ABOVE FINISHED COUNTER TOP

ABOVE FINISHED FLOOR

AMERICAN WIRE GAUGE

ABOVE FINISH GRADE

ACCESS POINT

AUDIO VISUAL

BACK BONE

CONDUIT

CATEGORY

CIRCUIT

CEILING

COPPER

DATA

CENTERLINE

CABLE TRAY

EXISTING TO REMAIN

ENTRANCE FACILITY EQUIPMENT GROUND

ELECTRO METALLIC TUBING

FIRE ALARM ANNUNCIATOR PANEL

FIRE ALARM TERMINAL CABINET FIRE ALARM REMOTE ANNUNCIATOR

FIRE ALARM CONTROL AND INDICATING PANEL

GROUND FAULT CIRCUIT INTERRUPTING

INTERMEDIATE DISTRIBUTION FACILITY

INFORMATION TECHNOLOGY

MAIN DISTRIBUTION FACILITY

NATIONAL ELECTRIC CODE

POLYVINYL CHLORIDE CONDUIT

SPECIAL MOUNTING HEIGHT

TELECOMMUNICATIONS

TELECOMMUNICATIONS ROOM

UNLESS OTHERWISE NOTED

WIRELESS ACCESS POINT

TELECOMMUNICATIONS GROUNDING BUS BAR TELECOMMUNICATIONS MAIN GROUNDING BUS BAR

FURNISHED BY OWNER INSTALLED BY CONTRACTOR

NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION

OWNER FURNISHED CONTRACTOR INSTALLED

FIRE ALARM CONTROL PANEL

EMPTY CONDUIT

ELECTRICAL

FIRE ALARM

FLOOR BOX

FIBER OPTIC FACE OF COLUMN

GROUND

MECHANICAL MULTI-MODE

NOT TO SCALE

OUTSIDE PLANT PULL BOX PHASE PANEL PATCH PANEL

ROUGH IN ONLY RIGID STEEL CONDUIT

PAIR

SLEEVE SINGLE MODE

SYSTEM

TELEPHONE

TAMPER PROOF

VOLUME CONTROL

WEATHERPROOF

TELEVISION

J, J-BOX JUNCTION BOX

EV,ELEV ELEVATOR

CAT

CFOI

CKT

CLG

ELEC

EMT

FATC

FARA

FCIP

FOIC

G, GND

MDF

NTS

OSP

SYS

TELE

MECH

WALL

CEILING

BY VENDOR DETAIL

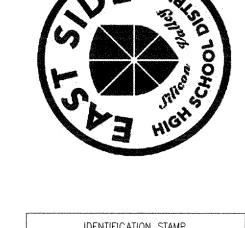
PROVIDED

BY VENDOR

N/A

N/A





IDENTIFICATION STAMP DIVISION OF THE STATE ARCHITECT FILE NUMBER: 43-H10

1	
	Revision

Submittal	Date
100% SCHEMATIC DESIGN	3/14/2016
100% DESIGN DEVELOPMENT	5/10/2016
50% CD ESTIMATE	6/9/2016
35% CD ESTIMATE	7/22/2016
DSA SUBMITTAL	8/26/2016
3ID SET	01/25/2017
JSA APPROVAL	02/02/2017

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LOW VOLTAGE SYMBOL

T0.10

INTERCOM, PAGING & SOUND SYMBOLS BACK BOX MTG. HT. POWER WALL MOUNT TELECOR PAGING SPEAKER - (1) WHITE CAT6 CABLE. PROVIDE 3/4"C IN WALL AND EXTEND 6" ABOVE CEILING NEAR J-HOOKS. INTERIOR SPEAKERS CONSIST OF TELECOR STB-11, TELECOR CC1, AND ATLAS SPEC. PER MFG. TWP | SOUND VP-161A-APF. EXTERIOR SPEAKERS CONSIST OFATLAS APF-15TVC, ATLAS SE161-R6, AND ATLAS VP161-CEILING MOUNTED TELECOR PAGING SPEAKER - (1) WHITE CAT6 CABLE. INTERIOR SPEAKERS CONSIST OF PER MFG. CEILING SPEC. TELECOR STB-11, TELECOR CC1, AND ATLAS SOUND VP-161A-APF. EXTERIOR SPEAKERS CONSIST OFATLAS APF-CONTRACTOR FURNISHED OWNER INSTALLED 15TVC, ATLAS SE161-R6, AND ATLAS VP161-APF.

CEILING MOUNTED AV SPEAKER

EXTEND 6" ABOVE CEILING NEAR J-HOOKS.

*PROVIDE 3/4" C.O. STUB-UP 6" ABOVE ACCESSIBLE CEILING AND PROVIDE A BUSHING U.O.N.

WALL MOUNTED AV SPEAKER. PROVIDE 3/4"C IN WALL AND PROVIDED PER VENDOR

SYMBOLS	SECURITY SYMBOLS	BACK BOX	MTG. HT.	POWER
KP	INTRUSION ALARM KEYPAD - (1) 22AWG, 4 CONDUCTOR CABLE. PROVIDE 3/4"C IN WALL AND EXTEND 6" ABOVE CEILING NEAR J-HOOKS.	PER MFG. SPEC.	45" AFF	N/A
HMS	WALL MOUNTED INTRUSION ALARM MOTION SENSOR - (1) 22AWG, 4 CONDUCTOR CABLE. PROVIDE 3/4"C IN WALL AND EXTEND 6" ABOVE CEILING NEAR J-HOOKS.	PER MFG. SPEC.	PER VENDOR DETAIL	N/A
мѕс	CEILING MOUNTED INTRUSION ALARM MOTION SENSOR - (1) 22AWG, 4 CONDUCTOR CABLE	PER MFG. SPEC.	PER VENDOR DETAIL	N/A
Н <mark>СВ</mark>	WALL MOUNTED GLASS BREAK SENSOR - (1) 22AWG, 4 CONDUCTOR CABLE. PROVIDE 3/4"C IN WALL AND EXTEND 6" ABOVE CEILING NEAR J-HOOKS.	PER MFG. SPEC.	PER VENDOR DETAIL	N/A
⊕	CEILING MOUNTED GLASS BREAK SENSOR - (1) 22AWG, 4 CONDUCTOR CABLE. PROVIDE 3/4"C BACK TO IDF.			
個	INTRUSION ALARM BELL, (1) 22AWG, 4 CONDUCTOR CABLE	PER MFG. SPEC.	PER VENDOR DETAIL	N/A
∤ SC 4	STATIONARY SECURITY CAMERA - (1) YELLOW CATEGORY 6 CABLE & (1) 18AWG 2 CONDUCTOR CABLE	PER MFG. SPEC.	PER VENDOR DETAIL	PER MFG SPEC.
HEE N	PAN, TILT & ZOOM SECURITY CAMERA - (1) YELLOW CATEGORY 6 CABLE & (1) 18AWG 2 CONDUCTOR CABLE	PER MFG. SPEC.	PER VENDOR DETAIL	PER MFG SPEC.

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*PROVIDE 3/4" C	.O. STUB-UP 6" ABOV	E ACCESSIBLE CEI	LING AND PROVIDE A	A BUSHING U.O.N.

SYMBOLS	PATHWAY SYMBOLS	NOTE
	LOW-VOLTAGE SYSTEMS CABLE TRAY ROUTE	
шшш	LADDER STYLE RACK TRAY IN TELECOM ROOMS	
	EZ-PATH SLEEVE	

			***************************************		
-	SYMBOLS	CLOCK SYMBOLS	BACK BOX	MTG. HT.	POWER
	©	WALL MOUNTED PRIMEX WIRELESS CLOCK	PER MFG. SPEC.	TBD	N/A
-					

SYMBOLS	VOICE AND DATA SYMBOLS	BACK BOX	MTG. HT.	POWER
4	TYPE "A" FLUSH MOUNTED STANDARD HEIGHT - (4) BLUE CAT6 CABLES. PROVIDE 3/4"C IN WALL AND EXTEND 6" ABOVE CEILING NEAR J-HOOKS.	G	18" AFF	N/A
<b>H</b>	TYPE "A" FLUSH MOUNTED 6" ABOVE FINISHED COUNTER TOP - (4) BLUE CAT6 CABLES. PROVIDE 3/4"C IN WALL AND EXTEND 6" ABOVE CEILING NEAR J-HOOKS.	G	6" AFF	N/A
K	TYPE "B" FLUSH MOUNTED STANDARD HEIGHT - (2) BLUE CAT6 CABLES. PROVIDE 3/4"C IN WALL AND EXTEND 6" ABOVE CEILING NEAR J-HOOKS.	G	18" AFF	N/A
H	TYPE "B" FLUSH MOUNTED 6" ABOVE FINISHED COUNTER TOP - (2) BLUE CAT6 CABLES. PROVIDE 3/4"C IN WALL AND EXTEND 6" ABOVE CEILING NEAR J-HOOKS.	G	6" AFF	N/A
И	TYPE "C" FLUSH MOUNTED WALL PHONE PLATE ADA HEIGHT NOT 18" AFF - (1) BLUE CAT6. PROVIDE 3/4"C IN WALL AND EXTEND 6" ABOVE CEILING NEAR J-HOOKS.	G	48" AFF	N/A
	TYPE "D" WIRELES ACESS POINT - (2) GREEN CAT6 CABLES	N/A	ABOVE CEILING	N/A
•	TYPE "A" IN FLOOR MONUMENT - (4) BLUE CAT6 CABLES. PROVIDE 3/4"C IN WALL AND EXTEND 6" ABOVE CEILING NEAR J-HOOKS.	PER ELEC. SPEC.	FLOOR	N/A
<b>7</b>	TYPE "B" IN FLOOR MONUMENT - (2) BLUE CAT6 CABLES. PROVIDE 3/4"C IN WALL AND EXTEND 6" ABOVE CEILING NEAR J-HOOKS.	PER ELEC. SPEC.	FLOOR	N/A
	DATA CEILING OUTLET OUTLET CONFIGURATION IS (4) BLUE CATEGORY 6 CABLES NO DISTINCTION BETWEEN VOICE AND DATA	PER MFG. SPEC.	CEILING	N/A
V	DATA CEILING OUTLET OUTLET CONFIGURATION IS (2) BLUE CATEGORY 6 CABLES NO DISTINCTION BETWEEN VOICE AND DATA	PER MFG. SPEC.	CEILING	N/A
тмдв	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR LOCATED IN IDF	N/A	PER MFG. SPEC.	N/A

*ALL DATA AND VOICE BOXES SHALL HAVE 1" C.O. STUB-UP 6" ABOVE ACCESSIBLE CEILING AND PROVIDE A BUSHING U.O.N.

SYMBOLS	AUDIO VISUAL SYMBOLS	BACK BOX	MTG. HT.	POWER
SBE	TYPE "SBE" MOUNTED IN ENTERTAINMENT BOX. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT. (2) RAPIDRUN SINGLE GANG INTEGRATED WALL PLATES WITH VGA, HDMI, DVI, 3.5mm MINI STEREO, AND USB EXTENDER	, -	COORD. WITH ARCH DRAWINGS	N/A
<b>™</b> SBU	TYPE "SBU" FLUSH MOUNTED STANDARD HEIGHT. (1) RAPIDRUN SINGLE GANG INTEGRATED WALL PLATE WITH VGA, HDMI, DVI, 3.5mm MINI STEREO, AND USB EXTENDER. PROVIDE 3/4"C IN WALL AND EXTEND 6" ABOVE CEILING NEAR J-HOOKS.	G	18" AFF	N/A
,	`			

*PROVIDE 1 1/4" C.O. STUB-UP 6" ABOVE ACCESSIBLE CEILING AND PROVIDE A BUSHING U.O.N.

ENCE	COMMUNICATION SYSTEMS BACKBOX LEGEND
	RACO #695 OR EQUAL - SINGLE-GANG BACKBOX,3-3/4" HIGH, 1-31/32" WIDE AND 3-1/2" DEEP.
	RACO #696 OR EQUAL - TWO-GANG BACKBOX, 3-3/4" HIGH, 3-3/8" WIDE AND 3-1/2" DEEP.
	RACO #697 OR EQUAL - THREE-GANG BACKBOX, 3-3/4" HIGH, 5-19/32" WIDE AND 3-1/2" DEEP.
ı	RACO #698 OR EQUAL - FOUR-GANG BACKBOX, 3-3/4" HIGH, 7-13/32" WIDE AND 3-1/2" DEEP.
	STEEL CITY #72171 OR EQUAL - 4-11/16" HIGH, 4-11/16" WIDE, AND 2-1/8" DEEP BACKBOX WITH STEEL CITY #72-C-14 SINGLE DEVICE COVER.
,	RACO #699 OR EQUAL-FIVE-GANG BACKBOX, 3-3/4" HIGH, 9-7/32" WIDE AND 3-1/2" DEEP.
	RACO #250 OR EQUAL-4-11/16" SQUARE BOX, 2-1/8" DEEP WITH RACO #838 OR EQUAL 3/4" DEEP ONE DEVICE COVER.
	RACO #952 OR EQUAL-THREE-GANG BOX, 1-5/8" DEEP WITH RACO #822 OR EQUAL 3/4" DEEP THREE GANG DEVICE COVER.
	RACO #265 OR EQUAL-4-11/16" SQUARE BOX, 1-1/2" DEEP WITH RACO #840 OR EQUAL 3/4" DEEP TWO DEVICE COVER.
	SPIDER BOX AFB-501-8 GANG FLOOR BOX. PROVIDE (2) 1-1/2" CONDUITS FOR LOW VOLTAGE SYSTEMS AND CONDUITS TO SUPPORT (4) DUPLEX RECEPTACLES IN FLOOR BOX.

THE COMMUNICATION VENDORS AND ELECTRICAL CONTRACTOR SHALL CONFORM TO STATE AND LOCAL CODES FOR THE ROUGH-IN AND INSTALLATION OF THE COMMUNICATION SYSTEMS. THIS INCLUDES, BUT IS NOT LIMITED TO, MEETING CODES CONCERNING CONDUIT, CABLE (PLENUM OR NON-PLENUM), CABLE INSTALLATION, DEVICE LOCATIONS, WALL PENETRATIONS, AND FIREPROOFING SLEEVES AND CONDUITS.

THE ELECTRICAL CONTRACTOR SHALL CONFIRM ALL ROUGH-IN, ELECTRICAL, AND EQUIPMENT LOCATION REQUIREMENTS WITH THE COMMUNICATION VENDORS.

THE GENERAL CONTRACTOR SHALL COORDINATE ALL STRUCTURAL MOUNTING REQUIREMENTS WITH THE COMMUNICATION VENDORS. THIS INCLUDES, BUT IS NOT LIMITED TO, CEILING, WALL, AND FLOOR MOUNTED EQUIPMENT.

THE GENERAL CONTRACTOR SHALL COORDINATE THE INSTALLATION SCHEDULE WITH ALL COMMUNICATION VENDORS. ALL VOICE AND DATA WALL OUTLET BACKBOXES INSTALLED AT 45"

BACKBOX THAT IS CLEAR FROM ANY OTHER DEVICES OR

AFF MUST HAVE A MINIMUM 8" RADIUS FROM THE CENTER OR THE

OBSTRUCTIONS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A GROUNDING AND BONDING SYSTEM IN ALL COMMUNICATION EQUIPMENT ROOMS AND IT EQUIPMENT SERVER ROOMS. THE ELECTRICAL CONTRACTOR SHALL USE A MINIMUM #6 AWG STRANDED COPPER BONDING CONDUCTOR TO BE INSTALLED

BACKBOX REQUIREMENTS ARE FOR PLANNING PURPOSES ONLY. THE GENERAL CONTRACTOR SHALL COORDINATE ACTUAL BACKBOX REQUIREMENTS WITH VENDOR SHOP DRAWINGS.

COORDINATE WITH ARCHITECTURAL ELEVATIONS.

AROUND THE PERIMETER OF THESE ROOMS.

TECHNOLOGY SECOND LEVEL

### **KEYNOTES**

- E-1407 PROVIDE DATA CONNECTION FOR CEILING MOUNTED PROJECTOR. E-1409 EXTERIOR WALL MOUNTED PA SPEAKER. MOUNT 9' ABOVE SECOND FLOOR SLAB.
- E-1410 PROVIDE (3) 2" CONDUITS FROM IDF TO AV CABINET. INSTALL BUSHINGS AND PULL
- E-1414 PROVIDE 2-GANG J-BOX W/ MUD RING MOUNTED ABOVE SHORT THROW PROJECTOR. COORDINATE ELEVATION WITH ARCHITECTURAL DRAWINGS.
- E-1415 PROVIDE DATA CONNECTION ABOVE SHORT THROW PROJECTOR: COORDINATE ELEVATION WITH ARCHITECTURAL DRAWINGS.
- E-1416 PROVIDE BOX AND CONDUIT PATHWAY ONLY. EXTEND CONDUIT TO IDF. INSTALL
- OUTLET BOX 6" FROM CANOPY PERIMETER E-1417 PROVIDE DATA CONNECTION FOR LCD TV. MOUNT +54" A.F.F.
- E-1418 EXISTING 4" PENETRATIONS TO FIRST FLOOR MDF/IDF.
- E-1419 TELECOMMUNICATIONS MAIN GROUNDING BUSBAR. TIE TO BUILDING GROUND WITH CONNECTOR SIZED PER TIA STANDARDS BUT NOT LESS THAN #3/0. CERTIFY GROUND
  - CONNECTION PER TIA STANDARDS.
- E-1423 PA SPEAKER TO TIE INTO EXISTING TELECOR SYSTEM.

OR EQUIVALENT.

E-1424 (1) 1" CONDUIT BETWEEN DATA PORTS IN CASEWORK

TECHNOLOGY GENERAL NOTES

ARE UNACCEPTABLE.

IN WRITING BY THE ENGINEER.

ACCORDING TO THE FOLLOWING:

12"

- LATEST PUBLISHED EDITION.

ENTERED.

SPECIFICATIONS.

STRUCTURAL DRAWINGS.

1. CONDUITS SHALL, (a) CONTAIN NO CONTINUOUS SECTIONS LONGER THAN 30M (98 FT.), AND, (b) CONTAIN NO MORE THAN (2) 90° BENDS OR (1) REVERSE BEND WITHOUT INSTALLING A PULLBOX. CONDUITS IN PLACE OF PULLBOXES

2. CONDUITS SHALL CONTAIN PLASTIC OR NYLON PULL TAPE RATED AT 200 LBS.

WITH A MINIMUM OF 5 FEET OF EXTRA PULL TAPE COILED AT EACH END.

3. CONDUIT BEND RADIUS SHALL BE (a) A MINIMUM OF 6 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS 2" IN DIAMETER OR LESS, AND, (b) 10 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS MORE THAN 2" IN

4. TERMINATE CONDUITS AND SLEEVES THAT PROTRUDE THROUGH STRUCTURAL FLOORS 2"-3" ABOVE THE FLOOR SURFACE.

5. INSTALL BUSHINGS AND BELL ENDS AS REQUIRED ON ALL CONDUITS.

RESPONSIBILITY TO ENSURE GROUND WATER, RAIN WATER OR

SEE SITE UTILITY PLAN NOTES FOR ADDITIONAL UNDERGROUND

COMMUNICATIONS CONDUIT SEALING REQUIREMENTS.

6. FLEX CONDUIT IS GENERALLY UNACCEPTABLE FOR USE AS A COMMUNICATIONS CONDUIT EXCEPT AT SEISMIC JOINTS AND AS APPROVED

7. ALL UNDER SLAB OR IN-SLAB CONDUITS SHALL BE INSTALLED IN A MANNER THAT PREVENTS WATER INFILTRATION OF THE CONDUIT. IT IS THE CONTRACTOR'S

CONSTRUCTION WATER IS PREVENTED FROM ENTERING AND/OR REMOVED FROM THE CONDUITS PRIOR TO PLACEMENT OF COMMUNICATIONS CABLES.

ALL PULLBOXES SHALL BE SIZED AND INSTALLED PER ANSI/TIA/EIA-569B. PULLBOXES FOR UNDER FLOOR CONDUIT RUNS ARE NOT PERMITTED UNLESS OTHERWISE NOTED. PULLBOXES FOR OVERHEAD CONDUIT RUNS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS WITHIN THE ACCESSIBLE CEILING SPACE AND SUPPORTED INDEPENDENTLY FROM THE STRUCTURE AND CONDUIT SUPPORTS. PULLBOXES FOR ROOF MOUNTED OR EXTERIOR ABOVE GRADE APPLICATIONS SHALL BE NEMA 3 RATED. PULLBOXES SHALL BE SIZED

CONDUIT WIDTH LENGTH DEPTH WIDTH INCREASE PER ADDITIONAL CONDUIT

FOR OTHER CONDUIT SIZES REFER TO ANSI/TIA/EIA 569B TABLE 12.

16"

48"

9. CONDUIT(S) SHALL EXIT A PULLBOX ON THE WALL OPPOSITE THE WALL

10. PROVIDE LABELING OF EACH CONDUIT PER GENERAL ELECTRICAL

11. PROVIDE INTERNAL/EXTERNAL GAS AND WATER TIGHT MECHANICAL SEALING/PLUGGING OF EACH BUILDING ENTRY CONDUIT AS SPECIFIED

12. COORDINATE ALL MOUNTING DIMENSIONS FOR ELECTRICAL DEVICES AND SWITCHES WITH ARCHITECTURAL INTERIOR ELEVATIONS PRIOR TO ROUGH-IN.

13. COORDINATE ALL PENETRATIONS WITH STRUCTURAL PLANS AND DETAILS. NO

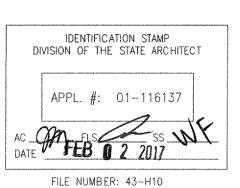
PENETRATIONS ARE PERMITTED UNLESS SPECIFICALLY NOTED ON

ELSEWHERE IN THE DRAWINGS AND SPECIFICATIONS.

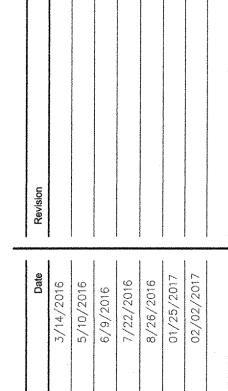
E-1425 (1) 1 1/4" CONDUIT. ROUTE CONDUIT FROM 6" ABOVE CEILING TO FIRST FLOOR CEILING, WITHIN CEILING TO DESK, THEN RISE INTO LIBRARY DESK CASEWORK. E-1426 AV CABINET. COORDINATE INSTALL WITH CASEWORK CONTRACTOR. CPI - 11790-725 -







OAK GROVE HIGH SCHOOL - LIBRA REMODEL & SITE IMPROVEMENTS



Submittal	Date
100% SCHEMATIC DESIGN	3/14/2016
100% DESIGN DEVELOPMENT	5/10/2016
50% CD ESTIMATE	6/9/2016
85% CD ESTIMATE	7/22/2016
DSA SUBMITTAL	8/26/2016
BID SET	01/25/2017
DSA APPROVAL	02/02/2017

Job. No.	1524810
Date	02/02/2017
Checked by	Checker
Scale	As indicated

TECHNOLOGY SECOND LEVEL FLOOR PLAN

TECHNOLOGY SECOND LEVEL IDF

**KEYNOTES** 

E-1401 LADDER RACK CABLE TRAY PER SPECIFICATIONS, SIZE PER PLANS. LADDER RACK TO BE ANCHORED TO WALLS AND MOUNTED TO RACKS WITH RACK-TO-RUNWAY MOUNTING PLATE PER SPECIFICATIONS. SCS CONTRACTOR TO INSTALL CABLE RUNWAY RADIUS DROPS WHEREVER CABLE LEAVES THE TRAY. USE MOVEABLE RUNWAY CROSS MEMBERS AS REQUIRED PER DROP AND SPECIFICATIONS. LADDER RACK TO BE SUPPORTED EVERY 4 FEET. SUPPORT FROM DECK ABOVE ONLY AS NEEDED. SEE SCS DETAILS ON SHEET T4.00 FOR ADDITIONAL INFORMATION.

E-1402 12" X 1 1/2" DEEP LADDER RACK. FASTEN CABLE TO CABLE TRAY WITH VELCRO TIES. BOND ALL SECTIONS AND GROUND PER TIA STANDARDS. E-1403 ALL MDF/IDF WALLS SHALL BE COVERED WITH 4'X8'X3/4" ACX FIRE RATED PLYWOOD, A-SIDE FACING INTERIOR OF ROOM, PAINTED WITH FIRE-RETARDANT PAINT LEAVING ONE STAMP EXPOSED NEAR THE TOP. MOUNT PLYWOOD VERTICALLY STARTING 6" A.F.F. ALL PLYWOOD PANELS SHALL BE MOUNTED IN CONTACT WITH EACH OTHER,

LEAVING NO GAPS BETWEEN PANELS. E-1419 TELECOMMUNICATIONS MAIN GROUNDING BUSBAR. TIE TO BUILDING GROUND WITH CONNECTOR SIZED PER TIA STANDARDS BUT NOT LESS THAN #3/0. CERTIFY GROUND CONNECTION PER TIA STANDARDS.

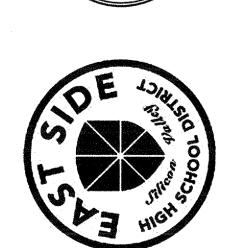
E-1420 11421 - WALL ANGLE SUPPORT KIT. REFER TO DETAIL 4/T4.00 E-1421 10595 - RACK TO RUNWAY MOUNTING PLATE. REFER TO DETAIL 5/T4.00

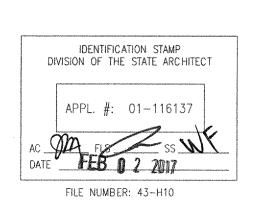
E-1422 10506 - CABLE RUNWAY ELEVATION KIT

E-1427 12100 - CABLE RUNWAY RADIUS DROP.

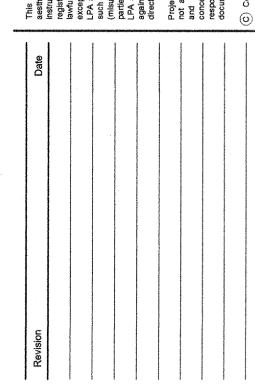
E-1428 TYPE "C" WALL PHONE. E-1429 12" X 1 1/2" DEEP LADDER RACK MOUNTED VERTICALLY ON WALL, HEIGHT TO BE FROM TMGB TO HORIZONTAL LADDER RACK OR TOP OF SERVER RACK. FASTEN CABLE TO CABLE TRAY WITH VELCRO TIES. BOND ALL SECTIONS AND GROUND PER TIA STANDARDS.

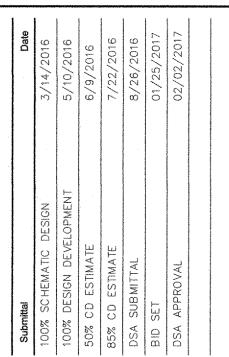
E-1430 REFER TO RACK MOUNTING DETAIL 8/T4.00 FOR MOUNTING REQUIREMENTS.





OAK GROVE HIGH SCHOOL - LIBRA REMODEL & SITE IMPROVEMENTS

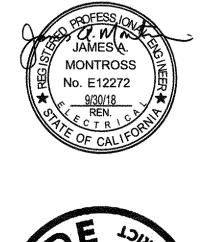




1524810 02/02/2017 Checker 1 1/2" = 1'

TECHNOLOGY SECOND LEVEL IDF

E-1410 PROVIDE (3) 2" CONDUITS FROM IDF TO AV CABINET. INSTALL BUSHINGS AND PULL STRINGS.





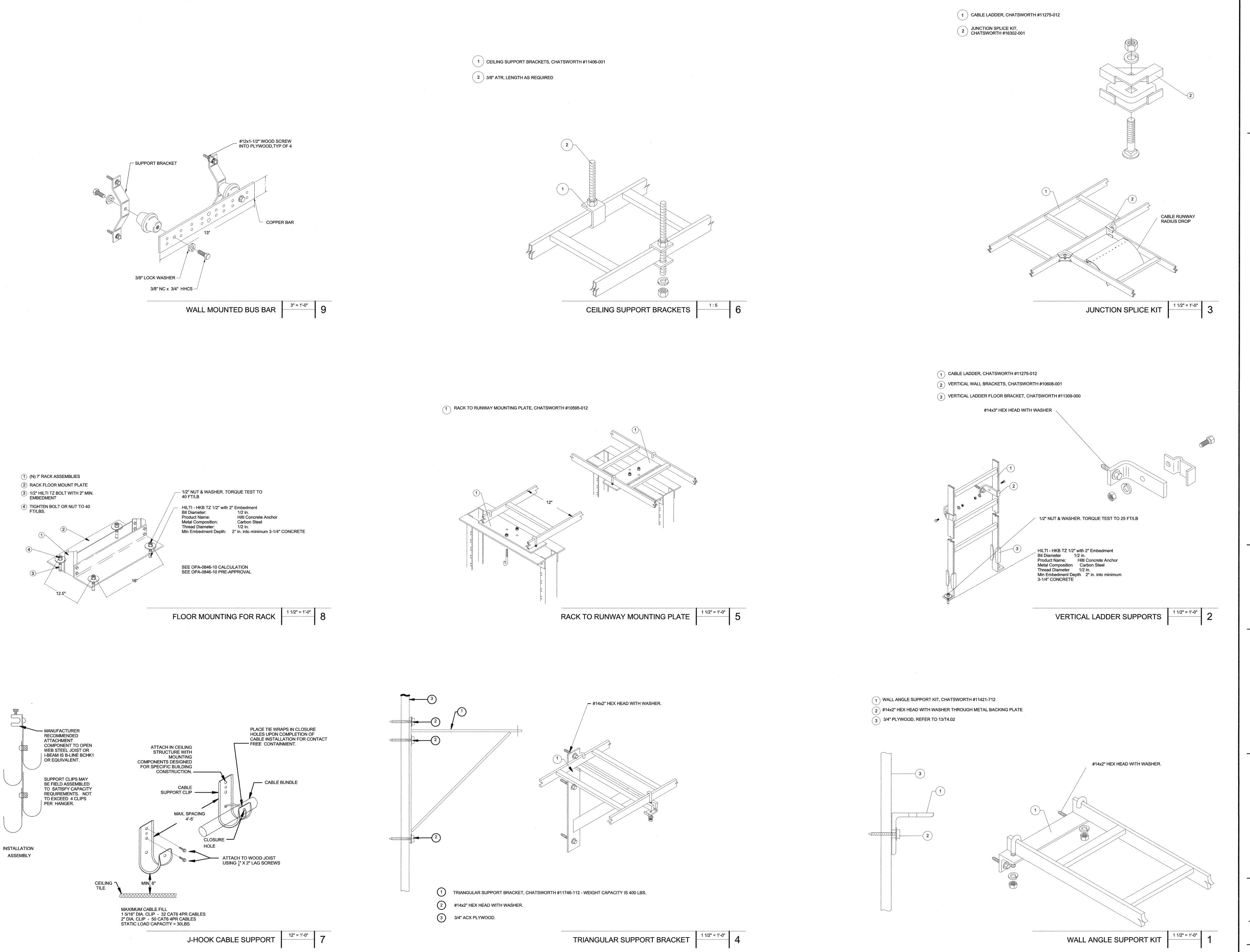
OAK GROVE HIGH SCHOOL - LIBRAREMODEL & SITE IMPROVEMENTS

1524810 02/02/2017 Checker 1" = 1' Checked by

SECOND LEVEL CONDUIT ROUTE - IDF TO AV CABINET

T2.03

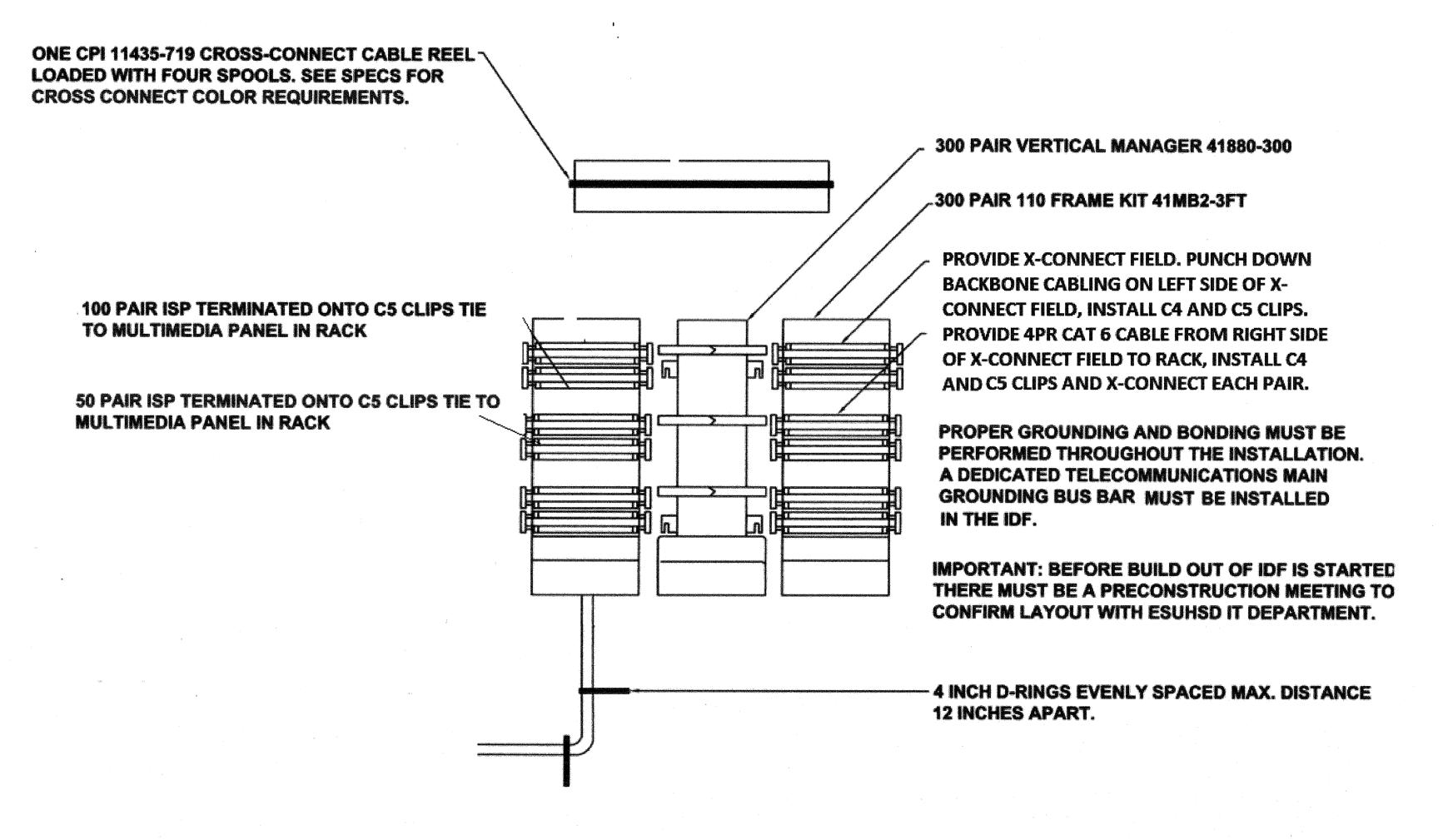
IDF TO AV CABINET CONDUIT ROUTE



IDENTIFICATION STAMP DIVISION OF THE STATE ARCHITECT FILE NUMBER: 43-H10 GROVE HIGH SCHOOL -ODEL & SITE IMPROVEM 1524810 Job. No. 02/02/2017 Checked by Scale As indicated TECHNOLOGY TYPICAL DETAILS T4.00

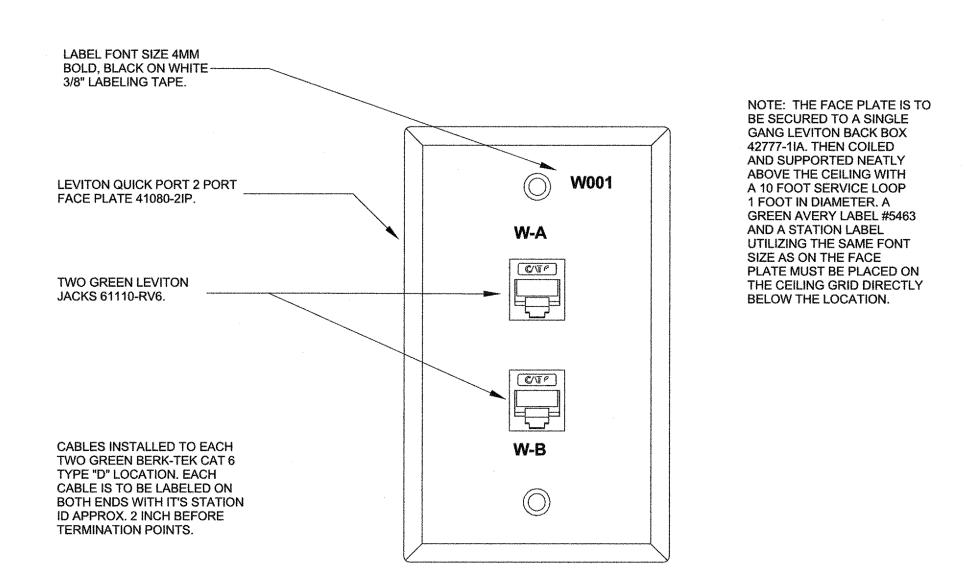
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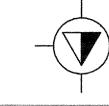


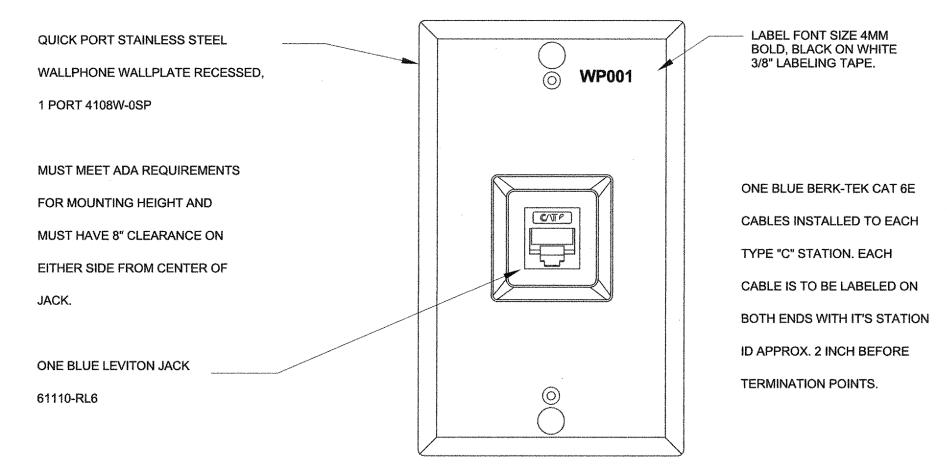
# IDF COPPER BACKBONE ELEVATION STANDARD

**ESUHSD IT GUIDELINES 12-1-11** 



# TYPE "D" WIRELESS LOCATION DETAIL

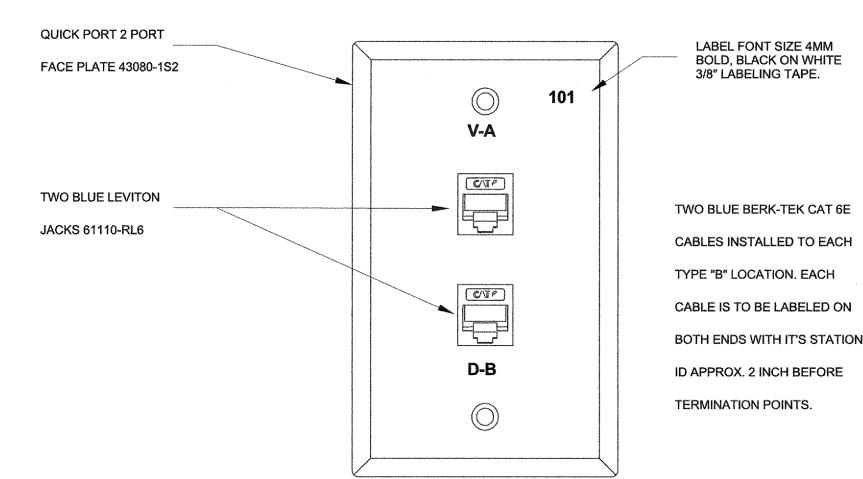




## TYPE "C" WALL PHONE LOCATION DETAIL

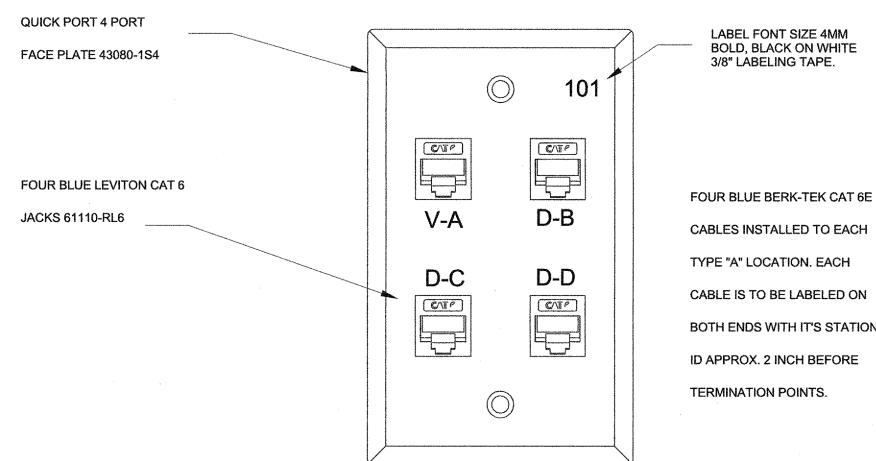


TYPE "C" DETAIL 12" = 1'-0" 3



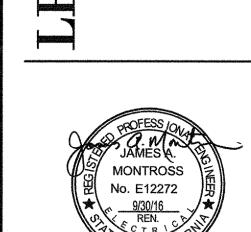
### TYPE "B" WORK STATION DETAIL



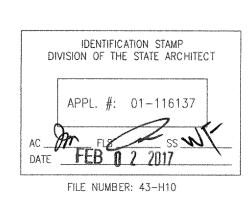


## TYPE "A" WORK STATION DETAIL

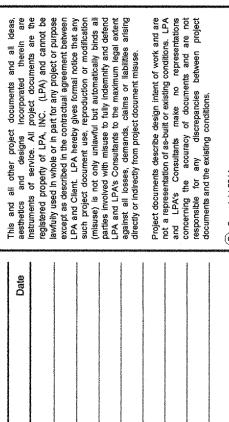


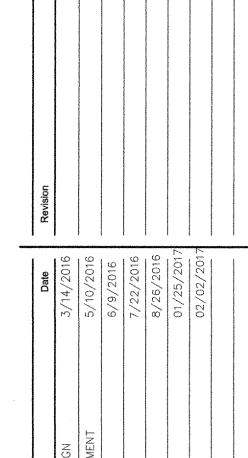






OAK GROVE HIGH SCHOOL - LIBRAREMODEL & SITE IMPROVEMENTS





Submittal	100% SCHEMATIC DESIGN	100% DESIGN DEVELOPMENT	50% CD ESTIMATE	85% CD ESTIMATE	DSA SUBMITTAL	BID SET	DSA APPROVAL		
<b>Job. No.</b> 1524810									
Dat	Date 02/02/2017						)17		

12" = 1'-0"TECHNOLOGY

TYPICAL DETAILS

T4.01

HIGH SCHOOL - L

1524810 Job. No. Date 02/02/2017 Checked by Checker Scale As indicated

**TECHNOLOGY** TYPICAL DETAILS

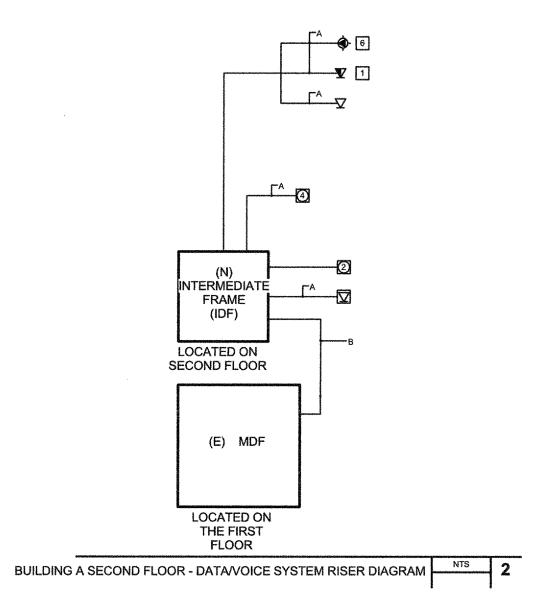
PRIMEX WIRELESS TRADITIONAL SERIES CLOCK 14306 (12.5") BLACK. PROVIDE RECEPTACLE BEHIND CLOCK. CLOCK SHALL BE SYNCHRONIZED TO EXISTING CAMPUS CLOCK SYSTEM.

5 110 FRAMING KIT.

6 WIRELESS ACCESS POINT DEVICE IS OWNER PROVIDED, CONTRACTOR INSTALLED. COORDINATE WITH THE DISTRICT.

TYPE	DATA / VOICE CABLE SCHEDULE		
	DESCRIPTION		
C1	(1) 25 PAIRS #22 & (1) 25 PAIRS #24 AWG ARMOR COPPER CABLE, OSP (PER DISTRICT STANDARD)		
C2	4 PAIR CAT 6		
С3	(1) 25 PAIRS #24 TELEPHONE CABLE, ISP (PER DISTRICT STANDARD)		
C4	(1) 25 PAIRS #22 SPEAKER CABLE, ISP (PER DISTRICT STANDARD)		

TYPE		SECURITY MATERIAL LIST				
		DESCRIPTION				
MOTION DETECTOR		BOSCH ISC-BPR2 BLUE LINE GEN 2 PIR				
EXPANDER		BOSCH B208				
KEY PAD		BOSCH D1255				
CONTROL PANEL		BOSCH B9512G WITH B430 MODULE				
ENCLOSURE		BOSCH D8103				
LOCK & KEYSET		BOSCH D101				
BREAK GLASS		BOSCH DS103i				
HORN		AMSECO ABB-1014				
POWER SUPPLY		ALARMSAF PS5-M003-UL				
TYPE	INTERLOCAL AL ADM OF OUR TV OARLE COURSE!!!					
IIFE	l.	NTRUSION ALARM SECURITY CABLE SCHEDULE				
		DESCRIPTION				
Ė	(4) #18 (UNSHEILDED)					
	Tankan Kulin sekan berbagai saki pineka asal kiki dan dan dan panta da basai					



DATA / VOICE CABLE SCHEDULE

DESCRIPTION

12 MM (OM4) FIBER OPTIC CABLE, 50 & 100 PR COPPER BACKBONE

SEE FLOOR PLAN FOR EXACT LOCATION AND QUANTITY

PROVIDE 110-FT KIT FOR COPPER TERMINATION AS

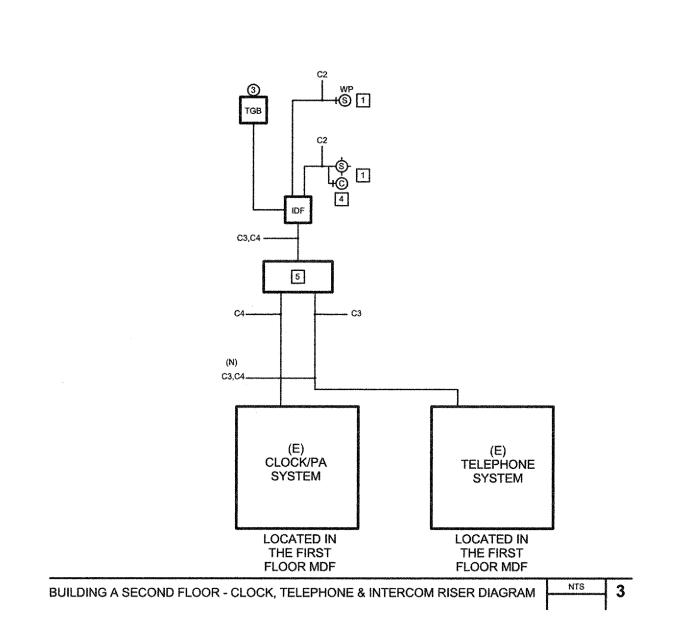
2 PROVIDE CROSS CONNECT SPOOL HOLDER.

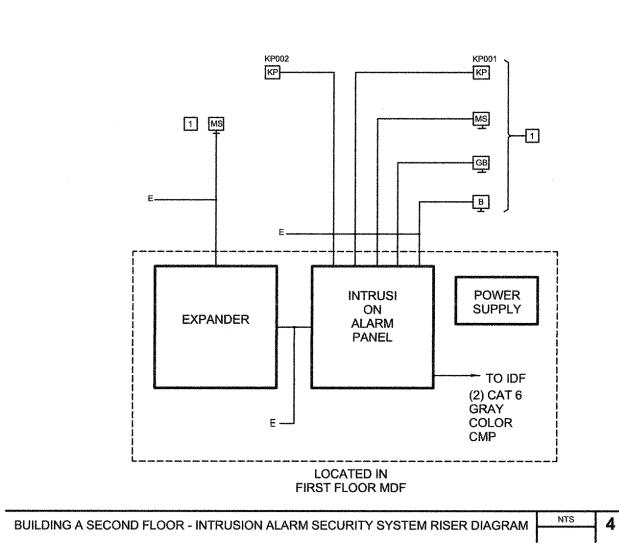
CPI 11435-719 OR EQUIV.

A 4 PAIR CAT 6

OF DEVICES

REQUIRED.





- 1. GENERAL DETAIL ONLY. SCS CONTRACTOR SHALL COORDINATE WITH PLANS AND PROVIDE A COMPLETE SYSTEM. SCS CONTRACTOR SHALL COMPLY WITH ALL ANSI, EIA AND TIA STANDARDS. 2. ALL ITEMS SHALL BE PROVIDED BY SCS CONTRACTOR UNLESS OTHERWISE NOTED.
- 3. PROVIDE THREAD-FORMING BONDING SCREWS TO ATTACH ALL PATCH PANELS, HORIZONTAL CABLE MANAGERS,

**GENERAL NOTES** 

EXAMPLE "A"

- FIBER ENCLOSURES, ETC.

# 4. PROVIDE THREAD FORMING GROUNDING SCREWS TO ATTACH EQUIPMENT GROUND CONDUCTOR TO RACK BUSBARS. 5. ALL CONNECTIONS TO GROUND BUSBARS SHALL BE 2-HOLE COMPRESSION LUGS, UNLESS OTHERWISE NOTED.

### **KEYNOTES**

- ANSI COMPLIANT TELECOMMUNICATIONS MAIN GROUND BUSBAR (TMGB) / TELECOMMUNICATION GROUNDING BUSBAR (TGB) PER SPECIFICATIONS. SEE GENERAL TELECOMMUNICATIONS GROUNDING NOTES. PROVIDED AND INSTALLED BY E.C.
  - (2) IRREVERSIBLE COMPRESSION CONNECTOR
  - 3 TELECOMMUNICATION EQUIPMENT BONDING CONDUCTOR (TEBC). #6 AWG GREEN INSULATED GROUND CONDUCTOR. TYPICAL U.O.N. [4] RACK BONDING CONDUCTOR. ALL CONDUCTORS ROUTED TO TMGB/TGB.
  - [5] INDIVIDUAL EQUIPMENT BONDING CONDUCTORS FROM EACH PIECE OF EQUIPMENT AND RACK TO THE RACK BONDING CONDUCTOR.
  - 6 RACK BONDING CONDUCTOR EXTENDED TO BOTTOM OF RACK TO ACCOMMODATE FUTURE GROWTH. 7 RACK ISOLATION GROUND PLATES (IF APPLICABLE).

**GENERAL NOTES:** 

ELECTRICAL CONTRACTOR SHALL PROVIDE TEST

LOG FOR FIBER OPTIC AND COPPER CABLE

AFTER A COMPLETE INSTALLATION OF DATA

SYSTEM AND SUBMIT TO THE DISTRICT. SEE

SPECIFICATION, DIVISION 27 FOR TESTING

ALL (E) FIBER OPTIC CABLES SHALL BE OTDR

TESTED PRIOR TO ST CONNECTORS.
ALL COPPER BACKBONE CABLE
WETHER EXISTING OR NEW SHALL BE

TESTED PER CONTRACT DOCUMENTS

**SHEET NOTES:** 

(1) FOR ADDITIONAL INFORMATION ON DEVICE LABELING

(2) FIRE ALARM PANEL. COORDINATE WITH THE FIRE ALARM

JACK ON EITHER END FOR BMS. COORDINATE WITH

(4) SECURITY INTRUSION ALARM PANEL. COORDINATE WITH

SECURITY INTRUSION SYSTEM CONTRACTOR FOR CABLE

CONTRACTOR FOR CABLE CONNECTION.

PROVIDE CAT6 - BLUE CABLE WITH A BLUE CAT6

(5) COORDINATE WITH THE DISTRICT PRIOR TO RACK

MECHANICAL FOR EXACT LOCATION.

AND NUMBERING, FACEPLATES, DEVICE COLOR AND OTHER DATA, VOICE SPEAKERS, INTRUSION STANDARDS SEE IT GUIDELINE STANDARDS. COORDINATE WITH THE

AND DISTRICT STANDARDS.

INFORMATION.

DISTRICT.

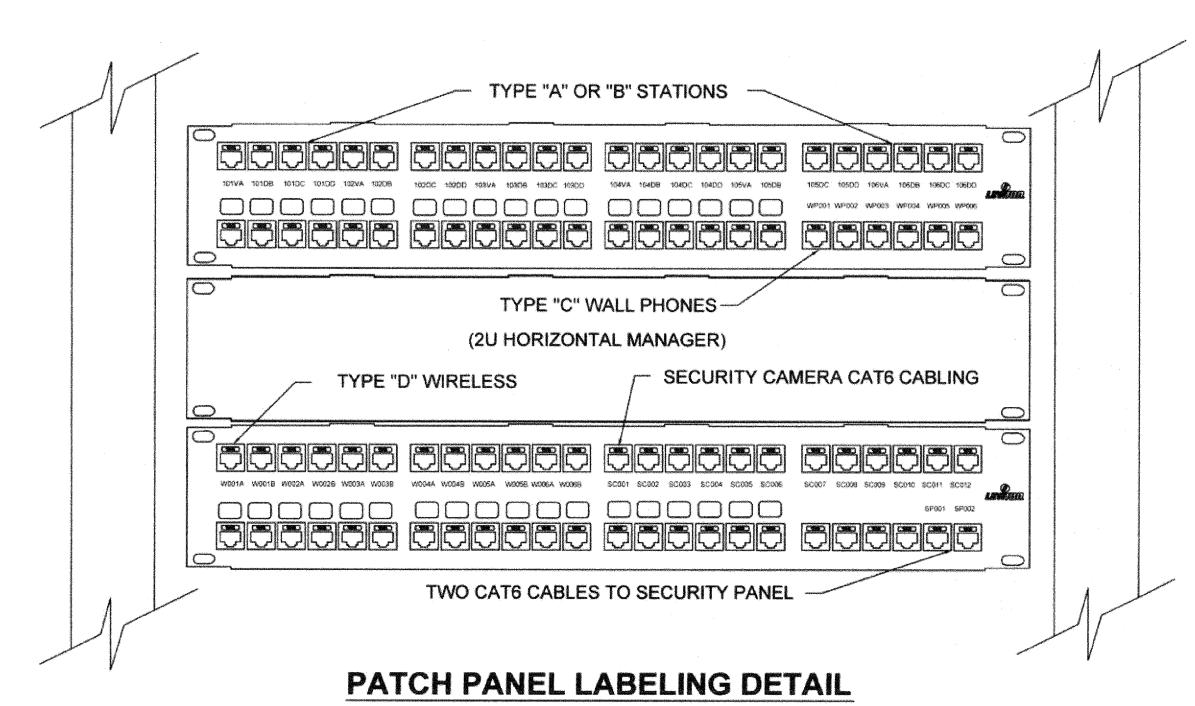
CONNECTION.

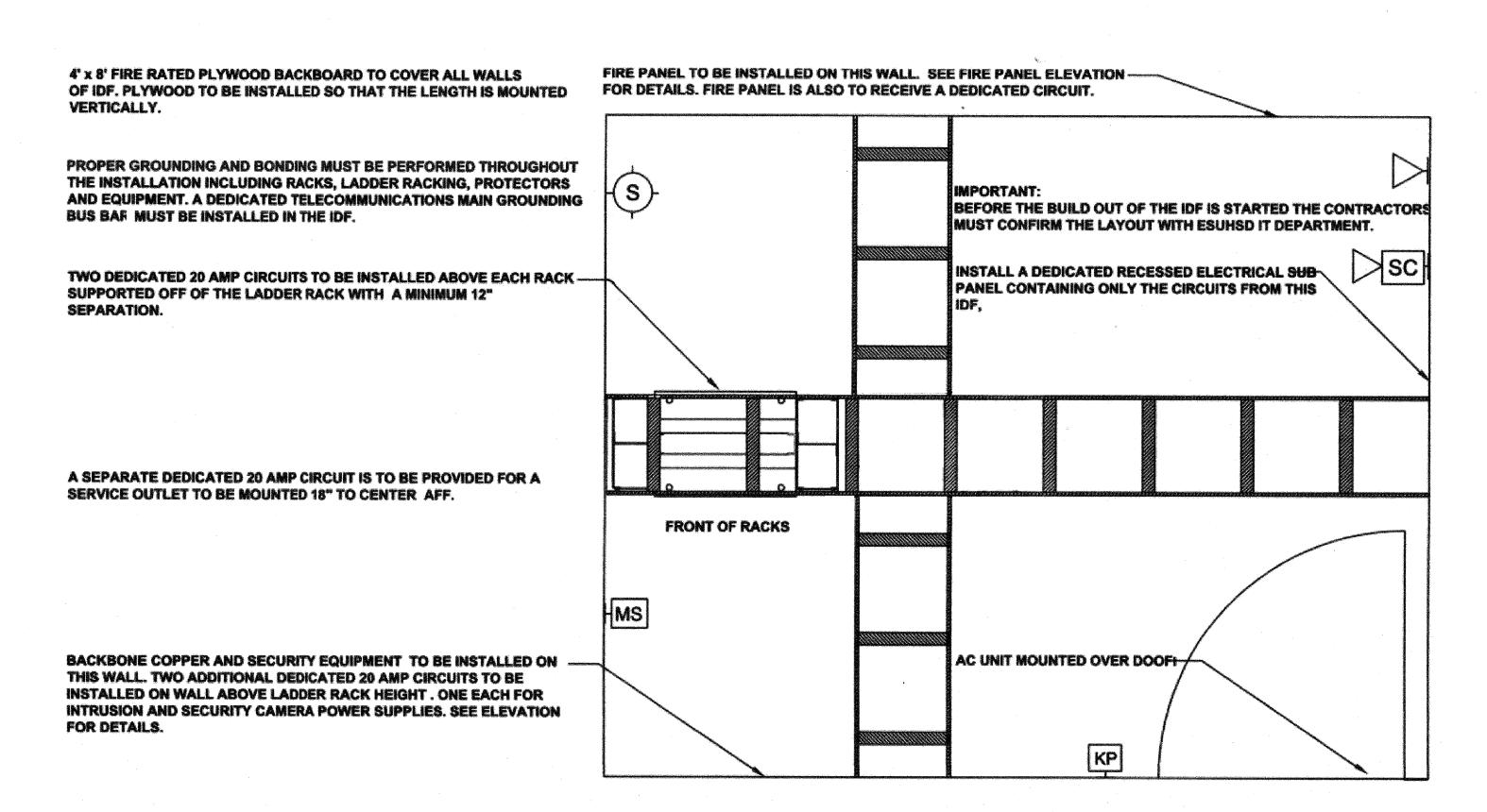
INSTALLATION.

- 8 TOP MOUNTED RACK GROUNDING BUSBAR (RGB).
- 12 INDIVIDUAL EQUIPMENT GROUNDING TERMINAL. TYPICAL EACH PIECE OF EQUIPMENT. 13 CONDUIT RISER. 14 SEE DETAIL 8/T4.00 FOR RACK ANCHORAGE. • • • • • • • • • • • • • • • • • FIRE SECURITY PANEL PANEL 2 1  $\circ$

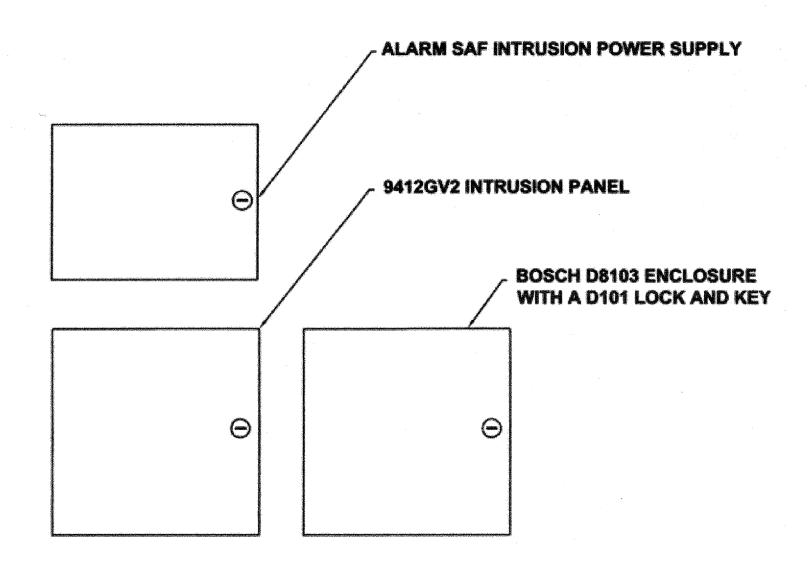
EXAMPLE "B"

EXAMPLE "C"





8x10 IDF TOP VIEW LAYOUT STANDARD **ESUHSD IT GUIDELINES 12-1-11** 



TWO GRAY CAT6 CABLES ARE TO BE RAN FROM THE 9412GV2 INTRUSION PANEL TO THE SECURITY MULTIMEDIA PANEL LOCATED ON THE IDF RACK. BOTH CABLES ARE TO BE HOUSED IN A TWO PORT LEVITON SMB. ALL INTRUSION PANEL POINT INDEX AND ASSIGNMENTS WILL BE PROVIDED BY THE ESUHSD IT DEPT. THE CONTRACTOR MUST PROGRAM THE PANEL BASED ON INFORMATION PROVIDED.

THE BOSCH D8103 ENCLOSURE IS TO HOUSE OCTOPOPITS AND IDEAL BARRIER STRIPS FOR A CLUTTER FREE INTRUSION PANEL.

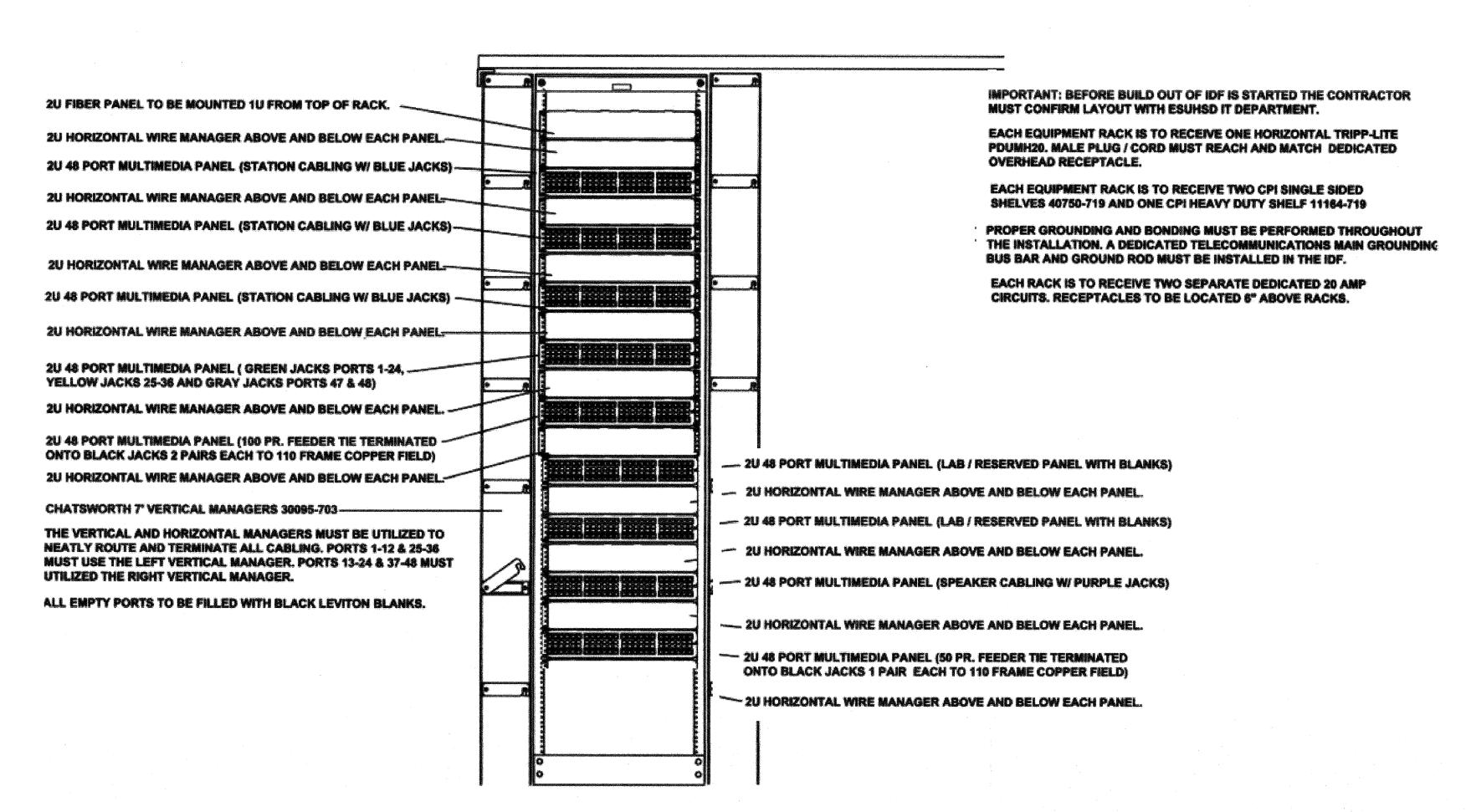
PROPER GROUNDING AND BONDING MUST BE PERFORMED THROUGHOUT THE INSTALLATION AND CONNECTED TO THE TELECOMMUNICATIONS MAIN GROUNDING BUS BAR IN THE IDF.

INTRUSION PANEL & CAMERA POWER SUPPLIES EACH RECEIVE A SEPARATE DEDICATED 20 AMP CIRCUIT TIED BACK TO THE IDF ELECTRICAL SUB PANEL.

IMPORTANT: BEFORE BUILD OUT OF IDF IS STARTED THE CONTRACTOR MUST CONFIRM LAYOUT WITH ESUHSD IT DEPARTMENT.

### **IDF SECURITY ELEVATION STANDARD**

**ESUHSD IT GUIDELINES 12-1-11** 



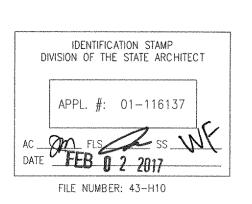
## IDF EQUIPMENT RACKS ELEVATION STANDARD

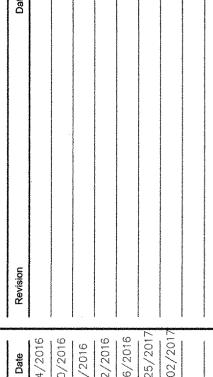
VOICE, DATA, SPEAKERS, INTRUSION, CAMERAS ESUHSD IT GUIDELINES 12-1-11

**260.1** 949.  $( \ominus )$ (8)









02/02/2017 Checked by Scale

TECHNOLOGY TYPICAL DETAILS

Checker

T4.03