DOCKETED	
Docket Number:	21-SPPE-01
Project Title:	CA3 Backup Generating Facility-Vantage
TN #:	240158
Document Title:	CA3DC PCC Drawing Set Rev3 - Part I
Description:	N/A
Filer:	Scott Galati
Organization:	DayZenLLC
Submitter Role:	Applicant Representative
Submission Date:	10/28/2021 10:25:36 AM
Docketed Date:	10/28/2021

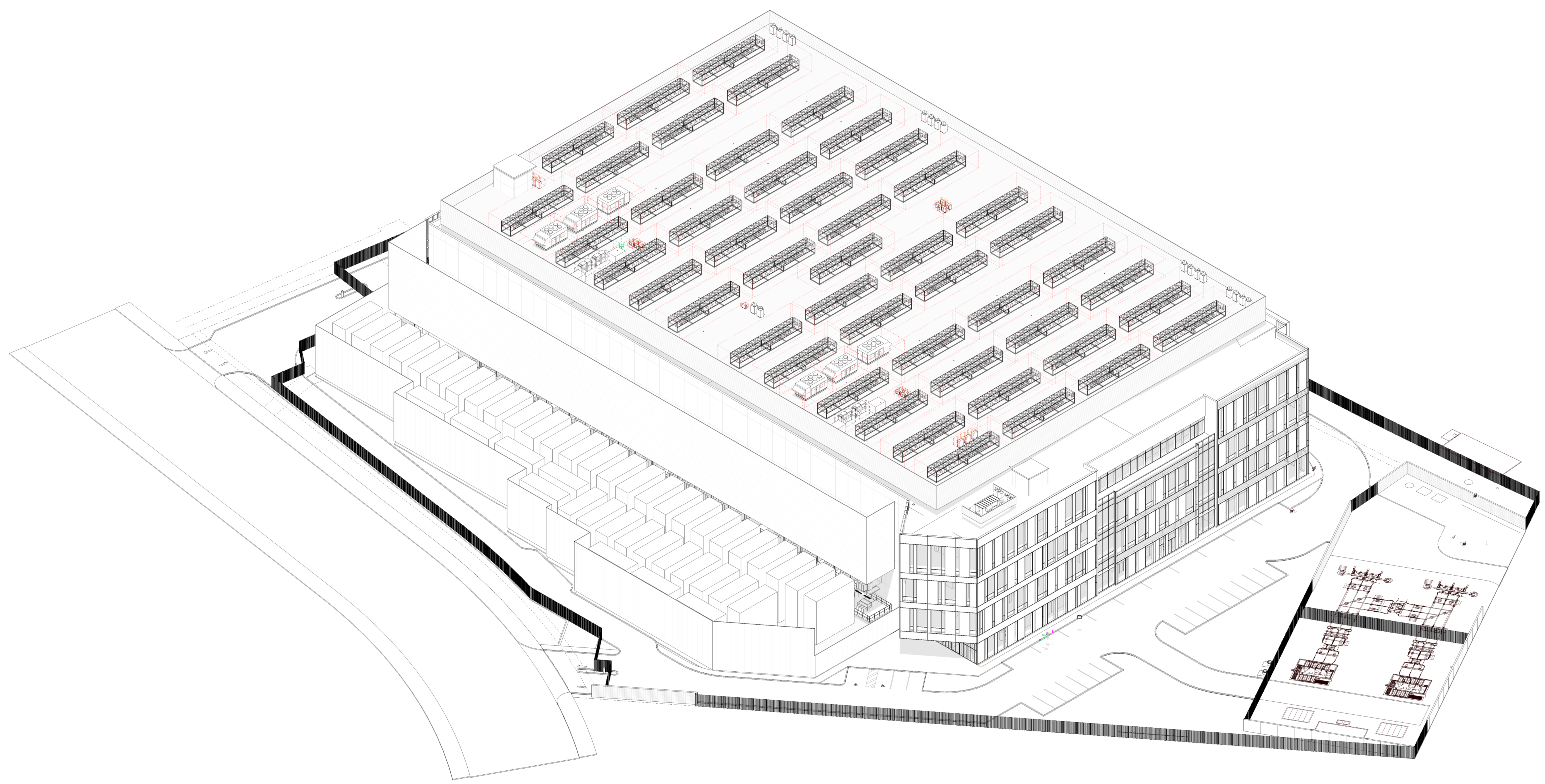
VANTAGE CA31

2590 WALSH AVENUE SANTA CLARA, CA 95051
APN : 216-28-112

ISSUED FOR PCC REVIEW

10-26-2021

DRAWING LIST



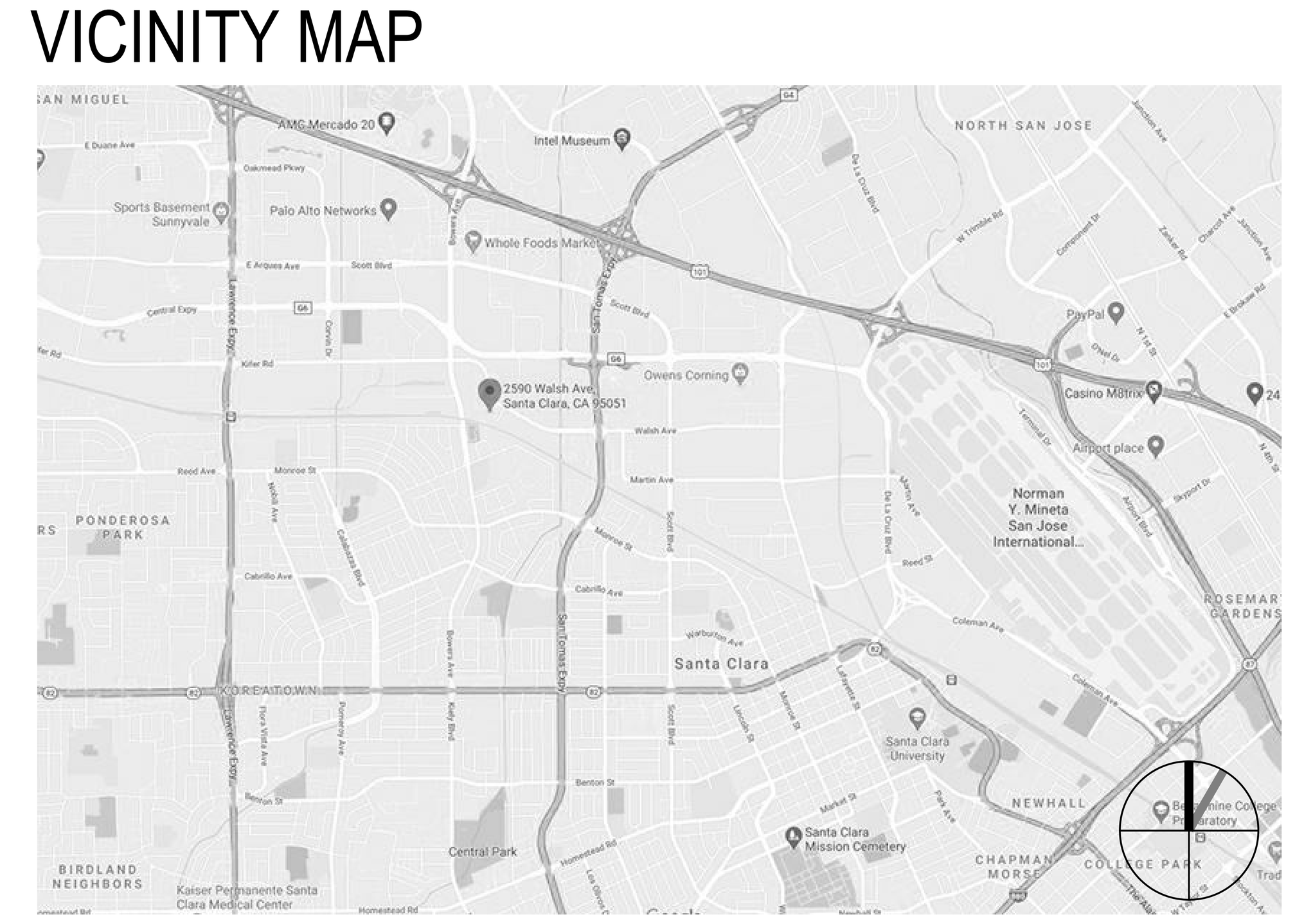
SCOPE OF WORK

NEW PROJECT CONSISTING OF 8 DATA HALLS, MECHANICAL PENTHOUSE, BACKUP GENERATORS, POWER EQUIPMENT CENTERS AND ADMINISTRATIVE FUNCTIONS.THE SITE IS CURRENTLY DEVELOPED WITH AN APPROXIMATELY 115,000 SQUARE FOOT SINGLE-STORY OFFICE AND WAREHOUSE BUILDING AND ASSOCIATED PAVED SURFACE AREAS WHICH WILL BE DEMOLISHED. THE SCOPE OF WORK WITHIN THESE DOCUMENTS CONSISTS OF ALL ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING WORK TO SUPPORT THE CONSTRUCTION OF THE CORE AND SHELL OF THE BUILDING AND THE TENANT BUILD OUT OF THE DATA HALL.

PROJECT INFORMATION SUMMARY

BUILDING GSF: 468,170 SF
OCCUPANCY GROUP: NON-SEPERATED MIXED OCCUPANCY(B,S-2, AND A-2)
USE: ELECTRONIC DATA PROCESSING
TYPE OF CONSTRUCTION: TYPE I-B
NUMBER OF STORIES: 4 STORIES
BUILDING HEIGHT: 87.5'
TYPE OF FIRE SPRINKLERS SYSTEM PROVIDED:
BUILDING EQUIPPED THROUGHOUT WITH AN AUTOMATED NFPA13 SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1
NUMBER OF PARKING SPACES:30 SPACES PROVIDED ON SITE*
*SEE SHEET AS100.02 FOR ADDITIONAL PARKING INFORMATION

VICINITY MAP



LOCATION MAP

OWNER
VANTAGE DATA CENTERS

ARCHITECT
SHEEHAN NAGLE HARTRAY ARCHITECTS
SHEEHAN NAGLE HARTRAY ARCHITECTS
130 East Randolph Street, Suite 3100
CHICAGO, IL 60601

MEP ENGINEER
Southland Industries
33225 Western Ave.
Union City, CA 94587
510.477.3300

ROSENDIN
www.rosendin.com
880 Mabury Road
San Jose, CA 95133
1.408.286.2800
Orchard Office
2698 Orchard Pkwy
San Jose, CA 95134
1.408.321.2200

STRUCTURAL ENGINEER
PEOPLES ASSOCIATES
STRUCTURAL ENGINEERS
408-957-9220 • www.pase.com
San Jose, California Pleasanton, California

CIVIL ENGINEER
HMH
1570 Oakland Road
San Jose, CA 95131
(408) 487-2200
HMHca.com

REED ASSOCIATES
LANDSCAPE ARCHITECTURE
477 SOUTH TAAFFE STREET
SUNNYVALE, CALIFORNIA 94086
PHONE: 408•481•9020

PROGRESS SET
NOT FOR CONSTRUCTION

No.	Description	Date
D	ISSUED FOR PCC REVIEW	10-26-2021
C	ISSUED FOR PCC REVIEW	10-06-2021
B	ISSUED FOR PCC REVIEW	08-11-2021
1	ISSUED FOR 100% SD	07-16-2021
A	ISSUED FOR PCC REVIEW	05-10-2021

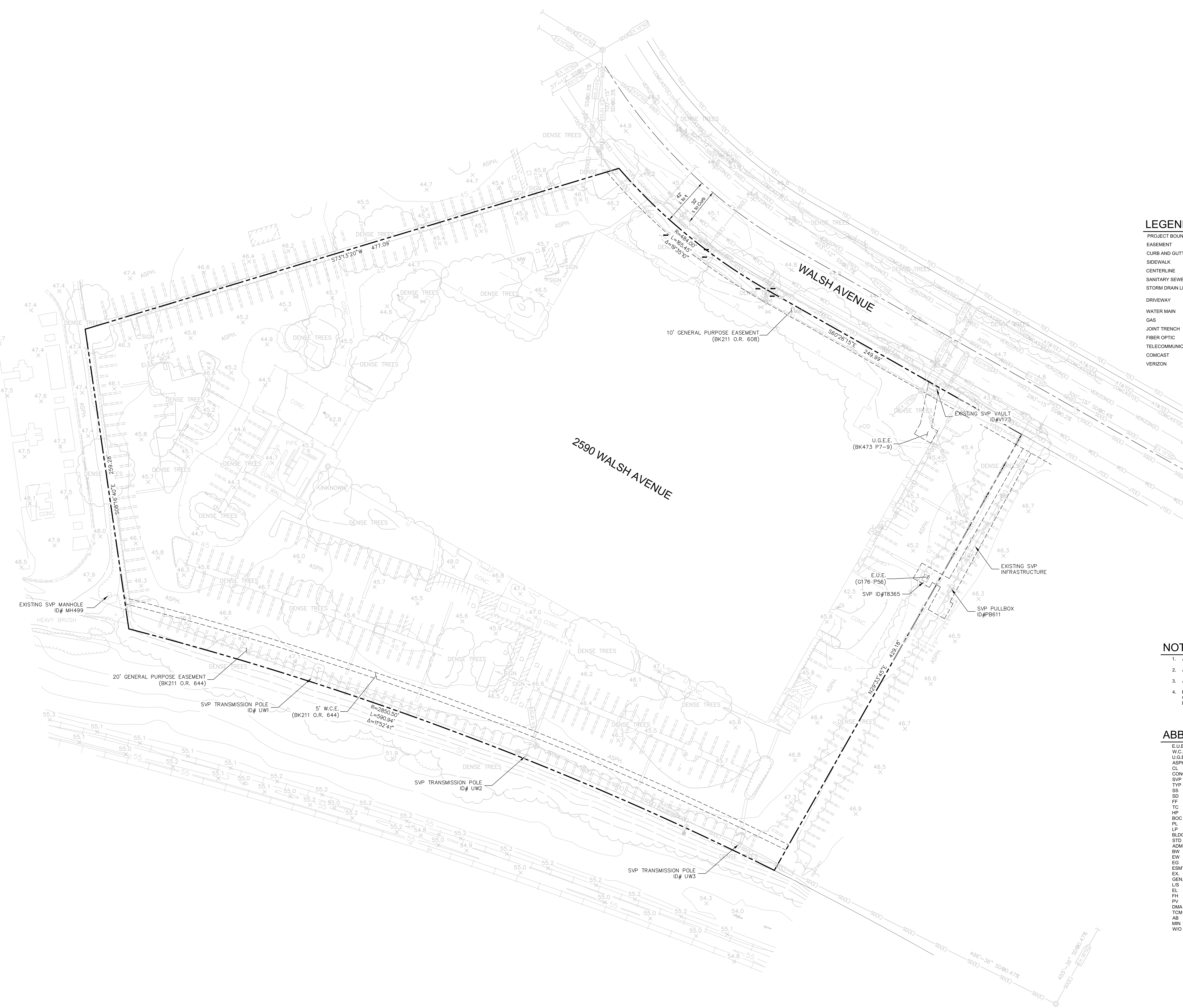
VANTAGE CA31
2590 WALSH AVENUE
SANTA CLARA, CA 95051
APN : 216-28-112

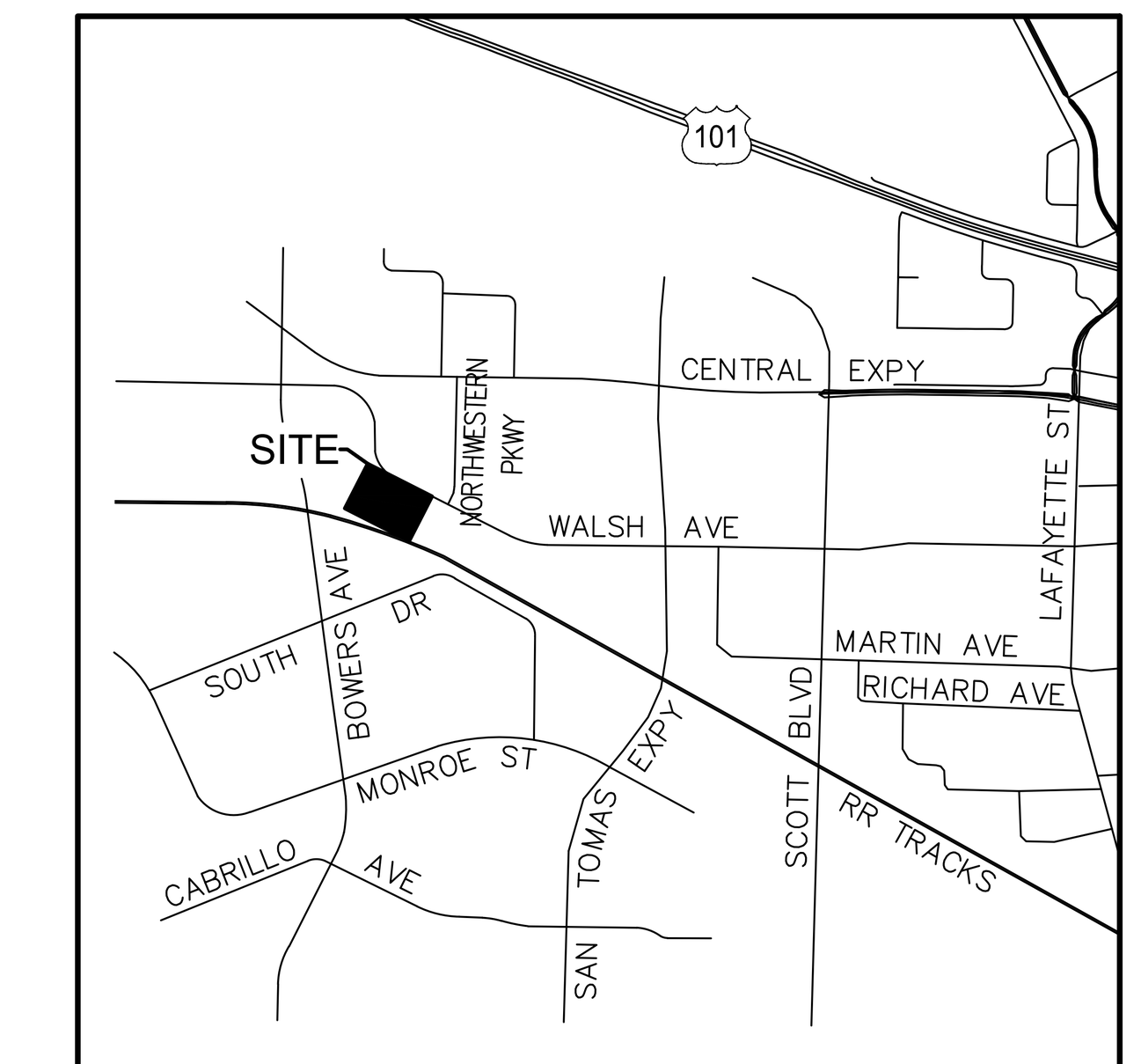
ISSUED FOR PCC REVIEW

COVER SHEET

G000.01

SCALE: AS NOTED





VICINITY MAP
SCALE: 1" = 1000'

LEGEND

	EXISTING
PROJECT BOUNDARY	
EASEMENT	
CURB AND GUTTER	
SIDEWALK	
CENTERLINE	
SANITARY SEWER	EX–SS
STORM DRAIN LINE	EX–SD
DRIVEWAY	
WATER MAIN	EX–W
GAS	G
JOINT TRENCH	JT
FIBER OPTIC	FO(E)
TELECOMMUNICATION	T(E)
COMCAST	COMCAST(E)
VERIZON	VERIZON(E)

NOTES

1. ALL EXISTING STRUCTURES TO BE REMOVED.
2. ALL EXISTING TREES TO BE REMOVED ONSITE.
3. ALL EXISTING OVERHEAD UTILITIES ARE TO REMAIN UNLESS OTHERWISE NOTED.
4. EXISTING JOINT TRENCH ALONG PROJECT FRONTAGE CONTAINS MULTIPLE OWNERS (SVP, COMCAST, ZAYO, VERIZON BUSINESS & CENTURY LINK) WITHIN DUCT BANK.

ABBREVIATION LIST

E.U.E	ELECTRICAL UTILITY EASEMENT
W.C.E	WIRE CLEARANCE EASEMENT
U.G.E.E	UNDERGROUND ELECTRICAL EASEMENT
ASPH	ASPHALT
CL	CENTERLINE
CONC	CONCRETE
SVP	SILICON VALLEY POWER
TYP	TYPICAL
SS	SEWER
SD	STORMWATER DRAIN
FF	FINISHED FLOOR
TC	TOP OF CURB
HP	HIGH POINT
BOC	BACK OF CURB
PL	PROPERTY LINE
LP	LOW POINT
BLDG	BUILDING
STD	STANDARD
ADMIN	ADMINISTRATION
BW	BACK OF WALK
EW	EDGE OF WALK
EG	EDGE OF GRADE
ESMT	EASEMENT
EX.	EXISTING
GEN.	GENERAL
L/S	LANDSCAPE
EL	ELEVATION
FH	FIRE HYDRANT
PV	PAVEMENT
DMA	DRAINAGE MANAGEMENT AREA
TCM	TREATMENT CONTROL MEASURE
AB	AGGREGATE BASE
MIN	MINIMUM
W/O	WITHOUT

0 15 30 60
1 INCH = 30 FEET

OWNER

VANTAGE DATA CENTERS

ARCHITECT
SHEEHAN NAGLE HARTRAY ARCHITECTS

SHEEHAN NAGLE HARTRAY ARCHITECTS
130 East Randolph Street, Suite 3100
CHICAGO, IL 60601

MEP ENGINEER

Southland Industries
33225 Western Ave.
Union City, CA 94587
510.477.3300

ROSENDIN

STRUCTURAL ENGINEER

PEOPLES ASSOCIATES
STRUCTURAL ENGINEERS
408-957-9220 • www.pase.com
San Jose, California • Pleasanton, California

CIVIL ENGINEER

HMH
1570 Oakland Road
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PHONE: 408•481•9020

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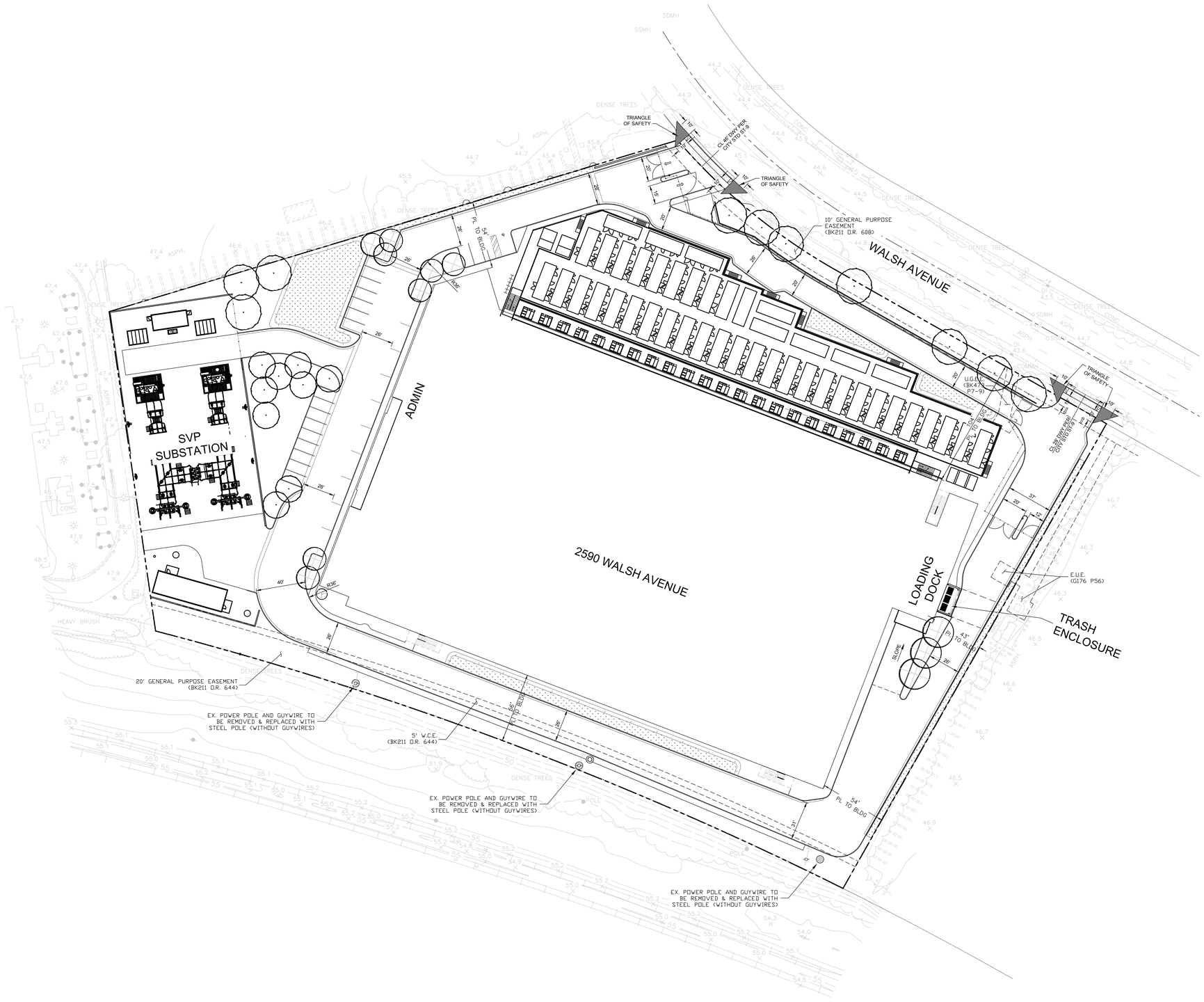
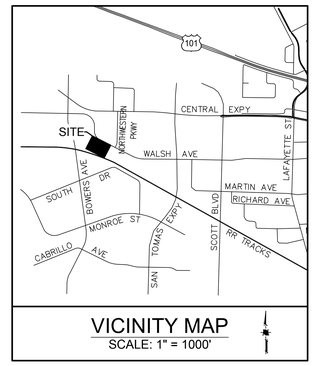
EXISTING CONDITIONS

C1

SCALE: AS NOTED





VICINITY MAP
SCALE: 1" = 1000'

LEGEND

	PROPOSED	EXISTING
PROJECT BOUNDARY		
EASEMENT		
CURB AND GUTTER		
SIDEWALK		
VALLEY GUTTER		
CENTERLINE		
STANDARD CSC DRIVEWAY (PER STD DETAIL ST-9)		

NOTES

1. EXISTING EASEMENTS ARE LABELED ON SHEET C1.

0 15 30 60
1 INCH = 30 FEET

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ARCHITECT
SHEEHAN NAGLE HARTRAY ARCHITECTS
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CHICAGO, IL 60601

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LANDSCAPE ARCHITECTURE

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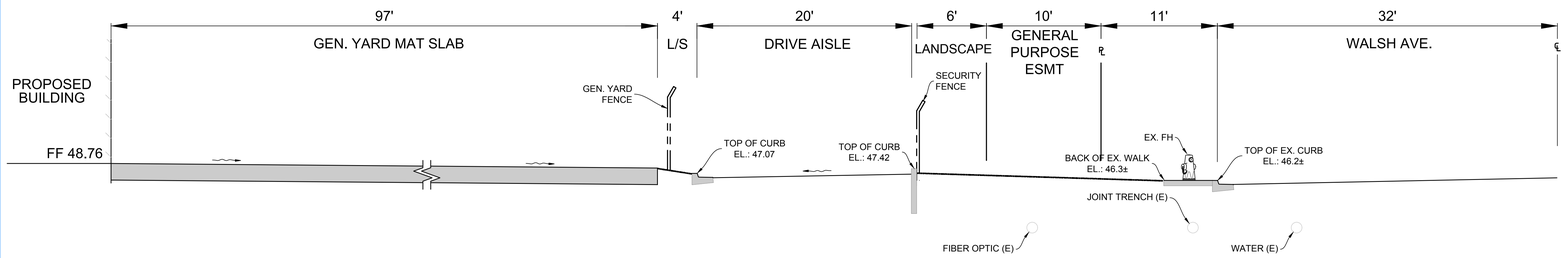
ISSUED FOR PCC REVIEW

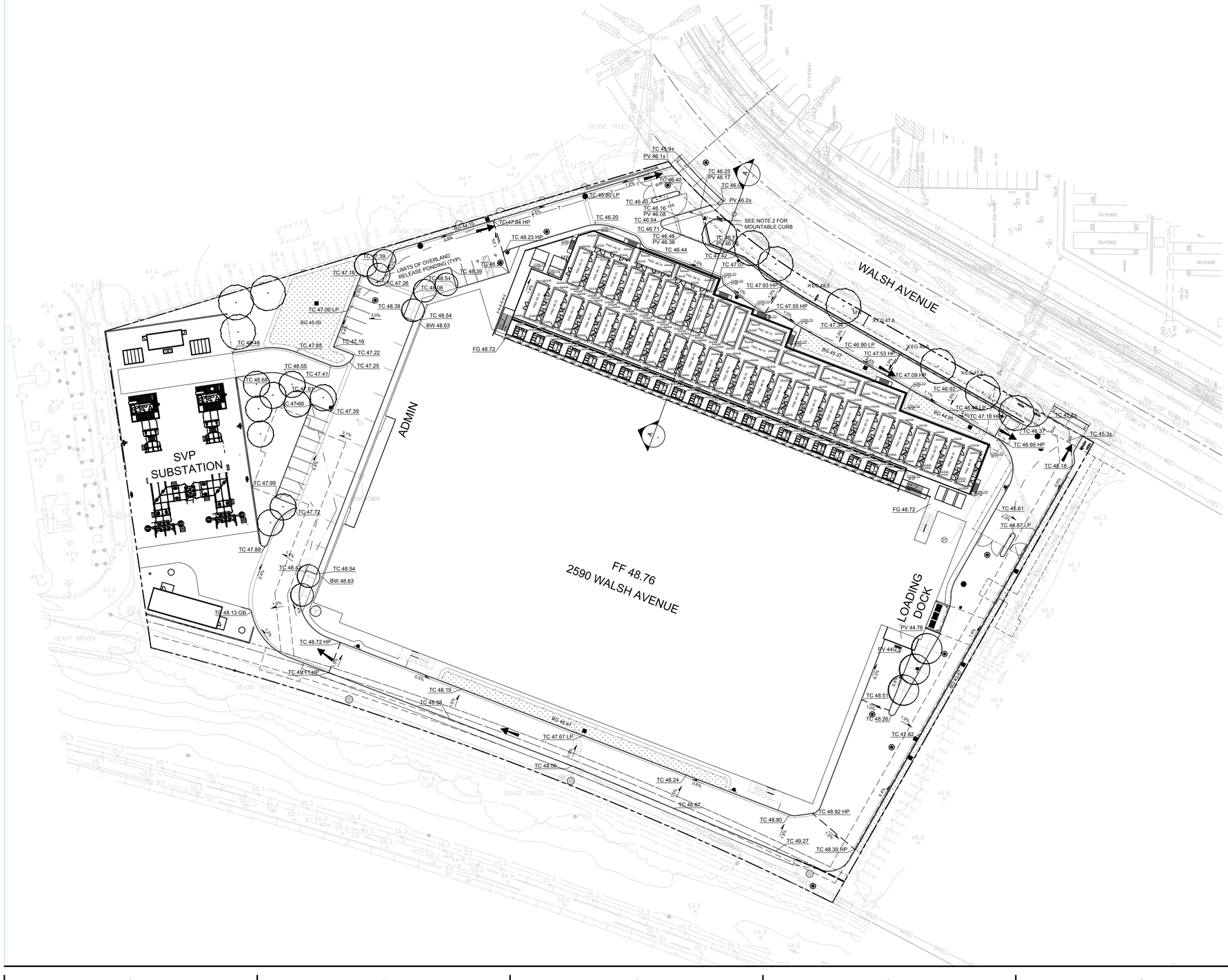
SITE PLAN

C2

SCALE: AS NOTED



SECTION-A
SCALE: 1"=5'



LEGEND

	PROPOSED	EXISTING
PROJECT BOUNDARY		
CURB AND GUTTER		
SIDEWALK		
DRIVEWAY		
GRADE BREAK		
CONCRETE DRAINAGE SWALE		
EASEMENT (SEE NOTE 1)		
VALLEY GUTTER		
OVERLAND RELEASE		
PONDING DEPTH		

NOTES

1. EXISTING EASEMENTS ARE LABELED ON SHEET C1.
2. SEE SHEET C6.1 FOR MOUNTABLE CURB FOR FIRE ACCESS ROAD DETAIL.
3. SEE SHEET C5 FOR CURB OPENING INTO BIORETENTION BASINS.

OWNER

VANTAGE DATA CENTERS

ARCHITECT

SHEEHAN NAGLE HARTRAY ARCHITECTS

SHEEHAN NAGLE HARTRAY ARCHITECTS
130 East Randolph Street, Suite 3100
CHICAGO, IL 60601

MEP ENGINEER

Southland Industries
Southland
33225 Western Ave.
Union City, CA 94587
510.477.3300

ROSENDIN

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PEOPLES ASSOCIATES
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408-957-9220 · www.pase.com
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CIVIL ENGINEER

HMH
1570 Oakland Road
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ISSUED FOR PCC REVIEW

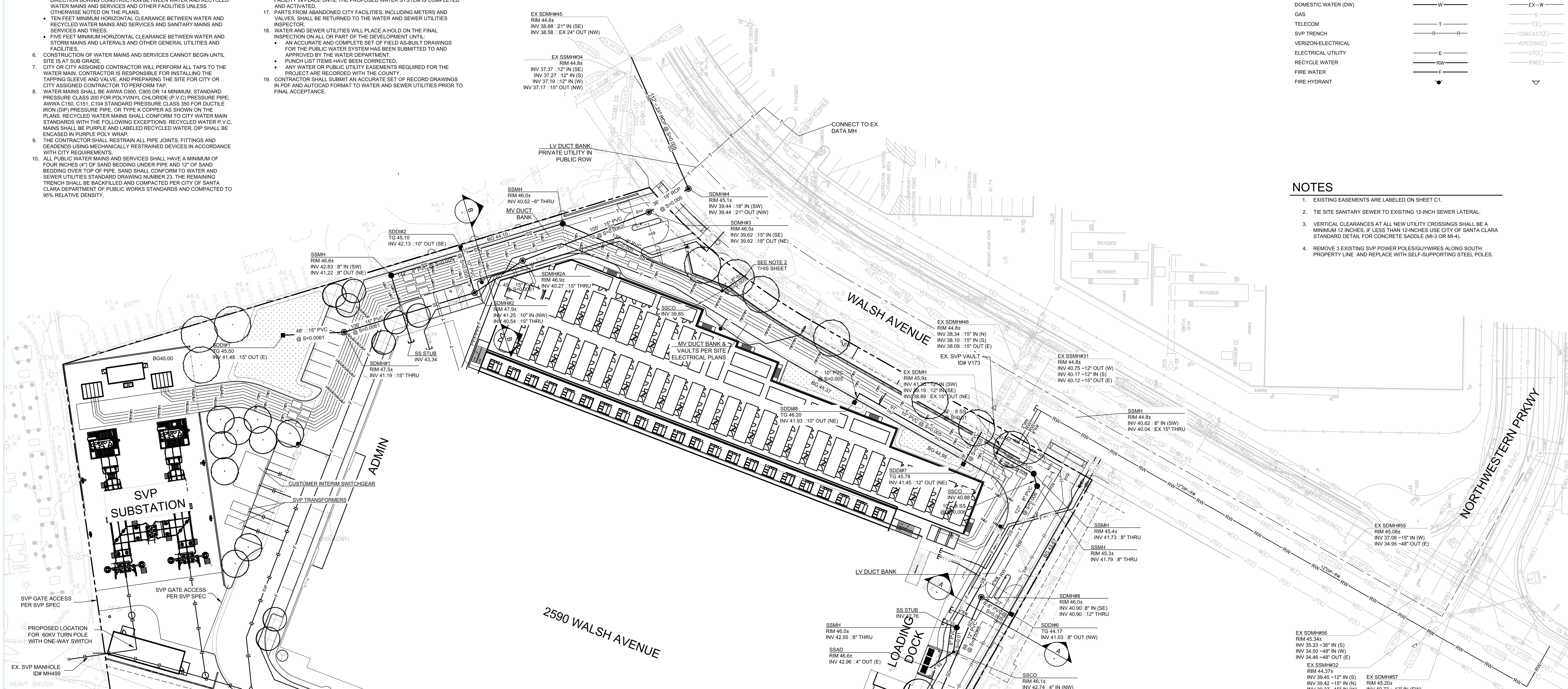
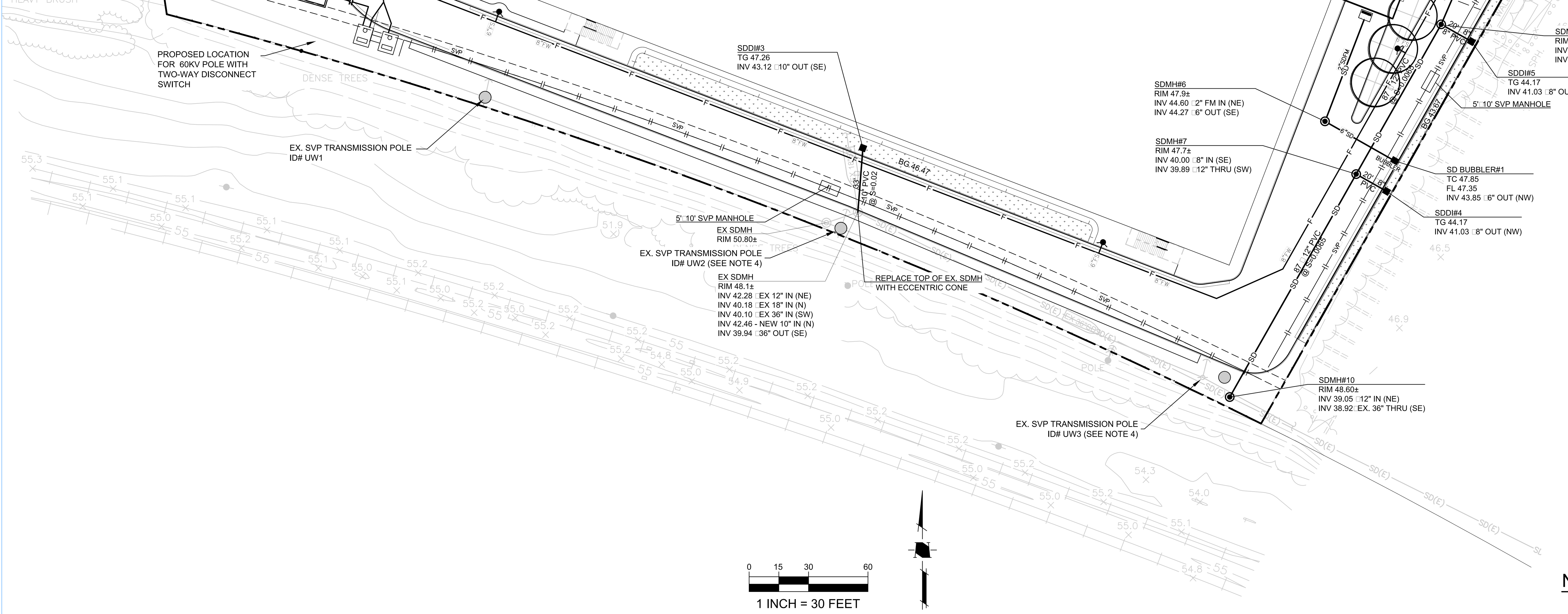
GRADING AND DRAINAGE PLAN

C3

SCALE: AS NOTED

PUBLIC WATER SYSTEM NOTES

1. WATER SYSTEM CONSTRUCTION SHALL CONFORM TO THE PROJECT PLANS, AND TO THE CITY OF SANTA CLARA WATER AND SEWER UTILITIES STANDARD DRAWINGS AND SPECIFICATIONS. COPIES ARE AVAILABLE ON THE CITY'S WEBSITE.
2. INFORMATION ON MATERIALS PROPOSED TO BE USED IN CONSTRUCTING WATER SYSTEM FACILITIES SHALL BE SUBMITTED TO WATER AND SEWER UTILITIES FOR REVIEW AND APPROVAL PRIOR TO THE BEGINNING OF ANY CONSTRUCTION OF WATER FACILITIES.
3. A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH THE CITY WATER AND SEWER UTILITIES IN ATTENDANCE PRIOR TO ANY WORK BEING ALLOWED TO BEGIN ON THE PUBLIC WATER SYSTEM. CALL 615-2053 BETWEEN 7:00 AM AND 4:00 PM MONDAY THROUGH FRIDAY EXCEPT HOLIDAYS. NOTIFY THE CITY WATER INSPECTOR A MINIMIMUM OF ONE WORKING DAY PRIOR TO REQUIRED INSPECTIONS.
4. WATER FACILITIES SHALL BE CONSTRUCTED AS SHOWN ON THE APPROVED PLANS. ALL CHANGES MUST BE APPROVED BY THE WATER INSPECTOR PRIOR TO BEING CONSTRUCTED. A REVISED DRAWING MUST BE APPROVED BY THE ENGINEER.
5. CLEARANCES:
   - ONE FOOT MINIMUM VERTICAL CLEARANCE FOR OPEN TRENCH CONSTRUCTION BETWEEN WATER AND GRAVITY MAINS UNLESS OTHERWISE NOTED ON THE PLANS.
   - TWO FEET MINIMUM VERTICAL CLEARANCE FOR OPEN TRENCH CONSTRUCTION BETWEEN WATER AND RECYCLED WATER MAINS AND SERVICES AND OTHER FACILITIES UNLESS OTHERWISE NOTED ON THE PLANS.
   - FIVE FEET MINIMUM VERTICAL CLEARANCE FOR HORIZONTAL DIRECTION BORING CONSTRUCTION BETWEEN WATER AND RECYCLED WATER MAINS AND SERVICES AND OTHER FACILITIES UNLESS OTHERWISE NOTED ON THE PLANS.
   - TEN FEET MINIMUM HORIZONTAL CLEARANCE BETWEEN WATER AND RECYCLED WATER MAINS AND SERVICES AND SANITARY MAINS AND SERVICES AND TREES.
   - FIVE FEET MINIMUM HORIZONTAL CLEARANCE BETWEEN WATER AND STORM MAINS AND LATERALS AND OTHER GENERAL UTILITIES AND FACILITIES.
6. CONSTRUCTION OF WATER MAINS AND SERVICES CANNOT BEGIN UNTIL SITE IS AT SUB GRADE.
7. CITY OR CITY ASSIGNED CONTRACTOR WILL PERFORM ALL TAPS TO THE WATER MAIN. CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE TAPPING SLEEVE AND VALVE, AND PREPARING THE SITE FOR CITY OR CITY ASSIGNED CONTRACTOR TO PERFORM TAP.
8. WATER MAINS SHALL BE AWWA C900, C905 DR 14 MINIMUM, STANDARD PRESSURE CLASS 200 FOR POLYVINYL CHLORIDE (P.V.C) PRESSURE PIPE, AWWA C150, C151, C104 STANDARD PRESSURE CLASS 350 FOR DUCTILE IRON (DIP) PRESSURE PIPE, OR TYPE K COPPER AS SHOWN ON THE PLANS. RECYCLED WATER MAINS SHALL CONFORM TO CITY WATER MAIN STANDARDS WITH THE FOLLOWING EXCEPTIONS: RECYCLED WATER P.V.C. MAINS SHALL BE PURPLE AND LABELED RECYCLED WATER. DIP SHALL BE ENCASED IN PURPLE POLY WRAP.
9. THE CONTRACTOR SHALL RESTRAIN ALL PIPE JOINTS, FITTINGS AND DEADENDS USING MECHANICALLY RESTRAINED DEVICES IN ACCORDANCE WITH CITY REQUIREMENTS.
10. ALL PUBLIC WATER MAINS AND SERVICES SHALL HAVE A MINIMUM OF FOUR INCHES (4") OF SAND BEDDING UNDER PIPE AND 12" OF SAND BEDDING OVER TOP OF PIPE. SAND SHALL CONFORM TO WATER AND SEWER UTILITIES STANDARD DRAWING NUMBER 23. THE REMAINING TRENCH SHALL BE BACKFILLED AND COMPACTED PER CITY OF SANTA CLARA DEPARTMENT OF PUBLIC WORKS STANDARDS AND COMPACTED TO 95% RELATIVE DENSITY.
11. CONTRACTOR SHALL DISINFECT AND FLUSH ALL NEW AND REPAIRED PORTIONS OF THE PUBLIC WATER SYSTEM ACCORDING TO WATER AND SEWER UTILITIES SPECIFICATIONS. CONTRACTOR MUST COMPLY WITH THE CITY'S NON-POINT SOURCE CONTROL PROGRAM. THE INITIAL BACTERIOLOGICAL TEST SHALL BE PERFORMED BY THE CITY AT THE CITY'S COST. SUBSEQUENT TESTS REQUIRED DUE TO FAILED INITIAL BACTERIOLOGICAL SAMPLES SHALL BE PERFORMED BY THE CITY AT DEVELOPER'S EXPENSE.
12. PRESSURE TEST SHALL BE PERFORMED BY THE CONTRACTOR AT 200 PSI FOR A MINIMUM OF TWO HOURS.
13. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING A SET OF CURRENT, THOROUGH, AND ACCURATE AS-BUILT DRAWINGS AT THE PROJECT SITE. THEY SHALL INCLUDE CENTER TO CENTER DIMENSIONS BETWEEN FITTINGS, VALVES, SERVICES, DEADENDS, TIE-BACKS, CHANGES IN PIPE TYPE, ETC. AND SHALL INCLUDE A DIMENSION REFERENCING A TRACEABLE FEATURE ON THE EXISTING WATER SYSTEM. THE UPDATED AS-BUILT DRAWINGS SHALL BE AVAILABLE FOR THE INSPECTOR'S REVIEW AT ALL TIMES. THE PROJECT WILL NOT BE CONSIDERED FOR ACCEPTANCE NOR ANY METERS ALLOWED TO BE TURNED ON UNTIL THE AS-BUILT DRAWINGS ARE COMPLETED, TURNED IN TO THE INSPECTOR, VERIFIED, AND ACCEPTED.
14. ALL WATER USE SHALL BE METERED EXCEPT FOR USE IN DISINFECTION AND FLUSHING OF WATER MAINS.
15. NO WATER VALVES ON THE EXISTING SYSTEM NOR ANY NEW VALVE CONNECTED TO THE EXISTING SYSTEM SHALL BE OPENED OR CLOSED BY ANYONE EXCEPT AUTHORIZED WATER AND SEWER UTILITIES PERSONNEL.
16. MAINTAIN, SECURE, AND PROTECT ANY EXISTING WATER SYSTEM FACILITY IN PLACE UNTIL THE PROPOSED WATER SYSTEM IS COMPLETED AND ACTIVATED.
17. PARTS FROM ABANDONED CITY FACILITIES, INCLUDING METERS AND VALVES, SHALL BE RETURNED TO THE WATER AND SEWER UTILITIES INSPECTOR.
18. WATER AND SEWER UTILITIES WILL PLACE A HOLD ON THE FINAL INSPECTION ON ALL OR PART OF THE DEVELOPMENT UNTIL:
   - AN ACCURATE AND COMPLETE SET OF FIELD AS-BUILT DRAWINGS FOR THE PUBLIC WATER SYSTEM HAS BEEN SUBMITTED TO AND APPROVED BY THE WATER DEPARTMENT.
   - PUNCH LIST ITEMS HAVE BEEN CORRECTED.
   - ANY WATER OR PUBLIC UTILITY EASEMENTS REQUIRED FOR THE PROJECT ARE RECORDED WITH THE COUNTY.
19. CONTRACTOR SHALL SUBMIT AN ACCURATE SET OF RECORD DRAWINGS IN PDF AND AUTOCAD FORMAT TO WATER AND SEWER UTILITIES PRIOR TO FINAL ACCEPTANCE.

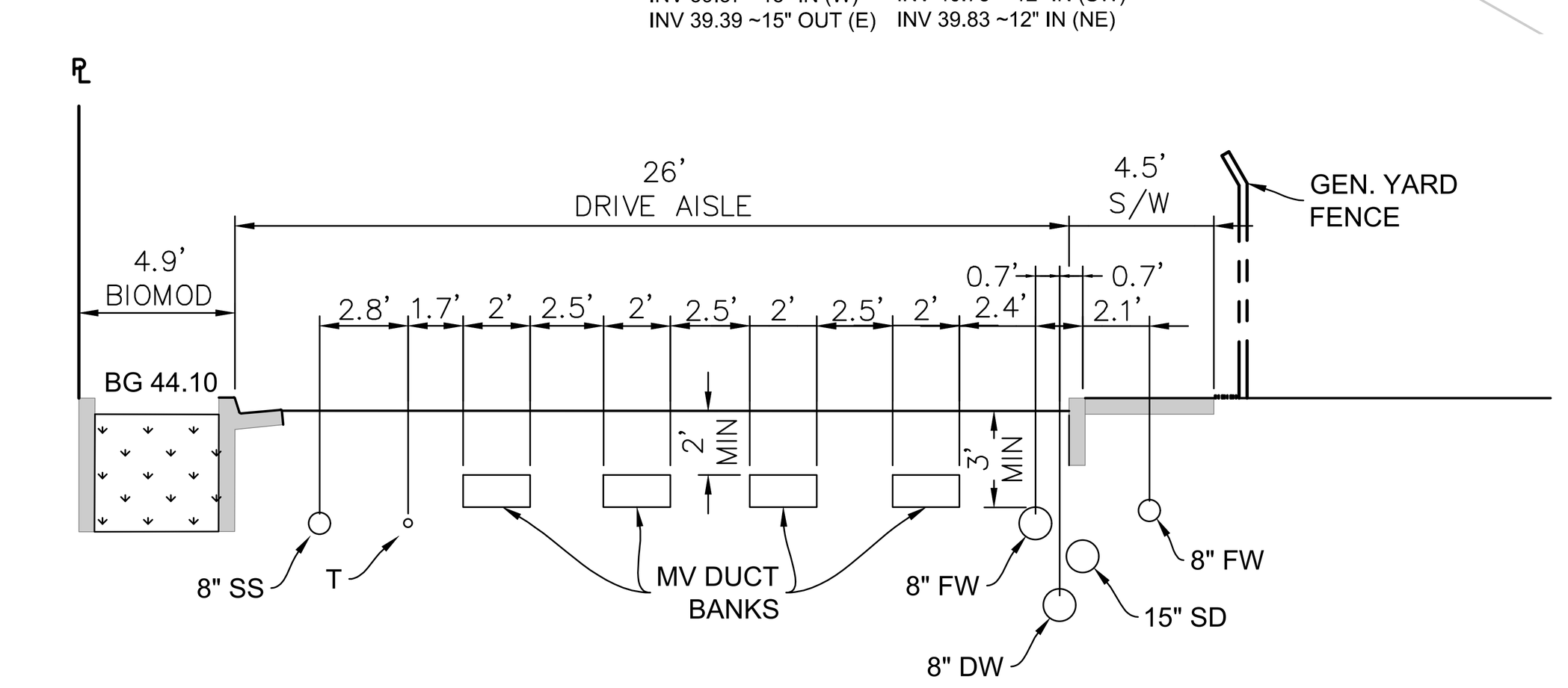



LEGEND

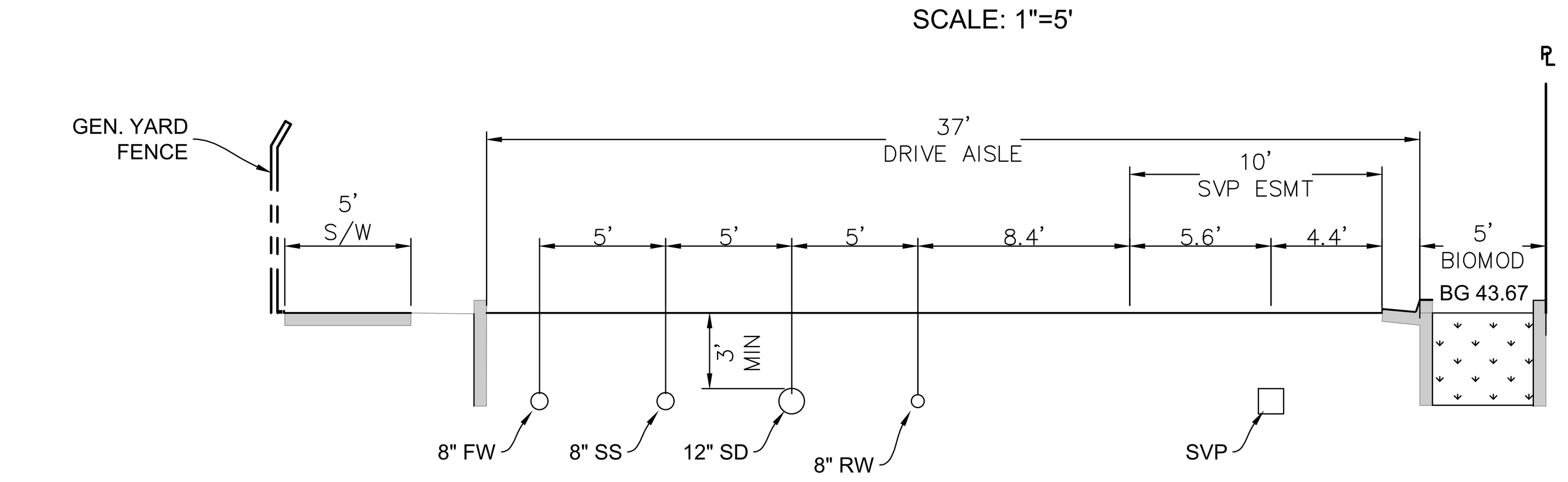
	PROPOSED	EXISTING
PROJECT BOUNDARY		
STORM DRAIN MANHOLE	◉	◎
SANITARY SEWER MANHOLE	●	○
CURB INLET		△
CATCH BASIN/BUBBLER	■	□
FLOW DRAINAGE		
EASEMENT		
CURB AND GUTTER		
SIDEWALK		
VALLEYGUTTER		
CENTERLINE		
SANITARY SEWER	SS	EX-SS
STORM DRAIN LINE	SD	EX-SD
DRIVEWAY		
GRADE BREAK		
CONCRETE DRAINAGE SWALE		
SCREEN WALL		
DOMESTIC WATER (DW)	W	EX-W
GAS		G
TELECOM	T	T(E)
SVP TRENCH		COMCAST(E)
VERIZON-ELECTRICAL		VERIZON(E)
ELECTRICAL UTILITY	E	UT(E)
RECYCLE WATER	RW	RW(E)
FIRE WATER	F	
FIRE HYDRANT		

NOTES

1. EXISTING EASEMENTS ARE LABELED ON SHEET C1.
2. TIE SITE SANITARY SEWER TO EXISTING 12-INCH SEWER LATERAL.
3. VERTICAL CLEARANCES AT ALL NEW UTILITY CROSSINGS SHALL BE A MINIMUM 12 INCHES. IF LESS THAN 12-INCHES USE CITY OF SANTA CLARA STANDARD DETAIL FOR CONCRETE SADDLE (MI-3 OR MI-4).
4. REMOVE 3 EXISTING SVP POWER POLES/GUYWIRES ALONG SOUTH PROPERTY LINE AND REPLACE WITH SELF-SUPPORTING STEEL POLES.



SECTION-B
SCALE: 1"=5'



SECTION-A
SCALE: 1"=5'

NOTE

1. SEE PUBLIC WATER SYSTEM NOTE 5 FOR CLEARANCES FROM PUBLIC WATER SYSTEM NOTES (ABOVE).

OWNER
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ARCHITECT
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MEP ENGINEER
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ISSUED FOR PCC REVIEW

UTILITY PLAN

C4

SCALE: AS NOTED

E

D

C

B

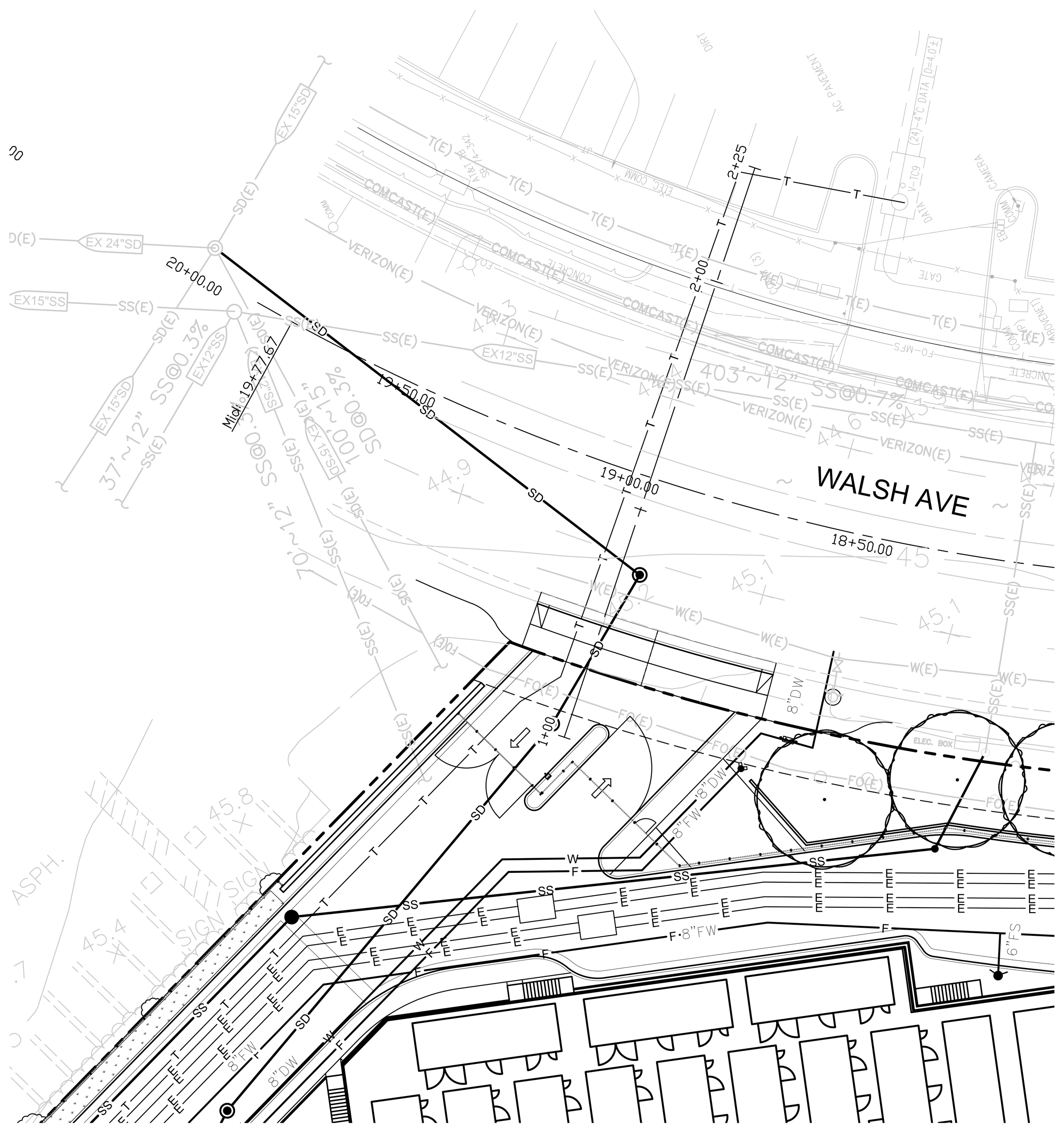
A

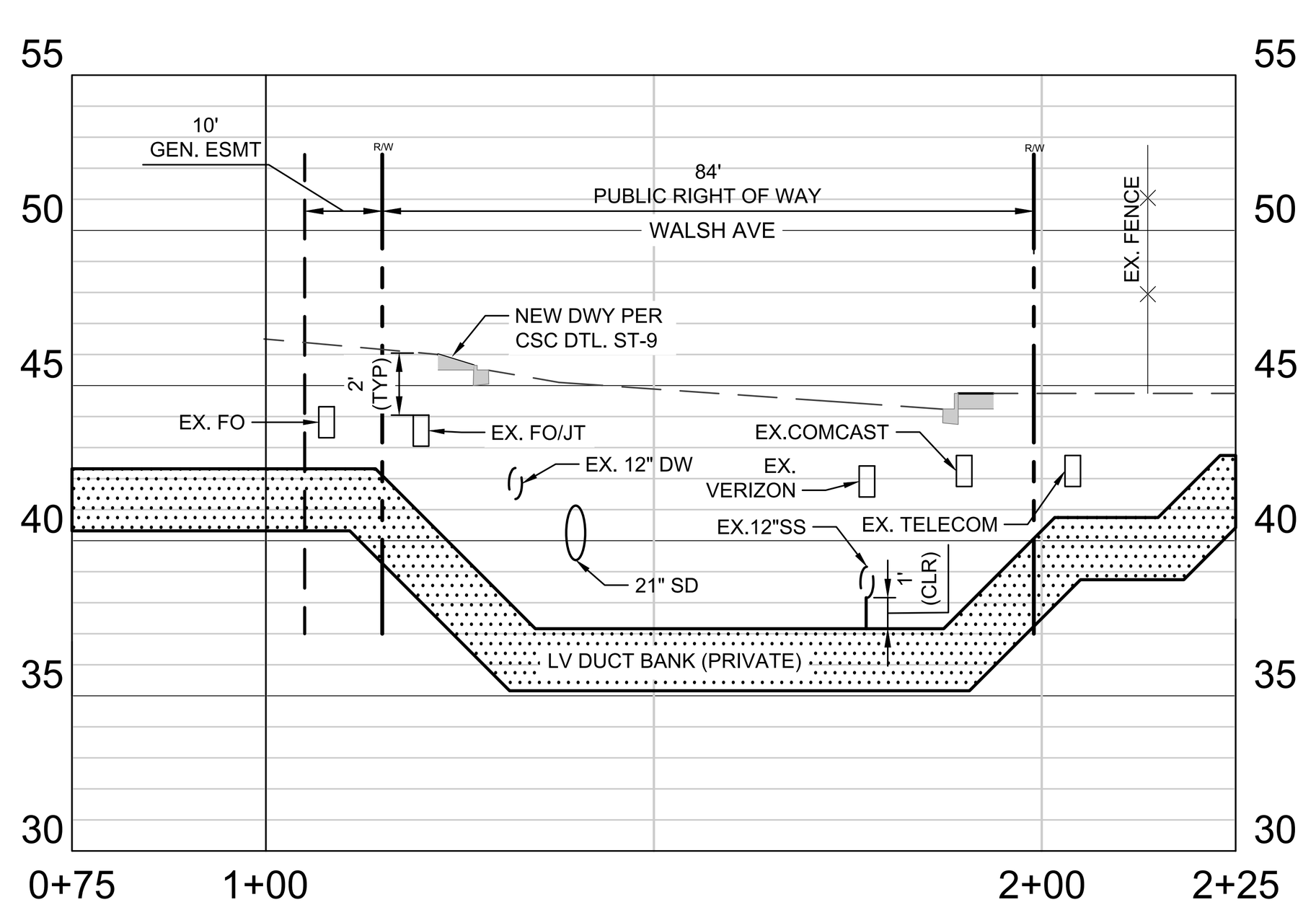
LEGEND

	PROPOSED	EXISTING
PROJECT BOUNDARY		
STORM DRAIN MANHOLE		
CURB INLET		
CATCH BASIN		
FLOW DRAINAGE		
EASEMENT		
CURB AND GUTTER		
SIDEWALK		
CENTERLINE		
SANITARY SEWER	SS	EX-SS
STORM DRAIN LINE	SD	EX-SD
DRIVEWAY		
GRADE BREAK		
CONCRETE DRAINAGE SWALE		
SCREEN WALL		
WATER MAIN	W	EX-W
GAS	G	G
TELECOM		T(E)
COMCAST-ELECTRICAL		COMCAST(E)
VERIZON-ELECTRICAL		VERIZON(E)
ELECTRICAL UTILITY		UT(E)
RECYCLE WATER		RW(E)
FIRE WATER	F	
FIRE WATER HYDRANT		
CURB OPENING (SEE DETAIL 3 SHEET C5A)		

NOTES

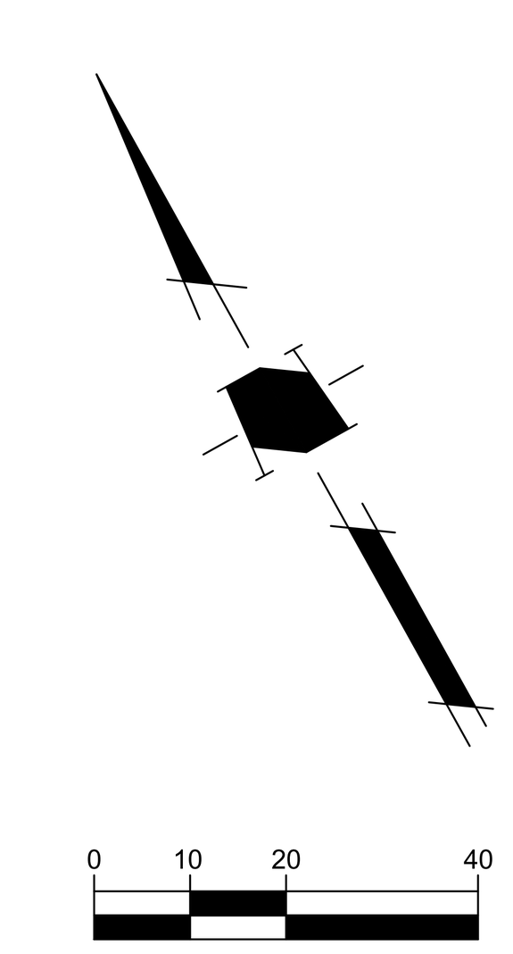
1. EXISTING EASEMENTS ARE LABELED ON SHEET C1.
2. ALL EXISTING UTILITIES SHOWN ARE FROM RECORD DRAWINGS AND SHALL BE POTHOLED TO VERIFIED DEPTH AT ALL CROSSING.





STA 18+96.04

SCALE: HORIZONTAL=1"=20'
VERTICAL=1"=5'



1 INCH = 20 FEET

6 | 5 | 4 | 3 | 2 | 1

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ARCHITECT
SHEEHAN NAGLE HARTRAY ARCHITECTS
SHEEHAN NAGLE HARTRAY ARCHITECTS
130 East Randolph Street, Suite 3100
CHICAGO, IL 60601

MEP ENGINEER
Southland Industries
33225 Western Ave.
Union City, CA 94587
510.477.3300
Southland
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PEOPLES ASSOCIATES
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CIVIL ENGINEER
HMH
1570 Oakland Road
San Jose, CA 95131
(408) 487-2200
HMHca.com

REED ASSOCIATES
LANDSCAPE ARCHITECTURE
477 SOUTH TAAFFE STREET
SUNNYVALE, CALIFORNIA 94086
PHONE: 408•481•9020

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D	Issued for PCC Review	10-25-2021
C	Issued for PCC Review	09-30-2021
2	Issued for 100% DD	08-26-2021
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A	Issued for PCC Review	05-10-2021

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SANTA CLARA, CA 95051
APN : 216-28-112

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LOW VOLTAGE DUCT BANK (PRIVATE)
CROSS SECTIONS

C4.1

SCALE: AS NOTED

TREATMENT CONTROL SUMMARY TABLE

DMA Area	TCM #	Sizing Method	Drainage Area (s.f.)	Impervious Area (s.f.)	Pervious Area (s.f.)	Bioretention Area Required (s.f.)	Bioretention Area Provided (s.f.)	Bioretention Lined or Unlined	Overflow Riser Height (in)	Location	Comments
1	1	Combo Calc	30,944	29,405	1,539	674	674	Unlined	12	Onsite	See Biomod detail on C5A
2	2	4%	100,511	82,092	18,419	3,284	3,412	Unlined	6	Onsite	See detail 4 on C5A
3	3	Combo Calc	76,865	66,580	10,285	2,087	2,087	Lined	6	Onsite	See detail 6 on C5A
4	4	4%	26,071	20,996	5,075	840	1,391	Unlined	6	Onsite	See Biomod detail on C5A
5	5	Combo Calc	24,186	23,137	1,049	568	568	Lined	10	Onsite	See detail 6 on C5A
6	6	Combo Calc	27,340	26,194	1,146	641	641	Lined	10	Onsite	See detail 6 on C5A
7	-	Self-Treating	5,699	707	4,992	-	-	-	-	Onsite	
		Totals:	291,616	249,111	42,505						

*Sizing for Bioretention Area Required calculated using the 4% Method (Impervious Area x 0.04)
**Per Chapter 2.3 of the C3 Stormwater Handbook Roadway projects that add new sidewalk along an exisiting roadway are exempt from Provision C.3.c of the Municipal Stormwater

LEGEND

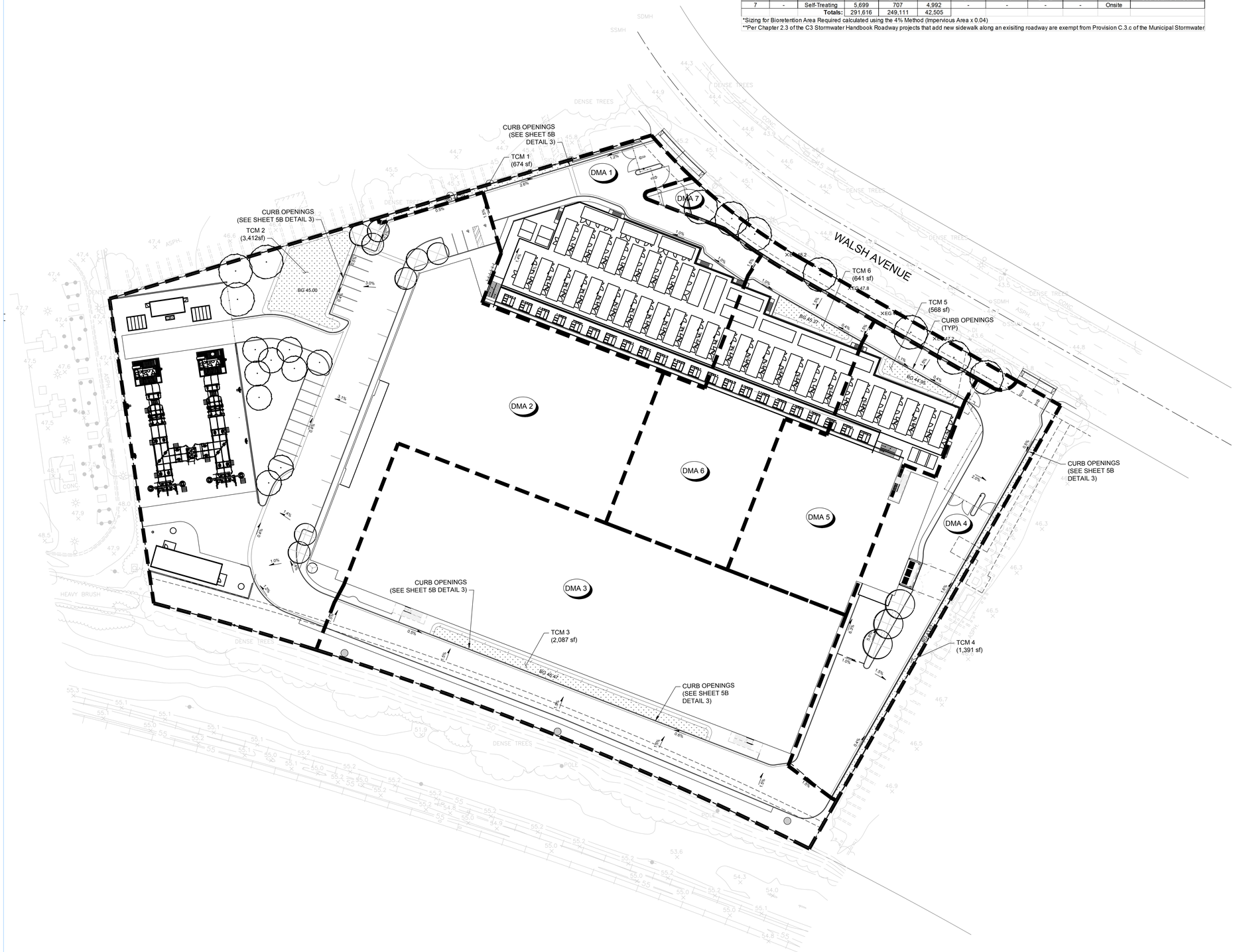
LID TREATMENT DRAINAGE AREA (SEE TCM SUMMARY TABLE THIS SHEET AND SIZING CALCULATIONS ON SHEET 5B) — DMA#

BIORETENTION AREA

COBBLES

NOTES

1. EXISTING EASEMENTS ARE LABELED ON SHEET C1.



0 15 30 60

1 INCH = 30 FEET

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ARCHITECT
SHEEHAN NAGLE HARTRAY ARCHITECTS
SHEEHAN NAGLE HARTRAY ARCHITECTS
130 East Randolph Street, Suite 3100
CHICAGO, IL 60601

MEP ENGINEER
Southland Industries
Southland
33225 Western Ave.
Union City, CA 94587
510.477.3300

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STORMWATER CONTROL PLAN

C5

SCALE: AS NOTED

OPERATION AND MAINTENANCE INFORMATION:

I. PROPERTY INFORMATION:

I.A. PROPERTY ADDRESS:
2590 WALSH AVENUE
SANTA CLARA, CA 95051

I.B. PROPERTY OWNER:
VANTAGE DATA CENTERS

II. RESPONSIBLE PARTY FOR MAINTENANCE:

II.A. CONTACT:
SIMON CASEY

II.B. PHONE NUMBER OF CONTACT:

II.C. EMAIL:
SCASEY@VANTAGE-DC.COM

II.D. ADDRESS:
2820 NORTHWESTERN PARKWAY
SANTA CLARA, CA 95051

SOURCE CONTROL MEASURES:

1. CONNECT THE FOLLOWING FEATURES TO SANITARY SEWER:
   a. COVERED TRASH/ RECYCLING ENCLOSURES.
   b. COVERED LOADING DOCKS AND MAINTENANCE BAYS.
2. BENEFICIAL LANDSCAPING.
3. USE OF WATER EFFICIENT IRRIGATION SYSTEMS.
4. MAINTENANCE (PAVEMENT SWEEPING, CATCH BASIN CLEANING, GOOD HOUSEKEEPING).
5. STORM DRAIN LABELING.

SITE DESIGN MEASURES:

1. CREATE NEW PERVIOUS AREAS:
   a. LANDSCAPING
2. CLUSTER STRUCTURES/PAVEMENT.
3. PLANT TREES ADJACENT TO AND IN PARKING AREAS AND ADJACENT TO OTHER IMPERVIOUS AREAS.
4. PARKING:
   a. NOT PROVIDED IN EXCESS OF CODE.

PROJECT SITE INFORMATION:

1. SOILS TYPE: VERY STIFF TO HARD CLAY
2. GROUND WATER DEPTH: 10-15 FEET BELOW FINISH SURFACE
3. NAME OF RECEIVING BODY:
4. FLOOD ZONE: ZONE "X"
5. FLOOD ELEVATION (IF APPLICABLE): N/A

BIOTREATMENT SOIL REQUIREMENTS

- BIORETENTION SOIL MIX SHALL MEET THE REQUIREMENTS AS OUTLINED IN APPENDIX C OF THE C.3 STORM WATER HANDBOOK AND SHALL BE A MIXTURE OF FINE SAND AND COMPOST MEASURED ON A VOLUME BASIS OF 60-70% SAND AND 30-40% COMPOST. CONTRACTOR TO REFER TO APPENDIX C FOR SAND AND COMPOST MATERIAL SPECIFICATIONS. CONTRACTOR MAY OBTAIN A COPY OF THE C3 HANDBOOK AT : HTTP://WWW.SANJOSECA.GOV/INDEX.ASPX?NID=1761
- PRIOR TO ORDERING THE BIOTREATMENT SOIL MIX OR DELIVERY TO THE PROJECT SITE, CONTRACTOR SHALL PROVIDE A BIOTREATMENT SOIL MIX SPECIFICATION CHECKLIST, COMPLETED BY THE SOIL MIX SUPPLIER AND CERTIFIED TESTING LAB.

BIORETENTION & FLOW-THROUGH PLANTER NOTES:

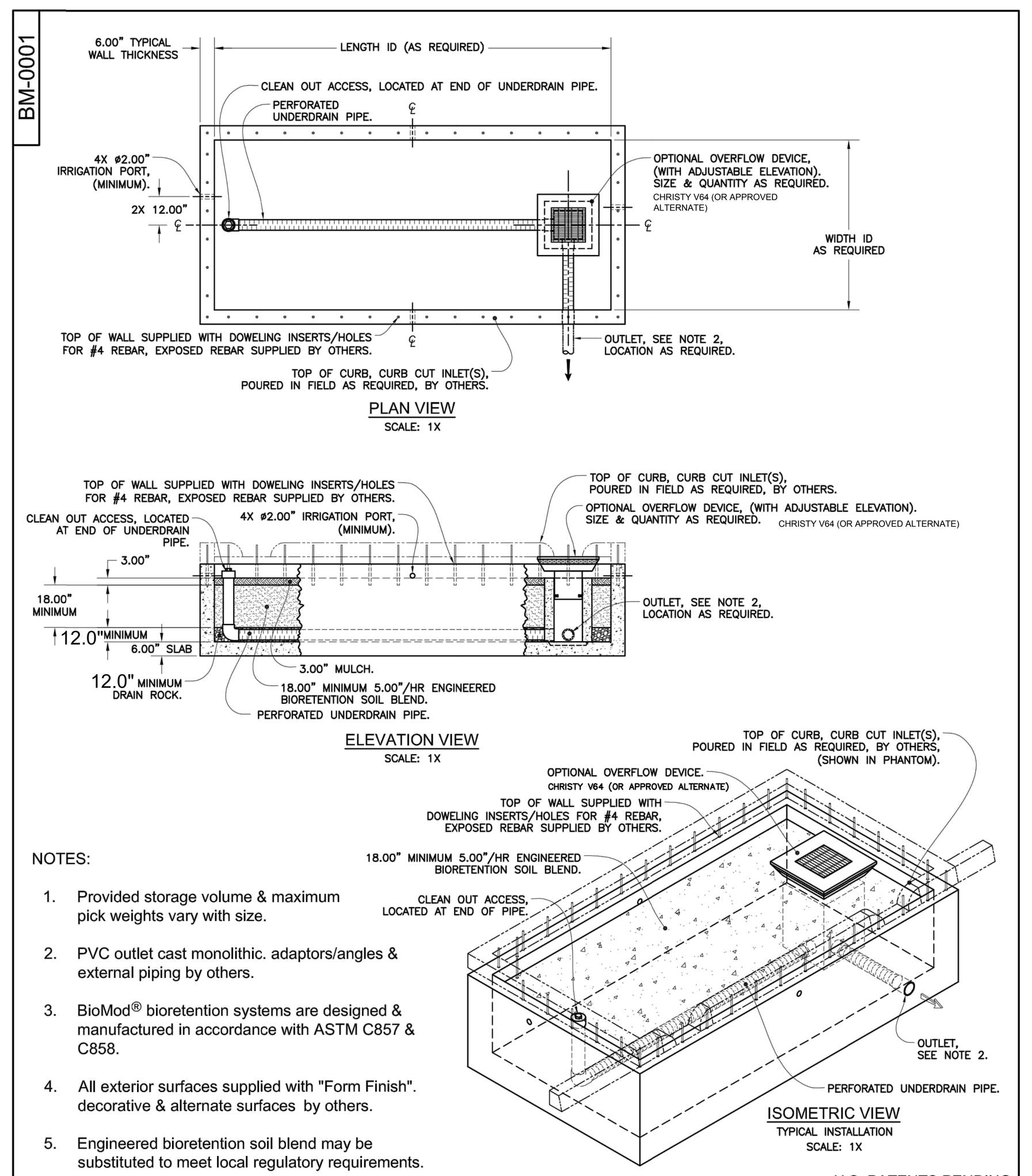
1. SEE GRADING PLAN FOR BASIN FOOTPRINT AND DESIGN ELEVATIONS.
2. PLACE 3 INCHES OF COMPOSTED, NON-FLOATABLE MULCH IN AREAS BETWEEN STORMWATER PLANTINGS.
3. SEE LANDSCAPE PLAN FOR MULCH, PLANT MATERIALS AND IRRIGATION REQUIREMENTS
4. CURB CUTS SHALL BE A MINIMUM 18" WIDE AND SPACED AT MAXIMUM 10' O.C. INTERVALS AND SLOPED TO DIRECT STORMWATER TO DRAIN INTO THE BASIN. CURB CUTS SHALL ALSO NOT BE PLACED INLINE WITH OVERFLOW CATCH BASIN. SEE GRADING PLAN FOR MORE DETAIL ON LOCATIONS OF CURB CUTS.
5. A MINIMUM 0.2' DROP BETWEEN STORM WATER ENTRY POINT (I.E. CURB OPENING, FLUSH CURB, ETC.) AND ADJACENT LANDSCAPE FINISHED GRADE.
6. DO NOT COMPACT NATIVE SOIL / SUBGRADE AT BOTTOM OF BASIN. LOOSEN SOIL TO 12" DEPTH.

PERVIOUS AND IMPERVIOUS SURFACES COMPARISON TABLE

a. Total Site Area: 6.69 acre	b. Total Site Area Disturbed: 6.69 acre (including clearing, grading, or excavating)				
Impervious Area[1] (IA)	Pre-project (Existing) IA (ft²)	Existing IA Retained As-is (ft²) (x)	Existing IA Replaced with IA (ft²) (y)	New IA Created (ft²) (z)	Total Post-Project IA (ft²) (x+y+z)
Roof	115,000	0	115,000	7,737	122,737
Surface Parking	57,960	0	5,355	0	5,355
Sidewalks, streets, etc.	78,046	0	78,046	42,973	121,019
c. Total Impervious Area	251,006	0	198,401	50,710	249,111
d. Total new and replaced impervious area			249,111		
Pervious Area (PA)	Pre-project (Existing) PA (ft²)				Total Post-Project PA (ft²)
Landscaping[2]	40,610				42,505
Pervious Paving	0				0
Other (e.g. Green Roof)	0				0
e. Total Pervious Area	40,610				42,505
f. Total Area (IA+PA)	291,616				291,616
g. Percent Replacement of IA in Redevelopment Projects (Total Existing IA Replaced with IA ÷ Total Existing IA) x 100% = 79.04 %					

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.



BM-0001
6.00" TYPICAL WALL THICKNESS
LENGTH ID (AS REQUIRED)
CLEAN OUT ACCESS, LOCATED AT END OF UNDERDRAIN PIPE.
PERFORATED UNDERDRAIN PIPE.
4X ø2.00" IRRIGATION PORT, (MINIMUM).
2X 12.00"
OPTIONAL OVERFLOW DEVICE, (WITH ADJUSTABLE ELEVATION). SIZE & QUANTITY AS REQUIRED.
CHRISTY V64 (OR APPROVED ALTERNATE)
WIDTH ID AS REQUIRED
TOP OF WALL SUPPLIED WITH DOWELING INSERTS/HOLES FOR #4 REBAR, EXPOSED REBAR SUPPLIED BY OTHERS.
OUTLET, SEE NOTE 2, LOCATION AS REQUIRED.
TOP OF CURB, CURB CUT INLET(S), POURED IN FIELD AS REQUIRED, BY OTHERS.
PLAN VIEW
SCALE: 1X
CLEAN OUT ACCESS, LOCATED AT END OF UNDERDRAIN PIPE.
3.00"
18.00" MINIMUM
12.0" MINIMUM
6.00" SLAB
12.0" MINIMUM DRAIN ROCK.
3.00" MULCH.
18.00" MINIMUM 5.00"/HR ENGINEERED BIORETENTION SOIL BLEND.
PERFORATED UNDERDRAIN PIPE.
ELEVATION VIEW
SCALE: 1X
TOP OF CURB, CURB CUT INLET(S), POURED IN FIELD AS REQUIRED, BY OTHERS, (SHOWN IN PHANTOM).
OPTIONAL OVERFLOW DEVICE. CHRISTY V64 (OR APPROVED ALTERNATE)
OUTLET, SEE NOTE 2.
PERFORATED UNDERDRAIN PIPE.
ISOMETRIC VIEW
TYPICAL INSTALLATION
SCALE: 1X

NOTES:

1. Provided storage volume & maximum pick weights vary with size.
2. PVC outlet cast monolithic. adaptors/angles & external piping by others.
3. BioMod® bioretention systems are designed & manufactured in accordance with ASTM C857 & C858.
4. All exterior surfaces supplied with "Form Finish". decorative & alternate surfaces by others.
5. Engineered bioretention soil blend may be substituted to meet local regulatory requirements.

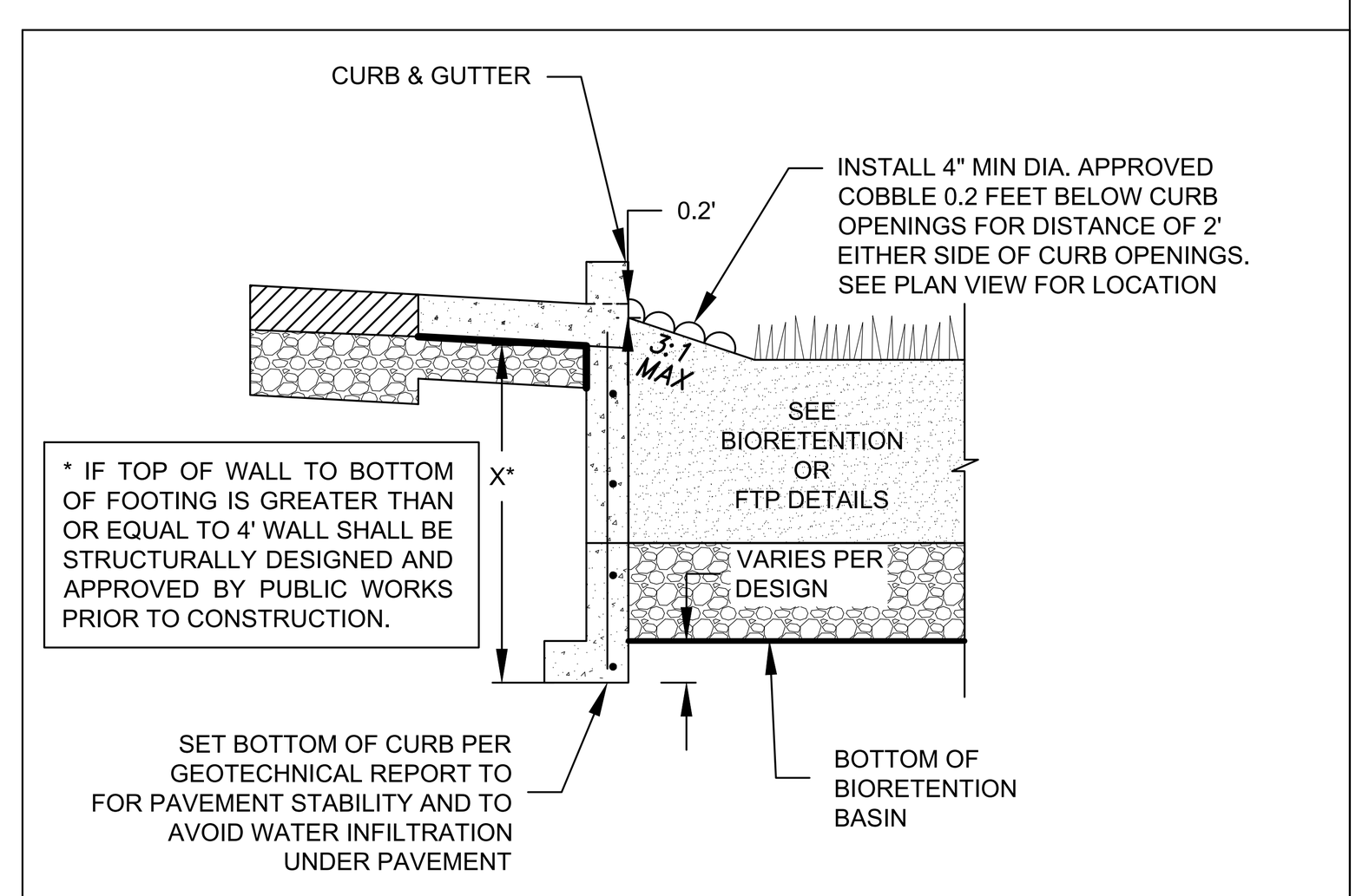
U.S. PATENTS PENDING.

Media Filtration

BioMod®
Modular Bioretention System for Detention Applications

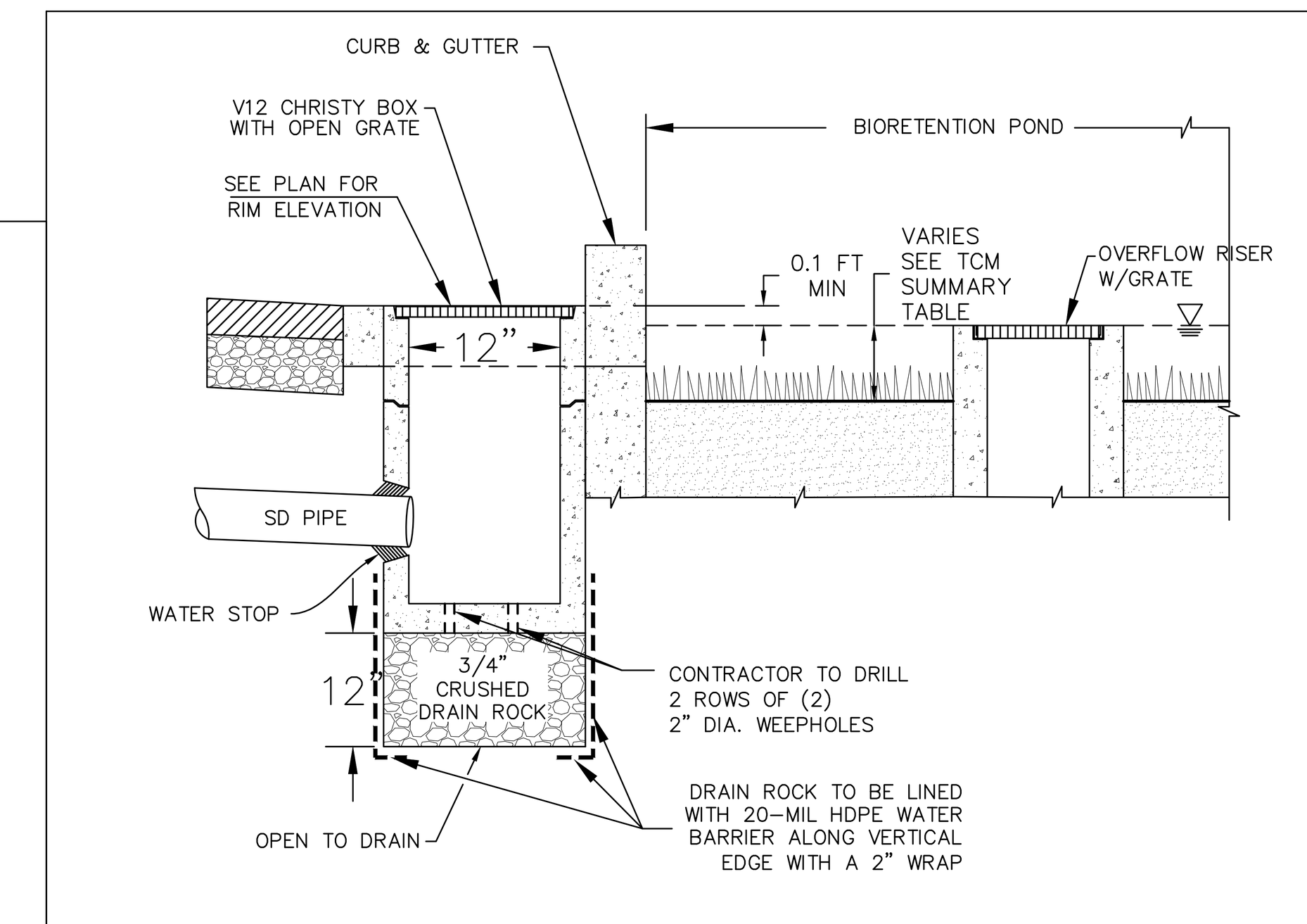
Oldcastle® Stormwater Solutions
7921 Southpark Plaza, Suite 200 | Littleton, CO | 80120 | Ph: 800.579.8819 | oldcastlestormwater.com

DRAWING NO.	REV	ECO	DATE	
BM-0001	NR	ECO-0094 NEW 1/7/15	JPR 1/7/15	SHEET 1 OF 1



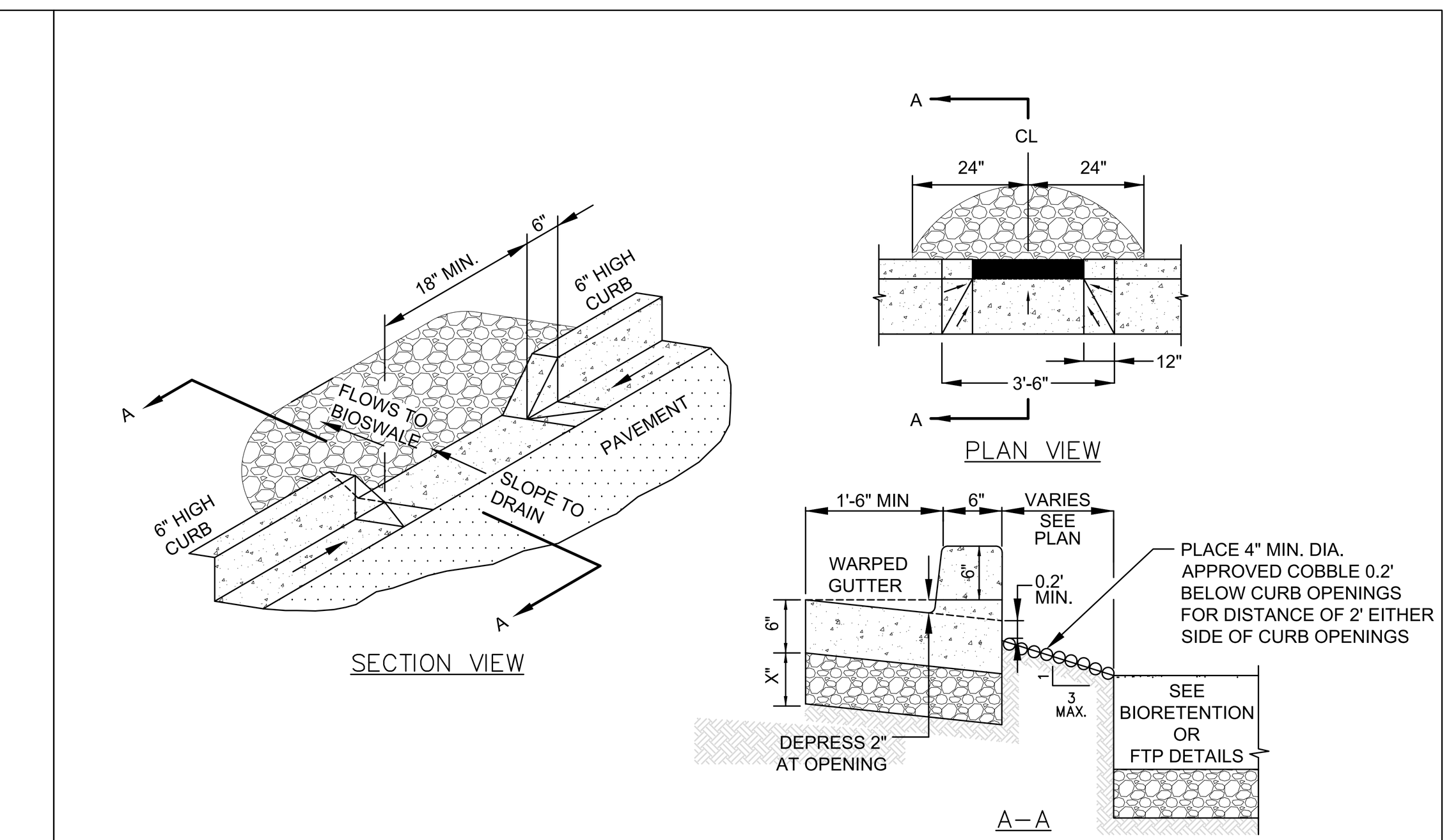
CURB & GUTTER
0.2'
INSTALL 4" MIN DIA. APPROVED COBBLE 0.2 FEET BELOW CURB OPENINGS FOR DISTANCE OF 2' EITHER SIDE OF CURB OPENINGS. SEE PLAN VIEW FOR LOCATION
3:1 MAX
* IF TOP OF WALL TO BOTTOM OF FOOTING IS GREATER THAN OR EQUAL TO 4' WALL SHALL BE STRUCTURALLY DESIGNED AND APPROVED BY PUBLIC WORKS PRIOR TO CONSTRUCTION.
X*
SEE BIORETENTION OR FTP DETAILS
VARIES PER DESIGN
SET BOTTOM OF CURB PER GEOTECHNICAL REPORT TO FOR PAVEMENT STABILITY AND TO AVOID WATER INFILTRATION UNDER PAVEMENT
BOTTOM OF BIORETENTION BASIN

1 CURB ADJACENT TO BIORETENTION N.T.S.



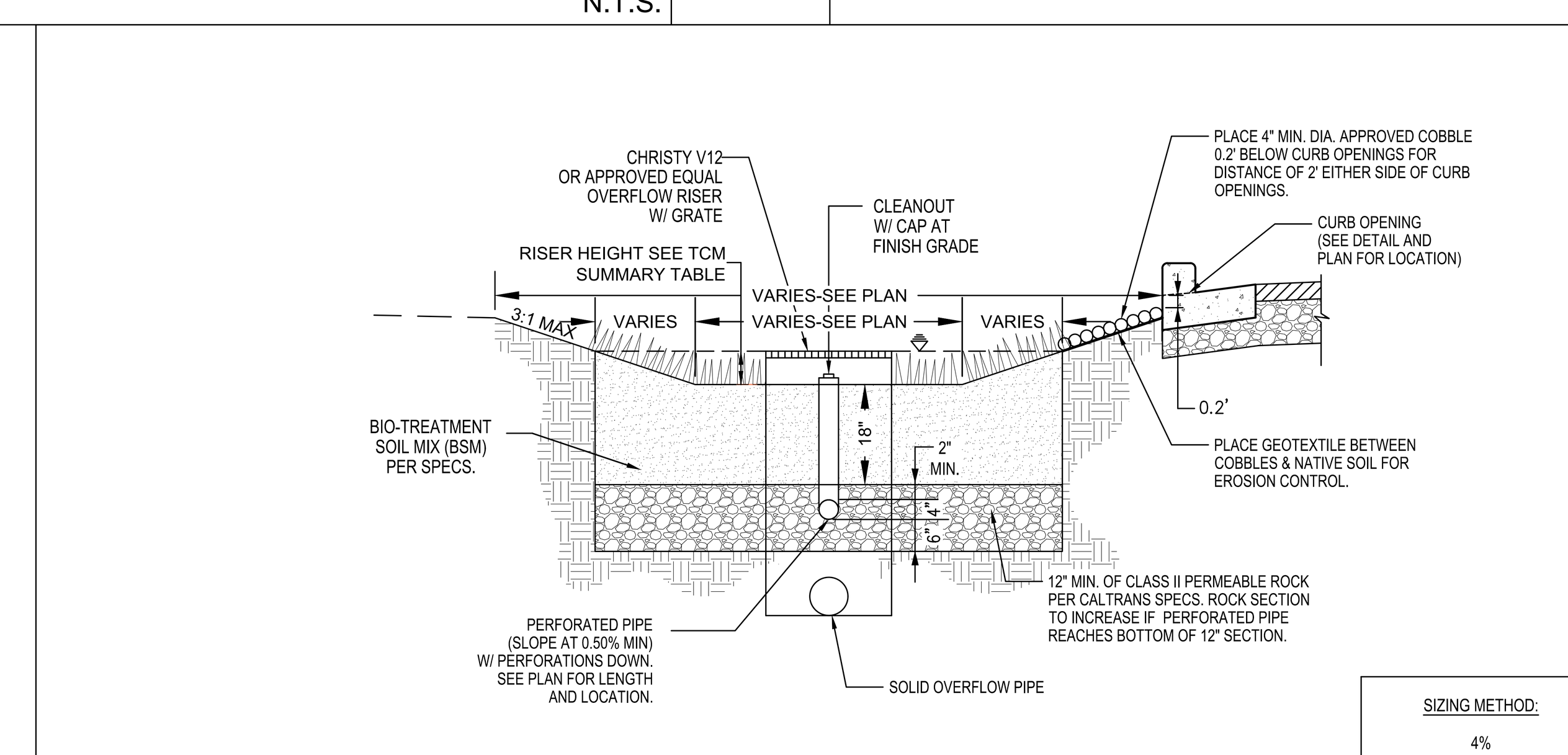
CURB & GUTTER
V12 CHRISTY BOX WITH OPEN GRATE
SEE PLAN FOR RIM ELEVATION
BIORETENTION POND
0.1 FT MIN
VARIES SEE TCM SUMMARY TABLE
OVERFLOW RISER W/GRATE
12"
SD PIPE
WATER STOP
12"
3/4" CRUSHED DRAIN ROCK
CONTRACTOR TO DRILL 2 ROWS OF (2) 2" DIA. WEEPHOLES
OPEN TO DRAIN
DRAIN ROCK TO BE LINED WITH 20-MIL HDPE WATER BARRIER ALONG VERTICAL EDGE WITH A 2" WRAP

2 BUBBLER BOX DETAIL N.T.S.



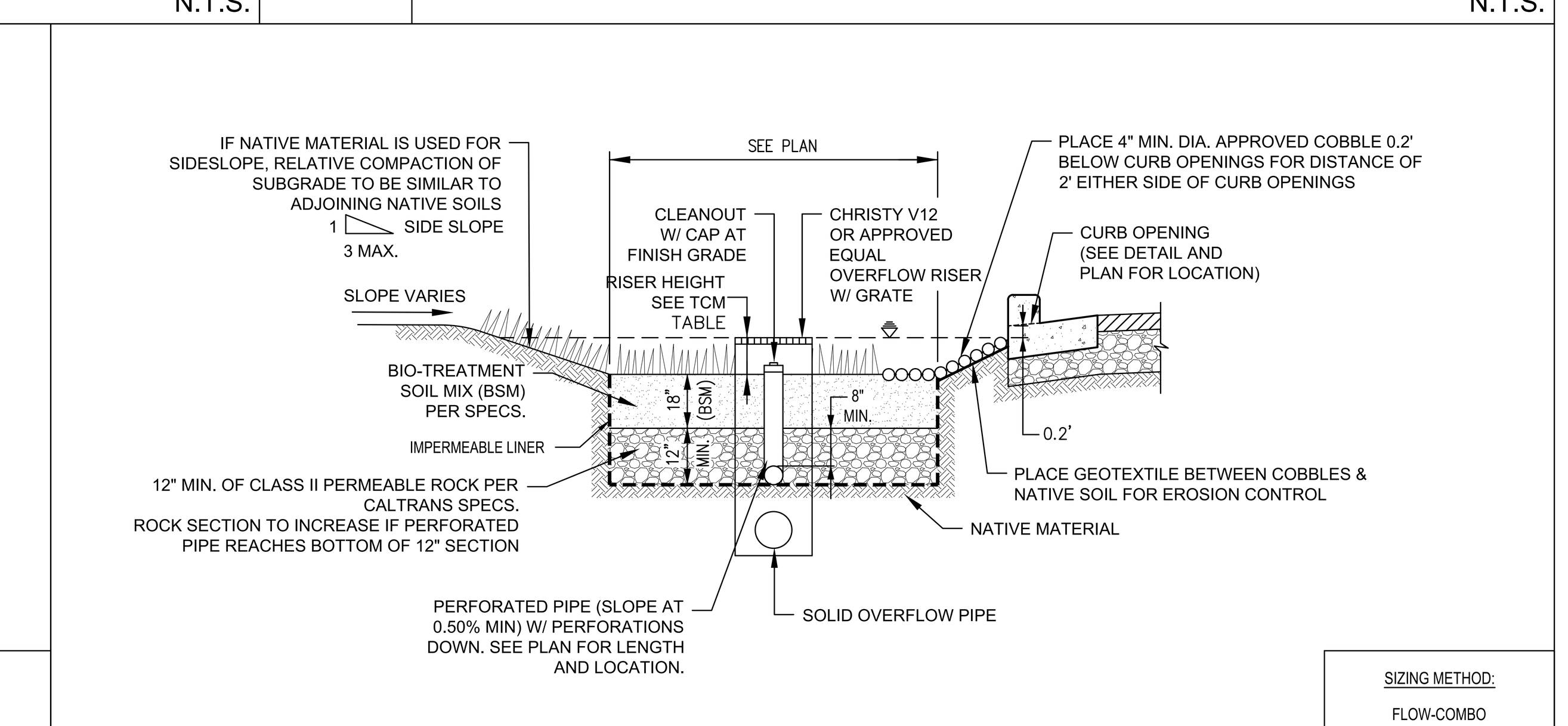
18" MIN.
6"
6" HIGH CURB
FLOWS TO BIOSWALE
SLOPE TO DRAIN
PAVEMENT
6" HIGH CURB
SECTION VIEW
CL
24"
24"
3'-6"
12"
PLAN VIEW
1'-6" MIN
6"
VARIES SEE PLAN
WARPED GUTTER
0.2' MIN.
PLACE 4" MIN. DIA. APPROVED COBBLE 0.2' BELOW CURB OPENINGS FOR DISTANCE OF 2' EITHER SIDE OF CURB OPENINGS
3 MAX.
SEE BIORETENTION OR FTP DETAILS
DEPRESS 2" AT OPENING
A—A

3 CURB OPENING N.T.S.



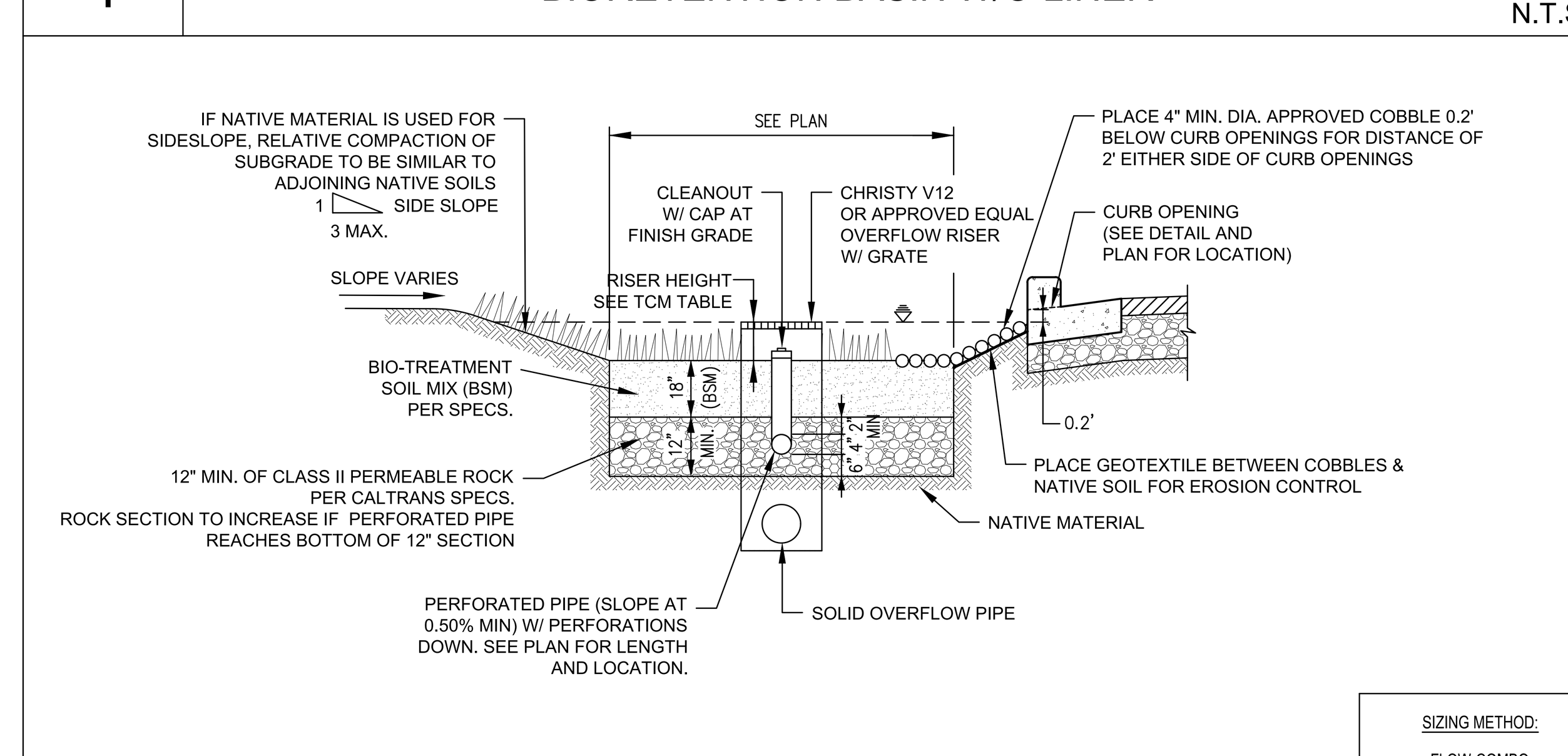
CHRISTY V12 OR APPROVED EQUAL OVERFLOW RISER W/ GRATE
CLEANOUT W/ CAP AT FINISH GRADE
RISER HEIGHT SEE TCM SUMMARY TABLE
PLACE 4" MIN. DIA. APPROVED COBBLE 0.2' BELOW CURB OPENINGS FOR DISTANCE OF 2' EITHER SIDE OF CURB OPENINGS.
CURB OPENING (SEE DETAIL AND PLAN FOR LOCATION)
VARIES-SEE PLAN
3:1 MAX
VARIES
VARIES
BIO-TREATMENT SOIL MIX (BSM) PER SPECS.
18"
2" MIN.
0.2'
PLACE GEOTEXTILE BETWEEN COBBLES & NATIVE SOIL FOR EROSION CONTROL.
12" MIN. OF CLASS II PERMEABLE ROCK PER CALTRANS SPECS. ROCK SECTION TO INCREASE IF PERFORATED PIPE REACHES BOTTOM OF 12" SECTION.
PERFORATED PIPE (SLOPE AT 0.50% MIN) W/ PERFORATIONS DOWN. SEE PLAN FOR LENGTH AND LOCATION.
SOLID OVERFLOW PIPE
SIZING METHOD:
4%

4 BIORETENTION BASIN W/O LINER N.T.S.



PLACE 4" MIN. DIA. APPROVED COBBLE 0.2' BELOW CURB OPENINGS FOR DISTANCE OF 2' EITHER SIDE OF CURB OPENINGS
CLEANOUT W/ CAP AT FINISH GRADE
CHRISTY V12 OR APPROVED EQUAL OVERFLOW RISER W/ GRATE
CURB OPENING (SEE DETAIL AND PLAN FOR LOCATION)
SLOPE VARIES
RISER HEIGHT SEE TCM TABLE
BIO-TREATMENT SOIL MIX (BSM) PER SPECS.
IMPERMEABLE LINER
8" MIN.
0.2'
12" MIN. OF CLASS II PERMEABLE ROCK PER CALTRANS SPECS. ROCK SECTION TO INCREASE IF PERFORATED PIPE REACHES BOTTOM OF 12" SECTION
PLACE GEOTEXTILE BETWEEN COBBLES & NATIVE SOIL FOR EROSION CONTROL
NATIVE MATERIAL
PERFORATED PIPE (SLOPE AT 0.50% MIN) W/ PERFORATIONS DOWN. SEE PLAN FOR LENGTH AND LOCATION.
SOLID OVERFLOW PIPE
SIZING METHOD:
FLOW-COMBO

5 BIORETENTION BASIN W/ LINER N.T.S.



IF NATIVE MATERIAL IS USED FOR SIDESLOPE, RELATIVE COMPACTION OF SUBGRADE TO BE SIMILAR TO ADJOINING NATIVE SOILS
PLACE 4" MIN. DIA. APPROVED COBBLE 0.2' BELOW CURB OPENINGS FOR DISTANCE OF 2' EITHER SIDE OF CURB OPENINGS
CLEANOUT W/ CAP AT FINISH GRADE
CHRISTY V12 OR APPROVED EQUAL OVERFLOW RISER W/ GRATE
CURB OPENING (SEE DETAIL AND PLAN FOR LOCATION)
SLOPE VARIES
RISER HEIGHT SEE TCM TABLE
BIO-TREATMENT SOIL MIX (BSM) PER SPECS.
0.2'
12" MIN. OF CLASS II PERMEABLE ROCK PER CALTRANS SPECS. ROCK SECTION TO INCREASE IF PERFORATED PIPE REACHES BOTTOM OF 12" SECTION
PLACE GEOTEXTILE BETWEEN COBBLES & NATIVE SOIL FOR EROSION CONTROL
NATIVE MATERIAL
PERFORATED PIPE (SLOPE AT 0.50% MIN) W/ PERFORATIONS DOWN. SEE PLAN FOR LENGTH AND LOCATION.
SOLID OVERFLOW PIPE
SIZING METHOD:
FLOW-COMBO

6 BIORETENTION BASIN W/O LINER N.T.S.

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ARCHITECT
SHEEHAN NAGLE HARTRAY ARCHITECTS
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130 East Randolph Street, Suite 3100
CHICAGO, IL 60601

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SUNNYVALE, CALIFORNIA 94086
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STORMWATER CONTROL PLAN
NOTES & DETAILS

C5A

SCALE: AS NOTED

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. REPLACE BIOTREATMENT SOIL AND MULCH, IF NEEDED. CHECK FOR STANDING WATER, STRUCTURAL FAILURE AND CLOGGED OVERFLOWS. REMOVE TRASH AND DEBRIS. REPLACE DEAD PLANTS.	ANNUALLY, BEFORE THE WET SEASON BEGINS
11	INSPECT BIORETENTION AREA USING THE ATTACHED INSPECTION CHECKLIST.	ANNUALLY, BEFORE THE WET SEASON

SIZING FOR VOLUME BASED TREATMENT

DMA # 1
A= 30944 s.f.
Impervious Area = 29405 s.f. **% Imperviousness= 95.03%**

MAPsite = 14 Correction Factor= **1.0072**
MAPgage = 13.9
Clay (D): **X** Sandy Clay (D): Clay Loam (D):
Silt Loam/Loam (B): Not Applicable (100% Impervious):

Are the soils outside the building footprint not graded/compacted? **NO** Yes/No

If no, and the soil will be compacted during site preperation and grading, the soils infiltration ability will be decreased. Modify your answer to a soil with a lower inflatraion rate (eg. Silt Loam to Clay)
Modified Soil Type: CLAY

S= 1.00%
UBS Volume for 1% Slope (UBS1%) = 0.56158215 inches (Use Figure B-2)
UBS Volume for 15% Slope (UBS15%) = 0.5850795 inches (Use Figure B-5)

UBS Volume for X% Slope (UBSX%) = 0.56158215 inches (Corrected Slope for the site)
Adjusted UBS = Correction Factor (Step 2) x UBSx% (Step 5)

Adjusted UBS = 0.5656223 inches
Design Volume = Adjusted UBS (Step 6) x Drainage Area (Step 1) x 1ft/12inch

Design Volume = 1,458.55 ft^3

COMBO FLOW & VOLUME BIORETENTION CALCULATION

Total Drainage Area = 30,944 sq. ft
Impervious Area = 29,405 sq. ft
Pervious Area = 1,539 sq. ft
Equivalent Impervious Area = 154 sq. ft Total Equivalent Impervious = **29,559** sq. ft
Rainfall intensity = 0.2 in/hr
Duration = Adjusted UBS (Step 6) / Rainfall Intensity
Duration = 2.8281115 hrs

Estimate the Surface Area = 674 sq. ft (Typically start with Total Impervious x 0.03)
Volume of Treated Runoff = 794.22799 cu. ft
Volume in Ponding Area = 664.3234 cu. ft
Depth of Ponding = 0.985643 ft Depth of Ponding = 11.8 inches (Round up)

If Depth of Ponding is less than 6" the design can be optimized with a smaller surface area. (repeat)
If Depth of Ponding is greater than 12" a larger surface area will be required (repeat)
If Depth of Ponding is between 6" to 12" this is the range allowable for bioretention of flow through planters.

SIZING FOR VOLUME BASED TREATMENT

DMA # 3
A= 76865 s.f.
Impervious Area = 66580 s.f. **% Imperviousness= 86.62%**

MAPsite = 14 Correction Factor= **1.0072**
MAPgage = 13.9
Clay (D): **X** Sandy Clay (D): Clay Loam (D):
Silt Loam/Loam (B): Not Applicable (100% Impervious):

Are the soils outside the building footprint not graded/compacted? **NO** Yes/No

If no, and the soil will be compacted during site preperation and grading, the soils infiltration ability will be decreased. Modify your answer to a soil with a lower inflatraion rate (eg. Silt Loam to Clay)
Modified Soil Type: CLAY

S= 1.00%
UBS Volume for 1% Slope (UBS1%) = 0.53552013 inches (Use Figure B-2)
UBS Volume for 15% Slope (UBS15%) = 0.55985819 inches (Use Figure B-5)

UBS Volume for X% Slope (UBSX%) = 0.53552013 inches (Corrected Slope for the site)
Adjusted UBS = Correction Factor (Step 2) x UBSx% (Step 5)

Adjusted UBS = 0.5393728 inches
Design Volume = Adjusted UBS (Step 6) x Drainage Area (Step 1) x 1ft/12inch

Design Volume = 3,454.91 ft^3

COMBO FLOW & VOLUME BIORETENTION CALCULATION

Total Drainage Area = 76,865 sq. ft
Impervious Area = 66,580 sq. ft
Pervious Area = 10,285 sq. ft
Equivalent Impervious Area = 1,029 sq. ft Total Equivalent Impervious = **67,609** sq. ft
Rainfall intensity = 0.2 in/hr
Duration = Adjusted UBS (Step 6) / Rainfall Intensity
Duration = 2.696864 hrs

Estimate the Surface Area = 2087 sq. ft (Typically start with Total Impervious x 0.03)
Volume of Treated Runoff = 2345.148 cu. ft
Volume in Ponding Area = 1109.7595 cu. ft
Depth of Ponding = 0.5317487 ft Depth of Ponding = 6.4 inches (Round up)

If Depth of Ponding is less than 6" the design can be optimized with a smaller surface area. (repeat)
If Depth of Ponding is greater than 12" a larger surface area will be required (repeat)
If Depth of Ponding is between 6" to 12" this is the range allowable for bioretention of flow through planters.

SIZING FOR VOLUME BASED TREATMENT

DMA # 5
A= 24186 s.f.
Impervious Area = 23137 s.f. **% Imperviousness= 95.66%**

MAPsite = 14 Correction Factor= **1.0072**
MAPgage = 13.9
Clay (D): **X** Sandy Clay (D): Clay Loam (D):
Silt Loam/Loam (B): Not Applicable (100% Impervious):

Are the soils outside the building footprint not graded/compacted? **NO** Yes/No

If no, and the soil will be compacted during site preperation and grading, the soils infiltration ability will be decreased. Modify your answer to a soil with a lower inflatraion rate (eg. Silt Loam to Clay)
Modified Soil Type: CLAY

S= 1.00%
UBS Volume for 1% Slope (UBS1%) = 0.56355462 inches (Use Figure B-2)
UBS Volume for 15% Slope (UBS15%) = 0.58698834 inches (Use Figure B-5)

UBS Volume for X% Slope (UBSX%) = 0.56355462 inches (Corrected Slope for the site)
Adjusted UBS = Correction Factor (Step 2) x UBSx% (Step 5)

Adjusted UBS = 0.567609 inches
Design Volume = Adjusted UBS (Step 6) x Drainage Area (Step 1) x 1ft/12inch

Design Volume = 1,144.02 ft^3

COMBO FLOW & VOLUME BIORETENTION CALCULATION

Total Drainage Area = 24,186 sq. ft
Impervious Area = 23,137 sq. ft
Pervious Area = 1,049 sq. ft
Equivalent Impervious Area = 105 sq. ft Total Equivalent Impervious = **23,242** sq. ft
Rainfall intensity = 0.2 in/hr
Duration = Adjusted UBS (Step 6) / Rainfall Intensity
Duration = 2.8380448 hrs

Estimate the Surface Area = 568 sq. ft (Typically start with Total Impervious x 0.03)
Volume of Treated Runoff = 671.67061 cu. ft
Volume in Ponding Area = 472.34526 cu. ft
Depth of Ponding = 0.8315938 ft Depth of Ponding = 10 inches (Round up)

If Depth of Ponding is less than 6" the design can be optimized with a smaller surface area. (repeat)
If Depth of Ponding is greater than 12" a larger surface area will be required (repeat)
If Depth of Ponding is between 6" to 12" this is the range allowable for bioretention of flow through planters.

SIZING FOR VOLUME BASED TREATMENT

DMA # 6
A= 27340 s.f.
Impervious Area = 26203 s.f. **% Imperviousness= 95.84%**

MAPsite = 14 Correction Factor= **1.0072**
MAPgage = 13.9
Clay (D): **X** Sandy Clay (D): Clay Loam (D):
Silt Loam/Loam (B): Not Applicable (100% Impervious):

Are the soils outside the building footprint not graded/compacted? **NO** Yes/No

If no, and the soil will be compacted during site preperation and grading, the soils infiltration ability will be decreased. Modify your answer to a soil with a lower inflatraion rate (eg. Silt Loam to Clay)
Modified Soil Type: CLAY

S= 1.00%
UBS Volume for 1% Slope (UBS1%) = 0.5641079 inches (Use Figure B-2)
UBS Volume for 15% Slope (UBS15%) = 0.58752377 inches (Use Figure B-5)

UBS Volume for X% Slope (UBSX%) = 0.5641079 inches (Corrected Slope for the site)
Adjusted UBS = Correction Factor (Step 2) x UBSx% (Step 5)

Adjusted UBS = 0.5681662 inches
Design Volume = Adjusted UBS (Step 6) x Drainage Area (Step 1) x 1ft/12inch

Design Volume = 1,294.47 ft^3

COMBO FLOW & VOLUME BIORETENTION CALCULATION

Total Drainage Area = 27,340 sq. ft
Impervious Area = 26,203 sq. ft
Pervious Area = 1,137 sq. ft
Equivalent Impervious Area = 114 sq. ft Total Equivalent Impervious = **26,317** sq. ft
Rainfall intensity = 0.2 in/hr
Duration = Adjusted UBS (Step 6) / Rainfall Intensity
Duration = 2.8408312 hrs

Estimate the Surface Area = 641 sq. ft (Typically start with Total Impervious x 0.03)
Volume of Treated Runoff = 758.73865 cu. ft
Volume in Ponding Area = 535.73341 cu. ft
Depth of Ponding = 0.8357775 ft Depth of Ponding = 10 inches (Round up)

If Depth of Ponding is less than 6" the design can be optimized with a smaller surface area. (repeat)
If Depth of Ponding is greater than 12" a larger surface area will be required (repeat)
If Depth of Ponding is between 6" to 12" this is the range allowable for bioretention of flow through planters.

OWNER
VANTAGE DATA CENTERS

ARCHITECT
SHEEHAN NAGLE HARTRAY ARCHITECTS
SHEEHAN NAGLE HARTRAY ARCHITECTS
130 East Randolph Street, Suite 3100
CHICAGO, IL 60601

MEP ENGINEER
Southland Industries
33225 Western Ave.
Union City, CA 94587
510.477.3300
Southland
ROSENDIN

STRUCTURAL ENGINEER
PEOPLES ASSOCIATES
STRUCTURAL ENGINEERS
408-957-9220 • www.pase.com
San Jose, California Pleasanton, California

CIVIL ENGINEER
HMH
1570 Oakland Road
San Jose, CA 95131
(408) 487-2200
HMHca.com

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LANDSCAPE ARCHITECTURE
477 SOUTH TAAFFE STREET
SUNNYVALE, CALIFORNIA 94086
PHONE: 408•481•9020

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VANTAGE CA31

2590 WALSH AVENUE
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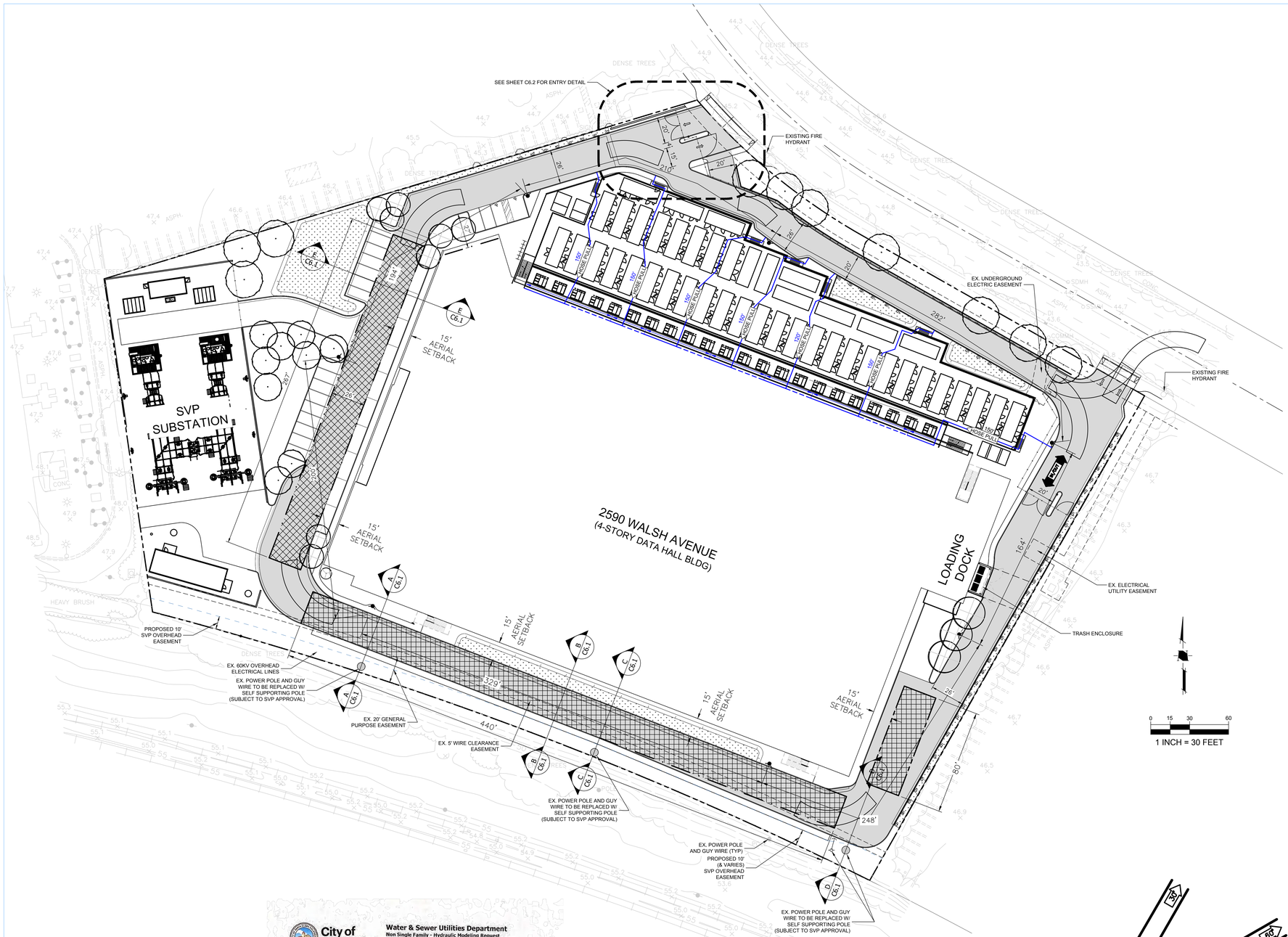
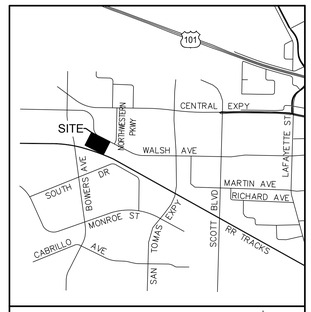
STORMWATER CALCULATIONS

C5B

SCALE: AS NOTED





VICINITY MAP
SCALE: 1" = 1000'

LEGEND
PROJECT BOUNDARY

FIRE ACCESS ROAD (EVAE-SEE NOTE 3)

AERIAL ACCESS

FIRE ACCESS TURNING RADIUS

NOTES
1. SECURITY GATES SHALL BE EQUIPPED WITH OPTICOM SWITCH OR APPROVED ALTERNATIVE FOR FIRE DEPARTMENT ACCESS.
2. ALL EVAE'S ARE FUTURE AND SHALL BE DEDICATED BY SEPARATE INSTRUMENT.
3. ALL TREES ALONG AERIAL ACCESS ROADWAY(S) SHALL HAVE MATURE HEIGHTS OF NOT GREATER THAN 30 FEET.
4. PAINT ALL CURBS RED ALONG EMERGENCY VEHICLE ACCESS EASEMENT (EVAE) LANES.
5. REPLACE EXISTING SVP POWER POLES + GUY WIRES WITH SELF SUPPORTING POLES.
6. AERIAL ACCESS PROVIDED:
   - EXTERIOR PERIMETER: 1,558 LF
   - AERIAL ACCESS PROVIDED: 784 LF
   - COVERAGE: 50%

	AREA (SF)	CONSTRUCTION TYPE	OCCUPANCY GROUP	NUMBER OF STORIES	HEIGHT (FT)
BUILDING 1	468,170	IB	NON-SEPARATED MIXED OCCUPANCY (B, S-2 & A*2)	4	87'-6"

PER CFC 2019 APPENDIX B	
SECTION B104.1 TOTAL FLOOR AREA (SF)	468,170
TABLE B105.1(2) TOTAL FIRE-FLOW (GPM)	6,000
TABLE B105.2 REDUCED FIRE-FLOW (GPM)	1,500

PER CFC 2019 APPRENDIX, TABLE C102.1	
MINIMUM NUMBER OF HYDRANTS	6
AVERGAE SPACING BETWEEN HYDRANTS (FT)	250
MAXIMUM DISTANCE FROM ANY POINT ON STREET OR ROAD FRONTAGE TO EXTERIOR WALL OF THE BUILDING (FT)	150

0 15 30 60
1 INCH = 30 FEET

City of Santa Clara — Water & Sewer Utilities Department
Non Single Family - Hydraulic Modeling Request Form for Fire Flow Data
1500 Warburton Avenue, Santa Clara, CA 95050

APPLICANT INFORMATION (BY APPLICANT)

APPLICANT NAME: Michael Stoner	DATE: 08/26/2020
APPLICANT COMPANY: Vantage Data Centers c/o Lake Street Consulting	
APPLICANT ADDRESS: 2820 Northwestern Parkway	
APPLICANT PHONE NO: (650)776-8553	ALTERNATE PHONE NO:
APPLICANT EMAIL: michael@lakestreetventures.com	

PROJECT INFORMATION (BY APPLICANT)

PROJECT NAME: Vantage Data Center	
PROJECT ADDRESS: 2590 Walsh Avenue	
PROJECT DESCRIPTION: Data center of TBD s.f.	
APN: 216-28-112	BUILDING TYPE (CALIFORNIA BUILDING CODE):
NO. OF HYDRANT(S) TO BE FLOWED: 1	
FLOW HYDRANT (S) NO.: 2353	STATIC & RESIDUAL HYDRANT (S) NO.: 2352, 3447

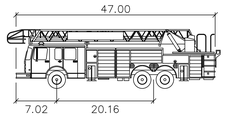
PROJECT MODELING DATA (CITY TO PROVIDE TO APPLICANT)

FLOW HYDRANT (S) NO.: 2353	STATIC & RESIDUAL HYDRANT (S) NO.: 2352
RESIDUAL PRESSURE (PSI): 50.7	STATIC PRESSURE (PSI): 59.1
AVAILABLE FLOW AT 20 PSI (GPM):	TEST FLOW (GPM): 2,000

APPROVED BY MODELING ENGINEER: ☒ YES ☐ NO SIGNATURE: DATE: 20 OCT 20

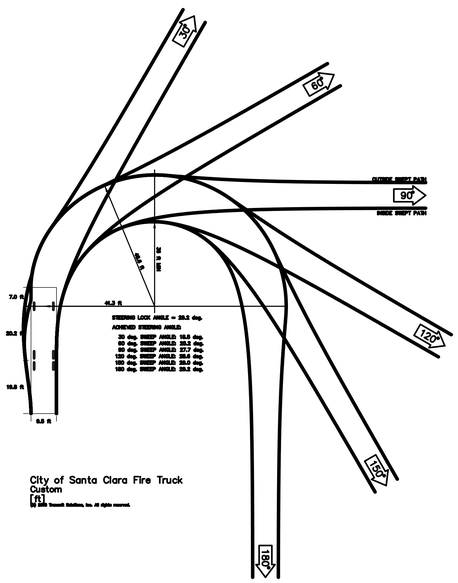
APPROVED BY UTILITIES ENGINEER: ☒ YES ☐ NO SIGNATURE: DATE: 10.20.20

Notes:
1. The fire flow request by applicant will be analyzed using the City's hydraulic modeling program. This will determine the projected available fire flow capacity and residual pressure from public fire hydrants.
2. Results are typically available 2-3 weeks after the application has been submitted.
3. The hydraulic modeling fee for a single family home fire flow request is $1,496. Email Water@santaclara.gov for instructions on submitting payment.
4. Upon proof of payment, email application to Water@santaclara.gov or deliver in person to the Water & Sewer Utilies Department at the City.
5. Upon submittal of form, City will provide applicant with an utility map so that applicant can identify desired hydrant and hydrant to be flowed.



City of Santa Clara Fire Truck

Width	:	9.50 ft
Track	:	8.00 ft
Overall Length	:	47.00 ft
Wheelbase	:	20.16 ft
Lock to Lock Time	:	6.0 s
Steering Angle	:	29.2°



City of Santa Clara Fire Truck
Custom
[1]

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ARCHITECT
SHEEHAN NAGLE HARTRAY ARCHITECTS
SHEEHAN NAGLE HARTRAY ARCHITECTS
130 East Randolph Street, Suite 3100
CHICAGO, IL 60601

MEP ENGINEER
Southland Industries
Southland
33225 Western Ave.
Union City, CA 94587
510.477.3300

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STRUCTURAL ENGINEER
PEOPLES ASSOCIATES
STRUCTURAL ENGINEERS
408-957-9220 · San Jose, California
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CIVIL ENGINEER
HMH
1570 Oakland Road
San Jose, CA 95131
(408) 487-2200
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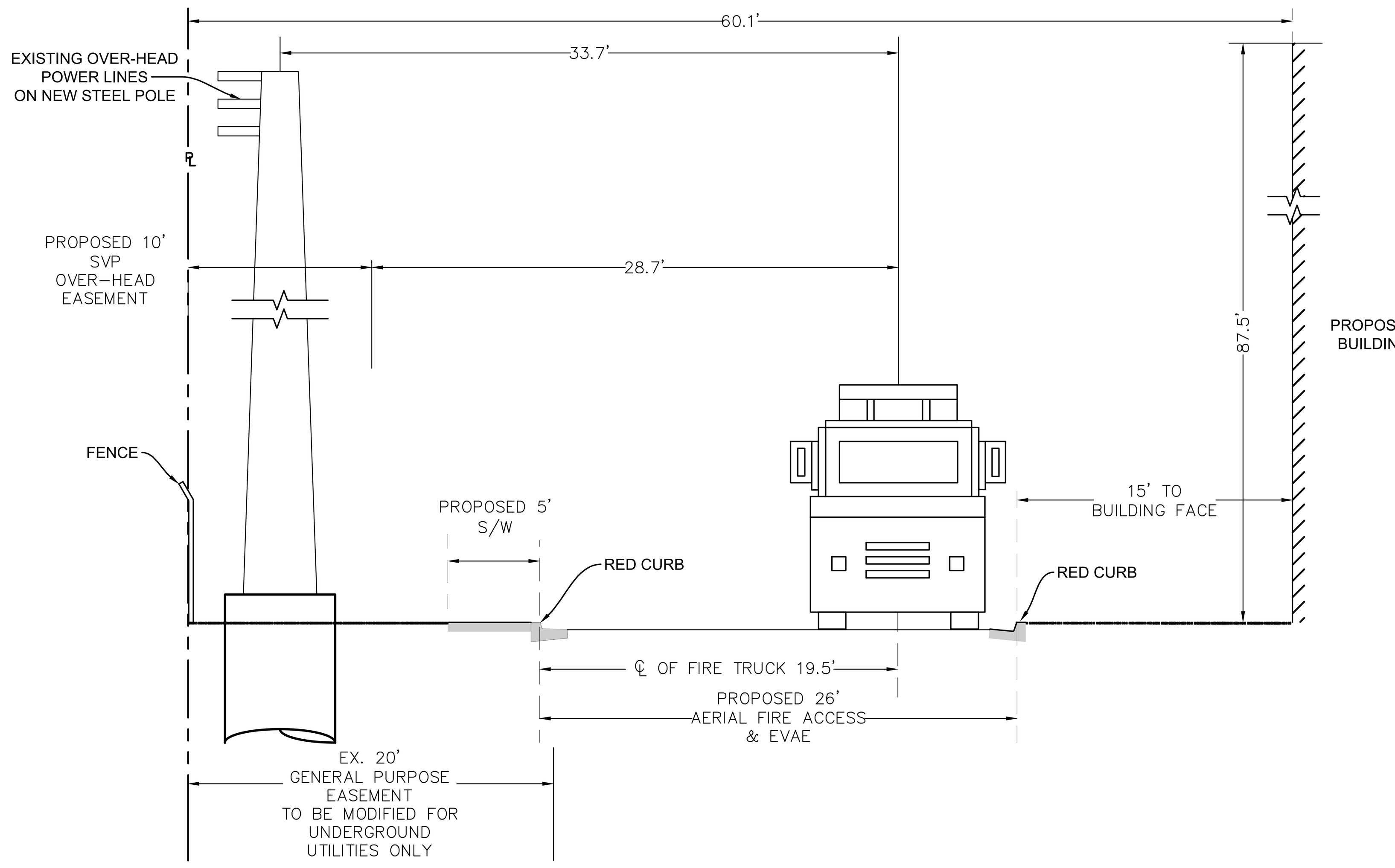
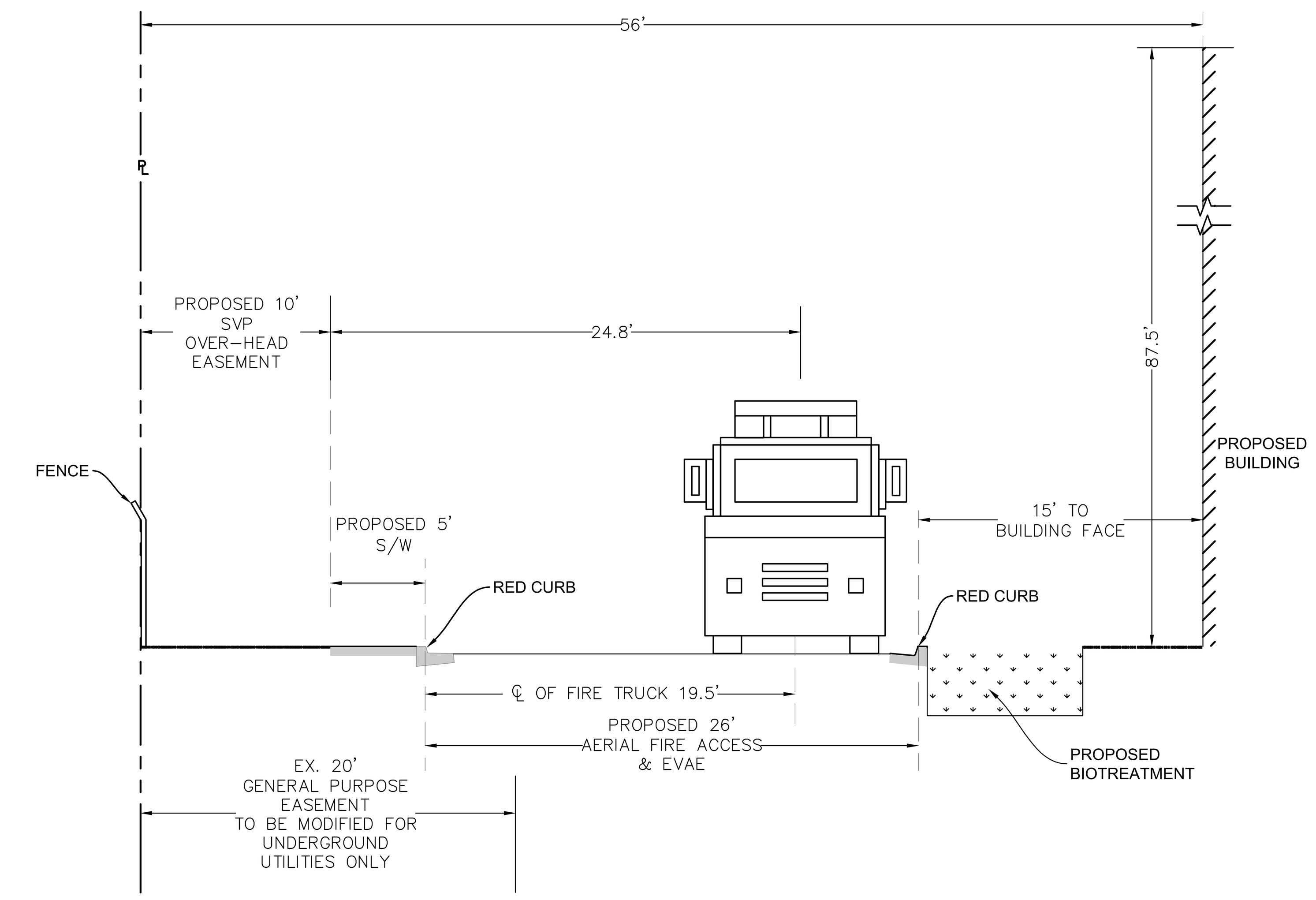
FIRE ACCESS & HYDRANT PLAN

C6.0

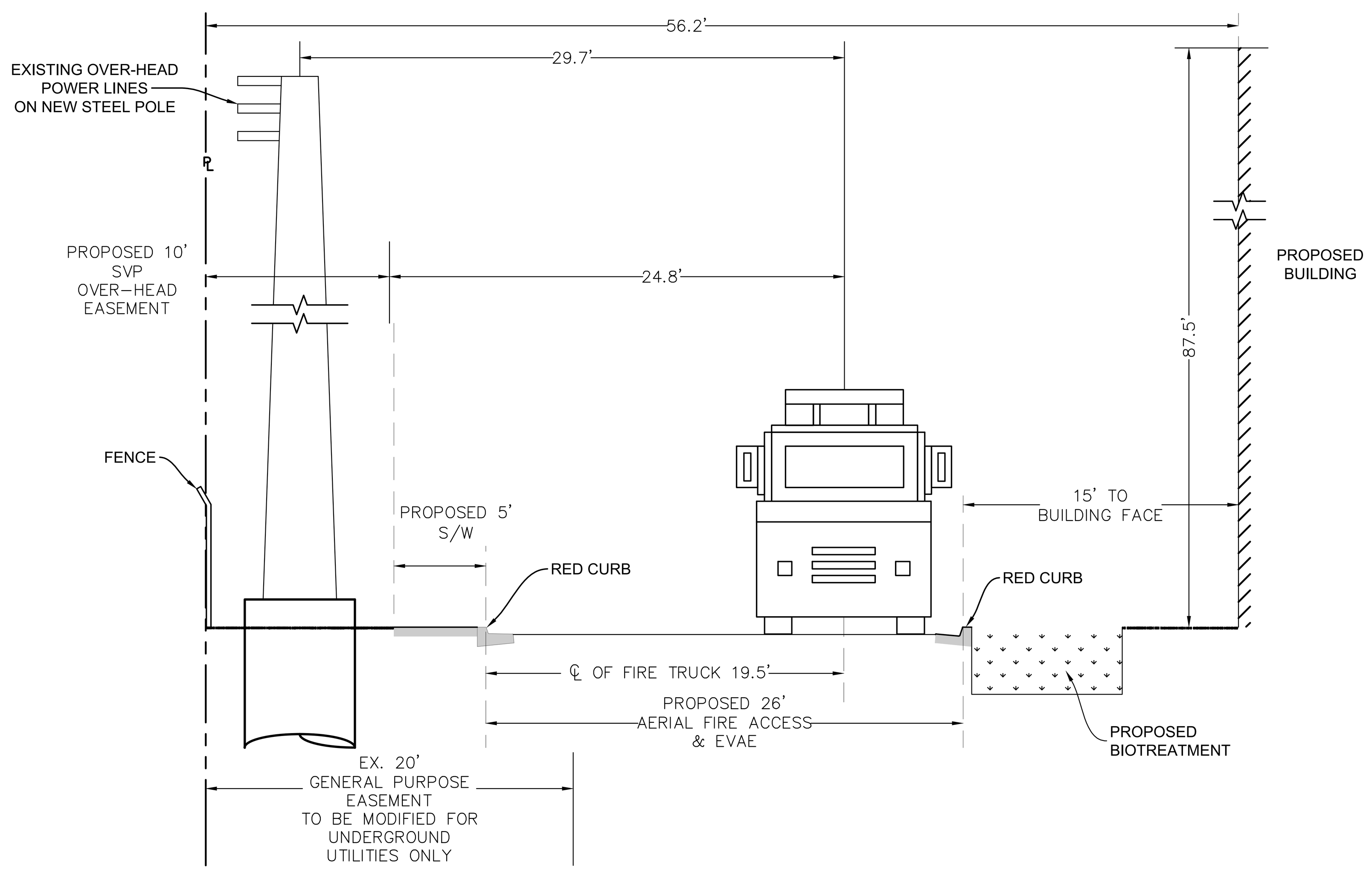
SCALE: AS NOTED



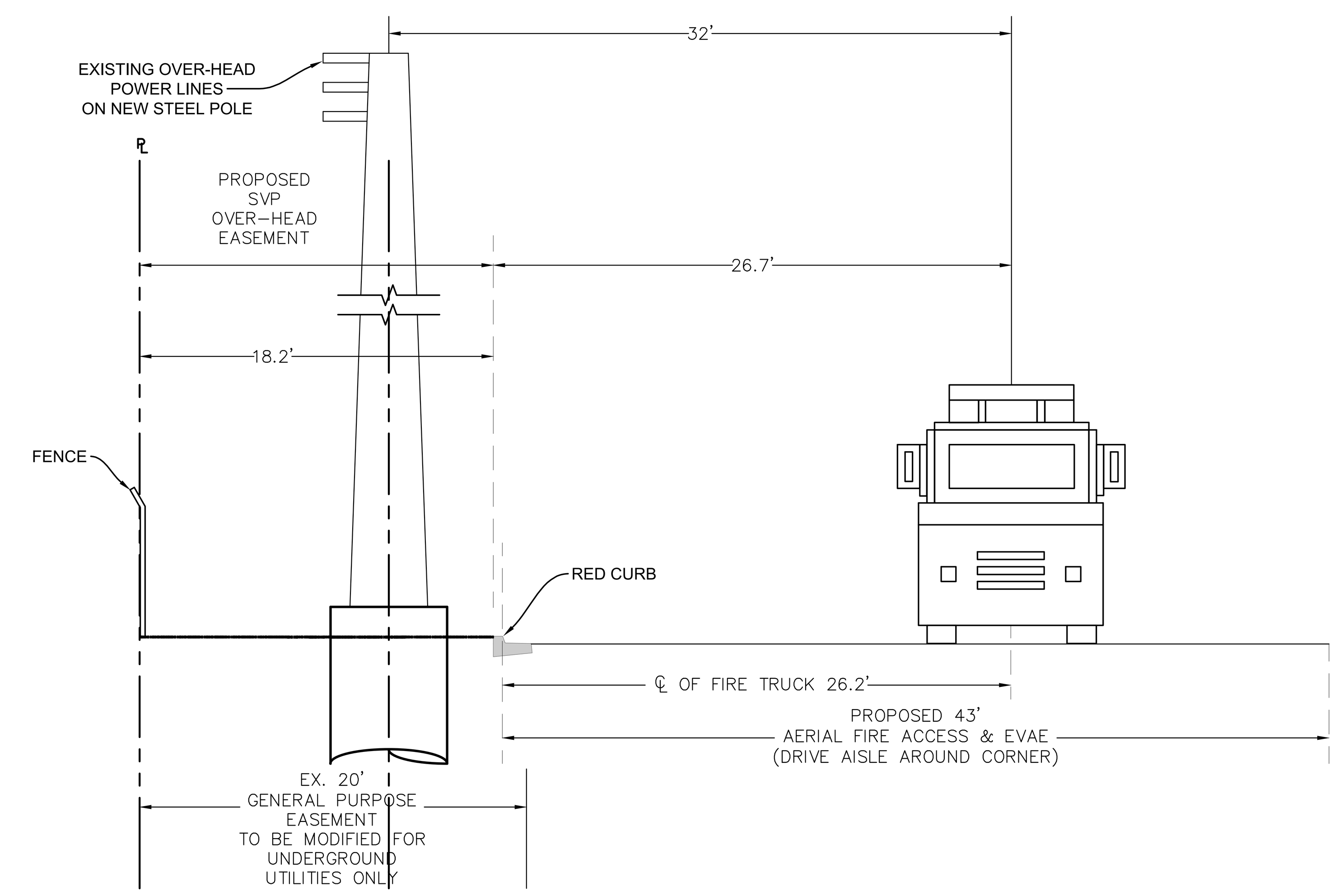
SECTION-A
SCALE: 1"=5'



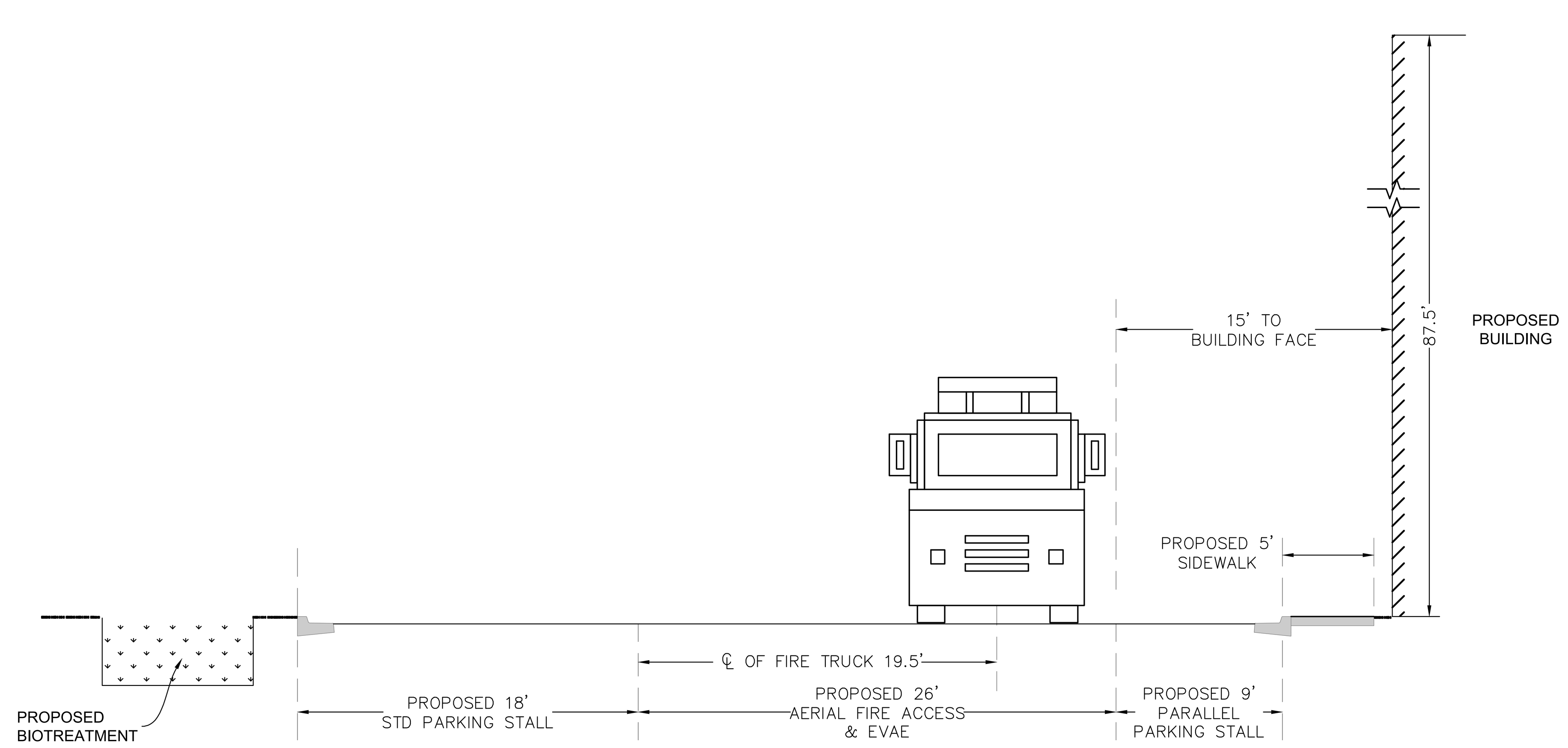
SECTION-B
SCALE: 1"=5'



SECTION-C
SCALE: 1"=5'



SECTION-D
SCALE: 1"=5'



SECTION-E
SCALE: 1"=5'

OWNER

VANTAGE DATA CENTERS

ARCHITECT

SHEEHAN NAGLE HARTRAY ARCHITECTS

SHEEHAN NAGLE HARTRAY ARCHITECTS
130 East Randolph Street, Suite 3100
CHICAGO, IL 60601

MEP ENGINEER

Southland Industries
33225 Western Ave.
Union City, CA 94587
510.477.3300

ROSENDIN

STRUCTURAL ENGINEER

PEOPLES ASSOCIATES
STRUCTURAL ENGINEERS
408-957-9220 • www.pase.com
San Jose, California Pleasanton, California

CIVIL ENGINEER

HMH
1570 Oakland Road
San Jose, CA 95131
(408) 487-2200
HMHca.com

REED ASSOCIATES
LANDSCAPE ARCHITECTURE
477 SOUTH TAAFFE STREET
SUNNYVALE, CALIFORNIA 94086
PHONE: 408•481•9020

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VANTAGE CA31

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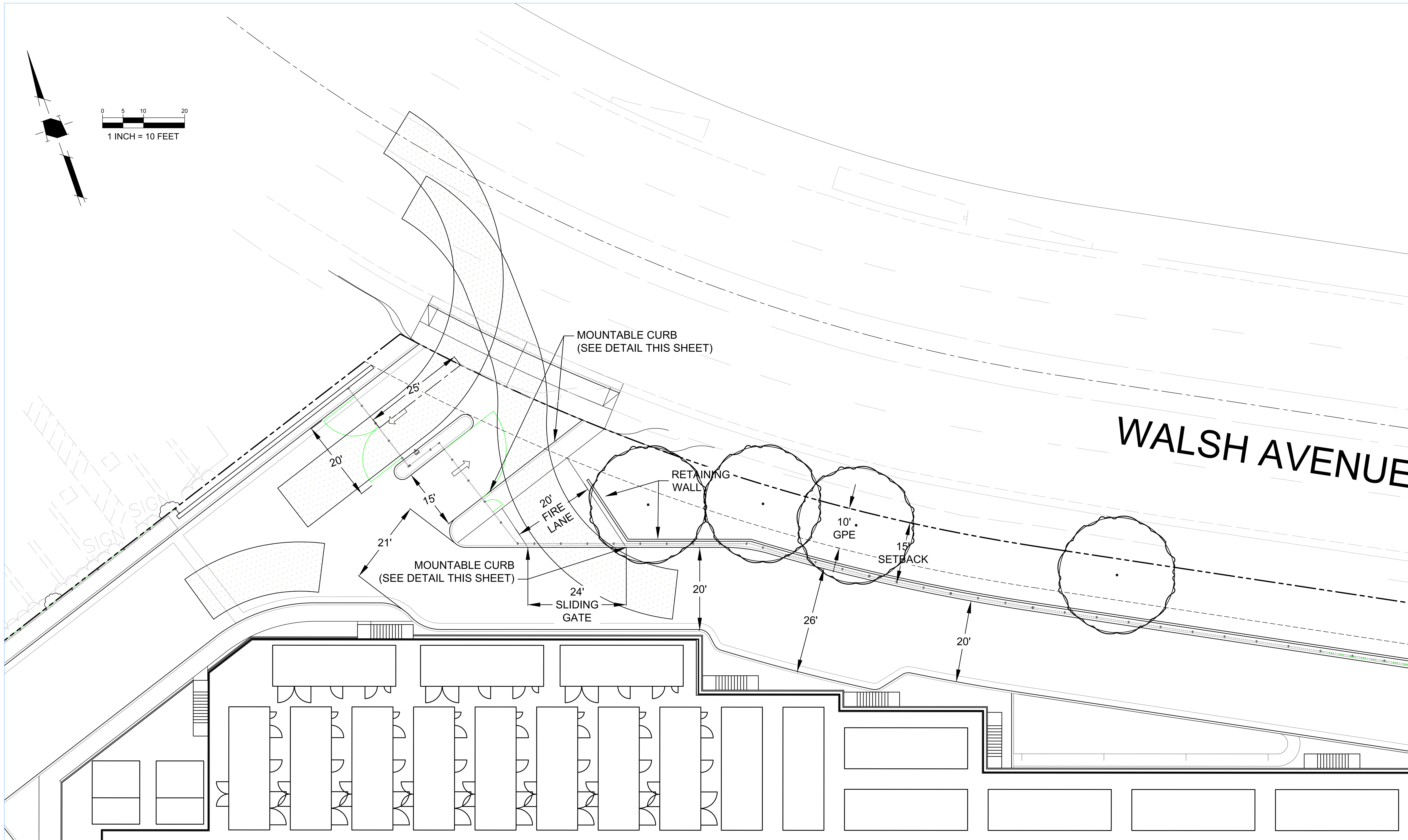
CROSS SECTIONS

C6.1

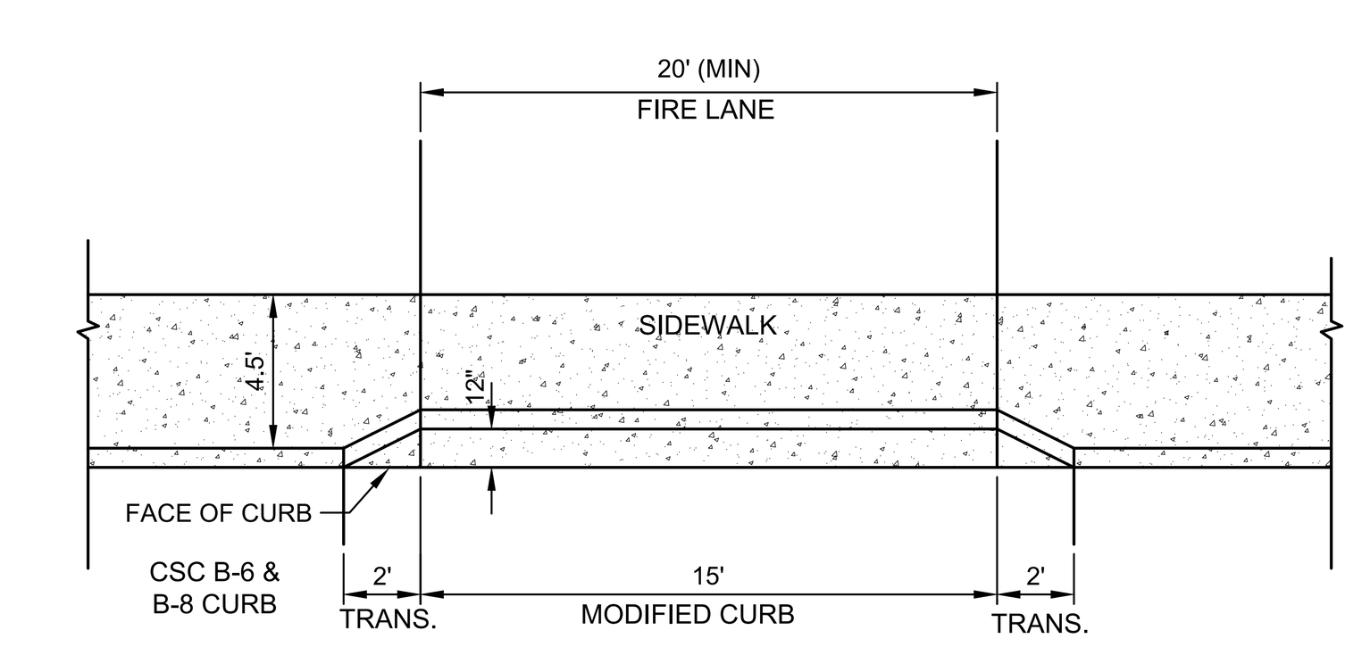
SCALE: AS NOTED



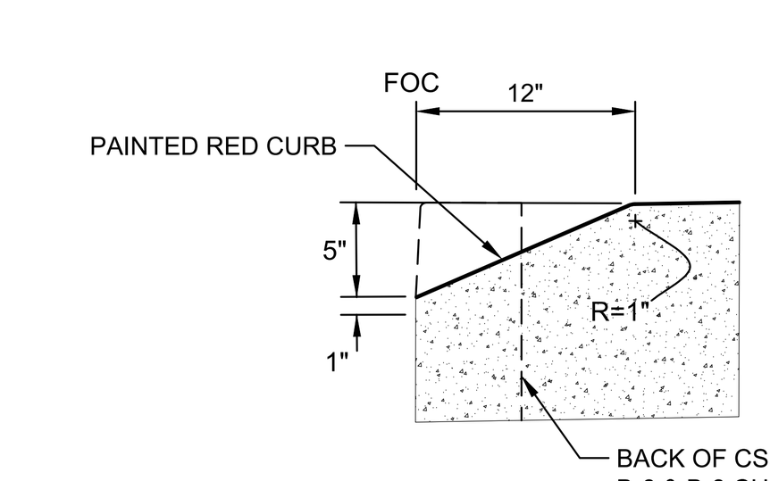
LEGEND

PROJECT BOUNDARY

FIRE ACCESS TURNING RADIUS (R=48', R=36')



TYP CURB TRANSITION PLAN DETAIL FOR FIRE ACCESS
NTS



TYP MOUNTABLE CURB-SECTION FOR FIRE ACCESS ROAD
NTS

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ARCHITECT
SHEEHAN NAGLE HARTRAY ARCHITECTS
SHEEHAN NAGLE HARTRAY ARCHITECTS
130 East Randolph Street, Suite 3100
CHICAGO, IL 60601

MEP ENGINEER
Southland Industries
33225 Western Ave.
Union City, CA 94587
510.477.3300
Southland.
ROSENDIN

STRUCTURAL ENGINEER
PEOPLES ASSOCIATES
STRUCTURAL ENGINEERS
408-957-9220 • www.pase.com
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CIVIL ENGINEER
HMH
1570 Oakland Road (408) 487-2200
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REED ASSOCIATES
LANDSCAPE ARCHITECTURE
477 SOUTH TAAFFE STREET
SUNNYVALE, CALIFORNIA 94086
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FIRE ACCESS - DRIVEWAY
ENLARGEMENT & SECTIONS

C6.2

SCALE: AS NOTED