




















High Mountain Development

Voice Video Data

	main distribution frame aka MDF		1 port faceplate: # (D=data, V=CATV & P=phone)
	intermediate distribution frame aka IDF		2 port faceplate: # (D=data, V=CATV & P=phone)
	office & amenity area IDF		3 port faceplate: # (D=data, V=CATV & P=phone)
	underground conduit		4 port faceplate: # (D=data, V=CATV & P=phone)
	above ground conduit		blank plate
	fiber optic cable		apartment distribution panel aka JBOX
	pull-box or hand-hole flush to grade		120v duplex receptacle
	24" x 24" ceiling fire-rated hatch		120v quad receptacle
	Prewire Wi-Fi access point		busbar bonded to electrical service ground
	Prewire Exterior access point		

Note: above symbol legend is typical and all symbols may not apply



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Title Page

April 14, 2021

VVD.a1

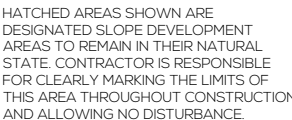
VVD.a	Title Page
VVD.b	Table of Contents
VVD.c	Low Voltage Responsibility Matrix
VVD.d	Project Information
VVD.e	General Requirements
VVD.f	Site Pathways
VVD.g	Fiber Distribution
VVD.h	Closet Elevations
VVD.i	Office & Amenity layouts
VVD.j	Unit Wiring layout
VVD.k	Network Requirements
VVD.l1	Low Voltage options



Item	Drawing Set	Specifications	Purchased by	Installed by	Termination / Testing / Labeling	Notes
MDF / IDF / AMENITY CLOSETS						
Closet Buildout	Architectural	Voice Video Data	General Contractor	General Contractor		
Door Lock	Architectural	Hardware Schedule	General Contractor	General Contractor		
Plywood Backboard	Electrical	Voice Video Data	General Contractor	General Contractor		4'x8' sheet per provider
Power / Grounding / Lighting	Electrical	Voice Video Data	Electrical Contractor	Electrical Contractor		
HVAC (if req.)	Mechanical	Voice Video Data	Mechanical Contractor	Mechanical Contractor		
LOW VOLTAGE CONDUIT						
POE Handhole	Electrical	Voice Video Data	General Contractor	General Contractor		Recommend 48"x36"x24"
Entrance Conduit (POE to MDF)	Electrical	Voice Video Data	General Contractor	General Contractor		Recommend 3-4"c
Distribution Conduit (MDF to IDF's)	Electrical	Voice Video Data	General Contractor	General Contractor		Recommend 3-2"c unless otherwise specified
Office & Amenity Conduit	Electrical	Voice Video Data	General Contractor	General Contractor		Recommend 2"c
Riser Conduits / Sleeves	Electrical	Voice Video Data	General Contractor	General Contractor		Per drawings
Home Run Conduit	Electrical	Voice Video Data	General Contractor	General Contractor		If Required
IoT / DAS Conduit	Electrical	Voice Video Data	General Contractor	General Contractor		Price as an Alt/Add - (see VVD.I1)
BACKBONE CABLING						
Entrance Cable (POE to MDF)	n/a	Service Provider	Service Provider	Service Provider	Service Provider	
Distribution Cable (MDF to IDF)	Voice Video Data	Voice Video Data	Low Voltage Contractor	Low Voltage Contractor	Low Voltage Contractor	12 strand single mode
Office Service (MDF/IDF to Office IDF)	Voice Video Data	Voice Video Data	Low Voltage Contractor	Low Voltage Contractor	Low Voltage Contractor	12 strand single mode
HOME RUN CABLING						
Video Cable	Voice Video Data	Voice Video Data	Low Voltage Contractor	Low Voltage Contractor	Low Voltage Contractor	RG-6 Coax
Data Cable	Voice Video Data	Voice Video Data	Low Voltage Contractor	Low Voltage Contractor	Low Voltage Contractor	Cat-6
Data Cable (Wi-Fi)	Voice Video Data	Voice Video Data	Low Voltage Contractor	Low Voltage Contractor	Low Voltage Contractor	Cat-6a
IN-UNIT WIRING						
Apartment Distribution Panel (ADP)	Voice Video Data	Voice Video Data	Low Voltage Contractor	Low Voltage Contractor		Primex - P2100
Data Module	Voice Video Data	Voice Video Data	Low Voltage Contractor	Low Voltage Contractor	Low Voltage Contractor	Leviton - 12-Port #47600-QPB
Electrical Outlet(s) in ADP	Electrical	Voice Video Data	Electrical Contractor	Electrical Contractor	Electrical Contractor	
Data	Voice Video Data	Voice Video Data	Low Voltage Contractor	Low Voltage Contractor	Low Voltage Contractor	
Faceplates & Jacks	Voice Video Data	Voice Video Data	Low Voltage Contractor	Low Voltage Contractor	Low Voltage Contractor	
OFFICE & AMENITY WIRING						
Equipment Rack	Voice Video Data	Voice Video Data	Low Voltage Contractor	Low Voltage Contractor		
Patch Panels	Voice Video Data	Voice Video Data	Low Voltage Contractor	Low Voltage Contractor	Low Voltage Contractor	
Data Outlets	Voice Video Data	Voice Video Data	Low Voltage Contractor	Low Voltage Contractor	Low Voltage Contractor	
Life Safety Cables	Voice Video Data	Voice Video Data	Low Voltage Contractor	Low Voltage Contractor	Low Voltage Contractor	
Wi-Fi Prewire	Voice Video Data	Voice Video Data	Low Voltage Contractor	Low Voltage Contractor	Low Voltage Contractor	
Power / Grounding	Electrical	Voice Video Data	Electrical Contractor	Electrical Contractor		
HVAC	Mechanical	Voice Video Data	Mechanical Contractor	Mechanical Contractor		See General Requirements (VVD.e6)
Office Network Equipment	n/a	Property Management	Property Management	3 rd party vendor		
Office Phone System	n/a	Property Management	Property Management	3 rd party vendor		
Common Area Wi-Fi System	n/a	Service Provider	Service Provider	Service Provider		

Representative

Entrance Conduit
2-4" c



NOT FOR CONSTRUCTION

NOTE:

1. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
2. ALL SIGNAGE AND STRIPING SHALL BE PER M.U.T.C.D. LATEST ADDITION.
3. ALL VEHICULAR AREAS ARE TO BE STANDARD DUTY ASPHALT UNLESS OTHERWISE NOTED.
4. ANY REQUIRED TRAFFIC CONTROL SHALL BE PER A.D.O.T STANDARDS AND IS THE RESPONSIBILITY OF THE CONTRACTOR.

NOTE:

1. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
2. ALL SIGNAGE AND STRIPING SHALL BE PER M.U.T.C.D. LATEST ADDITION.
3. ALL VEHICULAR AREAS ARE TO BE STANDARD DUTY ASPHALT UNLESS OTHERWISE NOTED.
4. ANY REQUIRED TRAFFIC CONTROL SHALL BE PER A.D.O.T STANDARDS AND IS THE RESPONSIBILITY OF THE CONTRACTOR.

5/8" IPF
THIS POINT IS THE SOUTHEAST CORNER OF
LOT "A" OF A RESUBDIVISION OF
LOT 2 OF PACKARD SUBDIVISION
AS RECORDED IN DOCUMENT NO.
20121116000741980

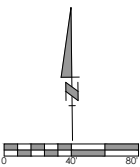


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Site Info

April 14, 2021

VVD.d1



- Items that are not specified by the Scope of Work or the accompanying Drawings, but are required by local, state and federal authorities, or normally used and required for the system design to perform to specifications and system design intent, will be considered part of the Voice-Video-Data (VVD) Scope of Work & Layouts.
- The Low Voltage Contractor shall assist with General Contractor in ensuring that any essential items that fall under the responsibility of parties other than the Low Voltage Contractor are completed.
- Definitions
 - Low Voltage Contractor means the party who is contracted by the General Contractor to install detailed in the VVD Scope of Work & Layouts.
 - Facilities are that part of the wire, cable, and equipment on the premises that connects and delivers low voltage services from each provider's off premises network to the Point of Entry, usually at the Main Distribution Frame.
 - Point of Entry (POE) for the purposes of providing services to the premises is the single point where each provider's Facilities interconnect with the Distribution Plant (DP), usually at the Main Distribution Frame.
 - Main Distribution Frame (MDF) is the main distribution point for the site. The Facilities connect to the Distribution Plant in the MDF.
 - Distribution Plant (DP) is that part of the wire, cable, and equipment on the premises that delivers low voltage services from MDF to each Intermediate Distribution Frame. Unless otherwise specified, the DP is provided and installed by the service provider(s).
 - Intermediate Distribution Frame (IDF) is an intermediate distribution point located throughout a multifamily building. The DP connects to the Home-Run Wiring in the IDF.
 - Home-Run Wiring (HRW) is that part of the wire, cable, and equipment in each building that delivers low voltage services from the corresponding IDF to the Apartment Distribution Panel in each unit.
 - Apartment Distribution Panel (ADP) is a centralized distribution point in each unit. The HRW connects to the Inside Wiring in the ADP. The ADP is also commonly referred to as a junction box.
 - Inside Wiring (IW) is that part of the wire, cable, and equipment in each unit that delivers low voltage services from the ADP to each faceplate. All IW shall be wired in a star configuration from the ADP to each faceplate.

- All work will meet or exceed the requirements of all applicable statutes, ordinances, rules, codes, regulations, decisions, and orders of all local, state and federal authorities having jurisdiction over the construction of telecommunications cable systems, including, but not limited to, applicable building codes, fire codes, and regulations of the Occupational Safety and Health Administration and Federal Communications Commission.
- All work will meet or exceed the requirements of the 2017 National Electrical Code, other NFPA codes, and any then-current amendments or addenda thereto, including, but not limited to:
 - NFPA 70 National Electrical Code 2017 Edition, Article 800
 - "Communications Systems"
 - NFPA 70 National Electrical Code 2017 Edition, Article 200
 - "Wiring and Protection"
- Except as otherwise specified in the Scope of Work, all work will meet or exceed the requirements of the ANSI/TIA/EIA telecommunications cabling standards and any then-current amendments or addenda thereto, including, but not limited to:
 - ANSI/TIA/EIA-570-B
 - "Residential Telecommunications Infrastructure Standard"
 - ANSI/TIA/EIA-568-B.1 and addenda
 - "Commercial Building Telecommunications Cabling Standard - Part 1: General Requirements"
 - ANSI/TIA/EIA-568-B.2 and addenda
 - "Commercial Building Telecommunications Cabling Standard - Part 2: Balanced Twisted-Pair"
 - ANSI/TIA/EIA-568-B.3 and addenda
 - "Optical Fiber Cabling Components Standard"
 - ANSI/TIA/EIA-569-A and addenda
 - "Commercial Building Standard for Telecommunications Pathways and Spaces"
 - ANSI/TIA/EIA-606-A and addenda
 - "Administration Standard for Commercial Telecommunications Infrastructure"
 - ANSI/TIA/EIA-607-A and addenda
 - "Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications"
- All work will meet or exceed the safety requirements and certifications of Underwriters Laboratories Inc. (UL).
- Except as otherwise specified in the Scope of Work, all video cabling will be installed and terminated in accordance with the Society of Cable Telecommunications Engineers standards.

- All wiring will be riser-rated at a minimum and plenum-rated in such spaces as required it by local, state or national code.
- All voice wiring will:
 - utilize 4-pair TIA Category 6 unshielded twisted copper cable.
 - not exceed 300 feet in total length.
 - be terminated at all IDF and MDF locations on 110 modular jack panels
 - be terminated at each faceplate on RJ-25c jacks wired to the USOC configuration.
- All video wiring will:
 - will utilize quad-shield 60% minimum braid Series 6 or Series 11 coaxial cable with a minimum manufacturer's specification of 2 GHz.
 - will not exceed 125 feet if Series 6 cable or 175 feet if Series 11 cable is used.
 - be connectorized at all locations with a radial 360-degree crimp "F" connector using a radial taper compression tool. Hex crimp tools are prohibited.
 - be terminated in the ADP directly on a 1x6, two-way, 1 GHz, passive video splitter. "Pigtails" are prohibited unless specified.
 - be terminated at each faceplate on F-81 barrel connectors.
- All data wiring will:
 - utilize 4-Pair TIA Category 6 unshielded twisted copper cable.
 - not exceed 300 feet in total length.
 - be terminated at all IDF and MDF locations on 110 type patch panels mounted to floor or wall equipment racks with a minimum of 15' of slack.
 - unless specified otherwise, be terminated at each ADP on an 8-port Category 6 Network Module with 2' of slack.
 - be terminated at each faceplate on TIA RJ-45 jacks utilizing the TIA 568a standard configuration with 1' of slack.
- All data wiring for wireless access points will:
 - utilize 4-Pair TIA Category 6a unshielded twisted copper cable.
 - be terminated at all IDF and MDF locations on 110 modular jack panels mounted to floor or wall equipment racks.
 - be terminated on a standard RJ-45 modular plug utilizing the TIA 568A standard configuration with a 24" tail for the future installation of equipment.
 - At interior locations, RJ-45 modular plug shall be placed behind a low voltage pass through or blank plate.
 - At exterior locations the RJ-45 modular plug shall be placed inside an exterior rated box with a blank cover. Wherever possible, the exterior rated box shall be flush to the exterior wall and large enough to avoid damaging the cable.
- All fiber will:
 - utilize armored single mode.
 - utilize fusion splicing and tested to meet ANSI/TIA/EIA standards.
 - 4 strands will be terminated with SC/UPC connectors.
 - 2 strands will be terminated with SC/APC connectors.
 - additional strands will not be terminated.
 - have 24' minimum slack cable at all cable ends after termination.
- All microduct will:
 - 12 MM microduct with drawstring

- Apartment Distribution Panel will be:
 - **RF Transparent w/vented door** - Primex, Leviton or equivalent.
 - Located so that it is not on a fire-rated wall and does not interfere with planned closet poles or shelving.
 - Mounted firmly between two studs so that it is flush with the outer finished surface of the surrounding wall with 1.5" minimum clearance all around the door.
 - Bundled, webbed or jacketed hybrid cable assemblies may be used as long as the component cables and any outer jackets or sheaths of the assembly meet the referenced requirements.
- A single-gang low voltage mounting ring will be installed during rough-in for each faceplate. Electrical boxes will not be used unless the faceplate is in a fire-rated wall.
- Whenever possible, the Low Voltage Contractor shall organize the various cables, wires and fiber with the following color scheme:
 - Wired Data = Blue
 - Wireless Data = Green
 - Voice = White
 - Video = n/a
- For prewire locations, the requisite cables shall have 20" tails either zig-zagged in corresponding stud bay or coiled in appropriate box.
- All low voltage wiring and faceplates will be installed at least one stud bay apart from high voltage wiring. Unless there is supplemental shielding, the distance between low voltage and high voltage cables shall exceed 4" except where they cross. Low voltage wiring will cross high voltage wiring at right angles with a 2" minimum separation.
- Protecting cabling from damage is the responsibility of the Low Voltage Contractor. The Low Voltage Contractor shall install nail plates where cabling passes through wall studs. Where steel framing is used, plastic bushings will be installed wherever cables pass through metal structural members. The cables will not touch any edges of metal framing.
- The Low Voltage Contractor shall secure and support all cabling at maximum 48" intervals using industry standard fastening methods that will not compress or deform the cables.
- Cable pulling and bend radius will not exceed the manufacturer's maximum pulling tension recommendations for the cable being installed.
- All microduct and equivalent flexible pathways will be less than 200', supported at the beginning and end of each bend or turn, maintain a minimum 12" bend radius, and have less than 10 bends or turns.
- Splicing or repair of cabling is not permitted. Any defective wiring, damaged cabling, or any cable or cable installation that does not meet these specifications, will be replaced. The Low Voltage Contractor shall replace the damaged cable at its expense, unless it is the result of gross negligence by another trade or unavoidable because of subsequent changes.
- During rough-in, sufficient extra cable tails will be left for termination. The ends of all rough-in cable in either the MDF or IDFs will be placed in a plastic bag after labeling to prevent damage. In the unit, the cable will be coiled inside the ADP and the panel opening covered with the included cardboard paint shield until the permanent locking cover is installed during trim-out.
- The Low Voltage Contractor is responsible for all fire-stopping, smoke seals, and/or assemblies. No flammable materials will be used to line a chase or hole. All fire-stopping materials will meet applicable guidelines, standards, codes, rules, and regulations.
- The Low Voltage Contractor is responsible for measuring the distance of all cable runs. The distances indicated by the accompanying Drawings or the Scope of Work are estimates.
- Unless otherwise specified, all wiring will be labeled and documented per ANSI/TIA/EIA-606, "Administration Standard for the Telecommunications Infrastructure for Commercial Buildings."

- **Voice Cable Testing**
 - All voice wiring will be tested after installation by the Low Voltage Contractor. All cables will be tested for proper wire mapping, opens, shorts, crossed and split pairs, and maximum cable length, as well as proper location and identification. Simple continuity testing is not an acceptable alternative, except during rough-in.
- **Video Cable Testing**
 - All video wiring will be tested after installation by the Low Voltage Contractor. All cables will be tested for continuity, maximum cable length, as well as proper location and identification. Simple continuity testing is not an acceptable alternative, except during rough-in.
- **Data Cable Testing**
 - All data wiring will be tested per BICSI Standard Basic Link testing procedures.
- **Fiber Testing**
 - Single-mode fiber shall be tested at 1310nm and 1550nm in both directions, as well as proper location and identification. The cable attenuation shall be 1dB/km at both 1310nm and 1550nm for inside plant cables and .5dB/km at both 1310nm and 1550nm for outside plant cables.
- **Test Documentation Requirements**
 - The Low Voltage Contractor shall provide 3 sets of written and signed documentation certifying acceptable test results to the General Contractor. If the signed documentation is not provided, the Low Voltage Contractor shall re-test at no charge.

- Construction
 - All communications rooms will be constructed per the accompanying Drawings.
 - The walls of the communications rooms will be covered with $\frac{3}{4}$ " plywood over any building materials required by code. The plywood will be 8' high, start at 6" AFF and will meet all national, state and local codes.
 - No piping, ductwork, mechanical equipment, or power cabling shall pass through the equipment room.
 - Rooms must be dry, secure, have power & lighting, and have a ground bar present prior to installation of service provider cable and equipment.
- Secure Access/Lock Boxes
 - All doors will have a deadbolt style lock. Access will be restricted to authorized personnel.
- HVAC
 - The General Contractor shall provide sufficient HVAC or ventilation to maintain a temperature of 40-95 degrees Fahrenheit.
 - The MDF require HVAC. The heat load averages 15,000 BTUs.
 - The Office and Amenity IDF(s) require HVAC. The heat load averages 15,000 BTUs.
 - If MDF and Office and Amenity IDF are combined, the combined average heat load is 25,000 BTUs.
 - ~~Exterior IDF(s) serving only residential units require HVAC. The heat load averages 12,000 BTUs.~~
 - Interior IDF(s) serving only residential units and adjacent to conditioned space require forced ventilation with fan and thermostat.
- Lighting
 - The General Contractor shall provide at least one fluorescent ceiling fixture to provide sufficient lighting throughout the rooms.
- Electrical
 - Per the accompanying Drawings, the Electrical Contractor shall provide 20A 120V duplex outlet(s). Circuits shall be dedicated on a per provider basis.
- Grounding
 - The Electrical Contractor shall install a solid copper grounding busbar with insulated standoffs in each room. The busbar will be bonded to the building's electrical service ground.
 - The Low Voltage Contractor shall attach all telecommunications equipment, frames, cabinets and voltage protectors that they install to the busbar. However, the providers will attach their own equipment to the busbar

- Facilities and Distribution Plant Wiring
 - Voice Facilities and Distribution Plant Wiring
 - The demarc(s) for VOICE service will be at the MDF.
 - The Low Voltage Contractor is responsible for all wiring and passive infrastructure beyond the demarc. The provider will install all active equipment.
 - Data/Video Facilities and Distribution Plant Wiring
 - The demarc(s) for DATA service will be at the MDF.
 - The Low Voltage Contractor is responsible for all wiring and passive infrastructure beyond the demarc. The provider will install all active equipment.
 - The Low Voltage Contractor shall install the following per the VVD Scope of Work & Layouts:
 - 7' equipment rack for terminating and connecting all of the data wiring and fiber in the MDF and each IDF. The rack will be located within 6' of a power source.
 - 12-strands of fiber as a dedicated run from the MDF to each IDF including the Office and Amenity Area
- Telecommunications Conduit Requirements:
 - The general contractor will provide and install the following per the VVD Scope of Work & Layouts
 - entrance entrance vault / hand hole and conduit from service provider POE to the MDF as shown on plans.
 - distribution conduit from MDF to each of the IDF's as shown on plans.
 - vertical sleeves between IDF's for distribution and home run cables.
 - conduit if required between each units ADP to the IDF. Size and type to be determined by service provider requirements.
 - 1" flexible conduit above the ceiling of each corridor for future IoT /DAS requirements. Conduit should tie back to its respective IDF.
- Home-run Wiring
 - The Low Voltage Contractor shall install the following per the VVD Scope of Work & Layouts:
 - (1) video cable from the Living Area Outlet in each unit to the corresponding IDF.
 - (2) data cables from the ADP to the corresponding IDF.
 - (1) data cable (Cat-6) will be terminated on a network module to provide a connection for all IW to incoming data/voice services.
 - (1) data cable (Cat-6a) will be terminated on a network module to provide a connection for in-unit Wi-Fi access points.
 - All wiring will be installed as directly as possible from the IDF.

- Inside Wiring (Units)

- ADP

- The Low Voltage Contractor shall install the following per the VVD Scope of Work & Layouts:
 - an ADP with hinged door and lock.
 - A video splitter with adequate ports to support total number of video outlets in the unit.
 - a network module to provide a connection for all IW to incoming data/voice services. (*Recommend: Leviton 12-Port QuickPort Mounting Bracket*)
 - The Low Voltage Contractor shall place all modules and punch-downs in the upper 12" of the ADP.
 - The Low Voltage Contractor shall fill out and attach the IW label provided by the manufacturer indicating the IW layout in each unit.
 - The Low Voltage Contractor shall coordinate with the electrical contractor to insure a duplex electrical outlet is installed inside the ADP.

- Wiring

- The Low Voltage Contractor shall install the following per the VVD Scope of Work & Layouts:
 - (1) data cable from the ADP to each data port on a faceplate. Some faceplates may have more than one data port.
 - (1) video cable from the ADP to each video port on a faceplate. Some faceplates may have more than one video port.
 - (1) data cable from the ADP to each wall and ceiling Wi-Fi location terminated with an RJ-45 modular plug with a 36" tail behind a blank plate.
 - All wiring will be installed as directly as possible from the faceplate to the ADP.

- Office and Amenity Areas
 - Office and Amenity Areas IDF
 - The Low Voltage Contractor shall install per the VVD Scope of Work & Layouts a 7' high wall mounted rack that will house the incoming connections for voice, data, and video services and distribution of all low voltage services in the Office and Amenity Areas. The Low Voltage Contractor is responsible for proper wire management.
 - Wiring
 - The Low Voltage Contractor shall install the following per the VVD Scope of Work & Layouts:
 - (1) video cable from the IDF to each video port on a faceplate. Faceplates may have more than one video port
 - (1) data cable from the IDF to each data port on a faceplate. Faceplates may have more than one data port.
 - (1) voice cable from the IDF to each voice port on a faceplate. Faceplates may have more than one voice port.
 - All wiring will be installed as directly as possible from the faceplate to the IDF.
 - Other "House" Requirements
 - The Low Voltage Contractor shall install the following from the MDF:
 - Fire System(s): (1) phone cable from fire system(s) - exact location to be confirmed onsite.
 - Elevator(s): (1) phone cable from elevator system(s) - exact location to be confirmed onsite.
 - Pool Emergency Phone(s): (1) pool phone with heavy duty outdoor enclosure per the authority having jurisdiction and (1) phone - exact location to be confirmed onsite.
 - Guest Telephone Entry(s): (1) data/phone cable from each guest telephone entry - exact location to be confirmed onsite.
- Common Area Wi-Fi Prewire Locations
 - The Low Voltage Contractor shall install the following from the MDF or nearest IDF:
 - (2) data cables to each Wi-Fi prewire location as shown on the drawings.
 - Interior Wi-Fi locations shall terminate in at a single gang box/mudring with a blank cover plate on ceiling
 - Exterior Wi-Fi locations shall terminate in at a weather rated single gang wall mounted box with a blank cover. Exterior locations shall be 9' AFF at minimum.

Civil Engineering | Land Surveying | Landscape Architecture
Environmental | Water Resources | Laser Scanning + Modeling

SCHUEL

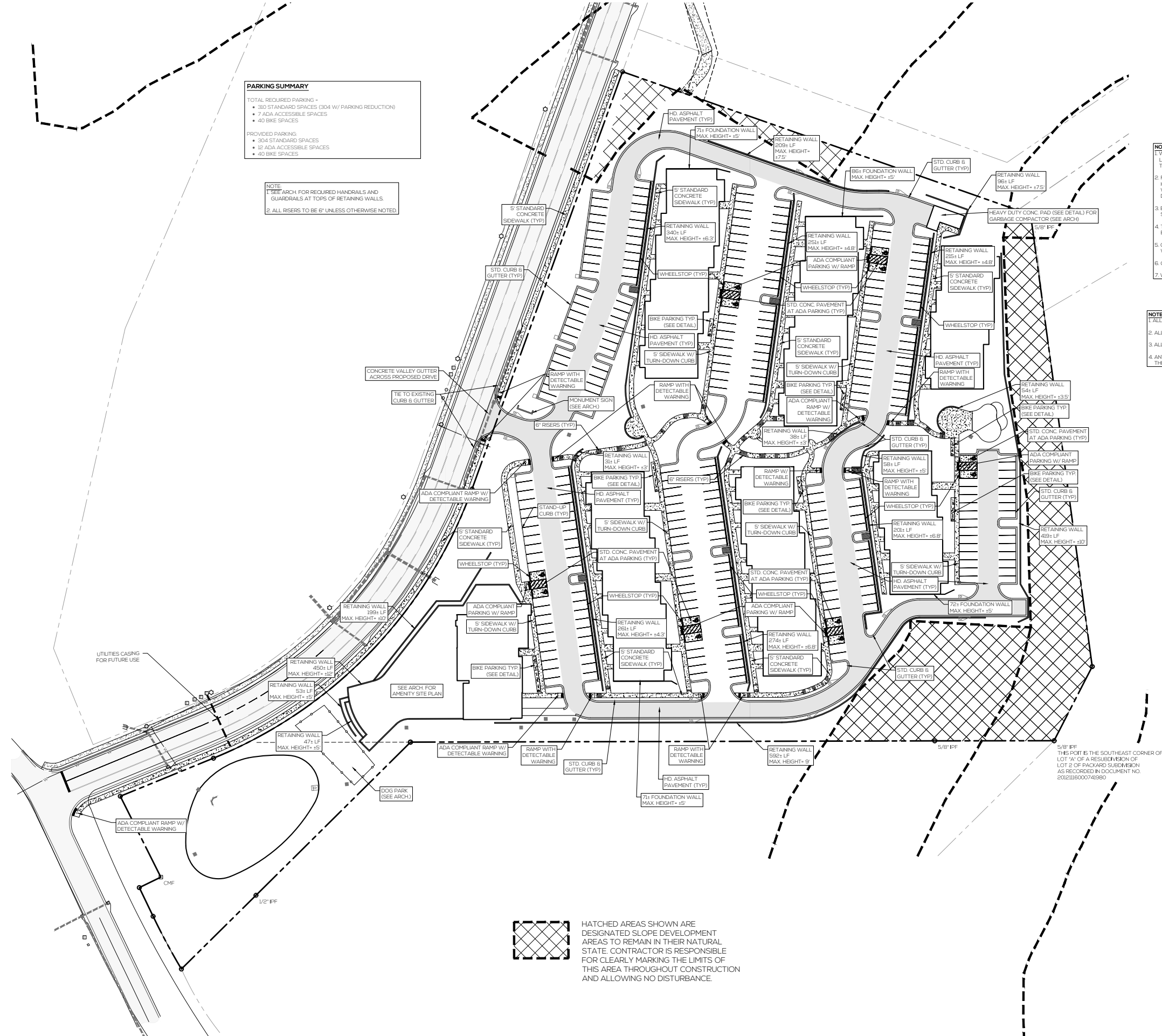
1001 22nd Street South
Birmingham, Alabama 35203
205.323.6166
schuel.com

7500 Memorial Pkwy SW, Ste 209
Huntsville, Alabama 35892
256.539.1221

NOT FOR CONSTRUCTION

- NOTE:**
1. WALLS TO BE CONTRACTOR DESIGN/BUILD. PLANS STAMPED BY AN ALABAMA LICENSED STRUCTURAL ENGINEER WILL BE REQUIRED FOR APPROVAL FROM THE CITY OF HUNTSVILLE FOR WALL DESIGNS.
 2. FINISHED WALL HEIGHT AND AREA MAY VARY WITH FIELD CONDITIONS. MAXIMUM HEIGHTS ARE MEASURED FROM LOWEST ADJACENT FINISHED GRADE TO TOP OF WALL. CONTRACTOR SHALL CONSIDER ADDITIONAL SQUARE FOOTAGE REQUIRED DOWN TO FOOTINGS.
 3. EXCAVATION FOR WALL CONSTRUCTION IS NOT PERMITTED IN THE DESIGNATED SDD RESTRICTED AREAS.
 4. THE BASE/FOOTING LOCATIONS MAY VARY WITH FIELD CONDITIONED AND SHOULD BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO DESIGN.
 5. CONTRACTOR RESPONSIBLE FOR COORDINATING WALL DESIGN AND CONSTRUCTION WITH UTILITIES AND STORM DRAINAGE SHOWN IN THESE PLANS.
 6. CONTRACTOR RESPONSIBLE FOR DRAINAGE DESIGN BEHIND TOP OF WALLS.
 7. WALL DIMENSIONS ARE PROVIDED FOR BUDGETARY PRICING ASSISTANCE.

- NOTE:**
1. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
 2. ALL SIGNAGE AND STRIPING SHALL BE PER M.U.T.C.D., LATEST ADDITION.
 3. ALL VEHICULAR AREAS ARE TO BE STANDARD DUTY ASPHALT UNLESS OTHERWISE NOTED.
 4. ANY REQUIRED TRAFFIC CONTROL SHALL BE PER A.D.O.T. STANDARDS AND IS THE RESPONSIBILITY OF THE CONTRACTOR.



PARKING SUMMARY

TOTAL REQUIRED PARKING +

- 300 STANDARD SPACES (304 W/ PARKING REDUCTION)
- 7 ADA ACCESSIBLE SPACES
- 40 BIKE SPACES

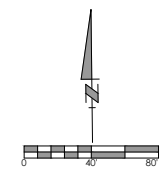
PROVIDED PARKING

- 304 STANDARD SPACES
- 12 ADA ACCESSIBLE SPACES
- 40 BIKE SPACES

NOTE:

1. SEE ARCH. FOR REQUIRED HANDRAILS AND GUARDRAILS AT TOPS OF RETAINING WALLS.
2. ALL RISERS TO BE 6" UNLESS OTHERWISE NOTED.

HATCHED AREAS SHOWN ARE DESIGNATED SLOPE DEVELOPMENT AREAS TO REMAIN IN THEIR NATURAL STATE. CONTRACTOR IS RESPONSIBLE FOR CLEARLY MARKING THE LIMITS OF THIS AREA THROUGHOUT CONSTRUCTION AND ALLOWING NO DISTURBANCE.



SPECIFICATION KEYNOTES

PROJECT NOTES

FLOOR PLAN GENERAL NOTES

- LEVEL 0 FLOOR PLAN** 1 N

ASSEMBLY KEYNOTES

SPECIFICATION KEYNOTES

PROJECT NOTES

TAG	DESCRIPTION
A	TYPE A UNIT (1X) - BUILDING A3 ONLY
B	TYPE A UNIT (2X) - BUILDING A1 ONLY
C	TYPE A UNIT (3X) - BUILDING A4 ONLY
D	REF. AP10'S FOR UNIT RCP
E	MASONRY RETAINING WALL STEPS WITH GRADE, MAINTAIN 8" ABV EXT FINISH GRADE

FLOOR PLAN GENERAL NOTES

1. ALL FRAMING DIMENSIONS ARE TO FINISH FACE OF STUD, U.N.O.
2. ALL MASONRY DIMENSIONS ARE TO FACE OF MASONRY, U.N.O.
3. CLEAN & PREPARE CONCRETE SURFACES AS NECESSARY FOR SPECIFIED FINISH.
4. PATCH HOLES IN CONCRETE WHERE PIPE OR OTHER PENETRATIONS OCCURED.
5. PATCH AND REPAIR ALL CRACKED AND SPALLED CONCRETE AS NECESSARY FOR FINISH.

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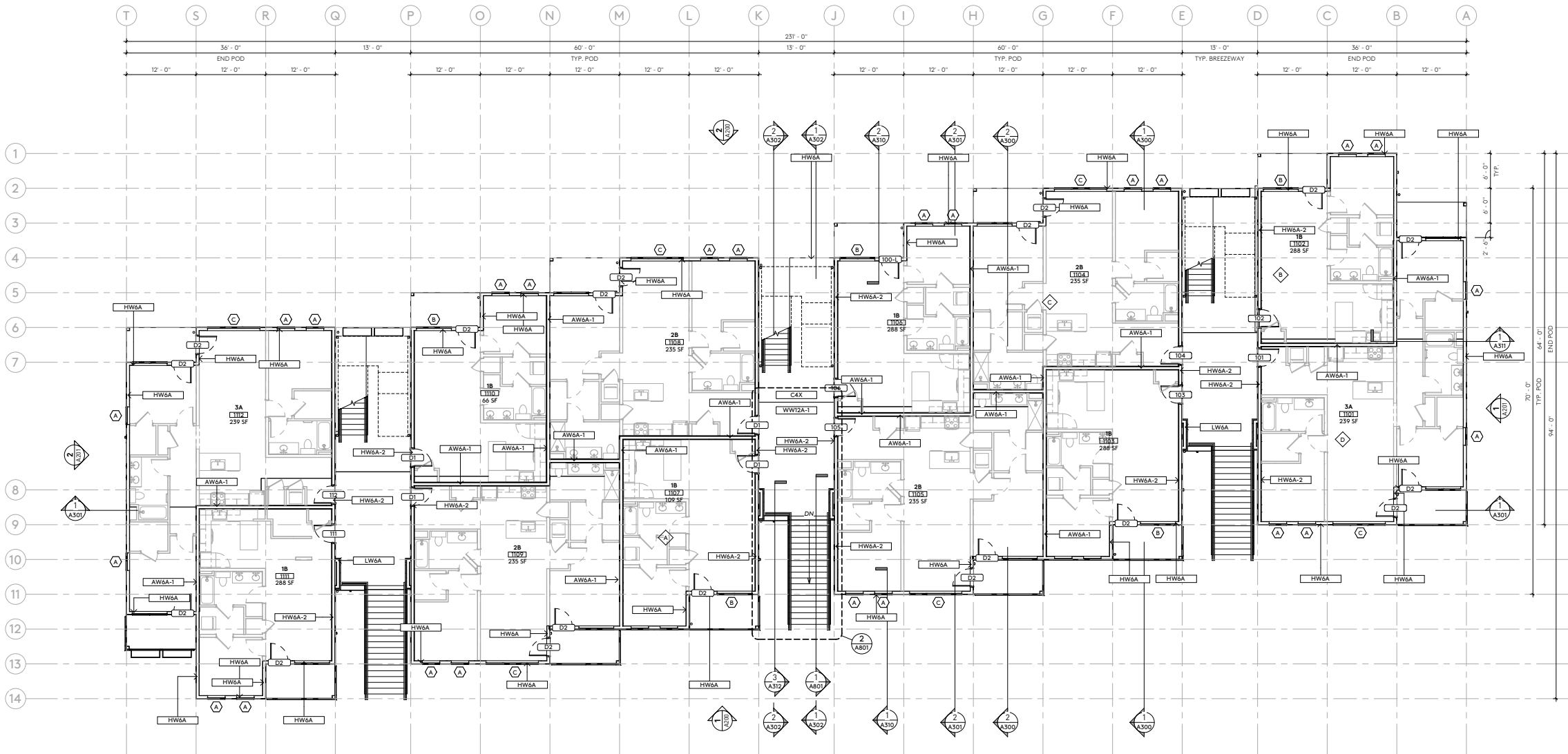


Site Pathways

April 14, 2021

VVD.f3

LEVEL 1 FLOOR PLAN
A200-1 | 1/8" = 1'-0" 1 N



ASSEMBLY KEYNOTES

SPECIFICATION KEYNOTES

PROJECT NOTES

FLOOR PLAN GENERAL NOTES

TAG	DESCRIPTION
A	TYPE A UNIT (1X) - BUILDING A3 ONLY
B	TYPE A UNIT (2X) - BUILDING A1 ONLY
C	TYPE A UNIT (3X) - BUILDING A4 ONLY
D	REF. APPO'S FOR UNIT RCP
E	MASONRY RETAINING WALL STEPS WITH GRADE, MAINTAIN 8" ABV EXT FINISH GRADE

1. ALL FRAMING DIMENSIONS ARE TO FINISH FACE OF STUD, U.N.O.
2. ALL MASONRY DIMENSIONS ARE TO FACE OF MASONRY, U.N.O.
3. CLEAN & PREPARE CONCRETE SURFACES AS NECESSARY FOR SPECIFIED FINISH.
4. PATCH HOLES IN CONCRETE WHERE PIPE OR OTHER PENETRATIONS OCCURED.
5. PATCH AND REPAIR ALL CRACKED AND SPALLED CONCRETE AS NECESSARY FOR FINISH.

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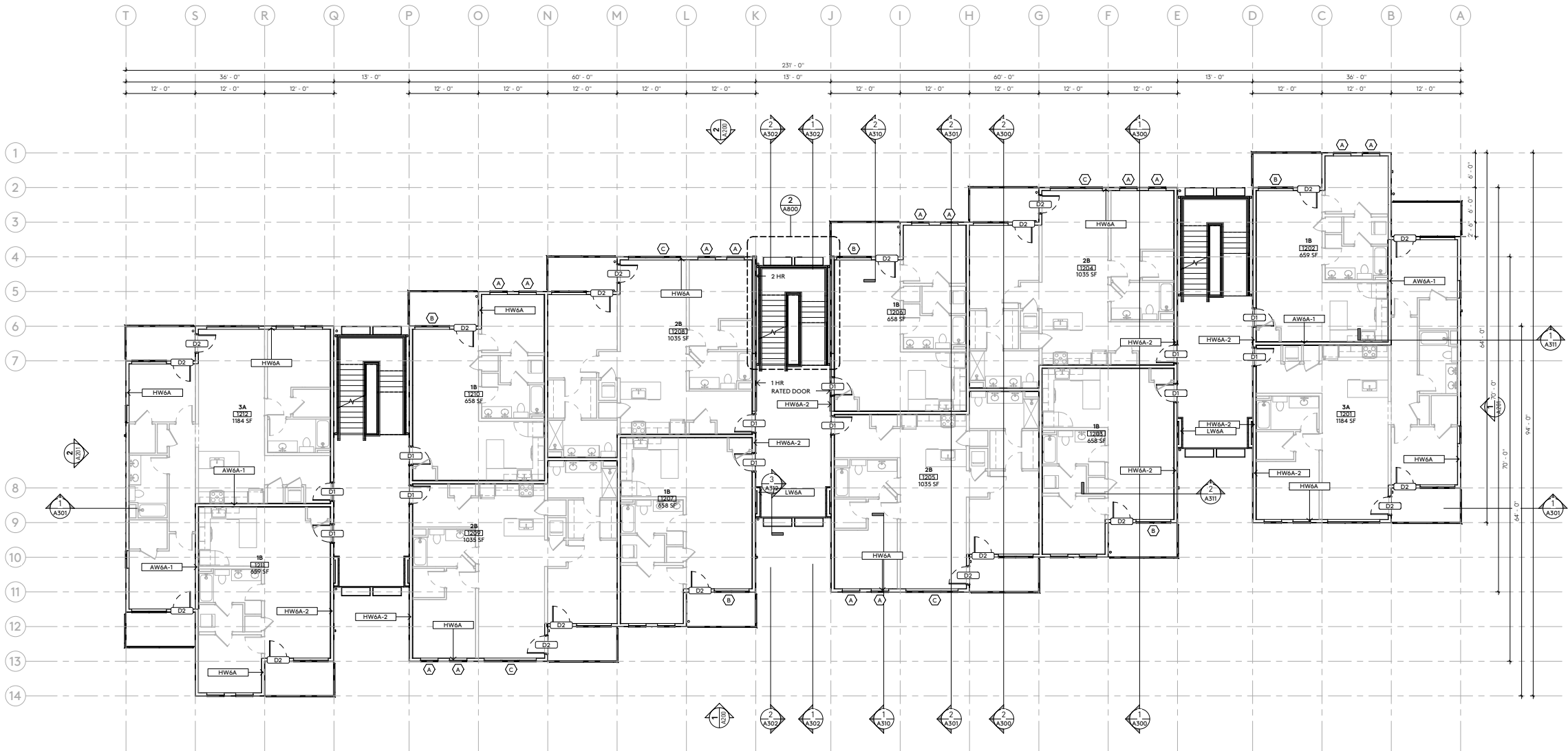


Site Pathways

April 14, 2021

VVD.f4

LEVEL 2 FLOOR PLAN
A200-1 | 1/8" = 1'-0" 1 N



ASSEMBLY KEYNOTES

SPECIFICATION KEYNOTES

PROJECT NOTES

FLOOR PLAN GENERAL NOTES

TAG	DESCRIPTION
A	TYPE A UNIT (1X) - BUILDING A3 ONLY
B	TYPE A UNIT (2X) - BUILDING A1 ONLY
C	TYPE A UNIT (3X) - BUILDING A4 ONLY
D	REF. APPO'S FOR UNIT RCP
E	MASONRY RETAINING WALL STEPS WITH GRADE, MAINTAIN 8" ABV EXT FINISH GRADE

1. ALL FRAMING DIMENSIONS ARE TO FINISH FACE OF STUD, U.N.O.
2. ALL MASONRY DIMENSIONS ARE TO FACE OF MASONRY, U.N.O.
3. CLEAN & PREPARE CONCRETE SURFACES AS NECESSARY FOR SPECIFIED FINISH.
4. PATCH HOLES IN CONCRETE WHERE PIPE OR OTHER PENETRATIONS OCCURED.
5. PATCH AND REPAIR ALL CRACKED AND SPALLED CONCRETE AS NECESSARY FOR FINISH.

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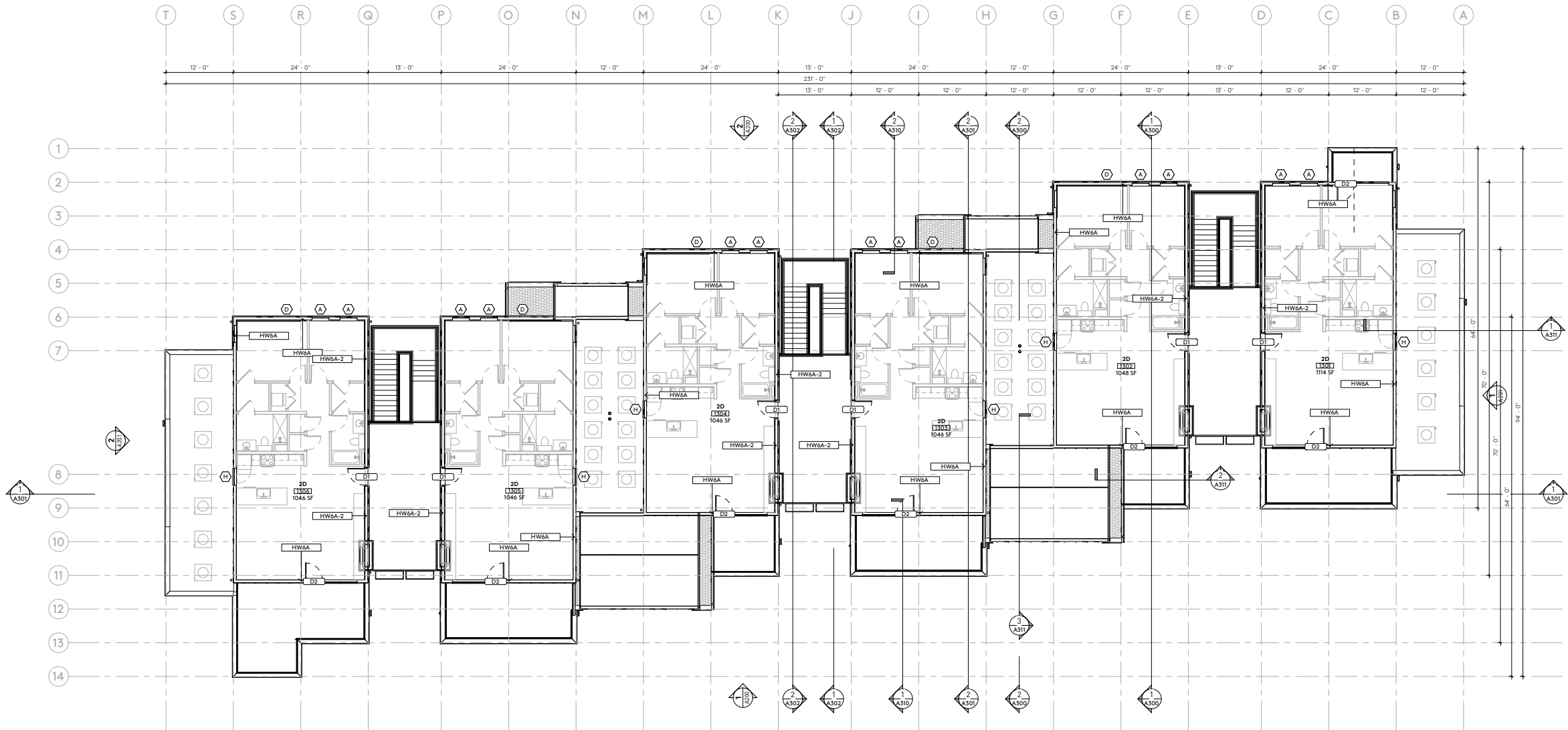


Site Pathways

April 14, 2021

VVD.f5

LEVEL 3 FLOOR PLAN
A200-1 | 1/8" = 1'-0" 1 N



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1. ALL FRAMING DIMENSIONS ARE TO FINISH FACE OF STUD, U.N.O.
2. ALL MASONRY DIMENSIONS ARE TO FACE OF MASONRY, U.N.O.
3. CLEAN & PREPARE CONCRETE SURFACES AS NECESSARY FOR SPECIFIED FINISH.
4. PATCH HOLES IN CONCRETE WHERE PIPE OR OTHER PENETRATIONS OCCURED.
5. PATCH AND REPAIR ALL CRACKED AND SPALLED CONCRETE AS NECESSARY FOR FINISH.

TAG DESCRIPTION	
A TYPE A UNIT (2X) - BUILDING B1 ONLY	

ASSEMBLY KEYNOTES

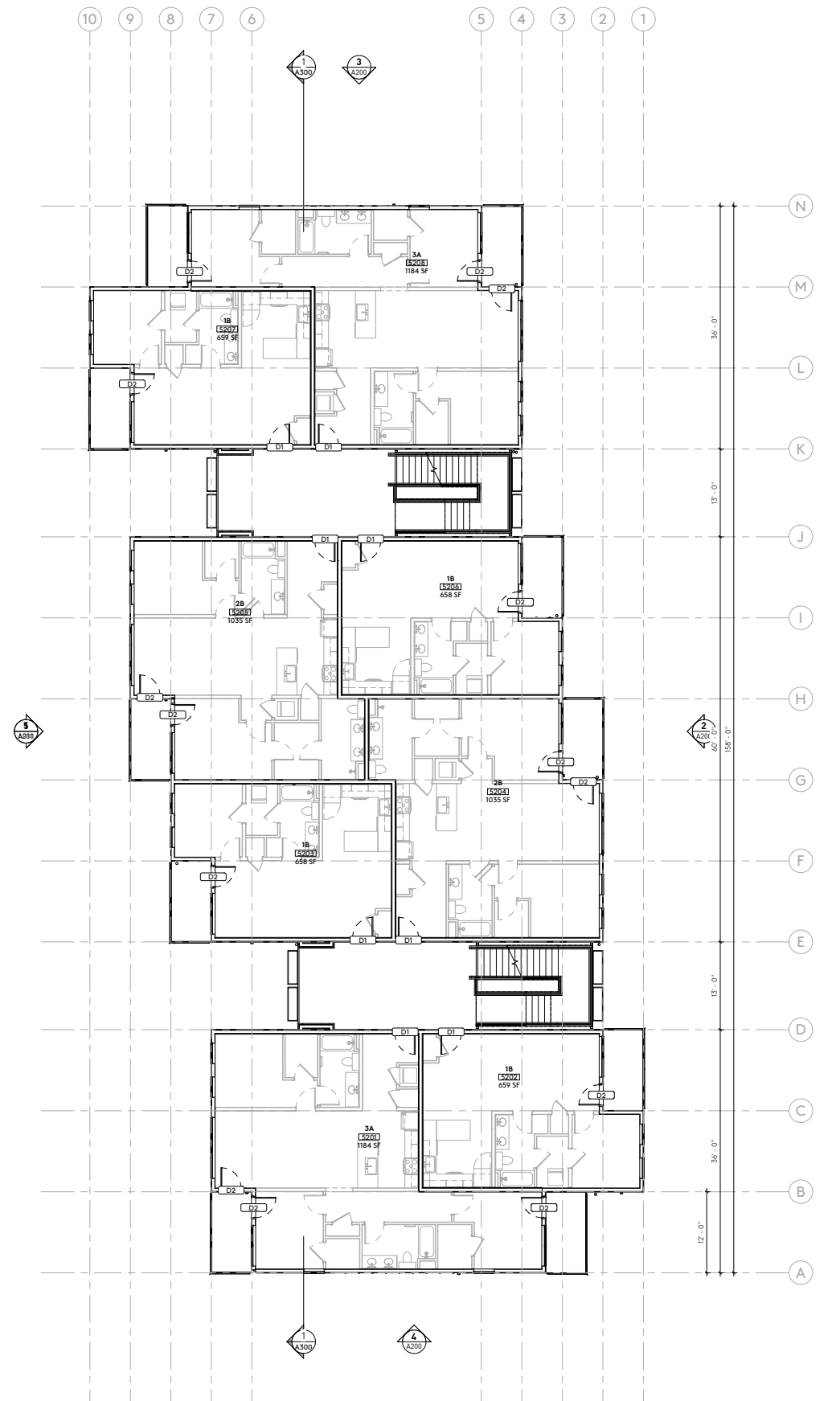


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VVD.f7



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Environmental | Water Resources | Laser Scanning + Modeling

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schoel.com

7500 Memorial Pkwy SW, Ste 209
Huntsville, Alabama 35892
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schoel.com

NOT FOR CONSTRUCTION

- NOTE:**
1. WALLS TO BE CONTRACTOR DESIGN/BUILD. PLANS STAMPED BY AN ALABAMA LICENSED STRUCTURAL ENGINEER WILL BE REQUIRED FOR APPROVAL FROM THE CITY OF HUNTSVILLE FOR WALL DESIGNS.
 2. FINISHED WALL HEIGHT AND AREA MAY VARY WITH FIELD CONDITIONS. MAXIMUM HEIGHTS ARE MEASURED FROM LOWEST ADJACENT FINISHED GRADE TO TOP OF WALL. CONTRACTOR SHALL CONSIDER ADDITIONAL SQUARE FOOTAGE REQUIRED DOWN TO FOOTINGS.
 3. EXCAVATION FOR WALL CONSTRUCTION IS NOT PERMITTED IN THE DESIGNATED SDD RESTRICTED AREAS.
 4. THE BASE/FOOTING LOCATIONS MAY VARY WITH FIELD CONDITIONED AND SHOULD BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO DESIGN.
 5. CONTRACTOR RESPONSIBLE FOR COORDINATING WALL DESIGN AND CONSTRUCTION WITH UTILITIES AND STORM DRAINAGE SHOWN IN THESE PLANS.
 6. CONTRACTOR RESPONSIBLE FOR DRAINAGE DESIGN BEHIND TOP OF WALLS.
 7. WALL DIMENSIONS ARE PROVIDED FOR BUDGETARY PRICING ASSISTANCE.

- NOTE:**
1. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
 2. ALL SIGNAGE AND STRIPING SHALL BE PER M.U.T.C.D., LATEST ADDITION.
 3. ALL VEHICULAR AREAS ARE TO BE STANDARD DUTY ASPHALT UNLESS OTHERWISE NOTED.
 4. ANY REQUIRED TRAFFIC CONTROL SHALL BE PER A.D.O.T. STANDARDS AND IS THE RESPONSIBILITY OF THE CONTRACTOR.

PARKING SUMMARY

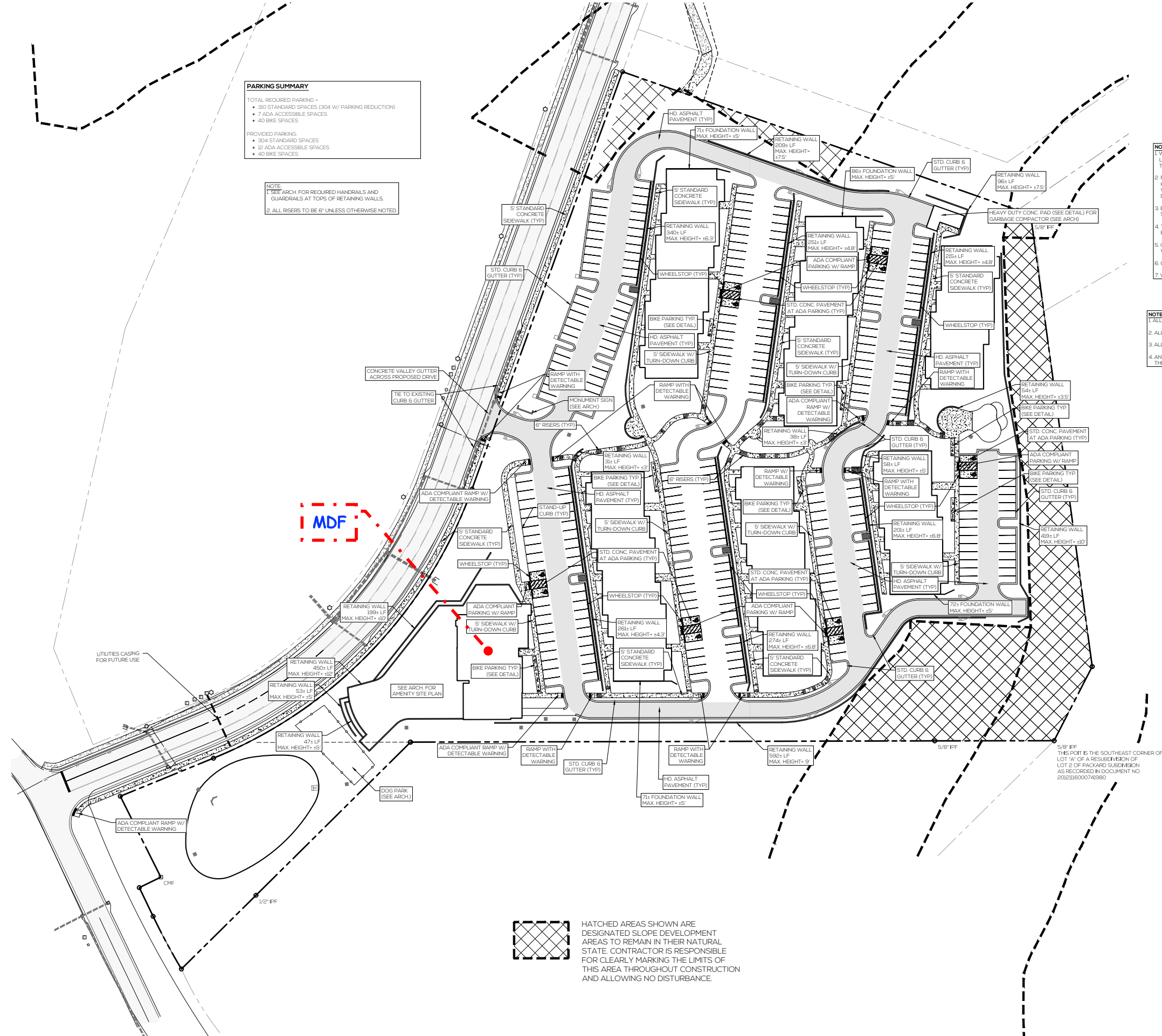
TOTAL REQUIRED PARKING +

- 300 STANDARD SPACES (304 W/ PARKING REDUCTION)
- 7 ADA ACCESSIBLE SPACES
- 40 BIKE SPACES

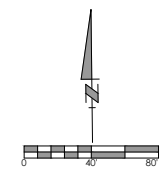
PROVIDED PARKING

- 304 STANDARD SPACES
- 12 ADA ACCESSIBLE SPACES
- 40 BIKE SPACES

- NOTE:**
1. SEE ARCH. FOR REQUIRED HANDRAILS AND GUARDRAILS AT TOPS OF RETAINING WALLS.
 2. ALL RISERS TO BE 6" UNLESS OTHERWISE NOTED.



HATCHED AREAS SHOWN ARE DESIGNATED SLOPE DEVELOPMENT AREAS TO REMAIN IN THEIR NATURAL STATE. CONTRACTOR IS RESPONSIBLE FOR CLEARLY MARKING THE LIMITS OF THIS AREA THROUGHOUT CONSTRUCTION AND ALLOWING NO DISTURBANCE.



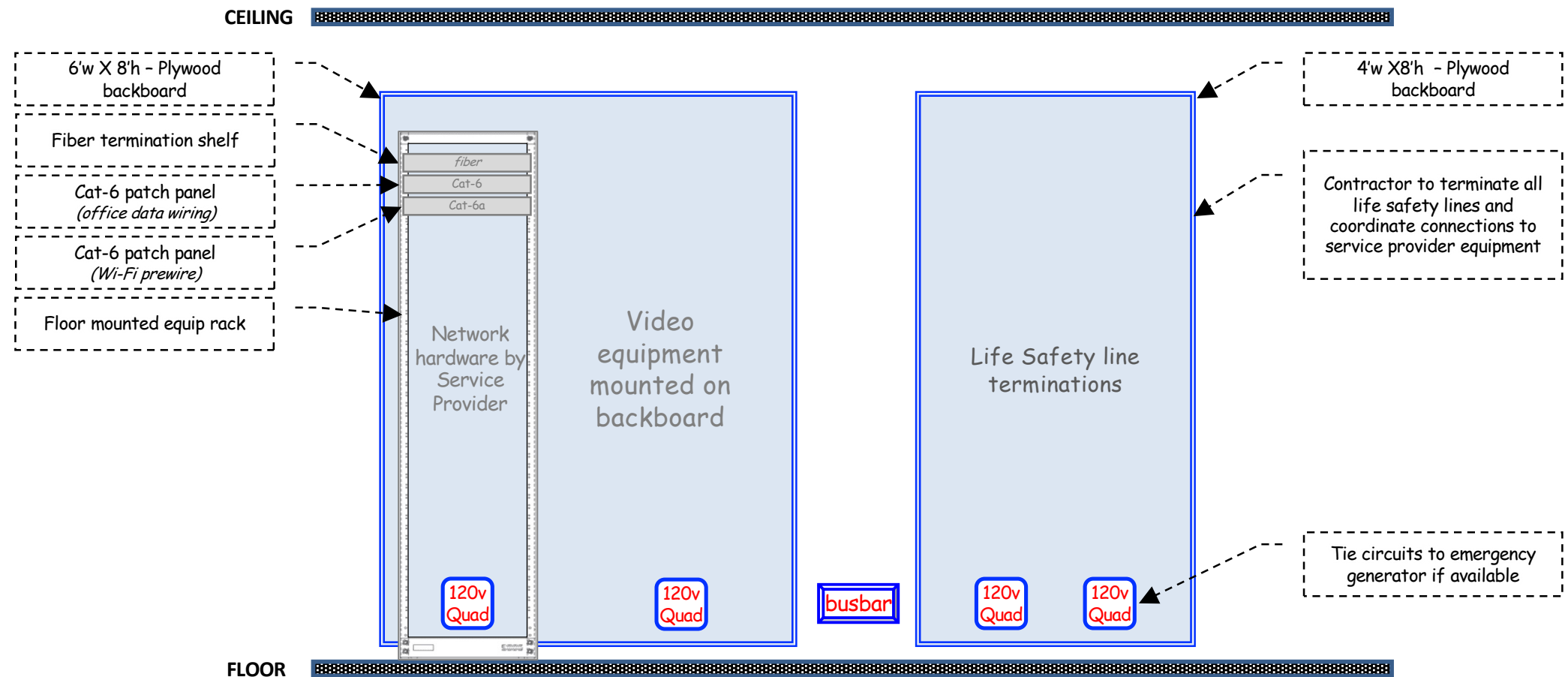
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Fiber Distribution

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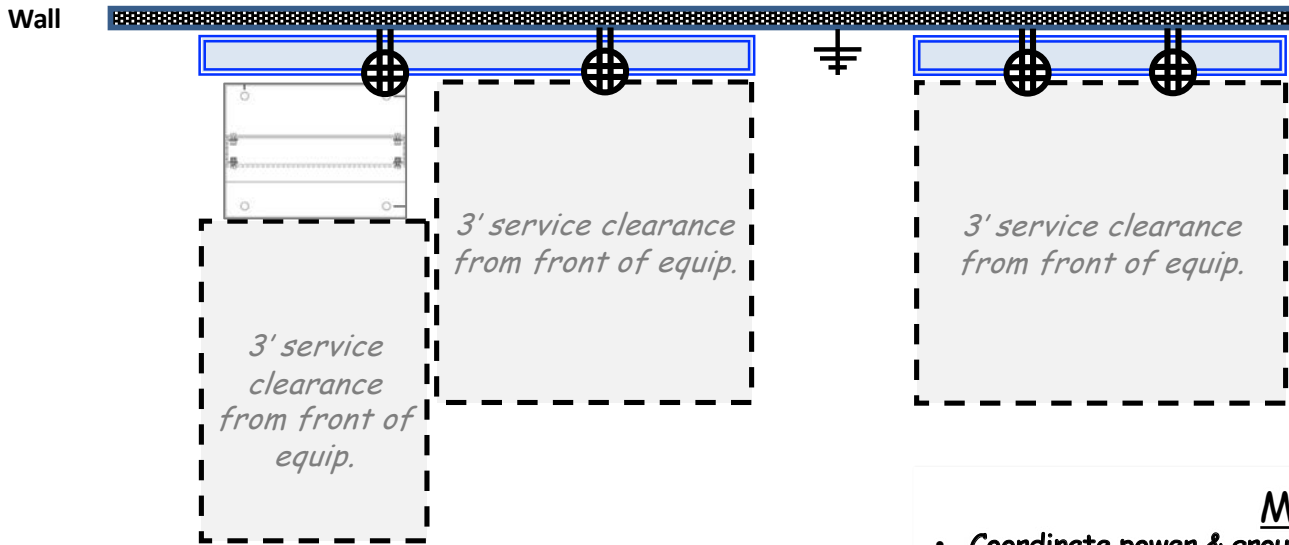
VVD.g1

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Elevation View

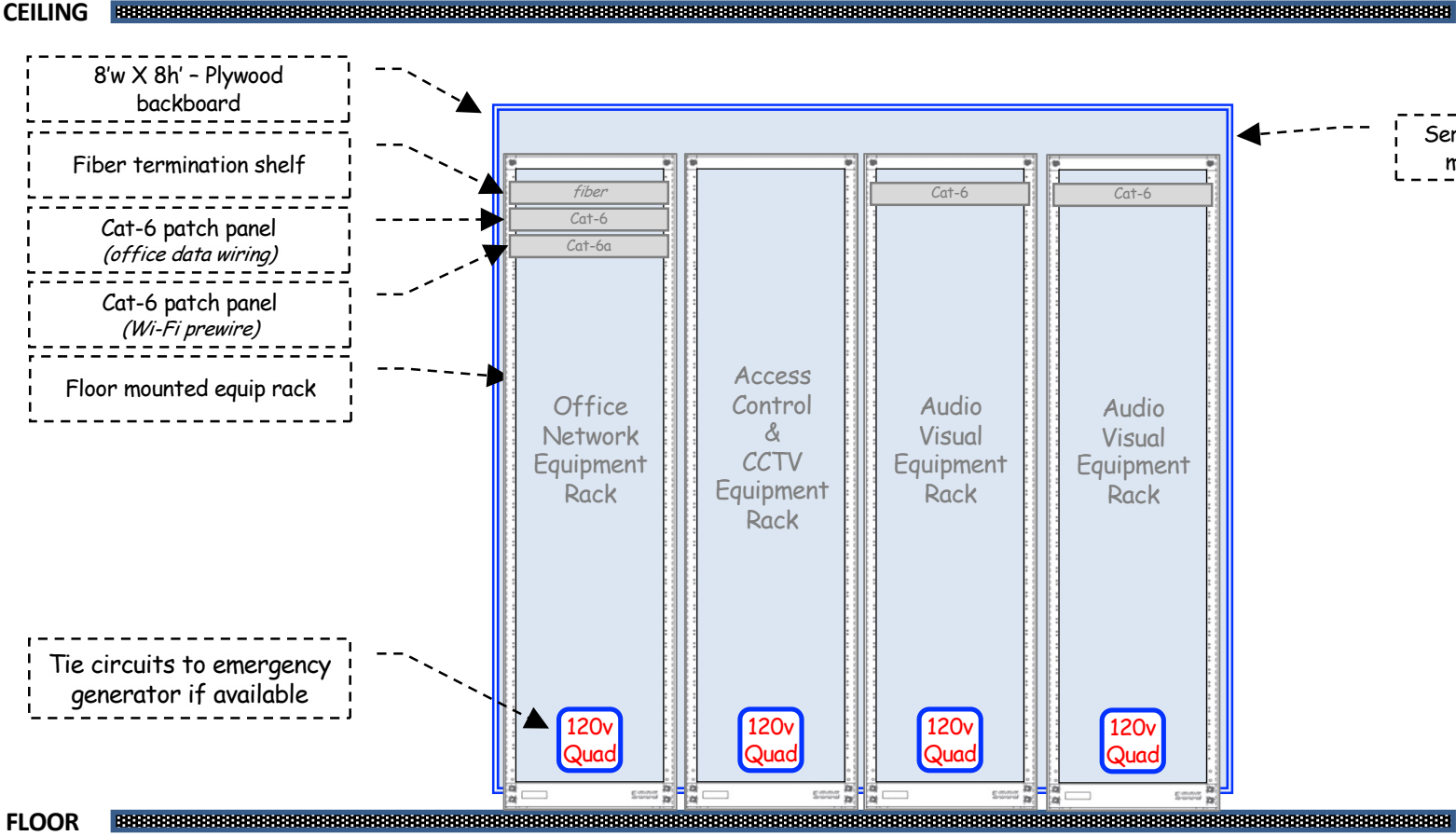
Plan View



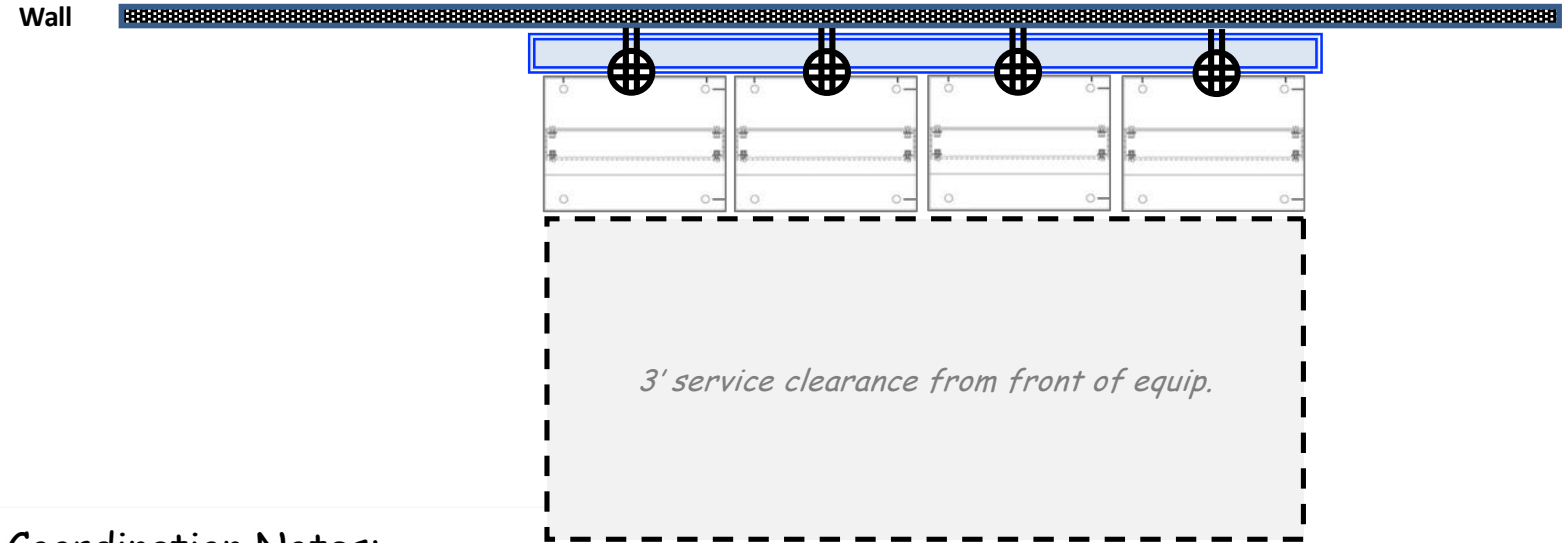
MEP Coordination Notes:

- Coordinate power & grounding requirements on Electrical drawings
- Coordinate conduit size and routing on Electrical drawings
- HVAC may be required, but at minimum provide temperature sensor & exhaust fan.

MDF - Typical Layout



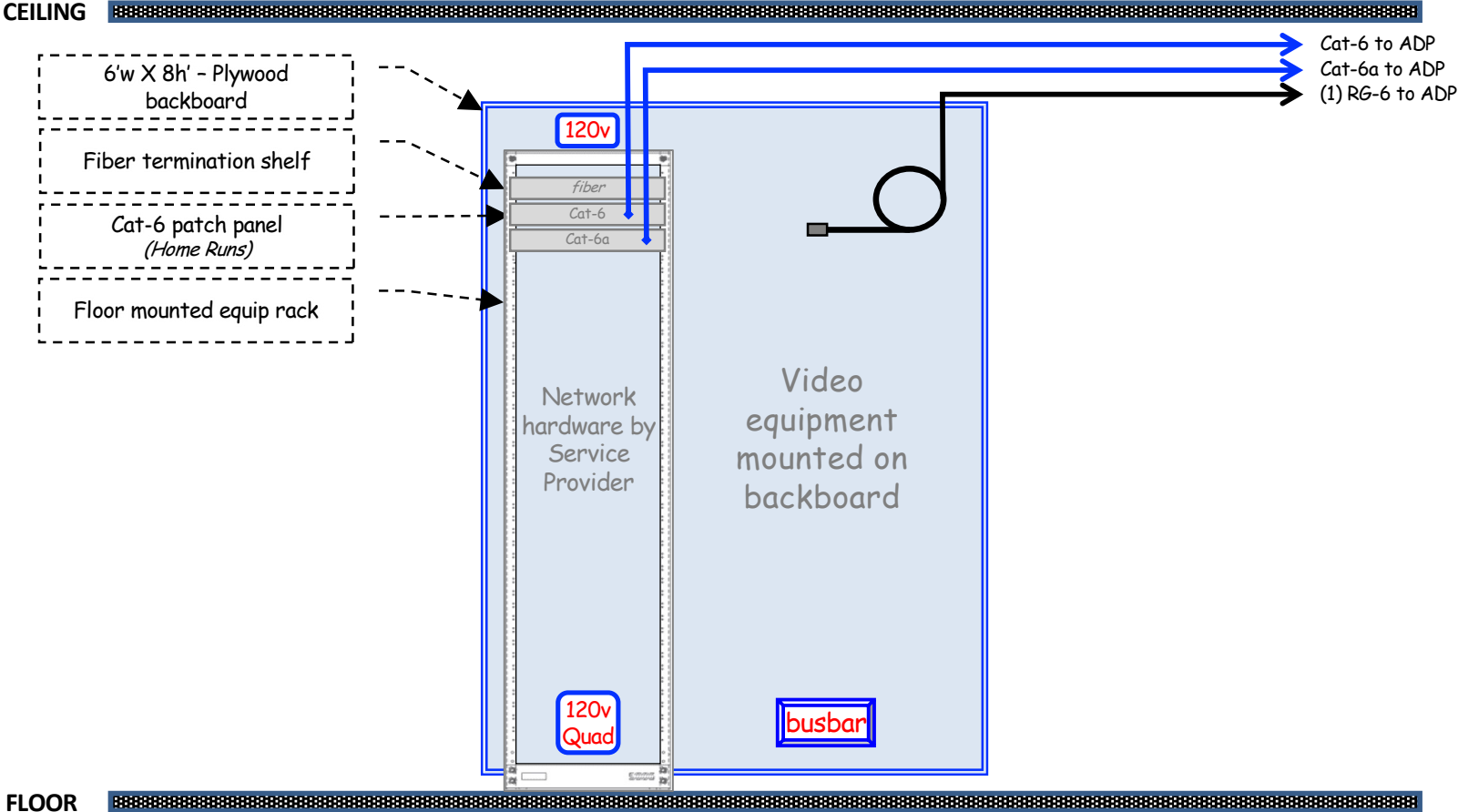
Elevation View
Plan View



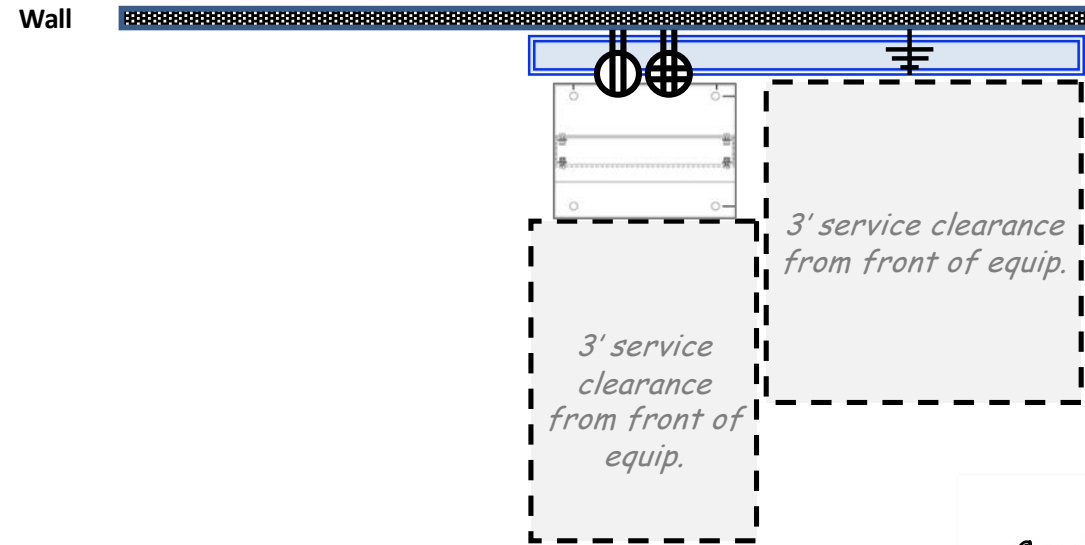
MEP Coordination Notes:

- Coordinate power & grounding requirements on Electrical drawings
- Coordinate conduit size and routing on Electrical drawings
- HVAC may be required, but at minimum provide temperature sensor & exhaust fan.

Office IDF - Typical Layout



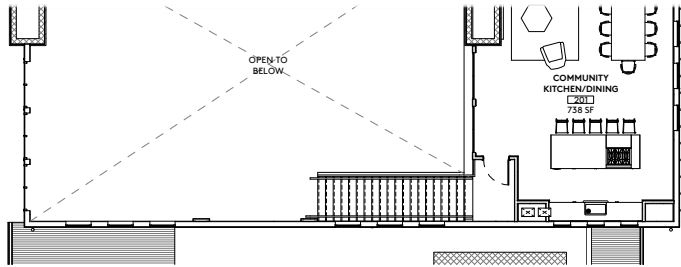
Elevation View
Plan View



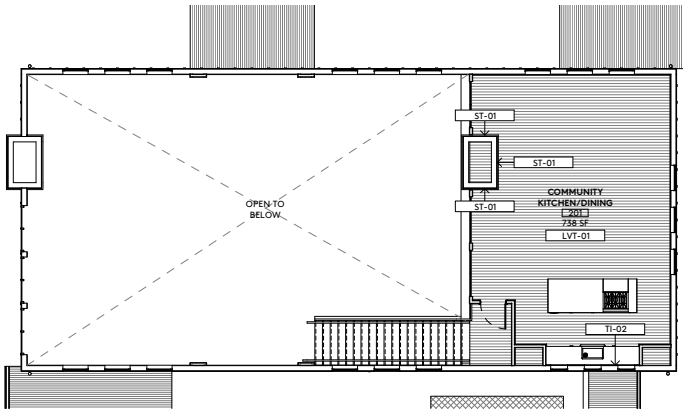
- MEP Coordination Notes:
- Coordinate power & grounding requirements on Electrical drawings
 - Coordinate conduit size and routing on Electrical drawings
 - HVAC may be required, but at minimum provide temperature sensor & exhaust fan.

IDF - Typical Layout

Prewire for Common Area Wi-Fi Access Points :
Interior Wi-Fi - (2) Cat6 to single gang box w/cover plate on ceiling
Exterior Wi-Fi - (2) Cat6 to weather rated single gang box w/cover on wall minimum 9' AFF
All cables terminated and routed back to closest IDF or MDF



LEVEL 2 FURNITURE PLAN
A200-1 | 1/8" = 1'-0" 4

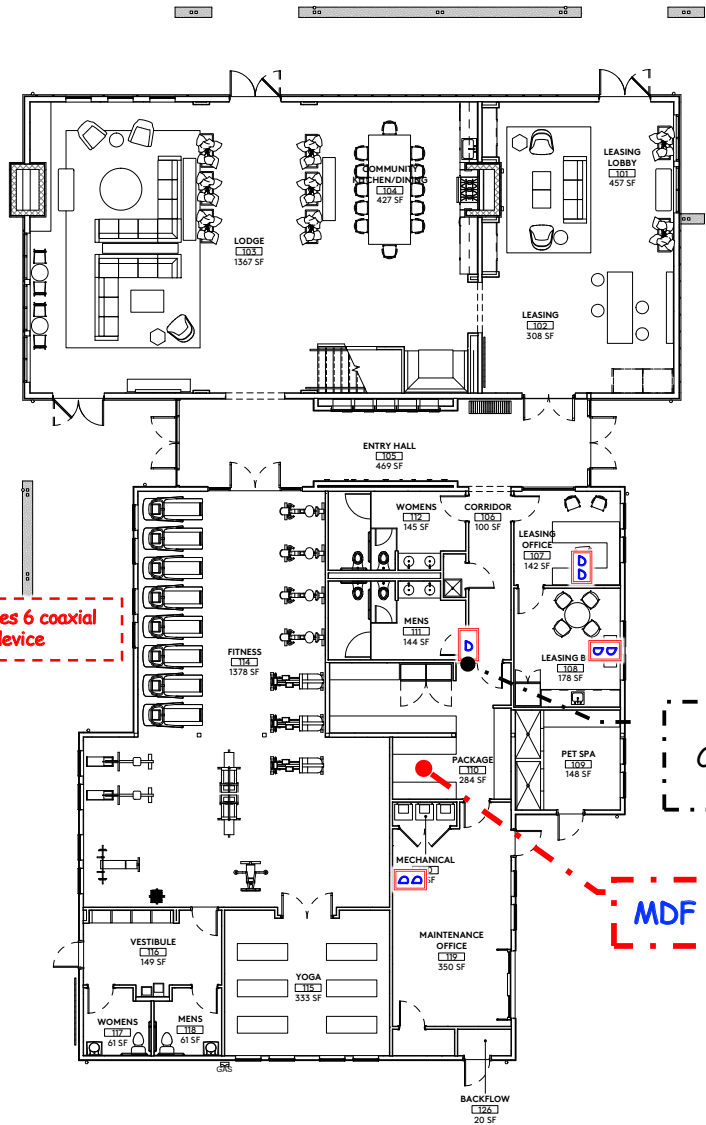


LEVEL 2 FINISH PLAN
A200-1 | 1/8" = 1'-0" 3

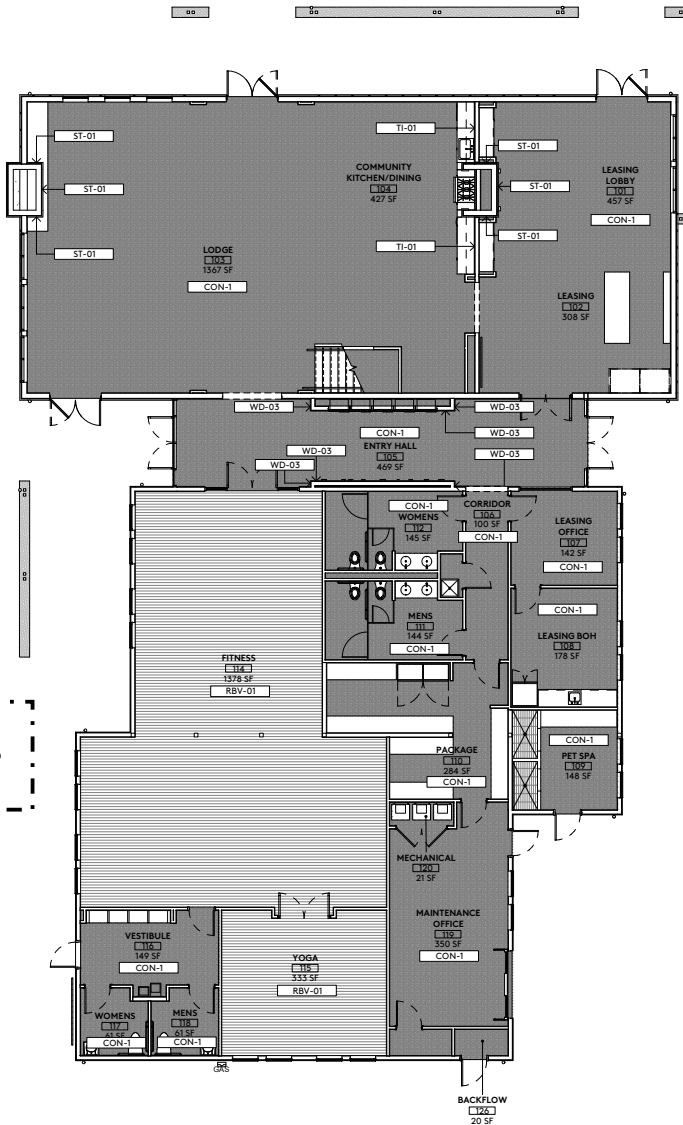
PROJECT NOTES
TAG DESCRIPTION
A BLOCKING PER TRUSS MANUF. REF. STRUCTURAL

SPECIFICATION KEYNOTES

ASSEMBLY KEYNOTES



LEVEL 1 FURNITURE PLAN
A200-1 | 1/8" = 1'-0" 2



LEVEL 1 FINISH PLAN
A200-1 | 1/8" = 1'-0" 1

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Office & Amenity
Layouts

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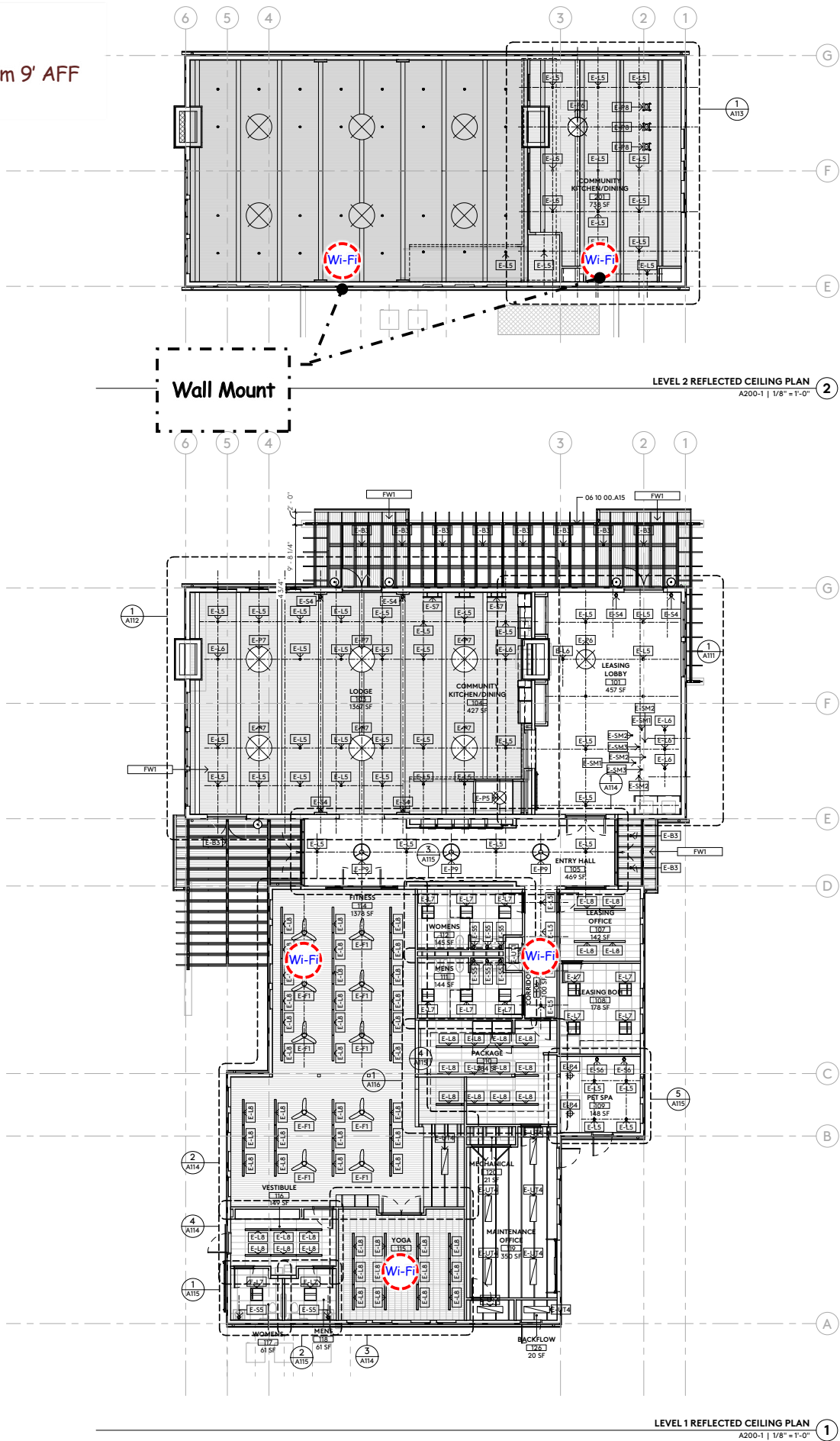
VVD.i1

Prewire for Common Area Wi-Fi Access Points :

Interior Wi-Fi - (2) Cat6 to single gang box w/cover plate on ceiling

Exterior Wi-Fi - (2) Cat6 to weather rated single gang box w/cover on wall minimum 9' AFF

All cables terminated and routed back to closest IDF or MDF



PROJECT NOTES

TAG DESCRIPTION
A BLOCKING PER TRUSS MANUF, REF. STRUCTURAL

SPECIFICATION KEYNOTES

06 10 00 A15 2X12

ASSEMBLY KEYNOTES

EXTERIOR LIGHT FIXTURES		
MARK	DESCRIPTION	COUNT
E-B3	CYLINDER PENDANT	16
E-B4	EXTERIOR WALL SCONCE	5

LIGHTING KEY : AMENITY BUILDING	
•	E-L5 : RECESSED DOWNLIGHT
•	E-L6 : RECESSED DIRECTIONAL DOWNLIGHT
□	E-L7 : RECESSED 2X2 LED FIXTURE
—	E-L8 : RECESSED 4'-0" LINEAR LED FIXTURE
—	E-UT1 : 2' LED SURFACE MOUNT UTILITY FIXTURE
—	E-UT4 : SUSPENDED LED UTILITY FIXTURE
•	E-SM1 : DECORATIVE SURFACE MOUNTED FIXTURE
•	E-SM2 : DECORATIVE SURFACE MOUNTED FIXTURE
•	E-SM3 : DECORATIVE SURFACE MOUNTED FIXTURE
•	E-S4 : DECORATIVE SCONCE - LOOGE
•	E-S5 : DECORATIVE SCONCE - RESTROOMS
•	E-S6 : DECORATIVE SCONCE - DOG SPA
—	E-S7 : 3' DECORATIVE PICTURE LIGHT
⊕	E-P4 : DECORATIVE PENDANT
⊕	E-P5 : DECORATIVE PENDANT
⊕	E-P6 : DECORATIVE PENDANT
⊕	E-P7 : DECORATIVE PENDANT
⊕	E-P8 : DECORATIVE PENDANT
⊕	E-P9 : DECORATIVE PENDANT
⊕	E-F1 : CEILING FAN WITHOUT LIGHT KIT

CEILING LEGEND	
ACT-01 : 1X4 ACT - WHITE	
GYP-01 : PAINTED GYP - WHITE	
GYP-02 : PAINTED GYP - COLOR	
XX-XX : ...	
WC-02 : WALLCOVERING	

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Prewire for Common Area Wi-Fi Access Points :
Interior Wi-Fi - (2) Cat6 to single gang box w/cover plate on ceiling
Exterior Wi-Fi - (2) Cat6 to weather rated single gang box w/cover on wall minimum 9' AFF
All cables terminated and routed back to closest IDF or MDF

HARDSCAPE NOTES

1. ALL DIMENSIONS ARE AT 90° UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS ARE FROM FACE OF MATERIAL OR EDGE OF SURFACE BEING DIMENSIONED, UNLESS OTHERWISE NOTED. DIMENSIONS TO BUILDING WALL ARE FACE OF WALL AT FINISHED GRADE.
3. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING MISS UTILITY PRIOR TO BEGINNING CONSTRUCTION FOR LOCATION OF ALL UTILITY LINES. NOTIFY LANDSCAPE ARCHITECT IMMEDIATELY OF ANY CONFLICTS. CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO EXISTING UTILITIES.
4. EXPANSION JOINTS SHALL OCCUR WHERE PAVED SURFACES MEET WALLS AND WHERE HORIZONTAL SURFACES MEET VERTICAL SURFACES, OR WHERE OTHERWISE NOTED ON LAYOUT PLAN. LANDSCAPE ARCHITECT TO APPROVE JOINT FILLER COLOR WHERE VISIBLE AT EXISTING BUILDING. CONTROL JOINTS AS SHOWN ON LAYOUT PLANS.
5. CONTRACTOR TO VERIFY EXISTING ELEVATIONS.
6. ALL STAIRS TO BE 6" RISE UNLESS OTHERWISE NOTED.
7. ALL WALKS SHALL HAVE A MINIMUM CROSS SLOPE FOR POSITIVE DRAINAGE AND SHALL NOT EXCEED 2% CROSS SLOPE UNLESS APPROVED BY OWNER/ARCHITECT.
8. ALL WALL DIMENSIONS ARE TO CENTER OF COLUMN OR EDGE OF BUILDING.
9. SEE CIVIL SHEETS FOR GRADING.
10. ALL POURED CONCRETE STAIRS AND WALLS TO HAVE INTEGRAL COLOR: DAVIS COLORS LIGHT GRAY

SITE LEGEND

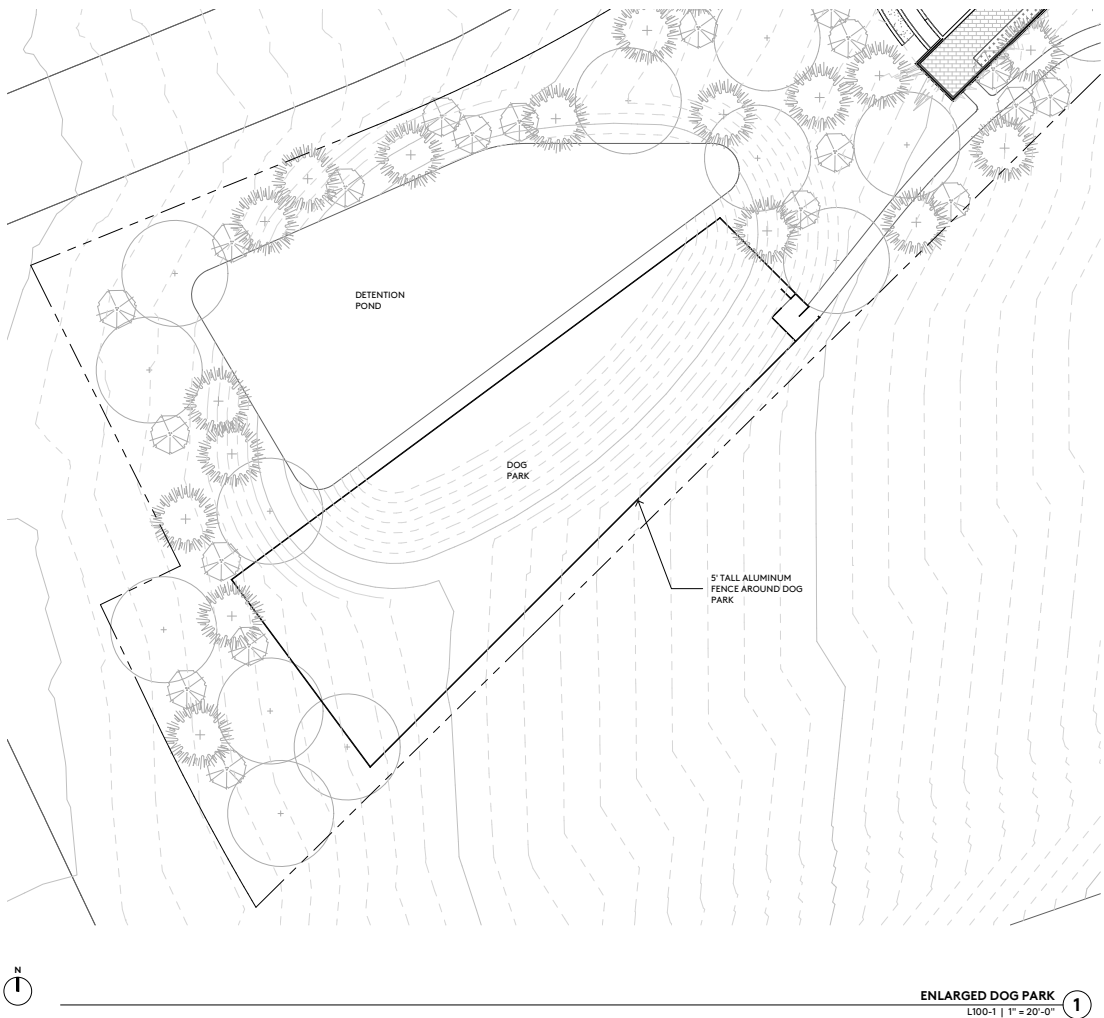
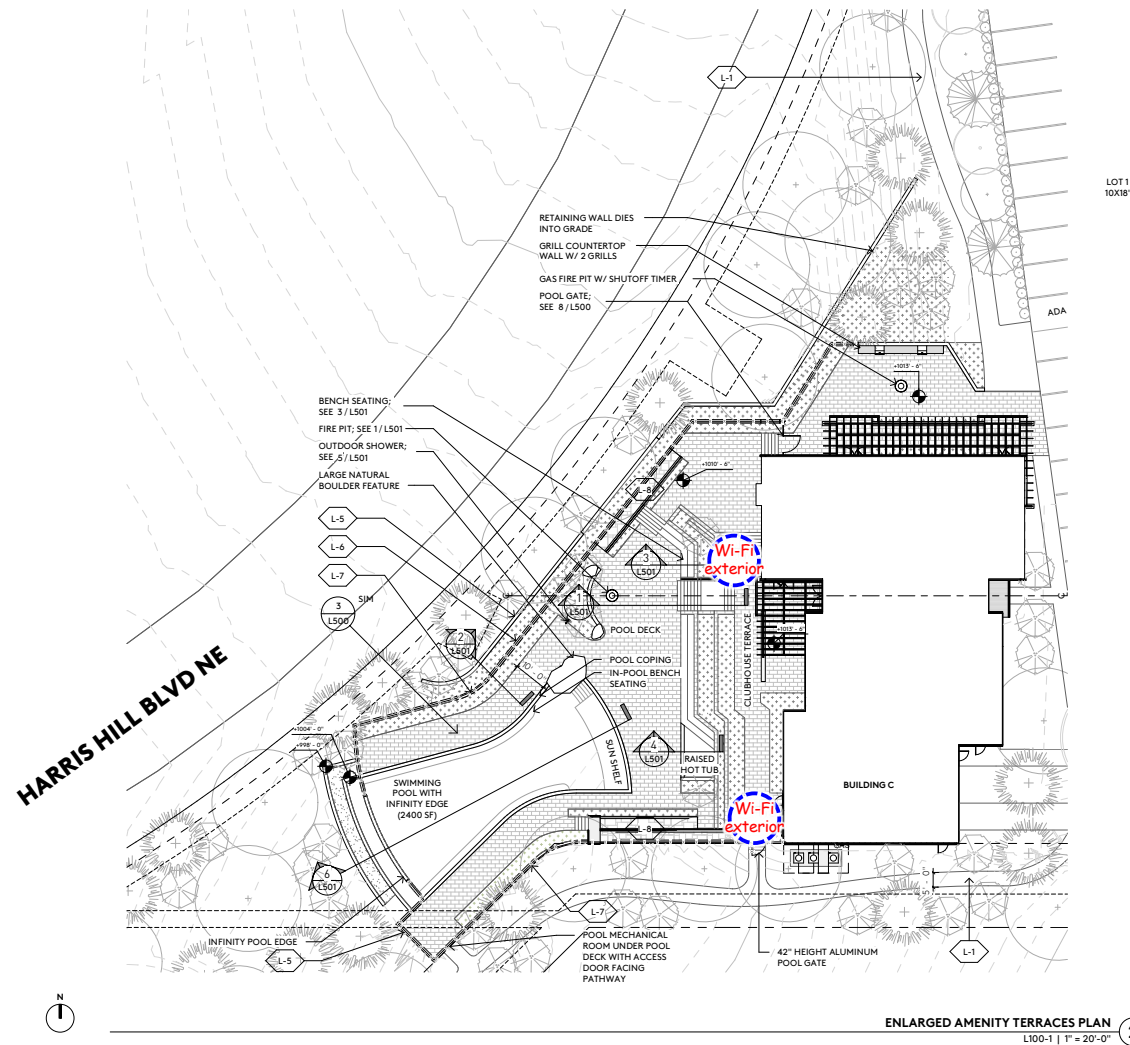
- EXISTING FOOTPRINT
- NEW CONSTRUCTION
- PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE

HARDSCAPE MATERIAL KEY

- CONCRETE PAVING (4" THICK, REINFORCED)
- LARGE FORMAT CONCRETE PAVER (PEDESTRIAN RATED)
- LARGE FORMAT CONCRETE PAVER (VEHICULAR RATED)
- LAWN
- MULCH
- PLANTING

LANDSCAPE NOTES

- L-1 5' WIDE CONCRETE PATHWAY, TYP.
- L-2 5' TALL RETAINING WALL WITH 42" GUARDRAIL ON TOP
- L-3 4' TALL RETAINING WALL WITH 42" GUARDRAIL ON TOP
- L-4 7' TALL RETAINING WALL WITH 42" GUARDRAIL ON TOP
- L-5 5' TALL RETAINING WALL
- L-6 10' TALL RETAINING WALL
- L-7 42" HEIGHT ALUMINUM POOL FENCE
- L-8 ADA RAMP



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Prewire for Common Area Wi-Fi Access Points :

Interior Wi-Fi - (2) Cat6 to single gang box w/cover plate on ceiling

Exterior Wi-Fi - (2) Cat6 to weather rated single gang box w/cover on wall minimum 9' AFF

All cables terminated and routed back to closest IDF or MDF

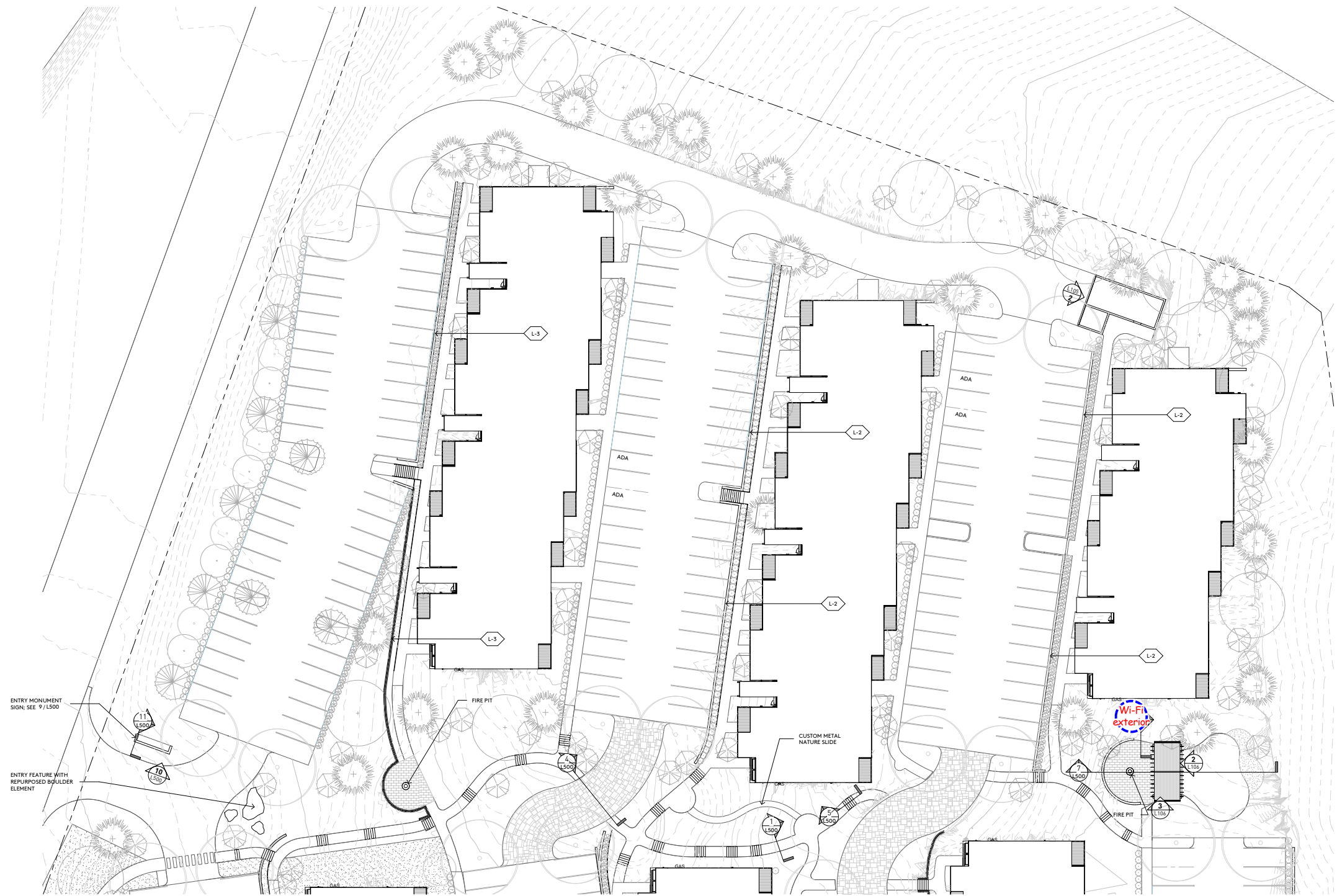
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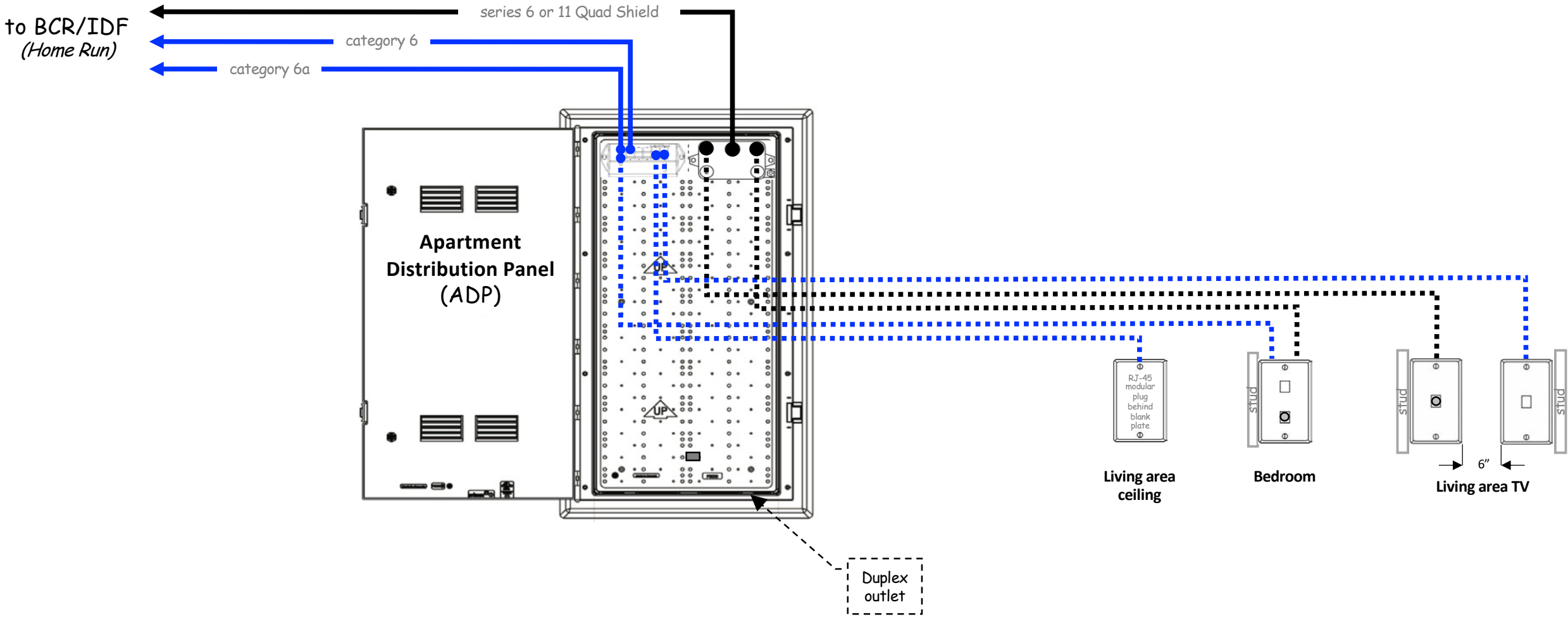
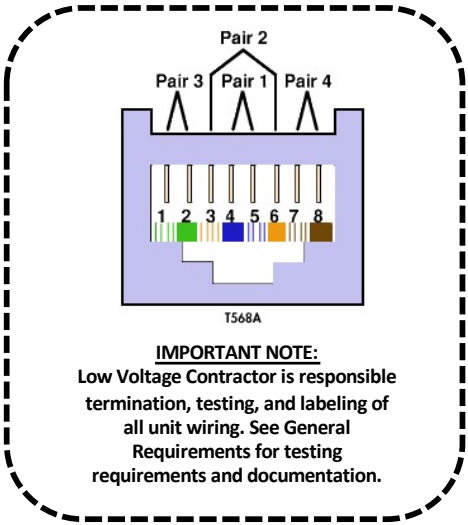
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VVD.i4



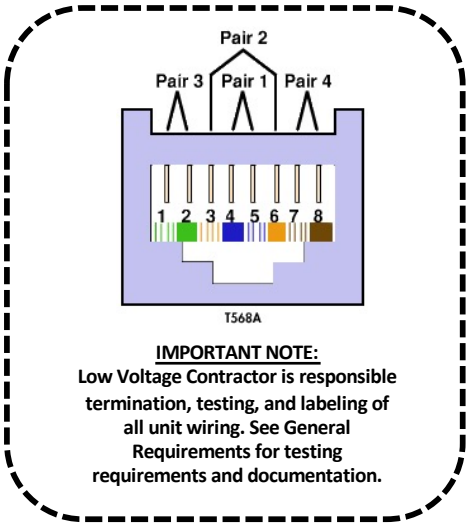
ENLARGED AMENITY TERRACES PLAN2
L100-1 | 1" = 20'-0" ①

Unless specified otherwise, the general contractor's low voltage trade shall install all the below
Installation should follow final furniture layouts

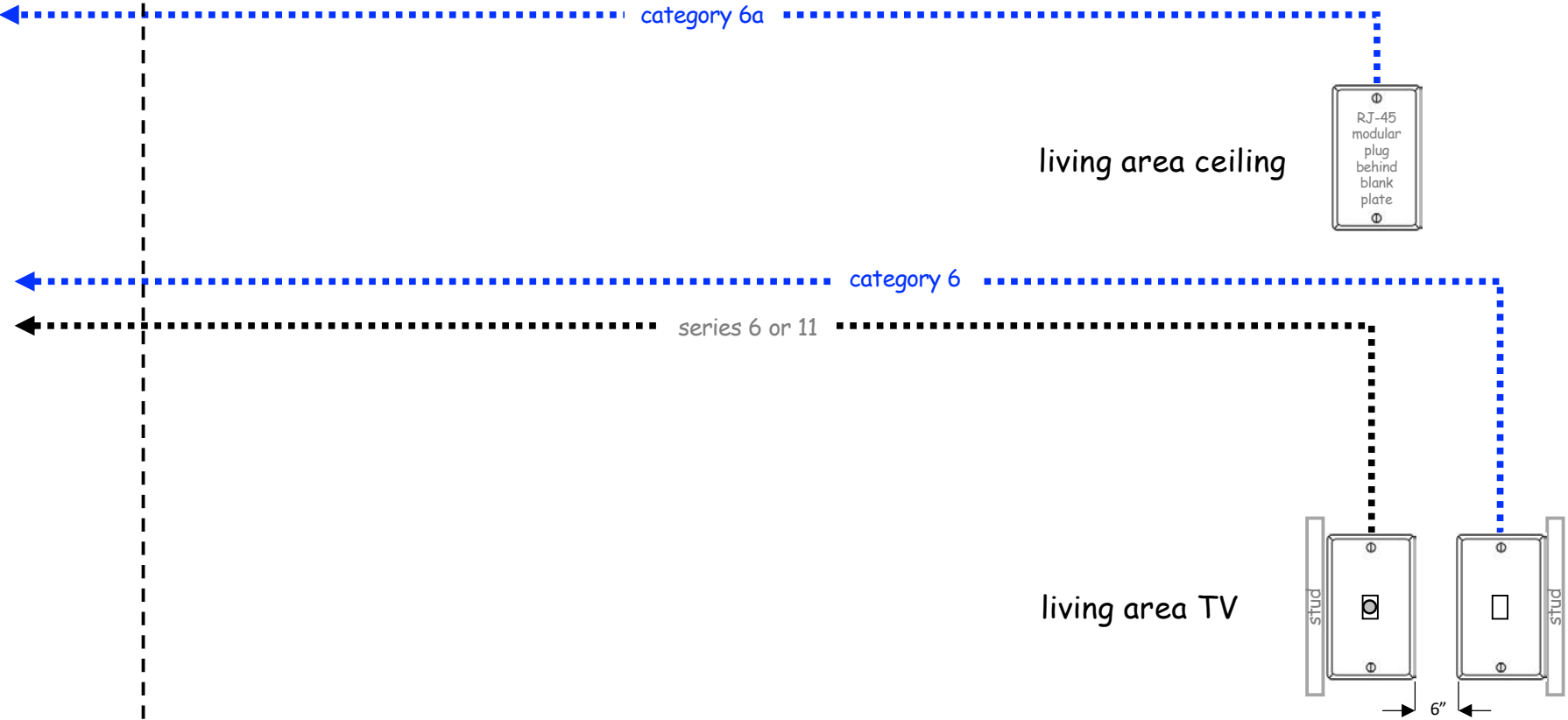


Studio & Efficiency Apartments Only

Unless specified otherwise, the general contractor's low voltage trade shall install all of the below
Installation should follow final furniture layouts



from BCR/IDF



The below systems and/or equipment may require high-speed Internet access, secure VLAN, IP, SSIDs, etc. Please identify any location(s) for the below systems.

- Access control systems
- Area of refuge & other emergency communications systems
- Audio-Video system
- Audio-Video access (Resident Streaming)
- Automated teller machine
- Active Building/BuildingLink and other messaging systems
- Building Management Systems (BMS)
- Close Circuit Television (CCTV) systems
- Concierge desk and systems
- Controlled lighting Systems
- Controlled parking systems
- Credit card and other POS systems
- DAS/NAS systems or other cellular boosters
- Electric car charging stations
- Fitness personal entertainment systems
- Gaming or virtual/simulated sports systems
- Guest entry systems
- Intercoms
- Laundry systems
- Leak detection and other telemetry sytems
- Leasing touchscreens and kiosks
- LED or video walls
- Management Software
- Mechanical key tracking and electronic door lock systems
- Online music sources
- Package systems
- Phone systems
- Retail parking systems
- Room reservation systems
- Security and intrusion alarm systems
- Submetering equipment
- Transportation information screens and systems
- Vending machines
- Video advertisements and information systems
- Video conferencing and virtual classrooms
- Wi-Fi Coverage

The Low Voltage contractor shall price the following as an Add/Alternate to the base design:

Conduit / Pathways:

- Provide and install 1-1/2" flexible conduit from each IDF down the center of the corridor in each direction. The purpose is to provide a future pathway for additional systems such as ERRCS, DAS, or IoT.
- Provide and install (1) 12mm microduct from each unit ADP back to its corresponding IDF for a future fiber pathway. Provide adequate slack and secure pull string at both ends.

Category 6a Upgrade:

- Provide and install Category 6a cable for all Wi-Fi prewire locations. Upgrade shall include upgrading all associated patch panels and connecting hardware.

