

APPLICABLE CODES

1. The Work shall comply with the California Building Standards Code (Title 24), 2019

- Part 1 - California Building Standards Administrative Code
- Part 2 - California Building Code
- Part 3 - California Electrical Code
- Part 4 - California Mechanical Code
- Part 5 - California Plumbing Code
- Part 6 - California Energy Code
- Part 9 - California Fire Code
- Part 11 - California Green Building Standards Code (CALGreen Code)
- Part 12 - California Referenced Standards Code

2. The Work shall comply with the applicable Codes, Ordinances and Regulations of the City of Santa Rosa

3. The designs depicted in these construction documents comply substantially with the requirements set forth in Part 6 of Title 24, the California Energy Code. Mandatory energy savings features for this project, whether or not they are shown or stated in these documents, must be incorporated into the project as outlined in the Title 24 Energy Compliance documentation prepared for this project.

RECEIVED
December 21, 2022
E07561

1650 West Steele Lane Apartments



SHEET INDEX

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PROJECT TEAM

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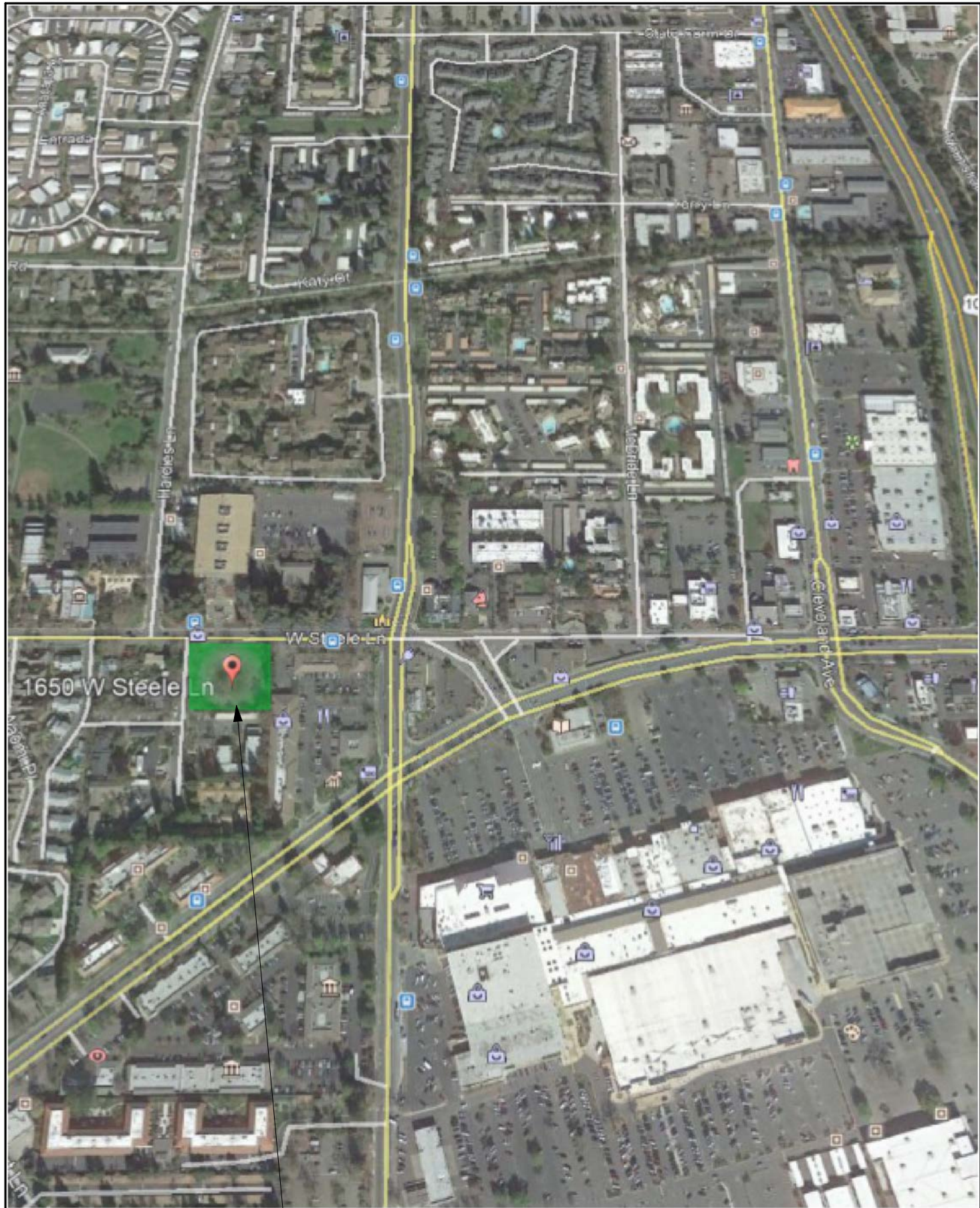
FIRE DEPT. NOTES

- Notes:**
1. Provide KNOX box as required by Fire Department at secured points of access to the project.
 2. Provide address identification visible from West Steele Lane and at driveway entry on Meadowbrook Court. Location and design to be approved by Fire Dept.
 3. Buildings I, II, III, IV are 30'-0" or less from Grade Plane to top of structural plate. Per, CFC D105, aerial access is not required.
 4. See Sheet A1.2 for diagram of hose pull and emergency vehicle access, perCFC Appendix D 103. Hose pull and fire apparatus access is provided within 150' of all portions of exterior walls at the ground floor and an emergency vehicle turn-around is not required.

Fire Department Plan Submittals

1. Gates and Barricades across fire apparatus access roads
2. Wayfaring and accessible signage
3. NFPA 13 sprinklers
4. NFPA 14 standpipe system
5. NFPA 24 private fire underground system
6. NFPA 72 fire alarm system

VICINITY MAP



PROJECT SITE

PROJECT DATA

LEVEL 1- (9) UNITS- HEATED SPACE LOBBY/ LAUNDRY- HEATED SPACE OFFICE- HEATED SPACE COVERED BREEZEWAY GARAGE Building I- tuck under GARAGE Building III - tuck under GARAGE Building IV- automated parking TOTAL SF	12,224 SF 942 SF 420 SF 1,992 SF 1,470 SF 890 SF 2,282 SF 16,866 SF
LEVEL 2- (14) UNITS- HEATED SPACE	12, 418 SF
LEVEL 3- (13) UNITS- HEATED SPACE	11, 586 SF
TOTAL BUILDING CONSTRUCTION AREA:	43,742 SF

State Density Bonus: Gov. Code 65915

- Base density: .98 acre x 18 units/ acre = 17.6 units; round up to 18
(9) bonus density market rate units are desired
150% state density bonus is requested: 1.5 x 18 = 27 units
9 + 18 = 27 units
(3) very low income units are proposed for density bonus of 9 units
15% x 18 = 2.70, round up to 3 units
2 development incentives are requested:
• For reduction of rear yard setback to from 15' to 5' at parking structure
• For increase in height from 35' to 45'

- 15 market rate units + 3 below market rate units = 18 base density units
18 base density units + 9 density bonus market rate units = 27 units
3 affordable units +
15 base density market rate units +
9 state bonus density units
= 27 total units

Supplemental Density Bonus: Santa Rosa City Code 20-31.070

- 36 units desired - 27 units available with state density bonus = 9 units
50% x 18 (base density) = 9 units
27 units + 9 units = 36 units
50% supplemental density bonus requested (100% -50% = 50%)
Table 3.2 - Eligible for 100% density bonus over base density of 18 units = 36 units

20-31.070, E	Eligibility Points	50% x 100 = 100 points
		50%

Propose 100 points from (1) very low income unit to add 8 supplemental density bonus units
Table 3.3 3.7% x 18 =.67, round up to 1 unit

Unit Mix	(1) 3 bedroom - very low income unit (per Gov. Code 65915) (1) 1 bedroom - very low income unit (per Gov. Code 65915) (1) 1 bedroom - very low income unit (per Gov. Code 65915) (1) 1 bedroom - very low income unit (per City Code 20-31.070) (15) market rate base density units (17) <u>Density Bonus Units</u> (36) units
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TOTAL

PARKING REQUIRED -
TABLE 3-6 DENSITY BONUSHOUSING DEVELOPMENT MAXIMUM PARKING RATIOS:

MARKET RATE UNITS (5) 1 BEDROOM UNITS (25) 2 BEDROOM UNITS (2) 3 BEDROOM UNITS 32 UNITS TOTAL	1.5/UNIT 1.5/UNIT 1.5/UNIT	= 7.5 STALLS = 37.5 STALLS = 3 STALLS = 48 STALLS
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AFFORDABLE UNITS (2) 1 BEDROOM UNITS (1) 2 BEDROOM UNIT (1) 3 BEDROOM UNIT 4 UNITS TOTAL REQUIRED	1/UNIT 1/UNIT 1/UNIT	= 2 STALLS = 1 STALLS = 1 STALLS = 4 STALLS
--	----------------------------	--

PARKING REQUIRED = 52 STALLS

PARKING PROVIDED: MARKET RATE UNITS (4) 1 BEDROOM UNITS (26) 2 BEDROOM UNITS (2) 3 BEDROOM UNITS 30 UNITS TOTAL	1.0 COVERED 1.0 COVERED 1.0 COVERED	= 4 STALLS = 26 STALLS = 2 STALLS = 32.0 STALLS
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AFFORDABLE UNITS: (3) 1 BEDROOM UNITS (1) 3 BEDROOM UNIT 4 UNITS PROVIDED	1.0 1.0	= 3 STALLS = 1 STALL = 4 STALLS
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TOTAL PROVIDED = 36 STALLS

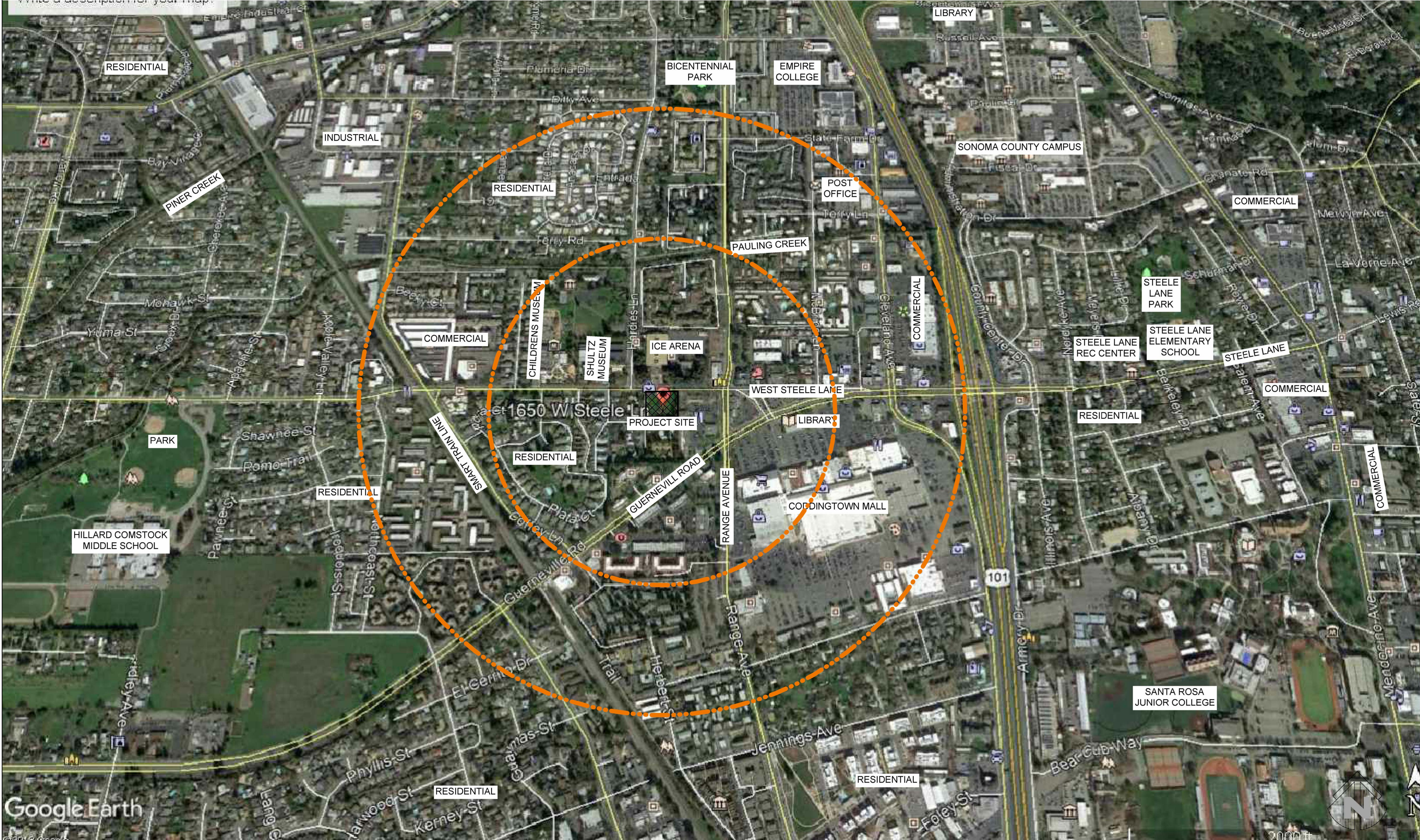
PARKING RATIO REQUIRED = 1.3 STALLS PER UNIT
PARKING RATIO PROVIDED = 1 STALL/ UNIT

BICYCLE STORAGE: 9 SECURE + 9 IN RACKS = 18 BICYCLE STALLS

PROJECT DESCRIPTION

The proposed multi-family residential project is located on a parcel in a Transit Oriented Priority Development Area, the North Station Area Specific Plan district. A public library, museums, ice skating arena, the City's largest shopping center, two major grocery stores, local small businesses and services, public transit, including the SMART line, bike and pedestrian paths, neighborhood parks parks, and schools are all located within one half mile of the project.
The multi-family apartment building comprises 36 dwellings and proposes a 100% increase in allowable density from 18 units to 36 units, as permitted by Supplemental Bonus Density Ordinance 20-31.070, of 50% over the State Density Bonus of 50%.
4 of the 36 units are proposed as below market rate, very low income units.
The dwellings are in (3) separate three story buildings, with massing organized around a central community open space - interior courtyard. Semi-private open space is provided in walled garden patios at the ground floor units, and balconies at upper level units. A common use open area is in the courtyard on the ground floor, at the entry garden plaza and in the covered passage located at the intersection of West Steele Lane and Meadowbrook Court. There is a common Laundry facility at the ground floor as well as a Lobby and Leasing Office.
Covered parking for 25 cars is provided in a 2 level automated parking structure at the east side yard. 11 surface parking stalls are provided at the south (rear) yard. A parking ratio of 1 stall per unit is proposed in this transit-oriented development. On-site short-term and long-term bicycle secure storage is provided for 18 bicycles.
As permitted by the Density Bonus Law, Gov. Code 65915, A waiver of development standard to allow an increase of maximum building height from 35' to 45' is requested. A concession to allow a parking reduction from 52 stalls required to 36 stalls provided is requested. A concession for a reduction of side yard setback at the east property boundary from 10' to 5' is requested.





Site Context Map



Looking South at North Boundary of Parcel



Looking North to Ice Arena from Parcel boundary



Looking North to Ice Arena from interior of Parcel



Looking East from interior of Parcel



North Boundary of parcel from West Steele Lane



North Boundary of parcel from West Steele Lane



Single Family Residence at west side of Meadowbrook Court



Single Family Residence at west side of Meadowbrook Court



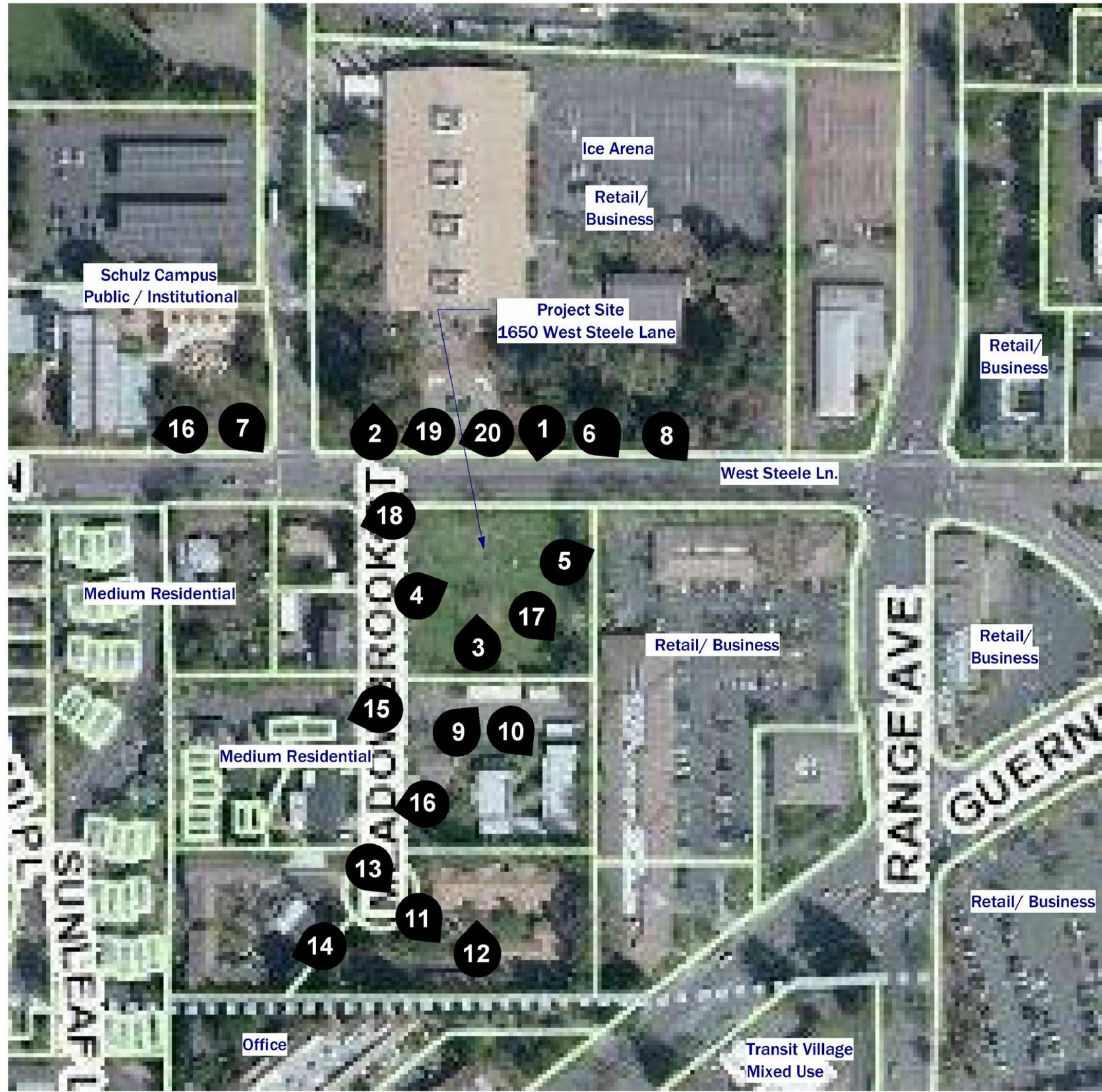
West Boundary of parcel from Meadowbrook Court



Apartment Buildings at west side of Meadowbrook Court



Apartment Buildings at southwest end of Meadowbrook Court



Apartment Buildings at southwest end of Meadowbrook Court



Apartment Buildings at southeast end of Meadowbrook Court



East Boundary of Parcel; looking at rear of retail center



West Steele Lane Elevation of adjacent Retail



Looking at northwest corner of site



Carports at adjacent parcel at south boundary of project



Apartment Buildings at southeast end of Meadowbrook Court



Pair of Red Tail Hawks nesting in one of the sycamore trees on the site



Looking east to corner of Range Ave. and West Steele Ln.



Apartment building at parcel south of project site

Existing and Surrounding Land Uses



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1650 West Steele Lane Apartments

Existing and Surrounding Land
Uses

Revisions

Job Number
Project Number
Project Architect
Checker

Drawn By
Author

Date
1/20/20

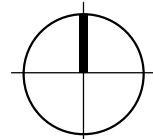
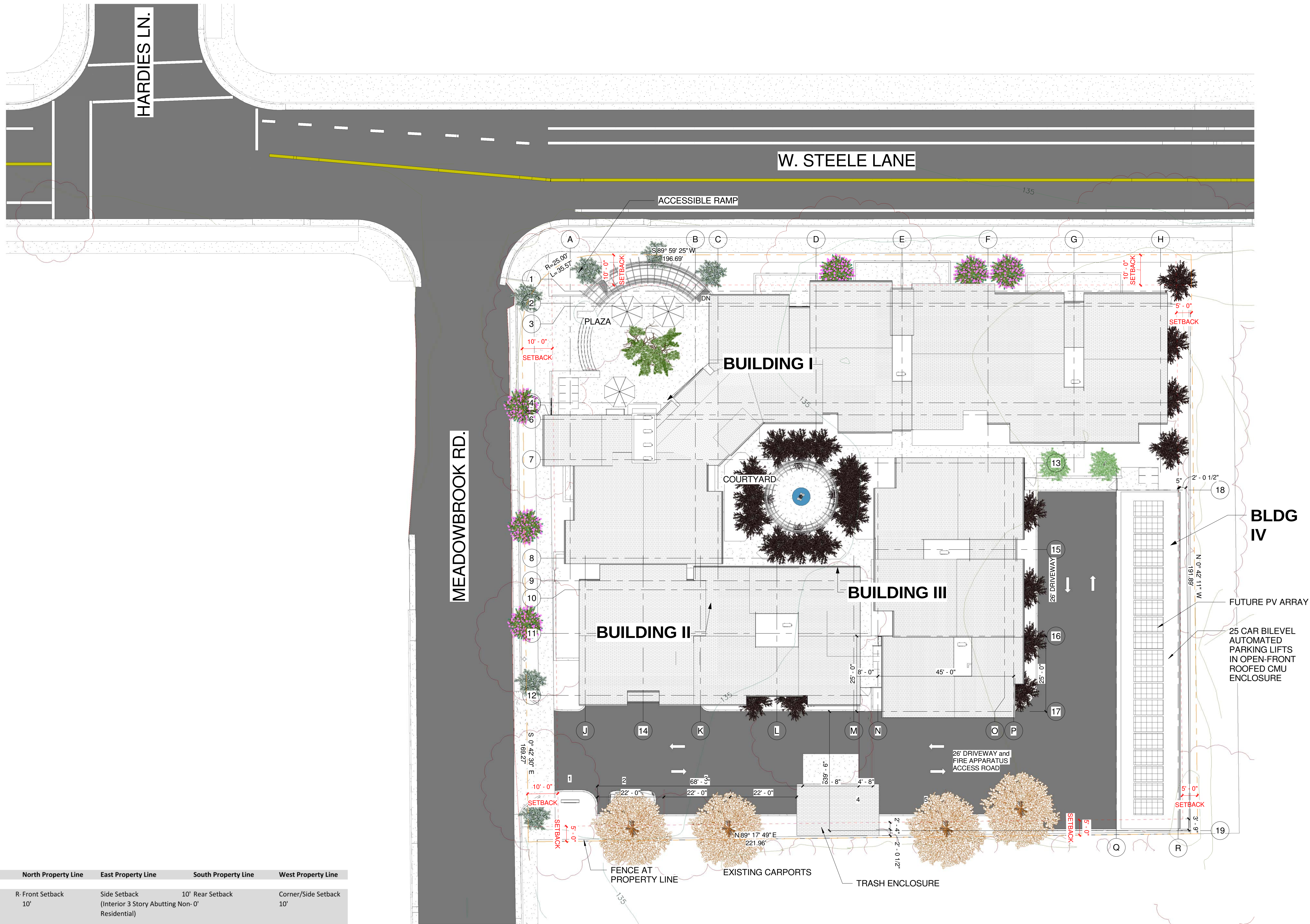
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A0.2

1650 W. Steele Ln.
Santa Rosa, CA 95403
A.P.N. 041-042-012

APN/Address	Land Use/Zoning	North Property Line	East Property Line	South Property Line	West Property Line
041-042-012 1650 West Steele Ln. (project site)	Medium Residential 3-15-SA	R: Front Setback 10'	Side Setback (Interior 3 Story Abutting Non-0' Residential)	10' Rear Setback	Corner/Side Setback 10'
041-042-031 2158 Meadowbrooke Ct.	Medium Residential 0170-SA	PD Side Setback 0' (1 Story Abutting R3)	Rear Setback N/A	Side Setback N/A	Front Setback N/A
041-042-027 1311 Guerneville Rd.	Retail and Business Services SA	CG Rear/ Corner Setback N/A	Side/Corner Setback N/A	Front Setback N/A	Side Setback 5' (Interior Adjacent to Residential Use)

1 Architectural Site Plan
1/16" = 1'-0"



SCALE: 1/16" = 1' - 0"
0' 8' 16' 32'



Luminaire Schedule										
Symbol	Qty	Tag	Label	Lum. Lumens	LLF	Description	Lum. Watts	Total Watts	Filename	BUG Rating
	7	A	WPLEDFC80Y	9207	1.000	Wallpack 80W Full Cutoff 3000K	83	581	WPLEDFC80Y - RAB02588.IES	B2-U0-G1
	13	B	SLIM12Y	1915	1.000	Wallpack 12W Full cutoff 3000K	15.9	206.7	SLIM12Y-RAB04264.IES	B1-U0-G0
	3	C	VANLED10YFFR	1450	1.000	Canopy 10W Full Cutoff 3000K	13.1	39.3	VANLED10YFFR - Warm - RAB02997.IES	B1-U0-G0

NOTES:

- * The light loss factor (LLF) is a product of many variables, only lamp lumen depreciation (LLD) has been applied to the calculated results unless otherwise noted. The LLD is the result (quotient) of mean lumens / initial lumens per lamp manufacturers' specifications.
- * Illumination values shown (in footcandles) are the predicted results for planes of calculation either horizontal, vertical or inclined as designated in the calculation summary. Meter orientation is normal to the plane of calculation.
- * The calculated results of this lighting simulation represent an anticipated prediction of system performance. Actual measured results may vary from the anticipated performance and are subject to means and methods which are beyond the control of RAB Lighting Inc.
- * Mounting height determination is job site specific, our lighting simulations assume a mounting height (insertion point of the luminaire symbol) to be taken at the top of the symbol for ceiling mounted luminaires and at the bottom of the symbol for all other luminaire mounting configurations.
- * It is the Owner's responsibility to confirm the suitability of the existing or proposed poles and bases to support the proposed fixtures, based on the weight and EPA of the proposed fixtures and the owner's site soil conditions and wind zone. It is recommended that a professional engineer licensed to practice in the state the site is located be engaged to assist in this determination.
- * The landscape material shown hereon is conceptual, and is not intended to be an accurate representation of any particular plant, shrub, bush, or tree, as these materials are living objects, and subject to constant change. The conceptual objects shown are for illustrative purposes only. The actual illumination values measured in the field will vary.
- * Photometric model elements such as buildings, rooms, plants, furnishings or any architectural details which impact the dispersion of light must be detailed by the customer documents for inclusion in the RAB lighting design model. RAB is not responsible for any inaccuracies caused by incomplete information on the part of the customer, and reserves the right to use best judgement when translating customer requests into photometric studies.
- * RAB Lighting Inc. luminaire and product designs are protected under U.S. and International intellectual property laws. Patents issued or pending apply.



RAB®
LIGHTING
170 Ludlow Avenue, Northvale, NJ 07647
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Job Name: 1650 West Steele Lane Santa Rosa, CA	Scale: as noted	PROJECT #162961
Lighting Layout Version A	Date: 11/9/2020	CASE #529889
	Filename: 1650 West Steele Lane 529889a	
Drawn By: Shaun Fillion, LC		

The Lightning Analysis, *as-built*, Energy Analyzed and/or Visual Simulation ("Lighting Design") provided by RAB Lighting Inc., ("RAB"), represents an anticipated prediction of lighting system performance based upon design parameters and information supplied by others. These design parameters and information provided by others have been used by RAB as the basis for its Lighting Design. RAB makes no representation or warranty about the conditions, accuracy or completeness of such information. RAB recommends that design parameters and other information be fully verified to reduce variation.

RAB neither warrants, either implied or stated with regard to actual measured light levels or energy consumption levels as compared to those illustrated by this Lighting Design. RAB neither warrants, either implied or stated, nor represents the appropriateness, completeness or accuracy of the Lighting Design if it is installed, used, operated, maintained or modified without strict compliance with the accompanying instructions, specifications and manuals submitted by RAB. The Lighting Design is being put in, whole or in part, as advisory documents for informational purposes and is not intended for construction nor as being part of a project's construction documentation package.



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1650 West Steele Lane Apartments

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Santa Rosa, CA 95403
A.P.N. 041-042-012

First Floor Plan

Revisions

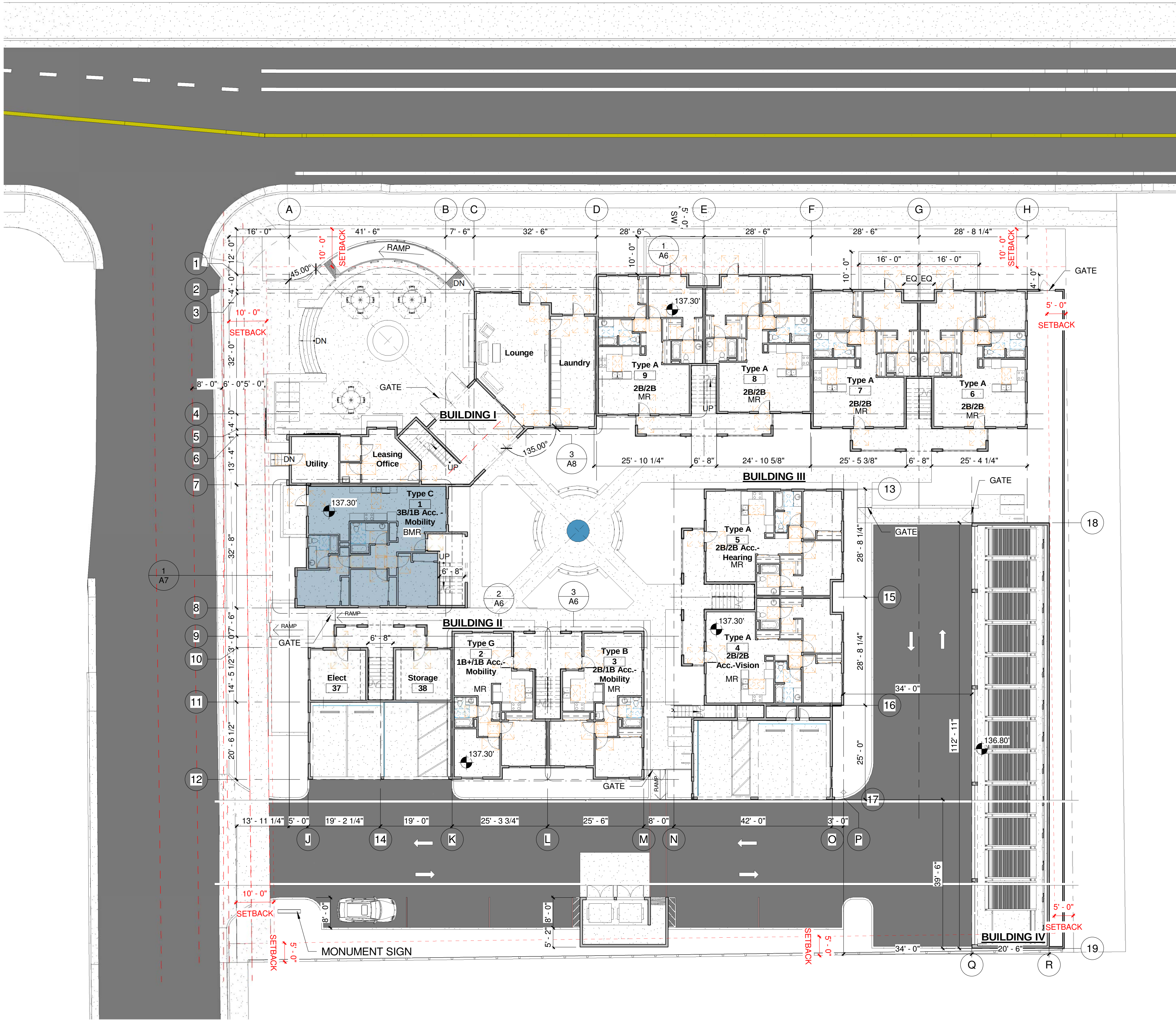
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Project Number
Project Architect
Checker

Drawn By
Author

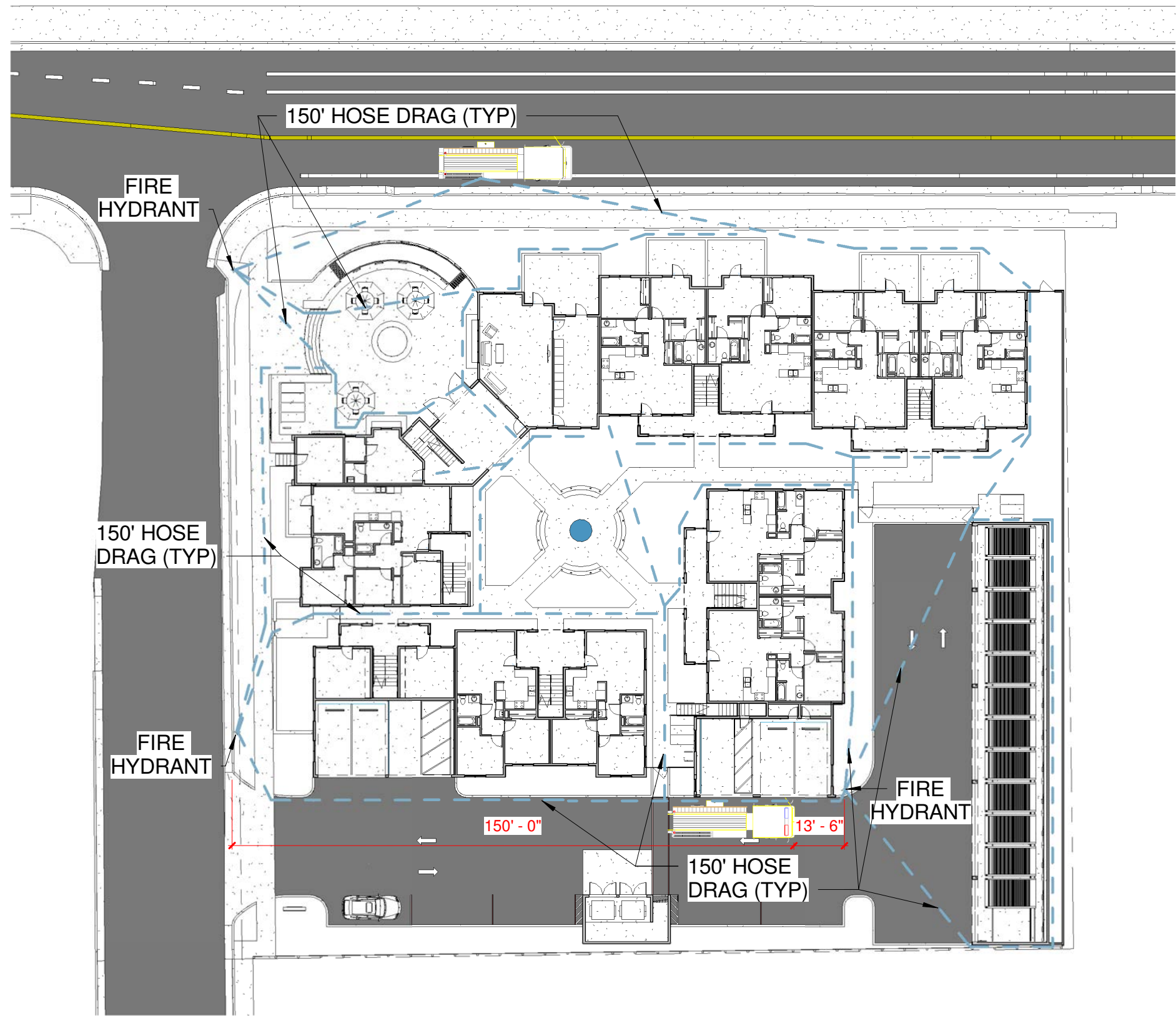
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Sheet

A2



1 First Floor Plan
1/16" = 1'-0"

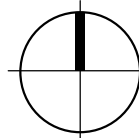


2 Fire Access Plan
1/32" = 1'-0"

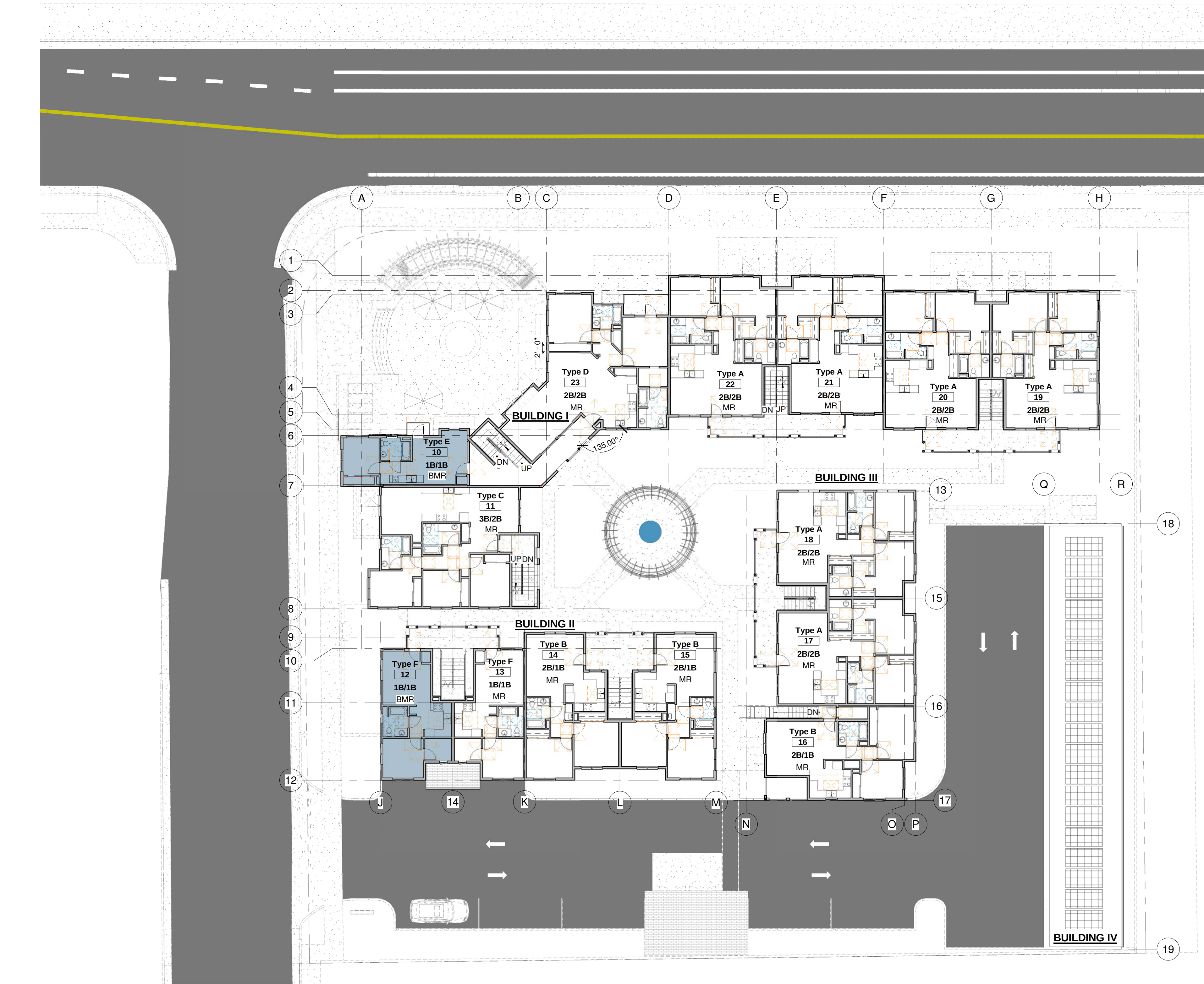
Density Bonus Key

- MR- Market Rate
BMR- Below Market Rate

Density Bonus Unit Map- Table of Units			
Number	Name	Unit Type	Notes
Level 1			
1	Type C	3B/1B Acc.- Mobility	Affordable, Mobility Impaired
2	Type G	1B+/1B Acc.- Mobility	Mobility Impaired
3	Type B	2B/1B Acc.- Mobility	Mobility Impaired
4	Type A	2B/2B Acc.-Vision	Vision Impaired
5	Type A	2B/2B Acc.- Hearing	Hearing Impaired
6	Type A	2B/2B	Adaptable
7	Type A	2B/2B	Adaptable
8	Type A	2B/2B	Adaptable
9	Type A	2B/2B	Adaptable
37	Elect		
38	Storage		
39	Utility		
40	Leasing Office		
41	Lounge		
42	Laundry		
Level 2			
10	Type E	1B/1B	Affordable
11	Type C	3B/2B	
12	Type F	1B/1B	Affordable
13	Type F	1B/1B	
14	Type B	2B/1B	
15	Type B	2B/1B	
16	Type B	2B/1B	
17	Type A	2B/2B	
18	Type A	2B/2B	
19	Type A	2B/2B	
20	Type A	2B/2B	
21	Type A	2B/2B	
22	Type A	2B/2B	
23	Type D	2B/2B	
Level 3			
24	Type E	1B/1B	Affordable
25	Type C	3B/2B	
26	Type F	1B/1B	
27	Type F	1B/1B	
28	Type B	2B/1B	
29	Type B	2B/1B	
30	Type A	2B/2B	
31	Type A	2B/2B	
32	Type A	2B/2B	
33	Type A	2B/2B	
34	Type A	2B/2B	
35	Type A	2B/2B	
36	Type D	2B/2B	



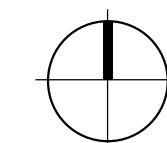
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0' 8' 16' 32'



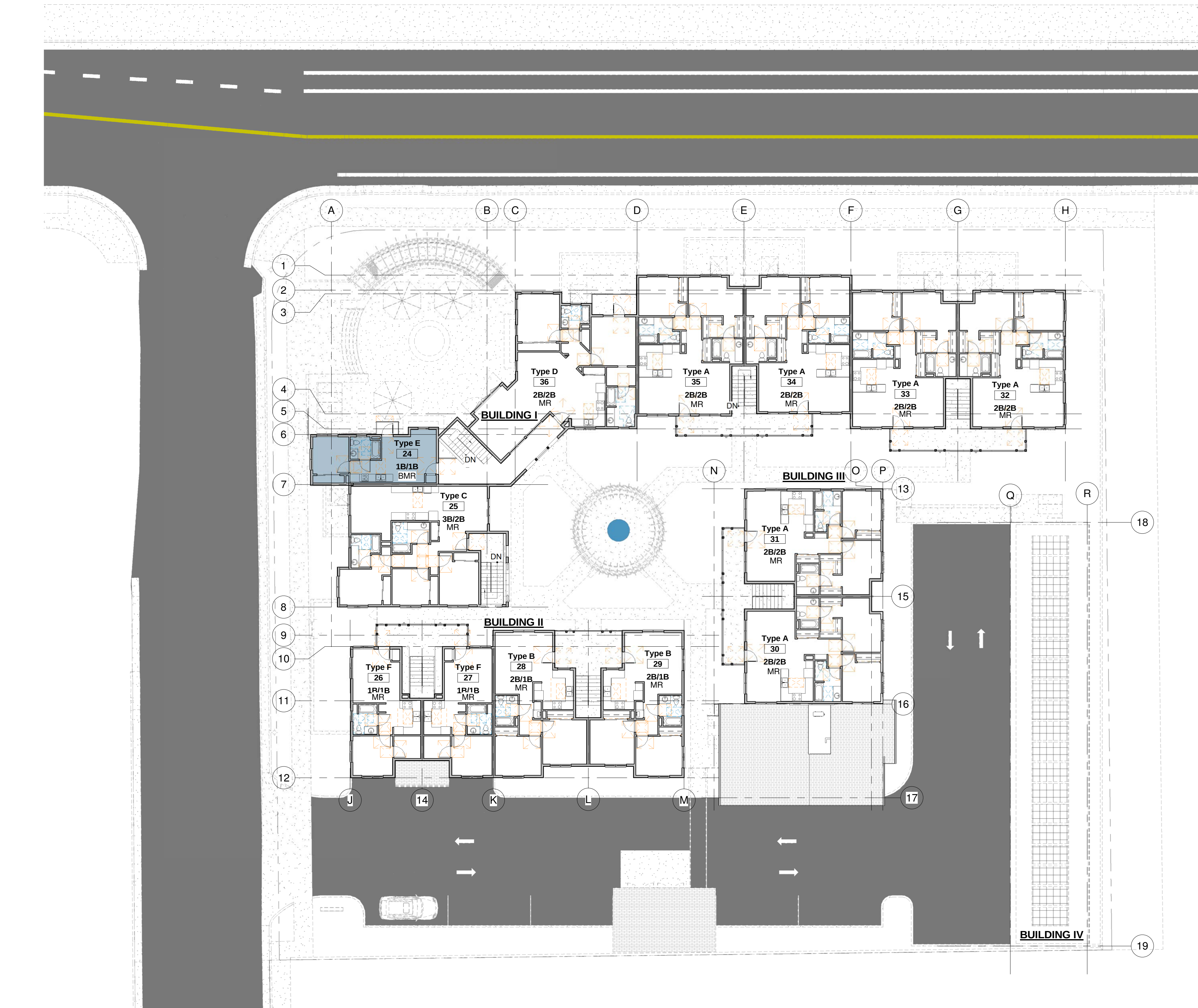
1 Second Floor Plan
1/16" = 1'-0"

Density Bonus Key
MR- Market Rate
BMR- Below Market Rate

Density Bonus Unit Map- Table of Units			
Number	Name	Unit Type	Notes
Level 1			
1	Type C	3B/1B Acc.- Mobility	Affordable, Mobility Impaired
2	Type G	1B+/1B Acc.- Mobility	Mobility Impaired
3	Type B	2B/1B Acc.- Mobility	Mobility Impaired
4	Type A	2B/2B Acc.-Vision	Vision Impaired
5	Type A	2B/2B Acc.- Hearing	Hearing Impaired
6	Type A	2B/2B	Adaptable
7	Type A	2B/2B	Adaptable
8	Type A	2B/2B	Adaptable
9	Type A	2B/2B	Adaptable
37	Elect		
38	Storage		
39	Utility		
40	Leasing Office		
41	Lounge		
42	Laundry		
Level 2			
10	Type E	1B/1B	Affordable
11	Type C	3B/2B	
12	Type F	1B/1B	Affordable
13	Type F	1B/1B	
14	Type B	2B/1B	
15	Type B	2B/1B	
16	Type B	2B/1B	
17	Type A	2B/2B	
18	Type A	2B/2B	
19	Type A	2B/2B	
20	Type A	2B/2B	
21	Type A	2B/2B	
22	Type A	2B/2B	
23	Type D	2B/2B	
Level 3			
24	Type E	1B/1B	Affordable
25	Type C	3B/2B	
26	Type F	1B/1B	
27	Type F	1B/1B	
28	Type B	2B/1B	
29	Type B	2B/1B	
30	Type A	2B/2B	
31	Type A	2B/2B	
32	Type A	2B/2B	
33	Type A	2B/2B	
34	Type A	2B/2B	
35	Type A	2B/2B	
36	Type D	2B/2B	



SCALE: 1/16" = 1'-0"
0' 8' 16' 32'

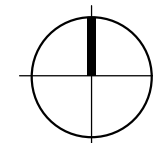


1 Level 3
1/16" = 1'-0"

Density Bonus Key

- MR- Market Rate
BMR- Below Market Rate

Density Bonus Unit Map- Table of Units			
Number	Name	Unit Type	Notes
Level 1			
1	Type C	3B/1B Acc.- Mobility	Affordable, Mobility Impaired
2	Type G	1B+/1B Acc.- Mobility	Mobility Impaired
3	Type B	2B/1B Acc.- Mobility	Mobility Impaired
4	Type A	2B/2B Acc.-Vision	Vision Impaired
5	Type A	2B/2B Acc.- Hearing	Hearing Impaired
6	Type A	2B/2B	Adaptable
7	Type A	2B/2B	Adaptable
8	Type A	2B/2B	Adaptable
9	Type A	2B/2B	Adaptable
37	Elect		
38	Storage		
39	Utility		
40	Leasing Office		
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42	Laundry		
Level 2			
10	Type E	1B/1B	Affordable
11	Type C	3B/2B	
12	Type F	1B/1B	Affordable
13	Type F	1B/1B	
14	Type B	2B/1B	
15	Type B	2B/1B	
16	Type B	2B/1B	
17	Type A	2B/2B	
18	Type A	2B/2B	
19	Type A	2B/2B	
20	Type A	2B/2B	
21	Type A	2B/2B	
22	Type A	2B/2B	
23	Type D	2B/2B	
Level 3			
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26	Type F	1B/1B	
27	Type F	1B/1B	
28	Type B	2B/1B	
29	Type B	2B/1B	
30	Type A	2B/2B	
31	Type A	2B/2B	
32	Type A	2B/2B	
33	Type A	2B/2B	
34	Type A	2B/2B	
35	Type A	2B/2B	
36	Type D	2B/2B	



SCALE: 1/16" = 1'-0"
0' 8' 16' 32'



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Third Floor Plan

Revisions

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Project Number

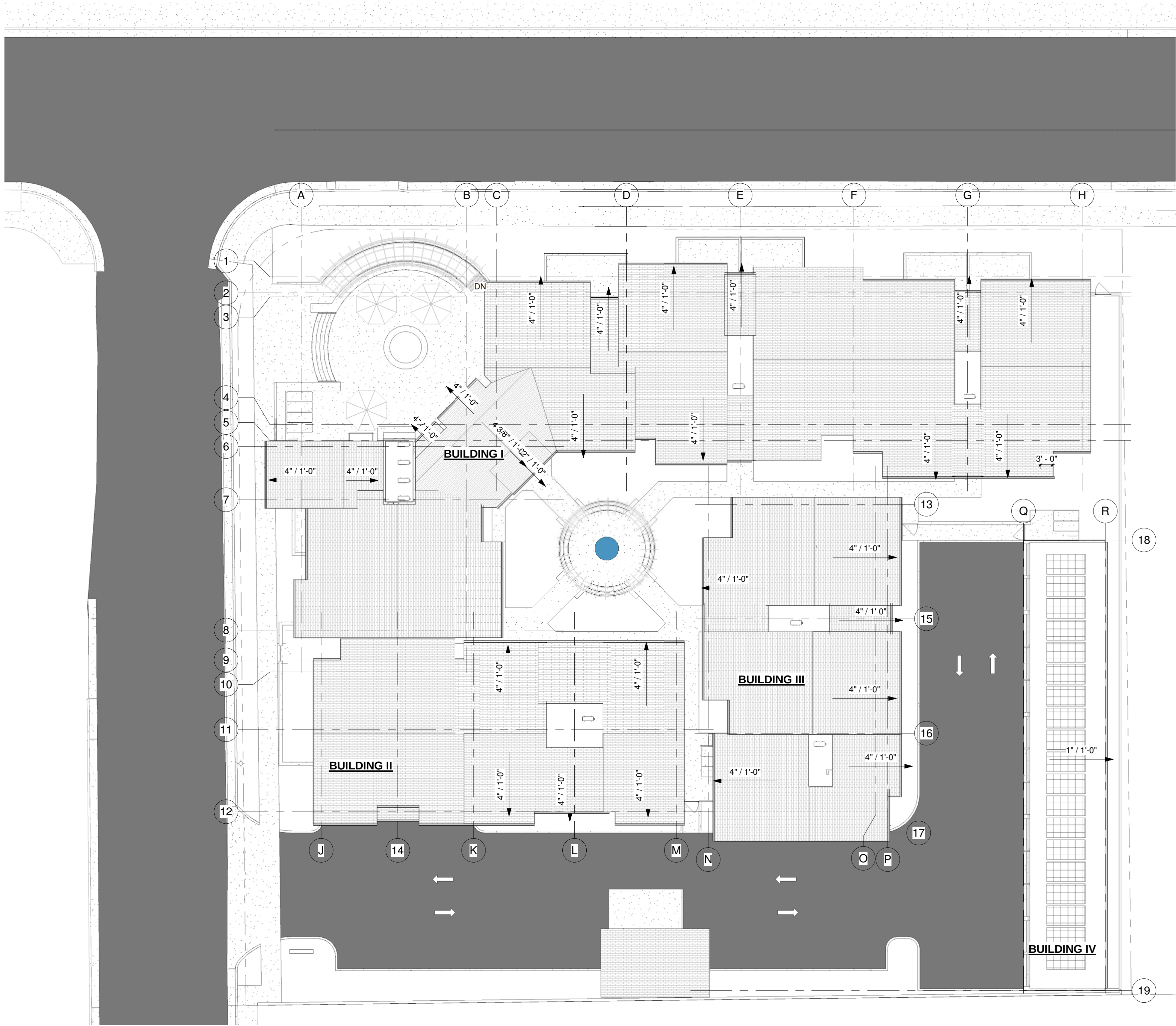
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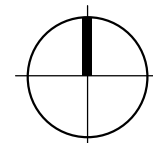
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A4



1 Roof Plan
1/16" = 1'-0"



SCALE: 1/16" = 1'-0"
0' 8' 16' 32'



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1650 West Steele Lane Apartments

Roof Plan

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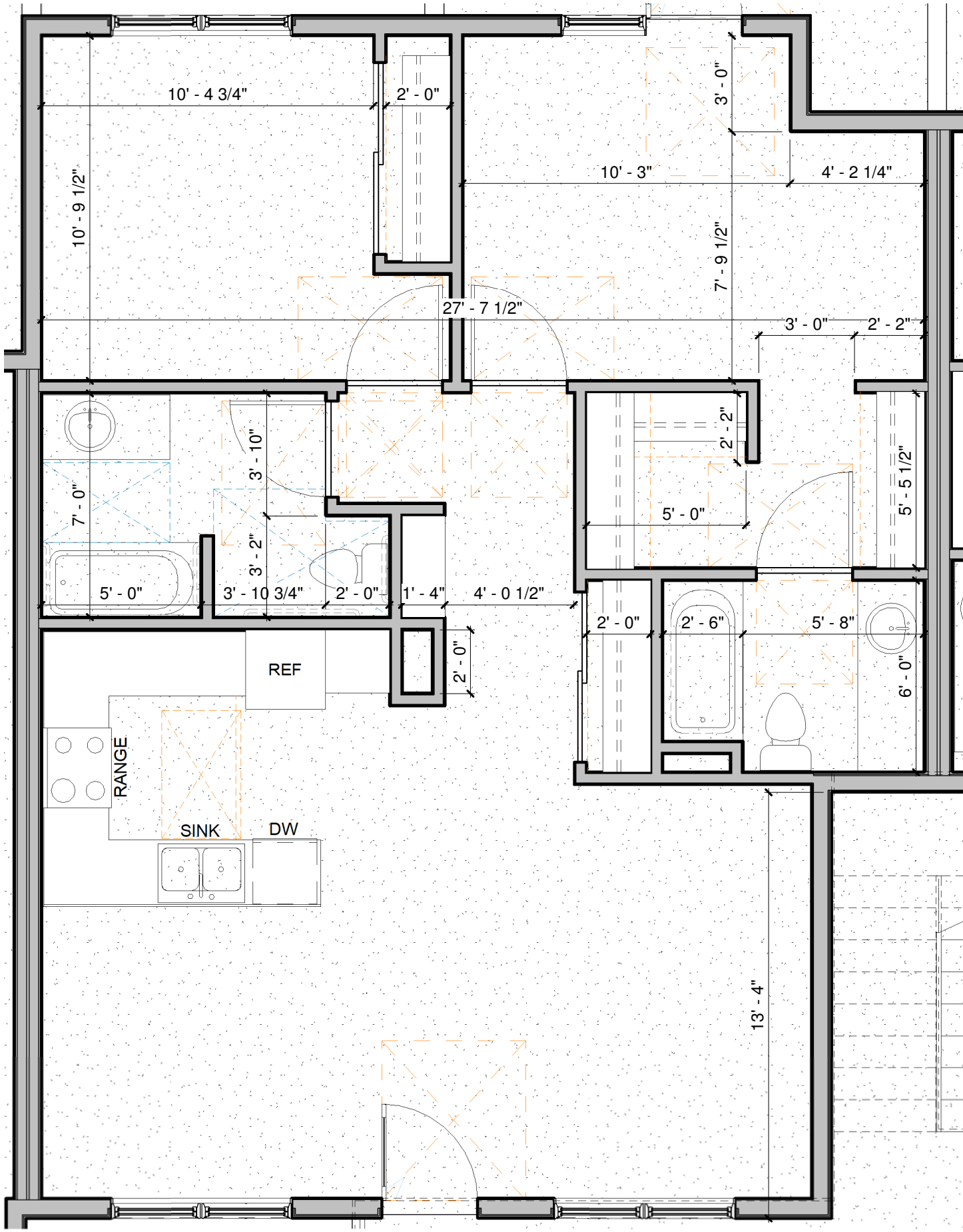
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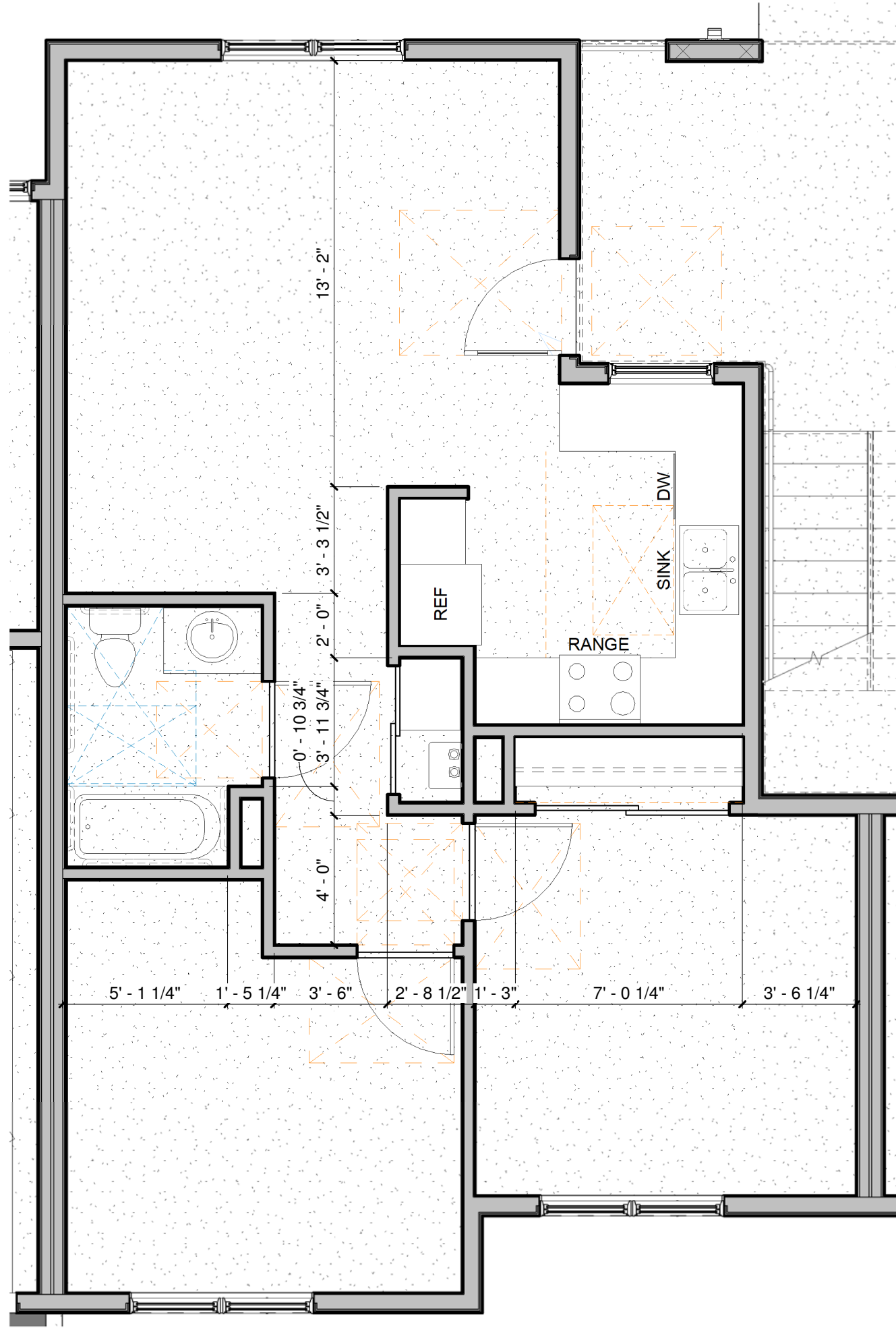
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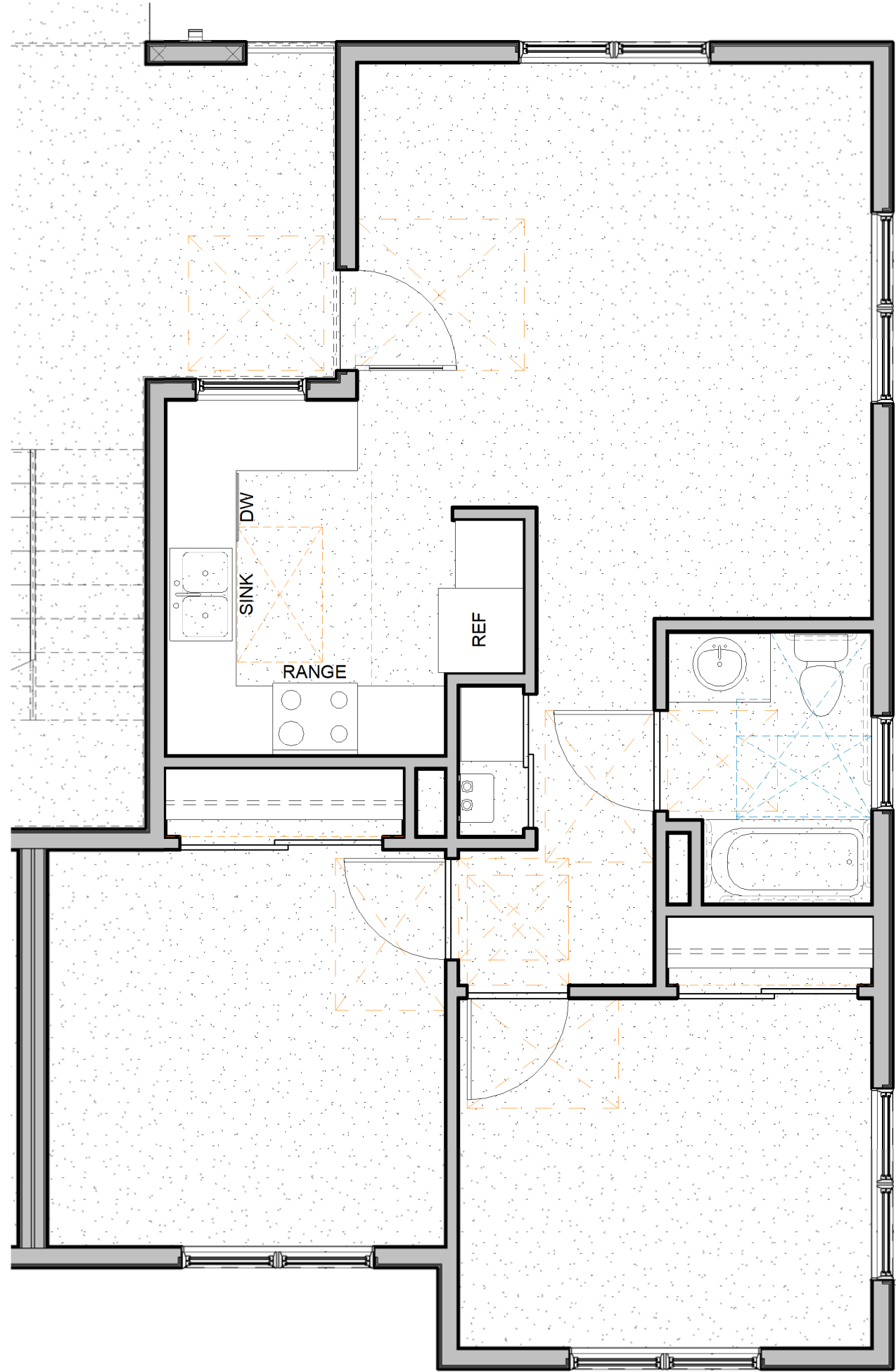
A5



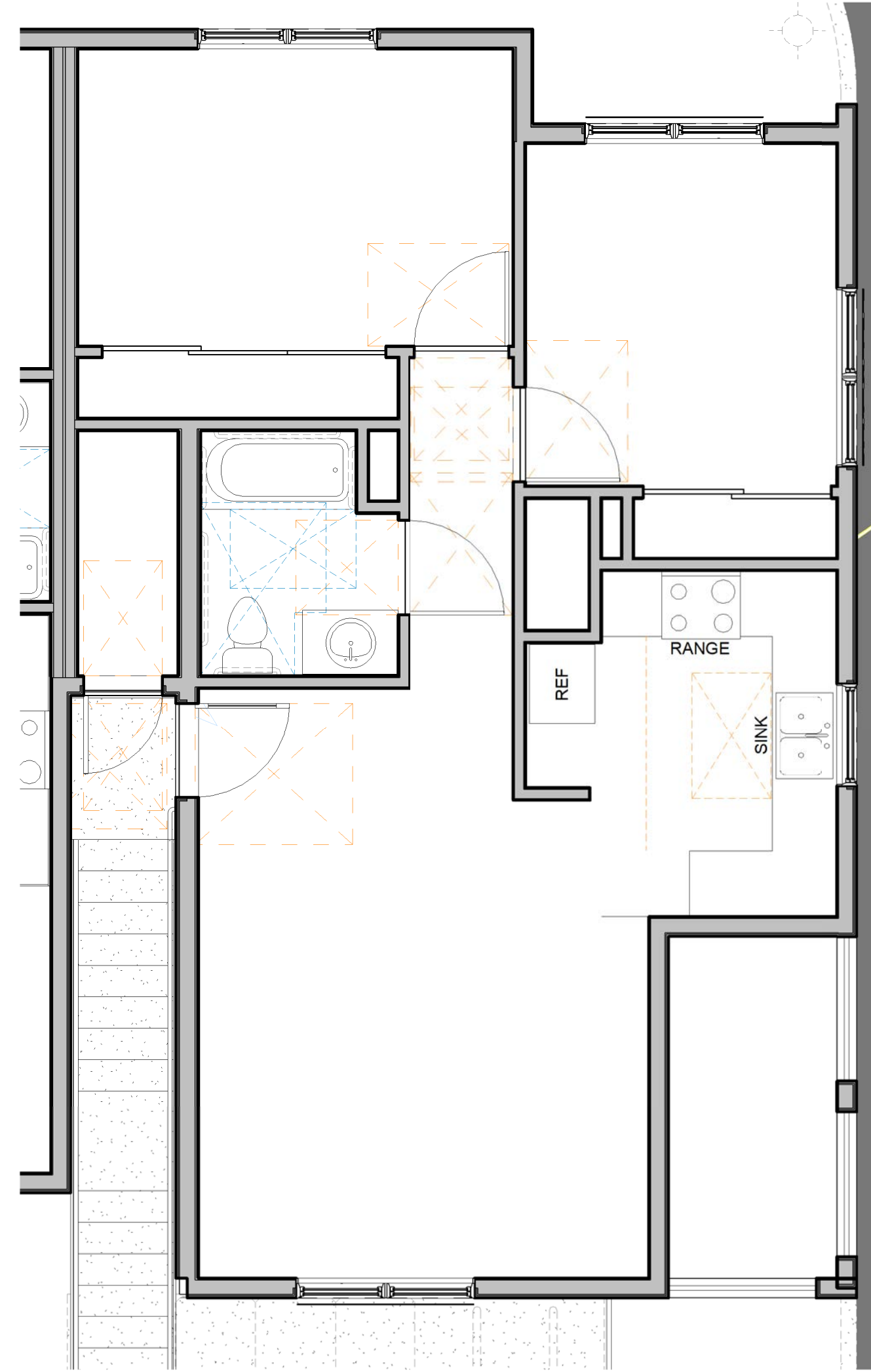
1 Level 1 - Unit Type A - 952 SF
1/4" = 1'-0"



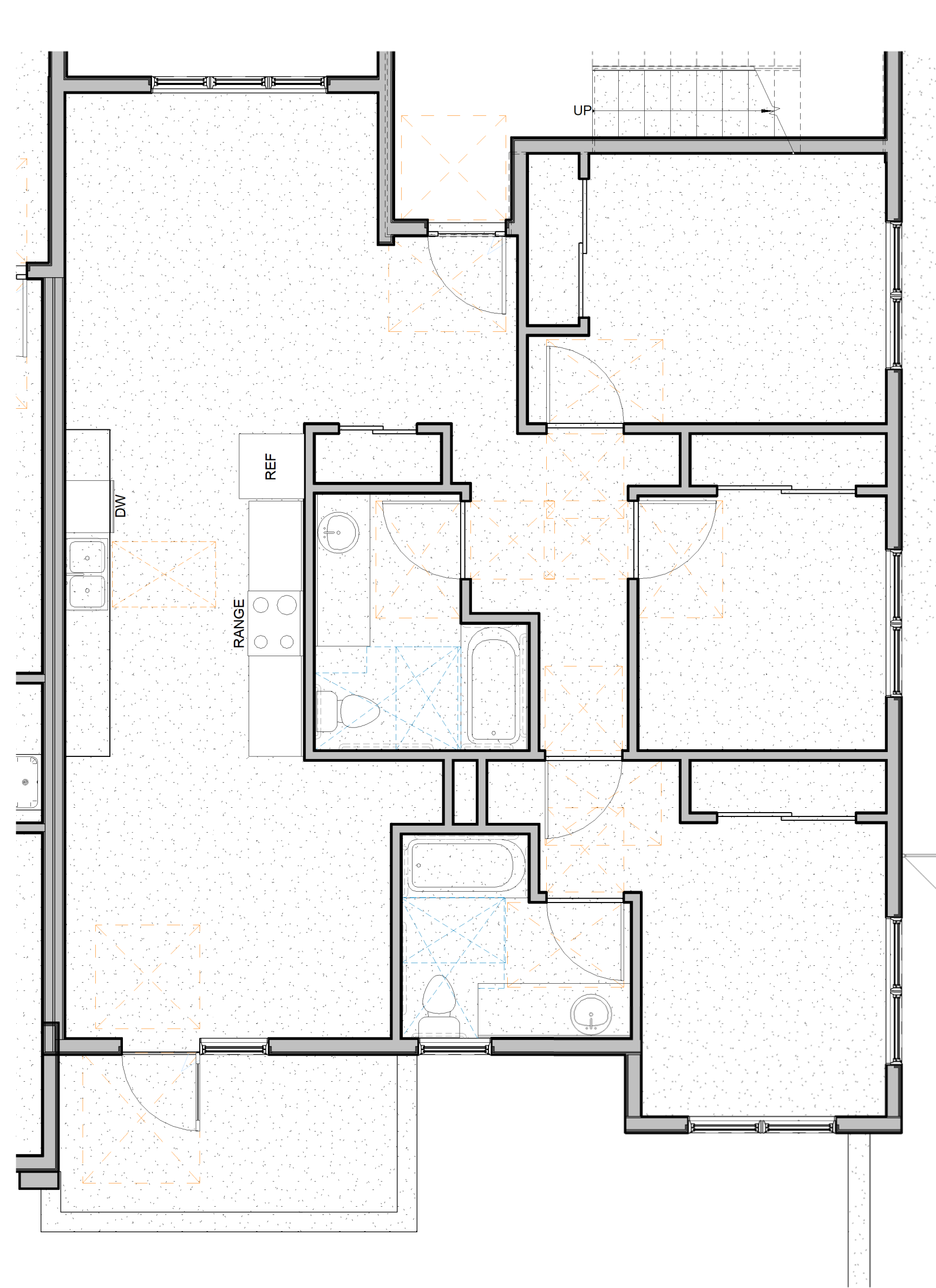
2 Level 1 - Unit Type G - 777 SF
1/4" = 1'-0"



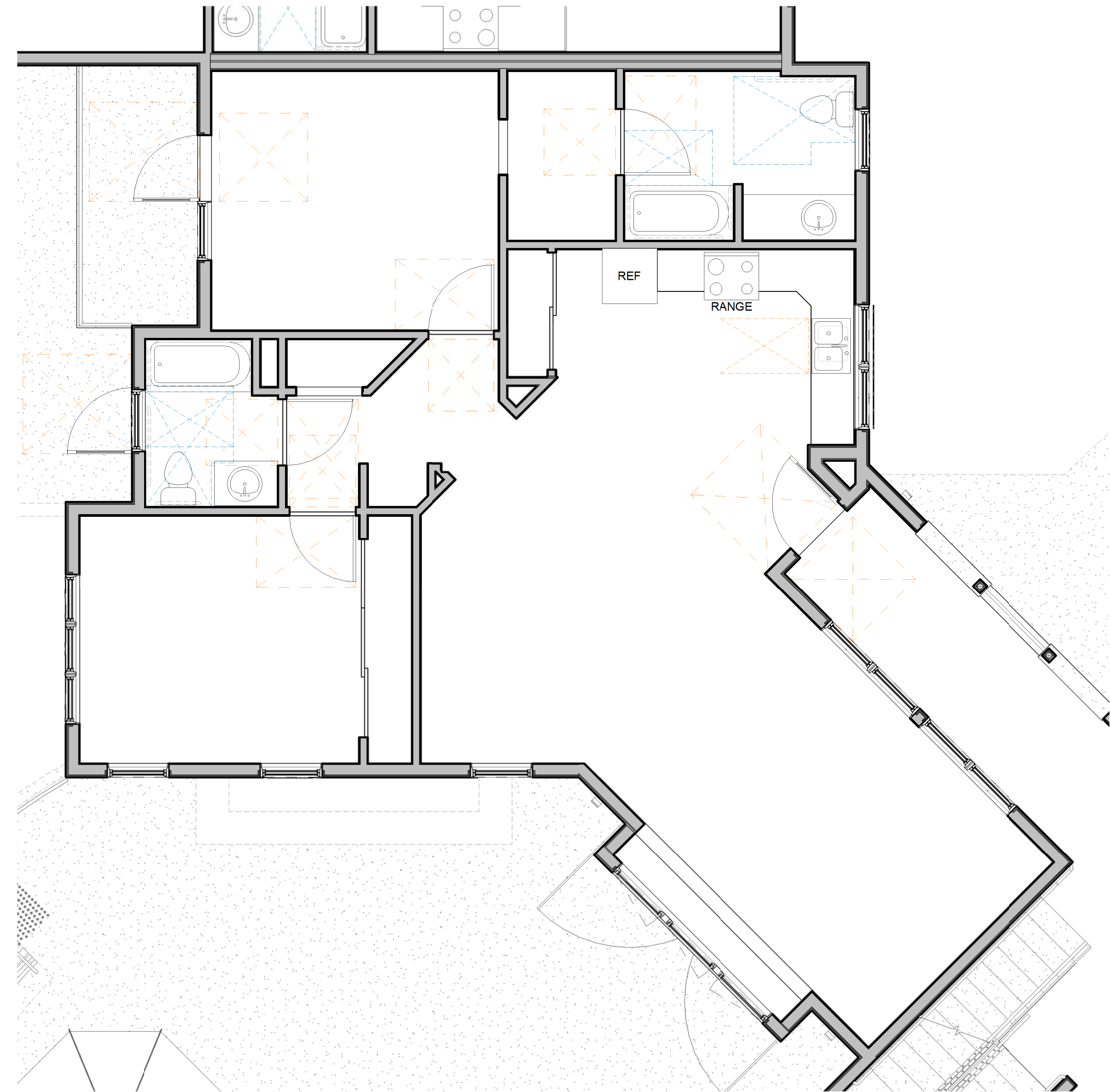
3 Level 1 - Unit Type B1 & B2 - 777 SF
1/4" = 1'-0"



4 Level 2 - Unit B3 - 779 SF
1/4" = 1'-0"

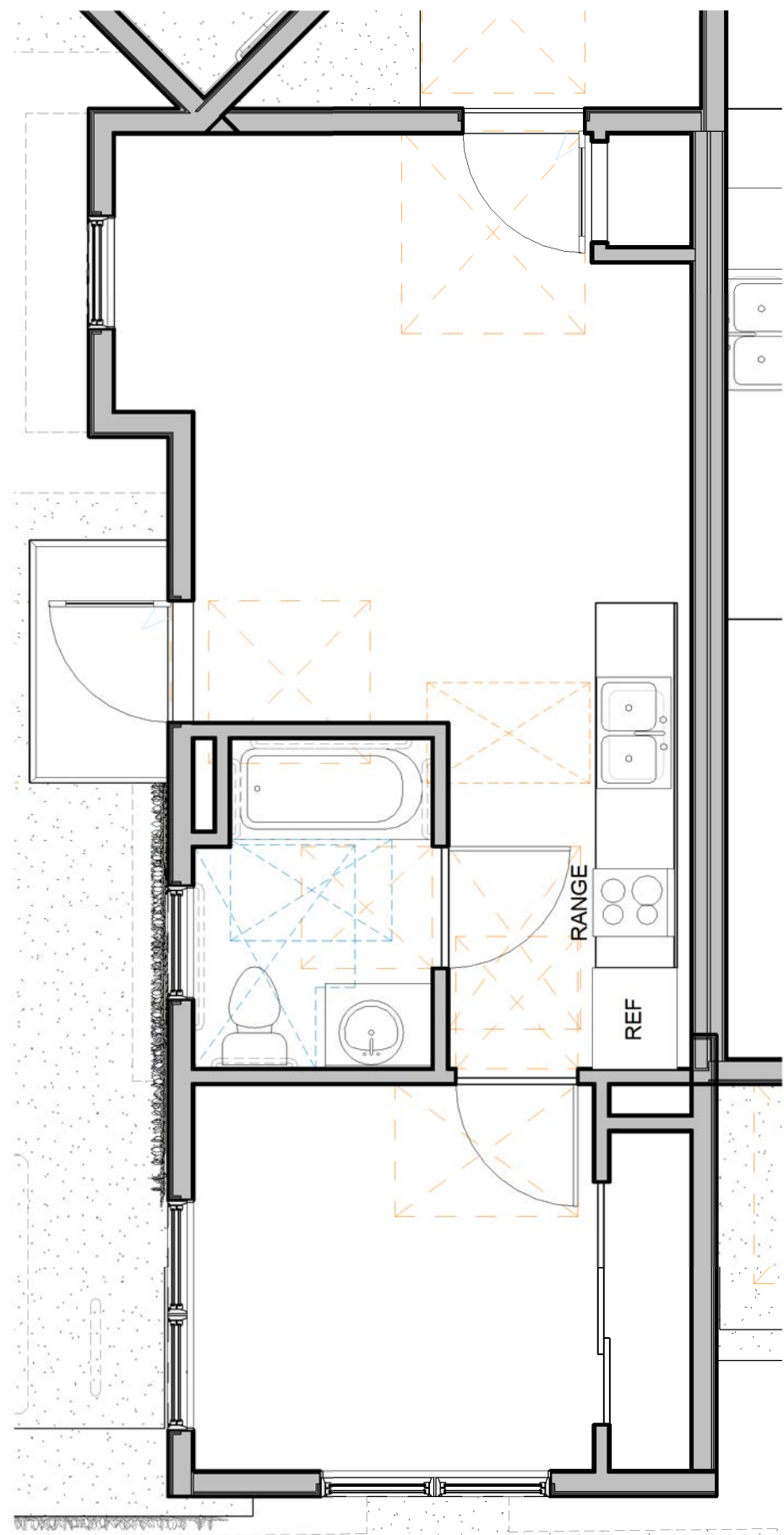


1 Level 1 - Unit Type C1 - 1110 SF
1/4" = 1'-0"

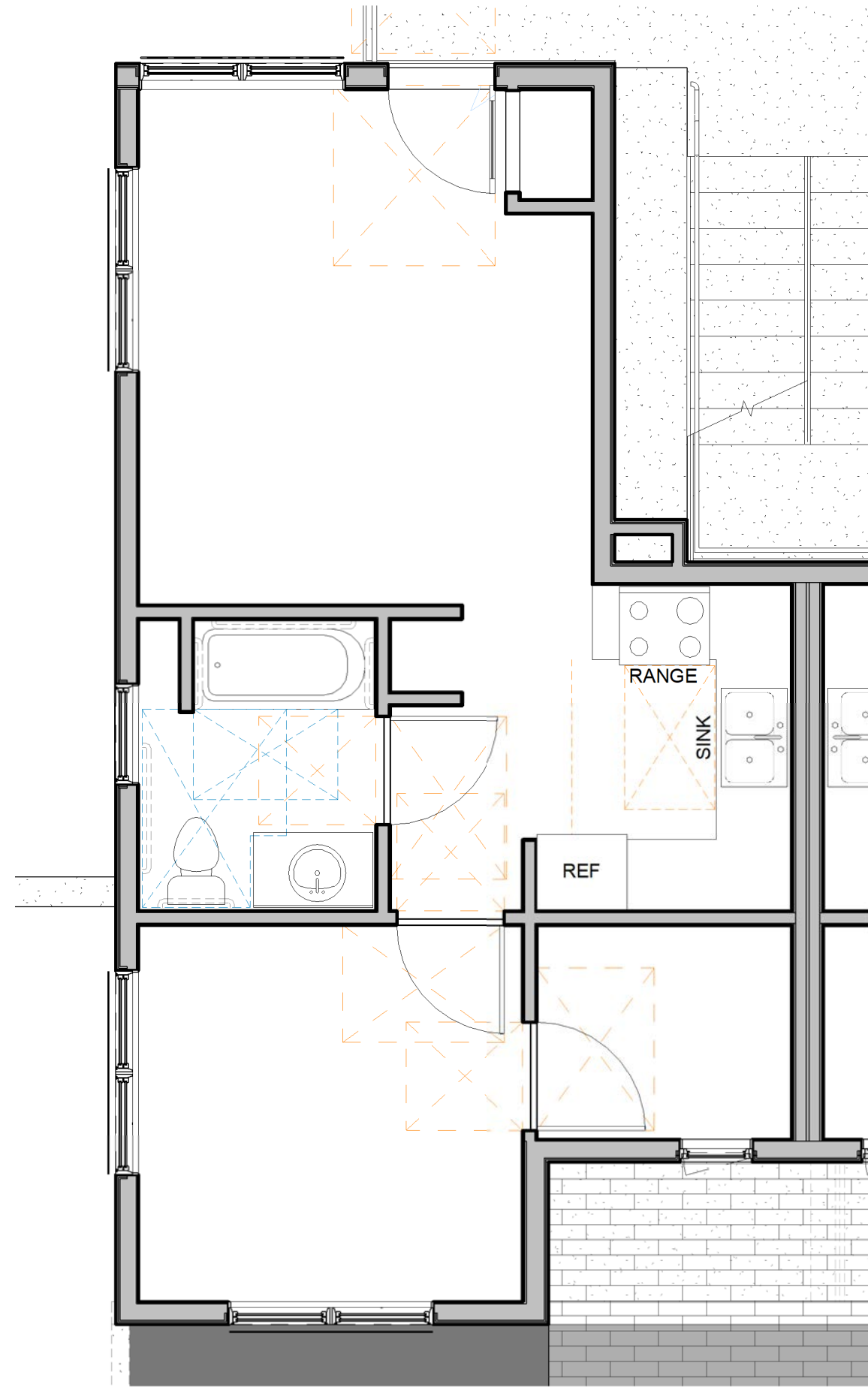


2 Level 2- Unit D1 - 1185
1/4" = 1'-0"

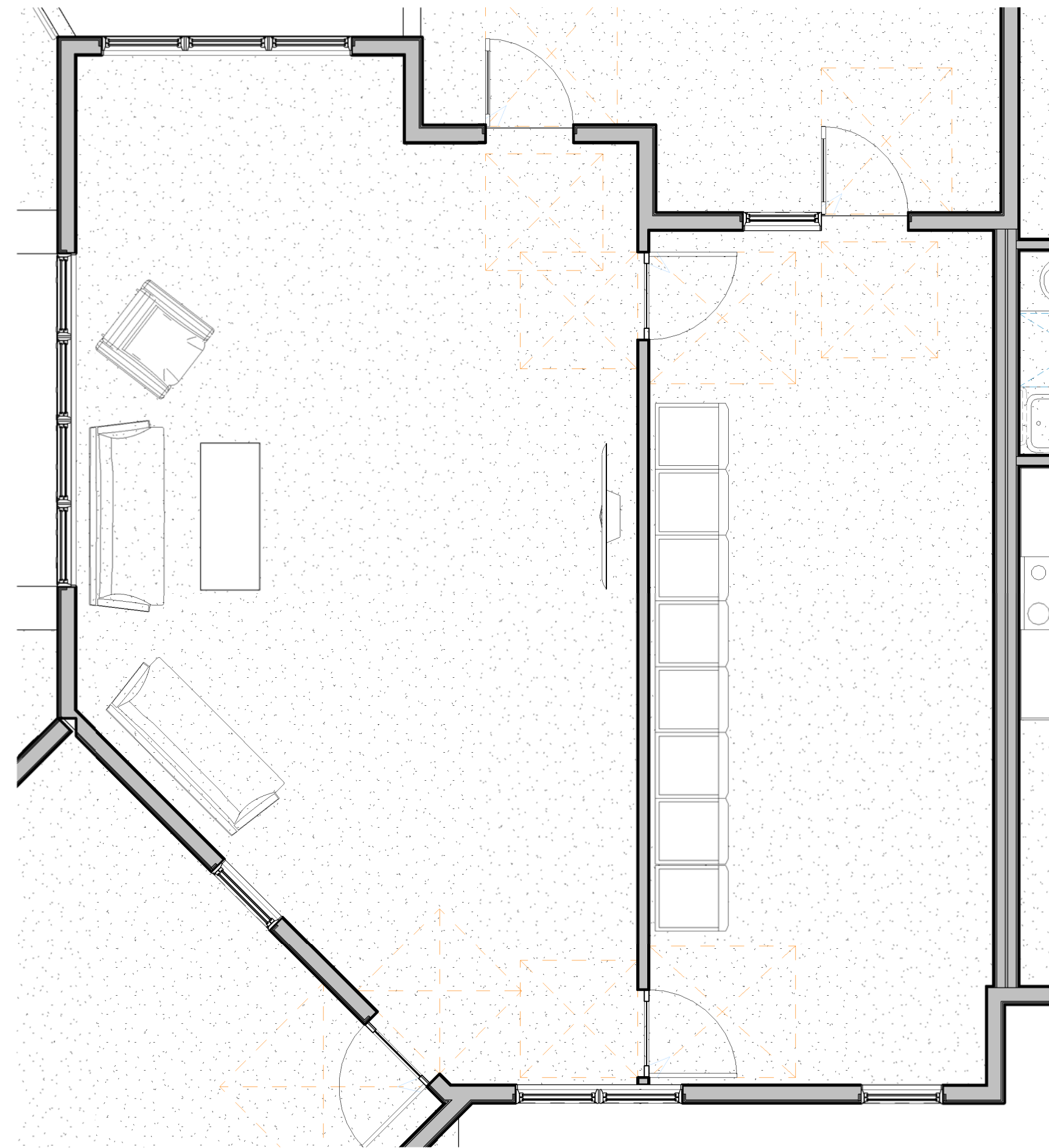




1 Level 2- Unit E1 - 433 SF
1/4" = 1'-0"



2 Level 2- Unit F1 - 507 SF
1/4" = 1'-0"



3 Level 1 - Community Room and Laundry - 942 SF
1/4" = 1'-0"





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1650 West Steele Lane Apartments

Elevations - BLDG 'I'

Revisions

Job Number
Project Number
Project Architect
Checker
Drawn By
Author

Date
1/20/20

Sheet

A9



1 BLDG 'I' - North
1/8" = 1'-0"



3 BLDG 'I' - West
1/8" = 1'-0"



4 BLDG 'I' - East
1/8" = 1'-0"



6 BLDG 'I' - South
1/8" = 1'-0"



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A.P.N. 041-042-012

Elevations - BLDG 'II', 'III' & 'IV'

Revisions

Job Number
Project Number

Project Architect
Checker

Drawn By
Author

Date
1/20/20

Sheet

A10





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1650 West Steele Lane Apartments

Colors and Materials

Revisions

Job Number
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Project Architect
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Author

Date
1/20/20

Sheet

A10.1



Lithonia LED ADA
D Series Area Light



Lithonia LED ADA
D Series Bollard



Luminis SQ500.Syrios Square LED Wall Down Light



Lithonia LED ADA
D Series Wall Pack Light



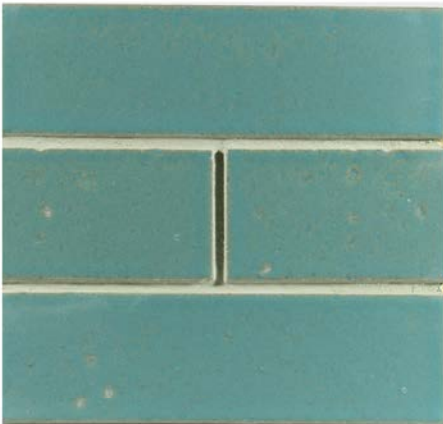
Luminis Scirocco Wall Sconce SR115T



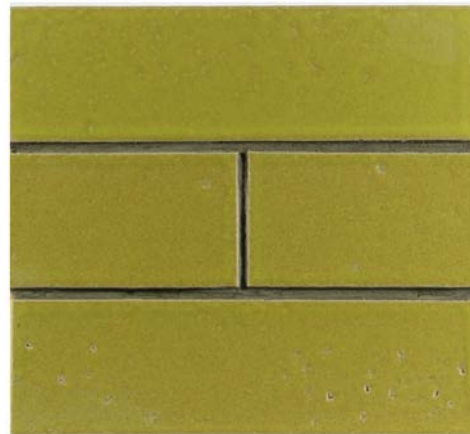
SANTA BARBARA FINISH AT EXTERIOR
CEMENT PLASTER STUCCO



CEMENT PLASTER STUCCO
LA HABRA - FALLBROOK



TRIKEENAN- BONEYARD BRICK
GLAZED CERAMIC BRICK TILE
COLOR - DIAMOND SPRINGS
SIZE - NORMAN 2.25" X 11 5/8"



TRIKEENAN- BONEYARD BRICK
GLAZED CERAMIC BRICK TILE
COLOR - PARAKEET
SIZE - NORMAN 2.25" X 11 5/8"



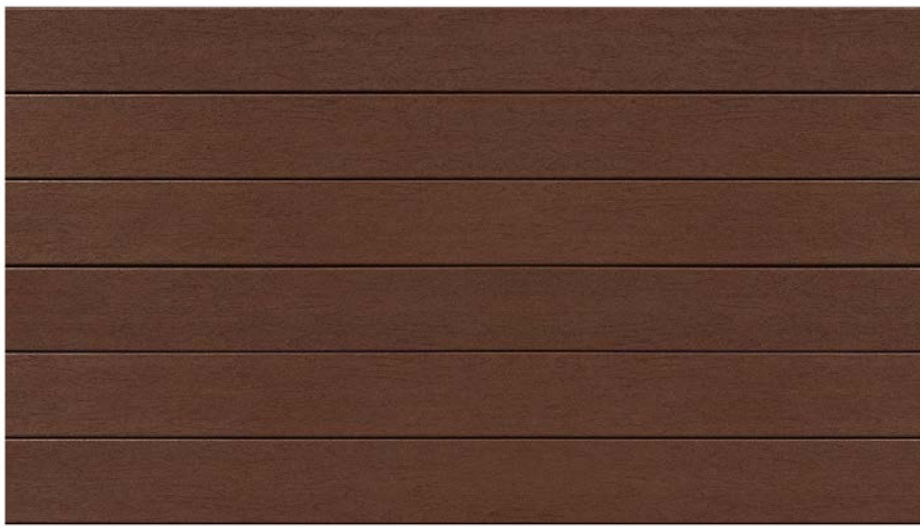
THIN BRICK CERAMIC TILE



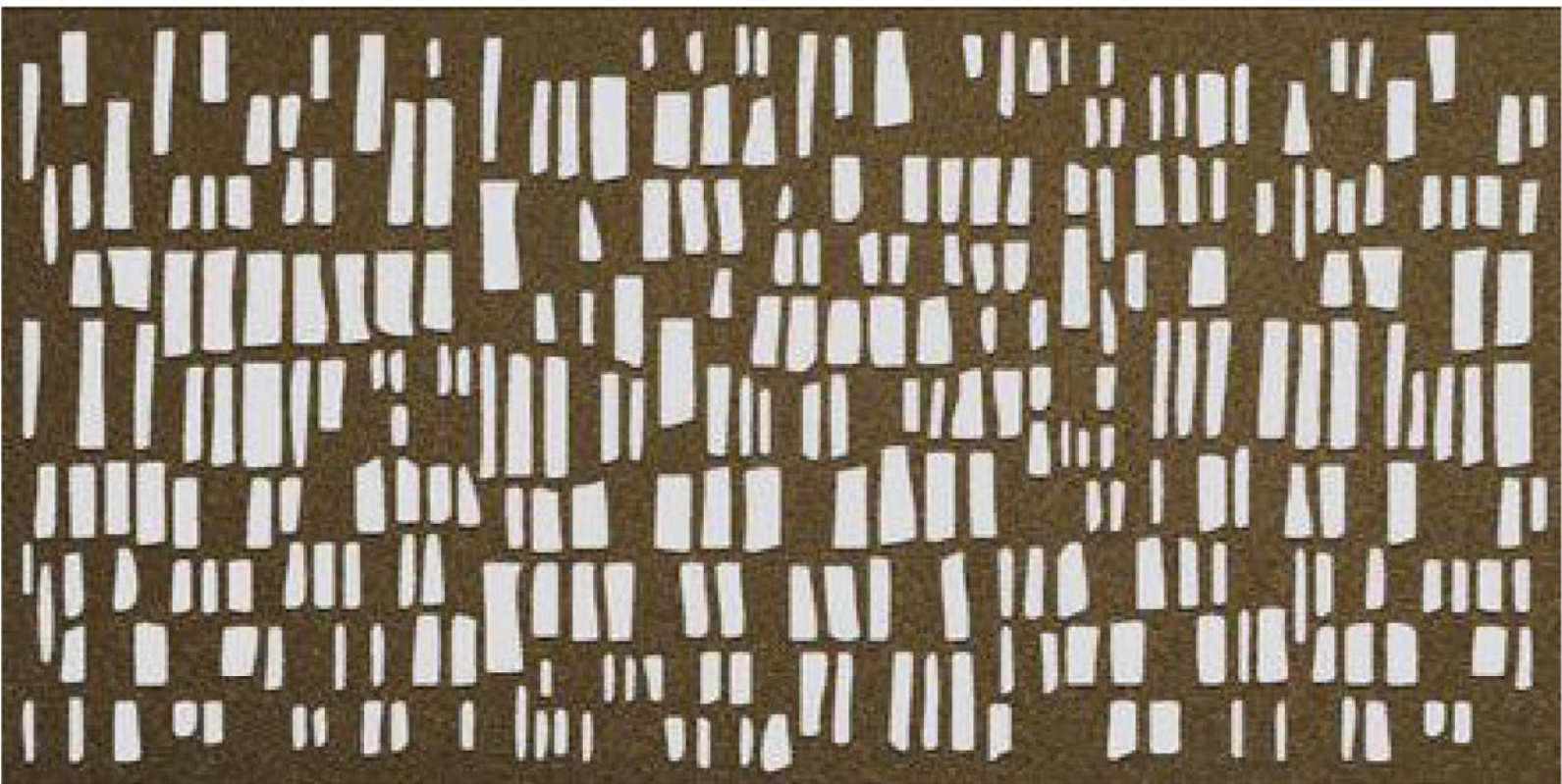
TRIKEENAN- BONEYARD BRICK
GLAZED CERAMIC BRICK TILE
COLOR - MOREL
SIZE - NORMAN 2.25" X 11 5/8"



TRIKEENAN- BONEYARD BRICK
GLAZED CERAMIC BRICK TILE
COLOR - JUS WHITE
SIZE - NORMAN 2.25" X 11 5/8"



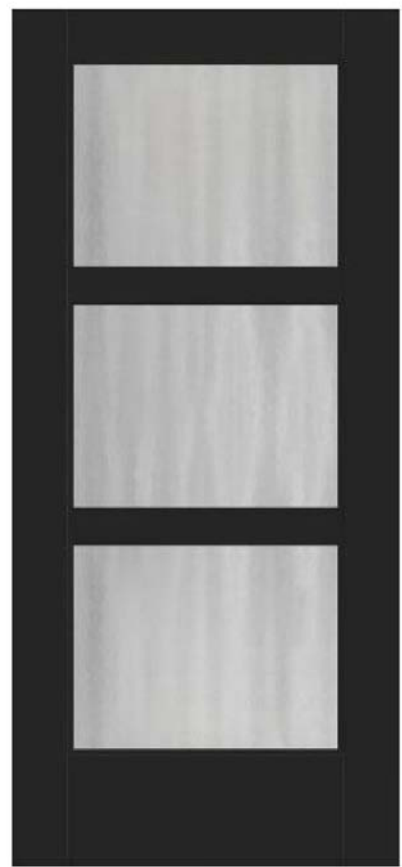
COMPOSITE CLADDING WOOD TONED SIDING,
FIBERON - COLOR "MERGANTI" OR EQUAL



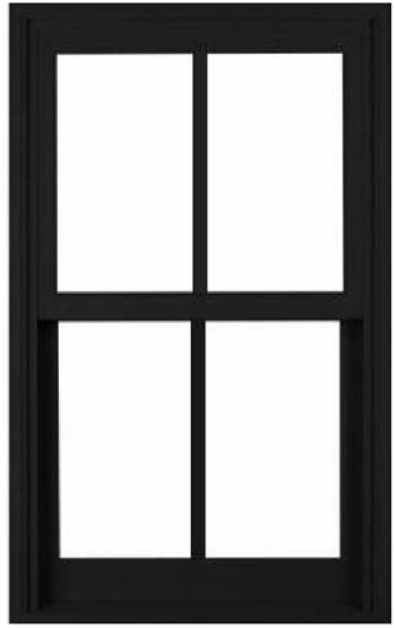
GARAGE ACCESSORY BUILDING - LASER CUT ALUMINUM SCREEN PANEL AT LEVEL 2
MOZ DESIGNS ARCHITECTURAL METALS
PATTERN - LIMESTONE, COLOR - BRONZE SAND



ALUMINUM RAILING
ANODIZED BRONZE



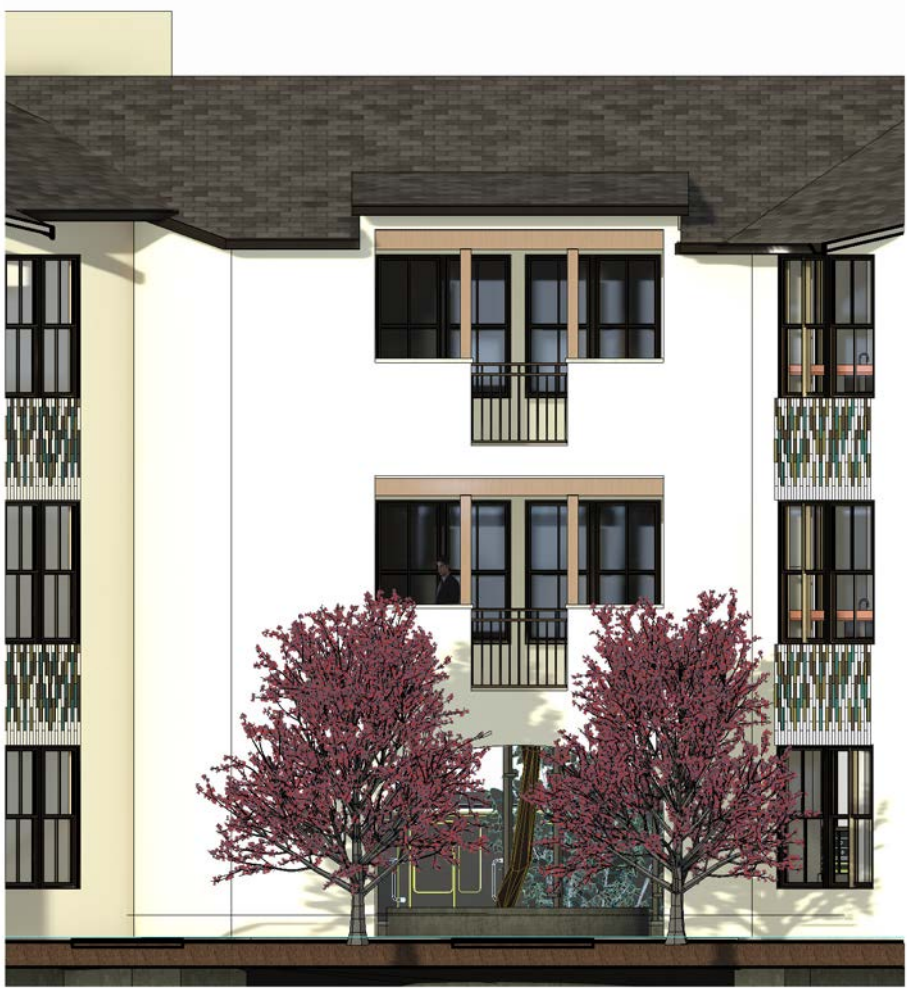
THERMA TRU FULL LITE
FLUSH-GLAZED
STYLE NO. S5700XJ-SDLF2
ONYX



MARVIN 4-LITE
DOUBLE HUNG WINDOW
BLACK VINYL



CERTAINTIED COMPOSITION SHINGLE
COLOR - WEATHERED WOOD



BUILDING "1" INTERIOR OF COURTYARD AT
ARCHED ENTRYWAY



BUILDING "1" ENTRY PLAZA
ARCHED ENTRY INTO RESIDENTIAL COURTYARD



BUILDING "A" WEST ELEVATION ON MEADOWBROOK COURT



Hedgpath
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A.P.N. 041-042-012

Sections

Revisions

Job Number

Project Number

Project Architect

Checker

Drawn By

Author

Date

1/20/20

Sheet

A11



1 Site Section 'A'
1/8" = 1'-0"



2 Site Section 'B'
1/8" = 1'-0"



1 View from Steele Ln & Hardies Ln



5 View from Meadowbrooke



4 Perspective from Courtyard Ground





Perspective at Entry



Perspective from Courtyard





Perspective Rendering from Steele Lane



Perspective Rendering from Meadowbrook Court

BENCHMARK

CITY OF SANTA ROSA BENCHMARK D-146, BEING A BRASS DISK IN WELL MONUMENT NEAR THE CENTERLINE INTERSECTION OF WEST STEELE LANE AND HARDIES LANE. ELEVATION = 132.40.

OWNER

PATRICK O'NEIL
STAGECOACH DEVELOPMENT
COMPANY, INC.
19 LEONA DRIVE
SANTA ROSA, CA 94903
(415) 491-4091

ARCHITECT

HEDGPETH ARCHITECTS
INGRID ANDERSON
2321 BETHARDS DRIVE, SUITE B
SANTA ROSA, CA 95404
(707) 523-7010

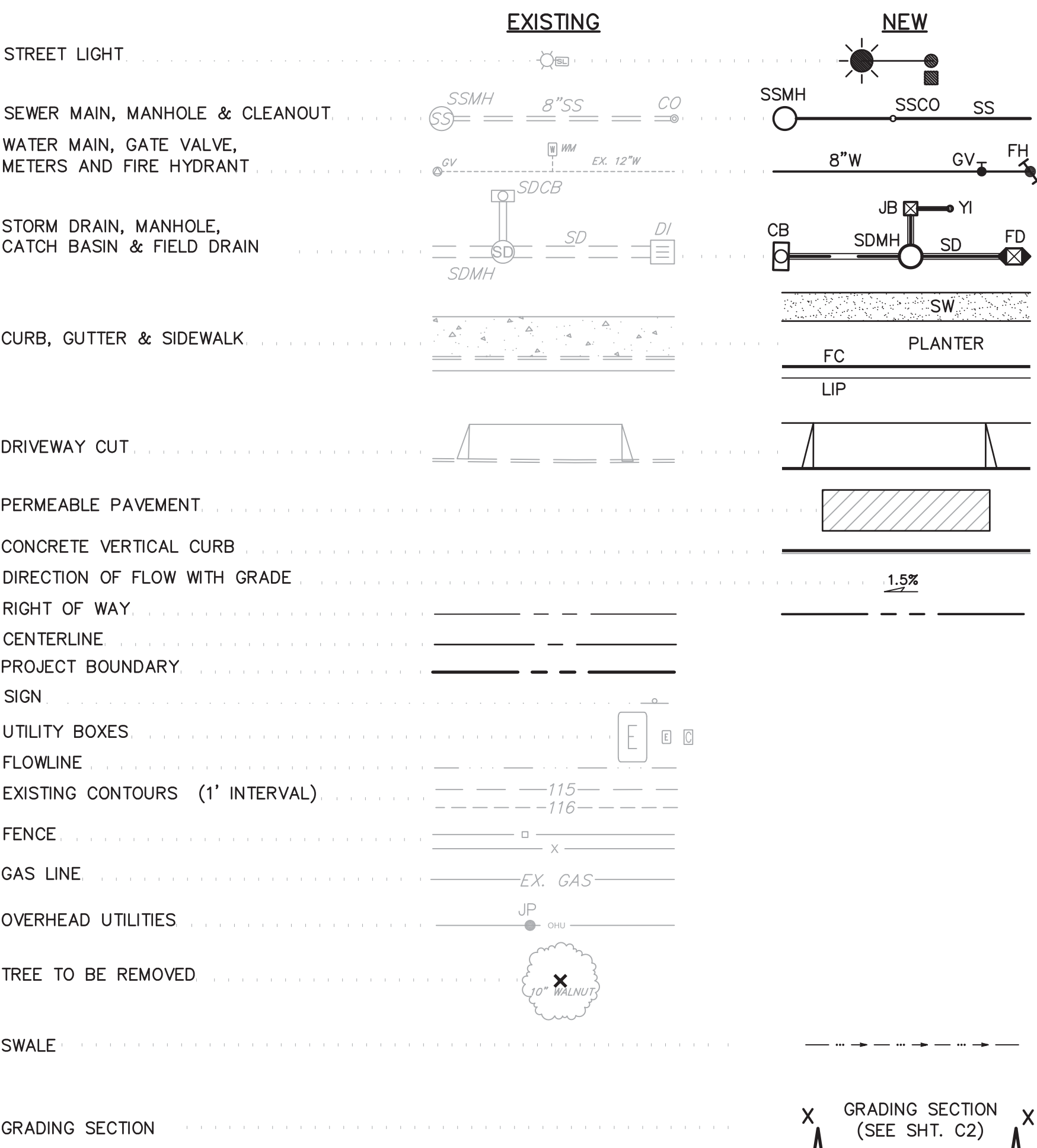
ENGINEER

CIVIL DESIGN CONSULTANTS, INC.
2200 RANGE AVENUE, SUITE 204
SANTA ROSA, CA 95403
(707) 542-4820

SURVEYOR

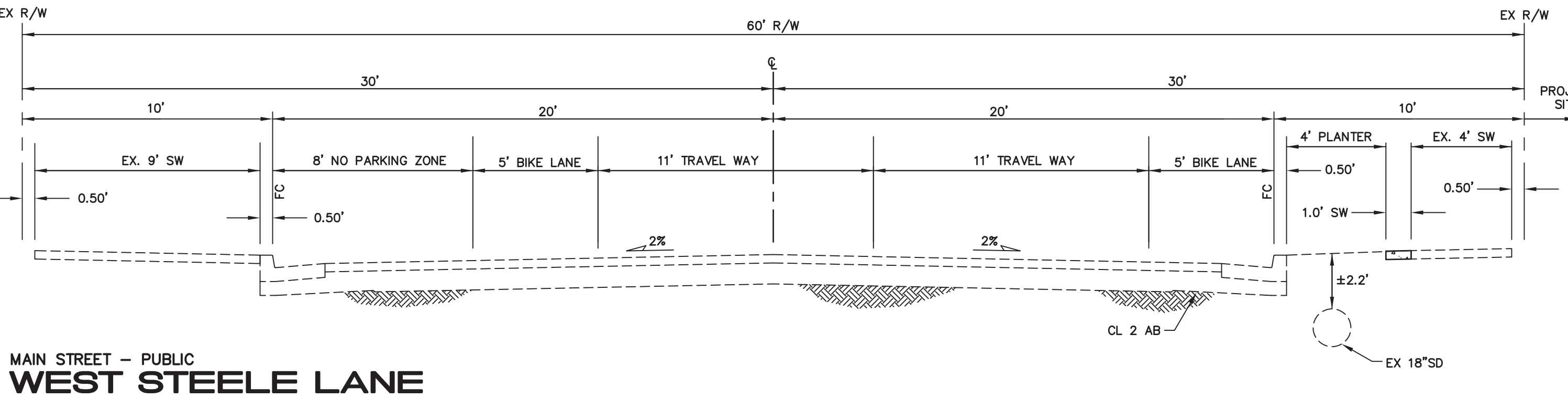
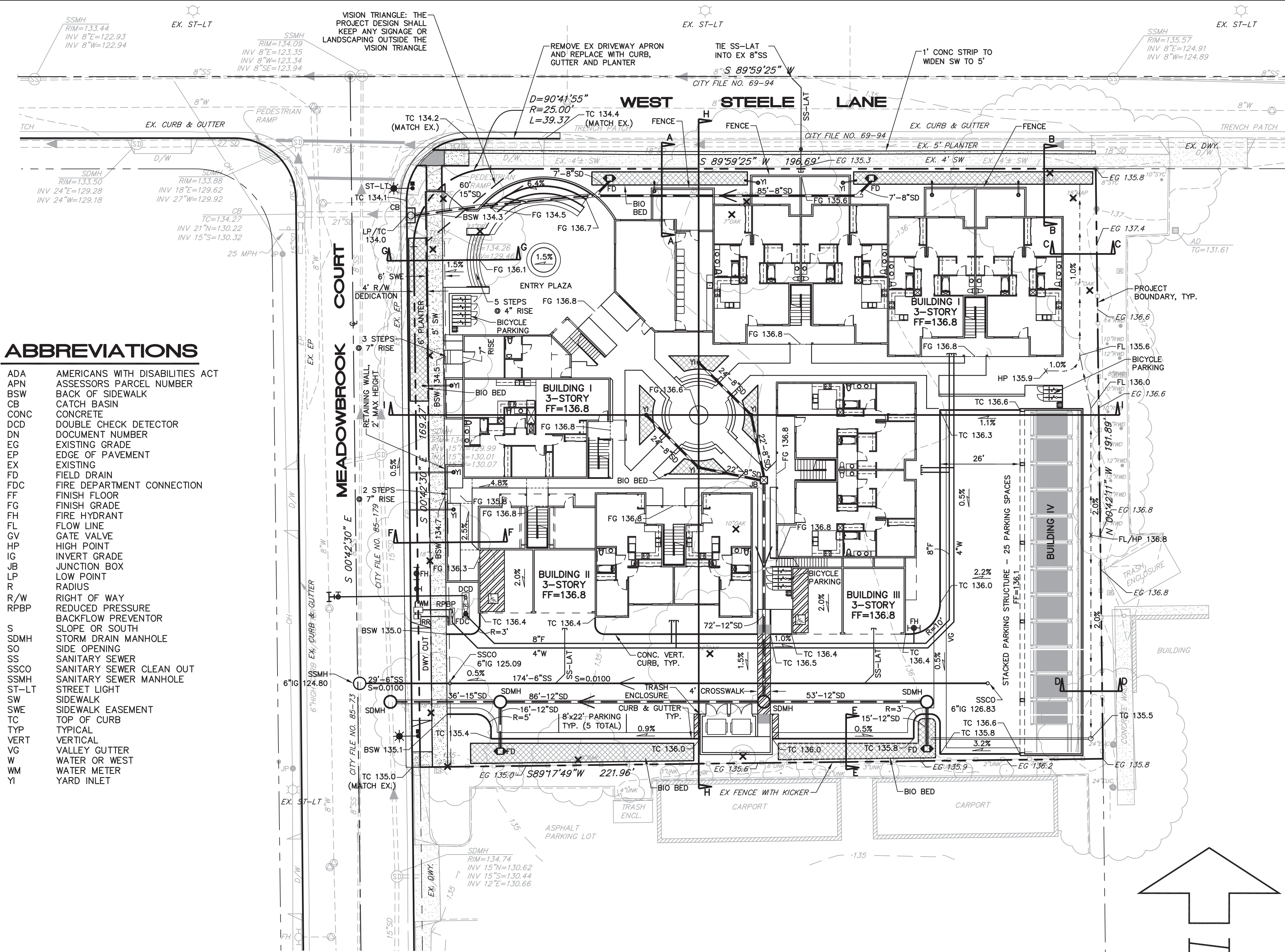
MIKE FORD LAND SURVEYING
8910 SONOMA HWY, SUITE 12B
KENWOOD, CA 95452
(707) 833-6468

LEGEND

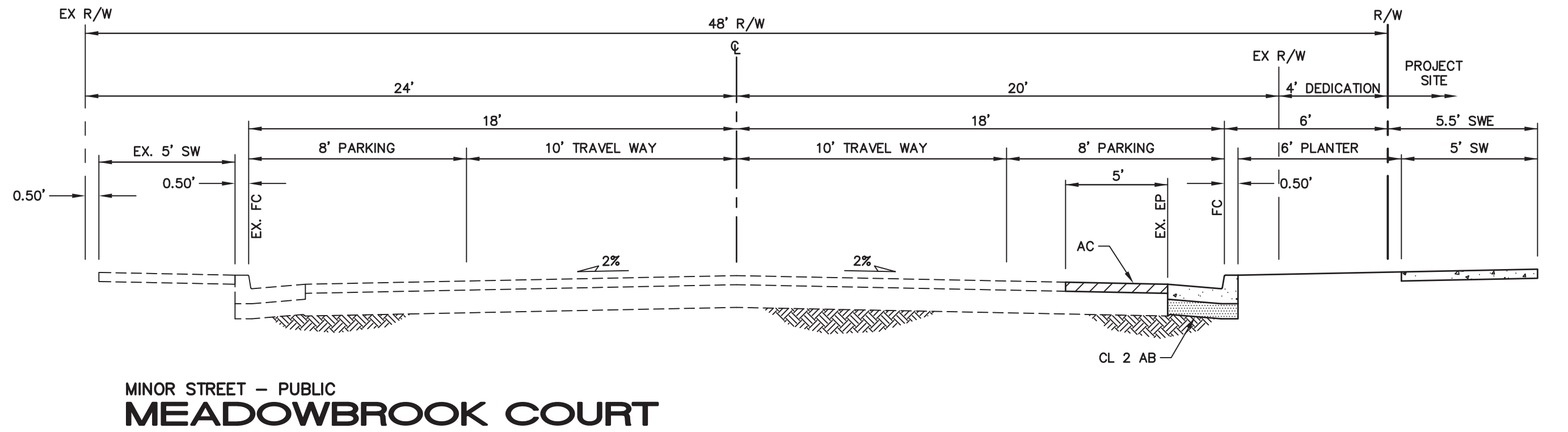


ABBREVIATIONS

ADA	AMERICANS WITH DISABILITIES ACT
APN	ASSESSORS' PARCEL NUMBER
BSW	BACK OF SIDEWALK
CB	CATCH BASIN
CONC	CONCRETE
DCD	DOUBLE CHECK DETECTOR
DN	DOCUMENT NUMBER
EG	EXISTING GRADE
EP	EDGE OF PAVEMENT
EX	EXISTING
FD	FIELD DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FF	FINISH FLOOR
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
GV	GATE VALVE
HP	HIGH POINT
IG	INVERT GRADE
JB	JUNCTION BOX
LP	LOW POINT
R	RADIUS
R/W	RIGHT OF WAY
RPBP	REDUCED PRESSURE BACKFLOW PREVENTOR
S	SLOPE OR SOUTH
SDMH	STORM DRAIN MANHOLE
SO	SIDE OPENING
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEAN OUT
SSMH	SANITARY SEWER MANHOLE
ST-LT	STREET LIGHT
SW	SIDEWALK
SWE	SIDEWALK EASEMENT
TC	TOP OF CURB
TYP	TYPICAL
VERT	VERTICAL
VG	VALLEY GUTTER
W	WATER OR WEST
WM	WATER METER
YI	YARD INLET



MAIN STREET - PUBLIC
WEST STEELE LANE

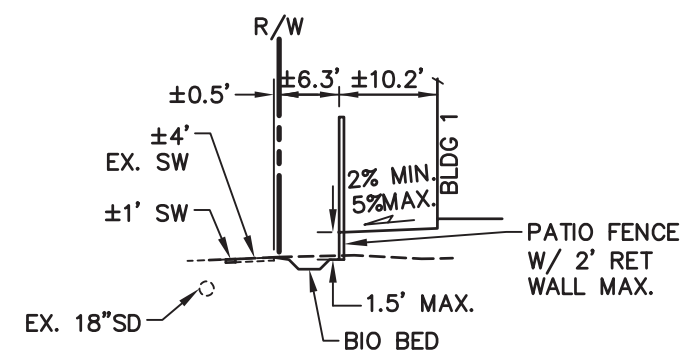


MINOR STREET - PUBLIC
MEADOWBROOK COURT

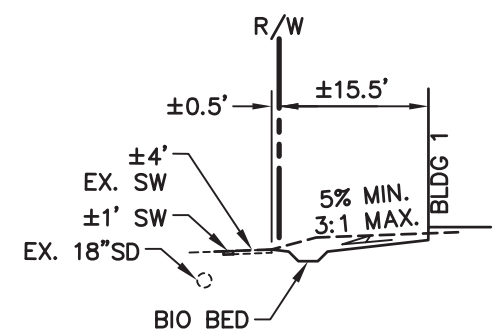
6/2/22
DATE
No. 4451
CIVIL
STATE OF CA
DENNIS D. DALEY
PCE #4451

CIVIL DESIGN CONSULTANTS, INC.
2200 Range Avenue, Suite 204
Santa Rosa, CA 95403
(707) 542-4820

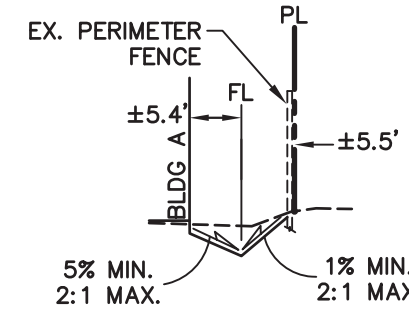
SITE GRADING AND UTILITY PLAN
STEEL LANE APARTMENTS
APN: 041-042-012
1650 WEST STEELE LANE
SANTA ROSA, CA
DOC. NO. 2017-078633
JUNE 2022
JOB NO. 19-107
SHEET NO. C1
OF 2 SHEETS



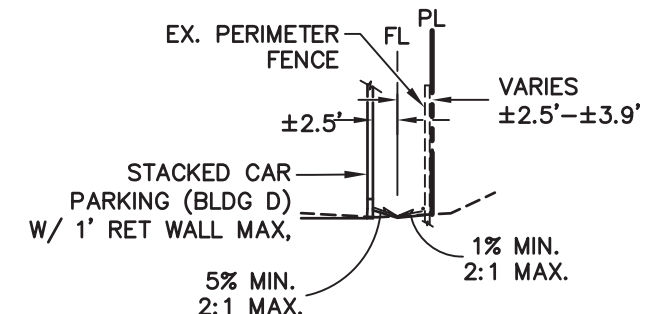
SECTION A-A
1" = 20' HORZ.
1" = 10' VERT.



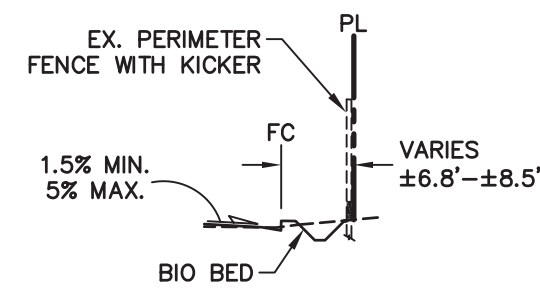
SECTION B-B
1" = 20' HORZ.
1" = 10' VERT.



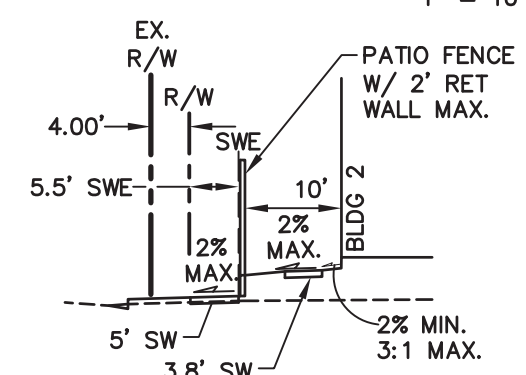
SECTION C-C
1" = 20' HORZ.
1" = 10' VERT.



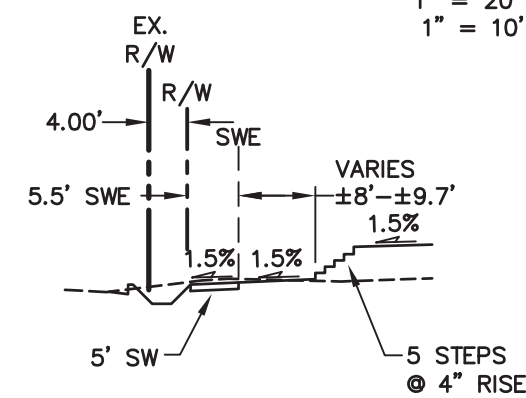
SECTION D-D
1" = 20' HORZ.
1" = 10' VERT.



SECTION E-E
1" = 20' HORZ.
1" = 10' VERT.

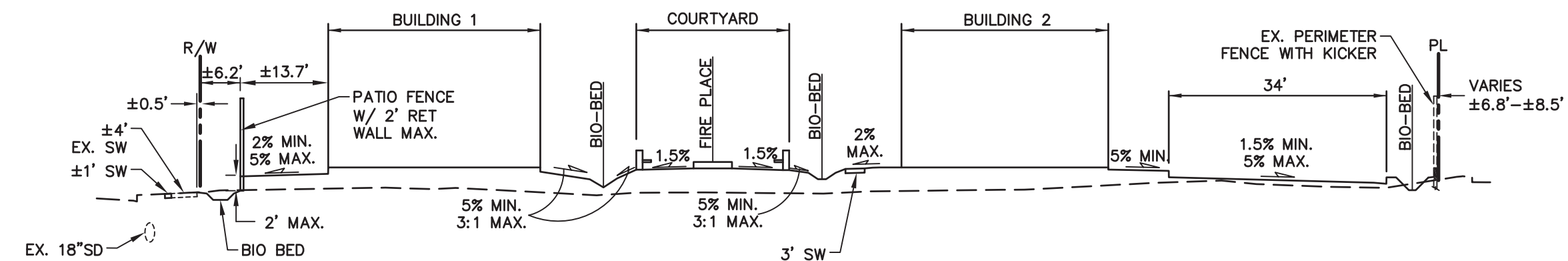


SECTION F-F
1" = 20' HORZ.
1" = 10' VERT.

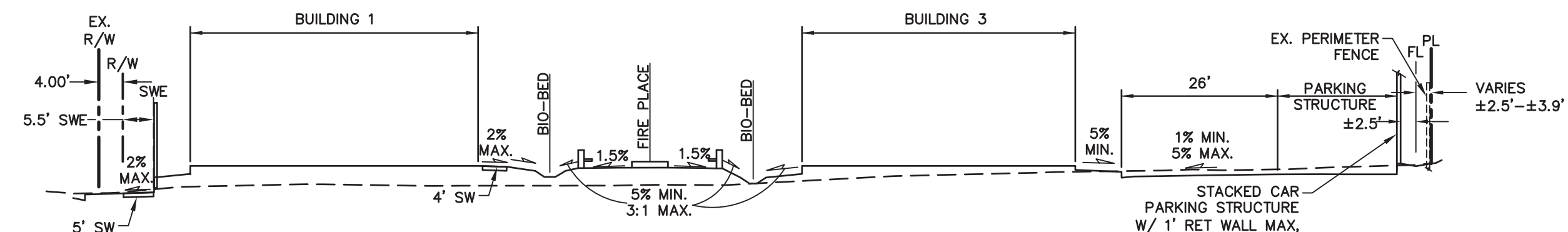


SECTION G-G
1" = 20' HORZ.
1" = 10' VERT.

GRADING SECTIONS

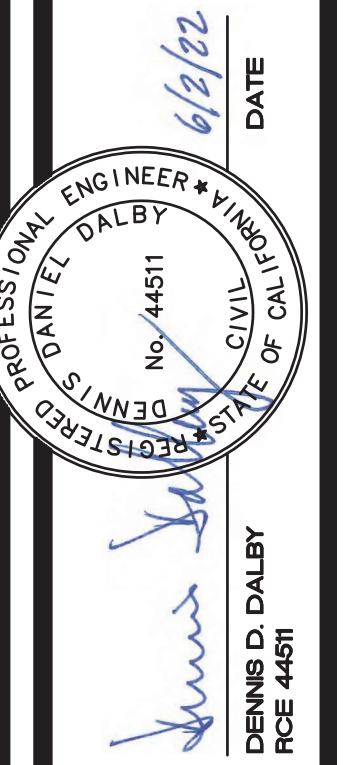


SECTION H-H
1" = 20' HORZ.
1" = 10' VERT.



SECTION I-I
1" = 20' HORZ.
1" = 10' VERT.

SITE/BUILDING SECTIONS



CIVIL DESIGN CONSULTANTS, INC.
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Santa Rosa, CA 95403
(707) 542-4820

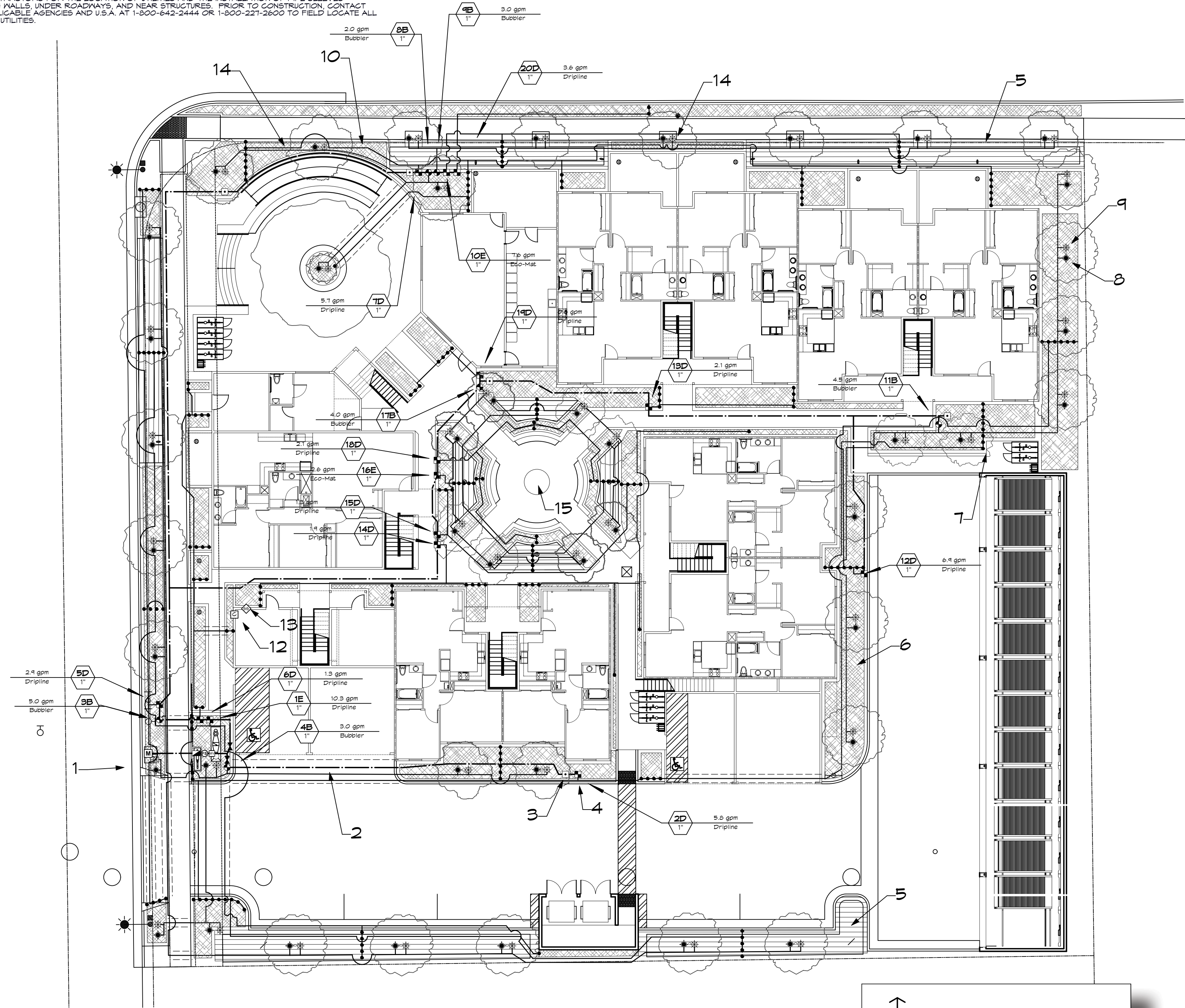
GRADING SECTIONS AND SITE BUILDING SECTIONS
STEELE LANE APARTMENTS
1650 WEST STEELE LANE
SANTA ROSA, CA
APN: 041-042-012
DOC. NO. 2017-076633

JUNE 2022
JOB NO.
19-107
SHEET NO.

C2
OF 2 SHEETS

U.S.A NOTE
IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO BE FAMILIAR WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, STRUCTURES, AND UTILITIES. THE IRRIGATION CONTRACTOR SHALL EXERCISE EXTREME CARE, AND BE RESPONSIBLE FOR ANY DAMAGE IN EXCAVATING AND WORKING NEAR UTILITIES. THE LANDSCAPE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE OTHER SUB-CONTRACTORS FOR THE LOCATION OF UTILITIES AND THE INSTALLATION OF PIPE SLEEVES THROUGH WALLS, UNDER ROADWAYS, AND NEAR STRUCTURES. PRIOR TO CONSTRUCTION, CONTACT ALL APPLICABLE AGENCIES AND U.S.A. AT 1-800-642-2444 OR 1-800-221-2600 TO FIELD LOCATE ALL EXISTING UTILITIES.

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

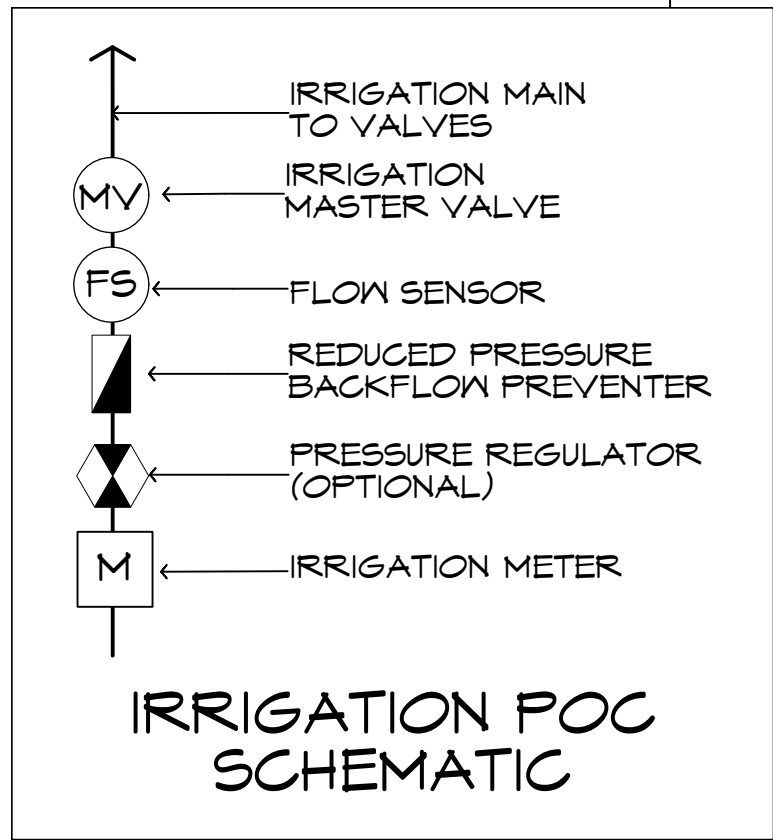


IRRIGATION PLAN

Scale: 1/16" = 1'-0"

IRRIGATION KEYNOTES

- POC AT DEDICATED IRRIGATION WATER METER; REFER TO SCHEMATIC DRAWING THIS SHEET AND CIVIL DRAWINGS
- TYPICAL IRRIGATION SLEEVE BENEATH PAVEMENT; SIZE SLEEVE TO CONTAIN PIPE AND WIRE PER DETAIL; MINIMUM SIZE NO LESS THAN 2" DIAMETER
- QUICK COUPLER, TYPICAL
- DRIPLINE VALVE, TYP.
- PARALLEL LINE HATCH INDICATES ECO-MAT
- CROSS LINE HATCH INDICATE LANDSCAPE DRIPLINE ZONES
- POLY TUBING TO PVC CONNECTION, TYPICAL
- TREE BUBBLERS, TWO PER TREE, TYPICAL. ONE ABOVE GRADE STREAM BUBBLER AND ONE SUB-SURFACE BUBBLER
- TREE AREA IS CALCULATED AT A NETTED DIAMETER OF 6 FT. OR EQUIVALENT AREA. THE SAME AREA IS REMOVED FROM THE HYDROZONE BELOW THE TREE AND THE HIGHER WATER USE IS APPLIED IN THE ETVAL CALCULATION.
- INSTALL DRIPLINE 3" BELOW GRADE IN ALL PLANTING AREAS AT 18" OC TYPICAL. ALL DRIPLINE SHALL BE INSTALLED PARALLEL, GENERALLY FOLLOWING CONTOURS. HOLD DRIPLINE BACK FROM EDGE 1/2 THE ROW SPACING. MINIMUM OF ONE DRIP IN NARROW SPACES.
- TREE BUBBLER VALVE, TYP.
- CONTROLLER LOCATION: MOUNT AT EYE LEVEL; SUBJECT TO OWNER APPROVAL
- SOLAR SYNC SENSOR, ROOF MOUNT WITH CLEAR ACCESS TO SKY
- IRRIGATION LAYOUT IS DIAGRAMMATIC. INSTALL ALL MAIN LINE, LATERALS AND CONTROL WIRE IN LANDSCAPE AREAS. DO NOT INSTALL IN PUBLIC RIGHT OF WAY. WHEN LAYOUT REQUIRES INSTALLATION UNDER PAVING, USE IRRIGATION SLEEVES PER DETAIL SHEET L-3.
- WATER FEATURE



BIORETENTION AREAS SUPPLEMENTAL TEMPORARY IRRIGATION

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

IRRIGATION LEGEND				
SYMBOL	EQUIPMENT	MANUFACTURER	MODEL	REMARKS
	Root Zone Watering System	Hunter	RZWS-18-25-CV	One per tree, typical
	Hunter Stream Bubbler	Hunter	MSBN-25Q	One per tree, typical
	Landscape Dripline	Rain Bird	XFS-06-12	
	Eco-Mat	Hunter	ECO-MAT 11MM	
SEE DETAIL	Automatic Line Flush Valve	Hunter	AFV-T	INSTALL IN 6" VALVE BOX @ END OF CIRCUIT
SEE DETAIL	Air Relief Valve	Hunter	AVR-07S	INSTALL IN 6" VALVE BOX @ HIGH POINT OF CIRCUIT
SEE DETAIL	Continuous Acting Air Vent	Netalim	65ARIS1	INSTALL UPSTREAM FROM SUBMETER
	Bubbler	Hunter Industries(R)	ICV-1016-AS-ADJ	
	Dripline	Hunter Industries(R)	ICZ-101-LF-25	
	Eco-Mat	Hunter Industries(R)	ICZ-101-LF-25	
	Isolation Valve - Ball Valve	KBI	CPVC CTS	
	Master Valve	Hunter Industries(R)	ICV-1016	
	Backflow Preventer Enclosure	Le Muer	BF 18" X 30" X 30"	Install Per Manufacturer's Specs
	1" Reduced Pressure Backflow Preventer	Watts	LFO0M42-PC-GT 1	Required
	3/4" Quick Coupling Valve	Rainbird	3S-DNP	Use with non-potable water
	Flow Sensor	GST	ELF-T10-NC1	
	Solar Sync Sensor - Wireless	Hunter	SSS-SEN	Mount at roof eave with clear view of sky.
	Irrigation Controller - 6 Station	Hunter	IC-600-M	
	6 Station Plug-in Expansion Module	Hunter	ICM-600	(4 TOTAL)
	Main Line		PVC Schedule 40	
	Lateral		PVC Schedule 40	
	Poly to PVC Header			
	Backflow Preventer Enclosure			
	Pipe and Wire Sleeve		PVC Schedule 40	Size by pipe load; 2" PVC minimum
	VALVE STATION AND SEQUENCE			
	ELECTRIC CONTROL VALVE			
	GALLONS PER MINUTE			

REFER TO SHEET L3 FOR LANDSCAPE WATER USE CALCULATIONS

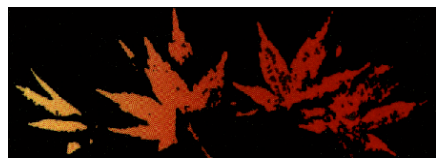
IRRIGATION NOTES

- ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR TO FINISH GRADE OF THE AREA TO BE IRRIGATED UNLESS OTHERWISE NOTED ON THE PLANS.
- THE SPRINKLER SYSTEM DESIGN IS BASED ON THE MINIMUM STATIC PRESSURE OF 35 PSI AT THE VALVES AND THE MAXIMUM FLOW DEMAND SHOWN ON THE IRRIGATION DRAWINGS AT THE POINT OF CONNECTION. THE IRRIGATION CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION OF THE IRRIGATION SYSTEM. IF THE WATER PRESSURE SHOWN ON THE DRAWINGS DIFFERS FROM THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY. IN THE EVENT PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO THE START OF CONSTRUCTION, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
- THE LOCATION OF THE CONTROLLER TO BE VERIFIED BY OWNER. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTING ALL PROPOSED STATIONS TO THE CONTROLLER. CONTROLLER TO BE CONFIGURED TO OPERATE 20 STATIONS. CONTROLLER SHALL BE HUNTER IC-600-M WITH THREE ICM-600 EXPANSION MODULES.
- ALL CONSTRUCTION IS TO BE PER THE LATEST EDITION OF THE UNIFORM BUILDING CODE.
- THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ROOT BARRIERS, ETC. SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY. INSTALL PIPING AND VALVES IN PLANTING AREAS WHERE POSSIBLE, AND LOCATE ELECTRIC CONTROL AND QUICK COUPLING VALVES IN GROUND COVER/SHRUB AREAS, 6" TO 12" AWAY FROM HARDSCAPE OR TURF AREA FOR EASY ACCESS.
- THE IRRIGATION CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS FOR OPTIMUM PERFORMANCE AND TO PREVENT OVER SPRAY ONTO WALKS, ROADWAYS, AND/OR BUILDINGS. THIS SHALL INCLUDE SELECTING THE BEST DEGREE OF ARC TO FIT THE EXISTING SITE CONDITIONS AND THROTTLING THE FLOW CONTROL AT EACH VALVE TO OBTAIN THE OPTIMUM OPERATING PRESSURE FOR EACH SYSTEM.
- IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE THEMSELVES WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, STRUCTURES, AND UTILITIES. THE IRRIGATION CONTRACTOR SHALL EXERCISE EXTREME CARE, AND BE RESPONSIBLE FOR ANY DAMAGE IN EXCAVATING AND WORKING NEAR UTILITIES. CONTRACTOR SHALL COORDINATE ALL WORK WITH THE GENERAL CONTRACTOR AND OTHER SUB-CONTRACTORS FOR THE LOCATION OF UTILITIES AND THE INSTALLATION OF PIPE SLEEVES THROUGH WALLS, UNDER ROADWAYS, AND NEAR STRUCTURES. PRIOR TO CONSTRUCTION, CONTACT ALL APPLICABLE AGENCIES AND U.S.A. AT 1-800-642-2444 TO FIELD LOCATE ALL EXISTING UTILITIES.
- FIELD ADJUSTMENTS MAY BE REQUIRED TO PROVIDE OPTIMUM OPERATING EFFICIENCY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE LANDSCAPE ARCHITECT TO REVIEW FIELD ADJUSTMENTS PRIOR TO INSTALLATION. IN THE EVENT THAT NO CONTACT IS MADE WITH THE LANDSCAPE ARCHITECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REVISIONS.
- SLEEVE ALL IRRIGATION PIPE AND CONTROL WIRES UNDER STREETS AND CONCRETE WALKWAYS WITH THE PROPER SIZE CLASS 200 PVC PIPE TO DEPTH AS SPECIFIED.
- FOR ADDITIONAL INFORMATION, SEE PROJECT DETAILS AND SPECIFICATIONS.
- ALL WORK SHALL CONFORM TO ALL APPLICABLE CITY OF SANTA ROSA CONSTRUCTION STANDARDS.
- NO GALVANIZED IRON PIPE OR FITTINGS SHALL BE ALLOWED.
- A BALL VALVE IN A SEPARATE ROUND VALVE BOX IS TO BE INSTALLED IMMEDIATELY UPSTREAM FROM EACH REMOTE CONTROL VALVE OR GROUP OF VALVES. VALVE SHALL BE SIZED TO MAINLINE SUPPLY AT THE RC VALVE. SEE DETAIL.
- INSTALL 3" WIDE DETECTABLE TAPE (#3" DTP, AS MANUFACTURED BY T. CHRISTY). TAPE SHALL BE INSTALLED 6" ABOVE THE IRRIGATION MAIN.
- INSTALL ALL LANDSCAPE DRIPLINE BENEATH MULCH. INSTALL ALL TUBING 3" BELOW GRADE, PARALLEL AT SPACING INDICATED. USE LANDSCAPE STAPLES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS TO SECURE TUBING TO GROUND.
- A SIGNED CERTIFICATE OF COMPLETION IS REQUIRED PRIOR TO FINAL ACCEPTANCE BY THE CITY OF SANTA ROSA. IF THE INSTALLATION OF THE LANDSCAPE DOES MEET OR SUBSTANTIALLY COMPLY WITH THE APPROVED LANDSCAPE CONSTRUCTION DOCUMENTS, THE CERTIFICATE OF COMPLETION WILL NOT BE SIGNED OR APPROVED BY THE LANDSCAPE ARCHITECT OF RECORD.

REVISIONS

5/18/22	SITE PLAN COORDINATION BASED ON CITY COMMENTS	DM
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1650 WEST STEEL LANE
SANTA ROSA, CA

DATE: 12/18/21
MLA JOB #: 2019-14
SCALE: 1" = 16'
DRAWN: DM

L1

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

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



Scale: 1/16" = 1'-0"

1. TRAIN VINES UP WALL
2. BIO-FILTRATION SOD, TYPICAL
3. NO MULCH IN BIOSWALES
4. WATER FEATURE
5. 3" DEEP MULCH, ALL LANDSCAPE AREAS
6. 2' X 4' RECTANGULAR TREE GRATES AT BACK OF SIDEWALK
7. TRAIN VINES ON ARBOR

PLANT LEGEND

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

1. UPON COMPLETION OF INSTALLATION, CONTRACTOR SHALL SUBMIT TO THE ENGINEERING DEVELOPMENT SERVICES INSPECTOR A COMPLETED AND SIGNED "CERTIFICATE OF COMPLETION" STATING THE PROJECT HAS BEEN INSTALLED AS DESIGNED.
2. THE CERTIFICATE OF COMPLETION SHALL BE ACCOMPANIED BY AN IRRIGATION AUDIT, IRRIGATION SCHEDULE AND A MAINTENANCE SCHEDULE, AS DESCRIBED IN THE CITY ORDINANCE.
3. A FINAL CITY INSPECTION SHALL BE PERFORMED. THE INSTALLATION CONTRACTOR SHALL ATTEND THIS INSPECTION AND MAKE ALL REQUIRED REPAIRS AND ADJUSTMENTS TO ACHIEVE APPROVAL AND COMPLETION FROM THE CITY. TO SCHEDULE AN INSPECTION, CONTACT ENGINEERING DEVELOPMENT SERVICES AT (707) 543-4611.
4. A MINIMUM OF 8" OF NON-MECHANICALLY COMPACTED SOIL SHALL BE AVAILABLE FOR WATER ABSORPTION AND ROOT GROWTH IN PLANTED AREAS.
5. INCORPORATE COMPOST OR NATURAL FERTILIZER INTO THE SOIL TO A MINIMUM DEPTH OF 8" AT A MINIMUM RATE OF 8 CUBIC YARDS PER 1000 SQUARE FEET OR PER SPECIFIC AMENDMENT RECOMMENDATIONS FROM A SOILS LABORATORY REPORT.
6. A MINIMUM 3" LAYER OF MULCH SHALL BE APPLIED ON ALL EXPOSED SOIL SURFACES OF PLANTING AREAS EXCEPT IN TURF AREAS, CREEPING OR ROOTING GROUNDCOVERS OR DIRECT SEEDING APPLICATIONS.

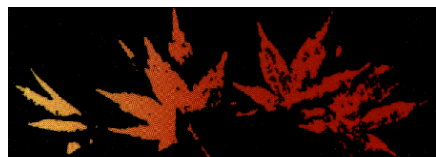
A. PROJECT APPLICANT MUST SUBMIT DOCUMENTATION VERIFYING IMPLEMENTATION OF A LANDSCAPE ANALYSIS REPORT RECOMMENDATIONS TO THE CITY WITH CERTIFICATE OF COMPLETION

B. THE CERTIFICATE OF COMPLETION MUST BE ACCOMPANIED BY AN IRRIGATION AUDIT THAT CONTAINS THE FOLLOWING:

- ◆ OPERATING PRESSURE OF THE IRRIGATION SYSTEM
- ◆ DISTRIBUTION UNIFORMITY OF OVERHEAD IRRIGATION
- ◆ PRECIPITATION RATE OF OVERHEAD IRRIGATION
- ◆ REPORT OF ANY OVERSPRAY OR BROKEN IRRIGATION EQUIPMENT
- ◆ IRRIGATION SCHEDULE INCLUDING:
 1. PLANT ESTABLISHMENT IRRIGATION SCHEDULE
 2. REGULAR IRRIGATION SCHEDULE BY MONTH (SEE ORDINANCE FOR DETAILS)
 3. VERIFICATION THAT A DIAGRAM OF THE IRRIGATION PLAN SHOWING HYDROZONES IS KEPT WITH THE IRRIGATION CONTROLLER FOR SUBSEQUENT MANAGEMENT PURPOSES .
- ◆ ALL LANDSCAPE IRRIGATION AUDITS MUST BE CONDUCTED BY A CITY CERTIFIED LANDSCAPE IRRIGATION AUDITOR OR A THIRD PARTY CERTIFIED LANDSCAPE IRRIGATION AUDITOR.
- ◆ AN IRRIGATION MAINTENANCE SCHEDULE TIMELINE MUST BE ATTACHED TO THE CERTIFICATE OF COMPLETION (SEE ORDINANCE FOR DETAILS)

C. IRRIGATION AUDIT: AN IN-DEPTH EVALUATION OF THE PERFORMANCE OF AN IRRIGATION SYSTEM CONDUCTED BY A CERTIFIED LANDSCAPE IRRIGATION AUDITOR (SEE ORDINANCE FOR DETAILS). THE AUDIT MUST BE CONDUCTED IN A MANNER CONSISTENT WITH THE IRRIGATION ASSOCIATION'S LANDSCAPE IRRIGATION AUDITOR CERTIFICATION PROGRAM OR OTHER U.S. EPA "WATERSENSE" LABELED AUDITING PROGRAM.

5/18/22 SITE PLAN COORDINATION BASED ON CITY COMMENTS DM



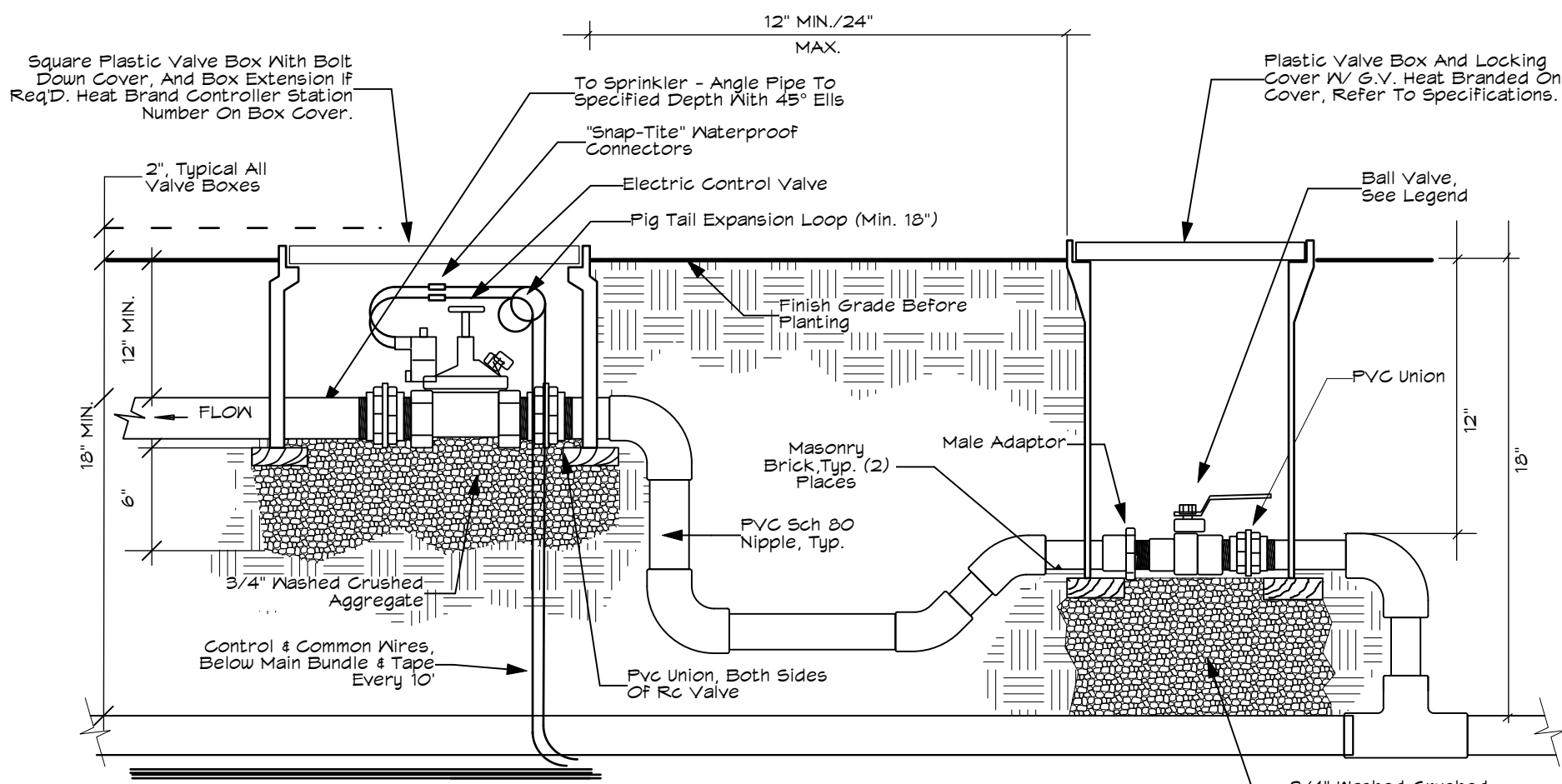
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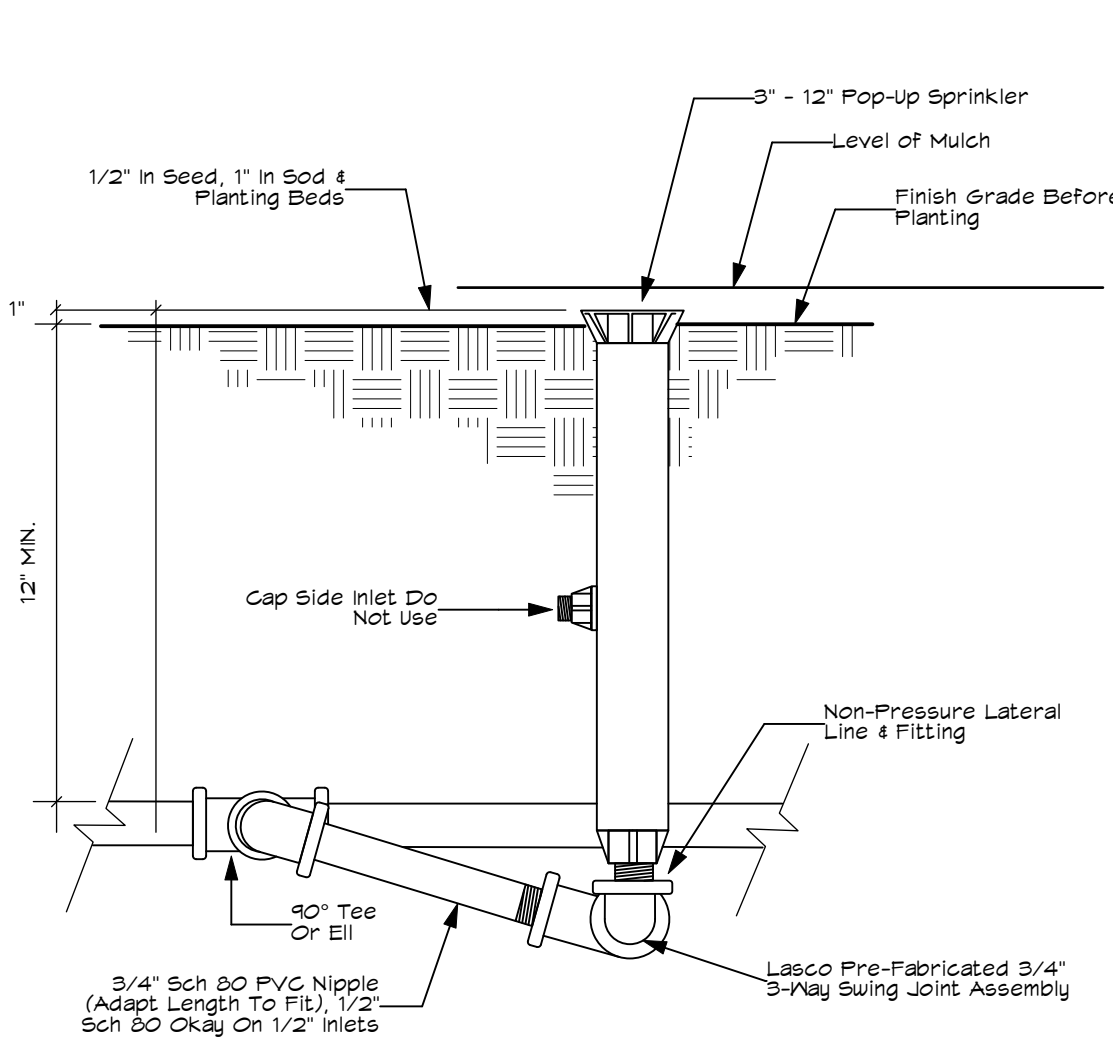
DATE: 12/18/2
MLA JOB #: 2019-14
SCALE: 1" = 20'
DRAWN: DM

L2



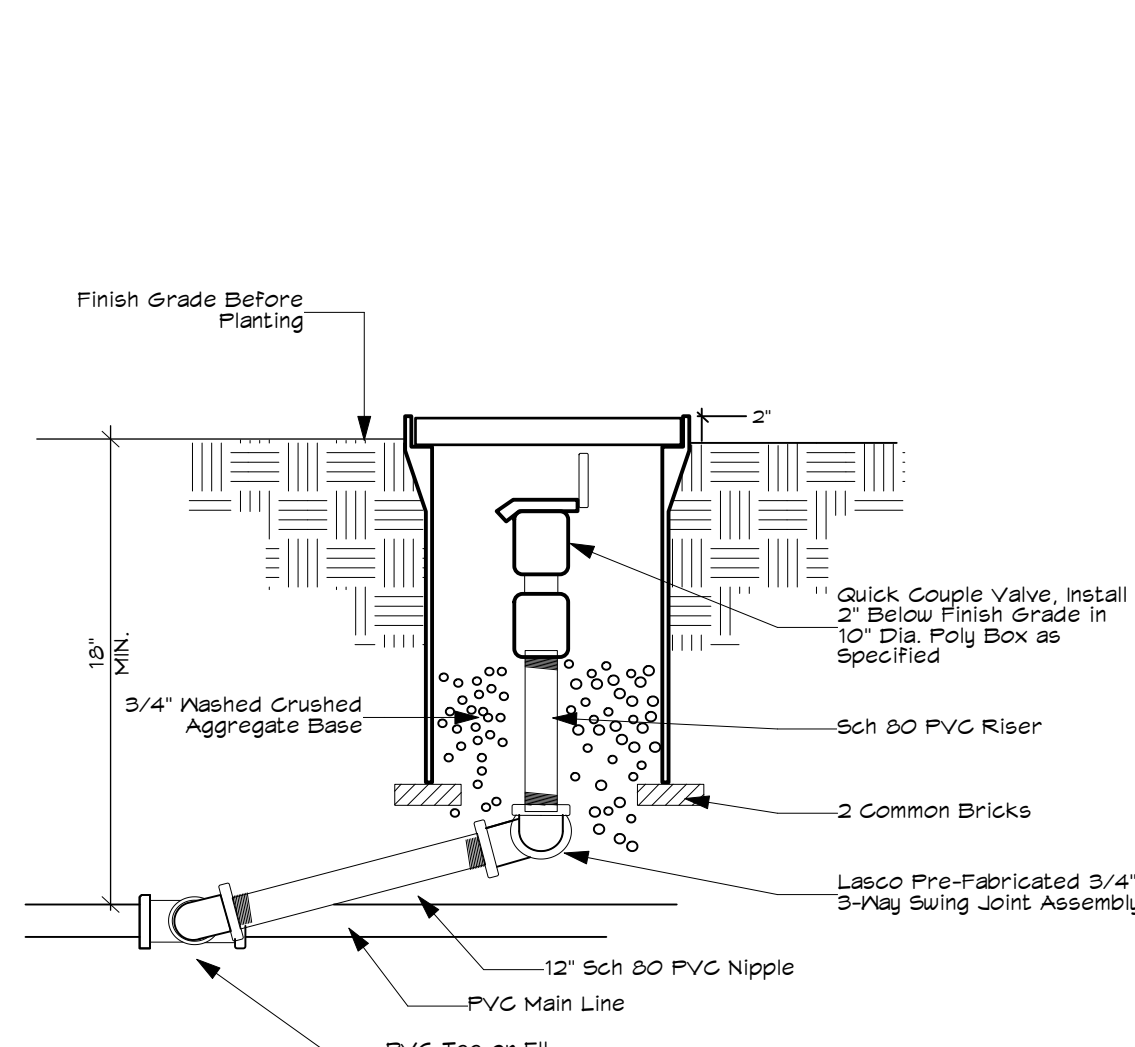
- NOTES:
- 1) INSTALL CONTROL VALVES A MINIMUM OF 18" FROM STRUCTURES OR HARDSCAPING.
 - 2) INSTALL VALVES IN PLANT BEDS WHEREVER POSSIBLE.
 - 3) PLACE VALVE BOX AT RIGHT ANGLES TO STRUCTURES OR HARDSCAPING.
 - 4) INSTALL VALVE BOX SO THAT TOP OF BOX IS FLUSH WITH ADJACENT HARDSCAPING.
 - 5) PLACE AGGREGATE PRIOR TO INSTALLATION OF VALVE BOX.
 - 6) INSTALL VALVE BOXES SO THAT TOP OF BOX IS FLUSH WITH ADJACENT HARDSCAPING.
 - 7) INSTALL ONE BALL VALVE IN BOX IMMEDIATELY UPSTREAM FROM EACH REMOTE CONTROL VALVE.

A **ELECTRIC CONTROL VALVE WITH SHUT OFF**
L3 NTS

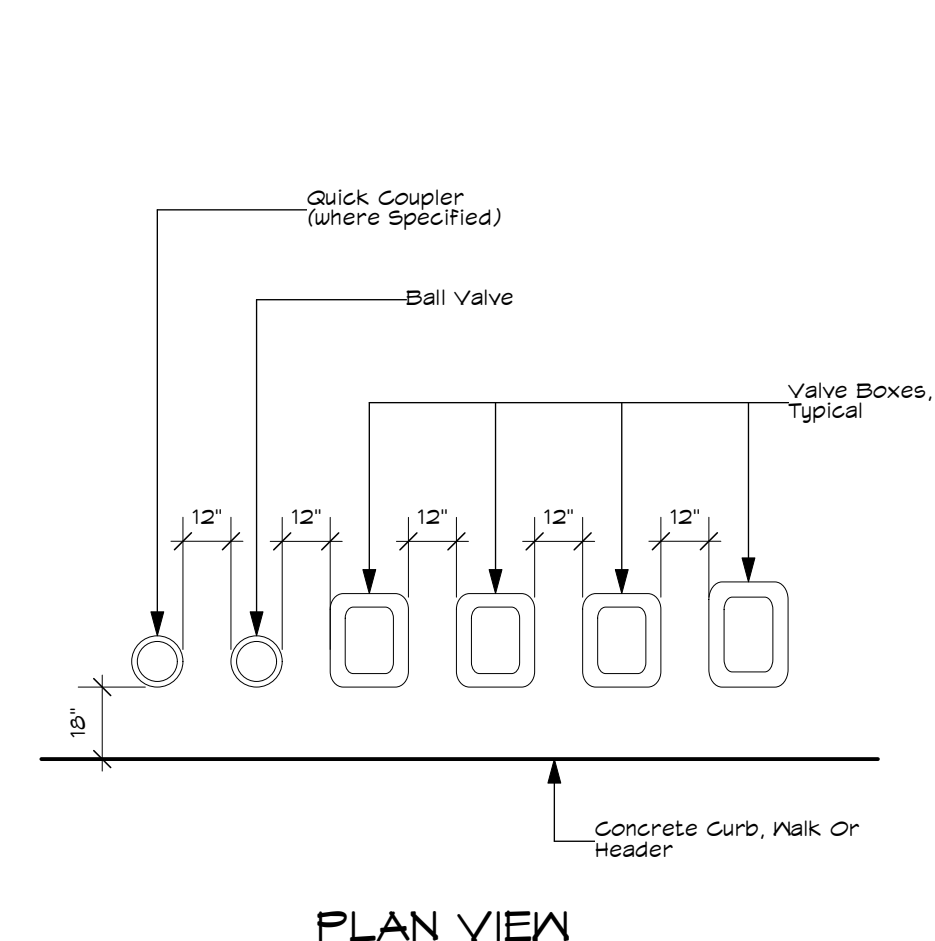


- NOTES:
- 1) LOCATE HEAD 6" FROM ALL EDGES IN LAWN AREAS. LOCATE HEAD 12" FROM ALL EDGES IN SHRUB AREAS.
 - 2) LOCATE STREAM SPRAY AND BUBBLERS HEADS 6" FROM ALL EDGES.
 - 3) USE TEFLON PASTE ON ALL MALE THREADS.

B **POP-UP SPRINKLER DETAIL**
L3 INCLUDES 4", 6" AND 12" NTS

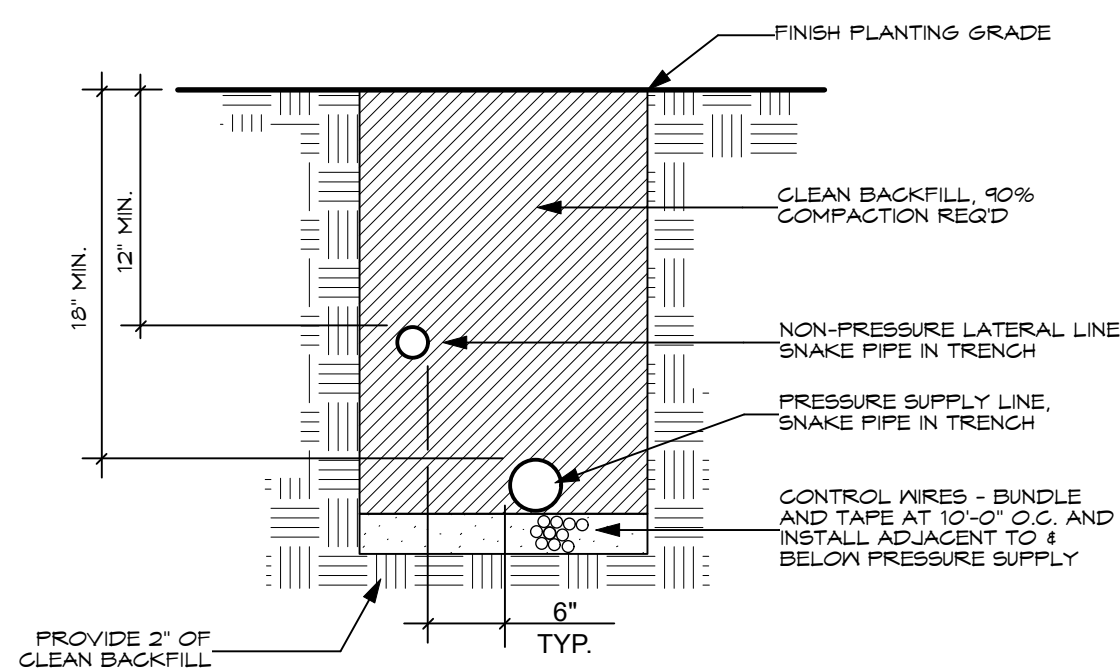


C **QUICK COUPLER DETAIL**
L3 NTS



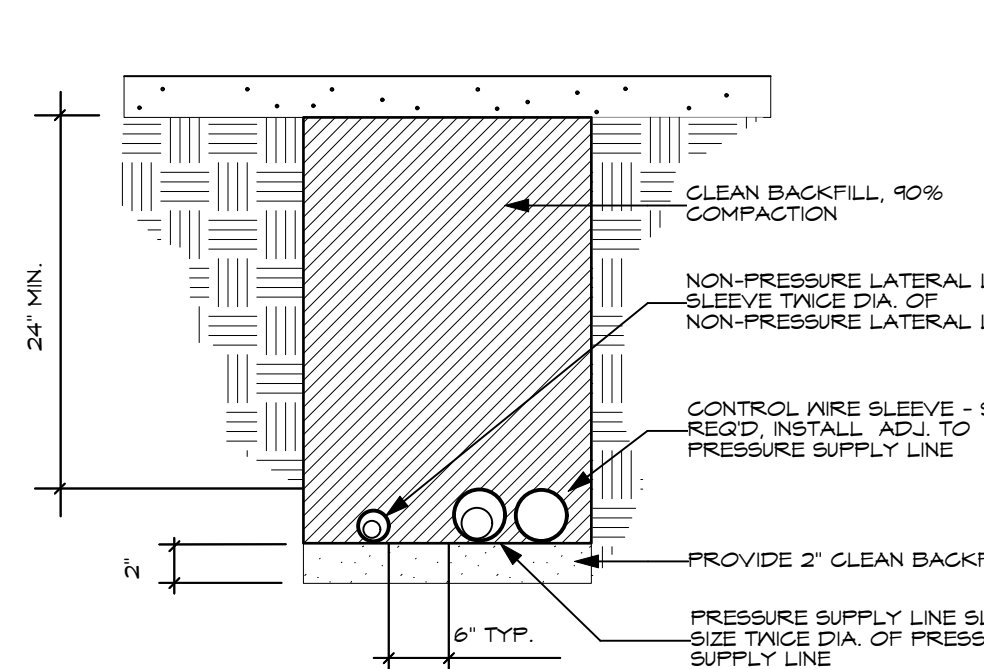
- NOTES:
- 1) CENTER VALVE BOX OVER VALVE ASSEMBLY.
 - 2) LOCATE VALVE BOXES IN GROUND COVER/SHRUB AREAS WHEN POSSIBLE.
 - 3) SET VALVE BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE.

D **VALVE BOX LAYOUT**
L3 NTS



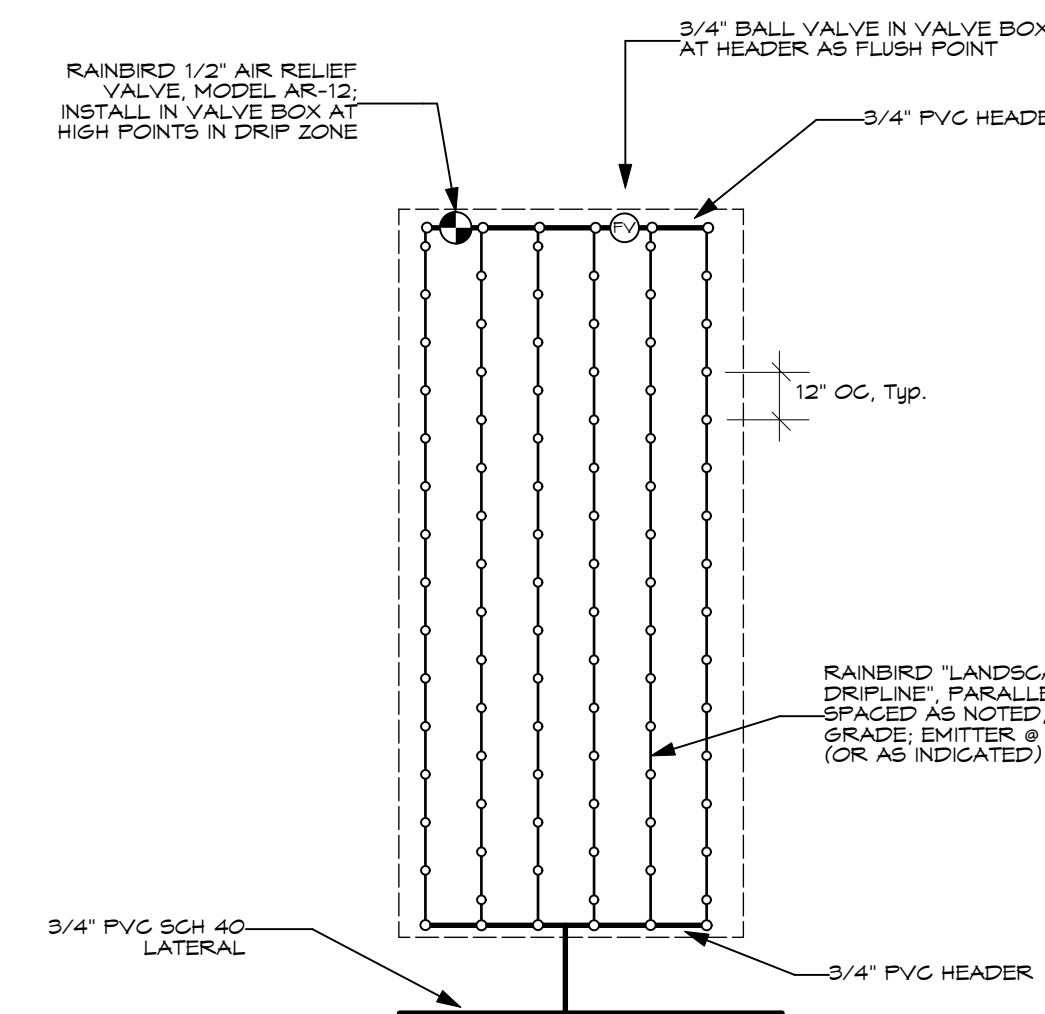
- NOTE:
- 1) PISTAL AND LOOP CONTROL WIRE AT ALL CHANGES IN DIRECTION.
 - 2) PROVIDE 18" EXPANSION LOOP AT ALL 90° ANGLES, AND EVERY 100' OF STRAIGHT CURVE RUN.

E **PIPE INSTALLATION IN PLANTED AREA**
L3 NTS

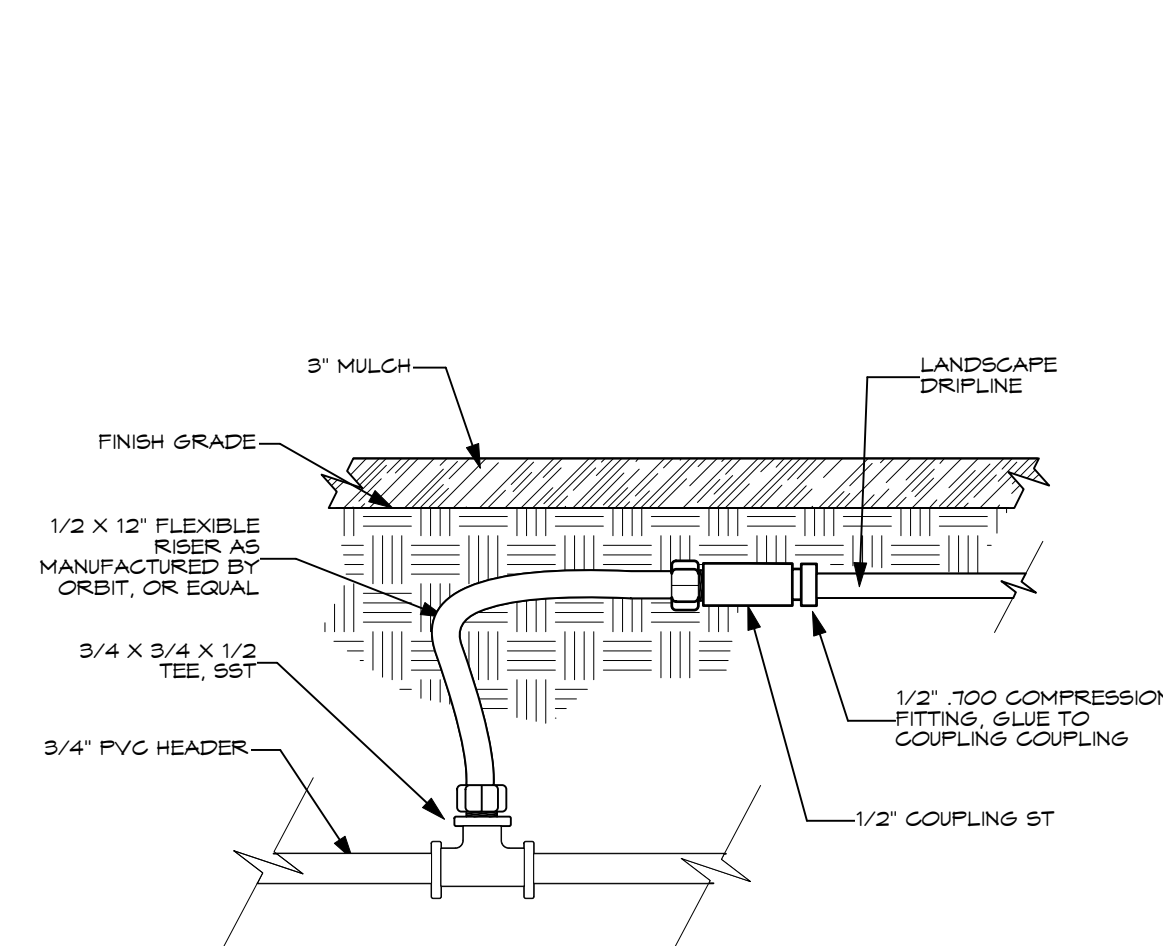


- NOTES:
- 1) ALL SLEEVES TO BE SCH 40 PVC.
 - 2) EXTEND ALL SLEEVES 12" BEYOND EDGE OF HARDSCAPING AT BOTH ENDS.

F **PIPE INSTALLATION UNDER PAVING**
L3 NTS



G **DRIP CIRCUIT LAYOUT**
L3 NTS

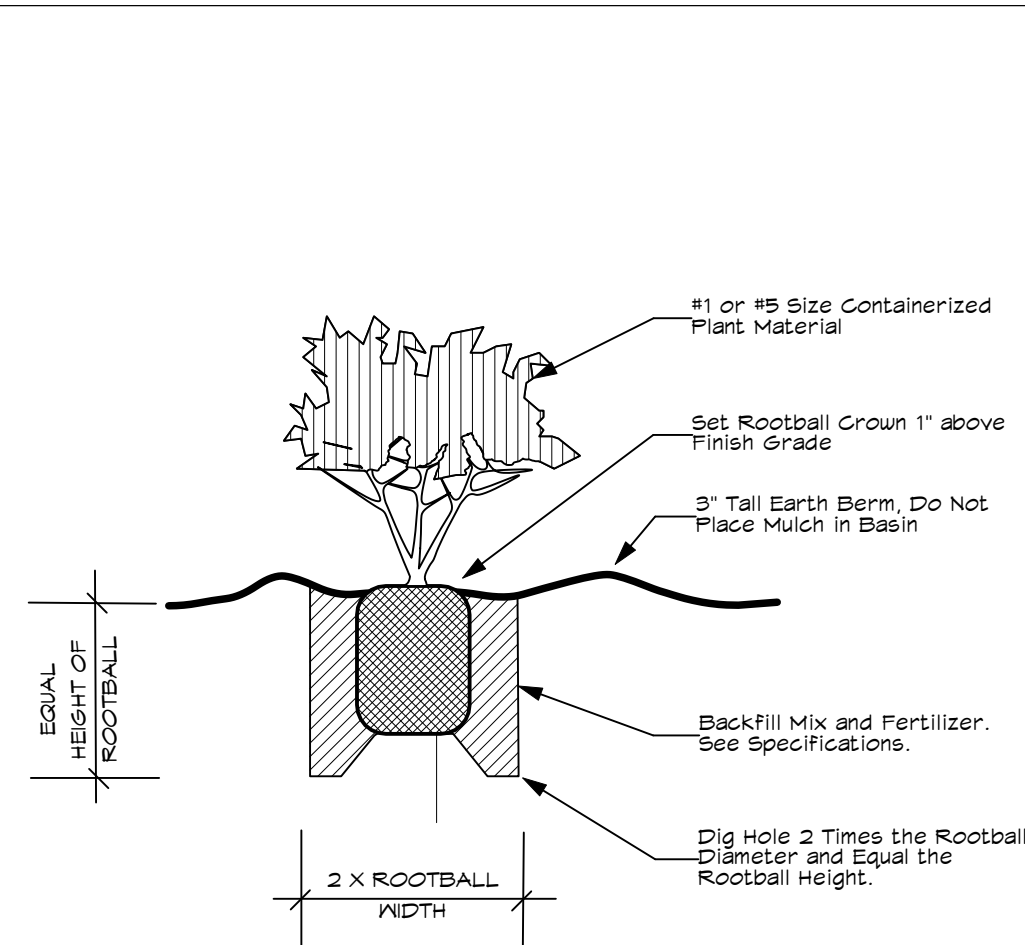


H **POLY TO PVC COMPRESSION FITTING DETAIL**
L3 NTS

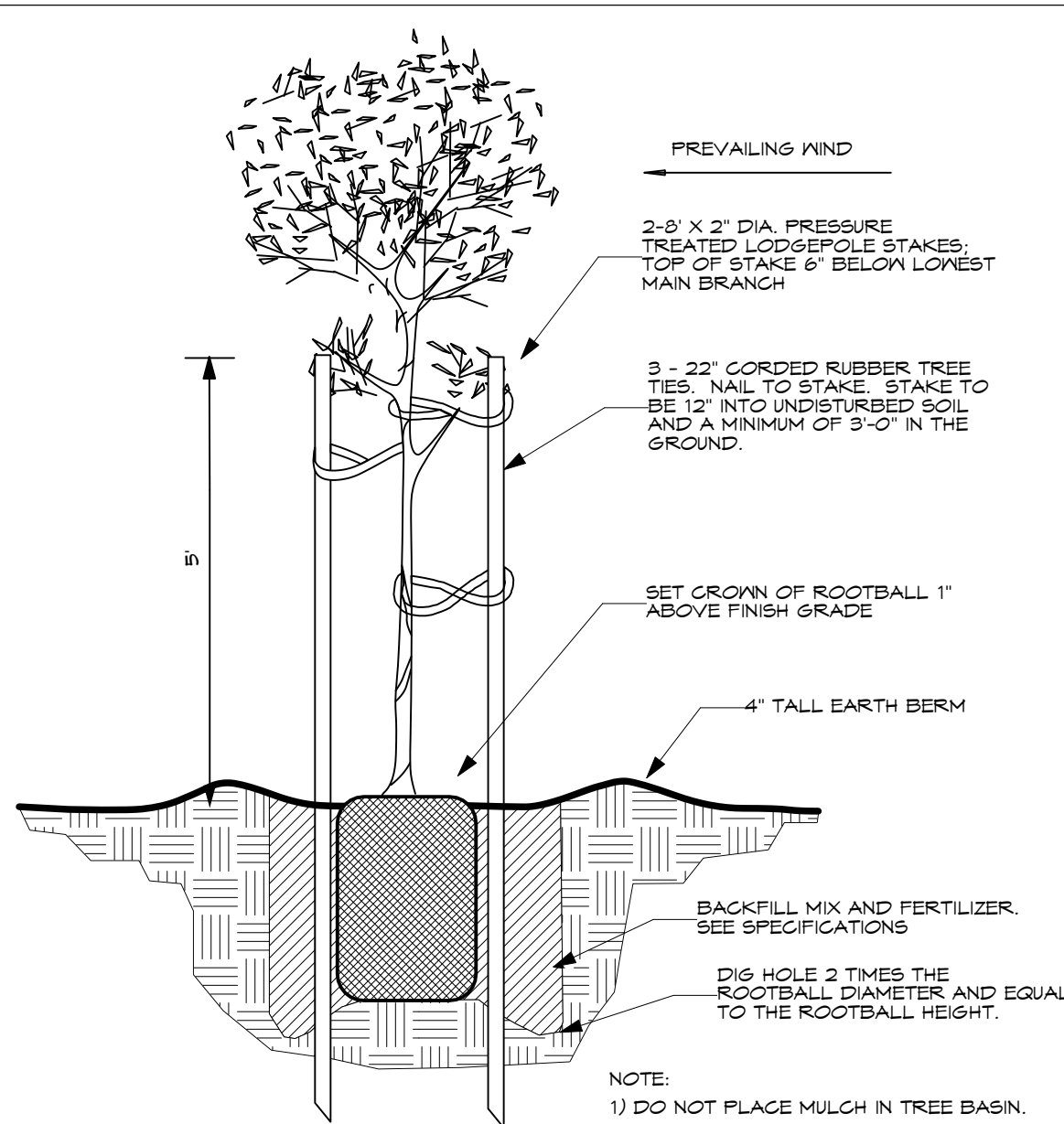
DETAIL HYDROZONE TABLE					
Name	Method	Water Use	Water Use Value	Hydrozone Area in SF	% of Landscape
1E	Eco-Mat	Low	0.3	1,012.12 sf	10.5%
2D	Sub-Surface Dripline	Low	0.3	988.13 sf	10.4%
3B	Root Watering System	Moderate	0.6	282.74 sf	2.9%
4B	Root Watering System	Low	0.3	164.64 sf	1.6%
5D	Sub-Surface Dripline	Low	0.3	471.43 sf	5.0%
6D	Sub-Surface Dripline	Low	0.3	321.92 sf	3.3%
7D	Sub-Surface Dripline	Low	0.3	970.22 sf	10.1%
8B	Root Watering System	Low	0.3	119.10 sf	1.2%
9B	Root Watering System	Low	0.3	96.00 sf	1.0%
10E	Eco-Mat	Low	0.3	849.94 sf	8.9%
11B	Root Watering System	Moderate	0.3	254.47 sf	2.6%
12D	Sub-Surface Dripline	Low	0.3	1,045.54 sf	11.4%
13D	Sub-Surface Dripline	Low	0.3	481.13 sf	5.0%
14D	Sub-Surface Dripline	Low	0.3	486.82 sf	5.1%
15D	Sub-Surface Dripline	Low	0.3	280.70 sf	2.9%
16E	Eco-Mat	Low	0.3	301.85 sf	3.1%
17B	Root Watering System	Moderate	0.6	226.14 sf	2.4%
18D	Sub-Surface Dripline	Moderate	0.6	237.01 sf	2.5%
19D	Sub-Surface Dripline	Moderate	0.6	137.40 sf	1.4%
20D	Sub-Surface Dripline	Low	0.3	757.54 sf	7.9%
21	Water Feature	High	1	14.63 sf	0.2%
				9,614 sf	100%

- NOTE:
- 1) DO NOT PLACE MULCH IN TREE BASIN.
 - 2) PLANTING HOLE TO BE TESTED FOR DRAINAGE PRIOR TO PLANTING. IF HOLES DO NOT DRAIN WITHIN 4 HOURS CONTACT LANDSCAPE ARCHITECT.
 - 3) INSTALL ROOT BARRIER ON ALL FOUR SIDES OF PLANTER.

K **TREE WELL WITH ROOT BARRIER**
L3 NTS



I **SHRUB PLANTING DETAIL**
L3 NTS



- NOTE:
- 1) DO NOT PLACE MULCH IN TREE BASIN.
 - 2) DETAIL NOT TO SCALE.

J **TREE PLANTING DETAIL**
L3 NTS

MANA AND ETWU CALCULATIONS			
1) Maximum Applied Water Allowance (MANA)			
MANA = (ETO) (0.62) (0.95 X LA) + (0.45 X SLA)			
Where:			
ETO = Annual Net Reference Evapotranspiration (inches)			
0.45 = ET Adjustment Factor (Commercial)			
0.95 = ET Adjustment Factor (Residential)			
LA = Landscaped Area (square feet)			
0.62 = conversion factor (to gallons per square foot)			
SLA = Portion of the landscape area identified as Special Landscape Area (square feet)			
0.45 = the additional ET adjustment factor for Special Landscape Area (1.0 - 0.95 = 0.45) (Commercial)			
0.95 = the additional ET adjustment factor for Special Landscape Area (1.0 - 0.45 = 0.95) (Residential)			
Commercial (C) or Residential (R)			
A) Net Evapotranspiration Calculation			
Local Reference ETO	46.03		
27.22" (Annual Rainfall)	X	25	= 6.81 (Effective Rainfall)
Net Evapotranspiration Calculation + Annual ETO - Effective Rainfall			= 34.23
B) Adjusted Landscape Area Calculation			
9,614 sf (Landscape Area)	X	0.45	= 4,326.15 sf
0.00 sf (Special Landscape Area)	X	0.95	= 0.00 sf
Sum of Adjusted Landscape Area			= 4,326.15 sf
MANA	34.23	X	62
		X	4,326.15
			= 105,210 gal/yr
2) Estimated Total Water Use (ETWU)			
A) Net Evapotranspiration Calculation			
Net Evapotranspiration Calculation + Annual ETO - Effective Rainfall			= 34.23 sf
B) Adjusted Landscape Area Calculation			
0.00 sf	X	0.01	= 0.00 sf
Very Low Water Use			
0.456 sf	X	0.03	= 2,536.07 sf
Low Water Use			
1.138 sf	X	0.06	= 682.88 sf
Moderate Water Use			
14.63 sf	X	0.3	= 14.63 sf
High Water Use			
Sum of Adjusted Landscape Area			= 3,234.14 sf
ETWU	34.23	X	62
		X	3,234.14
			= 98,464 gal/yr
Irrigation Efficiency Factor			
Square Footage of Landscape on Drip	9,613.67 sf		
Square Footage of Landscape on Spray	0.00 sf		
Total Square Footage of Landscape	9,613.67 sf		
Adjusted Irrigation Efficiency Factor	0.81		

PLANT TYPE	AREA	% OF LANDSCAPE
Very Low	0.00	0%
Low	8,456.23	88%
Moderate	1,137.81	12%
High	14.63	0%
Total	9,613.67	100%

PRECIPITATION RATES BY VALVE		
VALVE ID	FLOW IN GPM	PRECIPITATION RATE IN INCHES PER HOUR
1E	10.3 GPM	0.43
2D	5.8 GPM	0.56
3B	5.0 GPM	1.70
4B	3.0 GPM	1.70
5D	2.9 GPM	0.53
6D	1.3 GPM	0.33
7D	5.7 GPM	0.56
8B	2.0 GPM	1.70
9B	3.0 GPM	3.01
10E	7.6 GPM	0.82
11B	4.5 GPM	1.70
12D	6.9 GPM	0.61
13D	2.1 GPM	0.42
14D	1.9 GPM	0.37
15D	1.3 GPM	0.44
16E	2.6 GPM	0.83
17B	4.0 GPM	1.70
18D	2.1 GPM	0.84
19D	0.6 GPM	0.41
20D	3.6 GPM	0.46

REVISIONS

5/18/22 SITE PLAN COORDINATION BASED ON CITY COMMENTS DM

DATE: 12/18/21
MLA JOB #: 2019-14
SCALE: As Shown
DRAWN: DM

L3

SHEET L3 OF 4

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REGISTERED LANDSCAPE ARCHITECT
DONALD G. MACNAIR
NO. 2800
09/8/1/23
STATE OF CALIFORNIA

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844-6880
don@macnairlandscape.com

LANDSCAPE DETAILS

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APARTMENTS
1650 WEST STEEL LANE
SANTA ROSA, CA

DIVISION 2 SITE WORK

SECTION 02700

UNDERGROUND IRRIGATION SYSTEM

PART 1 GENERAL

1.01 SCOPE

A. Work Included: perform all work necessary and required for the construction of the project as indicated. Such work includes but is not limited to the following:

1. Furnish and install complete irrigation system.
2. Fencing and backfilling.
3. Sleeves for irrigation piping and remote control valve wiring under pavements and walks as noted.

B. Related Work in Other Sections: The following items of associated work are included in other sections of these specifications:

1. Landscaping, Section 02800

C. By Others: The following items of work will be performed by others and are not included in the contract.

1. Electrical stub-out for irrigation controller.
2. Irrigation water meter.
3. Water stub-out(s) for irrigation system.

1.02 INSPECTION OF CONDITIONS: Examine related work and surfaces before starting work of this section. Report to the landscape architect in writing, conditions which will prevent the proper provision of this work. Beginning the work of this section without reporting unsuitable conditions to the landscape architect constitutes acceptance of conditions by the contractor. Any required removal, repair, or replacement of this work caused by unsuitable conditions to be done at no additional cost to the owner.

1.03 CODES, RULES AND SAFETY ORDERS

A. All work and materials to be in full accordance with the latest rules and regulations of safety orders of Division of Industrial Safety, the Uniform Plumbing Code published by the Western Plumbing Officials' Association, and other applicable rules and regulations, including the prevailing local plumbing code. Nothing in these drawings or specifications is to be construed to permit work not conforming to these codes. Should the construction documents, or instructions, be at variance with the aforementioned rules and regulations, notify the landscape architect and get instructions before proceeding with the work affected.

B. Furnish and maintain all warning signs, shoring, barricades, red lanterns, etc., as required by the Safety Orders of the Division of Industrial Safety and local ordinances.

C. Contact U.S.A. for location of underground utilities.

1.04 STANDARDS: American Society of Testing and Materials (ASTM).

1.05 PERMITS AND FEES: Obtain all permits and pay required fees to any governmental agency having jurisdiction over the work. Arrange inspections required by local agencies and ordinances during the course of construction as required.

1.06 APPROVAL: Wherever the terms "approve", "approval", or "approved" are used in the specifications, they mean approval of landscape architect in writing.

1.07 WORK SCHEDULE: Submit a proposed work schedule to landscape architect at least 5 days prior to start of work under this Section. After approval, no modification shall be made to this schedule with out written authorization by the landscape architect.

1.08 OBSERVATION SCHEDULE: Schedule a minimum of 5 days before beginning work under this Section. All requests for observation must be made 72 hours in advance.

A. Job start meeting

The purpose of this conference is to review questions the contractor may have regarding the work, administrative procedures during construction and project work schedule.

B. Irrigation installation and hydrostatic tests

Observation of installation and hydrostatic test results to be made by the landscape architect prior to backfilling of trenches.

C. Pre-maintenance

When all work has been completed a pre-maintenance walk-through will be conducted. If approved, the 90 calendar day maintenance period will begin.

D. Final Observation

Final Observation will be after the 90 calendar day maintenance period and all required work is completed. Please give 1 week notice for this observation meeting.

1.09 SUBSTITUTIONS

A. Specific reference to manufacturer's names and products specified in this Section are used as standards, but this implies no right to substitute other material or methods without written approval of the landscape architect.

B. Installation of any approved substitution is contractor's responsibility. Any changes required for installation of any approved substitution must be made to the satisfaction of the landscape architect and without additional cost to the owner.

1.10 PROTECTION OF EXISTING CONDITIONS

A. Contractor shall acquire themself with all site conditions. Should utilities or other work not shown on the plans be found during excavations, contractor shall promptly notify landscape architect for instructions as to further action. Failure to do so will make contractor liable for any and all damage thereto arising from their operations subsequent to discovery of such utilities not shown on plans.

1.11 COORDINATION: Coordinate and cooperate with other contractors to enable the work to proceed as rapidly and efficiently as possible.

1.12 PRODUCT HANDLING: Protect work and materials under this Section from damage during construction and storage. Protect polyvinyl chloride (PVC) pipe and fittings from direct sunlight. Beds on which PVC is stored must be full length of pipe. Do not use any pipe or fitting that has been damaged or dented.

1.13 SAMPLES: Landscape architect reserves the right to take and analyze samples of materials for conformity to specifications at any time. Contractor shall furnish samples upon request by the landscape architect. Rejected material shall be removed from the site immediately and replaced at the contractors expense. Cost of testing materials not meeting specifications shall be paid by contractor.

1.14 HYDROSTATIC TESTS: A. Make hydrostatic tests when welded PVC joints have cured at least 24 hours. Apply continuous static water pressure of 100 psi as follows:

1. All piping on the pressure side of control valves shall be tested for two hours.
2. All completion of hydrostatic test, mainline shall be opened at farthest most point from the location of the pump to verify continuity of the mainline.

B. Leaks resulting from tests shall be repaired and tests repeated until system passes tests.

1.15 "AS-BUILT" IRRIGATION DRAWINGS: Contractor shall furnish Record Drawings of the complete irrigation system. Procure from the landscape architect full sized sepia of Contract Drawings. Construction drawings shall be on the construction site at all times while the irrigation system is being installed. Actual location of valves and all irrigation and drainage piping shall be shown on the prints by drawings from easily identified permanent features, such as buildings, curbs, fences, walks or property lines. Drawings shall show approved substitutions, if any, of material including manufacturer's name and catalog number. The drawings shall be at scale and all indications shall be neat. All information noted on the print shall be transferred to the prints by contractor and all indications shall be recorded in a neat, orderly way. The record drawings shall be turned over to the landscape architect at or before the Final Acceptance of the project.

1.16 CONTROLLER CHARTS

1. As-built drawings shall be approved by the landscape architect before charts are prepared.

2. Provide one controller chart for each controller supplied.

3. The chart shall show the area controlled by automatic controller and shall be the maximum size controller door will allow.

4. The chart is to be reduced drawing of the actual as-built system. However, in the event the controller sequence is not legible when the drawing is reduced, it shall be enlarged to a size that will be readable when reduced.

5. Chart shall be black line print and a different color shall be used to show area of coverage for each station.

6. The chart shall be mounted using Velcro, or an approved equal.

7. When completed and approved, the chart shall be hermetically sealed between two pieces of plastic, each piece being a minimum 20 mils. thick.

8. These charts shall be completed and approved prior to final inspection of the irrigation system.

1.17 MATERIALS TO BE FURNISHED

A. Prior to final inspection the contractor shall furnish the following materials to the owner:

1. Two wrenches for disassembling and adjusting each type of sprinkler head supplied.
2. Two keys for each automatic controller.
3. Four keys for loose key hose bibs and/or hose bibs.
4. Twelve 12 inch pop-up sprinkler bodies.

1.18 CLEAN-UP: Keep all areas of work clean, neat and orderly at all times. Keep paved areas clean during installation. Clean up and remove all debris from the entire work area prior to Final Acceptance to satisfaction of landscape architect.

1.19 FINAL ACCEPTANCE: Work under this Section will be accepted by landscape architect upon satisfactory completion of all work. Upon Final Acceptance, owner will assume responsibility for maintenance of the work. Said assumption does not relieve contractor of obligations under Warranty.

1.20 WARRANTY: In addition to manufacturer's guarantees or warranties, all work shall be warranted for one year from the date of Final Acceptance against defects in material, equipment and workmanship by contractor. Warranty shall also cover repair of damage to any part of the premises resulting from leaks or other defects in materials, equipment and workmanship to the satisfaction of the owner.

1.21 GENERAL: Materials throughout the system shall be new and in perfect condition. At least 14 days prior to beginning work, submit for approval 2 copies of manufacturer's catalog cuts, specifications, and operating instructions of the complete list of materials and assemblies to be installed. Quantities of materials and equipment need not be included. No deviations from the specifications shall be allowed. The decision of the landscape architect shall be final in the determination of the quality of materials and equipment.

PART 2 MATERIALS

2.01 GENERAL: Materials throughout the system shall be new and in perfect condition. At least 14 days prior to beginning work, submit for approval 2 copies of manufacturer's catalog cuts, specifications, and operating instructions of the complete list of materials and assemblies to be installed. Quantities of materials and equipment need not be included. No deviations from the specifications shall be allowed. The decision of the landscape architect shall be final in the determination of the quality of materials and equipment.

2.02 WATER METERS: Shall be provided by others.

2.03 PIPE

A. Mainline piping on pressure side of irrigation control valves:

1. 2" size and greater to be Polyvinyl Chloride (P.V.C.) 1120-1220, Class 315 and shall conform to ASTM D 2241-73 and D 2672-73.
2. Up to and including 1-1/2" size to be Polyvinyl Chloride (P.V.C.) 1120-1220, Schedule 40 and shall conform to ASTM D 1785-73.
3. Galvanized Steel, Standard wall, Schedule 40, capable of working pressure up to 600 psi shall run from the point of connection to back flow prevention device.
4. Piping from the point of connection to the back flow prevention device shall be as approved by local code.

B. Lateral line piping on non-pressure side of irrigation control valves:

1. 2" size and greater to be Polyvinyl Chloride (P.V.C.) 1120-1220, Class 315 and shall conform to ASTM D 2241-73 and D 2672-73.
2. Up to and including 1-1/2" size to be Polyvinyl Chloride (P.V.C.) 1120-1220, Schedule 40 and shall conform to ASTM D 1785-73.

2.04 FITTINGS

A. PVC Fittings: Schedule 40, Polyvinyl Chloride, high impact weight, as manufactured by Sloane, Lasco, medium or approved equal.

B. Fittings for Galvanized Steel Pipe: Schedule 40, standard weight as manufactured by Grinnell, or approved equal.

C. Connections between main and valves shall be PVC Schedule 80 nipples and fittings.

2.05 SLEEVE MATERIALS

A. For Control Wires: PVC 1120-1220, Class 200 pipe or heavy wall galvanized steel conduit.

B. For Water Lines: PVC 1120-1220, Class 200 pipe or heavy wall galvanized steel conduit.

2.06 IRRIGATION CONTROLLERS

A. Controller to be as shown on plans and is to be installed as per detail and manufacturer's specifications.

2.07 IRRIGATION CONTROL VALVES

A. Remote Control Valves: Valves to be as shown on plans and installed per details and manufacturer's specifications.

2.08 CONTROL WIRE

A. Wire: Solid copper wire, U.L. approved for direct burial in ground. Minimum gauge: #14. Common ground wire shall be white.

B. Splicing Materials: Wire connectors shall be Pentite or snap connectors.

C. All wires shall be labeled with the valve number at the controller and valve.

D. 120 wiring shall be as required by local code and installed by an electrician. It shall not be on a switched circuit.

E. Common wire shall be white. Control wires shall be other than white. Use a different color control wire for each controller.

2.09 VALVE BOXES

A. Remote Control Valves: To be Brooks, Green or approved equal, one per valve.

B. Gate Valves and Control Wire Stub-out Locations: To be Brooks, Green or approved equal, one per valve and Water Stub-out Location.

2.10 QUICK-COUPLING VALVES

A. Quick coupling valves to be as per plans and details.

B. Furnish 2 valve keys fitted with hose valve assembly.

C. All valve boxes shall be purple in color or clearly labeled by the manufacturer to designate reclaimed water.

2.11 LANDSCAPE DRIP-LINE: Tubing as shown in legend and drawings.

A. Install in parallel and consistent rows at spacing indicated in all specified areas.

B. Install 3" below grade.

2.12 SPRINKLER HEADS

A. Heads as shown in legend and drawings.

2.13 BACK-FLOW PREVENTION ASSEMBLIES

A. Back-flow prevention device as shown in legend and drawings.

PART 3 EXECUTION

3.01 LAYOUT

A. Layout work as accurately as possible to drawings. Drawings are diagrammatic to the extent that swing joints, offsets and all fittings are not shown.

B. Full and complete coverage is required. Contractor shall make any necessary minor adjustments to layout required to achieve full coverage of irrigation areas at no additional cost to owner.

C. Dig trenches wide enough to allow a minimum of 6 in. between parallel pipe lines. Trenches shall be of sufficient depth to provide minimum cover from finish grade as follows:

1. Over PVC pipe on pressure side of irrigation control valve, control wires and quick coupling valves: 18 inches.
2. Over pipe on non-pressure side of irrigation control valve: 12 inches.

3.03 BACK FLOW PREVENTION DEVICE INSTALLATION

A. Install according to local code and manufacturer's instructions.

3.04 SLEEVING

A. Where pipes or wires must be installed under paving place them in sleeves with a 24" minimum depth and sufficient size to accommodate irrigation lines and/or wires.

B. Lack of pipe chase coordination does not relieve the contractor from installing the pipes and control wire shown on the drawing. In the event pipe chases were not installed prior to paving the contractor shall bore under the paving to accommodate pipes and wires.

C. All control wire shall be in Schedule 40 conduit from trench to controller. When valves are grouped together allow 12" between valve boxes, each valve in a separate box, (not to be placed in drainage swales, but kept in ground cover areas.)

1.20 WARRANTY: In addition to manufacturer's guarantees or warranties, all work shall be warranted for one year from the date of Final Acceptance against defects in material, equipment and workmanship by contractor. Warranty shall also cover repair of damage to any part of the premises resulting from leaks or other defects in materials, equipment and workmanship to the satisfaction of the owner.

1.21 GENERAL: Materials throughout the system shall be new and in perfect condition. At least 14 days prior to beginning work, submit for approval 2 copies of manufacturer's catalog cuts, specifications, and operating instructions of the complete list of materials and assemblies to be installed. Quantities of materials and equipment need not be included. No deviations from the specifications shall be allowed. The decision of the landscape architect shall be final in the determination of the quality of materials and equipment.

2.02 WATER METERS: Shall be provided by others.

2.03 PIPE

A. Mainline piping on pressure side of irrigation control valves:

1. 2" size and greater to be Polyvinyl Chloride (P.V.C.) 1120-1220, Class 315 and shall conform to ASTM D 2241-73 and D 2672-73.
2. Up to and including 1-1/2" size to be Polyvinyl Chloride (P.V.C.) 1120-1220, Schedule 40 and shall conform to ASTM D 1785-73.
3. Galvanized Steel, Standard wall, Schedule 40, capable of working pressure up to 600 psi shall run from the point of connection to back flow prevention device.
4. Piping from the point of connection to the back flow prevention device shall be as approved by local code.

B. Lateral line piping on non-pressure side of irrigation control valves:

1. 2" size and greater to be Polyvinyl Chloride (P.V.C.) 1120-1220, Class 315 and shall conform to ASTM D 2241-73 and D 2672-73.
2. Up to and including 1-1/2" size to be Polyvinyl Chloride (P.V.C.) 1120-1220, Schedule 40 and shall conform to ASTM D 1785-73.

2.04 FITTINGS

A. PVC Fittings: Schedule 40, Polyvinyl Chloride, high impact weight, as manufactured by Sloane, Lasco, medium or approved equal.

B. Fittings for Galvanized Steel Pipe: Schedule 40, standard weight as manufactured by Grinnell, or approved equal.

C. Connections between main and valves shall be PVC Schedule 80 nipples and fittings.

D. 120 wiring shall be as required by local code and installed by an electrician. It shall not be on a switched circuit.

E. Common wire shall be white. Control wires shall be other than white. Use a different color control wire for each controller.

2.09 VALVE BOXES

A. Remote Control Valves: To be Brooks, Green or approved equal, one per valve.

B. Gate Valves and Control Wire Stub-out Locations: To be Brooks, Green or approved equal, one per valve and Water Stub-out Location.

2.10 QUICK-COUPLING VALVES

A. Quick coupling valves to be as per plans and details.

B. Furnish 2 valve keys fitted with hose valve assembly.

C. All valve boxes shall be purple in color or clearly labeled by the manufacturer to designate reclaimed water.

2.11 LANDSCAPE DRIP-LINE: Tubing as shown in legend and drawings.

A. Install in parallel and consistent rows at spacing indicated in all specified areas.

B. Install 3" below grade.

2.12 SPRINKLER HEADS

A. Heads as shown in legend and drawings.

2.13 BACK-FLOW PREVENTION ASSEMBLIES

A. Back-flow prevention device as shown in legend and drawings.

1.20 WARRANTY: In addition to manufacturer's guarantees or warranties, all work shall be warranted for one year from the date of Final Acceptance against defects in material, equipment and workmanship by contractor. Warranty shall also cover repair of damage to any part of the premises resulting from leaks or other defects in materials, equipment and workmanship to the satisfaction of the owner.

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3. Galvanized Steel, Standard wall, Schedule 40, capable of working pressure up to 600 psi shall run from the point of connection to back flow prevention device.
4. Piping from the point of connection to the back flow prevention device shall be as approved by local code.

B. Lateral line piping on non-pressure side of irrigation control valves:

1. 2" size and greater to be Polyvinyl Chloride (P.V.C.) 1120-1220, Class 315 and shall conform to ASTM D 2241-73 and D 2672-73.
2. Up to and including 1-1/2" size to be Polyvinyl Chloride (P.V.C.) 1120-1220, Schedule 40 and shall conform to ASTM D 1785-73.

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C. Connections between main and valves shall be PVC Schedule 80 nipples and fittings.

D. 120 wiring shall be as required by local code and installed by an electrician. It shall not be on a switched circuit.

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2.11 LANDSCAPE DRIP-LINE: Tubing as shown in legend and drawings.

A. Install in parallel and consistent rows at spacing indicated in all specified areas.

B. Install 3" below grade.

2.12 SPRINKLER HEADS

A. Heads as shown in legend and drawings.

C. Use Teflon tape on all threaded fittings.

D. Thrust blocks shall be installed where the irrigation main changes direction as at elbows and tees and where the irrigation main terminates. Pressure tests shall not be made for a period of 36-48 hours following the completion of pouring of the thrust blocks. Concrete thrust blocks for supply mains shall be sized and placed in strict accordance with the pipe manufacturer's specifications and shall be of an adequate size and so placed as to take all thrust created by the maximum internal B. Related Work: The following items of associated work are included in other sections of these specifications.

3.03 BACK FLOW PREVENTION DEVICE INSTALLATION

A. Install according to local code and manufacturer's instructions.

3.04 SLEEVING

A. Where pipes or wires must be installed under paving place them in sleeves with a 24" minimum depth and sufficient size to accommodate irrigation lines and/or wires.

B. Lack of pipe chase coordination does not relieve the contractor from installing the pipes and control wire shown on the drawing. In the event pipe chases were not installed prior to paving the contractor shall bore under the paving to accommodate pipes and wires.

C. All control wire shall be in Schedule 40 conduit from trench to controller. When valves are grouped together allow 12" between valve boxes, each valve in a separate box, (not to be placed in drainage swales, but kept in ground cover areas.)

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2.02 WATER METERS: Shall be provided by others.

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A. Mainline piping on pressure side of irrigation control valves:

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C. Connections between main and valves shall be PVC Schedule 80 nipples and fittings.

D. 120 wiring shall be as required by local code and installed by an electrician. It shall not be on a switched circuit.

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B. Furnish 2 valve keys fitted with hose valve assembly.

C. All valve boxes shall be purple in color or clearly labeled by the manufacturer to designate reclaimed water.

2.11 LANDSCAPE DRIP-LINE: Tubing as shown in legend and drawings.

A. Install in parallel and consistent rows at spacing indicated in all specified areas.

B. Install 3" below grade.

2.12 SPRINKLER HEADS

A. Heads as shown in legend and drawings.

2.13 BACK-FLOW PREVENTION ASSEMBLIES

A. Back-flow prevention device as shown in legend and drawings.

1.20 WARRANTY: In addition to manufacturer's guarantees or warranties, all work shall be warranted for one year from the date of Final Acceptance against defects in material, equipment and workmanship by contractor. Warranty shall also cover repair of damage to any part of the premises resulting from leaks or other defects in materials, equipment and workmanship to the satisfaction of the owner.

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