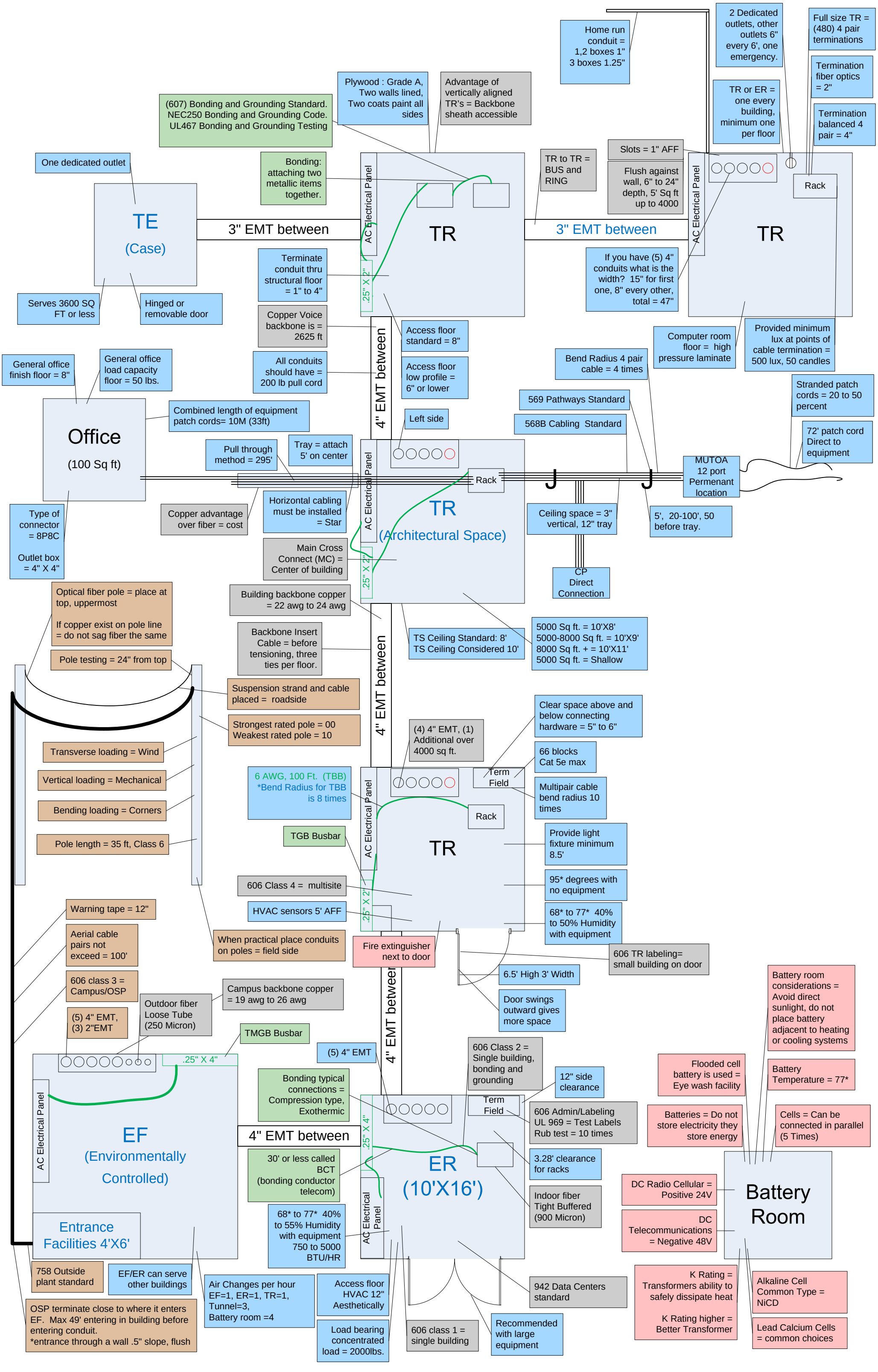
TE
(Case)
One dedicated outlet
Serves 3600 SQ FT or less
Hinged or removable door
3" EMT between
TR
AC Electrical Panel
.25" X 2"
Bonding: attaching two metallic items together.
(607) Bonding and Grounding Standard. NEC250 Bonding and Grounding Code. UL467 Bonding and Grounding Testing
Plywood : Grade A, Two walls lined, Two coats paint all sides
Advantage of vertically aligned TR's = Backbone sheath accessible
Terminate conduit thru structural floor = 1" to 4"
Copper Voice backbone is = 2625 ft
All conduits should have = 200 lb pull cord
Access floor standard = 8"
Access floor low profile = 6" or lower
Left side
4" EMT between
Home run conduit = 1,2 boxes 1" 3 boxes 1.25"
2 Dedicated outlets, other outlets 6" every 6', one emergency.
Full size TR = (480) 4 pair terminations
Termination fiber optics = 2"
TR or ER = one every building, minimum one per floor
Termination balanced 4 pair = 4"
Slots = 1" AFF
Flush against wall, 6" to 24" depth, 5' Sq ft up to 4000
TR to TR = BUS and RING
Rack
3" EMT between
TR
If you have (5) 4" conduits what is the width? 15" for first one, 8" every other, total = 47"
Computer room floor = high pressure laminate
Provided minimum lux at points of cable termination = 500 lux, 50 candles
Bend Radius 4 pair cable = 4 times
569 Pathways Standard
568B Cabling Standard
Stranded patch cords = 20 to 50 percent
72' patch cord Direct to equipment
MUTOA 12 port Permenant location
5', 20-100', 50 before tray.
Ceiling space = 3" vertical, 12" tray
CP Direct Connection
General office finish floor = 8"
General office load capacity floor = 50 lbs.
Office
(100 Sq ft)
Combined length of equipment patch cords= 10M (33ft)
Pull through method = 295'
Tray = attach 5' on center
Type of connector = 8P8C
Outlet box = 4" X 4"
Copper advantage over fiber = cost
Horizontal cabling must be installed = Star
Rack
TR
(Architectural Space)
Main Cross Connect (MC) = Center of building
Building backbone copper = 22 awg to 24 awg
Backbone Insert Cable = before tensioning, three ties per floor.
TS Ceiling Standard: 8'
TS Ceiling Considered 10'
5000 Sq ft. = 10'X8'
5000-8000 Sq ft. = 10'X9'
8000 Sq ft. + = 10'X11'
5000 Sq ft. = Shallow
Optical fiber pole = place at top, uppermost
If copper exist on pole line = do not sag fiber the same
Pole testing = 24" from top
Suspension strand and cable placed = roadside
Strongest rated pole = 00
Weakest rated pole = 10
Transverse loading = Wind
Vertical loading = Mechanical
Bending loading = Corners
Pole length = 35 ft, Class 6
(4) 4" EMT, (1) Additional over 4000 sq ft.
Clear space above and below connecting hardware = 5" to 6"
66 blocks Cat 5e max
Term Field
Multipair cable bend radius 10 times
6 AWG, 100 Ft. (TBB)
*Bend Radius for TBB is 8 times
TGB Busbar
Rack
TR
Provide light fixture minimum 8.5'
606 Class 4 = multisite
95* degrees with no equipment
HVAC sensors 5' AFF
68* to 77* 40% to 50% Humidity with equipment
Warning tape = 12"
Aerial cable pairs not exceed = 100'
When practical place conduits on poles = field side
Fire extinguisher next to door
606 TR labeling= small building on door
6.5' High 3' Width
Door swings outward gives more space
606 class 3 = Campus/OSP
(5) 4" EMT, (3) 2"EMT
Outdoor fiber Loose Tube (250 Micron)
Campus backbone copper = 19 awg to 26 awg
TMGB Busbar
(5) 4" EMT
606 Class 2 = Single building, bonding and grounding
Bonding typical connections = Compression type, Exothermic
12" side clearance
Term Field
606 Admin/Labeling UL 969 = Test Labels Rub test = 10 times
4" EMT between
30' or less called BCT (bonding conductor telecom)
3.28' clearance for racks
Indoor fiber Tight Buffered (900 Micron)
ER
(10'X16')
68* to 77* 40% to 55% Humidity with equipment 750 to 5000 BTU/HR
EF
(Environmentally Controlled)
Entrance Facilities 4'X6'
.25" X 4"
Battery room considerations = Avoid direct sunlight, do not place battery adjacent to heating or cooling systems
Flooded cell battery is used = Eye wash facility
Battery Temperature = 77*
Batteries = Do not store electricity they store energy
Cells = Can be connected in parallel (5 Times)
Battery Room
DC Radio Cellular = Positive 24V
DC Telecommunications = Negative 48V
758 Outside plant standard
EF/ER can serve other buildings
Air Changes per hour EF=1, ER=1, TR=1, Tunnel=3, Battery room =4
Access floor HVAC 12" Aesthetically
942 Data Centers standard
K Rating = Transformers ability to safely dissipate heat
K Rating higher = Better Transformer
Alkaline Cell Common Type = NiCD
Lead Calcium Cells = common choices
OSP terminate close to where it enters EF. Max 49' entering in building before entering conduit.
*entrance through a wall .5" slope, flush
Load bearing concentrated load = 2000lbs.
606 class 1 = single building
Recommended with large equipment