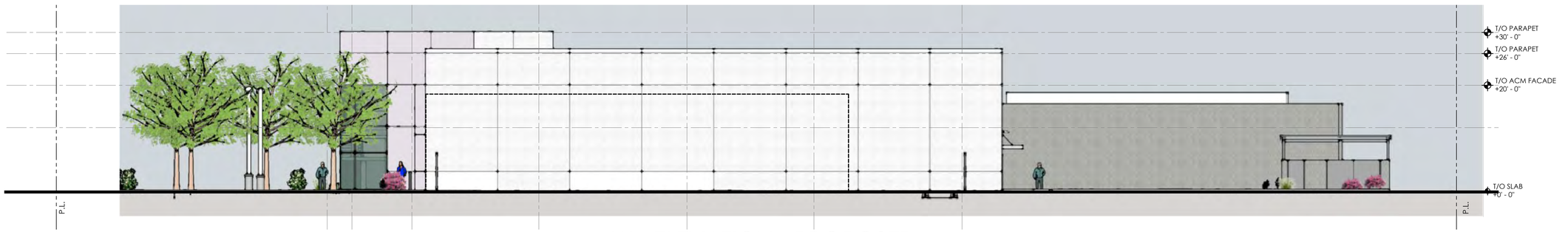
A3.3

SCALE: 1"=10'
DATE: DECEMBER 11 2020

TWM NO: 14-107.1

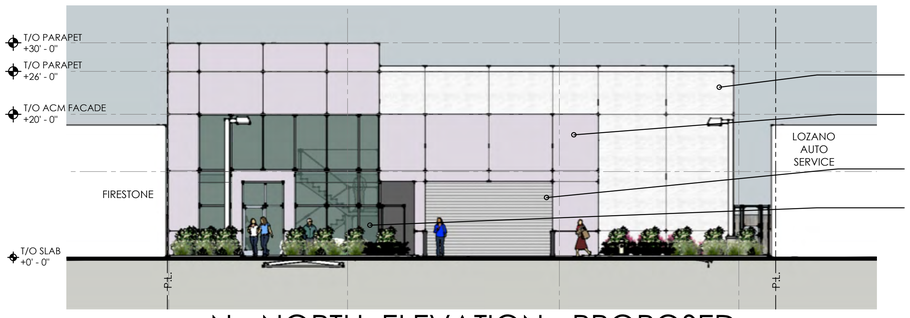
PLANNING SUBMITTAL - SUPPLEMENT - 11 DECEMBER 2020

E - ELEVATION - PROPOSED



W - ELEVATION - PROPOSED

S - SOUTH ELEVATION - PROPOSED



N - NORTH ELEVATION - PROPOSED

NEW EXTERIOR MATERIALS:

1. CEMENT PLASTER - TOYOTA LIGHT GREY
2. ACM (ALUMINUM COMPOSITE MATERIAL) - TOYOTA SILVER
3. DOORS AND ENTRY - TOYOTA MEDIUM GREY
4. STOREFRONT GLASS - CLEAR
5. SIGNAGE - NONE

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TOYOTA SUNNYVALE RECON CENTER REMODEL + EXPANSION

928 West El Camino Real, Sunnyvale, CA 94087
APN 201-19-036

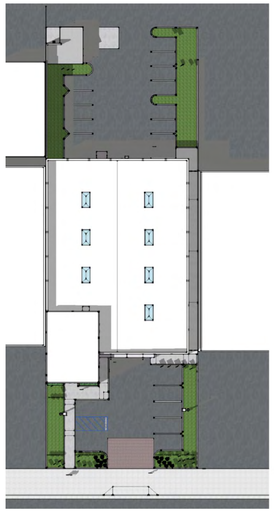
ELEVATIONS - RENDERED

A3.4

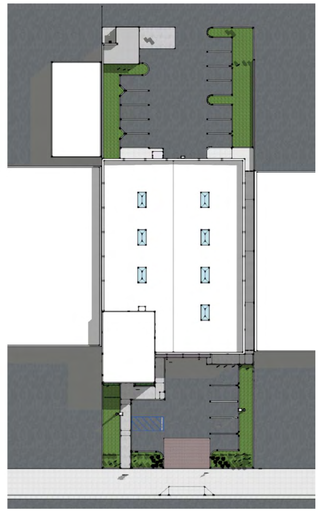
SCALE: 1"=10'
DATE: DECEMBER 11 2020

TWM NO: 14-107.1

PLANNING SUBMITTAL - SUPPLEMENT - 11 DECEMBER 2020



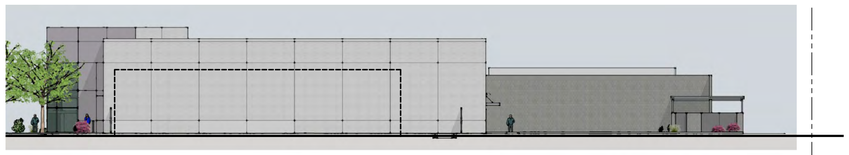
9AM



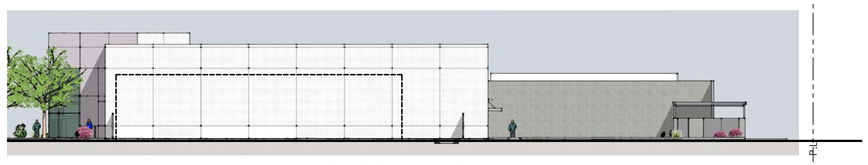
3PM

SUMMER SOLSTICE - JUNE 21

9AM 2% MAX SHADING AT NEIGHBORING PROPERTY
3PM 0% MAX SHADING ON NEIGHBORING PROPERTY

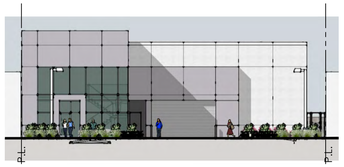


W - ELEVATION - JUNE 21 9AM



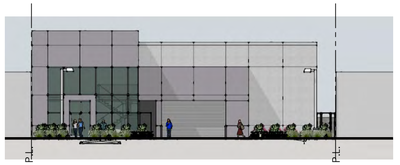
W - ELEVATION - JUNE 21 3PM

S - ELEVATION - JUNE 21 9AM



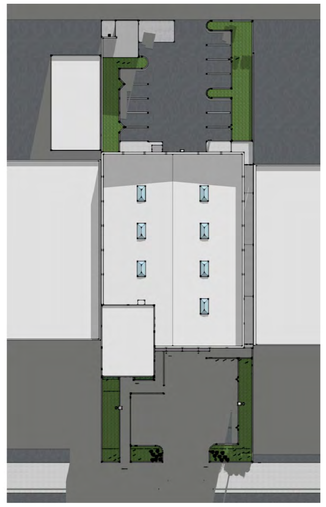
N - ELEVATION - JUNE 21 9AM

S - ELEVATION - JUNE 21 3PM



N - ELEVATION - JUNE 21 3PM

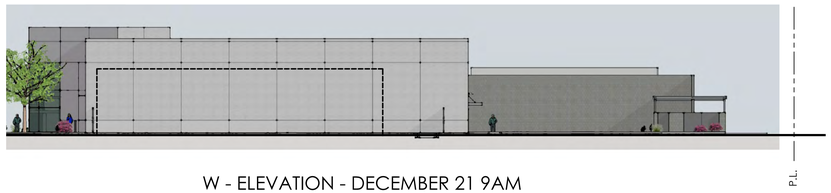
9AM



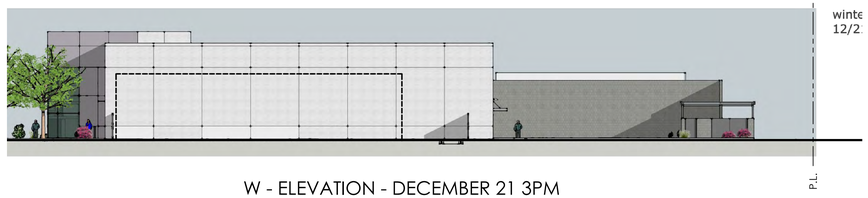
3PM

WINTER SOLSTICE - DECEMBER 21

9AM 30% MAX SHADING AT NEIGHBORING PROPERTY
3PM 4% MAX SHADING ON NEIGHBORING PROPERTY

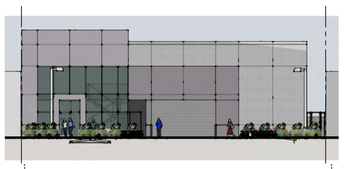


W - ELEVATION - DECEMBER 21 9AM



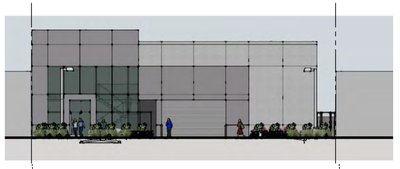
W - ELEVATION - DECEMBER 21 3PM

S - ELEVATION - DECEMBER 21 9AM



N - ELEVATION - DECEMBER 21 9AM

S - ELEVATION - DECEMBER 21 3PM



N - ELEVATION - DECEMBER 21 3PM

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TOYOTA SUNNYVALE RECON CENTER REMODEL + EXPANSION

928 West El Camino Real, Sunnyvale, CA 94087
APN 201-19-036

SOLAR ANALYSIS

A4.1

SCALE: 1"=20'
DATE: DECEMBER 11 2020

TWM NO: 14-107.1

PLANNING SUBMITTAL - SUPPLEMENT - 11 DECEMBER 2020

NV-2

AREA LIGHTING

FORM AND FUNCTION
- Sleek, low profile housing
- Spec grade performance
- Engineered for optimum thermal management
- Low depreciation rate
- Reduces energy consumption and costs up to 65%
- Exceeds IES foot candle levels utilizing the least number of poles and fixtures per project
- Optical system designed for:
  - Parking Lots
  - Auto Dealerships
  - General Area Lighting

CONSTRUCTION
- Die Cast Aluminum
- External cooling fins, Finite Element Analysis (FEA) designed
- Corrosion resistant external hardware
- One-piece silicone gasket ensures IP-65 seal for electronics compartment
- One-piece Optics Plate™ mounting silicone Micro Optics
- Two-piece silicone Micro Optic system ensures IP-67 level seal around each PCB
- Grade 2 Clear Anodized Optics Plate™ standard

FINISH
- 3-5 mils electrostatic powder coat.
- NLS' standard high-quality finishes prevent corrosion protects against and extreme environmental conditions

WARRANTY
Five-year limited warranty for drivers and LEDs.

LISTINGS
- Certified to UL 1598
- UL 8750
- CSA C22.2 No. 250.0
- DesignLights Consortium® (DLC)
- DesignLights Consortium Premium® (DLCP)
- IP65/ IP67 Rated
- 3G Vibration Rated per ANSI C136.31-2010

LED WATTAGE CHART

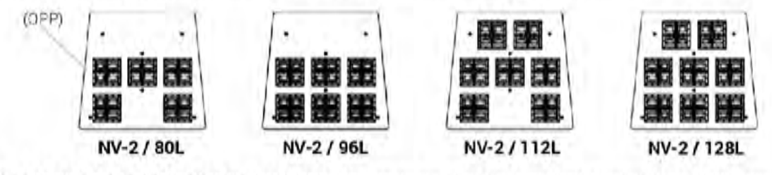
	80L	96L	112L	128L
700 milliamps	168w	200w	243w	265w
1050 milliamps	263w	316w	366w	409w

Project Name: Type:

Cat #	Light Dist.	No. of LEDs	Milliamps	Kelvin	Volts	Mounting	Color	Options
NV Size 2 (NV-2)	Type 2 (T2) Type 3 (T3) Type 4 (T4) Type 5 (T5) Nema 3 30° Narrow Beam (N3)	80 (80L) 96 (96L) 112 (112L) 128 (128L)	700 (7) 1050 (1)	3000K (30K) 4000K (40K) 5000K (50K)	120-277 (UNV) 347-480 (HV)	Direct Pole Single, D180 6" (DPS6) D90, T90, T120, QD 11" (DPS11) Knuckle Mount (KM) Wall Mount (WM) Trunnion Mount (TM) *Standard finish is stainless steel. Can be painted to match fixture Tennis Arm (TA) *See next page for Arm Configurations *For Round Pole please specify RPA4 or RPA5	Bronze (BRZ) White (WHT) Silver (SVR) Black (BLK) Graphite (GPH) Grey (GRY) Custom (CS)	Bird Deterrent (BD) Marine Grade Finish (MGF) Optic Plate Painted to Match Fixture (OPP) Nema 7-Pin Receptacle (PE7) Photocell + Receptacle (PCR) Receptacle + Shorting Cap (PER) FSP-211 with Motion Sensor (UNV Voltage) (FSP-20) *9'-20' Heights (FSP-40) *21'-40' Heights Surge Protector (10K) Quick Mount Bracket (QMB) Retrofit Mount Bracket (RQMB) Round Pole Adaptor 3"-4" Pole (RPA4) Round Pole Adaptor 5"-6" Pole (RPA5) Rotated Optic Left (ROL) Rotated Optic Right (ROR) Automotive House Side Shield (AHS) House Side Shield (HSS) *HSS not applicable with N2 - NEMA 24° Optics *HSS not applicable with N2 - NEMA 30° Optics

OPTICAL CONFIGURATIONS

Rotatable Optics (ROR) Rotated Right, (ROL) Rotated Left options available. Optics field and factory rotatable.



*** OPTIC PLATE PAINTED TO MATCH FIXTURE FINISH (OPP)**– Optic Plate standard clear anodized, Grade 2. When (OPP) specified, Optic Plate finish will match fixture finish

LUMENS

PART NUMBER	N3	LM/W	T2	LM/W	DLC	BUG	T3 HSS	LM/W	BUG	T3	LM/W	DLC	BUG	T4 HSS	LM/W	BUG	T4	LM/W	DLC	BUG	T5	LM/W	DLC	BUG	W
NV-2-80L-7-30K	19152	114	19744	116	S	B3-U0-G3	9744	58	B1-U0-G2	19218	113	S	B3-U0-G3	9576	57	B1-U0-G2	18992	112	S	B3-U0-G3	19712	117	P	B5-U0-G3	168
NV-2-80L-7-40K	19824	118	21000	126	P	B3-U0-G3	10416	62	B1-U0-G2	20328	121	P	B3-U0-G3	10248	61	B1-U0-G2	20160	120	P	B3-U0-G3	21168	126	P	B5-U0-G3	168
NV-2-80L-7-50K	21840	130	21672	129	P	B3-U0-G3	11088	66	B1-U0-G2	21168	126	P	B3-U0-G3	10920	65	B1-U0-G2	21000	125	P	B3-U0-G3	21840	130	P	B5-U0-G3	168
NV-2-80L-1-30K	29982	114	28141	107	S	B3-U0-G3	15254	58	B1-U0-G3	27352	104	S	B3-U0-G4	14991	57	B1-U0-G3	27086	103	S	B3-U0-G4	28404	108	S	B5-U0-G3	263
NV-2-80L-1-40K	31094	118	30246	115	S	B3-U0-G3	16306	62	B1-U0-G3	29456	112	S	B3-U0-G4	16043	61	B1-U0-G3	29193	111	S	B3-U0-G4	30508	116	S	B5-U0-G3	263
NV-2-80L-1-50K	34190	130	31297	119	P	B3-U0-G4	17358	66	B1-U0-G3	30508	116	S	B3-U0-G4	17095	65	B1-U0-G3	31034	118	P	B3-U0-G4	31560	120	P	B5-U0-G4	263
NV-2-96L-7-30K	22800	114	23200	116	S	B3-U0-G3	11600	58	B1-U0-G2	22600	113	S	B3-U0-G3	11400	57	B1-U0-G2	22400	112	S	B3-U0-G3	23400	117	S	B5-U0-G3	200
NV-2-96L-7-40K	23600	118	25000	125	P	B3-U0-G3	12400	62	B1-U0-G2	24200	121	P	B3-U0-G3	12200	61	B1-U0-G3	24000	120	P	B3-U0-G3	25200	126	P	B5-U0-G3	200
NV-2-96L-7-50K	26000	130	25800	129	P	B3-U0-G3	13200	66	B1-U0-G2	25200	126	P	B3-U0-G3	13000	65	B1-U0-G3	25000	125	P	B3-U0-G4	26000	130	P	B5-U0-G3	200
NV-2-96L-1-30K	36031	114	33812	107	S	B3-U0-G4	18328	58	B1-U0-G3	32864	104	S	B4-U0-G4	18012	57	B1-U0-G3	32548	103	S	B3-U0-G4	34128	108	S	B5-U0-G4	316
NV-2-96L-1-40K	37288	118	36340	115	S	B3-U0-G4	19592	62	B1-U0-G3	35392	112	S	B4-U0-G4	19276	61	B1-U0-G4	35076	111	S	B3-U0-G4	36656	116	S	B5-U0-G4	316
NV-2-96L-1-50K	41080	130	37604	119	P	B3-U0-G4	20856	66	B1-U0-G4	36656	116	S	B4-U0-G4	20540	65	B1-U0-G4	37288	118	P	B3-U0-G4	37920	120	P	B5-U0-G4	316
NV-2-112L-7-30K	27702	114	28188	116	S	B3-U0-G3	14094	58	B1-U0-G3	27459	113	S	B3-U0-G4	13851	57	B1-U0-G3	27216	112	S	B3-U0-G4	28431	117	P	B5-U0-G3	243
NV-2-112L-7-40K	28674	118	30375	125	P	B3-U0-G3	15066	62	B1-U0-G3	29403	121	P	B3-U0-G4	14823	61	B1-U0-G3	29160	120	P	B3-U0-G4	30618	126	P	B5-U0-G3	243
NV-2-112L-7-50K	31590	130	31347	129	P	B3-U0-G4	16038	66	B1-U0-G3	30618	126	P	B3-U0-G4	15795	65	B1-U0-G3	30375	125	P	B3-U0-G4	31590	130	P	B5-U0-G4	243
NV-2-112L-1-30K	41724	114	39162	107	S	B4-U0-G4	21228	58	B1-U0-G4	38064	104	S	B4-U0-G4	20862	57	B1-U0-G4	37698	103	S	B4-U0-G5	39528	108	S	B5-U0-G4	366
NV-2-112L-1-40K	43188	118	42090	115	S	B4-U0-G4	22692	62	B1-U0-G4	40992	112	S	B4-U0-G4	22326	61	B1-U0-G4	40626	111	S	B4-U0-G5	42456	116	S	B5-U0-G4	366
NV-2-112L-1-50K	47580	130	43554	119	P	B4-U0-G4	24156	66	B1-U0-G4	42456	116	S	B4-U0-G4	23790	65	B1-U0-G4	43188	118	P	B4-U0-G5	43920	120	P	B5-U0-G4	366
NV-2-128L-7-30K	30210	114	30740	116	S	B3-U0-G3	15370	58	B1-U0-G3	29945	113	S	B3-U0-G4	15105	57	B1-U0-G3	29680	112	S	B3-U0-G4	31005	117	P	B5-U0-G4	265
NV-2-128L-7-40K	31270	118	33125	125	P	B3-U0-G3	16430	62	B1-U0-G3	32065	121	P	B3-U0-G4	16165	61	B1-U0-G3	31800	120	P	B3-U0-G4	33390	126	P	B5-U0-G4	265
NV-2-128L-7-50K	34450	130	34185	129	P	B3-U0-G4	17490	66	B1-U0-G3	33390	126	P	B4-U0-G4	17225	65	B1-U0-G3	33125	125	P	B3-U0-G4	34450	130	P	B5-U0-G4	265
NV-2-128L-1-30K	46626	114	43763	107	S	B4-U0-G4	23722	58	B1-U0-G4	42536	104	S	B4-U0-G4	23312	57	B1-U0-G4	42127	103	S	B4-U0-G5	44172	108	S	B5-U0-G4	409
NV-2-128L-1-40K	48262	118	47035	115	S	B4-U0-G4	25358	62	B1-U0-G4	45808	112	S	B4-U0-G4	24949	61	B1-U0-G4	45399	111	S	B4-U0-G5	47444	116	S	B5-U0-G4	409
NV-2-128L-1-50K	53170	130	48671	119	P	B4-U0-G4	26994	66	B1-U0-G4	47445	116	S	B4-U0-G5	26585	65	B1-U0-G4	48262	118	P	B4-U0-G5	49080	120	P	B5-U0-G5	409

*DLC S= Standard
P= Premium

EPA

EPA	SGL	D90	D180	T90	T120	QD
NV-2-DP	0.89	1.22	1.78	1.96	1.91	1.96
NV-2-KM	0.69	1.18	1.38	1.85	2.68	1.85
NV-2-SA	0.98	1.96	1.75	2.66	2.62	2.66

L70/L90 DATA

TEMP.	NV-2 L70 (128L-1050mA)	NV-2 L90 (128L-1050mA)
25°C	483,000	160,000

DPX ARM LENGTH

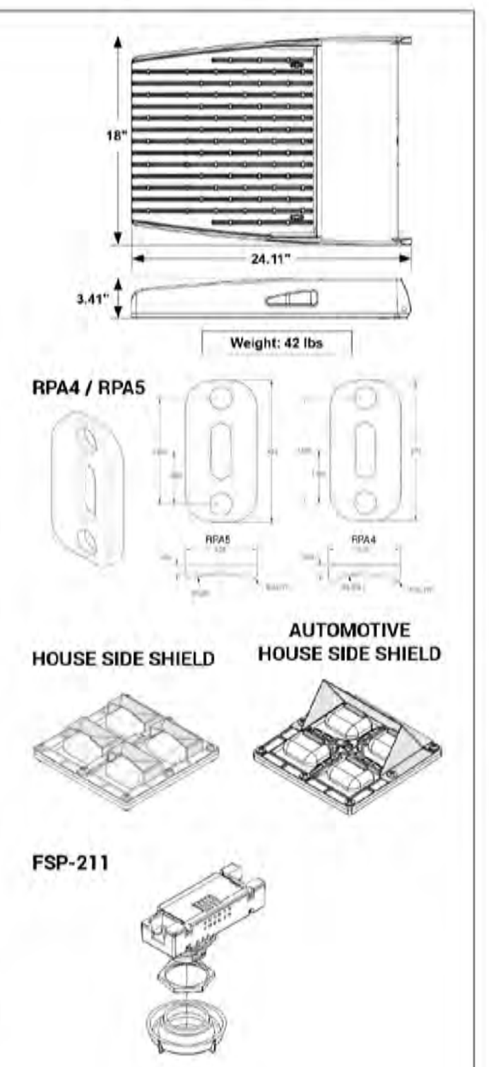
DPX ARM LENGTH	SGL	D90	D180	T90	T120	QD
NV-2	6.25"	11.25"	6.25"	11.25"	11.25"	11.25"

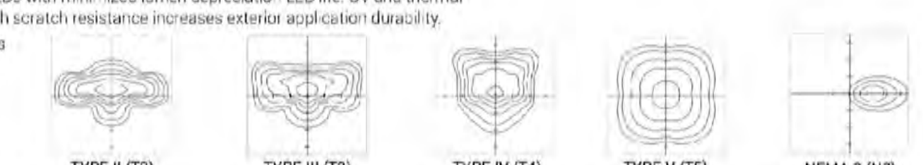
ELECTRICAL
- 120-277 Volts (UNV) or 347-480 Volts (HV)
- 0-10V dimming driver by Philips Advance
- Driver power factor at maximum load is ≥ .95, THD maximum load is 15%
- All internal wiring UL certified for 600 VAC and 105°C
- All drivers, controls, and sensors housed in enclosed IP-65 compartment
- Lumileds Luxeon MX LED's
- CRI >70
- Color temperatures: 3000K, 4000K, 5000K

OPTIONS
- **BIRD DETERRANT (BD)**—offers effective and humane deterrent for larger bird species and provides cost-effective long-term solution to nuisance bird infestations and protect your property.
- **MARINE GRADE FINISH (MGF)**—A multi-step process creating protective finishing coat against harsh environments.
  - Chemically washed in a 5 stage cleaning system.
  - Pre baked
  - Powder coated 3-5 mils of Zinc Rich Super Durable Polyester Primer.
  - 1-2 feet inside pole coverage top and bottom.
  - Oven Baked.
  - Finished Powder Coating of Super Durable Polyester Powder Coat 3-5 mil thickness.
- **SHIELDS (HSS, AHS)**—House Side Shield (HSS) is designed for full property line cut-off. Automotive House Side Shield (AHS) is a single-sided shield allowing partial cut-off on either side or front of luminaire.
- **ROUND POLE ADAPTER (RPA)**– When using round poles, specify Round Pole Adapter (RPA). Specify RPA4 when installing on 3"-4" round poles, and RPA5 when installing on 5"-6" round poles.

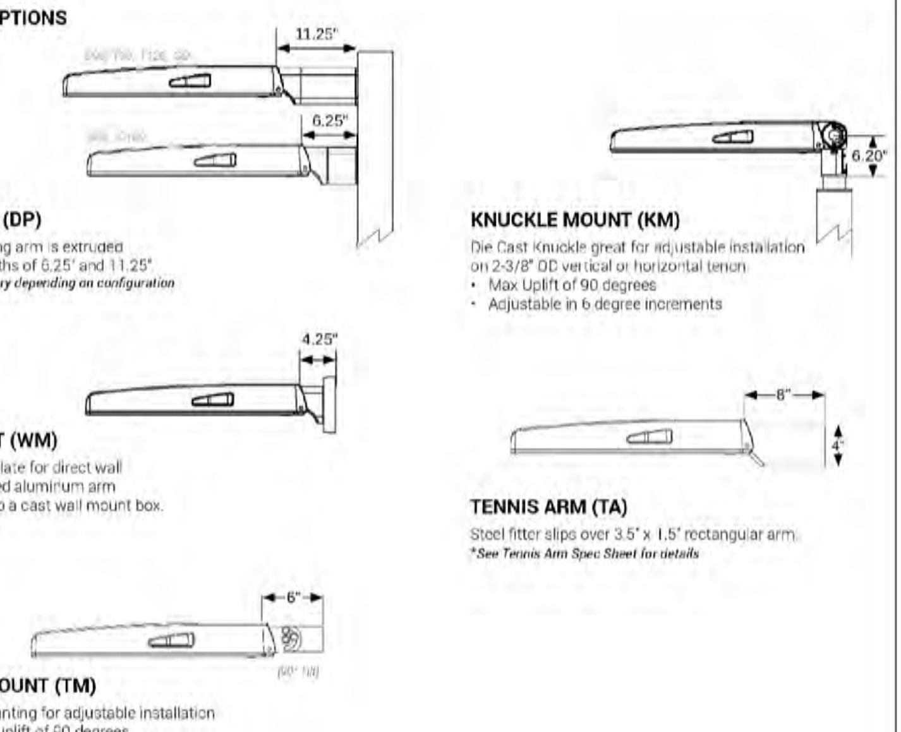
CONTROLS
- **FSP-211 (FSP-X)**—Passive infrared (PIR) sensor providing multi-level control based on motion/daylight contribution.
  - All control parameters adjustable via wireless configuration remote storing and transmitting sensor profiles
  - FSP-20 mounting heights 9-20 feet
  - FSP-40 mounting heights 21-40 feet.
  - Includes 5 dimming event cycles, 0-10V dimming with motion sensing, reprogrammable in the field.
- **NEMA 7-PIN RECEPTACLE (PE7)**—An ANSI C136.41-2013 receptacle provides electrical and mechanical interconnection between photo control cell and luminaire. Dimming receptacle available two or four dimming contacts supports 0-10 VDC dimming methods or Digital Addressable Lighting Interface (DALI), providing reliable power interconnect

OPTICS
Silicone optics high photothermal stability and light output provides higher powered LEDs with minimized lumen depreciation LED life. UV and thermal stability with scratch resistance increases exterior application durability.
- IES Types





MOUNTING OPTIONS



DIRECT POLE (DP)
Standard mounting arm is extruded aluminum in lengths of 6.25" and 11.25"
*Arm lengths may vary depending on configuration

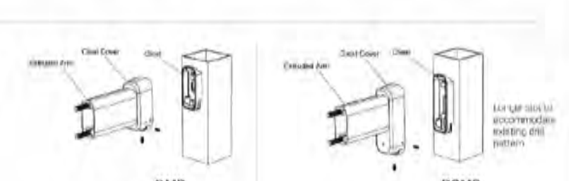
KNUCKLE MOUNT (KM)
Die Cast Knuckle great for adjustable installation on 2-3/8" OD vertical or horizontal tenon
- Max Uplift of 90 degrees
- Adjustable in 6 degree increments

WALL MOUNT (WM)
Cast Aluminum Plate for direct wall mount. 3" extruded aluminum arm mounts directly to a cast wall mount box.

TENNIS ARM (TA)
Steel fitter slips over 3.5" x 1.5" rectangular arm.
*See Tennis Arm Spec Sheet for details

TRUNNION MOUNT (TM)
Steel, bolt on mounting for adjustable installation with a maximum uplift of 90 degrees
*Unpainted stainless steel is standard

OPTIONAL
Optional Cast Aluminum Bracket, **Quick Mount Bracket (QMB)** and **Retrofit Quick Mount Bracket (RQMB)**, designed for quick mounting on Direct Square or Round Poles. Cleat mounts directly to pole for easily hung fixtures.



NV-W

HIGH PERFORMANCE FULL CUT OFF WALL PACK

FORM AND FUNCTION
- Sleek, low profile housing
- Spec grade performance
- Engineered for optimum thermal management
- L70 480,000
- Reduces energy consumption and costs up to 65%

CONSTRUCTION
- Die Cast Aluminum
- Internal cooling fins, Finite Element Analysis (FEA) designed
- Corrosion resistant external hardware
- One-piece silicone gasket ensures IP-65 seal for electronics compartment
- Two-piece silicone Micro Optic system ensures IP-67 level seal around each PCB
- Silicone Micro Optics: Recessed, full cutoff, vandal resistant and non-yellowing
- Dark Sky Compliant

FINISH
- 3-5 mils electrostatic powder coat.
- NLS' standard high-quality finishes prevent corrosion protects against and extreme environmental conditions

WARRANTY
Five-year standard warranty

LISTINGS
- Certified to UL 1598
- UL 8750
- CSA C22.2 No. 250.0
- DesignLights Consortium® (DLC)
- DesignLights Consortium Premium® (DLCP)
- IP65/ IP67 Rated

LED WATTAGE CHART

	16L	32L
350 milliamps	19w	-
530 milliamps	29w	-
700 milliamps	37w	71w
1050 milliamps	56w	-

Project Name: Type:

Cat #	Light Dist.	No. of LEDs	Milliamp	Kelvin	Volts	Mounting	Color	Options
NV-W (NV-W)	Type 2 (T2) Type 3 (T3) Type 4 (T4)	16 (16L) 32 (32L) *700mA only	350 (35) 530 (53) 700 (7) 1050 (1)	3000K (30K) 4000K (40K) 5000K (50K)	120-277 (UNV) 347-480 (HV)	Wall Mount (WM)	Bronze (BRZ) White (WHT) Silver (SVR) Black (BLK) Graphite (GPH) Grey (GRY) Custom (CS)	Marine Grade Finish (MGF) Dimming Control with Motion Sensor *8' Heights and Below (DC8) *9'-20' Heights (DC20) *21'-40' Heights (DC40) Surge Protector (10K) Emergency Battery 4W (EM4) *516 - 564 Lumens, Certified CA Title 20 Emergency Battery 8W (EM8) *1032 - 1128 Lumens, Certified CA Title 20 Emergency Battery 16W (EM16) *2064 - 2256 Lumens, Certified CA Title 20 Emergency Cold Pk Battery (EMCP) *14 Watts *1806 - 1974 Lumens, Certified CA Title 20 Housing Extension (HE) *To match EM Extension Box Button Photo Cell (PC) *Universal Voltage 120-277 Nema 7-Pin Receptacle (PE7) *Requires Deep Back Box Vanity Plate 16" SQ (VP)

LUMENS

PART NUMBER	T2	LM/W	T3	LM/W	T4	LM/W	W
NV-W 16L-35-30K	2470	130	2499	132	2470	130	19
NV-W 16L-35-40K	2618	138	2648	139	2618	138	19
NV-W 16L-35-50K	2618	138	2648	139	2618	138	19
NV-W 16L-53-30K	3544	122	3579	123	3544	122	29
NV-W 16L-53-40K	3756	130	3794	131	3756	130	29
NV-W 16L-53-50K	3756	130	3794	131	3756	130	29
NV-W 16L-7-30K	4388	119	4432	120	4388	119	37
NV-W 16L-7-40K	4651	126	4698	127	4651	126	37
NV-W 16L-7-50K	4651	126	4698	127	4651	126	37
NV-W 16L-1-30K	5970	107	6029	108	5970	107	56
NV-W 16L-1-40K	6328	113	6391	114	6328	113	56
NV-W 16L-1-50K	6328	113	6391	114	6328	113	56
NV-W 32L-7-30K	9010	127	9100	128	9010	127	71
NV-W 32L-7-40K	9550	135	9646	136	9550	135	71
NV-W 32L-7-50K	9550	135	9646	136	9550	135	71

BUG RATINGS

PART NUMBER	T2	T3	T4	W
NV-W-16L-35-30K	B1-U0-G1	B1-U0-G1	B1-U0-G1	19
NV-W-16L-35-40K	B1-U0-G1	B1-U0-G1	B1-U0-G1	19
NV-W-16L-35-50K	B1-U0-G1	B1-U0-G1	B1-U0-G1	19
NV-W-16L-53-30K	B1-U0-G1	B1-U0-G1	B1-U0-G1	29
NV-W-16L-53-40K	B1-U0-G1	B1-U0-G1	B1-U0-G1	29
NV-W-16L-53-50K	B1-U0-G1	B1-U0-G1	B1-U0-G1	29
NV-W-16L-7-30K	B1-U0-G1	B1-U0-G1	B1-U0-G1	37
NV-W-16L-7-40K	B1-U0-G1	B1-U0-G1	B1-U0-G1	37
NV-W-16L-7-50K	B1-U0-G1	B1-U0-G1	B1-U0-G1	37
NV-W-16L-1-30K	B1-U0-G1	B2-U0-G2	B1-U0-G2	56
NV-W-16L-1-40K	B1-U0-G1	B2-U0-G2	B2-U0-G2	56
NV-W-16L-1-50K	B1-U0-G1	B2-U0-G2	B2-U0-G2	56
NV-W-32L-7-30K	B2-U0-G2	B2-U0-G2	B2-U0-G2	71
NV-W-32L-7-40K	B2-U0-G2	B2-U0-G2	B2-U0-G2	71
NV-W-32L-7-50K	B2-U0-G2	B2-U0-G2	B2-U0-G2	71

L70 DATA

TEMP.	NV-W L70 (16L-1050mA)
60.2°C	483,000

TEMP.	NV-W L70 (32L-700mA)
63°C	483,000

EMERGENCY BATTERY BACK-UP LUMENS

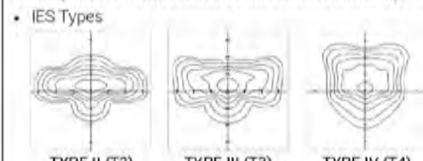
PART NUMBER	T2	LM/W	T3	LM/W	T4	LM/W	W
EM4-30K	520	130	524	131	516	129	4
EM4-40K	544	136	548	137	540	135	4
EM4-50K	560	140	564	141	556	139	4
EM8-30K	1040	130	1048	131	1032	129	8
EM8-40K	1088	136	1096	137	1080	135	8
EM8-50K	1120	140	1128	141	1112	139	8
EM16-30K	2080	130	2096	131	2064	129	16
EM16-40K	2176	136	2192	137	2160	135	16
EM16-50K	2240	140	2256	141	2224	139	16
EMCP-30K	1820	130	1834	131	1806	129	14
EMCP-40K	1904	136	1918	137	1890	135	14
EMCP-50K	1960	140	1974	141	1946	139	14

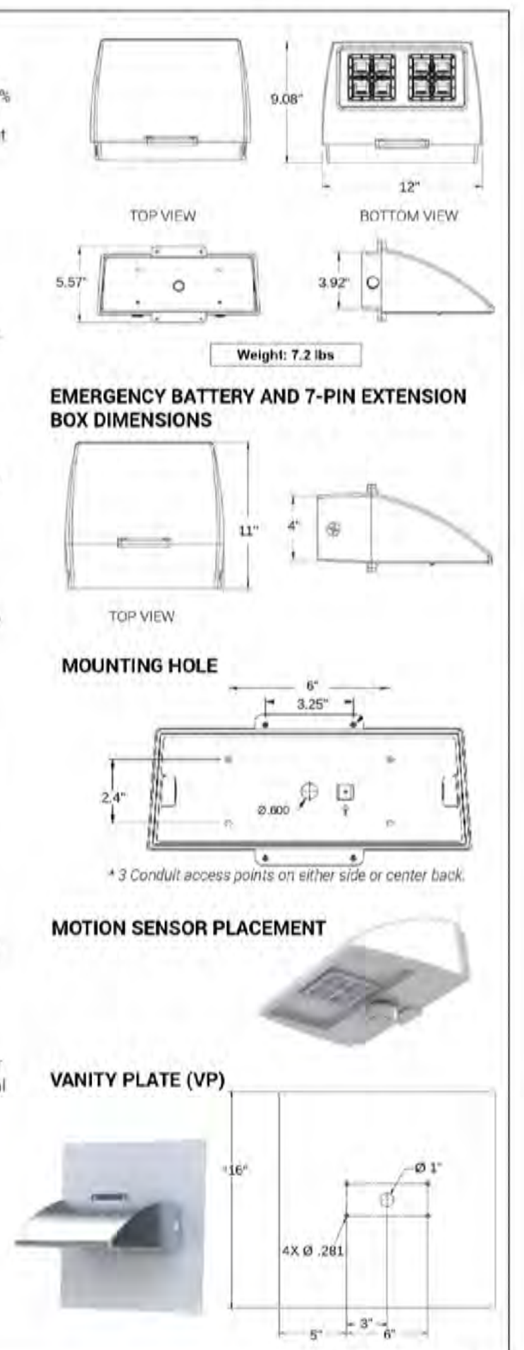
ELECTRICAL
- 120-277 Volts (UNV)
- 0-10V dimming driver by Philips Advance
- Driver power factor at maximum load is ≥ .95, THD maximum load is 15%
- All internal wiring UL certified for 600 VAC and 105°C
- All drivers, controls, and sensors housed in enclosed IP-65 compartment
- Lumileds Luxeon MX LED's
- CRI >70 MIN
- Color temperatures: 3000K, 4000K, 5000K

OPTIONS
- **MARINE GRADE FINISH (MGF)**—A multi-step process creating protective finishing coat against harsh environments.
  - Chemically washed in a 5 stage cleaning system.
  - Pre-baked
  - Powder coated 3-5 mils of Zinc Rich Super Durable Polyester Primer.
  - 1-2 feet inside pole coverage top and bottom.
  - Oven Baked.
  - Finished Powder Coating of Super Durable Polyester Powder Coat 3-5 mil thickness.
- **VANITY PLATE (VP)**—The Vanity Plate was designed to cover the unsightly remains on a wall where a larger HID wallpack was removed. The Vanity Plate will be painted to match the finish of the NV-W, custom finishes are available, please consult factory. The standard Vanity Plate is 16" x 16".

CONTROLS
- **DIMMING CONTROL (DCX)**—Passive infrared (PIR) sensor providing multi-level control based on motion/daylight contribution.
  - All control parameters adjustable via wireless configuration remote storing and transmitting sensor profiles.
  - DC8 mounting heights 8 feet and below
  - DC20 mounting heights 9-20 feet
  - DC40 mounting heights 21-40 feet
  - Includes 5 dimming event cycles, 0-10V dimming with motion sensing, reprogrammable in the field.
- **NEMA 7-PIN RECEPTACLE (PE7)**—An ANSI C136.41-2013 receptacle provides electrical and mechanical interconnection between photo control cell and luminaire. Dimming receptacle available two or four dimming contacts supports 0-10 VDC dimming methods or Digital Addressable Lighting Interface (DALI), providing reliable power interconnect.
- **EMERGENCY BATTERY OPERATION**— The emergency battery backup is integral to the NV-W. All emergency backup configurations include a standalone secondary driver with integral relay to detect power loss. This meets NFPA 70/NEC 2008. The emergency battery will power the NV-W for 90 minutes once power is lost. Emergency battery pack are of NiCAD batteries. (EMCP) Emergency Cold Pack Batteries are rated for -20°C to 50°C.

OPTICS
Silicone optics high photothermal stability and light output provides higher powered LEDs with minimized lumen depreciation LED life. UV and thermal stability with scratch resistance increases exterior application durability.
- IES Types





Luminaire Schedule

Symbol	Qty	Label	Arrangement	LLF	Description	Lum. Watts	Lum. Lumens
	4	PL-T4 (AHS)	SINGLE	0.950	NV-2-T4-80L-1-40K-ASA-SINGLE @ 16' MTG. HT. W/AHS SHIELD	263	19988
	2	WP-T3	SINGLE	0.950	NV-W-T3-16L-35-40K-WALL MT @ 14' MTG. HT.	19	2649
	1	WP-T4	SINGLE	0.950	NV-W-T4-16L-35-40K-WALL MT @ 14' MTG. HT.	19	2618
	1	WP-T4-SH	SINGLE	0.950	NV-W-T4-16L-35-40K-WALL MT @ 14' MTG. HT. W/SIDE SHIELD	19	2618
	1	2-WP-T3	SINGLE	0.950	NV-W-T2-16L-175-40K-WALL MT @ 14' MTG. HT.	10	1149

Calculation Summary

Label	Units	Avg	Max	Min	Avg/Min	Max/Min
CalcPts_1	Fc	1.17	15.4	0.0	N.A.	N.A.
PATHWAY	Fc	2.20	3.2	1.0	2.20	3.20

PHOTOMETRIC SITE PLAN

AVERAGE = 1.17 fc @ +3.9 ft.
MINIMUM = 1 fc Throughout / 5fc at entries.

NORTH

TWM ARCHITECTS + PLANNERS
TWM Architects + Planners
1011 C Street, San Rafael, CA 94901
TEL 415-472-5770
FAX 415-472-5846
www.twmarchitects.com

TOYOTA SUNNYVALE RECON CENTER REMODEL + EXPANSION

928 West El Camino Real, Sunnyvale, CA 94087
APN 201-19-036

SITE LIGHTING

A4.2

SCALE: N.A.
DATE: DECEMBER 11 2020

TWM NO: 14-107.1

PLANNING SUBMITTAL - SUPPLEMENT - 11 DECEMBER 2020

2019 CALIFORNIA GREEN BUILDING STANDARDS CODE
NONRESIDENTIAL MANDATORY MEASURES, SHEET 1

INSPECTOR SIGNOFF

CHAPTER 3
GREEN BUILDING
SECTION 301 GENERAL

301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.

301.3 NONRESIDENTIAL ADDITIONS AND ALTERATIONS. [BSC] The provisions of individual sections of Chapter 5 apply to newly constructed buildings, building additions of 1,000 square feet or greater, and/or building alterations with a permit valuation of $200,000 or above (for occupancies within the authority of California Building Standards Commission). Code sections relevant to additions and alterations shall only apply to the portions of the building being added or altered within the scope of the permitted work.

A code section will be designated by a banner to indicate where the code section only applies to newly constructed building [N] or to additions and alterations [A]. When the code section applies to both, no banner will be used.

301.3.1 Nonresidential additions and alterations that cause updates to plumbing fixtures only:

Note: On and after January 1, 2014, certain commercial real property, as defined in Civil Code Section 1101.3, shall have its noncompliant plumbing fixtures replaced with appropriate water-conserving plumbing fixtures under specific circumstances. See Civil Code Section 1101.1 *et seq.* for definitions, types of commercial real property affected, effective dates, circumstances necessitating replacement of noncompliant plumbing fixtures, and duties and responsibilities for ensuring compliance.

301.3.2 Waste Diversion. The requirements of Section 5.408 shall be required for additions and alterations whenever a permit is required for work.

301.4 PUBLIC SCHOOLS AND COMMUNITY COLLEGES. (see GBSC)
301.5 HEALTH FACILITIES. (see GBSC)

SECTION 302 MIXED OCCUPANCY BUILDINGS

302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.

SECTION 303 PHASED PROJECTS

303.1 Phased projects. For shell buildings and others constructed for future tenant improvements, only those code measures relevant to the building components and systems considered to be new construction (or newly constructed) shall apply.

303.1.1 Tenant improvements. The provisions of this code shall apply only to the initial tenant or occupant improvements to a project. Subsequent tenant improvements shall comply with the scoping provisions in Section 301.3 non-residential additions and alterations.

ABBREVIATION DEFINITIONS:
HCD Department of Housing and Community Development
BSC California Building Standards Commission
DSA-SS Division of the State Architect, Structural Safety
OSHPD Office of Statewide Health Planning and Development
LR Low Rise
HR High Rise
AA Additions and Alterations
N New

CHAPTER 5
NONRESIDENTIAL MANDATORY MEASURES

DIVISION 5.1 PLANNING AND DESIGN

SECTION 5.101 GENERAL
5.101.1 Scope
The provisions of this chapter outline planning, design and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore and enhance the environmental quality of the site and respect the integrity of adjacent properties.

SECTION 5.102 DEFINITIONS
5.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

CUTOFF LUMINAIRES. Luminaires whose light distribution is such that the candela per 1000 lamp lumens does not numerically exceed 25 (2.5 percent) at an angle of 90 degrees above nadir, and 100 (10 percent) at a vertical angle of 80 degrees above nadir. This applies to all lateral angles around the luminaire.

LOW-EMITTING AND FUEL EFFICIENT VEHICLES.
Eligible vehicles are limited to the following:

1. Zero emission vehicle (ZEV), including neighborhood electric vehicles (NEV), partial zero emission vehicle (PZEV), advanced technology PZEV (AT ZEV) or CNG fueled (original equipment manufacturer only) regulated under Health and Safety Code section 43800 and CCR, Title 13, Sections 1961 and 1962.
2. High-efficiency vehicles, regulated by U.S. EPA, bearing High-Occupancy Vehicle (HOV) car pool lane stickers issued by the Department of Motor Vehicles.

NEIGHBORHOOD ELECTRIC VEHICLE (NEV). A motor vehicle that meets the definition of "low-speed vehicle" either in Section 385.5 of the Vehicle Code or in 49CFR571.500 (as it existed on July 1, 2000), and is certified to zero-emission vehicle standards.

TENANT-OCCUPANTS. Building occupants who inhabit a building during its normal hours of operation as permanent occupants, such as employees, as distinguished from customers and other transient visitors.

VANPOOL VEHICLE. Eligible vehicles are limited to any motor vehicle, other than a motortruck or truck tractor, designed for carrying more than 10 but not more than 15 persons including the driver, which is maintained and used primarily for the nonprofit work-related transportation of adults for the purpose of ridesharing.

Note: Source: Vehicle Code, Division 1, Section 668

ZEV. Any vehicle certified to zero-emission standards.

SECTION 5.106 SITE DEVELOPMENT
5.106.1 STORM WATER POLLUTION PREVENTION. Newly constructed projects and additions which disturb less than one acre of land and are not part of a larger common plan of development or sale shall prevent the pollution of storm water runoff from the construction activities through one or more of the following measures:

5.106.1.1 Local ordinance. Comply with a lawfully enacted storm water management and/or erosion control ordinance.

5.106.1.2 Best Management Practices (BMP). Prevent the loss of soil through wind or water erosion by implementing an effective combination of erosion and sediment control and good housekeeping BMP.

1. Soil loss BMP that should be considered for each project include, but are not limited to, the following:
   a. Scheduling construction activity.
   b. Preservation of natural features, vegetation and soil.
   c. Drainage swales or lined ditches to control stormwater flow.
   d. Mulching or hydroseeding to stabilize disturbed soils.
   e. Erosion control to protect slopes.
   f. Protection of storm drain inlets (gravel bags or catch basin inserts).
   g. Perimeter sediment control (perimeter silt fence, fiber rolls).
   h. Sediment trap or sediment basin to retain sediment on site.
   i. Stabilized construction exits.
   j. Wind erosion control.
   k. Other soil loss BMP acceptable to the enforcing agency.
2. Good housekeeping BMP to manage construction equipment, materials and wastes that should be considered for implementation as appropriate for each project include, but are not limited to, the following:
   a. Material handling and waste management.
   b. Building materials stockpile management.
   c. Management of washout areas (concrete, paints, stucco, etc.).
   d. Control of vehicle/equipment fueling to contractor's staging area.
   e. Vehicle and equipment cleaning performed off site.
   f. Spill prevention and control.
   g. Other housekeeping BMP acceptable to the enforcing agency.

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5.106.4 BICYCLE PARKING. For buildings within the authority of California Building Standards Commission as specified in Section 103, comply with Section 5.106.4.1. For buildings within the authority of the Division of the State Architect pursuant to Section 105, comply with Section 5.106.4.2

5.106.4.1 Bicycle parking. [BSC-CG] Comply with Sections 5.106.4.1.1 and 5.106.4.1.2; or meet the applicable local ordinance, whichever is stricter.

5.106.4.1.1 Short-term bicycle parking. If the project or an addition or alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack.
Exception: Additions or alterations which add nine or less visitor vehicular parking spaces.

5.106.4.1.2 Long-term bicycle parking. For new buildings with 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of the tenant-occupant vehicular spaces with a minimum of one bicycle parking facility.

5.106.4.1.3 For additions or alterations that add 10 or more tenant-occupant vehicular spaces, provide secure bicycle parking for 5 percent of the tenant vehicular spaces being added, with a minimum of one bicycle parking facility.

5.106.4.1.4 For new shell buildings in phased projects provide secure bicycle parking for 5 percent of the anticipated tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility.

5.106.4.1.5 Acceptable bicycle parking facility for Sections 5.106.4.1.2, 5.106.4.1.3, and 5.106.4.1.4 shall be convenient from the street and shall meet one of the following:

1. Covered, lockable enclosures with permanently anchored racks for bicycles;
2. Lockable bicycle rooms with permanently anchored racks; or
3. Lockable, permanently anchored bicycle lockers.

Note: Additional information on recommended bicycle accommodations may be obtained from Sacramento Area Bicycle Advocates.

5.106.4.2 Bicycle parking. [DSA-SS] For public schools and community colleges, comply with Sections 5.106.4.2.1 and 5.106.4.2.2

5.106.4.2.1 Student bicycle parking. Provide permanently anchored bicycle racks conveniently accessed with a minimum of four two-bike capacity racks per new building.
5.106.4.2.2 Staff bicycle parking. Provide permanent, secure bicycle parking conveniently accessed with a minimum of two staff bicycle parking spaces per new building. Acceptable bicycle parking facilities shall be convenient from the street or staff parking area and shall meet one of the following:

1. Covered, lockable enclosures with permanently anchored racks for bicycles;
2. Lockable bicycle rooms with permanently anchored racks; or
3. Lockable, permanently anchored bicycle lockers.

5.106.5.2 DESIGNATED PARKING FOR CLEAN AIR VEHICLES. In new projects or additions or alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as follows:

TABLE 5.106.5.2 - PARKING

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED SPACES
0-9	0
10-25	1
25-50	3
51-75	6
76-100	8
101-150	11
151-200	16
201 AND OVER	AT LEAST 8% OF TOTAL

5.106.5.2.1 - Parking stall marking. Paint, in the paint used for stall striping, the following characters such that the lower edge of the last word aligns with the end of the stall striping and is visible beneath a parked vehicle: CLEAN AIR / VAN POOL / EV

Note: Vehicles bearing Clean Air Vehicle stickers from expired HOV lane programs may be considered eligible for designated parking spaces.

5.106.5.3 Electric vehicle (EV) charging. [N] Construction shall comply with Section 5.106.5.3.1 or Section 5.106.5.3.2 to facilitate future installation of electric vehicle supply equipment (EVSE). When EVSE(s) is/are installed, it shall be in accordance with the *California Building Code*, the California Energy Commission (CEC) and as follows:

5.106.5.3.1 Single charging space requirements. [N] When only a single charging space is required per Table 5.106.5.3.3, a raceway is required to be installed at the time of construction and shall be installed in accordance with the *California Electrical Code*. Construction plans and specifications shall include, but are not limited to, the following:

1. The type and location of the EVSE.
2. A listed raceway capable of accommodating a 208/240 -volt dedicated branch circuit.
3. The raceway shall not be less than trade size 1."
4. The raceway shall originate at a service panel or a subpanel serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and listed suitable cabinet, box, enclosure or equivalent.
5. The service panel or subpanel shall have sufficient capacity to accommodate a minimum 40-ampere dedicated branch circuit for the future installation of the EVSE.

5.106.5.3.2 Multiple charging space requirements. [N] When multiple charging spaces are required per Table 5.106.5.3.3 raceway(s) is/are required to be installed at the time of construction and shall be installed in accordance with the *California Electrical Code*. Construction plans and specifications shall include, but are not limited to, the following:

1. The type and location of the EVSE.
2. The raceway(s) shall originate at a service panel or a subpanel(s) serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and into listed suitable cabinet(s), box(es), enclosure(s) or equivalent.
3. Plan design shall be based upon 40-ampere minimum branch circuits.
4. Electrical calculations shall substantiate the design of the electrical system, to include the rating of equipment and any on-site distribution transformers and have sufficient capacity to simultaneously charge all required EVs at its full rated amperage.
5. The service panel or subpanel(s) shall have sufficient capacity to accommodate the required number of dedicated branch circuit(s) for the future installation of the EVSE.

5.106.5.3.3 EV charging space calculations. [N] Table 5.106.5.3.3 shall be used to determine if single or multiple charging space requirements apply for the future installation of EVSE.

Exceptions: On a case-by-case basis where the local enforcing agency has determined EV charging and infrastructure is not feasible based upon one or more of the following conditions:

1. Where there is insufficient electrical supply.
2. Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.

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TABLE 5.106.5.3.3

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED SPACES
0-9	0
10-25	1
36-50	2
51-75	4
76-100	5
101-200	7
201 AND OVER	6% of total[1]

1. Calculation for spaces shall be rounded up to the nearest whole number.

5.106.5.3.4 [N] Identification. The service panel or subpanel(s) circuit directory shall identify the reserved overcurrent protective device space(s) for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE".

5.106.5.3.5 [N] Future charging spaces qualify as designated parking as described in Section 5.106.5.2 Designated parking for clean air vehicles.

5.106.8 LIGHT POLLUTION REDUCTION. [N] Outdoor lighting systems shall be designed and installed to comply with the following:

1. The minimum requirements in the California Energy Code for Lighting Zones 0-4 as defined in Chapter 10, Section 10-114 of the California Administrative Code; and
2. Backlight (B) ratings as defined in IES TM-15-11 (shown in Table A-1 in Chapter 8);
3. Uplight and Glare ratings as defined in California Energy Code (shown in Tables 130.2-A and 130.2-B in Chapter 8; and
4. Allowable BUG ratings not exceeding those shown in Table 5.106.8, or

Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.

Exceptions: [N]

1. Luminaires that qualify as exceptions in Section 140.7 of the California Energy Code.
2. Emergency lighting.
3. Building facade meeting the requirements in Table 140.7-B of the California Energy Code, Part 6.
4. Custom lighting features as allowed by the local enforcing agency, as permitted by Section 101.8 Alternate materials, designs and methods of construction.

Note: [N] See also California Building Code, Chapter 12, Section 1205.6 for college campus lighting requirements for parking facilities and walkways.

5.106.10 GRADING AND PAVING. Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:

1. Swales.
2. Water collection and disposal systems.
3. French drains.
4. Water retention gardens.
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge.

Exception: Additions and alterations not altering the drainage path.

TABLE 5.106.8 [N] MAXIMUM ALLOWABLE BACKLIGHT, UPLIGHT AND GLARE (BUG) RATINGS [1,2]

ALLOWABLE RATING	LIGHTING ZONE 1	LIGHTING ZONE 2	LIGHTING ZONE 3	LIGHTING ZONE 4
MAXIMUM ALLOWABLE BACKLIGHT RATING [3]				
Luminaire greater than 2 mounting heights (MH) from property line	No Limit	No Limit	No Limit	No Limit
Luminaire back hemisphere is 1-2 MH from property line	B2	B3	B4	B4
Luminaire back hemisphere is 0.5-1 MH from property line	B1	B2	B3	B3
Luminaire back hemisphere is less than 0.5 MH from property line	B0	B0	B1	B2
MAXIMUM ALLOWABLE UPLIGHT RATING				
For area lighting [4]	U0	U0	U0	U0
For all other outdoor lighting,including decorative luminaires	U1	U2	U3	U4
MAXIMUM ALLOWABLE GLARE RATING [5]				
Luminaire greater than 2 MH from property line	G1	G2	G3	G4
Luminaire front hemisphere is 1-2 MH from property line	G0	G1	G1	G2
Luminaire front hemisphere is 0.5-1 MH from property line	G0	G0	G1	G1
Luminaire back hemisphere is less than 0.5 MH from property line	G0	G0	G0	G1

1. IESNA Lighting Zones 0 and 5 are not applicable; refer to Lighting Zones as defined in the *California Energy Code* and Chapter 10 of the *Callifornia Administrative Code.*

2. For property lines that abut public walkways, bikeways, plazas and parking lots, the property line may be considered to be 5 feet beyond the actual property line for purpose of determining compliance with this section. For property lines that abut public roadways and public transit corridors, the property line may be considered to be the centerline of the public roadway or public transit corridor for the purpose of determining compliance with this section.

3. If the nearest property line is less than or equal to two mounting heights from the back hemisphere of the luminaire distribution, the applicable reduced Backlight rating shall be met.

4. General lighting luminaires in areas such as outdoor parking, sales or storage lots shall meet these reduced ratings. Decorative luminaires located in these areas shall meet *U*-value limits for "all other outdoor lighting".

5. If the nearest property line is less than or equal to two mounting heights from the front hemisphere of the luminaire distribution, the applicable reduced Glare rating shall be met.

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DIVISION 5.2 ENERGY EFFICIENCY
SECTION 5.201 GENERAL
5.201.1 Scope [BSC-CG]. *California Energy Code [DSA-SS].* For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory building standards.

DIVISION 5.3 WATER EFFICIENCY AND CONSERVATION
SECTION 5.301 GENERAL
5.301.1 Scope. The provisions of this chapter shall establish the means of conserving water use indoors, outdoors and in wastewater conveyance.

SECTION 5.302 DEFINITIONS
5.302.1 Definitions. The following terms are defined in Chapter 2 *(and are included here for reference)*

EVAPOTRANSPIRATION ADJUSTMENT FACTOR (ETAF) [DSA-SS]. An adjustment factor when applied to reference evapotranspiration that adjusts for plant factors and irrigation efficiency, which are two major influences on the amount of water that needs to be applied to the landscape.

FOOTPRINT AREA [DSA-SS]. The total area of the furthest exterior wall of the structure projected to natural grade, not including exterior areas such as stairs, covered walkways, patios and decks.

METERING FAUCET. A self-closing faucet that dispenses a specific volume of water for each actuation cycle. The volume or cycle duration can be fixed or adjustable.

GRAYWATER. Pursuant to Health and Safety Code Section 17922.12, "graywater" means untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes. "Graywater" includes, but is not limited to wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines and laundry tubs, but does not include waste water from kitchen sinks or dishwashers.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO). The California ordinance regulating landscape design, installation and maintenance practices that will ensure commercial, multifamily and other developer installed landscapes greater than 2500 square feet meet an irrigation water budget developed based on landscaped area and climatological parameters.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO). [HCD] The California model ordinance (California Code of Regulations, Title 23, Division 2, Chapter 2.7), regulating landscape design, installation and maintenance practices. Local agencies are required to adopt the updated MWELO, or adopt a local ordinance at least as effective as the MWELO.

POTABLE WATER. Water that is drinkable and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards. See definition in the California Plumbing Code, Part 5.

POTABLE WATER. [HCD] Water that is satisfactory for drinking, culinary, and domestic puroses, and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards and the requirements of the Health Authority Having Jurisdiction.

RECYCLED WATER. Water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur [Water Code Section 13050 (n)]. Simply put, recycled water is water treated to remove waste matter attaining a quality that is suitable to use the water again.

SUBMETER. A meter installed subordinate to a site meter. Usually used to measure water intended for one purpose, such as landscape irrigation. For the purposes of CALGreen, a dedicated meter may be considered a submeter.

WATER BUDGET. Is the estimated total landscape irrigation water use which shall not exceed the maximum applied water allowance calculated in accordance with the Department of Water Resources Model Efficient Landscape Ordinance (MWELO).

SECTION 5.303 INDOOR WATER USE
5.303.1 METERS. Separate submeters or metering devices shall be installed for the uses described in Sections 503.1.1 and 503.1.2.

5.303.1.1 Buildings in excess of 50,000 square feet. Separate submeters shall be installed as follows:

1. For each individual leased, rented or other tenant space within the building projected to consume more than 100 gal/day (380 L/day), including, but not limited to, spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop.
2. Where separate submeters for individual building tenants are unfeasible, for water supplied to the following subsystems:
   a. Makeup water for cooling towers where flow through is greater than 500 gpm (30 L/s).
   b. Makeup water for evaporative coolers greater than 6 gpm (0.04 L/s).
   c. Steam and hot water boilers with energy input more than 500,000 Btu/h (147 kW).

5.303.1.2 Excess consumption. A separate submeter or metering device shall be provided for any tenant within a new building or within an addition that is projected to consume more than 1,000 gal/day.

5.303.3 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:

5.303.3.1 Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-Type toilets.

Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.

5.303.3.2 Urinals. The effective flush volume of urinals shall not exceed 0.5 gallons per flush.

5.303.3.3 Showerheads.
5.303.3.3.1 Single showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

5.303.3.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time.

Note: A hand-held shower shall be considered a showerhead.

5.303.3.4 Faucets and fountains.

5.303.3.4.1 Nonresidential Lavatory faucets. Lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi.

5.303.3.4.2 Kitchen faucets. Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.

5.303.3.4.3 Wash fountains. Wash fountains shall have a maximum flow rate of not more than1.8 gallons per minute/20 [rim space (inches) at 60 psi].

5.303.3.4.4 Metering faucets. Metering faucets shall not deliver more than 0.20 gallons per cycle.

5.303.3.4.5 Metering faucets for wash fountains. Metering faucets for wash fountains shall have a maximum flow rate of not more than 0.20 gallons per minute/20 [rim space (inches) at 60 psi].

Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

5.303.4 COMMERCIAL KITCHEN EQUIPMENT.

5.303.4.1 Food Waste Disposers. Disposers shall either modulate the use of water to no more than 1 gpm when the disposer is not in use (not actively grinding food waste/no-load) or shall automatically shut off after no more than 10 minutes of inactivity. Disposers shall use no more than 8 gpm of water.

Note: This code section does not affect local jurisdiction authority to prohibit or require disposer installation.

5.303.5 AREAS OF ADDITION OR ALTERATION. For those occupancies within the authority of the California Building Standards Commission as specified in Section 103, the provisions of Section 5.303.3 and 5.303.4 shall apply to new fixtures in additions or areas of alteration to the building.

5.303.6 STANDARDS FOR PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures and fittings shall be installed in accordance with the *California Plumbing Code*, and shall meet the applicable standards referenced in Table 1701.1 of the *California Plumbing Code* and in Chapter 6 of this code.

DISCLAIMER: THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE 2019 CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.

2019 CALIFORNIA GREEN BUILDING STANDARDS CODE
NONRESIDENTIAL MANDATORY MEASURES, SHEET 2

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SECTION 5.304 OUTDOOR WATER USE
5.304.1 OUTDOOR WATER USE IN LANDSCAPE AREAS. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.
Note:
1. The Model Water Efficient Landscape Ordinance (MWELO) is located in the California Code of Regulations, Title 23, Chapter 2.7, Division 2.
2. MWELO and supporting documents, including a water budget calculator, are available at: https://www.water.ca.gov/

5.304.6 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS [DSA-SS]. For public schools and community colleges, landscape projects as described in Sections 5.304.6.1 and 5.304.6.2 shall comply with the California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO) commencing with Section 490 of Chapter 2.7, Division 2, Title 23, California Code of Regulations, except that the evapotranspiration adjustment factor (ETAF) shall be 0.65 with an additional water allowance for special landscape areas (SLA) of 0.35.

Exception: Any project with an aggregate landscape area of 2,500 square feet or less may comply with the prescriptive measures contained in Appendix D of MWELO.

5.304.6.1 Newly constructed landscapes. [DSA-SS] New construction projects with an aggregate landscape area equal to or greater than 500 square feet.

5.304.6.2 Rehabilitated landscapes. [DSA-SS] Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 1,200 square feet.

DIVISION 5.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

SECTION 5.401 GENERAL
5.401.1 SCOPE. The provisions of this chapter shall outline means of achieving material conservation and resource efficiency through protection of buildings from exterior moisture, construction waste diversion, employment of techniques to reduce pollution through recycling of materials, and building commissioning or testing and adjusting.

SECTION 5.402 DEFINITIONS
5.402.1 DEFINITIONS. The following terms are defined in Chapter 2 *(and are included here for reference)*

ADJUST. To regulate fluid flow rate and air patterns at the terminal equipment, such as to reduce fan speed or adjust a damper.

BALANCE. To proportion flows within the distribution system, including sub-mains, branches and terminals, according to design quantities.

BUILDING COMMISSIONING. A systematic quality assurance process that spans the entire design and construction process, including verifying and documenting that building systems and components are planned, designed, installed, tested, operated and maintained to meet the owner's project requirements.

ORGANIC WASTE. Food waste, green waste, landscape and pruning wste, nonhazardous wood waste, and food soiled paper waste that is mixed in with food waste.

TEST. A procedure to determine quantitative performance of a system or equipment

SECTION 5.407 WATER RESISTANCE AND MOISTURE MANAGEMENT
5.407.1 WEATHER PROTECTION. Provide a weather-resistant exterior wall and foundation envelope as required by California Building Code Section 1402.2 (Weather Protection), manufacturer's installation instructions or local ordinance, whichever is more stringent.

5.407.2 MOISTURE CONTROL. Employ moisture control measures by the following methods.

5.407.2.1 Sprinklers. Design and maintain landscape irrigation systems to prevent spray on structures.

5.407.2.2 Entries and openings. Design exterior entries and/or openings subject to foot traffic or wind-driven rain to prevent water intrusion into buildings as follows:

5.407.2.2.1 Exterior door protection. Primary exterior entries shall be covered to prevent water intrusion by using nonabsorbent floor and wall finishes within at least 2 feet around and perpendicular to such openings plus at least one of the following:

1. An installed awning at least 4 feet in depth.
2. The door is protected by a roof overhang at least 4 feet in depth.
3. The door is recessed at least 4 feet.
4. Other methods which provide equivalent protection.

5.407.2.2.2 Flashing. Install flashings integrated with a drainage plane.

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SECTION 5.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING
5.408.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 65% of the non-hazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.408.1.2 or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent.

5.408.1.1 Construction waste management plan. Where a local jurisdiction does not have a construction and demolition waste management ordinance, submit a construction waste management plan that:

1. Identifies the construction and demolition waste materials to be diverted from disposal by efficient usage, recycling, reuse on the project or salvage for future use or sale.
2. Determines if construction and demolition waste materials will be sorted on-site (source-separated) or bulk mixed (single stream).
3. Identifies diversion facilities where construction and demolition waste material collected will be taken.
4. Specifies that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

5.408.1.2 Waste Management Company. Utilize a waste management company that can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with this section.

Note: The owner or contractor shall make the determination if the construction and demolition waste material will be diverted by a waste management company.

Exceptions to Sections 5.408.1.1 and 5.408.1.2:

1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist.
3. Demolition waste meeting local ordinance or calculated in consideration of loacl recycleing facilities and markets.

5.408.1.3 Waste stream reduction alternative. The combined weight of new construction disposal that does not exceed two pounds per square foot of building area may be deemed to meet the 65% minimum requirement as approved by the enforcing agency.

5.408.1.4 Documentation. Documentation shall be provided to the enforcing agency which demonstrates compliance with Sections 5.408.1.1, through 5.408.1.3. The waste management plan shall be updated as necessary and shall be accessible during construction for examination by the enforcing agency.

Notes:

1. Sample forms found in "A Guide to the California Green Building Standards Code (Nonresidential)" located at www.bsc.ca.gov/Home/CALGreen.aspx may be used to assist in documenting compliance with the waste management plan.
2. Mixed construction and demolition debris processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

5.408.2 UNIVERSAL WASTE. [A] Additions and alterations to a building or tenant space that meet the scoping provisions in Section 301.3 for nonresidential additions and alterations, shall require verification that Universal Waste items such as fluorescent lamps and ballast and mercury containing thermostats as well as other California prohibited Universal Waste materials are disposed of properly and are diverted from landfills. A list of prohibited Universal Waste materials shall be included in the construction documents.

Note: Refer to the Universal Waste Rule link at:
http://www.dtsc.ca.gov/LawsRegsPolicies/Regs/upload/OEAR-A_REGS_UWR_FinalText.pdf

5.408.3 EXCAVATED SOIL AND LAND CLEARING DEBRIS. 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed.

Exception: Reuse, either on or off-site, of vegetation or soil contaminated by disease or pest infestation.

Notes:

1. If contamination by disease or pest infestation is suspected, contact the County Agricultural Commissioner and follow its direction for recycling or disposal of the material.
2. For a map of know pest and/or disease quarantine zones, consult with the California Department of Food and Agriculture. (www.cdfa.ca.gov)

SECTION 5.410 BUILDING MAINTENANCE AND OPERATIONS
5.410.1 RECYCLING BY OCCUPANTS. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive.

Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code 42649.82 (a)(2)(A) et seq. shall also be exempt from the organic waste portion of this section.

5.410.1.1 Additions. All additions conducted within a 12-month period under single or multiple permits, resulting in an increase of 30% or more in floor area, shall provide recycling areas on site.

Exception: Additions within a tenant space resulting in less than a 30% increase in the tenant space floor area.

5.410.1.2 Sample ordinance. Space allocation for recycling areas shall comply with Chapter 18, Part 3, Division 30 of the *Public Resources Code*. Chapter 18 is known as the California Solid Waste Reuse and Recycling Access Act of 1991 (Act).

Note: A sample ordinance for use by local agencies may be found in Appendix A of the document at the CalRecycle's web site.

5.410.2 COMMISSIONING. [N] For new buildings 10,000 square feet and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements. Commissioning shall be performed in accordance with this section by trained personnel with experience on projects of comparable size and complexity. For I-Occupancies that are not regulated by OSHPD or for I-occupancies and L-occupancies that are not regulated by the California Energy Code Section 100.0 Scope, all requirements in Sections 5.410.2 through 5.410.2.6 shall apply.

Note: For energy-related systems under the scope (Section 100) of the California Energy Code, including heating, ventilation, air conditioning (HVAC) systems and controls, indoor lighting systems and controls, as well as water heating systems and controls, refer to California Energy Code Section 120.8 for commissioning requirements.

Commissioning requirements shall include:

1. Owner's or Owner representative's project requirements.
2. Basis of design.
3. Commissioning measures shown in the construction documents.
4. Commissioning plan.
5. Functional performance testing.
6. Documentation and training.
7. Commissioning report.

Exceptions:

1. Unconditioned warehouses of any size.
2. Areas less than 10,000 square feet used for offices or other conditioned accessory spaces within unconditioned warehouses.
3. Tenant improvements less than 10,000 square feet as described in Section 303.1.1.
4. Open parking garages of any size, or open parking garage areas, of any size, within a structure.

Note: For the purposes of this section, unconditioned shall mean a building, area, or room which does not provide heating and or air conditioning.

Informational Notes:

1. IAS AC 476 is an accreditation criteria for organizations providing training and/or certification of commissioning personnel. AC 476 is available to the Authority Having Jurisdiction as a reference for qualifications of commissioning personnel. AC 476 des not certify individuals to conduct functional performance tests or to adjust and balance systems.
2. Functional performance testing for heating, ventilation, air conditioning systems and lighting controls must be performed in compliance with the *California Energy Code*.

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5.410.2.1 Owner's or Owner Representative's Project Requirements (OPR). [N] The expectations and requirements of the building appropriate to its phase shall be documented before the design phase of the project begins. This documentation shall include the following:
1. Environmental and sustainability goals.
2. Building sustainable goals.
3. Indoor environmental quality requirements.
4. Project program, including facility functions and hours of operation, and need for after hours operation.
5. Equipment and systems expectations.
6. Building occupant and operation and maintenance (O&M) personnel expectations.

5.410.2.2 Basis of Design (BOD). [N] A written explanation of how the design of the building systems meets the OPR shall be completed at the design phase of the building project. The Basis of Design document shall cover the following systems:

1. Renewable energy systems.
2. Landscape irrigation systems.
3. Water reuse systems.

5.410.2.3 Commissioning plan. [N] Prior to permit issuance a commissioning plan shall be completed to document how the project will be commissioned. The commissioning plan shall include the following:
1. General project information.
2. Commissioning goals.
3. Systems to be commissioned. Plans to test systems and components shall include:
   a. An explanation of the original design intent.
   b. Equipment and systems to be tested, including the extent of tests.
   c. Functions to be tested.
   d. Conditions under which the test shall be performed.
   e. Measurable criteria for acceptable performance.
4. Commissioning team information.
5. Commissioning process activities, schedules and responsibilities. Plans for the completion of commissioning shall be included.

5.410.2.4 Functional performance testing. [N] Functional performance tests shall demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the approved plans and specifications. Functional performance testing reports shall contain information addressing each of the building components tested, the testing methods utilized, and include any readings and adjustments made.

5.410.2.5 Documentation and training. [N] A Systems Manual and Systems Operations Training are required, including Occupational Safety and Health Act (OSHA) requirements in *California Code of Regulations* (CCR), Title 8, Section 5142, and other related regulations.

5.410.2.5.1 Systems manual. [N] Documentation of the operational aspects of the building shall be completed within the systems manual and delivered to the building owner or representative. The systems manual shall include the following:
1. Site information, including facility description, history and current requirements.
2. Site contact information.
3. Basic operations and maintenance, including general site operating procedures, basic troubleshooting, recommended maintenance requirements, site events log.
4. Major systems.
5. Site equipment inventory and maintenance notes.
6. A copy of verifications required by the enforcing agency or this code.
7. Other resources and documentation, if applicable.

5.410.2.5.2 Systems operations training. [N] A program for training of the appropriate maintenance staff for each equipment type and/or system shall be developed and documented in the commissioning report and shall include the following:
1. System/equipment overview (what it is, what it does and with what other systems and/or equipment it interfaces).
2. Review and demonstration of servicing/preventive maintenance.
3. Review of the information in the Systems Manual.
4. Review of the record drawings on the system/equipment.

5.410.2.6 Commissioning report. [N] A report of commissioning process activities undertaken through the design and construction phases of the building project shall be completed and provided to the owner or representative.

5.410.4 TESTING AND ADJUSTING. New buildings less than 10,000 square feet. Testing and adjusting of systems shall be required for buildings less than 10,000 square feet or new systems to serve an addition or alteration subject to Section 303.1.

Note: For energy-related systems under the scope (Section 100) of the California Energy Code, including heating, ventilation, air conditioning (HVAC) systems and controls, indoor lighting systems and controls, refer to California Energy Code Section 120.8 for commissioning requirements and Sections 120.5, 120.6, 130.4, and 140.9(b)3 for additional testing requirements of specific systems.

5.410.4.2 Systems. Develop a written plan of procedures for testing and adjusting systems. Systems to be included for testing and adjusting shall include at a minimum, as applicable to the project:

1. Renewable energy systems.
2. Landscape irrigation systems.
3. Water reuse systems.

5.410.4.3 Procedures. Perform testing and adjusting procedures in accordance with manufacturer's specifications and applicable standards on each system.

5.410.4.3.1 HVAC balancing. In addition to testing and adjusting, before a new space-conditioning system serving a building or space is operated for normal use, the system shall be balanced in accordance with the procedures defined by the Testing Adjusting and Balancing Bureau National Standards; the National Environmental Balancing Bureau Procedural Standards; Associated Air Balance Council National Standards or as approved by the enforcing agency.

5.410.4.4 Reporting. After completion of testing, adjusting and balancing, provide a final report of testing signed by the individual responsible for performing these services.

5.410.4.5 Operation and maintenance (O & M) manual. Provide the building owner or representative with detailed operating and maintenance instructions and copies of guaranties/warranties for each system. O & M instructions shall be consistent with OSHA requirements in CCR, Title 8, Section 5142, and other related regulations.

5.410.4.5.1 Inspections and reports. Include a copy of all inspection verifications and reports required by the enforcing agency.

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DIVISION 5.5 ENVIRONMENTAL QUALITY
SECTION 5.501 GENERAL
5.501.1 SCOPE. The provisions of this chapter shall outline means of reducing the quantity of air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of a building's installers, occupants and neighbors.

SECTION 5.502 DEFINITIONS
5.502.1 DEFINITIONS. The following terms are defined in Chapter 2 *(and are included here for reference)*

ARTERIAL HIGHWAY. A general term denoting a highway primarily for through traffic usually on a continuous route.

A-WEIGHTED SOUND LEVEL (dBA). The sound pressure level in decibels as measured on a sound level meter using the internationally standardized A-weighting filter or as computed from sound spectral data to which A-weighting adjustments have been made.

1 BTU/HOUR. British thermal units per hour, also referred to as Btu. The amount of heat required to raise one pound of water one degree Fahrenheit per hour, a common measure of heat transfer rate. A ton of refrigeration is 12,000 Btu, the amount of heat required to melt a ton (2,000 pounds) of ice at 32^0 Fahrenheit.

COMMUNITY NOISE EQUIVALENT LEVEL (CNEL). A metric similar to the day-night average sound level (Ldn), except that a 5 decibel adjustment is added to the equivalent continuous sound exposure level for evening hours (7pm to 10pm) in addition to the 10 dB nighttime adjustment used in the Ldn.

COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, timber, prefabricated wood I-joists or finger-jointed lumber, all as specified in California Code of Regulations (CCR), Title 17, Section 93120.1(a).

Note: See CCR, Title 17, Section 93120.1.

DAY-NIGHT AVERAGE SOUND LEVEL (Ldn). The A-weighted equivalent continuous sound exposure level for a 24-hour period with a 10 dB adjustment added to sound levels occurring during nighttime hours (10p.m. to 7 a.m.).

DECIBEL (db). A measure on a logarithmic scale of the magnitude of a particular quantity (such as sound pressure, sound power, sound intensity) with respect to a reference quantity.

ELECTRIC VEHICLE (EV). An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, electric motorcycles, and the like, primarily powered by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array, or other source of electric current. Plug-in hybrid electric vehicles (PHEV) are considered electric vehicles. For purposes of the *California Electrical Code*, off-road, self-propoelled electric vehicles, such as industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, boats, and the like, are not included.

ELECTRIC VEHICLE CHARGING STATION(S) (EVCS). One or more spaces intended for charging electric vehicles.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). The conductors, including the ungrounded, grounded, and equipment grounding conductors and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.

ENERGY EQUIVALENT (NOISE) LEVEL (Leq). The level of a steady noise which would have the same energy as the fluctuating noise level integrated over the time of period of interest.

EXPRESSWAY. An arterial highway for through traffic which may have partial control of access, but which may or may not be divided or have grade separations at intersections.

FREEWAY. A divided arterial highway with full control of access and with grade separations at intersections.

GLOBAL WARMING POTENTIAL (GWP). The radiative forcing impact of one mass-based unit of a given greenhouse gas relative to an equivalent unit of carbon dioxide over a given period of time. Carbon dioxide is the reference compound with a GWP of one.

GLOBAL WARMING POTENTIAL VALUE (GWP VALUE). A 100-year GWP value published by the Intergovernmental Panel on Climate Change (IPCC) in either its Second Assessment Report (SAR) (IPCC, 1995); or its Fourth Assessment A-3 Report (AR4) (IPCC, 2007). The SAR GWP values are found in column "SAR (100-yr)" of Table 2.14.; the AR4 GWP values are found in column "100 yr" of Table 2.14.

HIGH-GWP REFRIGERANT. A compound used as a heat transfer fluid or gas that is: (a) a chlorofluorocarbon, a hdrochlorofluorocarbon, a hydrofluorocarbon, a perfluorocarbon, or any compound or blend of compounds, with a GWP value equal to or greater than 150, or (B) any ozone depleting substance as defined in Title 40 of the Code of Federal Regulations, Part 82, sec.82.3 (as amended March 10, 2009).

LONG RADIUS ELBOW. Pipe fitting installed between two lengths of pipe or tubing to allow a change of direction, with a radius 1.5 times the pipe diameter.

LOW-GWP REFRIGERANT. A compound used as a heat transfer fluid or gas that: (A) has a GWP value less than 150, and (B) is not an ozone depleting substance as defined in Title 40 of the Code of Federal Regulations, Part 82, sec.82.3 (as amended March 10, 2009).

MERV. Filter minimum efficiency reporting value, based on ASHRAE 52.2–1999.

MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base REactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundreths of a gram (g O^3/g ROC).

PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).

PSIG. Pounds per square inch, guage.

REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.

SCHRADER ACCESS VALVES. Access fittings with a valve core installed.

SHORT RADIUS ELBOW. Pipe fitting installed between two lengths of pipe or tubing to allow a change of direction, with a radius 1.0 times the pipe diameter.

SUPERMARKET. For the purposes of Section 5.508.2, a supermarket is any retail food facility with 8,000 square feet or more conditioned area, and that utilizes either refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units.

VOC. A volatile organic compound broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a)

Note: Where specific regulations are cited from different agencies such as SCAQMD, ARB, etc., the VOC definition included in that specific regulation is the one that prevails for the specific measure in question.

SECTION 5.503 FIREPLACES
5.503.1 FIREPLACES. Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace, or a sealed woodstove or pellet stove, and refer to residential requirements in the California Energy Code, Title 24, Part 6, Subchapter 7, Section 150. Woodstoves, pellet stoves and fireplaces shall comply with applicable local ordinances.

5.503.1.1 Woodstoves. Woodstoves and pellet stoves shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits.

SECTION 5.504 POLLUTANT CONTROL
5.504.1 TEMPORARY VENTILATION. The permanent HVAC system shall only be used during construction if necessary to condition the building or areas of addition or alteration within the required temperature range for material and equipment installation. If the HVAC system is used during construction, use return air filters with a Minimum Efficiency Reporting Value (MERV) of 8, based on ASHRAE 52.2-1999, or an average efficiency of 30% based on ASHRAE 52.1-1992. Replace all filters immediately prior to occupancy, or, if the building is occupied during alteration, at the conclusion of construction.

5.504.3 Covering of duct openings and protection of mechanical equipment during construction. At the time of rough installation, or during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of dust, water and debris which may collect in the system.

DISCLAIMER: THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE 2019 CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.

2019 CALIFORNIA GREEN BUILDING STANDARDS CODE
NONRESIDENTIAL MANDATORY MEASURES, SHEET 1

INSPECTOR SIGNOFF

CHAPTER 3
GREEN BUILDING
SECTION 301 GENERAL

301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.

301.3 NONRESIDENTIAL ADDITIONS AND ALTERATIONS. [BSC] The provisions of individual sections of Chapter 5 apply to newly constructed buildings, building additions of 1,000 square feet or greater, and/or building alterations with a permit valuation of $200,000 or above (for occupancies within the authority of California Building Standards Commission). Code sections relevant to additions and alterations shall only apply to the portions of the building being added or altered within the scope of the permitted work.

A code section will be designated by a banner to indicate where the code section only applies to newly constructed building [N] or to additions and alterations [A]. When the code section applies to both, no banner will be used.

301.3.1 Nonresidential additions and alterations that cause updates to plumbing fixtures only:

Note: On and after January 1, 2014, certain commercial real property, as defined in Civil Code Section 1101.3, shall have its noncompliant plumbing fixtures replaced with appropriate water-conserving plumbing fixtures under specific circumstances. See Civil Code Section 1101.1 et seq. for definitions, types of commercial real property affected, effective dates, circumstances necessitating replacement of noncompliant plumbing fixtures, and duties and responsibilities for ensuring compliance.

301.3.2 Waste Diversion. The requirements of Section 5.408 shall be required for additions and alterations whenever a permit is required for work.

301.4 PUBLIC SCHOOLS AND COMMUNITY COLLEGES. (see GBSC)
301.5 HEALTH FACILITIES. (see GBSC)

SECTION 302 MIXED OCCUPANCY BUILDINGS

302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.

SECTION 303 PHASED PROJECTS

303.1 Phased projects. For shell buildings and others constructed for future tenant improvements, only those code measures relevant to the building components and systems considered to be new construction (or newly constructed) shall apply.

303.1.1 Tenant improvements. The provisions of this code shall apply only to the initial tenant or occupant improvements to a project. Subsequent tenant improvements shall comply with the scoping provisions in Section 301.3 non-residential additions and alterations.

ABBREVIATION DEFINITIONS:
HCD Department of Housing and Community Development
BSC California Building Standards Commission
DSA-SS Division of the State Architect, Structural Safety
OSHPD Office of Statewide Health Planning and Development
LR Low Rise
HR High Rise
AA Additions and Alterations
N New

CHAPTER 5
NONRESIDENTIAL MANDATORY MEASURES

DIVISION 5.1 PLANNING AND DESIGN

SECTION 5.101 GENERAL
5.101.1 Scope
The provisions of this chapter outline planning, design and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore and enhance the environmental quality of the site and respect the integrity of adjacent properties.

SECTION 5.102 DEFINITIONS
5.102.1 DEFINITIONS
The following terms are defined in Chapter 2 (and are included here for reference)

CUTOFF LUMINAIRES. Luminaires whose light distribution is such that the candela per 1000 lamp lumens does not numerically exceed 25 (2.5 percent) at an angle of 90 degrees above nadir, and 100 (10 percent) at a vertical angle of 80 degrees above nadir. This applies to all lateral angles around the luminaire.

LOW-EMITTING AND FUEL EFFICIENT VEHICLES.
Eligible vehicles are limited to the following:

1. Zero emission vehicle (ZEV), including neighborhood electric vehicles (NEV), partial zero emission vehicle (PZEV), advanced technology PZEV (AT ZEV) or CNG fueled (original equipment manufacturer only) regulated under Health and Safety Code section 43800 and CCR, Title 13, Sections 1961 and 1962.
2. High-efficiency vehicles, regulated by U.S. EPA, bearing High-Occupancy Vehicle (HOV) car pool lane stickers issued by the Department of Motor Vehicles.

NEIGHBORHOOD ELECTRIC VEHICLE (NEV). A motor vehicle that meets the definition of "low-speed vehicle" either in Section 385.5 of the Vehicle Code or in 49CFR571.500 (as it existed on July 1, 2000), and is certified to zero-emission vehicle standards.

TENANT-OCCUPANTS. Building occupants who inhabit a building during its normal hours of operation as permanent occupants, such as employees, as distinguished from customers and other transient visitors.

VANPOOL VEHICLE. Eligible vehicles are limited to any motor vehicle, other than a motortruck or truck tractor, designed for carrying more than 10 but not more than 15 persons including the driver, which is maintained and used primarily for the nonprofit work-related transportation of adults for the purpose of ridesharing.

Note: Source: Vehicle Code, Division 1, Section 668

ZEV. Any vehicle certified to zero-emission standards.

SECTION 5.106 SITE DEVELOPMENT
5.106.1 STORM WATER POLLUTION PREVENTION. Newly constructed projects and additions which disturb less than one acre of land and are not part of a larger common plan of development or sale shall prevent the pollution of storm water runoff from the construction activities through one or more of the following measures:

5.106.1.1 Local ordinance. Comply with a lawfully enacted storm water management and/or erosion control ordinance.

5.106.1.2 Best Management Practices (BMP). Prevent the loss of soil through wind or water erosion by implementing an effective combination of erosion and sediment control and good housekeeping BMP.

1. Soil loss BMP that should be considered for each project include, but are not limited to, the following:
   a. Scheduling construction activity.
   b. Preservation of natural features, vegetation and soil.
   c. Drainage swales or lined ditches to control stormwater flow.
   d. Mulching or hydroseeding to stabilize disturbed soils.
   e. Erosion control to protect slopes.
   f. Protection of storm drain inlets (gravel bags or catch basin inserts).
   g. Perimeter sediment control (perimeter silt fence, fiber rolls).
   h. Sediment trap or sediment basin to retain sediment on site.
   i. Stabilized construction exits.
   j. Wind erosion control.
   k. Other soil loss BMP acceptable to the enforcing agency.
2. Good housekeeping BMP to manage construction equipment, materials and wastes that should be considered for implementation as appropriate for each project include, but are not limited to, the following:
   a. Material handling and waste management.
   b. Building materials stockpile management.
   c. Management of washout areas (concrete, paints, stucco, etc.).
   d. Control of vehicle/equipment fueling to contractor's staging area.
   e. Vehicle and equipment cleaning performed off site.
   f. Spill prevention and control.
   g. Other housekeeping BMP acceptable to the enforcing agency.

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5.106.4 BICYCLE PARKING. For buildings within the authority of California Building Standards Commission as specified in Section 103, comply with Section 5.106.4.1. For buildings within the authority of the Division of the State Architect pursuant to Section 105, comply with Section 5.106.4.2

5.106.4.1 Bicycle parking. [BSC-CG] Comply with Sections 5.106.4.1.1 and 5.106.4.1.2; or meet the applicable local ordinance, whichever is stricter.

5.106.4.1.1 Short-term bicycle parking. If the project or an addition or alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack.
Exception: Additions or alterations which add nine or less visitor vehicular parking spaces.

5.106.4.1.2 Long-term bicycle parking. For new buildings with 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of the tenant-occupant vehicular spaces with a minimum of one bicycle parking facility.

5.106.4.1.3 For additions or alterations that add 10 or more tenant-occupant vehicular spaces, provide secure bicycle parking for 5 percent of the tenant vehicular spaces being added, with a minimum of one bicycle parking facility.

5.106.4.1.4 For new shell buildings in phased projects provide secure bicycle parking for 5 percent of the anticipated tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility.

5.106.4.1.5 Acceptable bicycle parking facility for Sections 5.106.4.1.2, 5.106.4.1.3, and 5.106.4.1.4 shall be convenient from the street and shall meet one of the following:

1. Covered, lockable enclosures with permanently anchored racks for bicycles;
2. Lockable bicycle rooms with permanently anchored racks; or
3. Lockable, permanently anchored bicycle lockers.

Note: Additional information on recommended bicycle accommodations may be obtained from Sacramento Area Bicycle Advocates.

5.106.4.2 Bicycle parking. [DSA-SS] For public schools and community colleges, comply with Sections 5.106.4.2.1 and 5.106.4.2.2

5.106.4.2.1 Student bicycle parking. Provide permanently anchored bicycle racks conveniently accessed with a minimum of four two-bike capacity racks per new building.
5.106.4.2.2 Staff bicycle parking. Provide permanent, secure bicycle parking conveniently accessed with a minimum of two staff bicycle parking spaces per new building. Acceptable bicycle parking facilities shall be convenient from the street or staff parking area and shall meet one of the following:

1. Covered, lockable enclosures with permanently anchored racks for bicycles;
2. Lockable bicycle rooms with permanently anchored racks; or
3. Lockable, permanently anchored bicycle lockers.

5.106.5.2 DESIGNATED PARKING FOR CLEAN AIR VEHICLES. In new projects or additions or alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as follows:

TABLE 5.106.5.2 - PARKING

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED SPACES
0-9	0
10-25	1
25-50	3
51-75	6
76-100	8
101-150	11
151-200	16
201 AND OVER	AT LEAST 8% OF TOTAL

5.106.5.2.1 - Parking stall marking. Paint, in the paint used for stall striping, the following characters such that the lower edge of the last word aligns with the end of the stall striping and is visible beneath a parked vehicle: CLEAN AIR / VAN POOL / EV

Note: Vehicles bearing Clean Air Vehicle stickers from expired HOV lane programs may be considered eligible for designated parking spaces.

5.106.5.3 Electric vehicle (EV) charging. [N] Construction shall comply with Section 5.106.5.3.1 or Section 5.106.5.3.2 to facilitate future installation of electric vehicle supply equipment (EVSE). When EVSE(s) is/are installed, it shall be in accordance with the California Building Code, the California Energy Commission (CEC) and as follows:

5.106.5.3.1 Single charging space requirements. [N] When only a single charging space is required per Table 5.106.5.3.3, a raceway is required to be installed at the time of construction and shall be installed in accordance with the California Electrical Code. Construction plans and specifications shall include, but are not limited to, the following:

1. The type and location of the EVSE.
2. A listed raceway capable of accommodating a 208/240 -volt dedicated branch circuit.
3. The raceway shall not be less than trade size 1."
4. The raceway shall originate at a service panel or a subpanel serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and listed suitable cabinet, box, enclosure or equivalent.
5. The service panel or subpanel shall have sufficient capacity to accommodate a minimum 40-ampere dedicated branch circuit for the future installation of the EVSE.

5.106.5.3.2 Multiple charging space requirements. [N] When multiple charging spaces are required per Table 5.106.5.3.3 raceway(s) is/are required to be installed at the time of construction and shall be installed in accordance with the California Electrical Code. Construction plans and specifications shall include, but are not limited to, the following:

1. The type and location of the EVSE.
2. The raceway(s) shall originate at a service panel or a subpanel(s) serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and into listed suitable cabinet(s), box(es), enclosure(s) or equivalent.
3. Plan design shall be based upon 40-ampere minimum branch circuits.
4. Electrical calculations shall substantiate the design of the electrical system, to include the rating of equipment and any on-site distribution transformers and have sufficient capacity to simultaneously charge all required EVs at its full rated amperage.
5. The service panel or subpanel(s) shall have sufficient capacity to accommodate the required number of dedicated branch circuit(s) for the future installation of the EVSE.

5.106.5.3.3 EV charging space calculations. [N] Table 5.106.5.3.3 shall be used to determine if single or multiple charging space requirements apply for the future installation of EVSE.

Exceptions: On a case-by-case basis where the local enforcing agency has determined EV charging and infrastructure is not feasible based upon one or more of the following conditions:

1. Where there is insufficient electrical supply.
2. Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.

INSPECTOR SIGNOFF

TABLE 5.106.5.3.3

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED SPACES
0-9	0
10-25	1
36-50	2
51-75	4
76-100	5
101-200	7
201 AND OVER	6% of total[1]

1. Calculation for spaces shall be rounded up to the nearest whole number.

5.106.5.3.4 [N] Identification. The service panel or subpanel(s) circuit directory shall identify the reserved overcurrent protective device space(s) for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE".

5.106.5.3.5 [N] Future charging spaces qualify as designated parking as described in Section 5.106.5.2 Designated parking for clean air vehicles.

5.106.8 LIGHT POLLUTION REDUCTION. [N] Outdoor lighting systems shall be designed and installed to comply with the following:

1. The minimum requirements in the California Energy Code for Lighting Zones 0-4 as defined in Chapter 10, Section 10-114 of the California Administrative Code; and
2. Backlight (B) ratings as defined in IES TM-15-11 (shown in Table A-1 in Chapter 8);
3. Uplight and Glare ratings as defined in California Energy Code (shown in Tables 130.2-A and 130.2-B in Chapter 8; and
4. Allowable BUG ratings not exceeding those shown in Table 5.106.8, or

Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.

Exceptions: [N]

1. Luminaires that qualify as exceptions in Section 140.7 of the California Energy Code.
2. Emergency lighting.
3. Building facade meeting the requirements in Table 140.7-B of the California Energy Code, Part 6.
4. Custom lighting features as allowed by the local enforcing agency, as permitted by Section 101.8 Alternate materials, designs and methods of construction.

Note: [N] See also California Building Code, Chapter 12, Section 1205.6 for college campus lighting requirements for parking facilities and walkways.

5.106.10 GRADING AND PAVING. Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:

1. Swales.
2. Water collection and disposal systems.
3. French drains.
4. Water retention gardens.
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge.

Exception: Additions and alterations not altering the drainage path.

TABLE 5.106.8 [N] MAXIMUM ALLOWABLE BACKLIGHT, UPLIGHT AND GLARE (BUG) RATINGS [1,2]

ALLOWABLE RATING	LIGHTING ZONE 1	LIGHTING ZONE 2	LIGHTING ZONE 3	LIGHTING ZONE 4
MAXIMUM ALLOWABLE BACKLIGHT RATING [3]				
Luminaire greater than 2 mounting heights (MH) from property line	No Limit	No Limit	No Limit	No Limit
Luminaire back hemisphere is 1-2 MH from property line	B2	B3	B4	B4
Luminaire back hemisphere is 0.5-1 MH from property line	B1	B2	B3	B3
Luminaire back hemisphere is less than 0.5 MH from property line	B0	B0	B1	B2
MAXIMUM ALLOWABLE UPLIGHT RATING				
For area lighting [4]	U0	U0	U0	U0
For all other outdoor lighting,including decorative luminaires	U1	U2	U3	U4
MAXIMUM ALLOWABLE GLARE RATING [5]				
Luminaire greater than 2 MH from property line	G1	G2	G3	G4
Luminaire front hemisphere is 1-2 MH from property line	G0	G1	G1	G2
Luminaire front hemisphere is 0.5-1 MH from property line	G0	G0	G1	G1
Luminaire back hemisphere is less than 0.5 MH from property line	G0	G0	G0	G1

1. IESNA Lighting Zones 0 and 5 are not applicable; refer to Lighting Zones as defined in the California Energy Code and Chapter 10 of the Callifornia Administrative Code.

2. For property lines that abut public walkways, bikeways, plazas and parking lots, the property line may be considered to be 5 feet beyond the actual property line for purpose of determining compliance with this section. For property lines that abut public roadways and public transit corridors, the property line may be considered to be the centerline of the public roadway or public transit corridor for the purpose of determining compliance with this section.

3. If the nearest property line is less than or equal to two mounting heights from the back hemisphere of the luminaire distribution, the applicable reduced Backlight rating shall be met.

4. General lighting luminaires in areas such as outdoor parking, sales or storage lots shall meet these reduced ratings. Decorative luminaires located in these areas shall meet U-value limits for "all other outdoor lighting".

5. If the nearest property line is less than or equal to two mounting heights from the front hemisphere of the luminaire distribution, the applicable reduced Glare rating shall be met.

INSPECTOR SIGNOFF

DIVISION 5.2 ENERGY EFFICIENCY
SECTION 5.201 GENERAL
5.201.1 Scope [BSC-CG]. California Energy Code [DSA-SS]. For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory building standards.

DIVISION 5.3 WATER EFFICIENCY AND CONSERVATION
SECTION 5.301 GENERAL
5.301.1 Scope. The provisions of this chapter shall establish the means of conserving water use indoors, outdoors and in wastewater conveyance.

SECTION 5.302 DEFINITIONS
5.302.1 Definitions. The following terms are defined in Chapter 2 (and are included here for reference)

EVAPOTRANSPIRATION ADJUSTMENT FACTOR (ETAF) [DSA-SS]. An adjustment factor when applied to reference evapotranspiration that adjusts for plant factors and irrigation efficiency, which are two major influences on the amount of water that needs to be applied to the landscape.

FOOTPRINT AREA [DSA-SS]. The total area of the furthest exterior wall of the structure projected to natural grade, not including exterior areas such as stairs, covered walkways, patios and decks.

METERING FAUCET. A self-closing faucet that dispenses a specific volume of water for each actuation cycle. The volume or cycle duration can be fixed or adjustable.

GRAYWATER. Pursuant to Health and Safety Code Section 17922.12, "graywater" means untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes. "Graywater" includes, but is not limited to wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines and laundry tubs, but does not include waste water from kitchen sinks or dishwashers.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO). The California ordinance regulating landscape design, installation and maintenance practices that will ensure commercial, multifamily and other developer installed landscapes greater than 2500 square feet meet an irrigation water budget developed based on landscaped area and climatological parameters.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO). [HCD] The California model ordinance (California Code of Regulations, Title 23, Division 2, Chapter 2.7), regulating landscape design, installation and maintenance practices. Local agencies are required to adopt the updated MWELO, or adopt a local ordinance at least as effective as the MWELO.

POTABLE WATER. Water that is drinkable and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards. See definition in the California Plumbing Code, Part 5.

POTABLE WATER. [HCD] Water that is satisfactory for drinking, culinary, and domestic puroses, and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards and the requirements of the Health Authority Having Jurisdiction.

RECYCLED WATER. Water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur [Water Code Section 13050 (n)]. Simply put, recycled water is water treated to remove waste matter attaining a quality that is suitable to use the water again.

SUBMETER. A meter installed subordinate to a site meter. Usually used to measure water intended for one purpose, such as landscape irrigation. For the purposes of CALGreen, a dedicated meter may be considered a submeter.

WATER BUDGET. Is the estimated total landscape irrigation water use which shall not exceed the maximum applied water allowance calculated in accordance with the Department of Water Resources Model Efficient Landscape Ordinance (MWELO).

SECTION 5.303 INDOOR WATER USE
5.303.1 METERS. Separate submeters or metering devices shall be installed for the uses described in Sections 503.1.1 and 503.1.2.

5.303.1.1 Buildings in excess of 50,000 square feet. Separate submeters shall be installed as follows:

1. For each individual leased, rented or other tenant space within the building projected to consume more than 100 gal/day (380 L/day), including, but not limited to, spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop.
2. Where separate submeters for individual building tenants are unfeasible, for water supplied to the following subsystems:
   a. Makeup water for cooling towers where flow through is greater than 500 gpm (30 L/s).
   b. Makeup water for evaporative coolers greater than 6 gpm (0.04 L/s).
   c. Steam and hot water boilers with energy input more than 500,000 Btu/h (147 kW).

5.303.1.2 Excess consumption. A separate submeter or metering device shall be provided for any tenant within a new building or within an addition that is projected to consume more than 1,000 gal/day.

5.303.3 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:

5.303.3.1 Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-Type toilets.

Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.

5.303.3.2 Urinals. The effective flush volume of urinals shall not exceed 0.5 gallons per flush.

5.303.3.3 Showerheads.
5.303.3.3.1 Single showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

5.303.3.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time.

Note: A hand-held shower shall be considered a showerhead.

5.303.3.4 Faucets and fountains.

5.303.3.4.1 Nonresidential Lavatory faucets. Lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi.

5.303.3.4.2 Kitchen faucets. Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.

5.303.3.4.3 Wash fountains. Wash fountains shall have a maximum flow rate of not more than1.8 gallons per minute/20 [rim space (inches) at 60 psi].

5.303.3.4.4 Metering faucets. Metering faucets shall not deliver more than 0.20 gallons per cycle.

5.303.3.4.5 Metering faucets for wash fountains. Metering faucets for wash fountains shall have a maximum flow rate of not more than 0.20 gallons per minute/20 [rim space (inches) at 60 psi].

Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

5.303.4 COMMERCIAL KITCHEN EQUIPMENT.

5.303.4.1 Food Waste Disposers. Disposers shall either modulate the use of water to no more than 1 gpm when the disposer is not in use (not actively grinding food waste/no-load) or shall automatically shut off after no more than 10 minutes of inactivity. Disposers shall use no more than 8 gpm of water.

Note: This code section does not affect local jurisdiction authority to prohibit or require disposer installation.

5.303.5 AREAS OF ADDITION OR ALTERATION. For those occupancies within the authority of the California Building Standards Commission as specified in Section 103, the provisions of Section 5.303.3 and 5.303.4 shall apply to new fixtures in additions or areas of alteration to the building.

5.303.6 STANDARDS FOR PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code, and shall meet the applicable standards referenced in Table 1701.1 of the California Plumbing Code and in Chapter 6 of this code.

DISCLAIMER: THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE 2019 CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.

LEED v4.1 BD+C: New Construction and Major Renovation
Project Checklist

Project Name: Toyota Sunnyvale - Recon
Date: October 2020

Y	?	N	Credit	Points
1			Integrative Process	1

Y	?	N	Credit	Points
13	**0**	**0**	**Location and Transportation**	**16**
			LEED for Neighborhood Development Location	16
1			Sensitive Land Protection	1
			High Priority Site	2
5			Surrounding Density and Diverse Uses	5
5			Access to Quality Transit	5
1			Bicycle Facilities	1
			Reduced Parking Footprint	1
1			Electric Vehicles	1

Y	?	N	Credit	Points
6	**0**	**0**	**Sustainable Sites**	**10**
Y			Construction Activity Pollution Prevention	Required
1			Site Assessment	1
2			Protect or Restore Habitat	2
			Open Space	1
2			Rainwater Management	3
			Heat Island Reduction	2
1			Light Pollution Reduction	1

Y	?	N	Credit	Points
8	**0**	**0**	**Water Efficiency**	**11**
Y			Outdoor Water Use Reduction	Required
Y			Indoor Water Use Reduction	Required
Y			Building-Level Water Metering	Required
2			Outdoor Water Use Reduction	2
3			Indoor Water Use Reduction	6
2			Cooling Tower Water Use	2
1			Water Metering	1

Y	?	N	Credit	Points
4	**8**	**0**	**Energy and Atmosphere**	**33**
Y			Fundamental Commissioning and Verification	Required
Y			Minimum Energy Performance	Required
Y			Building-Level Energy Metering	Required
Y			Fundamental Refrigerant Management	Required
			Enhanced Commissioning	6
2	4		Optimize Energy Performance	18
1			Advanced Energy Metering	1
	1		Grid Harmonization	2
	3		Renewable Energy	5
1			Enhanced Refrigerant Management	1

Y	?	N	Credit	Points
11	**2**	**0**	**Materials and Resources**	**13**
Y			Storage and Collection of Recyclables	Required
Y			Construction and Demolition Waste Management Planning	Required
5			Building Life-Cycle Impact Reduction	5
1	1		Building Product Disclosure and Optimization - Environmental Product Declarations	2
1	1		Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
2			Building Product Disclosure and Optimization - Material Ingredients	2
2			Construction and Demolition Waste Management	2

Y	?	N	Credit	Points
13	**0**	**0**	**Indoor Environmental Quality**	**16**
Y			Minimum Indoor Air Quality Performance	Required
Y			Environmental Tobacco Smoke Control	Required
1			Enhanced Indoor Air Quality Strategies	2
3			Low-Emitting Materials	3
1			Construction Indoor Air Quality Management Plan	1
2			Indoor Air Quality Assessment	2
1			Thermal Comfort	1
2			Interior Lighting	2
1			Daylight	3
1			Quality Views	1
1			Acoustic Performance	1

Y	?	N	Credit	Points
4	**0**	**0**	**Innovation**	**6**
3			Innovation	5
1			LEED Accredited Professional	1

Y	?	N	Credit	Points
0	**0**	**0**	**Regional Priority**	**4**
			Regional Priority: Specific Credit	1
			Regional Priority: Specific Credit	1
			Regional Priority: Specific Credit	1
			Regional Priority: Specific Credit	1

Y	?	N	Credit	Points
60	**10**	**0**	**TOTALS** Possible Points:	**110**

Certified: 40 to 49 points, **Silver:** 50 to 59 points, **Gold:** 60 to 79 points, **Platinum:** 80 to 110

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TOYOTA SUNNYVALE RECON CENTER REMODEL + EXPANSION
CALGREEN + LEED CHECKLISTS

928 West El Camino Real, Sunnyvale, CA 94087
APN 201-19-036

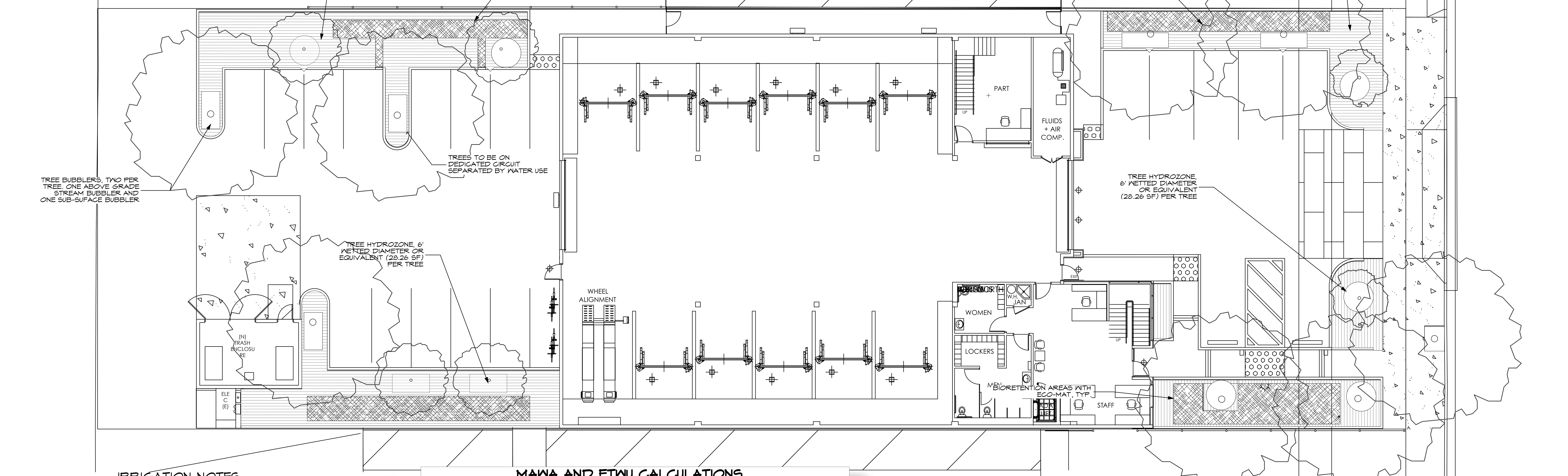
A5.0

SCALE: N.A.
DATE: DECEMBER 11 2020
TWM NO: 14-107.1

PLANNING SUBMITTAL - SUPPLEMENT - 11 DECEMBER 2020

U.S.A NOTE
IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO BE FAMILIAR WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, STRUCTURES, AND UTILITIES. THE IRRIGATION CONTRACTOR SHALL EXERCISE EXTREME CARE, AND BE RESPONSIBLE FOR ANY DAMAGE IN EXCAVATING AND WORKING NEAR UTILITIES. THE LANDSCAPE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE OTHER SUB-CONTRACTORS FOR THE LOCATION OF UTILITIES AND THE INSTALLATION OF PIPE SLEEVES THROUGH WALLS, UNDER ROADWAYS, AND NEAR STRUCTURES. PRIOR TO CONSTRUCTION, CONTACT ALL APPLICABLE AGENCIES AND U.S.A. AT 1-800-642-2444 OR 1-800-227-2600 TO FIELD LOCATE ALL EXISTING UTILITIES.

THESE DRAWINGS COMPLY WITH THE CRITERIA OF THE ORDINANCE. ORDINANCE REQUIREMENTS HAVE BEEN APPLIED FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN AND THE LANDSCAPE DESIGN PLAN."



IRRIGATION NOTES

1. ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR TO FINISH GRADE OF THE AREA TO BE IRRIGATED UNLESS OTHERWISE NOTED ON THE PLANS.
2. THE SPRINKLER SYSTEM DESIGN IS BASED ON THE MINIMUM STATIC PRESSURE OF 35 PSI AT THE VALVES AND THE MAXIMUM FLOW DEMAND SHOWN ON THE IRRIGATION DRAWINGS AT THE POINT OF CONNECTION. THE IRRIGATION CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION OF THE IRRIGATION SYSTEM. IF THE WATER PRESSURE SHOWN ON THE DRAWINGS DIFFERS FROM THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY. IN THE EVENT PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO THE START OF CONSTRUCTION, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
3. THE LOCATION OF THE CONTROLLER TO BE VERIFIED BY OWNER. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTING ALL PROPOSED STATIONS TO THE CONTROLLER. CONTROLLER TO BE CONFIGURED TO OPERATE 6 STATIONS. CONTROLLER SHALL BE HUNTER IC-600-M.
4. ALL CONSTRUCTION IS TO BE PER THE LATEST EDITION OF THE UNIFORM BUILDING CODE.
5. THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ROOT BARRIERS, ETC. SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY. INSTALL PIPING AND VALVES IN PLANTING AREAS WHERE POSSIBLE, AND LOCATE ELECTRIC CONTROL AND QUICK COUPLING VALVES IN GROUND COVER/SHRUB AREAS, 6" TO 12" AWAY FROM HARDSCAPE OR TURF AREA FOR EASY ACCESS.
6. THE IRRIGATION CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS FOR OPTIMUM PERFORMANCE AND TO PREVENT OVER SPRAY ONTO WALKS, ROADWAYS, AND/OR BUILDINGS. THIS SHALL INCLUDE SELECTING THE BEST DEGREE OF ARC TO FIT THE EXISTING SITE CONDITIONS AND THROTTLING THE FLOW CONTROL AT EACH VALVE TO OBTAIN THE OPTIMUM OPERATING PRESSURE FOR EACH SYSTEM.
7. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE THEMSELF WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, STRUCTURES, AND UTILITIES. THE IRRIGATION CONTRACTOR SHALL EXERCISE EXTREME CARE, AND BE RESPONSIBLE FOR ANY DAMAGE IN EXCAVATING AND WORKING NEAR UTILITIES. CONTRACTOR SHALL COORDINATE ALL WORK WITH THE GENERAL CONTRACTOR AND OTHER SUB-CONTRACTORS FOR THE LOCATION OF UTILITIES AND THE INSTALLATION OF PIPE SLEEVES THROUGH WALLS, UNDER ROADWAYS, AND NEAR STRUCTURES. PRIOR TO CONSTRUCTION, CONTACT ALL APPLICABLE AGENCIES AND U.S.A. AT 1-800-642-2444 TO FIELD LOCATE ALL EXISTING UTILITIES.
8. FIELD ADJUSTMENTS MAY BE REQUIRED TO PROVIDE OPTIMUM OPERATING EFFICIENCY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE LANDSCAPE ARCHITECT TO REVIEW FIELD ADJUSTMENTS PRIOR TO INSTALLATION. IN THE EVENT THAT NO CONTACT IS MADE WITH THE LANDSCAPE ARCHITECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REVISIONS.
9. SLEEVE ALL IRRIGATION PIPE AND CONTROL WIRES UNDER STREETS AND CONCRETE WALKWAYS WITH THE PROPER SIZE CLASS 200 PVC PIPE TO DEPTH AS SPECIFIED.
10. FOR ADDITIONAL INFORMATION, SEE PROJECT DETAILS AND SPECIFICATIONS.
11. ALL WORK SHALL CONFORM TO ALL APPLICABLE CITY OF SUNNYVALE CONSTRUCTION STANDARDS.
12. NO GALVANIZED IRON PIPE OR FITTINGS SHALL BE ALLOWED.
13. A BALL VALVE IN A SEPARATE ROUND VALVE BOX IS TO BE INSTALLED IMMEDIATELY UPSTREAM FROM EACH REMOTE CONTROL VALVE OR GHROUP OF VALVES. VALVE SHALL BE SIZED TO MAINLINE SUPPLY AT THE RC VALVE. SEE DETAIL.
14. INSTALL 3" WIDE DETECTABLE TAPE (#3" DTP, AS MANUFACTURED BY T. CHRISTY). TAPE SHALL BE INSTALLED 6" ABOVE THE IRRIGATION MAIN.
15. INSTALL ALL LANDSCAPE DRIPLINE BENEATH MULCH. INSTALL ALL TUBING 3" BELOW GRADE, PARALLEL AT SPACING INDICATED. USE LANDSCAPE STAPLES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS TO SECURE TUBING TO GROUND.
16. A SIGNED CERTIFICATE OF COMPLETION IS REQUIRED PRIOR TO FINAL ACCEPTANCE BY THE CITY OF SUNNYVALE. IF THE INSTALLATION OF THE LANDSCAPE DOES MEET OR SUBSTANTIALLY COMPLY WITH THE APPROVED LANDSCAPE CONSTRUCTION DOCUMENTS, THE CERTIFICATE OF COMPLETION WILL NOT BE SIGNED OR APPROVED BY THE
LANDSCAPE ARCHITECT OF RECORD.

MAWA AND ETWU CALCULATIONS

1) Maximum Applied Water Allowance (MAWA)

MAWA = (ETo) (0.62) [(0.55 X LA) + (0.45 X SLA)]

Where:
ETo = Annual Net Reference Evapotranspiration (inches)
0.45 = ET Adjustment Factor (Commercial)
0.55 = ET Adjustment Factor (Residential)
LA = Landscaped Area (square feet)
0.62 = Conversion factor (to gallons per square foot)
SLA = Portion of the landscape area identified as Special Landscape Area (square feet)
0.45 = the additional ET adjustment factor for Special Landscape Area (1.0 - 0.55 = 0.45) (Commercial)
0.55 = the additional ET adjustment factor for Special Landscape Area (1.0 - 0.45 = 0.55) (Residential)

Commercial (C) or Residential (R) C

A) Net Evapotranspiration Calculation

Local Reference ETo 44.33

29.67"/yr (Annual Rainfall) × .25 = 7.42 (Effective Rainfall)

Net Evapotranspiration Calculation = Annual ETo - Effective Rainfall = 36.91

B) Adjusted Landscape Area Calculation

2,899 sf (Landscape Area) × 0.45 Adjustment Factor = 1,304.43 sf

0.00 sf (Special Landscape Area) × 0.55 Adjustment Factor = 0.00 sf

Sum of Adjusted Landscape Area = 1,304.43 sf

MAWA= 36.912 × .62 × 1,304 sf = 29,853 gal/yr

2) Estimated Total Water Use (ETWU)

A) Net Evapotranspiration Calculation = 36.91 sf

Net Evapotranspiration Calculation = Annual ETo - Effective Rainfall

B) Adjusted Landscape Area Calculation

0.00 sf Very Low Water Use X.01 0.00 sf

2,786 sf X .03 835.69 sf

113 sf Moderate Water Use X.06 67.87 sf

0.00 sf High Water Use X 1.0 0.00 sf

Sum of Adjusted Landscape Area = 903.56 sf

ETWU = 36.91 × .62 × 904 sf / 0.81 = 25,848 gal/yr

Irrigation Efficiency Factor

Square Footage of Landscape on Drip	2,898.74 sf
Square Footage of Landscape on Spray	0.00 sf
Total Square Footage of Landscape	2,898.74 sf
Adjusted Irrigation Efficiency Factor	0.81

HYDROZONE SUMMARY TABLE

Name	Method	Water Use	Water Use Value	Flow in GPM	Preciptation Rate in Inches per Hour	Hydrozone Area in SF	% of Landscape
1D	Sub-Surface Dripline	Low	0.3	3.14	0.88	344 sf	12%
2D	Sub-Surface Dripline	Low	0.3	3.05	0.89	329 sf	11%
3B	Tree Bubbler	Low	0.3	3.50	1.78	190 sf	7%
4E	Eco-mat	Low	0.3	4.01	0.96	401 sf	14%
5D	Sub-Surface Dripline	Low	0.3	3.80	0.91	401 sf	14%
6D	Sub-Surface Dripline	Low	0.3	5.30	0.84	606 sf	21%
7B	Tree Bubbler	Moderate	0.6	2.00	1.70	113 sf	4%
8B	Tree Bubbler	Low	0.3	1.50	1.70	85 sf	3%
9E	Eco-mat	Low	0.3	3.46	0.92	362 sf	12%
					TOTAL LANDSCAPE AREA	2,899 sf	97.7%

SUMMARY HYDROZONE TABLE

PLANT TYPE	AREA	% OF LANDSCAPE
Very Low	0 sf	0%
Low	2,786 sf	96%
Moderate	113 sf	4%
High	0 sf	0%
Total	2,899 sf	100%

IRRIGATION LEGEND

SYMBOL	EQUIPMENT	MANUFACTURER	MODEL	REMARKS
⊗	STREAM BUBBLER: 6" POP-UP	HUNTER	PROS-06-CV-R-PRS30-MSBN-25Q	TREE WELL BUBBLER, AIM AT ROOT BALL; 1 PER TREE
●	ROOT WATERING SYSTEM	HUNTER	RZWS-18-25-CV	1 PER TREE
MV	1" NORMALLY CLOSED MASTER VALVE	HUNTER	ICV-101G	INSTALL DOWNSTREAM FROM BACKFLOW PREVENTER
◕	REMOTE CONTROL VALVE: TREE BUBBLER	HUNTER	ICV-101G-AS-ADJ	TREE BUBBLER CIRCUIT VALVE; SEE PLAN FOR SIZE
▚	REMOTE CONTROL VALVE: DRIP CIRCUIT	HUNTER	ICZ-101-LF-25	DRIP CIRCUIT VALVE
C	6 STATION CONTROLLER (6 STATION)	HUNTER	IC-600-M	MOUNT IN AT EYE LEVEL
SS	SOLAR SYNC SENSOR (WIRELESS)	HUNTER	WSS-SEN	MOUNT AT ROOF LINE ABOVE CONTROLLER LOCATION
◢	R.P. BACKFLOW PREVENTER - 3/4"	FEBCO	860U	REFER TO CIVIL DRAWINGS
E	BACK FLOW PREVENTER ENCLOSURE	LE MEUR	BF 18" X 30" X 30"	INSTALL PER MANUF. SPECS
⋈	BALL VALVE IN VALVE BOX	WATTS	B6400 SERIES	MATCH MAINLINE SIZE; REFER TO DETAIL
SEE DETAIL	AUTOMATIC LINE FLUSH VALVE	HUNTER	AFV-T	INST. IN 6" VALVE BOX @ END OF CIRCUIT
SEE DETAIL	AIR RELIEF VALVE	HUNTER	AVR-075	INST. IN 6" VALVE BOX @ HIGH POINT OF CIRCUIT
4"C	PIPE AND WIRE CHASE	PVC	CL 200	SEE PLAN FOR SIZE
●●●●●	POLY TO PVC CONNECTOR W/ COMPRESSION FITTING		SEE DETAIL G/L3	
▨	LANDSCAPE DRIPLINE	RAINBIRD	XFS-06-12-XX	INSTALL 3" BELOW GRADE @ SPACING SHOWN
— - —	MAINLINE	PVC	SCH 40 (1-1/2" AND SMALLER)	
——	LATERAL	PVC	SCH 40	
M	3/4" WATER METER			REFER TO CIVIL DRAWINGS
1E	VALVE STATION AND SEQUENCE			
1"	ELECTRIC CONTROL VALVE SIZE			
4.8	FLOW RATE IN GALLONS PER MINUTE			

AREA CALCULATION NOTE:
WATER USE CALCULATIONS ARE BASED ON ACTUAL LANDSCAPE AREAS. LANDSCAPE AREAS INCLUDE ALL SITE AREAS WITH IRRIGATED LANDSCAPE WHICH DEFINE THE HYDROZONES OF THE PROJECT. TREES ARE REQUIRED TO BE IRRIGATED VIA DEDICATED CIRCUITS SEPARATE FROM SHRUB AND GROUNDCOVER AREAS AND EACH TREE HYDROZONE IS BASED ON WATER USE AND OTHER FACTORS. FOR THE PURPOSES OF MAWA AND ETWU EACH TREE CANOPY IS CALCULATED WITH A 6' WETTED DIAMETER AND WHERE A TREE OVERLAPS AN UNDERSTORY LANDSCAPE BELOW, A 6' WETTED DIAMETER (28.26 SF) IS DEDUCTED FROM THE AREA BELOW. THE NET RESULT OF THE ACCUMULATED LANDSCAPE AND TREE AREAS IS AN ACCURATE REPRESENTATION OF ALL IRRIGATED LANDSCAPE AREA.

BIORETENTION AREAS
SUPPLEMENTAL TEMPORARY IRRIGATION

CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY SUPPLEMENTAL IRRIGATION OF ALL BIO-RETENTION AREAS THROUGH THE SOD OR PLANT ESTABLISHMENT PERIOD. METHOD OF IRRIGATION APPLICATION IS DISCRETIONARY AND MAY INCLUDE HAND WATERING OR INSTALLATION OF A TEMPORARY, ABOVE GRADE OVERHEAD SPRAY CIRCUIT. ANY REPLACEMENT NECESSARY FOR LOSS OR DAMAGE TO SOD OR PLANTS DUE TO LACK OF WATER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT CONTRACTOR'S EXPENSE.

PRELIMINARY IRRIGATION PLAN

0 10 20 FT

REGISTERED LANDSCAPE ARCHITECT
DONALD G. MACNAIR
NO. 2800
EXP. 8/31/21
STATE OF CALIFORNIA

MACNAIR
LANDSCAPE ARCHITECTURE
POST OFFICE BOX 251
KENWOOD, CALIFORNIA 95452
TEL (707) 833-2288
RLA #2800
don@macnairlandscapes.com

PRELIMINARY IRRIGATION PLAN

TOYOTA SUNNYVALE RECONDITIONING CENTER
SUNNYVALE, CALIFORNIA

DATE: 10/7/20
MLA JOB #: 2019-09
SCALE: 1" = 10'
DRAWN:

L-1

SHEET L-1 OF 2

REGISTERED LANDSCAPE ARCHITECT
DONALD G. MACNAIR
NO. 2800
EXP. 8/31/21
STATE OF CALIFORNIA

MACNAIR
LANDSCAPE
ARCHITECTURE

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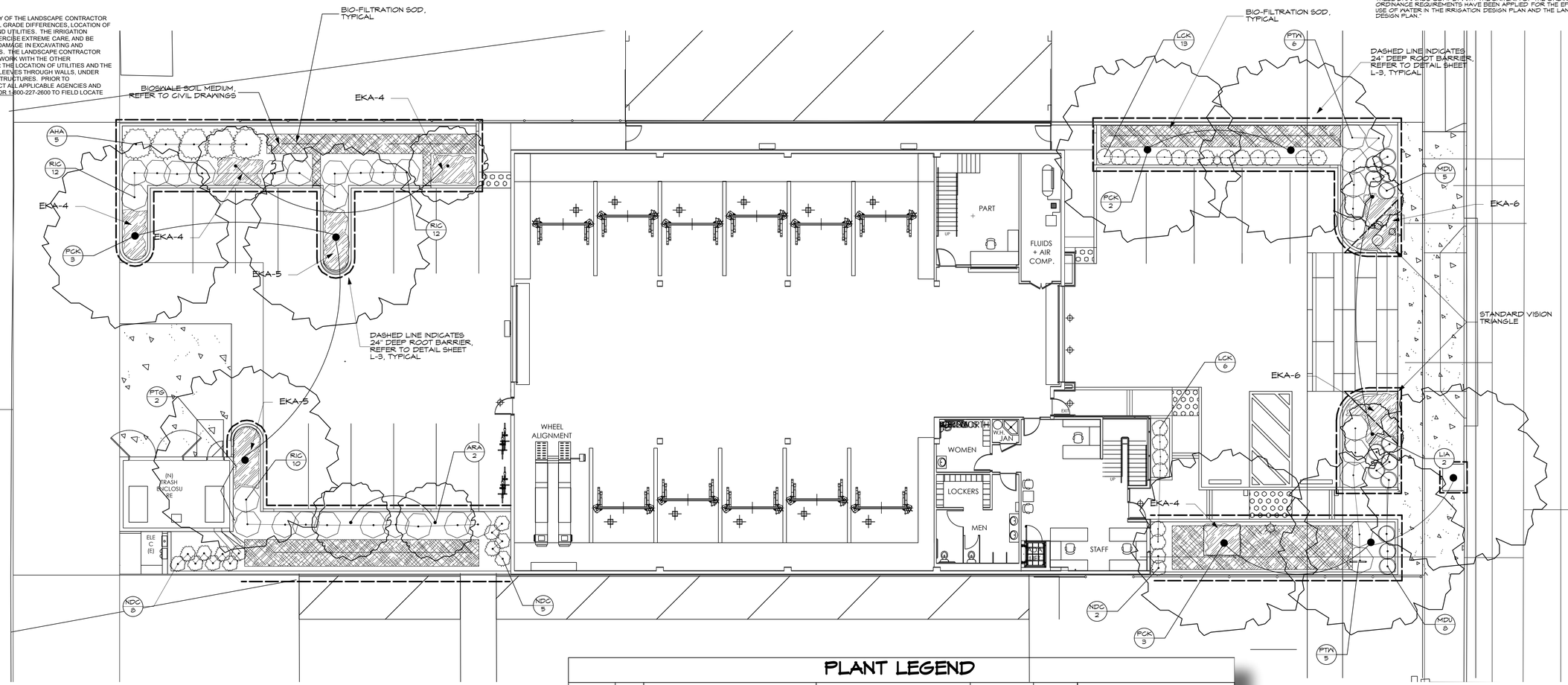
U.S.A NOTE

IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO BE FAMILIAR WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, STRUCTURES, AND UTILITIES. THE IRRIGATION CONTRACTOR SHALL EXERCISE EXTREME CARE, AND BE RESPONSIBLE FOR ANY DAMAGE IN EXCAVATING AND WORKING NEAR UTILITIES. THE LANDSCAPE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE OTHER SUB-CONTRACTORS FOR THE LOCATION OF UTILITIES AND THE INSTALLATION OF PIPE SLEEVES THROUGH WALLS, UNDER ROADWAYS, AND NEAR STRUCTURES. PRIOR TO CONSTRUCTION, CONTACT ALL APPLICABLE AGENCIES AND U.S.A. AT 1-800-642-2444 OR 1-800-227-2600 TO FIELD LOCATE ALL EXISTING UTILITIES.



PLANTING NOTES

1. ALL GROUND COVER TO BE SPACED IN A TRIANGULAR PATTERN. CONTRACTOR RESPONSIBLE FOR COMPLETE COVERAGE.
2. SUPPLY AGRIFORM 21 GRAM TABLETS AS FOLLOWS: 5-15 GAL., 3-5 GAL., 1-1 GAL.
3. DIG PLANTING PITS 2 TIMES THE DIAMETER AND EQUAL THE HEIGHT OF ROOTBALL.
4. BACKFILL PITS WITH 2/3 EXISTING SOIL, 1/3 ORGANIC AMENDMENT
5. ALL PLANTS TO BE SPOTTED IN THE FIELD BY LANDSCAPE ARCHITECT PRIOR TO PLANTING.
6. WHEN LANDSCAPING IN EXISTING PLANTED AREAS, CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE OR DESTROY ANY EXISTING PLANT MATERIAL OR IRRIGATION. EXISTING PLANT MATERIAL AND IRRIGATION THAT IS DAMAGED SHALL BE REPLACED WITH LIKE, SIZE, QUALITY, ETC. BY THE CONTRACTOR AT HIS EXPENSE.
7. SPECIAL ATTENTION IS TO BE PAID TO THE PLANTING AREAS SURROUNDING THE BUILDINGS. COMPACTED SOIL IS TO BE SUFFICIENTLY EXCAVATED TO ALLOW FOR PROPER ROOT GROWTH AND DRAINAGE OF ALL AREAS. CHECK SOIL FOR PROPER DRAINAGE PRIOR TO PLANTING. AUGER THROUGH COMPACTED SOIL WHERE NECESSARY. DO NOT PLANT IN THE DRAINAGE SWALES.
8. ALL CONSTRUCTION IS TO BE PER ALL APPLICABLE AND PREVAILING CITY OF SUNNYVALE CONSTRUCTION STANDARDS.
9. A SIGNED CERTIFICATE OF COMPLETION IS REQUIRED PRIOR TO FINAL ACCEPTANCE BY THE CITY OF SANTA ROSA. IF THE INSTALLATION OF THE LANDSCAPE DOES MEET OR SUBSTANTIALLY COMPLY WITH THE APPROVED LANDSCAPE CONSTRUCTION DOCUMENTS, THE CERTIFICATE OF COMPLETION WILL NOT BE SIGNED OR APPROVED BY THE LANDSCAPE ARCHITECT OF RECORD.

PLANT LEGEND

SYMBOL	SIZE	BOTANICAL NAME	COMMON NAME	WATER USE PER WUCOLS IV	QUANTITY	COMMENTS
Trees						
ARA	#24	Acer rubrum 'Armstrong'	Armstrong Maple	.6	4	
LIA	#24	Lagerstroemia indica x fauerii 'Arapaho'	Arapaho Crape Myrtle	.3	2	
PCK	#24	Pistacia chinensis 'Keith Davey'	Chinese pistache	.3	8	
Shrubs						
AHA	#5	Arctostaphylos densiflora 'Harmony'	Harmony Manzanita	.3	5	
LCK	#5	Loropetalum chinense 'Kurenai'	Jazz Hands® Dwarf Pink Chinese Fringe-flower	.3	13	
NDC	#5	Nandina domestica 'Compacta'	Dwarf Heavenly Bamboo	.3	13	
PTA	#5	Pittosporum tobira 'Wheeler's Dwarf'	Wheeler's Dwarf Japanese Mock Orange	.3	11	
RIC	#5	Rhaphiolepis indica 'Clara'	Clara Indian Hawthorn	.3	22	
Groundcover						
EKA	#1	Erigeron karvinskianus	Santa Barbara Daisy	.3	38	36" OC, Triangular Spacing
Ornamental Grass						
MDU	#1	Muhlenbergia dubia	Pine Muhly	.3	13	
Bioretention Areas						
	Sod	Biofiltration Sod	"Biofiltration Sod"	0.3		Delta Bluegrass (CA Natives)
Other						
		Mulch: Fir Bark 1-1/2" Minus	Medium Walk-On Bark			3" Depth, All Landscape Areas
See Detail		Linear Root Barrier	Root Solutions , or Equal			24" Depth, Continuous

PRELIMINARY PLANTING PLAN

0 10 20 FT

PRELIMINARY PLANTING PLAN

TOYOTA SUNNYVALE RECONDITIONING CENTER

SUNNYVALE, CALIFORNIA

DATE: 10/7/20
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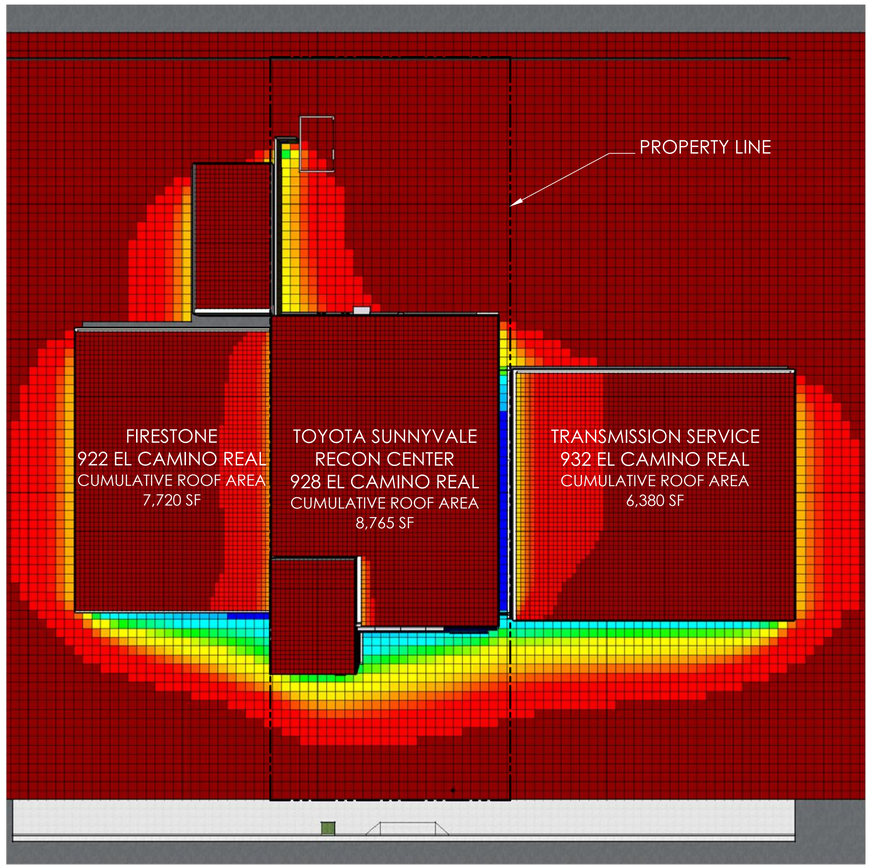
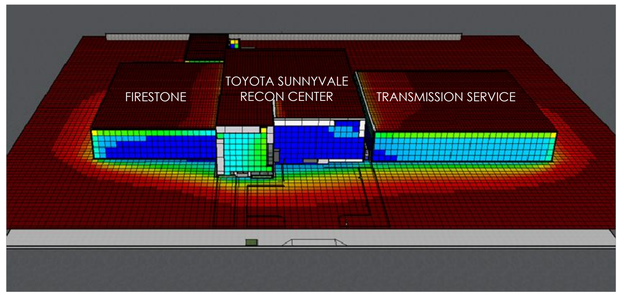
SCALE: 1" = 10'
DRAWN:

L-2

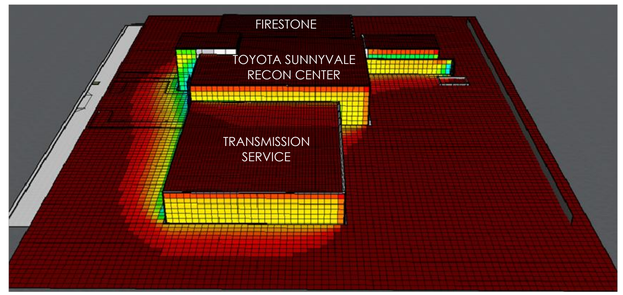
SHEET L-2 OF 2



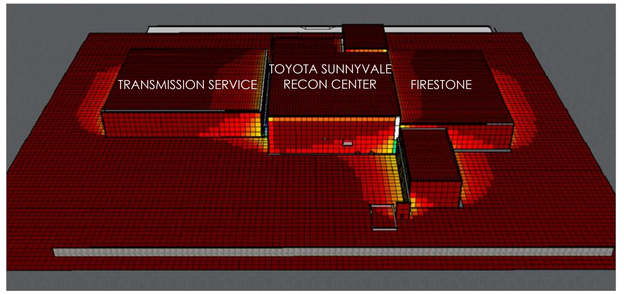
SUNLIGHT STUDY - PLAN VIEW



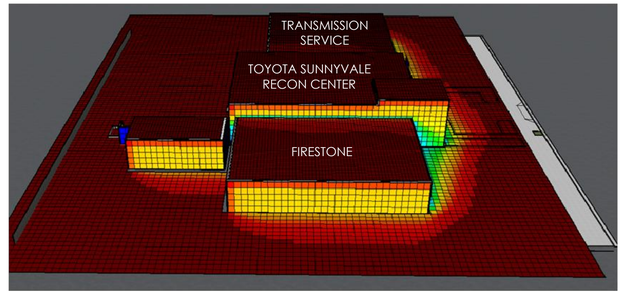
NORTH VIEW



WEST VIEW



SOUTH VIEW



EAST VIEW

NORTH

ANNUAL SUNLIGHT STUDY LEGEND			Firestone				Transmission Service			
			Rooftop Sunlight Hours		Cumulative Roof Area	7,720 SF	Rooftop Sunlight Hours		Cumulative Roof Area	6,380 SF
Color Legend	Percentage Range of Sunlight Hours	Area Range of Sunlight Hours	Area in the relative range of Sunlight Hours	The percentage of roof area in the relative range of sunlight hours	Multiplication Factor		Area in the relative range of sunlight hours	The percentage of roof area in the relative range of sunlight hours	Multiplication Factor	
	90 - 100% Sunlight	3,852 - 4,280	6,184.5	80.11%	95%	5,875.3	5,530.2	86.68%	95%	5253.7
	80 - 89% Sunlight	3,424 - 3,851	-	-	85%	-	-	-	85%	-
	70 - 79% Sunlight	2,996 - 3,423	1,204.3	15.60%	75%	903.2	346.4	5.43%	75%	259.8
	60 - 69% Sunlight	2,568 - 2,995	332.0	4.30%	65%	215.8	379.6	5.95%	65%	246.7
	50 - 59% Sunlight	2,140 - 2,567	-	-	55%	-	124.4	1.95%	55%	68.4
	40 - 49% Sunlight	1,712 - 2,139	-	-	45%	-	-	-	45%	-
	30 - 39% Sunlight	1,284 - 1,711	-	-	35%	-	-	-	35%	-
	20 - 29% Sunlight	856 - 1,283	-	-	25%	-	-	-	25%	-
	10 - 19% Sunlight	428 - 855	-	-	15%	-	-	-	15%	-
	0 - 9% Sunlight	0 - 427	-	-	5%	-	-	-	5%	-
					Resulting Area	6,994.3			Resulting Area	5,828.7
	Max Sunlight Hours		Cumulative roof area in square feet	Percentage	Min. Area Req'd.	Is the resultting area greater than the min. area req'd.?	Cumulative roof area in square feet	Percentage	Min. Area Req'd.	Is the resulting area greater than the min. area req'd.?
	4,280		7,720	90%	6,948	TRUE	6,380	90%	5,742	TRUE

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TOYOTA SUNNYVALE RECON CENTER REMODEL + EXPANSION

928 West El Camino Real, Sunnyvale, CA 94087
APN 201-19-036

ANNUAL SOLAR ANALYSIS

A4.3

SCALE: N.T.S.
DATE: DECEMBER 28, 2020

TWM NO: 14-107.1

PLANNING SUBMITTAL - SUPPLEMENT - 28 DECEMBER 2020