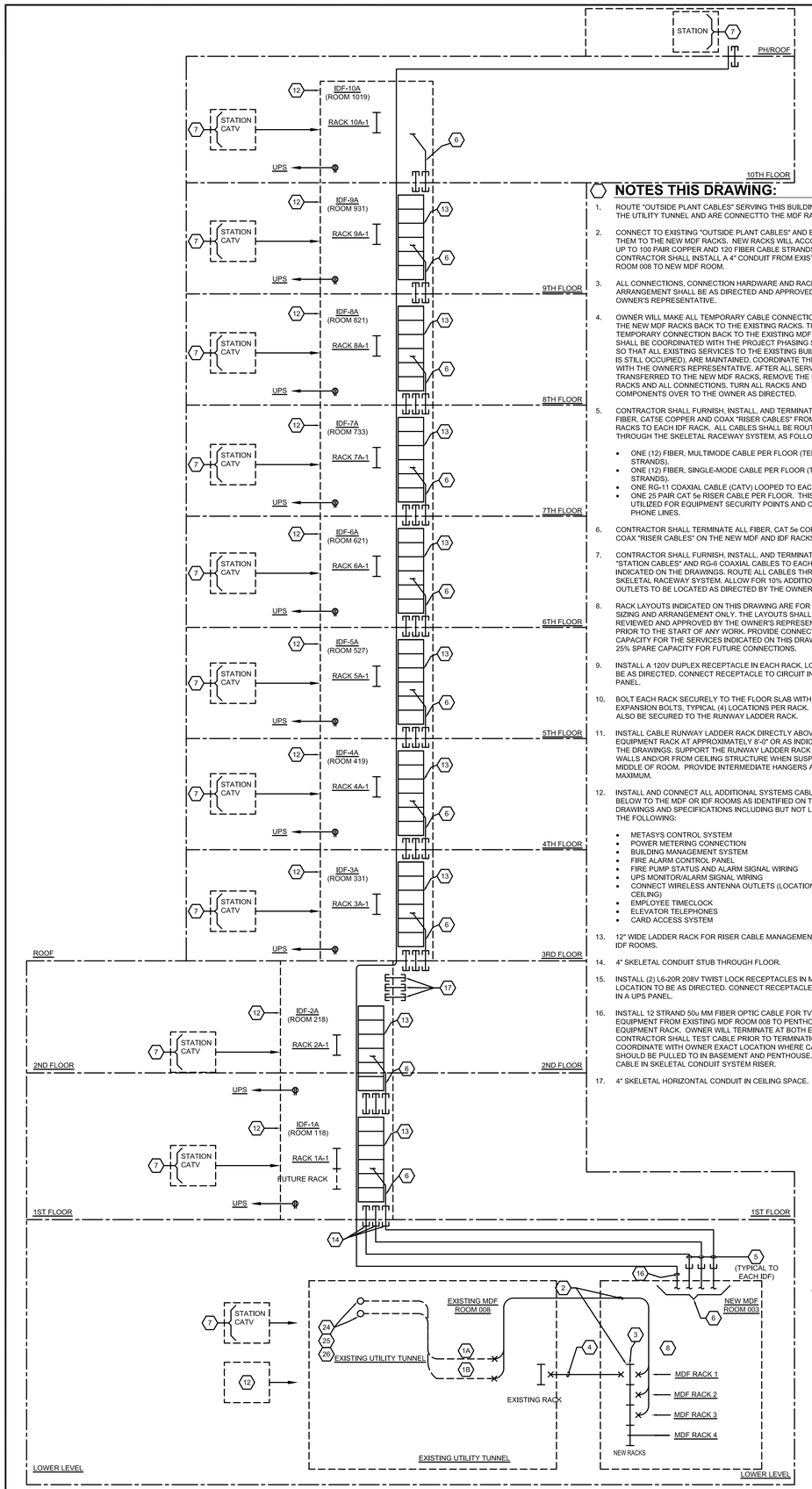
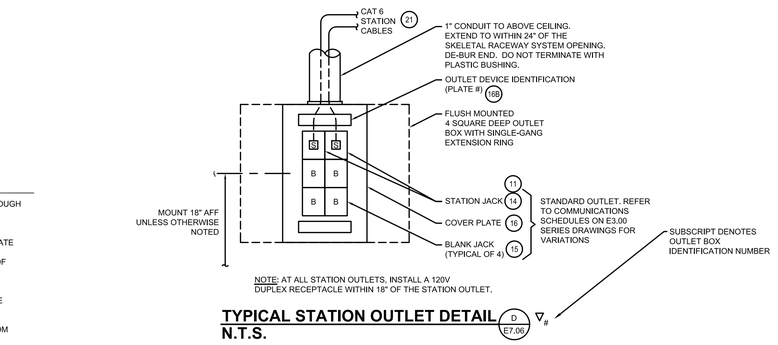


EXAMPLE TELECOMMUNICATIONS & CATV RISER DIAGRAM (N.T.S.)

NOTES THIS DRAWING:

1. ROUTE "OUTSIDE PLANT CABLES" SERVING THIS BUILDING THROUGH THE UTILITY TUNNEL AND ARE CONNECTTO THE MDF RACK.
2. CONNECT TO EXISTING "OUTSIDE PLANT CABLES" AND EXTEND THEM TO THE NEW MDF RACKS. NEW RACKS WILL ACCOMMODATE UP TO 100 PAIR COPPER AND 120 FIBER CABLE STRANDS. CONTRACTOR SHALL INSTALL A 4" CONDUIT FROM EXISTING MDF ROOM 008 TO NEW MDF ROOM.
3. ALL CONNECTIONS, CONNECTION HARDWARE AND RACK ARRANGEMENT SHALL BE AS DIRECTED AND APPROVED BY THE OWNER'S REPRESENTATIVE.
4. OWNER WILL MAKE ALL TEMPORARY CABLE CONNECTIONS FROM THE NEW MDF RACKS BACK TO THE EXISTING RACKS. THE TEMPORARY CONNECTION BACK TO THE EXISTING MDF RACKS SHALL BE COORDINATED WITH THE PROJECT PHASING SCHEDULE SO THAT ALL EXISTING SERVICES TO THE EXISTING BUILDING (THAT IS STILL OCCUPIED), ARE MAINTAINED. COORDINATE THIS WORK WITH THE OWNER'S REPRESENTATIVE. AFTER ALL SERVICES ARE TRANSFERRED TO THE NEW MDF RACKS, REMOVE THE EXISTING RACKS AND ALL CONNECTIONS. TURN ALL RACKS AND COMPONENTS OVER TO THE OWNER AS DIRECTED.
5. CONTRACTOR SHALL FURNISH, INSTALL, AND TERMINATE NEW FIBER, CAT5E COPPER AND COAX "RISER CABLES" FROM THE MDF RACKS TO EACH IDF RACK. ALL CABLES SHALL BE ROUTED THROUGH THE SKELETAL RACEWAY SYSTEM, AS FOLLOWS:
   - ONE (12) FIBER, MULTIMODE CABLE PER FLOOR (TERMINATE 6 STRANDS).
   - ONE (12) FIBER, SINGLE-MODE CABLE PER FLOOR (TERMINATE 6 STRANDS).
   - ONE RG-11 COAXIAL CABLE (CATV) LOOPED TO EACH IDF.
   - ONE 25 PAIR CAT 5e RISER CABLE PER FLOOR. THIS WILL BE UTILIZED FOR EQUIPMENT SECURITY POINTS AND COPPER PHONE LINES.
6. CONTRACTOR SHALL TERMINATE ALL FIBER, CAT 5e COPPER, AND COAX "RISER CABLES" ON THE NEW MDF AND IDF RACKS.
7. CONTRACTOR SHALL FURNISH, INSTALL, AND TERMINATE NEW CAT 6 "STATION CABLES" AND RG-6 COAXIAL CABLES TO EACH OUTLET INDICATED ON THE DRAWINGS. ROUTE ALL CABLES THROUGH THE SKELETAL RACEWAY SYSTEM. ALLOW FOR 10% ADDITIONAL OUTLETS TO BE LOCATED AS DIRECTED BY THE OWNER.
8. RACK LAYOUTS INDICATED ON THIS DRAWING ARE FOR GENERAL SIZING AND ARRANGEMENT ONLY. THE LAYOUTS SHALL BE REVIEWED AND APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO THE START OF ANY WORK. PROVIDE CONNECTION CAPACITY FOR THE SERVICES INDICATED ON THIS DRAWING PLUS 25% SPARE CAPACITY FOR FUTURE CONNECTIONS.
9. INSTALL A 120V DUPLEX RECEPTACLE IN EACH RACK, LOCATION TO BE AS DIRECTED. CONNECT RECEPTACLE TO CIRCUIT IN A UPS PANEL.
10. BOLT EACH RACK SECURELY TO THE FLOOR SLAB WITH CONCRETE EXPANSION BOLTS, TYPICAL (4) LOCATIONS PER RACK. RACK SHALL ALSO BE SECURED TO THE RUNWAY LADDER RACK.
11. INSTALL CABLE RUNWAY LADDER RACK DIRECTLY ABOVE EACH EQUIPMENT RACK AT APPROXIMATELY 8'-0" OR AS INDICATED ON THE DRAWINGS. SUPPORT THE RUNWAY LADDER RACK AT END WALLS AND/OR FROM CEILING STRUCTURE WHEN SUSPENDED IN MIDDLE OF ROOM. PROVIDE INTERMEDIATE HANGERS AT 36" O.C. MAXIMUM.
12. INSTALL AND CONNECT ALL ADDITIONAL SYSTEMS CABLES NOTED BELOW TO THE MDF OR IDF ROOMS AS IDENTIFIED ON THE DRAWINGS AND SPECIFICATIONS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
    - METASYS CONTROL SYSTEM
    - POWER METERING CONNECTION
    - BUILDING MANAGEMENT SYSTEM
    - FIRE ALARM CONTROL PANEL
    - FIRE PUMP STATUS AND ALARM SIGNAL WIRING
    - UPS MONITOR/ALARM SIGNAL WIRING
    - CONNECT WIRELESS ANTENNA OUTLETS (LOCATION ABOVE CEILING)
    - EMPLOYEE TIMECLOCK
    - ELEVATOR TELEPHONES
    - CARD ACCESS SYSTEM
13. 12" WIDE LADDER RACK FOR RISER CABLE MANAGEMENT BETWEEN IDF ROOMS.
14. 4" SKELETAL CONDUIT STUB THROUGH FLOOR.
15. INSTALL (2) L6-20R 208V TWIST LOCK RECEPTACLES IN MDF-1 RACK, LOCATION TO BE AS DIRECTED. CONNECT RECEPTACLE TO CIRCUIT IN A UPS PANEL.
16. INSTALL 12 STRAND 50µ MM FIBER OPTIC CABLE FOR TV STATION EQUIPMENT FROM EXISTING MDF ROOM 008 TO PENTHOUSE EQUIPMENT RACK. OWNER WILL TERMINATE AT BOTH ENDS. CONTRACTOR SHALL TEST CABLE PRIOR TO TERMINATION. COORDINATE WITH OWNER EXACT LOCATION WHERE CABLES SHOULD BE PULLED TO IN BASEMENT AND PENTHOUSE. ROUTE CABLE IN SKELETAL CONDUIT SYSTEM RISER.
17. 4" SKELETAL HORIZONTAL CONDUIT IN CEILING SPACE.



NOTE: AT ALL STATION OUTLETS, INSTALL A 120V DUPLEX RECEPTACLE WITHIN 18" OF THE STATION OUTLET.

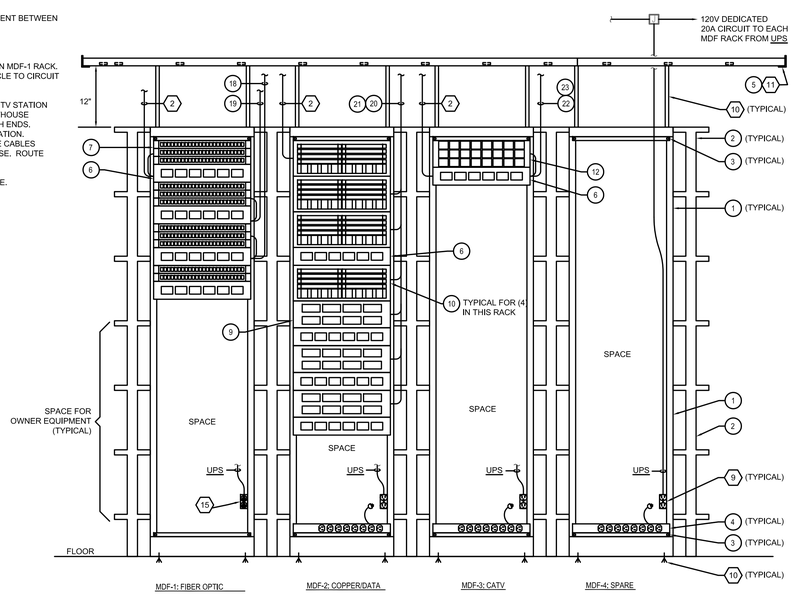
TYPICAL STATION OUTLET DETAIL N.T.S.

D / E7.06 / ▽#

TELECOMMUNICATIONS AND CATV EQUIPMENT / COMPONENTS

ID NO.	EQUIPMENT	MANUFACTURER	MODEL, CATALOG OR PART NUMBER	NOTES
1	EQUIPMENT RACK	CHATSWORTH	55053-703	FLOOR MOUNTED, 19" WIDE BY 7 FEET HIGH - EIA-310-D COMPLIANT
2	VERTICAL CABLE MANAGER	CHATSWORTH	11729-703	DOUBLE SIDED, 7" WIDE, CPI STANDARD - TYPICAL ON EACH RACK
3	HORIZONTAL GROUND BUS	ORTRONICS	OR-GBH19KIT	ONE 19" WIDE BAR AT TOP AND BOTTOM OF EACH RACK
4	RACK MOUNTED POWER STRIP	ORTRONICS	OR-50900051	ONE 19" WIDE STRIP AT BOTTOM OF EACH RACK. 120 V. 20 A. INSTALL FACING BACK OF RACK
5	UNIVERSAL CABLE RUNWAY	CHATSWORTH	10250-SERIES	12" WIDE LADDER TRAY AS INDICATED - INSTALL DIRECTLY OVER THE TOP OF THE RACK AS SHOWN ON DRAWINGS.
6	HORIZONTAL CABLE MANAGER	ORTRONICS	OR-808004818	LOCATE WHERE INDICATED ON RACK LAYOUTS
7	RACK MOUNTED FIBER CABINET	ORTRONICS	OR-FC01U-C, OR-FC02U-C OR-FC04U-C	12 PORT LC DUPLEX MM OFP_STD12MM OR 12 PORT LC DUPLEX SM OFP_STD12AC, INCLUDE ALL REQ 6 PORT DUPLEX SM & MM MODS
8	NOT USED			
9	48 PORT, CAT 6A PATCH PANEL	ORTRONICS	OR-PHD6A48	TERMINATES UP TO 48 CAT 6A CABLES. INCL BLACK BLANKS AS REQ.
10	100 PAIR, RACK MOUNT, 110 BLOCK	ORTRONICS	OR-30203506	COMPLETE WITH HORIZONTAL CABLE MANAGER
11	OUTLET JACK DUST COVER	PANDUIT	PSL-DCJB-YL-C	PROVIDE DUST COVER FOR EACH JACK IN THE PROJECT
12	COAXIAL PATCH, PATCH PANEL	ORTRONICS	OR-4010452 48	24 PORT
13	CAT 6A RJ-45 SECURITY JACK	ORTRONICS	OR-TJ6A	FOG WHITE
14	CAT 6A RJ-45 STATION JACK	ORTRONICS	OR-TJ6A-43	ORANGE
15	BLANK JACK MODULE	ORTRONICS	OR-42100002	ORANGE
16	STATION OUTLET - 6 PORT COVERPLATE	ORTRONICS	OR-40300545	FOG WHITE
16A	STATION OUTLET - 3 PORT COVERPLATE	ORTRONICS	OR-40300547	FOG WHITE
16B	OUTLET IDENTIFICATION LABEL	BRADY	LAT-176-124(2)0.375x1.90 INSERT - TYP. ON ALL OUTLETS	
17	COAXIAL CABLE - "F" CONNECTOR	ORTRONICS	OR-63700006	FOG WHITE
18	MULTIMODE FIBER CABLE	COMMSCOPE	5101-012A-MPBK	12 FIBER, PLENUM RATED, INDOOR/OUTDOOR DISTRIBUTION CABLE
19	SINGLE-MODE FIBER CABLE	COMMSCOPE	5101-012A-WPBK	12 FIBER, PLENUM RATED, INDOOR/OUTDOOR DISTRIBUTION CABLE
20	CAT 5e RISER CABLE	BERK-TEK	10059632	25 PAIR, UTP, PLENUM RATED, GRAY
21	CAT 6A STATION CABLE	SUPER-ESSEX	6H-272-4B	4 PAIR, UTP, PLENUM RATED, WHITE
22	COAXIAL CABLE RG-11	COMMSCOPE	2285V	75 OHM, PLENUM RATED
23	COAXIAL CABLE RG-6	COMMSCOPE	P6QSCCS	75 OHM, PLENUM RATED
24	OUTSIDE PLANT FIBER	SUPER-ESSEX	121443101	SINGLE MODE, 144 STRAND (SOME PROJECTS MAY BE LESS)
25	OUTSIDE PLANT COPPER	SUPER-ESSEX	X	CAT 5E, 22 AWG, 100 PR. CHECK WITH BSU.
26	OUTSIDE PLANT HANDHOLE	QUAZITE	PD3048BA48	30X48X48D, OPEN BOTTOM, GRAVEL, TIER 15 LID MIN, DRAIN.

TELECOMMUNICATIONS & CATV EQUIPMENT LIST



MDF RACK LAYOUT N.T.S.

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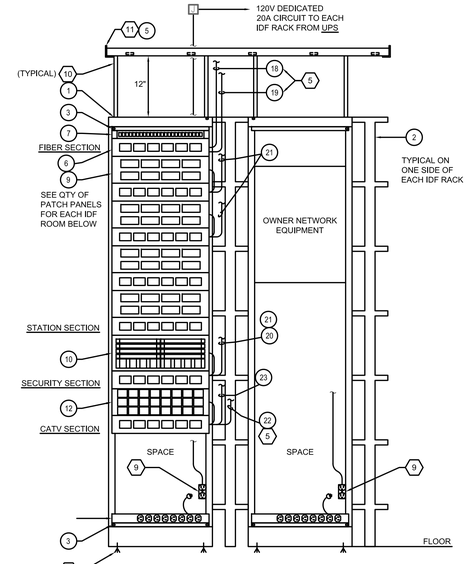
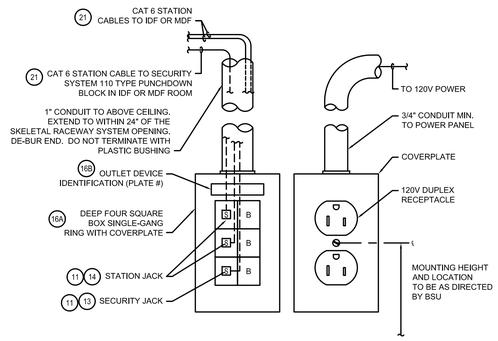


FLOOR	ROOM	#
LL	MDF-003	3
1ST	IDF-1A	2
2ND	IDF-2A	6
3RD	IDF-3A	4
4TH	IDF-4A	3
5TH	IDF-5A	5
6TH	IDF-6A	4
7TH	IDF-7A	4
8TH	IDF-8A	4
9TH	IDF-9A	4
10TH	IDF-10A	3

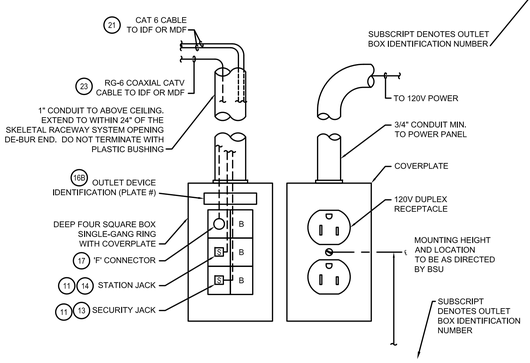
TYPICAL IDF RACK LAYOUT N.T.S.

A / E7.06 / 3 / 8



TYPICAL ELECTRONIC SIGNAGE OUTLET DETAIL N.T.S.

B / E7.06 / ▽# ES



TYPICAL TV OUTLET DETAIL N.T.S.

C / E7.06 / ▽# TV

BALL STATE UNIVERSITY

FACILITIES PLANNING and MANAGEMENT
SHOWALTER BUILDING
3401 N. TILLOTSON
765-285-5082

CERTIFIED

REVISIONS

PROJECT NAME

TELECOM STANDARDS
EXAMPLE PLANS AND DETAILS

BSU PROJECT NUMBER:
2017 XXX.01 XX
DATE: 09.18.18

DESIGNER: BCB
DRAFTER: BCB
SCALE: AS NOTED

SHEET TITLE

EXAMPLE DETAILS

SHEET NO.

E800

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