











Project Address: 2427-2433 San Pablo Avenue									
Base Project	Base Project Units	Base Project Units	% VLI units	# VLI Units	#VLI Units	% Bonus	# Bonus Units	# Bonus Units	Total Units
sq. ft. - see calculation below	base project/avg. unit size	Base Units/Max. Residential Density (Round down)	Per 65915, VLI = Very Low Income <50 AMI	% VLI x Base # Units	(Round Up)	Per 65915	%Bonus x Base # Units (rounded up)	%Bonus x Base # Units (rounded up)	base unit + DB Units (rounded up)
30,431	441	69.00	6%	4.14	5.00	22.5%	15.53	16.00	85

Base & Proposed Density Bonus Project Areas		
Base Project Residential Area (SF)	Floor Level	Proposed Project Residential Area (SF)
-	BASEMENT	N/A
7,022	1st	5,283
N/A	1st (mezzanine)	1,365
7,803	2nd	7,809
7,803	3rd	7,109
7,803	4th	7,809
N/A	5th	5,933
30,431	TOTAL	35,308

DENSITY BONUS CHART	
AFFORDABLE UNIT %	VERY LOW INCOME BONUS
5%	20.0%
6%	22.5%
7%	25.0%
8%	27.5%
9%	30.0%
10%	32.5%
11%	35.0%
12%	38.7%
15%	50.0%

USEABLE OPEN SPACE CALCULATION TABLE	
BASE PROJECT	
Apartment...	8
GLA Units:	61
SUBTOTAL	69
UNITS W/ PVT. BALCONY	0
TOTAL UNITS	69 UNITS
U.O.S. / UNIT	40 SF
TOTAL U.O.S. REQUIRED	2,760 SF
TOTAL U.O.S. PROVIDED	3,450 SF

USABLE OPEN SPACE		
U.O.S. Plan Floor # OR Unit #	Balcony SQ.FT	Minimum Dimension Required in all directions (ft)
ROOF	3,450	10'
4	0	6'
3	0	N/A
2	0	6'
1	0	10'
TOTAL	3,450	

\* Private Balconies not incl. in U.O.S. calculation

Base & Proposed Density Bonus Project Areas		
Base Project # of Units	Floor Level	Proposed Project # of Units
0	BASEMENT	N/A
8	1st	7
19	2nd	20
21	3rd	21
21	4th	21
N/A	5th	16
69	TOTAL	85

Proposed Area:	35,308
Proposed Units:	85
Average Unit Size:	415

BASE PROJECT ZONING CODE COMPLIANCE

BASE PROJECT - FAR			
	RES. AREA	COMMERCIAL	TOTAL
GROSS FLOOR AREA	30431	2000	32431
SITE AREA			10818
FAR			3.00

BASE PROJECT - USEABLE OPEN SPACE			
	UNITS	SF / UNIT	TOTAL AREA
TOTAL RES. UNITS	69	40	2,760
TOTAL U.O.S. AREA PROVIDED			3,450
GROUND FLOOR LANDSCAPE AREAS			350
ROOF LEVEL LANDSCAPED AREAS			1,032
TOTAL LANDSCAPED AREA			1,372

BASE PROJECT - PARKING				
	UNITS	SPACES	RATIO	TOTAL
BASE UNITS - GLA	61	0	0	0
BASE UNITS - REPLACEMENT	8	1	1	8
COMMERCIAL	2000	2	1000	2
TOTAL PARKING REQ.				10
TOTAL PARKING PROVIDED				15

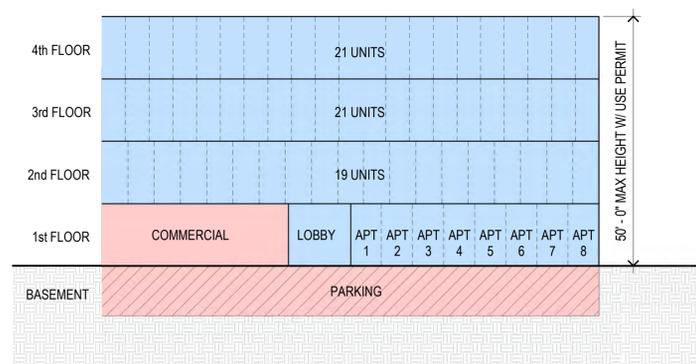
BASE PROJECT - DWELLING UNIT TABLE			
UNIT TYPE	GLA / SRO	1-BED	TOTAL
LEVEL 4	21	0	21
LEVEL 3	21	0	21
LEVEL 2	19	0	19
LEVEL 1	0	8	8
TOTAL	61	8	69
PERCENTAGE OF TOTAL	88%	12%	100%

BASE PROJECT - BEDROOM CALCULATION			
	GLA / SRO	1-BED	TOTAL
NUMBER OF UNITS	61	8	
BEDROOM PER UNIT	1	1	
TOTAL BEDROOMS	61	8	69

BASE PROJECT - LONG TERM BIKE PARKING				
	COUNT / BEDROOM	SPACES	RATIO	TOTAL
BASE GLA ROOMS	61	1	2.5	24
BASE BEDROOMS	8	1	3.0	3
TOTAL LONG TERM BIKE SPACES REQ.				27
TOTAL LONG TERM BIKE SPACES PROVIDED				32

BASE PROJECT - SHORT TERM BIKE PARKING				
	COUNT / BEDROOM	SPACES	RATIO	TOTAL
COMMERCIAL	2000	1	2000	1
GLA / SRO	61	1	20	4
RES. UNITS	8	1	40	1
TOTAL SHORT TERM BIKE SPACES REQ.				6
TOTAL SHORT TERM BIKE SPACES PROVIDED: 2-BIKE STREET RACKS				6

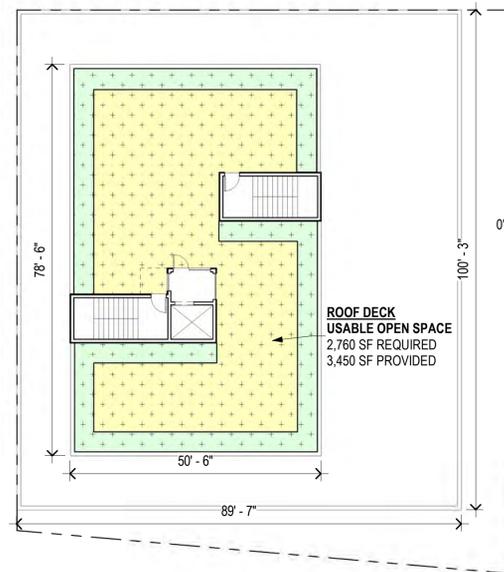
BASE PROJECT - STORMWATER			
	ROOF AREA	%	REQUIRED
BASE UNITS	8984	4	359



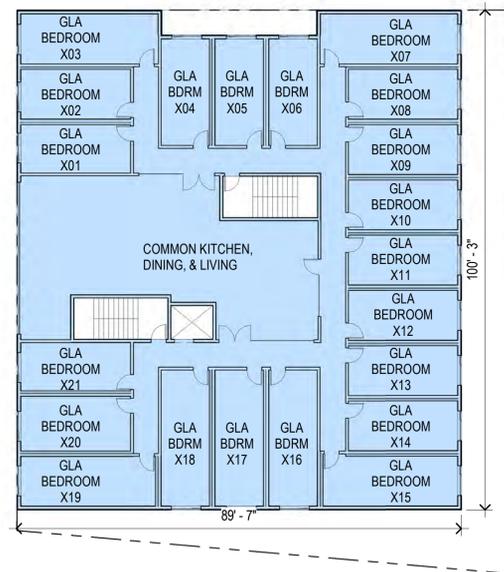
A BASE PROJECT DIAGRAM  
SCALE: 1/16" = 1'-0"



DENSITY BONUS AREA LEGEND



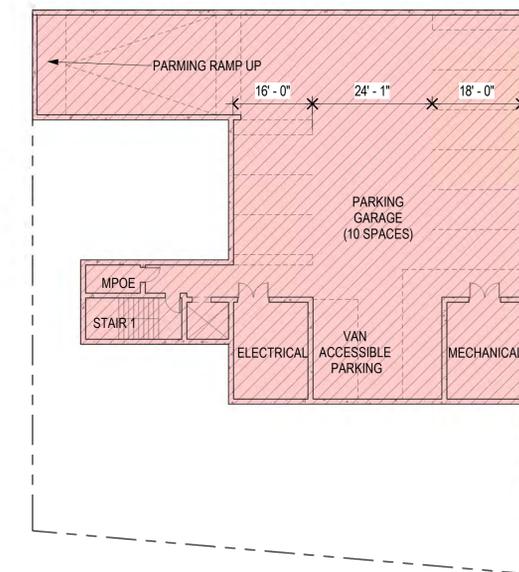
4 BASE PROJECT DIAGRAM - ROOF  
SCALE: 1/16" = 1'-0"



3 BASE PROJECT DIAGRAM - 2nd THRU 4th FLOORS  
SCALE: 1/16" = 1'-0"



2 BASE PROJECT DIAGRAM - 1ST FLOOR  
SCALE: 1/16" = 1'-0"



1 BASE PROJECT DIAGRAM - GARAGE  
SCALE: 1/16" = 1'-0"

SHEET NOTES

- SEE G002 FOR FULL ZONING CODE INFORMATION TABLE
- SEE SHEET G005 FOR USEABLE OPENSACE AND LANDSCAPING DIAGRAMS / CALCULATIONS
- SEE G008 FOR DENSITY BONUS PROJECT DIAGRAMS AND ZONING COMPLIANCE INFO



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SAN PABLO AVE  
G.L.A.

2427-2433  
SAN PABLO AVE  
BERKELEY, CA



ZONING &  
DESIGN REVIEW  
APPLICATION

PROJECT ISSUE RECORD:	

PROJECT #: ARN01  
ISSUE DATE: 12/1/22

BASE PROJECT PLANS & CALCS

G007



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2427-2433  
SAN PABLO AVE  
G.L.A.



ZONING &  
DESIGN REVIEW  
APPLICATION

PROJECT #:  
ISSUE DATE:  
DENSITY BONUS BONUS  
PROJECT DIAGRAMS &  
CALCS

G008

Project Address: 2427-2433 San Pablo Avenue									
Base Project	Base Project Units	Base Project Units	% VLI units	# VLI Units	#VLI Units	% Bonus	# Bonus Units	# Bonus Units	Total Units
sq. ft. - see calculation below	base project/avg. unit size	Base Units/Max. Residential Density (Round down)	Per 65915, VLI = Very Low Income <50 AMI	% VLI x Base # Units	(Round Up)	Per 65915	%Bonus x Base # Units (rounded up)	%Bonus x Base # Units (rounded up)	base unit + DB Units (rounded up)
30,431	441	69.00	6%	4.14	5.00	22.5%	15.53	16.00	85

**WAIVERS & CONCESSIONS**

- WAIVERS & DEVELOPMENT STANDARDS REDUCTIONS**
- i. INCREASE ALLOWABLE BUILDING STORIES TO 5 (4 ALLOWED)
  - ii. INCREASE OVERALL BUILDING HEIGHT TO 70'-8" (50' ALLOWED)

**REQUESTED CONCESSIONS**

Base Project Residential Area (SF)	Floor Level	Proposed Project Residential Area (SF)
-	BASEMENT	N/A
7,022	1st	5,283
N/A	1st (mezzanine)	1,365
7,803	2nd	7,809
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7,803	4th	7,809
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30,431	TOTAL	35,308

AFFORDABLE UNIT %	VERY LOW INCOME BONUS
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8%	27.5%
9%	30.0%
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11%	35.0%
12%	38.7%
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Base Project # of Units	Floor Level	Proposed Project # of Units
0	BASEMENT	N/A
8	1st	7
19	2nd	20
21	3rd	21
21	4th	21
N/A	5th	16
69	TOTAL	85

Proposed Area: 35,308  
Proposed Units: 85  
Average Unit Size: 415

**DENSITY PROJECT ZONING CODE COMPLIANCE**

DENSITY PROJECT - FAR	RES. AREA	COMMERCIAL	TOTAL
GROSS FLOOR AREA	37393	500	37893
SITE AREA			10818
FAR			3.50

DENSITY PROJECT - USEABLE OPEN SPACE	UNITS	SF / UNIT	TOTAL AREA
TOTAL RES. UNITS	85		
RES. UNIT W/ PVT. U.O.S.	4		
TOTAL U.O.S. UNITS	81	40	3,240
TOTAL U.O.S. AREA PROVIDED			3,280
GROUND FLOOR LANDSCAPE AREAS			715
COMMON AREA BALCONY LANDSCAPE AREAS			208
ROOF LEVEL LANDSCAPED AREAS			300
TOTAL LANDSCAPED AREA			1,223

DENSITY PROJECT - PARKING	UNITS	SPACES	RATIO	TOTAL
BASE UNITS - GLA	61	0	0	0
BASE UNITS - REPLACEMENT	8	1	8	8
COMMERCIAL	500	2	1000	2
TOTAL PARKING REQ.				10
TOTAL PARKING PROVIDED				15

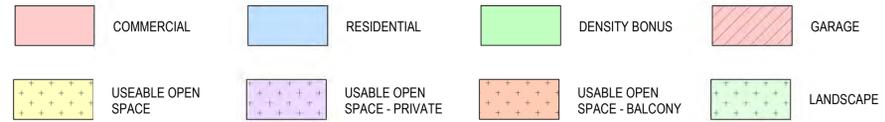
DENSITY PROJECT - DWELLING UNIT TABLE	GLA / SRO	1-BED	TOTAL
LEVEL 5	16	0	21
LEVEL 4	21	0	21
LEVEL 3	21	0	21
LEVEL 2	19	1	19
LEVEL 1	0	7	8
TOTAL	77	8	85
PERCENTAGE OF TOTAL	91%	9%	100%

DENSITY PROJECT - BEDROOM CALCULATION	GLA / SRO	1-BED	TOTAL
NUMBER OF UNITS	77	8	
BEDROOM PER UNIT	1	1	
TOTAL BEDROOMS	77	8	85

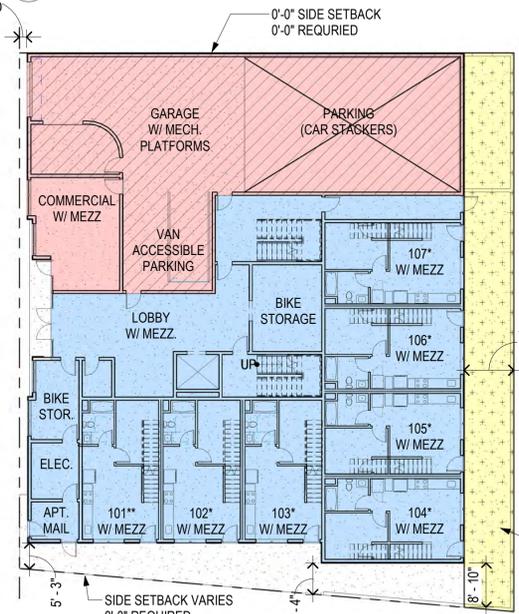
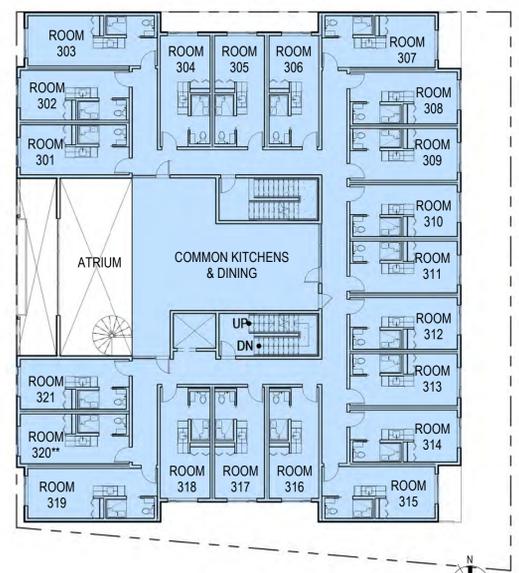
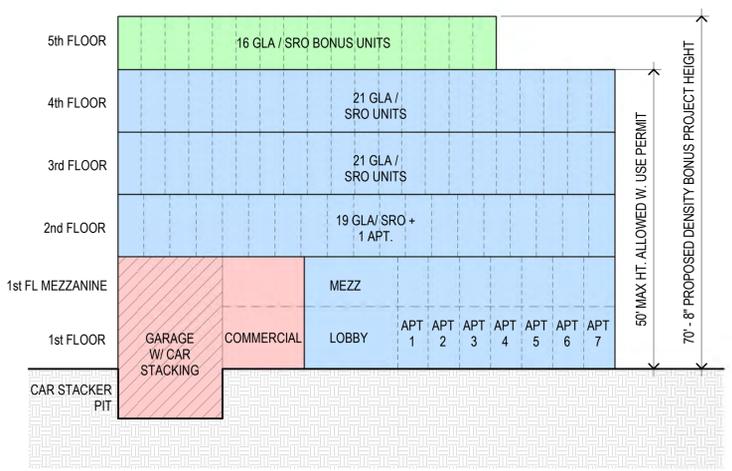
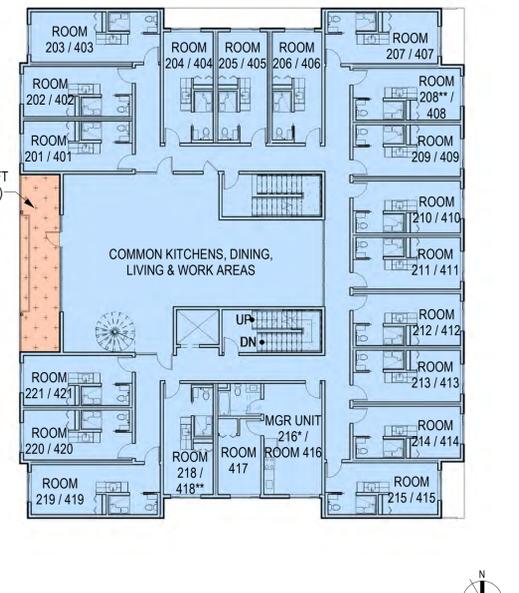
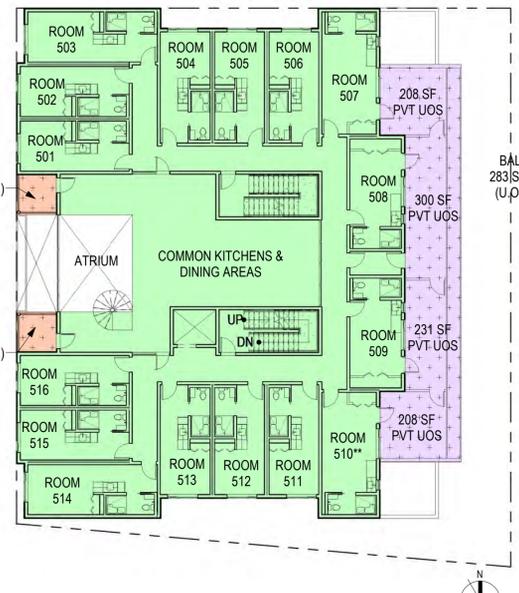
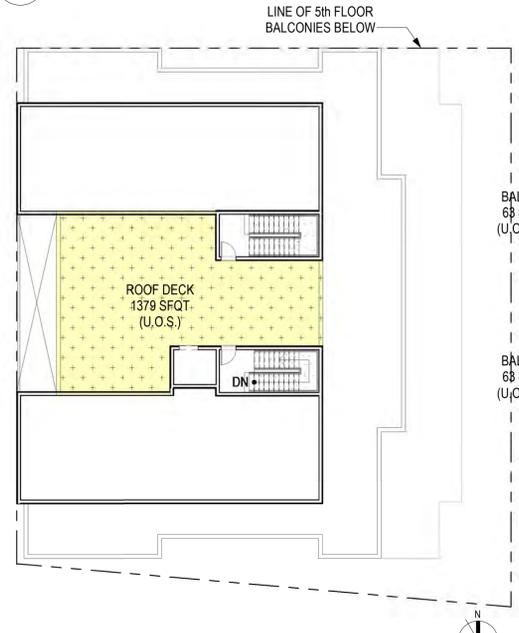
DENSITY PROJECT - LONG TERM BIKE PARKING	COUNT / BEDROOM	SPACES	RATIO	TOTAL
BASE GLA ROOMS	77	1	2.5	31
BASE BEDROOMS	8	1	3.0	3
TOTAL LONG TERM BIKE SPACES REQ.				33
TOTAL LONG TERM BIKE SPACES PROVIDED				34

DENSITY PROJECT - SHORT TERM BIKE PARKING	COUNT / BEDROOM	SPACES	RATIO	TOTAL
COMMERCIAL	500	1	2000	1
GLA / SRO	77	1	20	4
RES. UNITS	8	1	40	1
TOTAL SHORT TERM BIKE SPACES REQ.				6
TOTAL SHORT TERM BIKE SPACES PROVIDED: 2-BIKE STREET RACKS				6

DENSITY PROJECT - STORMWATER	ROOF AREA	%	REQUIRED
BASE UNITS	8925	4	357
PROVIDED			357



**DENSITY BONUS AREA LEGEND**











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BERKELEY, CA



**ZONING &  
DESIGN REVIEW  
APPLICATION**



**1** STREET PERSPECTIVE - BYRON STREET (LOOKING WEST)  
G044 1" = 1'-0"

△ PROJECT ISSUE RECORD:

NO.	DATE	ISSUE

PROJECT #: ARN01

ISSUE DATE: 12/1/22

PERSPECTIVES

**G044**





































**CAUTION:**

1. THE LOCATIONS, SIZES AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS PLAN WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS AND DEPTHS OF SUCH UNDERGROUND UTILITIES. (A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL KNOWN UNDERGROUND UTILITIES). CONTRACTOR SHALL VERIFY LOCATION AND DEPTH PRIOR TO ANY EXCAVATION OR IMPROVEMENT.
2. CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT FOR LOCATION OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION. PHONE: (800) 442-2444. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES PRIOR TO BEGINNING ANY WORK ON THIS SITE.
3. THESE DRAWINGS DO NOT ADDRESS CONTRACTOR MEANS, METHODS OR PROCESSES THAT MAY BE ASSOCIATED WITH ANY TOXIC SOILS IF FOUND ON SITE. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL CITY AND COUNTY STANDARDS AND APPROPRIATE REGULATIONS IF TOXIC SOILS ARE ENCOUNTERED. CONTRACTOR MUST NOTIFY THE OWNER'S PROJECT MANAGER IMMEDIATELY IF ANY SOILS ARE EVEN SUSPECTED OF BEING CONTAMINATED.

**GENERAL SITE NOTES:**

1. CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING ON THIS WORK AND CONSIDER THE EXISTING CONDITIONS AND SITE CONSTRAINTS IN THE BID. CONTRACTOR SHALL BE IN THE POSSESSION OF AND FAMILIAR WITH ALL APPLICABLE GOVERNING AGENCIES STANDARD DETAILS AND SPECIFICATIONS PRIOR TO SUBMITTING OF A BID.
2. ALL WORK IN THE PUBLIC RIGHT-OF-WAY SHALL CONFORM TO ALL APPLICABLE GOVERNING AGENCIES STANDARD DETAILS & SPECIFICATIONS.
3. CONTRACTOR AND HIS/HER SUB-CONTRACTORS SHALL BE IN POSSESSION AND FAMILIAR WITH THE GEOTECHNICAL REPORT BY: VSHA CONSULTANTS, INC. DATE: 4/15/2011, JOB NO. P21-008.
4. PRIOR TO BEGINNING WORK, AND AFTER INITIAL HORIZONTAL CONTROL STAKING, CONTRACTOR SHALL FIELD CHECK ALL ELEVATIONS MARKED WITH (d) AND REPORT ANY DISCREPANCIES GREATER THAN 0.05 TO OWNERS PROJECT MANAGER.
5. DAMAGE TO ANY EXISTING SITE IMPROVEMENTS, UTILITIES AND/OR SERVICES TO REMAIN SHALL BE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL REPAIR AND/OR REPLACE IN KIND.
6. CONTRACTOR SHALL REPLACE ALL STRUCTURES AND GRATE LIDS FOR VAULTS, CATCH BASINS, ETC., WITH VEHICULAR RATED STRUCTURES IN ALL TRAFFIC ACCESSIBLE AREAS.
7. CONTRACTOR SHALL MAINTAIN THE EXISTING SITE IN A SAFE AND USABLE MANNER SUCH THAT EMERGENCY VEHICLES WILL ACCESS AS REQUIRED BY THE CITY. SCRAPE CARED ON MID AND MAINTAIN ALL NECESSARY FENCING, GATES, SIGNAGE, TEMPORARY WALKWAYS, AND PROVISIONS FOR ENSURING THE PROJECT'S SECURITY AND SAFE PASSAGEWAY AROUND IT BY CAMPUS STAFF, STUDENTS AND VISITORS AT ALL TIMES.
8. CONTRACTOR TO BE RESPONSIBLE FOR OBTAINING ALL NECESSARY & REQUIRED PERMITS FOR THIS WORK.
9. NOTIFICATION PRIOR TO THE START OF THE WORK MUST BE GIVEN TO THE UNDERGROUND SERVICE ALERT (USA).
10. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING APPROVAL FROM DISTRICT PERSONNEL AND PROJECT ARCHITECT FOR THE LOCATION OF ALL STAGING, STORAGE, CONSTRUCTION OFFICE AND LAY DOWN AREAS.
11. CONSTRUCTION HOURS TO BE VERIFIED AND APPROVED BY DISTRICT AND LOCAL AGENCIES.
12. CONTRACTOR MUST HAVE OWNERS REPRESENTATIVE OR ENGINEER/ARCHITECT FIELD REVIEW AND APPROVE FORMWORK PRIOR TO PLACING SITE CONCRETE FOR CURBS, RAMPS, STAIRS, WALKS, DRIVEWAYS AND RELATED FLATWORK.
13. IF ARCHEOLOGICAL MATERIALS ARE UNCOVERED DURING GRADING, TRENCHING OR OTHER ON-SITE EXCAVATION, ALL WORK ON THE SITE SHALL BE STOPPED AND THE CITY IMMEDIATELY NOTIFIED. THE COUNTY CORNER & THE NATIVE AMERICAN HERITAGE COMMISSION SHALL ALSO BE NOTIFIED AND PROCEDURES FOLLOWED AS REQUIRED IN APPENDIX 'K' OF THE CALIFORNIA ENVIRONMENTAL ACT.
14. CONTRACTOR TO COORDINATE WITH SCHOOL PERSONNEL AND ENSURE HIS/HER WORK DOES NOT IMPACT SCHOOL OPERATION AND TRAFFIC CIRCULATION OF BUSES, EMERGENCY VEHICLES, STAFF AND STUDENT VEHICLES.

**SITE MAINTENANCE:**

1. CONTRACTOR SHALL GATHER ALL CONSTRUCTION DEBRIS ON A REGULAR BASIS AND PLACE IT IN A DUMPSTER OR OTHER CONTAINER WHICH IS EMPTIED OR REMOVED ON A REGULAR BASIS, WHEN APPROPRIATE. USE TARPS ON THE GROUND TO COLLECT FALLEN DEBRIS OR SPILLERS THAT COULD CONTRIBUTE TO STORM WATER RUNOFF POLLUTION.
2. REMOVE ALL DIRT, GRAVEL, RUBBISH, LIMBS, AND GREEN WASTE FROM STREET PAVEMENT AND STORM DRAINS ADJOINING THE SITE. LIMIT CONSTRUCTION ACCESS ROUTES ONTO THE SITE AND PLACE GRAVEL PADS AT THESE LOCATIONS. DO NOT DRIVE VEHICLES AND EQUIPMENT OFF THE PAVED OR GRAVELLED AREAS DURING WET WEATHER.
3. SWEEP OR VACUUM THE STREET PAVEMENT AND SIDEWALKS ADJOINING THE PROJECT SITE AND THE ON-SITE PAVED AREAS ON A DAILY BASIS. SCRAPE CARED ON MID AND DIRT FROM THESE AREAS BEFORE SWEEPING. CORNERS AND HARD TO REACH AREAS SHALL BE SWEEP MANUALLY.
4. IF THE STREETS, SIDEWALKS AND/OR PARKING LOT ARE PRESSURE WASHED, DEBRIS MUST BE TRAPPED AND COLLECTED TO PREVENT ENTRY INTO THE STORM DRAIN SYSTEM. NO CLEANING AGENT MAY BE DISCHARGED INTO THE STORM DRAIN. IF ANY CLEANING AGENT OR DEGREASER IS USED, WASH WATER MUST BE COLLECTED AND DISCHARGED TO THE SANITARY SEWER. SUBJECT TO THE APPROVAL OF THE OWNER'S PROJECT MANAGER, OR OTHERWISE DISPOSED THROUGH APPROPRIATE DISPOSAL METHODS.
5. CREATE A CONTAINED AND COVERED AREA ON THE SITE FOR THE STORAGE OF BAGS, CEMENT, PAINTS, OILS, FERTILIZERS, PESTICIDES, OR OTHER MATERIALS USED ON THE SITE THAT HAVE THE POTENTIAL OF BEING DISCHARGED INTO THE STORM DRAIN SYSTEM THROUGH EITHER BEING WIND-BLOWN OR IN THE EVENT OF A MATERIAL SPILL.
6. NEVER CLEAN MACHINERY, EQUIPMENT OR TOOLS INTO A STREET, GUTTER OR STORM DRAIN.
7. ENSURE THAT CEMENT TRUCKS, PAINTERS, OR STUCCO/PLASTER FINISHING CONTRACTORS DO NOT DISCHARGE WASH WATER FROM EQUIPMENT, TOOLS OR RINSE CONTAINERS INTO GUTTERS OR DRAINS.
8. PREVENT DUST FROM LEAVING THE SITE AND ACCUMULATING ON ADJACENT AREAS AS REQUIRED IN THE DUST CONTROL NOTES ON THIS SHEET.
9. PREVENT SEDIMENT LADEN STORM RUN-OFF FROM LEAVING THE SITE OR ENTERING STORM DRAIN OR SANITARY SEWER SYSTEMS AS REQUIRED IN THE EROSION AND SEDIMENTATION CONTROL NOTES ON THIS SHEET.
10. MAINTAIN EXISTING TREES AND PLANTS THAT ARE TO REMAIN AS REQUIRED BY THE TREE AND PLANT PROTECTION NOTES ON THIS SHEET.

**DUST CONTROL:**

1. WATER TRUCKS SHALL BE PRESENT AND IN USE AT THE CONSTRUCTION SITE. ALL PORTIONS OF THE SITE SUBJECT TO BLOWING AS DUST SHALL BE WATERED AS OFTEN AS DEEMED NECESSARY BY THE APPROPRIATE GOVERNMENTAL AGENCY IN ORDER TO ENSURE PROPER CONTROL OF BLOWING DUST FOR THE DURATION OF THE PROJECT.
2. WATERING ASSOCIATED WITH ON-SITE CONSTRUCTION ACTIVITY SHALL TAKE PLACE BETWEEN THE ESTABLISHED CONSTRUCTION HOURS AND SHALL INCLUDE AT LEAST ONE LATE AFTERNOON WATERING TO MINIMIZE THE EFFECTS OF BLOWING DUST.
3. ALL PUBLIC STREETS AND MEDIAN'S SOILED OR LITTERED DUE TO THIS CONSTRUCTION ACTIVITY SHALL BE CLEANED AND SWEEP ON A DAILY BASIS DURING THE WORK WEEK, OR AS OFTEN AS DEEMED NECESSARY BY THE OWNER'S ENGINEER/INSPECTOR, TO THE SATISFACTION OF THE CITY'S DEPARTMENT OF PUBLIC WORKS.
4. WATERING ON PUBLIC STREETS OR POWER WASHING SEDIMENTATION ON STREETS SHALL NOT OCCUR, UNLESS CONTRACTOR COLLECTS AND FILTERS THE WASH WATER PRIOR TO ITS ENTERING THE CITY'S STORM DRAIN SYSTEM.
5. ON-SITE PAVED ACCESS ROADS, PARKING AREAS, AND STAGING AREAS SHALL BE SWEEP DAILY WITH A WATER SWEEPER.
6. ALL TRUCKS HAULING SOIL, SAND, AND OTHER LOOSE MATERIALS SHALL BE COVERED WITH TARPULINS OR OTHER EFFECTIVE COVERS.
7. THE SPEED OF ALL VEHICLES DRIVING ON UNPAVED ROADS OR PORTIONS OF THE SITE SHALL BE LIMITED TO 10 MPH.

**EROSION AND SEDIMENTATION CONTROL NOTES:**

1. EROSION CONTROL MEASURES ARE INTENDED TO PREVENT SEDIMENT AND DEBRIS FROM ENTERING THE CITY. COUNTY STORM DRAIN SYSTEM SANITARY SEWER SYSTEM OR FROM LEAVING THE SITE. THE CONTRACTOR SHALL MAKE ADJUSTMENTS IN THE FIELD TO MAKE SURE THAT THIS CONCEPT IS CARRIED OUT.
2. EROSION CONTROL FACILITIES AND MEASURES ARE TO BE INSTALLED AND OPERABLE BY OCTOBER 14 AND SHALL CONTINUE IN EFFECT UNTIL DISTURBED AREAS ARE STABILIZED OR UNTIL INSTALLATION OF THE PERMANENT SITE IMPROVEMENTS.
3. CONTRACTOR SHALL ASSUME THE CONCEPTS ON THE EROSION CONTROL PLAN. C.S.1 ARE SCHEMATIC MINIMUM REQUIREMENTS. THE FULL EXTENT OF WHICH ARE TO BE DETERMINED BY THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR THE EXACT DESIGN AND EXTENT OF THE EROSION CONTROL SYSTEM SO THAT IT WORKS WITH THE CONTRACTOR'S INTENDED USE AND MANAGEMENT OF THE CONSTRUCTION SITE, AND IS APPROVAL BY THE APPROPRIATE GOVERNMENTAL AGENCIES.
4. ALL EROSION CONTROL FACILITIES SHALL BE INSPECTED BY THE CONTRACTOR AND REPAIRED, AS REQUIRED. AT THE CONCLUSION OF EACH WORKING DAY DURING THE RAINY SEASON, THE CONTRACTOR SHALL INSPECT THE EROSION CONTROL FACILITIES AND MAKE NECESSARY REPAIRS PRIOR TO ANTICIPATED STORMS AND AT REASONABLE INTERVALS DURING STORMS OF EXTENDED DURATION. REPAIRS TO DAMAGED FACILITIES SHALL BE MADE IMMEDIATELY UPON DISCOVERY.
5. AS SOON AS PRACTICAL FOLLOWING EACH STORM, THE CONTRACTOR SHALL REMOVE ANY ACCUMULATION OF SILT OR DEBRIS FROM THE EROSION CONTROL SEDIMENT BASINS AND SHALL CLEAR THE OUTLET PIPES OF ANY BLOCKAGE.
6. PROVISION SHALL BE MADE TO ASSURE THAT BORROW AREAS AND STOCK PILED SOILS ARE PROTECTED FROM EROSION WITH EROSION CONTROL MEASURES SATISFACTORY TO THE APPROPRIATE GOVERNMENTAL AGENCIES.
7. ALL STOCKPILE MATERIALS SHALL BE COVERED AND PROTECTED FROM THE ELEMENTS WITH A NON-PERMEABLE PLASTIC MEMBRANE SO AS TO PREVENT SOIL EROSION FROM CURBING. THIS COVER SHALL BE SECURED WITH ANCHORS OR WEIGHTS OF SUFFICIENT SIZE AND FREQUENCY TO PREVENT DISRUPTION OR REMOVAL BY WIND OR RAIN. ANCHORAGE AT THE BASE OF THE SLOPE SHALL BE AS INDICATED BY DETAIL ON THIS SHEET. ALL MEMBRANE AND COVERINGS SHALL BE INSPECTED AND MAINTAINED BY THE CONTRACTOR OR HIS REPRESENTATIVE ON A FREQUENT AND REGULAR BASIS. SPECIFICALLY BEFORE AND AFTER ANY INCLEMENT WEATHER. WITH ANY NECESSARY REPAIRS BEING IMMEDIATELY PERFORMED. COVERINGS SHALL REMAIN IN PLACE UNTIL THE STOCKPILES IS READY TO BE REMOVED FROM THE SITE, AT WHICH TIME THEY MAY BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
8. EARTHEN BERM, STRAW FIBER FILLED TUBES AND/OR GEOTEXTILE FABRIC BARRIER (SILT FENCING) SHALL BE CONSTRUCTED AS SHOWN TO PREVENT OUF FLOW OF SEDIMENT LADEN RUNOFF, OR THE EROSION OF BANKS OR ROADWAYS. ALL SUCH TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED BY THE CONTRACTOR AS SOON AS CONSTRUCTION IS COMPLETED AND VEGETATION IS ESTABLISHED. BAY BALES SHALL NOT BE USED.
9. ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS, SWEEP ON A REGULAR BASIS, TO THE SATISFACTION OF THE ON-SITE INSPECTORS.
10. SWEEP OR VACUUM THE STREET PAVEMENT AND SIDEWALKS ADJOINING THE PROJECT SITE AND THE ON-SITE PAVED AREAS ON A DAILY BASIS AS REQUIRED BY THE CITY. SCRAPE CARED ON MID AND DIRT FROM THESE AREAS BEFORE SWEEPING. CORNERS AND HARD TO REACH AREAS SHALL BE SWEEP MANUALLY.
11. PERSON RESPONSIBLE FOR EROSION CONTROL IMPLEMENTATION, TO BE DETERMINED.
12. WHEEL WASHERS SHALL BE INSTALLED AND USED TO CLEAN ALL TRUCKS AND EQUIPMENT LEAVING THE CONSTRUCTION SITE. IF WHEEL WASHERS CANNOT BE INSTALLED, TIRES OR TRACKS OF ALL TRUCKS AND EQUIPMENT SHALL BE WASHED OFF BEFORE LEAVING THE CONSTRUCTION SITE.

**TREE/PLANT PROTECTION NOTES:**

1. PRIOR TO BEGINNING CONSTRUCTION ON SITE, CONTRACTOR SHALL IDENTIFY, CONFIRM WITH OWNER AND PROTECT EXISTING TREES AND PLANTS DESIGNATED AS REMAIN.
2. PROVIDE 6-FOOT TALL TREE PROTECTION FENCE WITH DISTINCTIVE MARKING VISIBLE TO CONSTRUCTION EQUIPMENT, ENCLOSING DRIP LINES OF TREES DESIGNATED TO REMAIN.
3. WORK REQUIRED WITHIN FENCE LINE SHALL BE HELD TO A MINIMUM AVOID UNNECESSARY MOVEMENT OF HEAVY EQUIPMENT WITHIN FENCED AREA AND DO NOT PARK ANY VEHICLES UNDER DRIP LINE OF TREES. DO NOT STORE EQUIPMENT OR MATERIALS WITHIN FENCE LINE.
4. PRIOR TO REMOVING ROOTS AND BRANCHES LARGER THAN 2" IN DIAMETER OF TREES OR PLANTS THAT ARE TO REMAIN, CONSULT WITH THE OWNER'S PROJECT MANAGER.
5. ANY GRADE CHANGES GREATER THAN 6" WITHIN THE DRILLPIE OF EXISTING TREES SHALL NOT BE MADE WITHOUT FIRST CONSULTING THE LANDSCAPE ARCHITECT / CIVIL ENGINEER.
6. PROTECT EXISTING TREES TO REMAIN FROM SPILLED CHEMICALS, FUEL OIL, MOTOR OIL, GASOLINE AND ALL OTHER CHEMICALLY HAZARDOUS MATERIAL, AS WELL AS FROM PIDDING OR CONTINUOUSLY RUNNING WATER. SHOULD A SPILL OCCUR, STOP WORK IN THAT AREA AND CONTACT THE CITY'S ENGINEER. INSPECTOR IMMEDIATELY. CONTRACTOR SHALL BE RESPONSIBLE TO MITIGATE DAMAGE FROM SPILLED MATERIAL AS WELL AS MATERIAL CLEAN UP.
7. PROVIDE TEMPORARY IRRIGATION TO ALL TREES AND PLANTS THAT ARE IN OR ADJACENT TO CONSTRUCTION AREAS WHERE EXISTING IRRIGATION SYSTEM MAY BE AFFECTED BY THE CONSTRUCTION. ALSO PROVIDE TEMPORARY IRRIGATION TO RELOCATED TREES.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR ONGOING MAINTENANCE OF ALL TREES DESIGNATED TO REMAIN AND FOR MAINTENANCE OF RELOCATED TREES STOCKPILED DURING CONSTRUCTION. CONTRACTOR WILL BE REQUIRED TO REPLACE TREES THAT BE DUE TO LACK OF MAINTENANCE.
9. CONSULT WITH LANDSCAPE ARCHITECT SHOULD SPECIAL CIRCUMSTANCES ARISE OR QUESTIONS ARISE REGARDING THESE PROCEDURES.

**DEMOLITION NOTES:**

1. DEMOLITION AND CONSTRUCTION WORK MAY BE PERFORMED OVER THE TOP OF AND AROUND TELEPHONE AND POWER SERVICES. CONTRACTOR SHALL WORK BY HAND IN ALL AREAS WHERE THESE SERVICES MIGHT BE HARMED BY LARGER SIZE PRESSURE EQUIPMENT.
2. THE CONTRACTOR SHALL LOCATE AND CLEARLY MARK (AND THEN PRESERVE THESE MARKERS) FOR THE LOCATION OF CONSTRUCTION OF ALL TELEPHONE, DATA, STREET LIGHT, SIGNAL LIGHT AND POWER FACILITIES THAT ARE IN OR NEAR THE AREA OF CONSTRUCTION.
3. CONTRACTOR'S BID IS TO INCLUDE ALL VISIBLE SURFACE AND ALL SUBSURFACE FEATURES IDENTIFIED TO BE REMOVED OR ABANDONED IN THESE DOCUMENTS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR A SITE INSPECTION TO FULLY ACKNOWLEDGE THE EXTENT OF THE DEMOLITION WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY AND ALL PERMITS NECESSARY FOR ENCROACHMENT, GRADING, DEMOLITION, AND DISPOSAL OF SOIL MATERIALS AS REQUIRED BY PRIVATE, LOCAL AND STATE JURISDICTIONS. THE CONTRACTOR SHALL PAY ALL FEES ASSOCIATED WITH THE DEMOLITION WORK.
6. CONTRACTOR SHALL PAY DISPOSAL FEES.
7. BACKFILL ALL DEPRESSIONS AND TRENCHES FROM DEMOLITION OF FOUNDATIONS & UTILITIES TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.
8. WITHIN LIMITS OF WORK, REMOVE CURBS, GUTTERS, LANDSCAPING, SIGNAGE, TREES, SHRUBS, ASPHALT, UNDERGROUND PIPES, ETC. AS INDICATED ON THE DRAWINGS.
9. REMOVAL OF LANDSCAPING SHALL INCLUDE ROOTS AND ORGANIC MATERIALS TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.
10. PRIOR TO BEGINNING DEMOLITION WORK ACTIVITIES, CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES OUTLINED IN THE EROSION CONTROL PLAN & DETAILS.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING ALL DEMOLITION MATERIALS, OR STORING SELECTED ITEMS BY OWNERS REPRESENTATIVE AT DESIGNATED LOCATIONS.
12. ABANDONED UTILITIES WITHIN 6 FEET OF THE PROPOSED BUILDING FOOTPRINT SHOULD BE REMOVED IN THEIR ENTIRETY. UTILITIES OUTSIDE THE BUILDING AREA SHOULD BE REMOVED OR ABANDONED IN PLACE BY LOCATING AND PLUGGING ALL LATERALS AND JOINS OF PIPES WITH CONCRETE, AND THEN FILLING THE ENTIRE PIPE WITH GROUT. REMOVAL OF ANY UTILITIES WILL REQUIRE THAT ALL TRENCHES BE BACKFILLED PER THE SPECIFICATIONS WITH APPROPRIATE TESTS BY THE GEOTECHNICAL ENGINEER TO VERIFY COMPACTION VALUES.

**SITE FENCING NOTES:**

1. CONTRACTOR SHALL PROVIDE A CONSTRUCTION FENCE AROUND THE ENTIRE AREA OF DEMOLITION AND CONSTRUCTION, INCLUDING ALL STAGING, STORAGE, CONSTRUCTION OFFICE AND LAYDOWN AREAS.
2. FENCE LOCATION MAY BE ADJUSTED FROM TIME TO TIME AS CONSTRUCTION PROGRESSES TO EXCLUDE SOME AREAS WHERE CONSTRUCTION WORK IS NOT BEING DONE AND THE AREA IS NOT OBJECTIONABLE IN VISUAL APPEARANCE, AT THE DISCRETION AND APPROVAL OF THE DISTRICT STAFF. CONSTRUCTION FENCE SHALL BE A MINIMUM OF 4 HIGH GALVANIZED CHAIN LINK.
3. CONSTRUCTION FENCE ADDRESSED IN THESE NOTES IS TO MEET MINIMUM SEPARATION REQUIREMENTS FROM CONSTRUCTION SITE AND THE CAMPUS. CONTRACTOR IS REQUIRED TO INSTALL ANY ADDITIONAL FENCING, BARRICADES OR OTHER SAFETY DEVICES NEEDED TO KEEP THE SITE SECURE & SAFE AT ALL TIMES.
4. ALL FENCING SHALL BE INSTALLED AT ONLY LOCATIONS DESIGNATED AND APPROVED BY DISTRICT PERSONNEL, WITH PARTICULAR CARE GIVEN SUCH THAT THE FENCING DOES NOT CREATE A TRAFFIC HAZARD OR NUISANCE, OR RESTRICT CAMPUS CIRCULATION & FIRE EXITING.

**GRADING & EARTHWORK NOTES:**

1. ALL PAVED AREAS ARE TO SLOPE A MINIMUM OF 1%. ACCESSIBLE STALLS AND LOADING ZONES ARE TO SLOPE AT A MAXIMUM OF 2% IN ANY DIRECTION AND ACCESSIBLE PATHWAYS ARE TO SLOPE AT A MAXIMUM OF 8.33%, WITH A MAXIMUM CROSS-SLOPE OF 2%. ANY AREAS ON THE SITE NOT CONFORMING TO THESE BASIC RULES DUE TO EXISTING CONDITIONS OR DISCREPANCIES IN THE DOCUMENTS ARE TO BE REPORTED TO THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH FORMWORK FOR CURBS AND/OR FLATWORK.
2. CONTRACTOR SHALL DETERMINE EARTHWORK QUANTITIES BASED ON THE TOPOGRAPHIC SURVEY, THE SOILS INVESTIGATION AND THE PROPOSED SURFACE GRADES AND BASE THE BID ACCORDINGLY. ANY DIFFERENCES BETWEEN THE STATE, IN WHICH THE PROJECT SITE IS DELIVERED TO THE CONTRACTOR AND THESE DOCUMENTS SHOULD BE NOTED TO THE CIVIL ENGINEER.
3. ALL FILL SHALL BE COMPACTED PER THE CONSTRUCTION SPECIFICATIONS AND THE CONTRACTOR SHALL COORDINATE AND COMPLY WITH THE OWNER'S TESTING AGENCY TO TAKE THE APPROPRIATE TESTS TO VERIFY COMPACTION VALUES.
4. IMPORT SOILS MUST MEET THE REQUIREMENTS OF THE CONSTRUCTION SPECIFICATIONS.
5. COORDINATE THE PLACEMENT OF ALL SLEEVES FOR LANDSCAPE IRRIGATION WATER AND CONTROL WIRING AND STREET LIGHTING PRIOR TO THE PLACEMENT OF ANY ASPHALT, BASECOURSE OR CONCRETE SURFACING. SEE LANDSCAPE AND SITE ELECTRICAL DRAWINGS.
6. DO NOT ADJUST GRADES ON THIS PLAN WITHOUT PRIOR WRITTEN APPROVAL OF ARCHITECT & ENGINEER.
7. SPOT ELEVATIONS ARE TO FINISHED SURFACE.
8. TOP OF CONCRETE CURBS ARE 0.50 ABOVE TOP OF PAVING ELEVATIONS, U.N.O.
9. ROUGH GRADING TO BE WITHIN 0.1' AND FINISH GRADES ARE TO BE WITHIN 0.05'.
10. SUBGRADES SHALL BE PROOF ROLLED, OR AS INSTRUCTED PER THE CONSTRUCTION SPECIFICATIONS.
11. CONTRACTOR TO GRADE LANDSCAPED (NON PAVED) AREAS TO A FINISH GRADE OF 8" BELOW PROPOSED FINISH GRADE SHOWN ON THE GRADING PLANS. DISTRICT WILL INSTALL TOP 4" BENCHES OF TOPSOIL AND PERFORM FINISH GRADING. CONTRACTOR TO GRADE PLANTER & LANDSCAPED AREAS (NON PAVED AREAS ADJACENT TO BUILDINGS) TO FINISH GRADE 2" BELOW FINISH FLOOR OF BUILDING. DISTRICT TO INSTALL FINAL FILL MATERIAL AND INSTALL IRRIGATION SYSTEMS.
12. AFTER STAKING FOR HORIZONTAL CONTROL CONTRACTOR SHALL FIELD CHECK ALL ELEVATIONS MARKED WITH (d) AND REPORT ANY DISCREPANCIES GREATER THAN 0.05 TO ARCHITECT.
13. ALL EXISTING UTILITY STRUCTURES WITHIN THE AREA OF WORK SHALL HAVE THE LIDS, GRATES, COVERS, ETC. ADJUSTED TO BE FLUSH WITH FINISHED GRADES. CONTRACTOR SHALL IDENTIFY ALL SUCH ITEMS BY USE OF THESE PLANS AND THOROUGH FIELD INVESTIGATION.
14. GEOTECHNICAL CONSULTANT TO BE NOTIFIED OF DELIVERY OF ALL IMPORTED SOILS TO SITE FOR HIS/HER INSPECTION AND APPROVAL PRIOR TO PLACING BY CONTRACTOR.

**EARTHWORK QUANTITY NOTES:**

1. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE QUANTITIES OF ALL FORMS OF EARTHWORK ON THIS PROJECT AND BASING THE BID ON THOSE QUANTITIES WITH FULL KNOWLEDGE THAT ADDITIONAL PROCESSES, INCLUDING ENGINEERING, AND QUANTITIES ARE ALSO TO BE INCLUDED IN THE BID PER THE FOLLOWING NOTES.
2. THE CONTRACTOR SHALL MAKE AN INITIAL DETERMINATION OF THE QUANTITIES, BASED ON A DETAILED SITE VISIT, THE TOPOGRAPHIC SURVEY, THE GEOTECHNICAL REPORT, THE FINISH GRADES SHOWN ON THESE DRAWINGS, THE SIZE AND EXTENT OF FOOTINGS, THE PREPARATION AND MATERIALS USED FOR BUILDING SLABS, PAVEMENT SECTIONS, AND THE SIZE AND DEPTH OF UTILITY TRENCHES, INCLUDING THE UTILITY CONTRACTORS ANTICIPATED RE-USE OF EXISTING MATERIAL FOR BACKFILL IF ANY.
3. THE CONTRACTOR SHALL MEET THE GRADES SHOWN ON THE DRAWINGS, ADJUSTING THE AMOUNT OF IMPORT OR EXPORT AS REQUIRED TO DO SO. NO ASSUMPTIONS SHOULD BE MADE ABOUT THE SITE BALKANING, NO ADJUSTMENTS TO THE GRADES SHALL BE PERMITTED UNLESS SPECIFICALLY APPROVED BY THE ARCHITECT OR WRITING AFTER THE IMPACT OF ANY GRADE CHANGES IMPACT TO RAMPS, STAIRS, WORK BY OTHERS, ETC.) HAS BEEN THOROUGHLY REVIEWED BY THE ARCHITECT. WHEN PREPARING THE EARTHWORK BIDS, DO NOT ASSUME ANY CHANGES TO THE FINISHED GRADES SHOWN ON THESE DRAWINGS WILL BE PRIORITIZED.
4. THE EARTHWORK SPECIFICATIONS AND GEOTECHNICAL REPORT HAVE SPECIFIC REQUIREMENTS FOR BRIGGING FILL MATERIAL ONTO THE SITE (IMPORT) SINCE THE EXISTING SOILS ARE NOT SUITABLE FOR FILL MATERIAL IN CERTAIN AREAS. THE EARTHWORK SPECIFICATIONS AND GEOTECHNICAL REPORT MAY IDENTIFY ALTERNATIVES THAT ALLOW TREATMENT OF EXISTING SOILS TO MINIMIZE IMPORT. HOWEVER, MEETING THE GRADES SHOWN ON THESE DRAWINGS MUST ALSO BE CONSIDERED WHEN DETERMINING THE METHOD.
5. AFTER THE BID IS AWARDED THE CONTRACTOR SHALL SUBMIT A DETAILED EARTHWORK HANDLING PLAN THAT SHOWS THE INTENT AND LOCATIONS OF EARTH MOVEMENT AND QUANTITIES OF CUT, FILL, IMPORT AND EXPORT AS THE PROJECT WAS BID. PROPOSING ALTERNATIVE PLANS THAT MAY IDENTIFY GRADE ADJUSTMENTS TO MINIMIZE THE DISTANCE SOIL IS MOVED OR TO MINIMIZE IMPORT OR EXPORT WILL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF PREPARING AN EARTHWORK PLAN AS BID.

**GENERAL UTILITY SYSTEM NOTES:**

1. ALL TRENCHES SHALL BE BACKFILLED PER THE SPECIFICATIONS WITH APPROPRIATE TESTS TO VERIFY COMPACTION VALUES.
2. CONTRACTOR SHALL STAKE LOCATION OF ABOVE GROUND UTILITY EQUIPMENT (HYDRANTS, TRANSFORMERS, ETC) AND MEET WITH THE APPROPRIATE GOVERNMENTAL AUTHORITY AND PROPER UTILITY AUTHORITY TO REVIEW LOCATION PRIOR TO INSTALLATION. THE APPROPRIATE GOVERNMENTAL AUTHORITY AND PROPER UTILITY AUTHORITY MUST SPECIFICALLY AGREE WITH LOCATION PRIOR TO PROCEEDING WITH THE INSTALLATION.
3. CONTRACTOR SHALL VERIFY (WHETHER NECESSARY) SIZE, MATERIAL, LOCATION AND DEPTH OF ALL SYSTEMS THAT ARE TO BE CONNECTED TO OR CROSSED PRIOR TO THE TRENCHING OR INSTALLATION OF PROPOSED UTILITIES, AND INFORM ENGINEER OF ANY CONFLICTS BEFORE PROCEEDING WITH WORK.
4. CATHODIC PROTECTION IS REQUIRED ON ALL METALLIC FITTINGS AND ASSEMBLIES THAT ARE IN CONTACT WITH THE SOIL. CONTRACTOR IS RESPONSIBLE FOR FULLY ENGINEERING AND INSTALLING THIS SYSTEM AND COORDINATE ANODE AND TEST STATION LOCATIONS WITH OWNER'S ENGINEER. SEE PROJECT SPECIFICATIONS FOR ADDITIONAL CORROSION PROTECTION REQUIREMENTS.
5. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES, INVERTS AND LOCATIONS PRIOR TO BEGINNING ANY WORK ON THIS SITE.
6. ALL DRAINAGE STRUCTURES LOCATED IN VEHICULAR TRAFFIC AREAS SHALL HAVE TRAFFIC RATED COVERS AND BOLT-DOWN GRATINGS. ALL DRAINAGE STRUCTURES IN PEDESTRIAN ACCESSIBLE AREAS SHALL HAVE ADA APPROVED BOLT-DOWN GRATINGS.
7. ALL UTILITY STRUCTURES WITHIN THE AREA OF WORK SHALL HAVE THE LIDS, GRATES, COVERS, ETC. ADJUSTED TO BE FLUSH WITH FINISHED GRADES. CONTRACTOR SHALL IDENTIFY ALL SUCH ITEMS BY USE OF THESE PLANS AND FIELD INVESTIGATION.
8. SEE LANDSCAPE LAYOUT PLANS FOR IRRIGATION SLEEVE LOCATIONS.
9. ALL EXISTING UTILITY STRUCTURES (CLEANOUTS, VALVES, BOXES, MANHOLES, CBS, ETC.) SHALL BE RAISED TO FINAL FINISH GRADE AND COMPLETED WITH THE NECESSARY LABOR AND MATERIALS TO BE IN ACCORDANCE WITH DETAILS SHOWN ON THESE PLANS.
10. CLEANOUTS, CATCH BASINS, MANHOLES AND AREA DRAINS ARE TO BE ACCURATELY LOCATED BY THEIR RELATIONSHIP TO THE BUILDING, FLOORING, BUILDING UTILITIES, AND/OR CURB VAYOUT. NOT BY THE LENGTH OF PIPE SPECIFIED ON THE DRAWINGS, WHICH IS APPROXIMATE.

**GENERAL UTILITY SYSTEM NOTES (Cont.):**

11. SEE ELECTRICAL PLANS FOR SITE ELECTRICAL WORK. ADVISE ENGINEER OF ANY CONFLICTS WITH OTHER UTILITIES PRIOR TO BEGINNING WORK.
12. COMPLETE SYSTEMS ALL UTILITY SYSTEMS ARE DELINEATED IN A SCHEMATIC MANNER ON THESE PLANS. CONTRACTOR IS TO PROVIDE ALL FITTINGS, ACCESSORIES & WORK NECESSARY TO COMPLETE THE UTILITY SYSTEM SO THAT IT IS FULLY FUNCTIONING FOR THE PURPOSE INTENDED.
13. SEE SPECIFICATION SECTION 01300 FOR SUBMITTAL REQUIREMENTS OF UTILITY COMPONENTS.

**SANITARY SEWER NOTES:**

1. INSTALL DETECTABLE METALIZED WARNING TAPE APPROXIMATELY 18" BELOW THE SURFACE IN NON-PAVED AREAS, AND AT BOTTOM OF BASECOURSE FOR PAVED AREAS. GREEN, IMPRINTED WITH "CAUTION SANITARY SEWER LINE BELOW, CALPCO TYPE 2 OR EQUAL.
2. PUBLIC AND PRIVATE SANITARY SEWER MAIN AND SERVICE LINE 4-INCH THROUGH 8-INCH SHALL BE POLYVINYL CHLORIDE (PVC) SDR 35 SEWER PIPE.
3. WHERE CONNECTION IS TO BE MADE TO AN EXISTING SEWER OR STRUCTURE, SAID EXISTING SEWER OR STRUCTURE SHALL BE UNCOVERED AND CHECKED FOR LOCATION AND ELEVATION PRIOR TO STAKING NEW SEWER DEPTH AND LOCATION. ANY DISCREPANCY BETWEEN THE PLANS AND FIELD INFORMATION SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.
4. ALL SANITARY SEWER DESIGNED AT 1% OR FLATTER SHALL BE STAKED BY A CIVIL ENGINEER OR LAND SURVEYOR.
5. REFER TO SANITARY SEWER SPECIFICATIONS FOR LABOR AND MATERIAL, TESTING, AND QUALITY CONTROL REQUIREMENTS.
6. MINIMUM SLOPE FOR SITE SANITARY SEWER PIPES SHALL BE PER CURRENT UFG REQUIREMENTS:  
4" @ 2%  
6" @ 1%  
8" & LARGER @ 0.5%

**STORM DRAIN NOTES:**

1. INSTALL DETECTABLE METALIZED WARNING TAPE APPROXIMATELY 18" BELOW THE SURFACE IN NON-PAVED AREAS, AND AT BOTTOM OF BASECOURSE FOR PAVED AREAS. GREEN, IMPRINTED WITH "CAUTION STORM DRAIN LINE BELOW, CALPCO TYPE 2 OR EQUAL.
2. PAINT THE TOP OF THE CURBS ADJACENT TO EACH CATCH BASIN INSTALLED UNDER THE WORK OR ADJACENT TO THIS SITE WITH THE WORDS "NO DUMPING - DRAINS TO RAY". WORDING TO BE BLUE 4" HIGH LETTERS ON A PARTED WHITE BACKGROUND.
3. INSTALL ADA APPROVED GRATINGS ON ALL DRAINAGE STRUCTURES WITHIN PEDESTRIAN ACCESSIBLE PAVED AREAS. INSTALL BOLT-DOWN GRATINGS ON ALL DRAINAGE STRUCTURES.
4. WHERE CONNECTION IS TO BE MADE TO AN EXISTING SEWER OR STRUCTURE, SAID EXISTING SEWER OR STRUCTURE SHALL BE UNCOVERED AND CHECKED FOR LOCATION AND ELEVATION PRIOR TO STAKING NEW SEWER DEPTH AND LOCATION. ANY DISCREPANCY BETWEEN THE PLANS AND FIELD INFORMATION SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.
5. REFER TO STORM SEWER SPECIFICATIONS FOR LABOR AND MATERIAL, TESTING AND QUALITY CONTROL REQUIREMENTS.
6. MINIMUM SLOPE FOR SITE STORM DRAIN PIPES SHALL BE:  
4" @ 2%  
6" @ 1%  
8" & LARGER @ 0.5%  
UNLESS INDICATED OTHERWISE.
7. PRIVATE STORM DRAIN LINE 4-INCH THROUGH 12-INCH WITH A MINIMUM OF TWO (2) FEET OF COVER IN NON-TRAFFIC AREAS SHALL BE POLYVINYL CHLORIDE (PVC) SDR 35.
8. PRIVATE STORM DRAIN LINE 8-INCH THROUGH 12-INCH WITH NOT LESS THAN THREE (3) FEET OF COVER IN VEHICULAR TRAFFIC AREAS SHALL BE POLYVINYL CHLORIDE (PVC) 300, RATED 150 PSI CLASS PIPE.

**WATER SYSTEM NOTES:**

1. INSTALL DETECTABLE METALIZED WARNING TAPE APPROXIMATELY 18" BELOW THE SURFACE IN NON-PAVED AREAS, AND AT BOTTOM OF BASECOURSE FOR PAVED AREAS. BLUE, IMPRINTED WITH "CAUTION WATER-LINE BELOW, CALPCO TYPE 2 OR EQUAL.
2. PROVIDE THRUST BLOCKS OR COMPARABLE RESTRAINTS PER THE LOCAL WATER AGENCY. AT BENDS OF 22 1/2 DEGREES OR GREATER (HORIZONTAL AND VERTICAL, AT SIZE CHANGES AND AT FIRE HYDRANTS PER CITY STANDARD. AWWA C600, SECTION 3.8 UNLESS NOTED OTHERWISE.
3. PROVIDE MINIMUM OF 3 FEET OF COVER OVER WATER LINES, UNLESS NOTED OTHERWISE.
4. MAINTAIN PUBLIC WATER LINES 10' AWAY FROM PUBLIC SANITARY SEWER LINES.
5. WHERE WATER LINES HAVE TO CROSS SANITARY SEWER LINES, DO SO AT A 90 DEGREE ANGLE AND WATER LINES SHALL BE MINIMUM OF 12" ABOVE TOP OF SANITARY SEWER MAIN AND UNDERLINE JOINTS SHALL BE A MINIMUM OF 10 FEET FROM SANITARY SEWERS.
6. WATER LINES ARE SHOWN SCHEMATICALLY. CONTRACTOR SHALL IDENTIFY EACH ANGLE AND/OR BEND WITH APPROPRIATE FITTINGS THAT MAY BE REQUIRED TO ACCOMPLISH THE INTENDED DESIGN.
7. BOTTOM OF BACKFLOW PREVENTOR ASSEMBLY TO BE INSTALLED NO GREATER OR LESS THAN 12" FROM FINISH GRADE.
8. THE UNDERGROUND DOMESTIC WATER SYSTEM INSTALLER SHALL OBTAIN ALL APPROVALS AND PERMITS PRIOR TO ORDERING MATERIALS, FABRICATING SYSTEMS OR ANY INSTALLATION.
9. CONTRACTOR TO PORTHOLE AND VERIFY LOCATION, DEPTH & SIZE OF P.O.C. TO EXISTING WATERMAIN PRIOR TO INSTALLING ANY NEW WATERMAIN AND ADVISE THE OWNER ENGINEER OF ANY FIELD DISCREPANCIES THAT WILL IMPACT THE DESIGN.
10. REFER TO DOMESTIC WATER SPECIFICATIONS FOR LABOR AND MATERIAL, TESTING AND QUALITY CONTROL REQUIREMENTS.

11. PUBLIC AND PRIVATE WATER MAIN AND WATER SERVICE LINE 4-INCH THROUGH 16-INCH SHALL BE POLYVINYL CHLORIDE (PVC) AND SHALL MEET AWWA C900, RATED FOR 200 PSI CLASS PIPE WITH EPOXY COATED DUCTILE IRON FITTINGS AND FUSION EPOXY COATED GATE VALVES.
12. ALL WATER LINES 3" OR SMALLER SHALL BE TYPE E COPPER WITH SILVER BRAZED JOINTS. CONTRACTOR TO VERIFY PRESSURES FROM EXISTING LINES ARE ADEQUATE TO SERVICE BUILDINGS AS SPECIFIED BY THE PLUMBING PLANS.

**FIRE PROTECTION NOTES:**

1. THE UNDERGROUND FIRE PROTECTION SYSTEM SHOWN ON THIS DRAWING IS SCHEMATIC AND IS NOT INTENDED TO BE AN INSTALLATION DRAWING. THE UTILITY DRAWING IN THIS SET OF DOCUMENTS SHALL NOT BE USED AS A BASE SHEET FOR SHOP DRAWINGS WITHOUT WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER.
2. THE UNDERGROUND FIRE PROTECTION SYSTEM INSTALLER SHALL PREPARE SHOP DRAWINGS SHOWING ALL INFORMATION REQUIRED BY THE LOCAL FIRE MARSHAL, INCLUDING LOCATION, TYPE AND NUMBER OF ANGLES, THRUST BLOCKS, VALVES, FIRE HYDRANTS, P.V.'S, FDCS, BACKFLOW ASSEMBLIES, FLEXIBLE CONNECTIONS, VAULTS, AND FLOW CALCULATIONS TO FIRE HYDRANTS AND SPRINKLER RESERS PER FIRE FLOW REQUIRED BY LOCAL FIRE DEPARTMENT.
3. SHOP DRAWINGS SHALL BE SUBMITTED TO THE DSA & ARCHITECT. THE RATING AGENCY AND THE PROJECT MANAGER, ALLOWING THE TIME FOR REVIEW AND ACCEPTANCE, PRIOR TO START OF WORK.
4. THE UNDERGROUND FIRE PROTECTION SYSTEM INSTALLER SHALL OBTAIN ALL APPROVALS AND PERMITS PRIOR TO ORDERING MATERIALS, FABRICATING SYSTEMS OR ANY INSTALLATION.
5. GENERAL CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS AND EQUIPMENT LOCATIONS. REFER LOCATIONS ARE SHOWN ON ARCHITECTURAL AND PLUMBING DRAWINGS AND ARE TO BE COORDINATED WITH ACTUAL FIELD CONDITIONS.
6. INSTALL MONITORED TAMPERS/WITCHES AT ALL P.V.'S AND VALVES ON BACKFLOW ASSEMBLIES.
7. CONTRACTOR TO USE CATHODIC PROTECTION FOR ALL UNDERGROUND FIRE PROTECTION SYSTEMS. FINAL LOCATION OF ANODES AND TEST STATIONS SHALL BE COORDINATED WITH ARCH. ENGINEER. CONTRACTOR MAY ASSUME THAT THE TEST STATIONS WILL BE WITHIN 10 FEET OF THE FITTING/BENING BEING CONNECTED TO.
8. BOTTOM OF BACKFLOW PREVENTOR ASSEMBLY TO BE INSTALLED NO GREATER OR LESS THAN 12" FROM FINISH GRADE.
9. MIN. 2' CLEARANCE FROM BACK OF CURB TO FFS, P.V.'S, AND FDC'S.

**GENERAL NOTES FOR UNDERGROUND FIRE SERVICE**

1. NPA 24 SEC. 7.2 ALL FERROUS METAL PIPE SHALL BE LINED, AND STEEL PIPE SHALL BE COATED AND WRAPPED WITH JOINTS FIELD-COATED AND WRAPPED AFTER ASSEMBLY, FOR BURIED PIPE. GALVANIZING, INTERNALLY OR EXTERNALLY, DOES NOT MEET THE REQUIREMENTS OF THIS SECTION.
2. NPA 24 SEC. 8.5.2 ALL BOLTED JOINTS ACCESSORIES SHALL BE CLEANED AND THOROUGHLY COATED WITH ASPHALT OR OTHER CORROSION RETARDING MATERIAL AFTER INSTALLATION.
3. NPA 24 SEC. 8.4.2.8 AFTER INSTALLATION, RODS, NUTS, BOLTS, WASHERS, CLAMPS, AND OTHER RESTRAINING DEVICES, EXCEPT THRUST BLOCKS, SHALL BE CLEANED THOROUGHLY COATED WITH A BITUMINOUS OR OTHER ACCEPTABLE CORROSION RETARDING MATERIAL.
4. NPA 24 SEC. 8.2.1 UNDERGROUND MAINS SHALL BE COMPLETELY FLUSHED TO REMOVE FOREIGN MATERIALS THAT MIGHT HAVE ENTERED THE MAIN DURING THE COURSE OF THE INSTALLATION PER TABLE 9-1.1 TO PRODUCE A VELOCITY OF 10 FT. PER SECOND IN PIPES. WITNESSED BY THE INSPECTOR OF RECORD. LOCAL FIRE JURISDICTION SHALL BE NOTIFIED OF DATE AND TIME OF TESTING SO THEY MAY OBSERVE TESTING WHEN DESIRED.
5. NPA 24 (1995) SEC. 8.9.3.1 ALL NEW PRIVATE UNDERGROUND FIRE SERVICE MAINS SHALL BE TESTED HYDROSTATICALLY AT NOT LESS THAN 200-PSI PRESSURE FOR A MINIMUM OF TWO HOURS. (WITNESSED BY THE INSPECTOR OF RECORD)
6. THE AMOUNT OF LEAKAGE IN BURIED PIPING SHALL BE MEASURED AT THE SPECIFIED TEST PRESSURE BY PUMPING FROM A CALIBRATED CONTAINER. FOR NEW PIPE, THE AMOUNT OF LEAKAGE AT THE JOINTS SHALL NOT EXCEED TWO QUARTS PER HOUR PER 100 GASKETS OR JOINTS RESPECTIVE OF PIPE DIAMETER. NO VISIBLE LEAKAGE SHALL BE ALLOWED IN ABOVE GROUND PIPING. (ALSO SEE SEC. 9.2.3.3 FOR ALLOWABLE LEAKAGE)
7. HYDROSTATIC TESTS SHOULD BE MADE BEFORE THE JOINTS ARE COVERED SO THAT ANY LEAKS MAY BE READILY DETECTED.
8. NPA 24 (1995) SEC. 8.2.1 BEFORE ASKING FINAL APPROVAL OF AN INSTALLATION BY THE INSPECTOR OF RECORD, THE INSTALLING COMPANY SHALL FURNISH A CONTRACTOR'S MATERIAL AND TESTS CERTIFICATE TO BE SUBMITTED TO ISA. A TYPICAL CERTIFICATE IS SHOWN IN FIGURE 9-9.2.1. THIS FORM SHALL BE GIVEN TO THE INSPECTOR OF RECORD (OR WHO WILL TURN IN FOR ISA RECORDS.
9. NPA 24 SEC. 8.4 THE DEPTH OF COVER OVER WATER PIPES SHALL BE NOT LESS THAN 2 1/2 FT. TO PREVENT MECHANICAL DAMAGE AND SHALL BE BURED A MINIMUM OF 1 FT. UNDER DRIVEWAYS.

**UNDERGROUND FIRE SERVICE TO FIRE HYDRANTS REQUIREMENTS:**

1. NPA 24 SEC. 1.4 THE UNDERGROUND FIRE SERVICE PLANS SHALL BE DRAWN TO SCALE BY THE UNDERGROUND FIRE PROTECTION SYSTEM INSTALLER AND SHALL INCLUDE ALL ESSENTIAL DETAILS SUCH AS:
  - A) SIZE AND LOCATION OF ALL WATER SUPPLIES.
  - B) SIZE AND LOCATION OF ALL PIPING, INDICATION, WHERE POSSIBLE, THE CLASS AND TYPE AND DEPTH OF EXISTING PIPE, THE CLASS AND TYPE OF NEW PIPE TO BE INSTALLED, AND THE DEPTH TO WHICH IT IS TO BE BURIED.
  - C) SIZE, TYPE AND LOCATION OF VALVES. INDICATE IF LOCATED IN PIT OR IF OPERATION IS BY POST INDICATOR OR KEY WRENCH THROUGH A CURB BOX. INDICATE THE SIZE, TYPE, AND LOCATIONS OF METERS, REGULATORS, AND CHECK VALVES.
  - D) SIZE AND LOCATION OF TIE-INS, SHOWING SIZE AND NUMBER OF OUTLETS AND IF OUTLETS ARE TO BE EQUIPPED WITH INDEPENDENT GATE VALVE.
  - E) SPRINKLER AND STAMPOPE RESERS TO BE SUPPLIED BY THE SYSTEM.
  - F) LOCATION OF FIRE TREATMENT CONNECTIONS, IF PART OF PRIVATE FIRE SERVICE MAIN SYSTEM INCLUDING DETAIL OF CONNECTIONS.
2. NPA 24 (95) SEC. 5.1.1 LARGE PRIVATE FIRE SERVICE MAINS SYSTEMS SHALL HAVE SECTIONAL CONTROLLING VALVES AT APPROPRIATE POINTS IN ORDER TO PERMIT SECTIONALIZING THE SYSTEM IN THE EVENT OF A BREAK, OR FOR THE MAKING OR REPAIRS OR EXTENSIONS.
3. NPA 24 SEC. 7.2 ALL FERROUS METAL PIPE SHALL BE LINED, AND STEEL PIPE SHALL BE COATED AND WRAPPED WITH JOINTS FIELD-COATED AND WRAPPED AFTER ASSEMBLY, FOR BURIED PIPE. GALVANIZING, INTERNALLY OR EXTERNALLY, DOES NOT MEET THE REQUIREMENTS OF THIS SECTION.
4. NPA 24 SEC. 8.5.2 ALL BOLTED JOINT ACCESSORIES SHALL BE CLEANED AND THOROUGHLY COATED WITH ASPHALT OR OTHER CORROSION RETARDING MATERIAL AFTER INSTALLATION.
5. NPA 24 SEC. 8.6.2.8 AFTER INSTALLATION, RODS, NUTS, BOLTS, WASHERS, CLAMPS, AND OTHER RESTRAINING DEVICES, EXCEPT THRUST BLOCKS, SHALL BE CLEANED AND THOROUGHLY COATED WITH A BITUMINOUS OR OTHER ACCEPTABLE CORROSION RETARDING MATERIAL.
6. NPA 24 SEC. 8.6.2 THRUST BLOCKS SHALL BE OF A CONCRETE MIX NOT LEANER THAN ONE PART CEMENT, TWO AND ONE-HALF PARTS SAND, AND FIVE PARTS STONE. THRUST BLOCKS SHALL BE PLACED BETWEEN UNDISTURBED EARTH AND THE FITTING TO BE RESTRAINED, AND SHALL BE OF SUCH BEARING AS TO ENSURE ADEQUATE RESISTANCE TO THE THRUST TO BE ENCOUNTERED. IN GENERAL, THRUST BLOCKS SHALL BE SO PLACED THAT THE JOINS WILL BE ACCESSIBLE FOR INSPECTION AND REPAIR.
- 7

















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SHEET TITLE  
 LANDSCAPE SITE PLAN  
 1st FLOOR

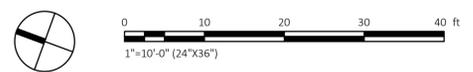
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 DPC 436

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 1 OF 11



**1**  
 L1.1 1ST FLOOR SITE PLAN



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**LANDSCAPE SITE PLAN  
 2nd FLOOR**

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DPC

PROJECT NUMBER

436

SHEET NUMBER

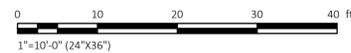
**L1.2**

2 OF 11



BALCONY PLANTER  
 - ±30 S.F.

**1**  
**L1.2** 2ND FLOOR SITE PLAN



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SHEET TITLE  
 LANDSCAPE SITE PLAN  
 4th FLOOR

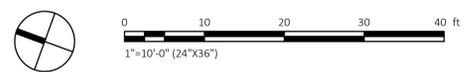
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SHEET NUMBER  
**L1.3**  
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1  
 L1.4 4TH FLOOR SITE PLAN



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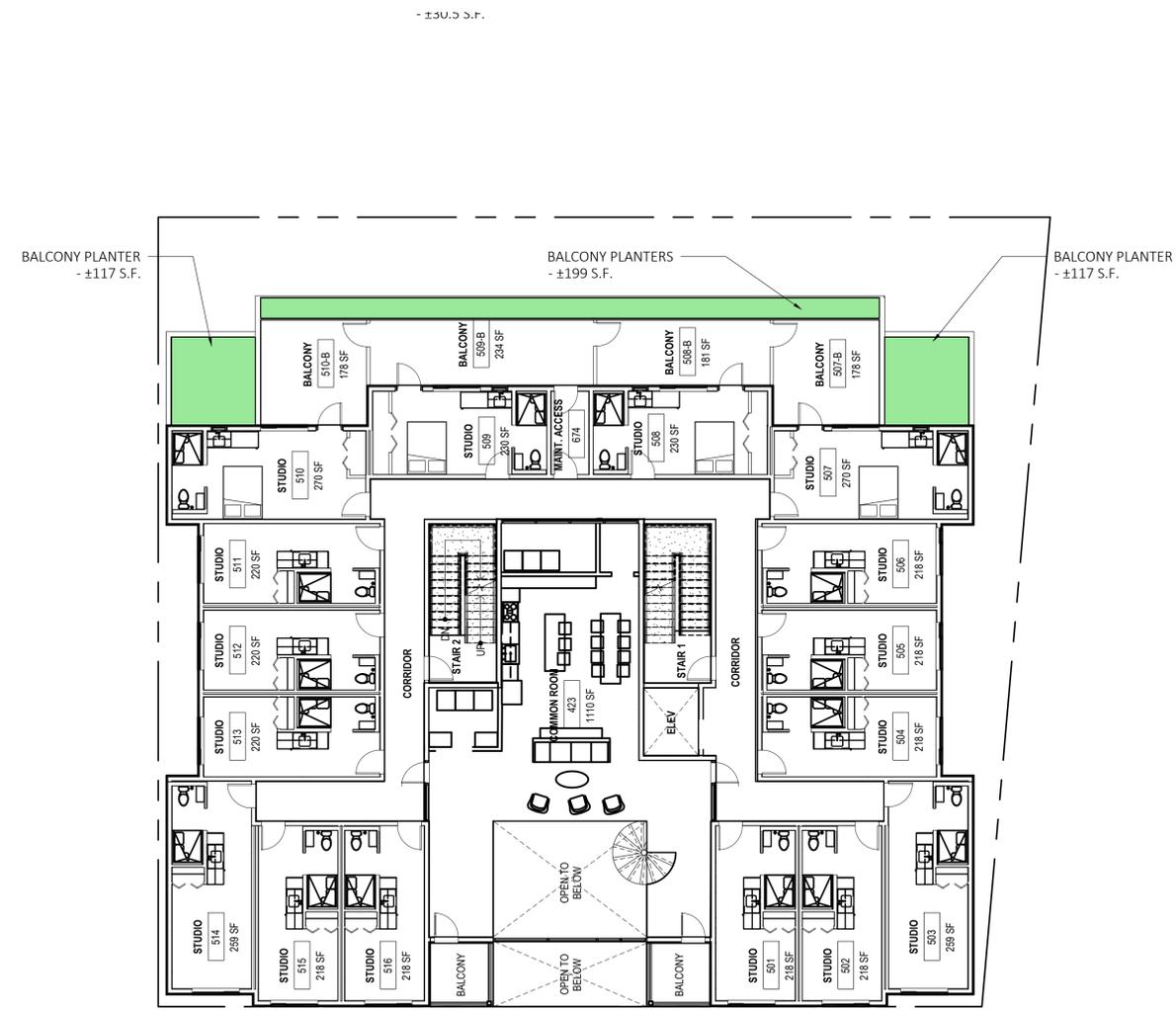
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SHEET TITLE  
 LANDSCAPE SITE PLAN  
 5th FLOOR

SCALE  
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SHEET NUMBER  
**L1.4**  
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1  
 L1.5 5TH FLOOR SITE PLAN



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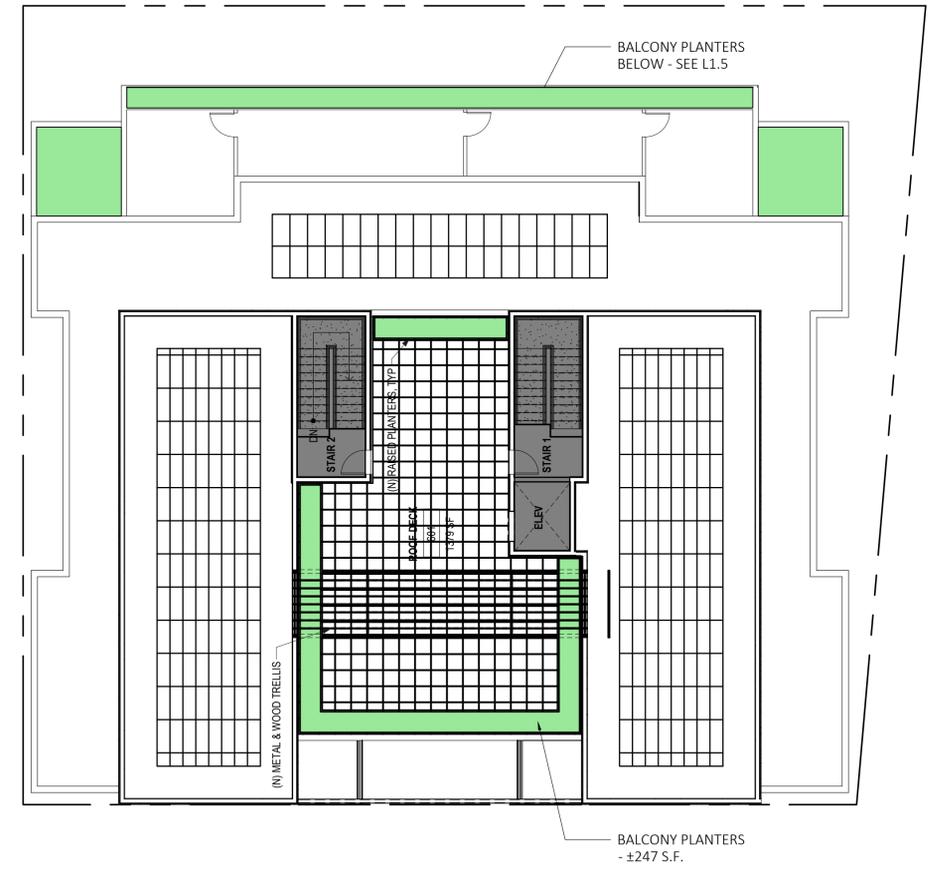
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SHEET TITLE  
 LANDSCAPE SITE PLAN  
 ROOF

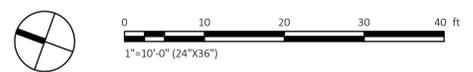
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SHEET NUMBER  
**L1.5**  
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**1**  
 L1.6 ROOF SITE PLAN



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SHEET TITLE  
**PLANTING PLAN  
1st FLOOR**

SCALE  
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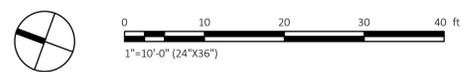
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SHEET NUMBER  
**L4.1**  
6 OF 11



PLANT SYMBOL CALLOUT:  
species abbreviation | number in this group or P.A.  
UMB CAL 2  
6-FT OC | 36" BOX  
spacing, if relevant | container size

**1**  
**L4.1** 1ST FLOOR SITE PLAN



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SHEET TITLE  
**PLANTING PLAN  
 2nd FLOOR**

SCALE  
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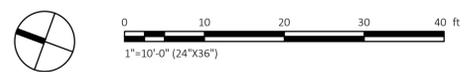
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**L4.2**  
 7 OF 11



SCA AEM 3 | 3' OC | 1 GAL  
 BEG BOL 2 | 18" OC | 1 GAL  
 PAS CAE 2 | 5 GAL

PLANT SYMBOL CALLOUT:  
 species abbreviation → UMB CAL  
 number in this group or P.A. → 2  
 spacing, if relevant → 6-FT OC  
 container size → 36"BOX

**1**  
**L4.2** 2ND FLOOR SITE PLAN



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SHEET TITLE  
**PLANTING PLAN  
 4th FLOOR**

SCALE  
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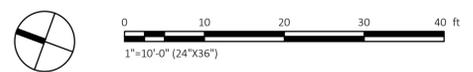
SHEET NUMBER  
**L4.3**  
 8 OF 11



LON SEM	1	PAS CAE	2	CAL FES	3	SCA AEM	3	LON SEM	1
	5 GAL		5 GAL	1' OC	1 GAL	3' OC	1 GAL		5 GAL

PLANT SYMBOL CALLOUT:  
 species abbreviation → number in this group or P.A.  
 UMB CAL 2  
 6-FT OC 36"BOX  
 spacing, if relevant → container size

**1**  
**L4.4** 4TH FLOOR SITE PLAN



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SHEET TITLE

**PLANTING PLAN  
5th FLOOR**

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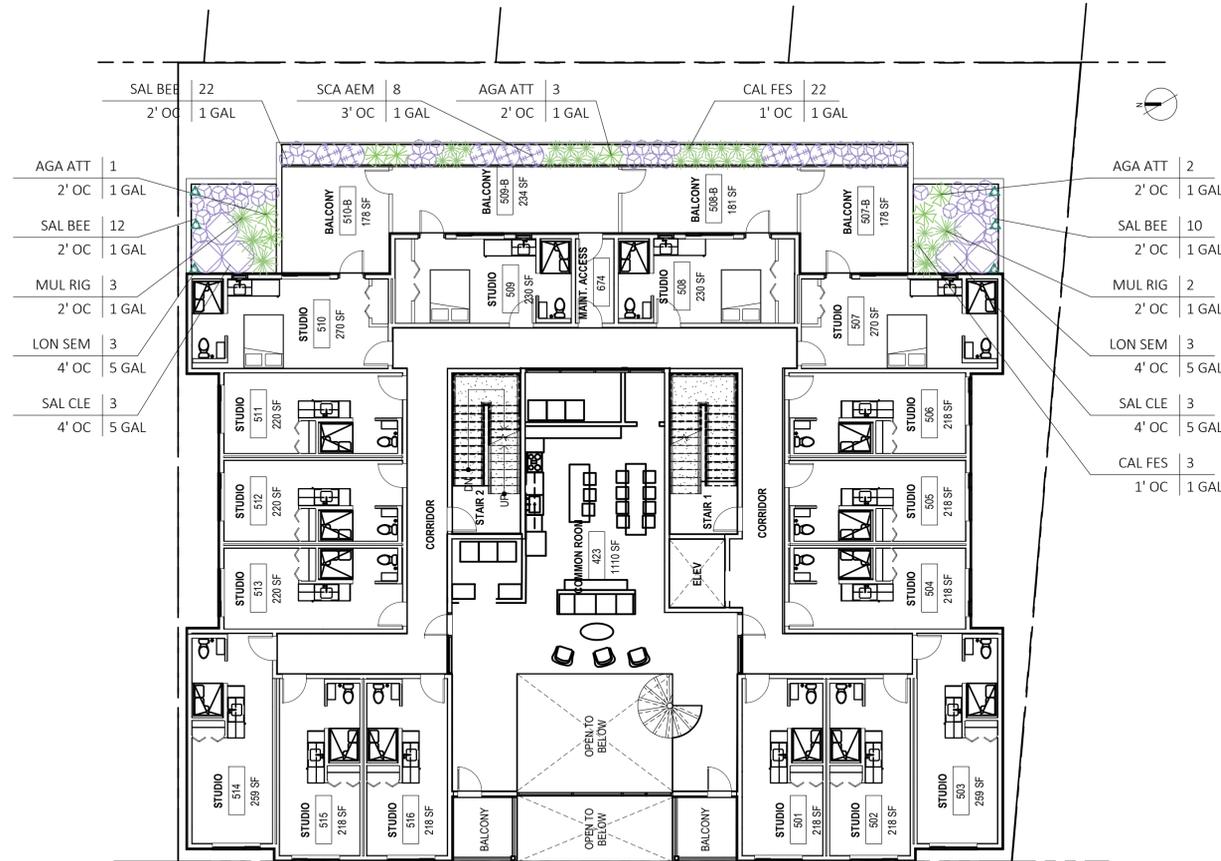
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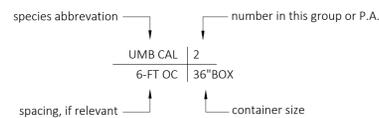
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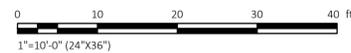
9 OF 11



PLANT SYMBOL CALLOUT:



**1**  
**L4.5** 5TH FLOOR SITE PLAN



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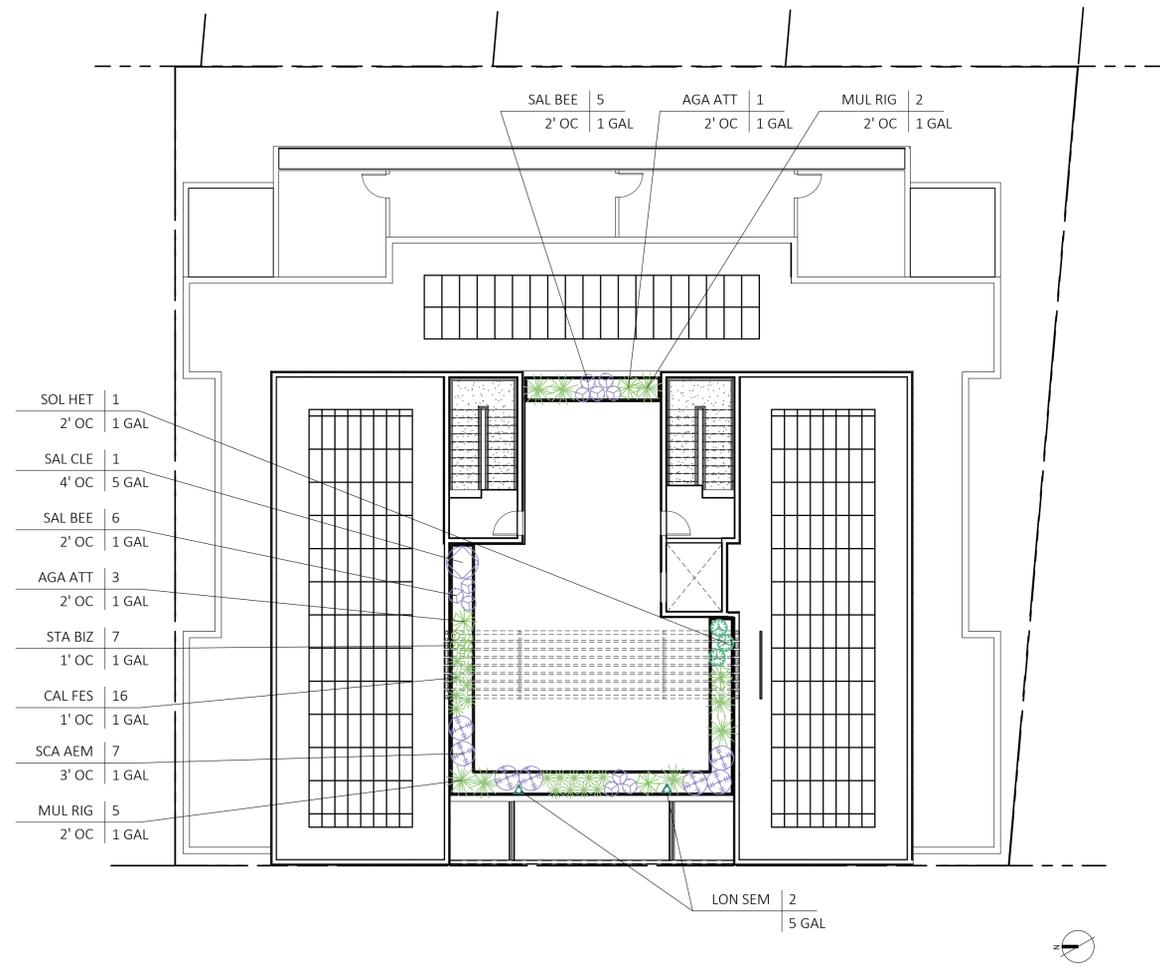
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SHEET TITLE  
**PLANTING PLAN  
ROOF**

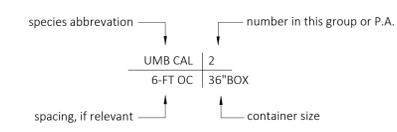
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SHEET NUMBER  
**L4.5**  
10 OF 11



PLANT SYMBOL CALLOUT:



**1**  
**L4.6** ROOF SITE PLAN



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SHEET TITLE

**PLANTING PALETTE  
PLANTING LIST  
& MWELO CALCULATIONS**

SCALE

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DRAWN

DPC

PROJECT NUMBER

436

SHEET NUMBER

**L4.6**

11 OF 11

**TREES**



**GLE TRI**  
GLEDITSIA TRICANTHOS 'MORAINE'  
MORAINE HONEYLOCUST

**PLANT LIST**

SYMBOL	SCIENTIFIC NAME	COMMON NAME	FORM	MAX HT	MAX SP	SUN	PS	SHD	WATER	36"	24"	#15	#5	#1
<b>TREES</b>														
GLE TRI	GLEDITSIA TRICANTHOS 'MORAINE'	MORAINE HONEYLOCUST	TREE	50'	50'	X			Low				6	
<b>SHRUB</b>														
MIM AUR	MIMULUS AURANTIACUS	STICKY MONKEY FLOWER	SHRUB	2-3'	2-3'	X	X	X	V. Low				33	
ROS CAL	ROSA CALIFORNICA	CALIFORNIA ROSE	SHRUB	3-10'	3-10'	X	X	X	Low				3	
SAL BEE	SALVIA 'BEE'S BLISS'	CREEPING SAGE	SHRUB	8"	1'-3'	X			Low				55	
SAL CLE	SALVIA CLEVELANDII	BLUE SAGE	SHRUB	4-5'	4-5'	X			Low				13	
SOL HET	SOLLYA HETEROPHYLLA	AUSTRALIAN BLUEBELL CREEPER	SHRUB	3-6'	3-6'	X	X		Low				6	
<b>PERENNIALS</b>														
BEG BOL	BEGONIA BOLIVIENSIS 'SANTA CRUZ'	TRAILING BEGONIA	PERENNIAL	1-2'	1-2'	X	X	X	Med				5	
SCA AEM	SCAEOVOLA AEMULA	FAN FLOWER	PERENNIAL	2'	2-3'	X			Low				24	
STA BYZ	STACHYS BYZANTINA	LAMB'S EARS	PERENNIAL	1-2'	1-2'	X	X	X	Low				7	
<b>SUCCULENTS</b>														
AGA ATT	AGAVE ATTENUATA	FOX TAIL AGAVE	SUCCULENT	2-3	2-3	X	X		Low				25	
<b>GRASSES AND SEDGES</b>														
CAL FES	FESTUCA CALIFORNICA	CALIFORNIA FESCUE	GRASS	2-3	1-2	X	X		Low				62	
MUL RIG	MUHLENBERGIA RIGENS	DEER GRASS	GRASS	4	4	X	X		Low				19	
<b>VINES</b>														
LON SEM	LONICERA SEMPERVIRENS 'MAGNIFICA'	TRUMPET HONEYSUCKLE	VINE	8-15'	3-6'	X	X		Med				10	
PAS CAE	PASSIFLORA CAERULEA	PASSION VINE	VINE	10-25'	3-6'	X	X		Med				4	
TRA JAS	TRACHELOSPERMUM JASMINOIDES	STAR JASMINE	VINE	3-6'	3-6'	X	X	X	Med				15	

**SHRUBS**



**MIM AUR**  
MIMULUS AURANTIACUS  
STICKY MONKEY FLOWER



**ROS CAL**  
ROSA CALIFORNICA  
CALIFORNIA ROSE



**SAL BEE**  
SALVIA 'BEE'S BLISS'  
CREEPING SAGE



**SAL CLE**  
SALVIA CLEVELANDII  
BLUE SAGE



**SOL HET**  
SOLLYA HETEROPHYLLA  
AUSTRALIAN BLUEBELL CREEPER

**PERENNIALS**



**BEG BOL**  
BEGONIA BOLIVIENSIS 'SANTA CRUZ'  
TRAILING BEGONIA



**SCA AEM**  
SCAEOVOLA AEMULA  
FAN FLOWER



**STA BYZ**  
STACHYS BYZANTINA  
LAMB'S EARS

**SUCCULENTS**



**AGA ATT**  
AGAVE ATTENUATA  
FOX TAIL AGAVE

**GRASSES**



**FES CAL**  
FESTUCA CALIFORNICA  
CALIFORNIA FESCUE



**MUH RIG**  
MUHLENBERGIA RIGENS  
DEER GRASS

**VINES**



**LON SEM**  
LONICERA SEMPERVIRENS 'MAGNIFICA'  
TRUMPET HONEYSUCKLE



**PAS CAE**  
PASSIFLORA CAERULEA  
PASSION VINE



**TRA JAS**  
TRACHELOSPERMUM JASMINOIDES  
STAR JASMINE

**MWELO CALCULATIONS:**

Flow-Through Planter Areas:  
Area: 450 s.f. = 4.5 gpm

Low Water Use On-grade Planting Areas:

Area: 362 s.f. = 1 gpm

Tree/Vine Planting (@25 s.f./tree & 4 s.f./vine)  
Area: 190 s.f. = 4 gpm\*

On-Structure Planting (Light-Weight Soil Mix)  
Area: 1,143 s.f. = 11.5 gpm

Total area of planting: 2,688 s.f.

Max. Applied Water Allowance  
=  $E_{To} \times 0.62 \times [0.7 \times \text{Landscape Area}]$   
MAWA =  $41.8 \times 0.62 \times [0.7 \times 2,145]$   
= 38,913 gals/year

Est. Total Water Use  
=  $E_{To} \times 0.62 \times \text{Plant Factor} \times \text{Landscape Area}$

Irrigation Efficiency  
 $ETWU = 41.8 \times 0.62 \times [(0.2 \times 450)/0.75] = 3,110 \text{ gals/year} +$   
 $41.8 \times 0.62 \times [0.2 \times 362/0.85] = 1,595 \text{ gals/year} +$   
 $41.8 \times 0.62 \times [0.2 \times 190/0.65] = 1,515 \text{ gals/year} +$   
 $41.8 \times 0.62 \times [0.2 \times 1143/0.5] = 11,848 \text{ gals/year}$   
= 18,065 gals/year

\*during establishment period only