

TECHNOLOGY SYSTEMS GENERAL NOTES	
1. REFER TO SPECIFICATION SECTION "TECHNOLOGY GENERAL PROVISIONS" FOR MORE INFORMATION ABOUT DRAWINGS AND BID DOCUMENTS.	
2. MANY SYMBOLS USED IN THIS PROJECT HAVE A TYPE ASSOCIATED WITH THEM. SEE SHEETS WITH DETAILS AND PROJECT SPECIFICATIONS FOR MORE INFORMATION ON THE DESCRIPTION OF EACH TYPE.	
3. ALL CONDUIT FOR TECHNOLOGY SYSTEMS INDOOR ABOVE GRADE SHALL BE EMT AND ALL CONDUIT FOR BELOW GRADE SHALL BE PVC.	
4. SEE LIFE SAFETY PLANS FOR LOCATIONS OF FIRE RATED PARTITIONS IN THIS PROJECT. PROVIDE AN APPROVED FIRE STOP SYSTEMS FOR EACH RACEWAY OR CABLE GOING THROUGH A RATED WALL. SEE SPECIFICATION "RACEWAYS FOR TECHNOLOGY" FOR MORE INFORMATION.	
5. WORKING CLEARANCES AROUND ELECTRICAL EQUIPMENT SHALL BE MAINTAINED IN COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE ARTICLE 110. COORDINATE EQUIPMENT INSTALLATION TO MAINTAIN REQUIRED CLEARANCES.	
6. SYMBOLS USED ON THE TECHNOLOGY DRAWINGS ARE NOT THE SAME SIZE AS THE ACTUAL OBJECT BEING REPRESENTED. THEREFORE LOCATIONS OF THE SYMBOLS ON THE FLOOR PLANS ARE AN APPROXIMATION TO THE ACTUAL LOCATION OF THE DEVICE AND NEED TO BE CAREFULLY COORDINATED WITH OTHER ELEMENTS IN THE VICINITY. AS A GENERAL GUIDELINE: A. VOICEDATA OUTLET FOR WORKAREAS SHALL BE INSTALLED WITHIN 6 INCHES OF A POWER OUTLET INDICATED IN ELECTRICAL DRAWINGS. B. TV OUTLETS SHALL BE INSTALLED WITHIN 6 INCHES OF A POWER OUTLET SHOWN ON THE ELECTRICAL DRAWINGS. C. WHEN MULTIPLE TECHNOLOGY SYSTEMS OUTLETS ARE INDICATED NEXT TO EACH OTHER WITH SYMBOLS, THE SPACING BETWEEN OUTLETS SHALL BE CONSISTENT IF NO ELEVATION IS SHOWN ON THE DRAWINGS. D. WHEN INSTALLER IS NOT CERTAIN ABOUT SPECIFIC ADJACENCIES OF A DEVICE, THE QUESTION SHALL BE ASKED TO THE ENGINEER PRIOR TO INSTALLATION.	
7. FOR EXACT LOCATION OF CEILING MOUNTED EQUIPMENT REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN. LOCATIONS OF EQUIPMENT NOT INCLUDED ON THE REFLECTED CEILING PLAN SHALL BE COORDINATED WITH THOSE ITEMS SHOWN. COORDINATION OF CEILING MOUNTED EQUIPMENT SHALL BE PRIOR TO ANY ROUGH-IN. NOTIFY ENGINEER OF ANY DISCREPANCY.	
8. LOCATIONS OF FLOOR BOXES AND FLOOR PENETRATIONS SHALL NOT BE MEASURED FROM THIS SET OF DRAWINGS. INSTALLER SHALL REQUEST PRECISE LOCATIONS FROM ARCHITECT.	
9. EACH VOICEDATA RJ45 JACK SHALL BE CONNECTED TO A DEDICATED 4 PR CABLE.	
10. THE RESPONSIBILITY OF RACEWAY INSTALLATION SHALL BE AS DIRECTED BY THE CONSTRUCTION MANAGER OR GENERAL CONTRACTOR, BUT ALL RACEWAYS FOR TECHNOLOGY ARE TO BE INCLUDED IN THIS CONTRACT.	
11. WHEN CONDUIT RUNS ARE INDICATED ABOVE GRADE OR BELOW GRADE ON THESE DRAWINGS, NOT EVERY SINGLE JUNCTION BOX (OR COMMUNICATIONS VAULT) REQUIRED IS INDICATED ON THE DRAWINGS. TYPICALLY ONLY END POINT LOCATIONS OR SPECIFIC PASS-THROUGH LOCATIONS WHERE THE ENGINEER DESIRES A BOX ARE SHOWN ON THE DRAWINGS. SEE SPECIFICATION "RACEWAYS FOR TECHNOLOGY" FOR REQUIREMENTS THAT INDICATE ADDITIONAL JUNCTION BOXES OR COMMUNICATION VAULTS THAT SHALL BE PROVIDED UNDER THIS CONTRACT. SUCH REQUIREMENTS INCLUDE ADDITIONAL BOXES REQUIRED BECAUSE OF NUMBER OF CONDUIT BENDS OR CHANGES IN ELEVATION.	
12. SOME SYMBOLS INCLUDED IN THE SYMBOL LEGEND MAY NOT BE USED IN THESE PROJECT DRAWINGS.	
13. UNDER NO CONDITIONS, CONDUITS FOR LOW VOLTAGE FOR FLOOR BOXES SHALL BE DAISY CHAINED TOGETHER BETWEEN ADJACENT FLOOR BOXES. ALL CONDUITS FOR FLOOR BOXES SHALL BE HOME RUNS TO NEAREST ACCESSIBLE CEILING SPACE.	
14. THIS SET OF DRAWINGS DOES NOT INDICATE ALL GROUNDING AND BONDING REQUIREMENTS FOR TECHNOLOGY SYSTEMS. REFER TO SPECIFICATION SECTION "GROUNDING FOR TELECOMMUNICATION SYSTEM" FOR ADDITIONAL REQUIREMENTS.	
15. ALL CABLES FOR TECHNOLOGY SYSTEMS RUN UNDER SLAB OR BELOW GRADE IN CONDUITS STUBBING UP INSIDE THE TELECOM ROOM SHALL BE INDOOR/OUTDOOR RATED. FOR CONDUITS STUBBING UP IN OTHER LOCATIONS DIFFERENT FROM TELECOM ROOMS AND FURTHER THAN 50 FT. FROM A TELECOM ROOM, DO NOT USE INDOOR/OUTDOOR RATED CABLES.	
16. GRAPHICS USED FOR EQUIPMENT IN ELEVATIONS AND CHANNELS (LINE DRAWINGS) DO NOT NECESSARILY REPRESENT THE PART NUMBER OF THE EQUIPMENT SPECIFIED. THE PART NUMBERS LISTED IN THE DRAWINGS AND SPECIFICATIONS ARE TO BE FOLLOWED FOR BASIS OF DESIGN, NOT THE GRAPHICS.	
17. THE TECHNOLOGY DRAWINGS DO NOT SHOW ALL REQUIRED CONDUITS/RACEWAYS TO BE PROVIDED UNDER THIS CONTRACT. TYPICALLY CONDUIT SLEEVES SMALLER THAN 2" ARE NOT SHOWN ON THE DRAWINGS. SEE SPECIFICATIONS "RACEWAYS FOR TECHNOLOGY" AND DRAWING DETAILS FOR ADDITIONAL RACEWAY REQUIREMENTS.	
18. DEFINITION OF ACRONYMS USED IN THESE DRAWINGS: A. N/C (N.C.) = NOT IN CONTRACT B. O/F (O.F.E.) = OWNER FURNISHED EQUIPMENT. SEE RESPONSIBILITY MATRIX FOR MORE INFORMATION. C. D/H (D.H.I.) = DOOR HARDWARE INSTALLER D. U/S (U.S.C.) = UNDER SEPARATE CONTRACT.	
19. ALL REQUIRED WALL PENETRATIONS, EXISTING AND NEW, SHALL MAINTAIN THE NEW WALL RATING AFTER CABLING HAS BEEN INSTALLED OR REMOVED.	
20. ALL SPEAKERS MOUNTED IN A CEILING TILE SHALL BE CENTERED IN THE CEILING TILE.	

SECURITY SYSTEM GENERAL NOTES

1. SYMBOLS USED TO REPRESENT DEVICES SUCH AS CCTV CAMERAS, INTERCOM STATIONS, SECURITY WORKSTATIONS, CALL STATIONS, AND EMERGENCY PHONE STATIONS REQUIRE ONE (1) DATA DROP FOR SUCH DEVICE. THIS DATA DROP IS NOT SHOWN ON THE VOICEDATA FLOOR PLANS, BUT SHALL BE PROVIDED FOLLOWING ALL REQUIREMENTS FOR VOICEDATA DROPS INDICATED IN THE DRAWING DETAILS AND IN THE SPECIFICATION "STRUCTURED CABLING SYSTEM".
2. ANY DATA DROPS FOR SECURITY DEVICES EXCEEDING 295 FT. OF PERMANENT LINK DISTANCE TO THE TELECOM ROOM WHERE CAMERA WILL BE WIRED TO, SHALL BE WIRED WITH FIBER OPTICS FOR HORIZONTAL CABLING AND A 2 CONDUCTOR AWG-16 (CL2P) CABLE. THE FIBER CABLE SHALL BE AS DESCRIBED IN SPECIFICATION "STRUCTURED CABLING SYSTEM". IF NO INDICATION IN SUCH SPECIFICATION, FIBER OPTIC CABLE SHALL BE A 2-STRAND OM3 CABLE WITH A SUITABLE JACKET FOR THE APPLICATION.
3. ALL DOUBLE DOORS THAT ARE SHOWN WITH TWO DOOR POSITIONS SWITCHES ARE TO RECEIVE (1) DOOR POSITION SWITCH ON EACH DOOR LEAF AND SHALL REPORT AS ONE ALARM POINT.
4. ALL CAMERAS, CARD READERS AND/OR KEYPADS DEDICATED FOR ELEVATOR FLOOR SELECTION CONTROL ARE SHOWN INSIDE THE ELEVATOR CAB ON THE LOWEST LEVEL FLOOR PLAN TO WHICH THE ELEVATOR TRAVELS.
5. LOCATION OF SURVEILLANCE CAMERAS SHALL BE CLOSELY COORDINATED WITH OTHER TRADES TO AVOID OBSTRUCTIONS IN THE FIELD OF VIEW. IT IS NOT REQUIRED FOR CAMERAS TO BE MOUNTED IN CENTER OF A CEILING TILE (OR CENTER OF A HALLWAY) IF THAT LOCATION CAUSES AN OBSTRUCTION IN THE FIELD OF VIEW OF THE CAMERA. ALL CAMERAS ARE TO BE INSTALLED AS TO MINIMIZE THE OBSTRUCTIONS IN THE FIELD OF VIEW WITHIN A 4' RADIUS OF THE SPECIFIED LOCATION.
6. SURVEILLANCE CAMERAS INDICATED IN THE CORNER OF A ROOM SHALL BE INSTALLED AS CLOSE AS PHYSICALLY POSSIBLE TO THE CORNER OF THE ROOM TO GAIN THE BEST FIELD OF VIEW FOR THAT CAMERA.
7. EACH ACCESS CONTROLLED DOOR IN THE PROJECT HAS A DOOR IDENTIFIER SYMBOL THAT ASSOCIATES THE DOOR TO A CORRESPONDING ROUGH-IN DETAIL IN THE DRAWINGS AND A SPECIFIC FUNCTIONALITY OF THE DOOR IN THE SECURITY SPECIFICATIONS.

TECHNOLOGY DRAWING INDEX	
SHEET	DESCRIPTION
T001	TECHNOLOGY SYMBOLS, LEGEND, NOTES AND INDEX
T002	TECHNOLOGY RESPONSIBILITY MATRIX
T101	SITE PLAN - TECHNOLOGY
T102	ENLARGED SITE PLANS - TECHNOLOGY
T201	FLOOR PLAN - TECHNOLOGY
T501	TECHNOLOGY RISER DIAGRAMS
T701	TECHNOLOGY DETAILS
XT003	IT EQUIPMENT SCHEDULE

BASIC MATERIALS	
	CONDUIT TURNED UP
	CONDUIT TURNED DOWN
	CAPPED CONDUIT
	CONDUIT STUBBED AND BUSHED INTO ACCESSIBLE CEILING CAVITY
	CONDUIT CONTINUED
	CONDUIT SLEEVES X= QTY OF SLEEVES Y= SIZE OF CONDUITS SLEEVES PENETRATING WALL ABOVE CEILING SPACE.
	IF NO QUANTITY INDICATED USE AS MANY SLEEVES AS REQUIRED TO MATCH CROSS SECTIONAL AREA OF CABLE TRAY NEXT TO SLEEVE.
	TUBULAR RUNWAY, HUNG ABOVE CEILING OR AS NOTED
	CABLE TRAY (TYPE), HUNG ABOVE CEILING OR AS NOTED
	SURFACE MOUNTED ENCLOSED TECHNOLOGY SYSTEMS. SEE SHEETS WITH DETAILS FOR ADDITIONAL INFORMATION
	JUNCTION BOX WALL MOUNTED. SIZE PER NEC IF NOT INDICATED ON DRAWING. NEMA 1 FOR INTERIOR, NEMA 4X FOR EXTERIOR USE WITH HINGED COVER AND LOCKING COVER
	JUNCTION BOX CEILING MOUNTED. SIZE PER NEC IF NOT INDICATED ON DRAWING. NEMA 1 FOR INTERIOR, NEMA 4X FOR EXTERIOR USE WITH HINGED COVER AND LOCKING COVER
	TELECOMMUNICATIONS GROUND VAULT. SEE DETAILS AND SPECS FOR MORE INFORMATION X= BOX TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT
	TELECOMMUNICATIONS PULLBOX. SEE DETAILS AND SPECS FOR MORE INFORMATION X= BOX TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT
	TECHNOLOGY POLE. SEE SHEETS WITH DETAILS FOR ADDITIONAL INFORMATION

GENERAL	
	NEW EQUIPMENT
	EXISTING WORK AND/OR EQUIPMENT REFERENCE, SHOWN ON MULTIPLE DRAWINGS
	DEVICE TO BE REMOVED (DEMO PLANS) UNDERFLOOR CONDUIT (NEW PLANS)
	WIRE AND/OR CONDUIT RUN CONTINUED ON REFERENCED DETAIL
	MATCH LINE REFERENCING CONTINUATION ON OTHER DRAWINGS
	DETAIL AND/OR SECTION REFERENCE
	CABLE ROUTING BOUNDARY
	FUTURE WORK

DRAWING NOTES AND DESIGNATIONS	
	DRAWING KEYED NOTES
	CABLE ROUTING NOTES
	DETAIL OR SECTION REFERENCE TAG

VOICE AND DATA SYSTEM	
	TELECOMMUNICATION OUTLET X= MOUNTING: (E= EXISTING, F= FLUSH, S= SURFACE, M= MODULAR FURNITURE ADAPTER, P= POLE, L= FLOOR, R= RACEWAY) N= NUMBER OF DATA CABLES IN THE FACEPLATE Y= NOT USED Z= NUMBER OF FIBER OPTIC STRANDS IN THE FACEPLATE U= USER(IF APPLICABLE) += INSTALLATION HEIGHT IN INCHES AT CENTER OF OUTLET, COORDINATE WITH ELECTRICAL. IF NOT SHOWN INSTALL AT TYPICAL RECEPTACLE HEIGHT. W= WALL TELEPHONE FACEPLATE WITH SUPPORT STUDS, INSTALLED AT 48" AFF AT CENTER OF OUTLET AND 12" FROM EDGE OF WALL. WP=WEATHERPROOF
	EXAMPLE: F2 = TWO DATA JACKS IN A SINGLE FACEPLATE, FLUSH MOUNTED
	MECH OUTLET FOR MECHANICAL/ ELECTRICAL/ FIRE ALARM/ ELEVATOR/ STAR CONNECTION Y: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET += IF NOT SHOWN, COORDINATE EXACT LOCATION WITH DEVICE
	CEILING MOUNTED INFORMATION OUTLET, MOUNTED ON FINISHED CEILING XY: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET
	WAP OUTLET FOR WIRELESS ACCESS POINT, WALL MOUNTED Y: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET += MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 8'-0" AFF
	WAP OUTLET FOR WIRELESS ACCESS POINT, MOUNTED ON FINISHED CEILING XY: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET
	FLOOR BOX FOR TECHNOLOGY SYSTEMS AND POWER OUTLETS. REFER TO POKE-THRU/ FLOORBOX SCHEDULE FOR MORE INFORMATION F= FLOOR CONDITION: (C= CONCRETE TYPE, G= GRADE, R= RAISED FLOOR, W= WOOD) Y= DENOTES # OF GANGS (1,2,3...) Z= DENOTES PLATE TYPE (A,B,C,...), A= NO AUDIO/VISUAL LN= AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET
	POKE-THRU FOR TECHNOLOGY SYSTEMS AND POWER OUTLETS. REFER TO POKE-THRU & FLOOR BOX SCHEDULE FOR MORE INFORMATION Y= DENOTES POKE-THRU SIZE (4=4", 6=6" 8=8"...) Z= DENOTES PLATE TYPE (A,B,C,...), A= NO AUDIO/VISUAL LN= AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET
	WALL MOUNTED FURNITURE FEED USED TO FEED CABLES TO MODULAR FURNITURE OR CABLES
	FLOOR BOX USED TO FEED CABLES TO MODULAR FURNITURE. REFER TO DETAIL SHEET X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT
	POKE-THRU USED TO FEED CABLES TO MODULAR FURNITURE. REFER TO DETAIL SHEET X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT
	AV BACKBOX, INSTALLED BEHIND DISPLAY/ CREDEENZA RACK, COORDINATE BACKBOX PRIOR TO ROUGH-IN. REFER TO DETAIL & SCHEDULE FOR MORE INFORMATION G= DENOTES # OF GANGS H= XY= AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET += MOUNTING HEIGHT IN INCHES AT CENTER OF DEVICE
	RECESS-IN-WALL STORAGE BOX, INSTALLED BEHIND DISPLAY, COORDINATE BACKBOX PRIOR TO ROUGH-IN. REFER TO DETAIL & SCHEDULE FOR MORE INFORMATION G= DENOTES # OF GANGS H= XY= AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET U: AS DESCRIBED FOR TELECOMMUNICATIONS OUTLET += MOUNTING HEIGHT IN INCHES AT CENTER OF DEVICE

BROADBAND TELEVISION SYSTEM	
	RX ANTENNA
	TX ANTENNA
	TX/RX ANTENNA
	2 WAY SPLITTER
	3 WAY SPLITTER
	4 WAY SPLITTER
	8 WAY SPLITTER
	SATELLITE DISH
	CATV AMPLIFIER I= INPUT LEG O= OUTPUT LEG T= TEST PORT X= AMPLIFIER TYPE - SP: SERVICE PROVIDER, H: HEADEND AMPLIFIER, D: DISTRIBUTION AMPLIFIER
	DISTRIBUTION TAP I= INPUT LEG O= OUTPUT LEG T= TAP LEGS, QTY AS INDICATED IN RISER
	DIRECTIONAL COUPLER I= INPUT LEG O= OUTPUT LEG T= TAP LEGS, QTY AS INDICATED IN RISER
	CATV TAP DEFINITION TAG X= NUMBER OF TAP LEGS Y= TAP VALUE IN dB
	CATV EQUALIZER X= EQUALIZING VALUE IN dB I= INPUT LEG O= OUTPUT LEG
	TERMINATOR
	SURGE SUPPRESSOR AT BUILDING ENTRY POINT
	TELEVISION OUTLET, COORDINATE ROUGH-IN WITH TV MOUNT INSTALLER, CEILING MOUNTED X= DENOTES TYPE OF OUTLET. SEE DETAIL FOR MORE INFORMATION U= USER(IF APPLICABLE). THIS ONLY APPLIES TO DATA AND FIBER NOT COAX H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 7'-0" AFF
	TELEVISION OUTLET, COORDINATE ROUGH-IN WITH TV MOUNT INSTALLER, WALL MOUNTED X= DENOTES TYPE OF OUTLET. SEE DETAIL FOR MORE INFORMATION U= USER(IF APPLICABLE). THIS ONLY APPLIES TO DATA AND FIBER NOT COAX H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 7'-0" AFF

AUDIO VISUAL EQUIPMENT	
	CEILING MOUNTED SPEAKER X= SPEAKER TYPE Y= SPEAKER ZONE Z= DENOTES SPEAKER # IN ZONE W= DENOTES SPEAKER WATTAGE TAP NO ZONE INDICATES LOCAL ZONE FOR AV SYSTEM IN ROOM
	WALL MOUNTED SPEAKER X= SPEAKER TYPE Y= SPEAKER ZONE Z= DENOTES SPEAKER # IN ZONE W= DENOTES SPEAKER WATTAGE TAP H= MOUNTING HEIGHT IN INCHES AT CENTER OF DEVICE NO ZONE INDICATES LOCAL ZONE FOR AV SYSTEM IN ROOM
	VOLUME CONTROL, WALL MOUNTED H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 4'-0" AFF
	FLIP TOP DEVICE MOUNTED ON TABLE
	SENS MICROPHONE FOR AMBIENT NOISE, WALL MOUNTED H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 8'-0" AFF
	SENS MICROPHONE FOR AMBIENT NOISE, CEILING MOUNTED
	MICROPHONE, DESK MOUNTED X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT
	MICROPHONE, WALL MOUNTED X= DENOTES TYPE OF OUTLET, IF NOT SHOWN, ONLY ONE TYPE H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET
	MICROPHONE, CEILING MOUNTED X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT
	WIRELESS ANTENNA FOR WIRELESS MICROPHONE, WALL MOUNTED H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 8'-0" AFF
	TOUCH SCREEN FOR AUDIO/VIDEO CONTROL, DESK MOUNTED X= DENOTES TYPE OF OUTLET, SEE RISER FOR MORE INFO, IF NOT SHOWN, ONLY ONE TYPE
	TOUCH SCREEN FOR AUDIO/VIDEO CONTROL, WALL MOUNTED, INCLUDES BACK BOX X= DENOTES TYPE OF OUTLET, SEE RISER FOR MORE INFO, IF NOT SHOWN, ONLY ONE TYPE H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 4'-0" AFF
	CAMERA FOR AV SYSTEM, WALL MOUNTED X= DENOTES TYPE OF OUTLET, SEE RISER FOR MORE INFO, IF NOT SHOWN, ONLY ONE TYPE H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET
	CAMERA FOR AV SYSTEM, CEILING MOUNTED X= DENOTES TYPE OF OUTLET, SEE RISER FOR MORE INFO, IF NOT SHOWN, ONLY ONE TYPE
	ASSISTED LISTENING TRANSMITTER, WALL MOUNTED H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET
	ROOM SCHEDULING PANEL, WALL MOUNTED, INCLUDES BACK BOX X= DENOTES TYPE OF OUTLET, SEE RISER FOR MORE INFO, IF NOT SHOWN, ONLY ONE TYPE H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 4'-0" AFF
	OCCUPANCY SENSOR, CEILING MOUNTED X= TYPE, C= CRESNET, E= ETHERNET
	AUDIO VISUAL DISPLAY TT= DISPLAY TYPE WITH MOUNT XX= SCREEN SIZE YY= HEIGHT TO CENTER OF SCREEN
	INTERACTIVE WHITEBOARD TT= DISPLAY TYPE WITH MOUNT XX= SCREEN SIZE YY= HEIGHT TO CENTER OF SCREEN
	OVERHEAD PROJECTOR WITH MOUNT X= TYPE Y= LENS THROW RATIO
	PULLDOWN PROJECTION SCREEN X= DIAGONAL DIMENSION IN INCHES
	MOTORIZED PROJECTION SCREEN X= DIAGONAL DIMENSION IN INCHES
	WALL SWITCH FOR MOTORIZED SCREEN
	PODIUM FOR AV EQUIPMENT, REFER TO DETAIL SHEETS X= DENOTES TYPE OF OUTLET, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT
	AV PLATE OUTLET, REFER TO DETAIL SHEETS X= DENOTES TYPE OF OUTLET. SEE DETAIL FOR MORE INFO, IF NOT SHOWN, ONLY ONE TYPE H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 1'-6" AFF
	SOUND BAR WITH CAMERA, WALL MOUNTED H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 8'-0" AFF

ELECTRONIC SECURITY SYSTEM	
	CARD READER, WALL MOUNTED
	CARD READER WITH INTEGRATED KEYPAD, WALL MOUNTED
	BIOMETRIC ACCESS CONTROL DEVICE, WALL MOUNTED
	KEYPAD, WALL MOUNTED
	WIRED IP LOCK, DOOR MOUNTED
	WIRELESS MORTISE LOCK, DOOR MOUNTED
	WIRELESS CYLINDRICAL LOCK, DOOR MOUNTED
	INTRUSION ALARM KEYPAD
	ELECTRIC MORTISE LOCK OR ELECTRIC TRIM
	DELAYED EGRESS LATCH LOCK
	DELAYED EGRESS MAG LOCK
	ELECTRIC CYLINDRICAL LOCK
	ELECTRIC LATCH RETRACTION LOCK
	ELECTROMAGNETIC LOCK
	ELECTRONIC DETENTION LOCK
	ELECTRIC DOOR STRIKE
	ELECTRIC DOOR OPERATOR (ACTUATOR ARM)
	DOOR POSITION SWITCH
	BALANCED MAGNETIC SWITCH
	PIM MODULE FOR WIRELESS LOCKS, WALL MOUNTED H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 7'-0" AFF
	ALARM, BLUE LIGHT, WALL MOUNTED H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 7'-0" AFF
	LOCAL ALARM - HORN/STROBE, WALL MOUNTED H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 7'-0" AFF
	SIREN ALARM FOR INTRUSION DETECTION, WALL MOUNTED H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 7'-0" AFF
	ASSISTANCE STATION, WALL MOUNTED X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT. REFER TO SPECIFICATION FOR TYPE H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 4'-0" AFF
	ASSISTANCE STATION (BLUE LIGHT), TOWER STATION X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT. REFER TO SPECIFICATION FOR TYPE
	INTERCOM SUBSTATION (DOOR STATION), WALL MOUNTED X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT. REFER TO RISER FOR TYPE H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 4'-0" AFF
	INTERCOM MASTER STATION, DESK MOUNTED X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT. REFER TO RISER FOR TYPE
	INTERCOM MASTER STATION, WALL MOUNTED X= TYPE, IF NOT SHOWN, ONLY ONE TYPE IN PROJECT. REFER TO RISER FOR TYPE H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 4'-0" AFF
	CALL STATION (THROUGH PHONE LINE) FOR BUILDING ENTRY, WALL MOUNTED H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 4'-0" AFF
	DOOR TYPE IDENTIFIER X= TYPE (A1,C3,B6...) REFER TO SECURITY DOOR DETAILS
	DOOR RELEASE BUTTON, WALL MOUNTED X= A: ADA ACCESSIBLE - (PALM ACTUATOR), W: HAND WAVE, NO TYPE: REGULAR PUSH BUTTON
	DOOR RELEASE BUTTON, DESK MOUNTED
	REQUEST TO EXIT DEVICE (IR SENSOR), MOUNT CENTERED ABOVE DOOR FRAME
	GLASS BREAK SENSOR, WALL MOUNTED H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 7'-0" AFF
	GLASS BREAK SENSOR, CEILING MOUNTED
	GATE PEDESTAL
	ELECTRIC GATE OPERATOR
	DURESS PANIC BUTTON, WALL MOUNTED H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 4'-0" AFF
	DURESS PANIC BUTTON, MOUNTED UNDER DESK
	MOTION DETECTOR, WALL MOUNTED, MOUNT 6" BELOW CEILING OR 8'-0" AFF MAX
	MOTION DETECTOR, 360 DEGREE SENSOR, CEILING MOUNTED
	INFANT ABDUCTION SYSTEM, WALL MOUNTED H= MOUNTING HEIGHT IN INCHES AT CENTER OF OUTLET, IF NOT SHOWN, INSTALL AT 8'-0" AFF
	INFANT ABDUCTION SYSTEM, CEILING MOUNTED ABOVE DOOR
	LINE BETWEEN SECURITY DEVICES, INDICATES ASSOCIATED EQUIPMENT
	CONTROLLED DOOR INTERLOCK GROUP, PROGRAMMED SO ONLY ONE DOOR CAN BE OPEN AT A TIME.
	ACCESS CONTROL DOOR DIRECTION, A1/A2 - REPRESENTS ACCESS CONTROL PATH FREE - NO ACCESS CONTROL
	CR - CARD READER
	BIOMETRIC - BIOMETRIC READER
	CR/P - CARD READER AND KEYPAD
	MONITORED - DOOR MONITORED

VIDEO SURVEILLANCE SYSTEMS	
	PAN/TILT/ZOOM CCTV CAMERA, WALL MOUNTED X,C,X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION. C = CAMERA NUMBER
	PAN/TILT/ZOOM CCTV CAMERA, CEILING MOUNTED X,C,X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION. C = CAMERA NUMBER
	FIXED CCTV CAMERA, WALL MOUNTED X,C,X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION. C = CAMERA NUMBER
	FIXED CCTV CAMERA, CEILING MOUNTED X,C,X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION. C = CAMERA NUMBER
	180° CCTV CAMERA, WALL MOUNTED X,C,X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION. C = CAMERA NUMBER
	180° CCTV CAMERA, CEILING MOUNTED X,C,X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION. C = CAMERA NUMBER
	180° MULTI-IMAGER CCTV CAMERA, WALL MOUNTED X,C,X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION. C = CAMERA NUMBER
	180° MULTI-IMAGER CCTV CAMERA, CEILING MOUNTED X,C,X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION. C = CAMERA NUMBER
	360° CCTV CAMERA, WALL MOUNTED X,C,X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION. C = CAMERA NUMBER
	360° CCTV CAMERA, CEILING MOUNTED X,C,X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION. C = CAMERA NUMBER
	360° MULTI-IMAGER CCTV CAMERA, WALL MOUNTED X,C,X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION. C = CAMERA NUMBER
	360° MULTI-IMAGER CCTV CAMERA, CEILING MOUNTED X,C,X= CAMERA TYPE (1,2,3), SEE DETAIL SHEETS FOR MORE INFORMATION. C = CAMERA NUMBER
	CCTV FLAT PANEL DISPLAY WITH MOUNT XX= SCREEN SIZE YY= HEIGHT TO CENTER OF SCREEN
	SECURITY SYSTEM WORKSTATION, DESK MOUNTED X= TYPE

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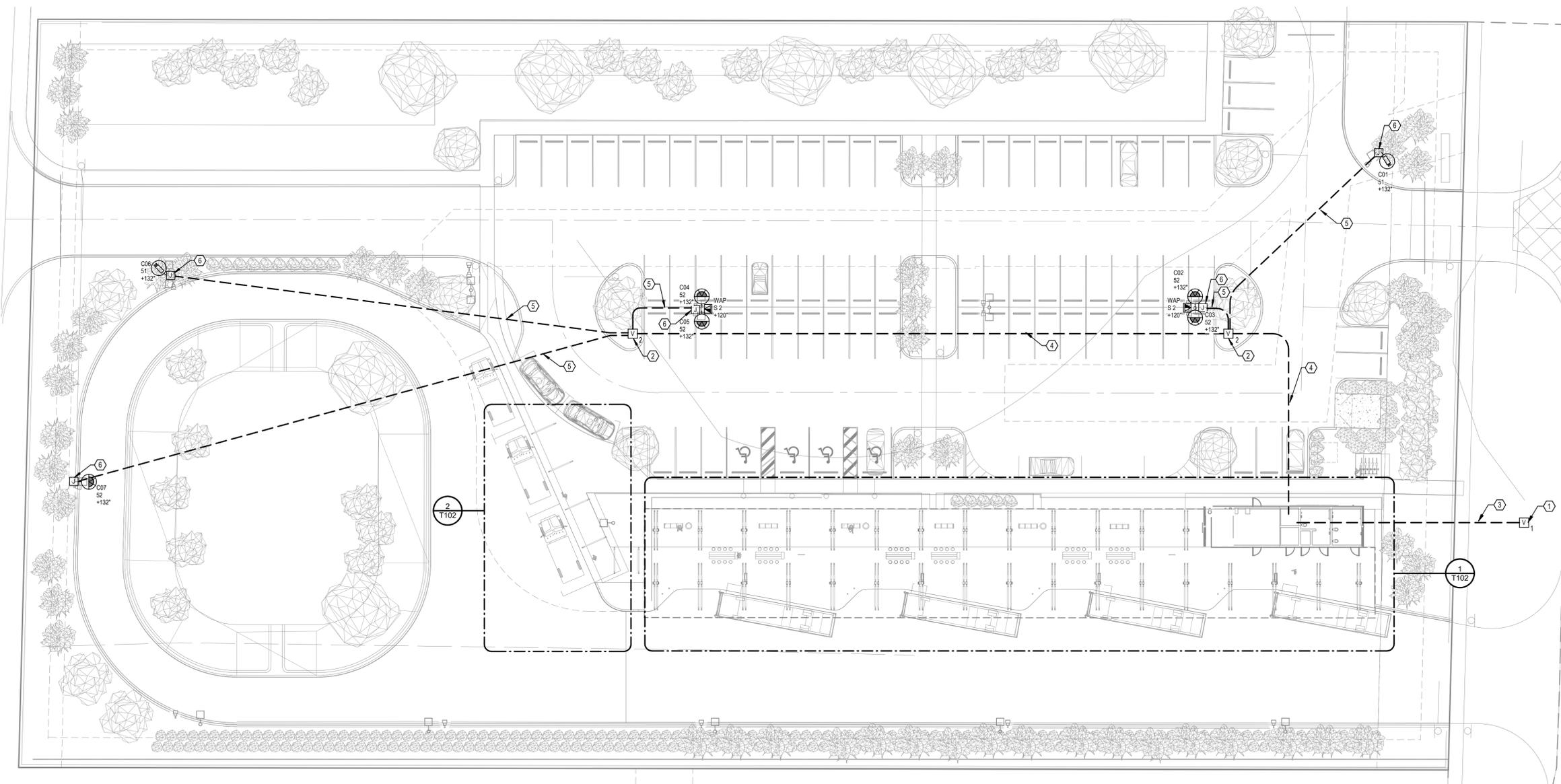
LeeTran Park & Ride Expansion					
DESIGN AND CONSTRUCTION RESPONSIBILITIES					
ITEM	SYSTEM	SCOPE	DESIGN RESPONSIBILITY	PROCUREMENT RESPONSIBILITY	CONSTRUCTION RESPONSIBILITY
1.00	VOICE SYSTEM (TELEPHONE COMMUNICATIONS SYSTEM ALL AREAS)				
1.01	RACEWAYS	Conduit, boxes, cable tray, etc.	A&E	GC	GC
1.02	INSIDE PREMISE WIRING	Structured cabling system, including patch cords	A&E	GC	GC
1.03	OUTSIDE PREMISE WIRING IN PRIVATE CAMPUS	Structured cabling system	A&E	GC	GC
1.04	OUTSIDE PREMISE WIRING FROM SERVICE PROVIDERS	Fiber and copper for services	A&E/OWNER	S.P.	S.P.
1.05	COUNTY FIBER BACKBONE TO DISTRICT FIBER LOOP	Fiber, conduit, pullboxes, etc.	OWNER/VENDOR	VENDOR	VENDOR
1.06	PATCHING OF VOICE LINES	labor only of patching at racks and work areas	A&E	N.A.	OWNER
1.07	PHONE SWITCH - ADMIN PHONES	Equipment selection, sizing, equipment layout, RFP	OWNER	GC	GC
2.00	DATA SYSTEM (COMPUTER NETWORKS ALL AREAS)				
2.01	RACEWAYS	Conduit, boxes, cable tray, etc.	A&E	GC	GC
2.02	INSIDE PREMISE WIRING	Structured cabling system, including patch cords	A&E	GC	GC
2.03	PATCHING OF DATA LINES	labor only of patching at racks and work areas	A&E	N.A.	OWNER
2.04	ACTIVE ELECTRONICS (NETWORKING EQUIPMENT, SWITCHES, ROUTERS, SERVERS AND COMPUTERS)	Equipment selection, sizing, equipment layout, RFP	OWNER	GC	OWNER
2.05	WIRELESS SURVEY	Modeling to predict location of WAPs, including measured survey after building shell is completed	A&E	N.A.	OWNER
2.06	WAPs	Wireless access points, including installation labor, support materials	OWNER	GC	GC
2.07	END POINT MEDIA CONVERTERS	Media converters, power supplies	OWNER	GC	GC
3.00	TELECOM ROOM OUTFIT				
3.01	PLYWOOD AND WALL SLEEVES	Plywood and sleeves for cables	A&E	GC	GC
3.02	GROUNDING SYSTEM	Ground bar and ground bus	A&E	GC	GC
3.02	RACKS, WIRE MANAGERS AND LADDER TRAY	Racks and all passive elements	A&E	GC	GC
4.00	CATV DISTRIBUTION (CABLE TV FOR ALL AREAS)				
4.01	RACEWAYS	Conduit, boxes, cable tray, etc.	A&E	GC	GC
4.02	INSIDE PREMISE WIRING	Coaxial cable	A&E	GC	GC
4.03	DISTRIBUTION DEVICES	Taps, amplifiers, splitters, etc.	S.P.	S.P.	S.P.
4.04	DISPLAYS	Displays/Monitors/TVs	A&E/OWNER	GC	GC
4.05	MOUNTS FOR TVS	Mounts for the TVS	A&E/OWNER	GC	GC
5.00	PAGING SYSTEM & DIGITAL SIGNAGE				
5.01	RACEWAYS	Conduit, boxes, cable tray, etc.	A&E	GC	GC
5.02	INSIDE PREMISE WIRING	Wiring for paging and digital signage systems	A&E	GC	GC
5.03	ACTIVE ELECTRONICS	Paging system	A&E/OWNER	GC	GC
5.04	WAYSIDE SIGNAGE, CLEVER MONITORS	Wayside Signage, Clever monitors	A&E/OWNER	GC	GC
6.00	BUILDING CCTV AND ACCESS CONTROL				
6.01	RACEWAYS	Conduit, boxes, cable tray, etc.	A&E	GC	GC
6.02	INSIDE PREMISE WIRING	Cables for cameras and card access	A&E	GC	GC
6.03	CCTV ACTIVE ELECTRONICS	Cameras and mounts	A&E/OWNER	GC	GC
6.04	CCTV SOFTWARE LICENSES	Software licenses for cameras	A&E/OWNER	GC	OWNER
6.05	CCTV VIDEO MANAGEMENT SYSTEM	DVRs	A&E/OWNER	GC	OWNER
6.06	ACCESS CONTROL ACTIVE ELECTRONICS	Access control panels, readers, etc.	A&E	GC	GC
6.07	LOCKING DEVICES	Magnets, electric mortise locks	A&E	GC	GC
7.00	EMERGENCY POWER BACKUP (UPS) FOR ACTIVE EQUIPMENT				
7.01	POWER WIRING	Conduit, cables and circuits	A&E	GC	GC
7.02	POWER DISTRIBUTION UNITS	ePDUs to be installed in rack	OWNER	GC	GC
7.03	ACTIVE EQUIPMENT - SMALL UNITS < 10KVA	UPS units in rack	OWNER	GC	GC
8.00	FIRE ALARM AND BUILDING MANAGEMENT SYSTEM				
8.01	RACEWAYS	Conduit, boxes, cable tray, etc.	A&E	GC	GC
8.02	INSIDE PREMISE WIRING	Cabling, grounding	A&E	GC	GC
8.03	ACTIVE ELECTRONICS	Data gathering panels, sensors, etc.	A&E	GC	GC
9.00	DISTRIBUTED ANTENNA SYSTEM (PUBLIC SAFETY)				
9.01	RACEWAYS	Conduit, boxes, cable tray, etc.	A&E	GC	GC
9.02	INSIDE PREMISE WIRING	Cabling, grounding	A&E	GC	GC
9.03	ACTIVE ELECTRONICS	Head end system, BDA, TX/RX and antennas	A&E	GC	GC

NOTES: A&E: ARCHITECT AND ALL CONSULTANTS WORKING UNDER ARCHITECT, LIKE TLC ENGINEERING SOLUTIONS
GC: GENERAL CONTRACTOR
S.P.: SERVICE PROVIDER
VENDOR: A SYSTEM INSTALLER HIRED DIRECTLY BY THE OWNER FOR A SPECIFIC SYSTEM

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KEYNOTES

1. PROVIDE POLYMER CONCRETE COMMUNICATIONS VAULT. THE DIMENSIONS SHALL BE A MINIMUM OF 3'-0" L X 2'-0" W X 2'-0" D. ENGRAVE ON TOP LID "COMMUNICATIONS" IN 2" LETTERS. REFER TO DETAIL FOR MORE INFORMATION.
2. PROVIDE 20" L X 12" W X 20" D POLYMER CONCRETE VAULT. ENGRAVE "COMMUNICATIONS" IN 2" LETTERS ON LID. REFER TO SPECIFICATION 270528 FOR MORE INFORMATION ON POLYMER CONCRETE REQUIREMENTS.
3. PROVIDE THREE (2) 2" CONDUITS AND ONE (1) 4" CONDUIT TO I.T. ROOM. REFER TO FLOOR PLAN FOR STUB UP LOCATION.
4. PROVIDE TWO (2) 2" CONDUITS.
5. PROVIDE ONE (1) 2" CONDUIT.
6. A 16" X 16" NEMA 4X ENCLOSURE WITH KEY LOCKABLE DOOR AT 4'-0" AFF. PROVIDE A LAYER OF 1" POLYISO IN ALL INTERIOR SURFACES. PROTECT INSULATION WITH ALUMINUM TAPE.

HORIZONTAL DISTRIBUTION NOTES

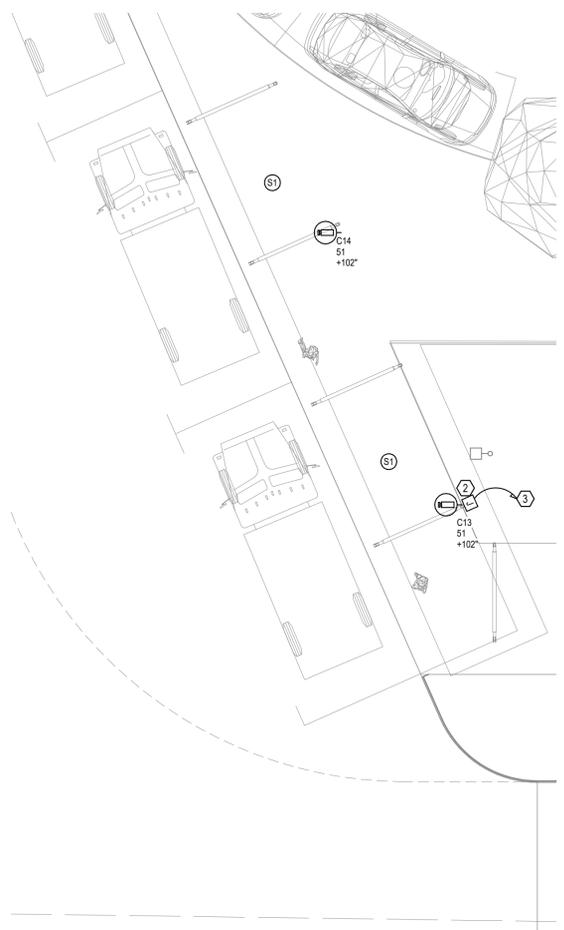
1. TERMINATE STRUCTURED TELECOMMUNICATIONS DATA CABLING IN THIS AREA ON PATCH PANEL INSTALLED IN RACKS IN I.T. ROOM, UNLESS OTHERWISE NOTED.
2. TERMINATE SECURITY SYSTEM CABLING IN THIS AREA AT SECURITY EQUIPMENT INSTALLED IN I.T. ROOM, UNLESS OTHERWISE NOTED.
3. TERMINATE PUBLIC ADDRESS SYSTEM CABLING IN I.T. ROOM, UNLESS OTHERWISE NOTED.

1 SITE PLAN - TECHNOLOGY
1" = 20'-0"

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2 ENLARGED PLAN - SIDE
CANOPY - TECHNOLOGY
1/8" = 1'-0"

GENERAL NOTES:

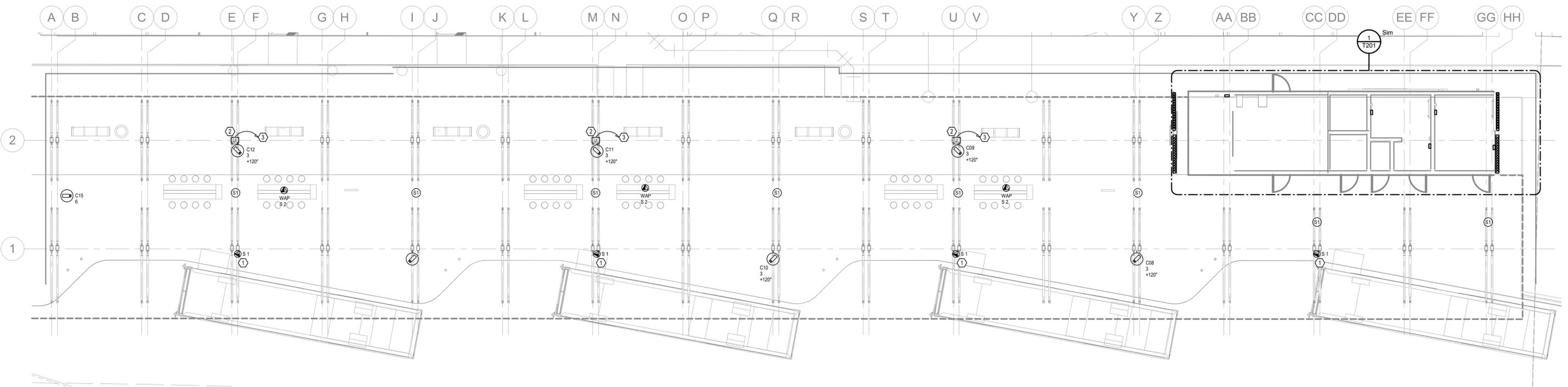
1. PROVIDE SURGE SUPPRESSION DEVICES IN THE IT ROOM FOR ALL HORIZONTAL 4-PAIR UTP CABLES ROUTED OUTSIDE OF BUILDING OR TO DEVICES ON THE EXTERIOR OF THE BUILDING.

KEYNOTES:

1. DATA DEDICATED FOR CLEVER SIGN. PROVIDE 6"X 6" ELECTRICAL BOX WITH SINGLE GANG DEVICE ADAPTER AND A SURFACE MOUNT OUTLET (BISCUIT JACK) WITH SINGLE CATEGORY JACK MOUNTED INSIDE.
2. PROVIDE 6"X6" ELECTRICAL BOX.
3. PROVIDE 1.5" UNDERGROUND CONDUIT TO IT ROOM 7.

HORIZONTAL DISTRIBUTION NOTES:

1. TERMINATE STRUCTURED TELECOMMUNICATIONS DATA CABLING IN THIS AREA ON PATCH PANEL INSTALLED IN RACKS IN I.T. ROOM, UNLESS OTHERWISE NOTED.
2. TERMINATE SECURITY SYSTEM CABLING IN THIS AREA AT SECURITY EQUIPMENT INSTALLED IN I.T. ROOM, UNLESS OTHERWISE NOTED.
3. TERMINATE PUBLIC ADDRESS SYSTEM CABLING IN I.T. ROOM, UNLESS OTHERWISE NOTED.

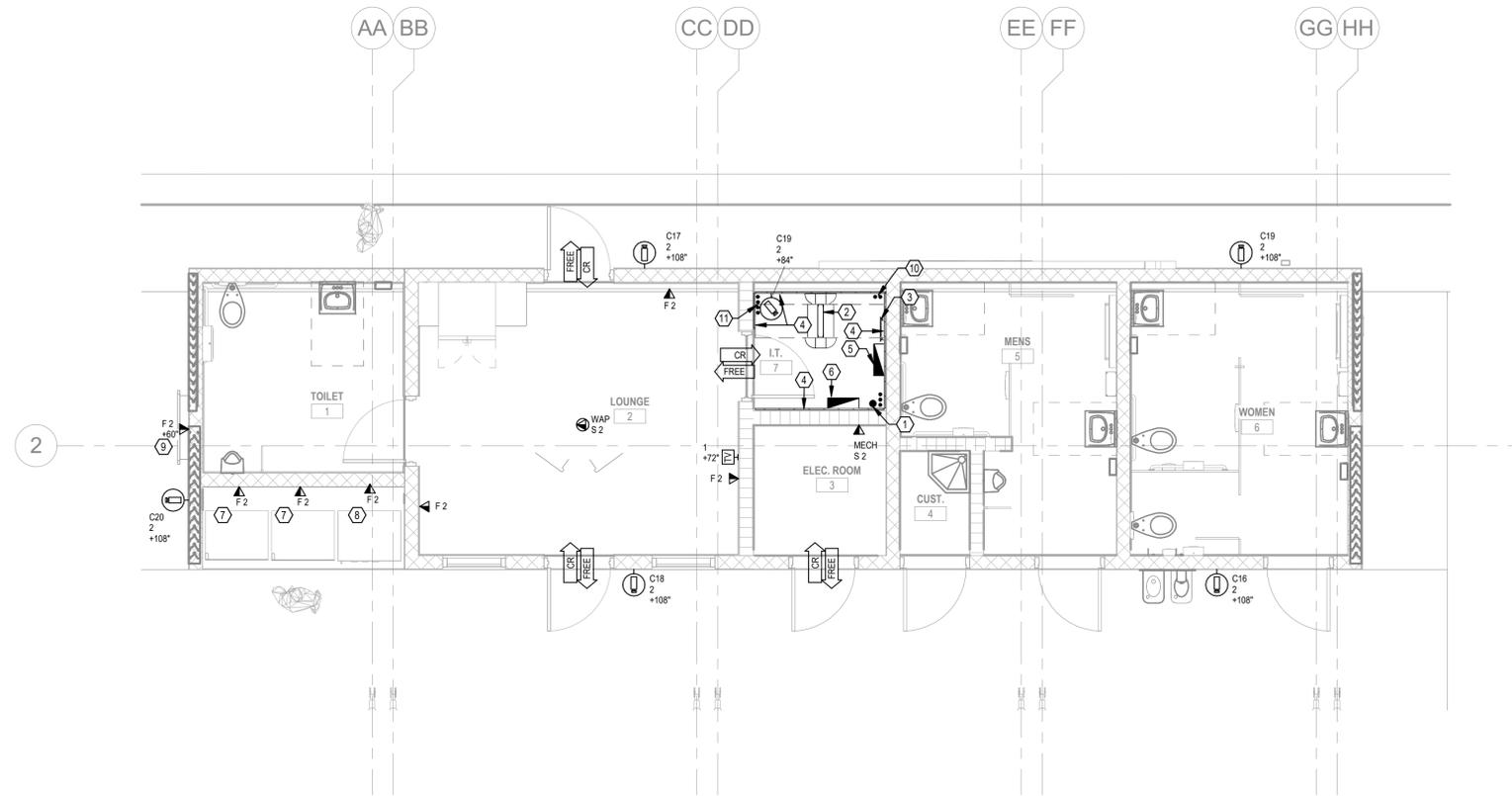


1 ENLARGED PLAN - MAIN
CANOPY - TECHNOLOGY
1/8" = 1'-0"

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1 FLOOR PLAN - TECHNOLOGY
1/4" = 1'-0"

GENERAL NOTES:

1. PROVIDE SURGE SUPPRESSION DEVICES IN THE IT ROOM FOR ALL HORIZONTAL 4-PAIR UTP CABLES ROUTED OUTSIDE OF BUILDING OR TO DEVICES ON THE EXTERIOR OF THE BUILDING.

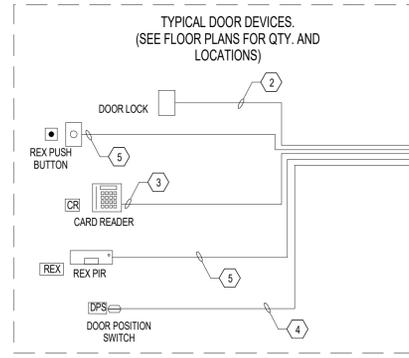
- KEYNOTES:**
1. LOCATE CONDUIT STUBS FROM COMMUNICATION VAULT TYPE 1 HERE AND AS CLOSE TO WALL AS POSSIBLE TO ELIMINATE INTERFERING WITH EQUIPMENT CLEARANCES.
 2. PROVIDE 2 POST RACK WITH 6" VERTICAL WIRE MANAGERS ON EACH SIDE.
 3. PROVIDE GROUND BUSBAR.
 4. PROVIDE 8" H X 4" W X 3/4" D PLYWOOD. INSTALL AT 4" AFF TO 8-4" AFF.
 5. SPACE DEDICATED FOR WALL MOUNTED ACCESS CONTROL EQUIPMENT.
 6. SPACE DEDICATED FOR DEMARC / SERVICE PROVIDER EQUIPMENT.
 7. DATA DEDICATED FOR VENDING MACHINE.
 8. DATA DEDICATED FOR TICKET VENDING MACHINE.
 9. DATA DEDICATED FOR CLEVER MONITOR.
 10. LOCATE CONDUIT STUBS FROM COMMUNICATION VAULT TYPE 2 HERE AND AS CLOSE TO WALL AS POSSIBLE TO ELIMINATE INTERFERING WITH EQUIPMENT CLEARANCES.
 11. LOCATE 1-1/2" CONDUIT STUBS FROM CANOPY DEVICES HERE AND AS CLOSE TO WALL AS POSSIBLE TO ELIMINATE INTERFERING WITH EQUIPMENT CLEARANCES.

- HORIZONTAL DISTRIBUTION NOTES:**
1. TERMINATE STRUCTURED TELECOMMUNICATIONS DATA CABLEING IN THIS AREA ON PATCH PANEL INSTALLED IN RACKS IN I.T. ROOM, UNLESS OTHERWISE NOTED.
 2. TERMINATE SECURITY SYSTEM CABLEING IN THIS AREA AT SECURITY EQUIPMENT INSTALLED IN I.T. ROOM, UNLESS OTHERWISE NOTED.
 3. TERMINATE PUBLIC ADDRESS SYSTEM CABLEING IN I.T. ROOM, UNLESS OTHERWISE NOTED.

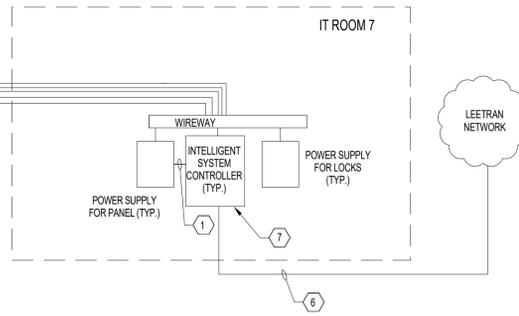
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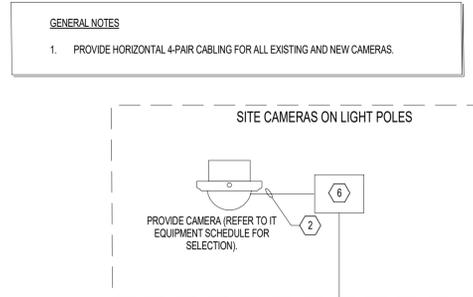


- KEYED NOTES**
1. PROVIDE POWER SUPPLY CABLE. REFER TO SPECIFICATION 281000 FOR MORE INFORMATION.
 2. PROVIDE CABLE FOR DOOR LOCK. REFER TO SPECIFICATION 281000 FOR MORE INFORMATION.
 3. PROVIDE CARD READER CABLE. REFER TO SPECIFICATION 281000 FOR MORE INFORMATION.
 4. PROVIDE UN-POWERED SENSOR CABLE. REFER TO SPECIFICATION 281000 FOR MORE INFORMATION.
 5. PROVIDE POWERED SENSOR CABLE. REFER TO SPECIFICATION 281000 FOR MORE INFORMATION.
 6. 4-PAIR UTP PATCH CORD CABLE.
 7. EXISTING KANTECH KT300 PANELS AND NEW KANTECH K400 PANELS. REFER TO SPECIFICATION 281000 FOR MORE INFORMATION ON NEW ACCESS CONTROL PANELS.

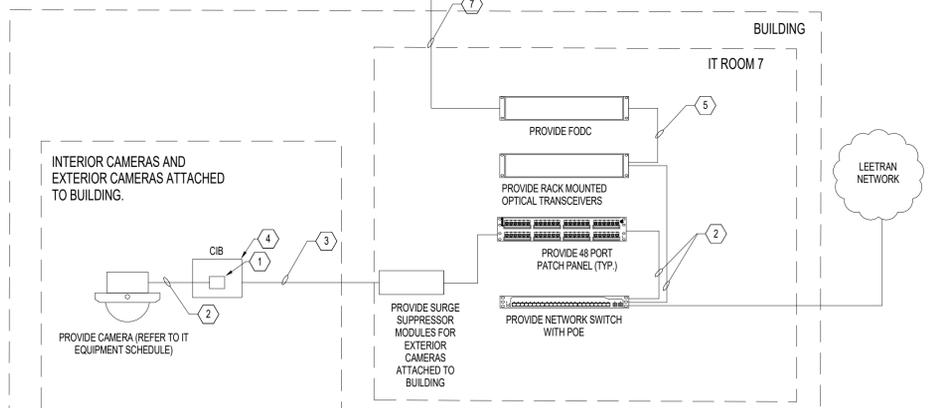


ACCESS CONTROL RISER
No Scale

3



- KEYED NOTES**
1. PROVIDE SURFACE MOUNTED DATA OUTLET
 2. PROVIDE 4-PAIR UTP PATCH CORD CABLE
 3. PROVIDE 4-PAIR UTP HORIZONTAL CABLE RUN TO CLOSEST TELECOM ROOM.
 4. PROVIDE CAMERA INTERFACE BOX. 6"x6"x8" NEMA 1 ENCLOSURE WITH HINGED DOOR MOUNTED IN ACCESSIBLE SPACE AS CLOSE AS POSSIBLE TO THE CAMERA.
 5. PROVIDE FIBER PATCH CABLE.
 6. PROVIDE HARDENED POE NETWORK SWITCH (REFER TO IT EQUIPMENT SCHEDULE FOR MORE INFORMATION).
 7. PROVIDE ONE (1) OPTICAL FIBER CABLE WITH 6 STRANDS MULTI-MODE OM4, OUTDOOR, OFNR. ALL TERMINATIONS SHALL BE WITH LC CONNECTORS.

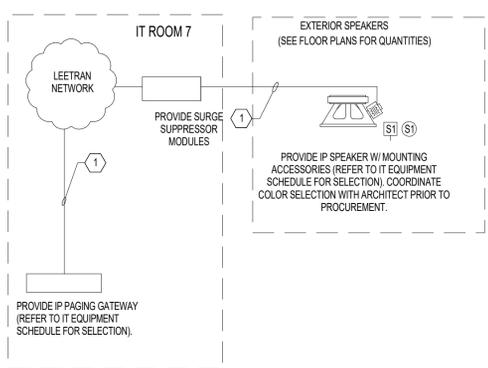


CCTV RISER
No Scale

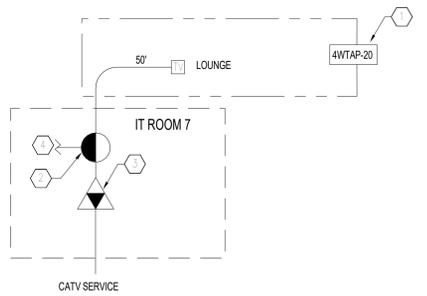
1

- KEYED NOTES**
1. PROVIDE 4-PAIR UTP CATEGORY CABLE. MATCH DESIGN CRITERIA FOR VOICE/DATA SPECIFICATIONS.

- GENERAL NOTES**
1. ALL CABLES FROM MULTI-TAPS TO TV RECEPTACLES SHOULD BE RG-6 UNLESS OTHERWISE NOTED.
 2. SYSTEM DESIGN FOR A BANDWIDTH OF 5-600MHZ. WITH RETURN PATH.
 3. ALL DISTANCES ARE ESTIMATED. CONTRACTOR TO FIELD VERIFY DISTANCES AND ADJUST TAP VALUES IF REQUIRED.
 4. CABLE SHALL BE CONTINUOUS BETWEEN DEVICES. INTERMEDIATE SPLICES OR COUPLINGS ARE NOT ALLOWABLE.
 5. ALL COAXIAL CONNECTORS SHALL BE "T" CRIMP TYPE FOR RG-6 AND RG-11.
 6. CATV TAPS SYMBOL LEGEND.
XW-YY
X: DENOTES 4 WAY OR 8 WAY TAP
YY: DENOTES TAP VALUES IN dB
WHEN "T" IS USED IT MEANS TERMINATION TAP.



- KEYED NOTES**
1. PROVIDE TAP WITH VALUES AS INDICATED IN DRAWING. PROVIDE BLANK PLATES AND TERMINATOR IN ALL UNUSED CAVITIES OF THE TAPS.
 2. PROVIDE DIRECTIONAL COUPLER - 12 dB
 3. PROVIDE CATV AMPLIFIER
 4. PROVIDE TERMINATION



IP TALKBACK PAGING RISER
No Scale

5

CATV RISER
No Scale

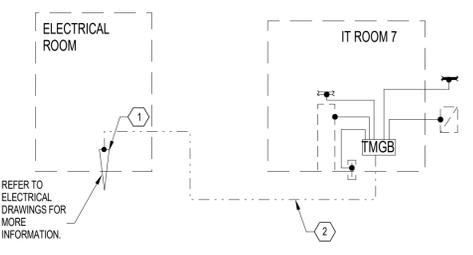
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ABBREVIATION/SYMBOL SCHEDULE

- TELECOMMUNICATION BONDING BACKBONE (TBB). SEE TABLE BELOW FOR CONDUCTOR SIZE
- BONDING CONDUCTOR. SHALL BE #6 AWG UNLESS OTHERWISE NOTED. USE AWG #2 FOR RACKS AND R56 GROUNDING.
- TMGB** MAIN TELECOMMUNICATION GROUNDING BUSBAR.
- TGB** TELECOMMUNICATIONS GROUNDING BUSBAR.
- ETGB** TELECOMMUNICATIONS GROUNDING BUSBAR FOR OUTDOOR USE.
- EQUIPMENT CABINET. TYPICAL FOR EACH.
- ⊞ ELECTRICAL PANELBOARD FEEDING CIRCUITS IN THIS ROOM
- CABLE BOND CONNECTION MADE WITH U.L. LISTED BONDING CONNECTION. SEE SPECIFICATIONS.
- ≡ CABLE TRAY IN COMM ROOM. PROVIDE AT LEAST (2) BONDING POINTS FOR EVERY LAYER OF TRAY.
- CABLE TRAY IN HALLWAY.
- ⊞ CONDUIT SLEEVE THROUGH SLAB.
- ⊞ PROTECTION OR SURGE SUPPRESSION DEVICE.
- ⊞ GROUNDING ELECTRODE 3FT LONG

TBB LENGTH LINEAR M (FT)	TBB SIZE AWG
LESS THAN 4 (13)	6
4-6 (14-20)	4
6-8 (21-26)	3
8-10 (27-33)	2
10-13 (34-41)	1
13-16 (42-52)	10
16-20 (53-66)	20
GREATER THAN 20 (66)	30

- KEYED NOTES**
1. PROVIDE BONDING CONNECTION TO EXISTING MAIN GROUNDING ELECTRODE.
 2. TBB CABLE SHALL BE RUN IN CONDUIT AT ALL TIMES IN AREAS OUTSIDE OF TELECOM ROOMS. THESE CONDUITS ARE NOT INDICATED IN THE FLOOR PLANS. BUT ARE REFERENCED IN THIS NOTE. INSTALLER TO SIZE THE CONDUITS ACCORDING TO THE N.E.C. GIVEN THE CONDUCTOR SIZES ESTIMATED BY THE INSTALLER BASED ON THE TABLE ON THIS SHEET.
 3. PROVIDE BONDING CONNECTION TO METAL CANOPY STRUCTURE.

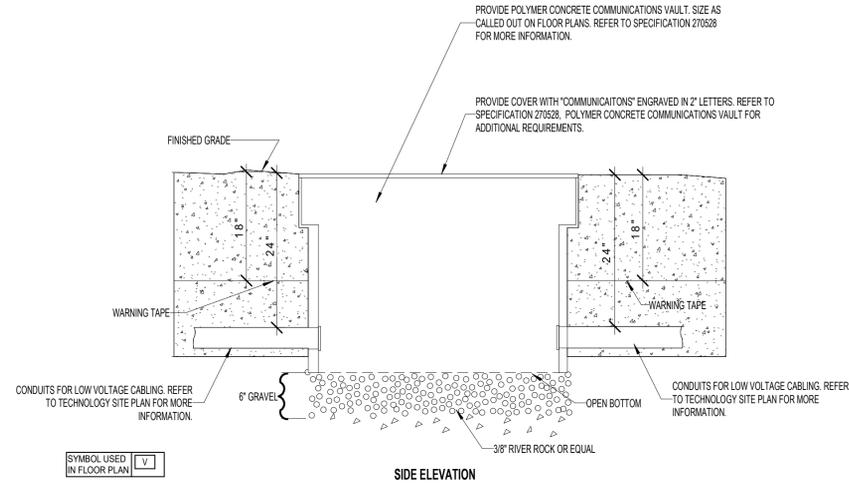


TELECOMMUNICATIONS GROUNDING AND BONDING RISER
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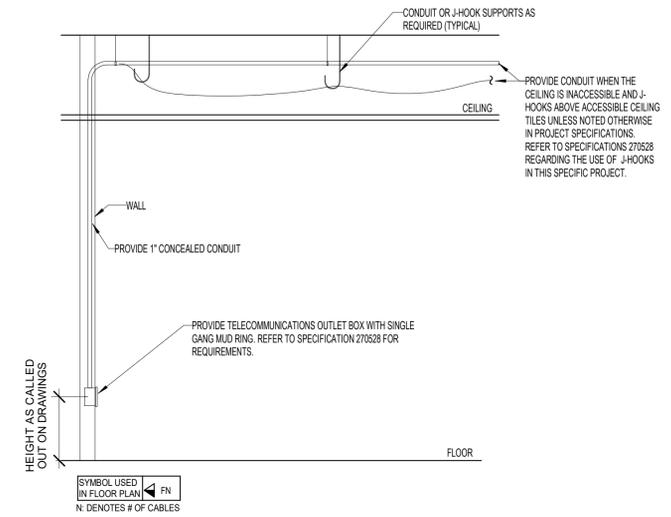
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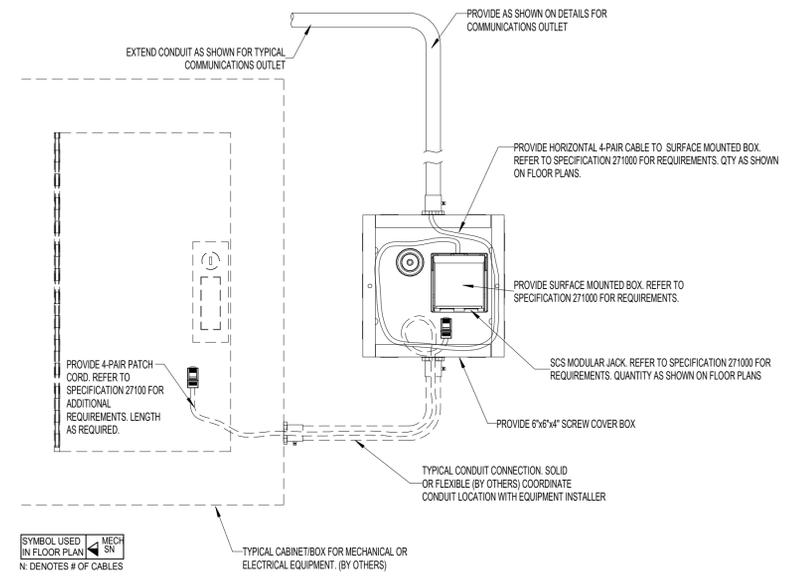
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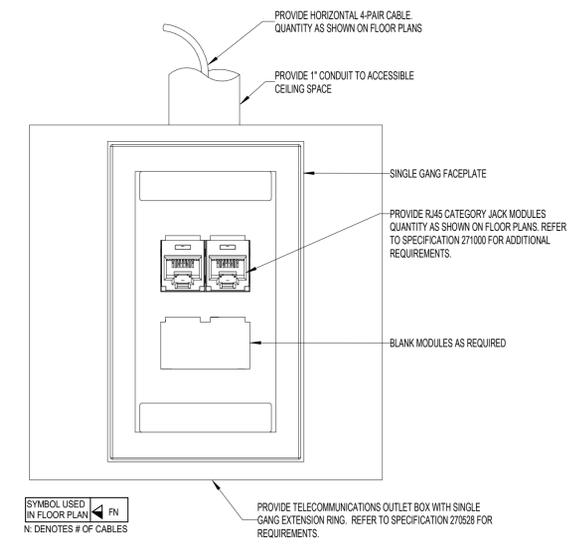
4 TELECOMMUNICATIONS VAULT
- POLYMER CONCRETE WITH
OPEN BOTTOM
1" = 1'-0"



1 COMMUNICATIONS BACKBOX
OUTLET AND CONDUIT
1/2" = 1'-0"



2 OUTLET FOR MECH/ELEC/ELEV
CONNECTION - TYPE 1
1" = 1'-0"



3 FLUSH MOUNTED OUTLET
1" = 1'-0"

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