

Local Area Network Proposal

**Prepared by CIS Department
Personnel for**

ABC Labs, Inc.

Sample LAN Design and Proposal
by Ann Gordon
1997

LAN Designs

- **Physical LAN Design**

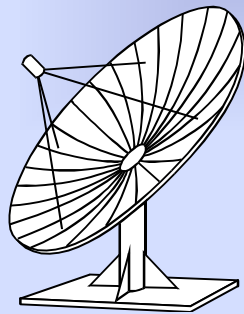
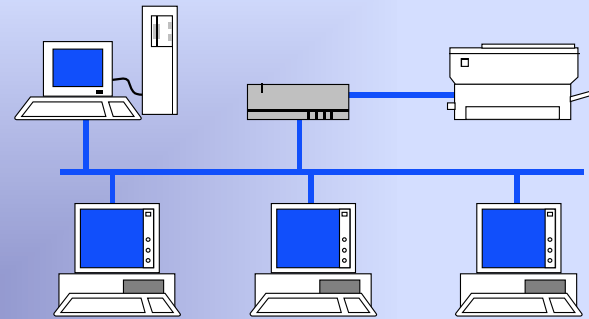
LAN Requirements

Legend

Building 1, Floor 1

Building 1, Floor 2

Building 2



- **Logical LAN Design**

LAN Specifications

Logical LAN Design

Physical LAN Design Requirements

| Department | Building | # Area (meters) | Nodes | Work Type |
|---------------------|----------|-----------------|-------|--|
| Admin. | 1 | 20 x 60 | 50 | Office |
| Sales | 1 | 10 x 30 | 10 | Office |
| Accounting | 1 | 20 x 60 | 5 | Office |
| Engineering/ CAD | 1 | 30 x 90 | 25 | Design and Database (20) Office (5) |
| Testing | 1 | 20 x 60 | 35 | Data Acquisitions, Multimedia Testing, Database, Testing Stations (30) Office (5) |
| Manufacturing | 2 | 100 x 250 | 75 | Robotics (60) Data Collection (10) Office (5) |

Legend for Physical LAN Design



Slower Pentium PCs



Testing Station



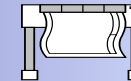
Faster Pentium PCs



Laser Printer



Robotics PCs



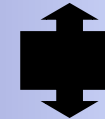
Plotter



WinNT Server



CD Burner Station



Intelligent Hub



10/100Base-TX Switch



Fed Ex Station



155 Mbps Fiber cable



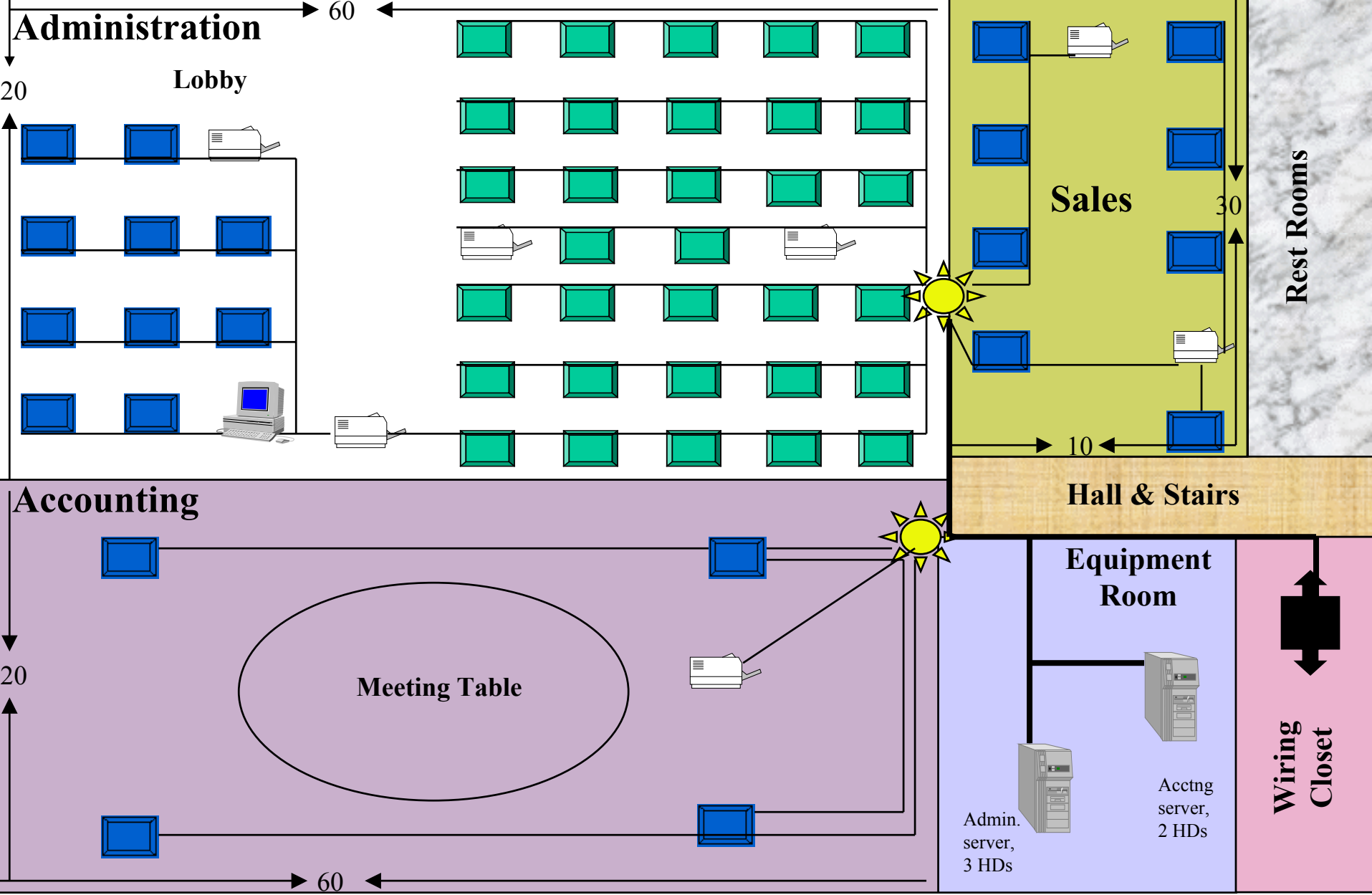
100Mbps Backbone Cable



2 pair UTP Category 3



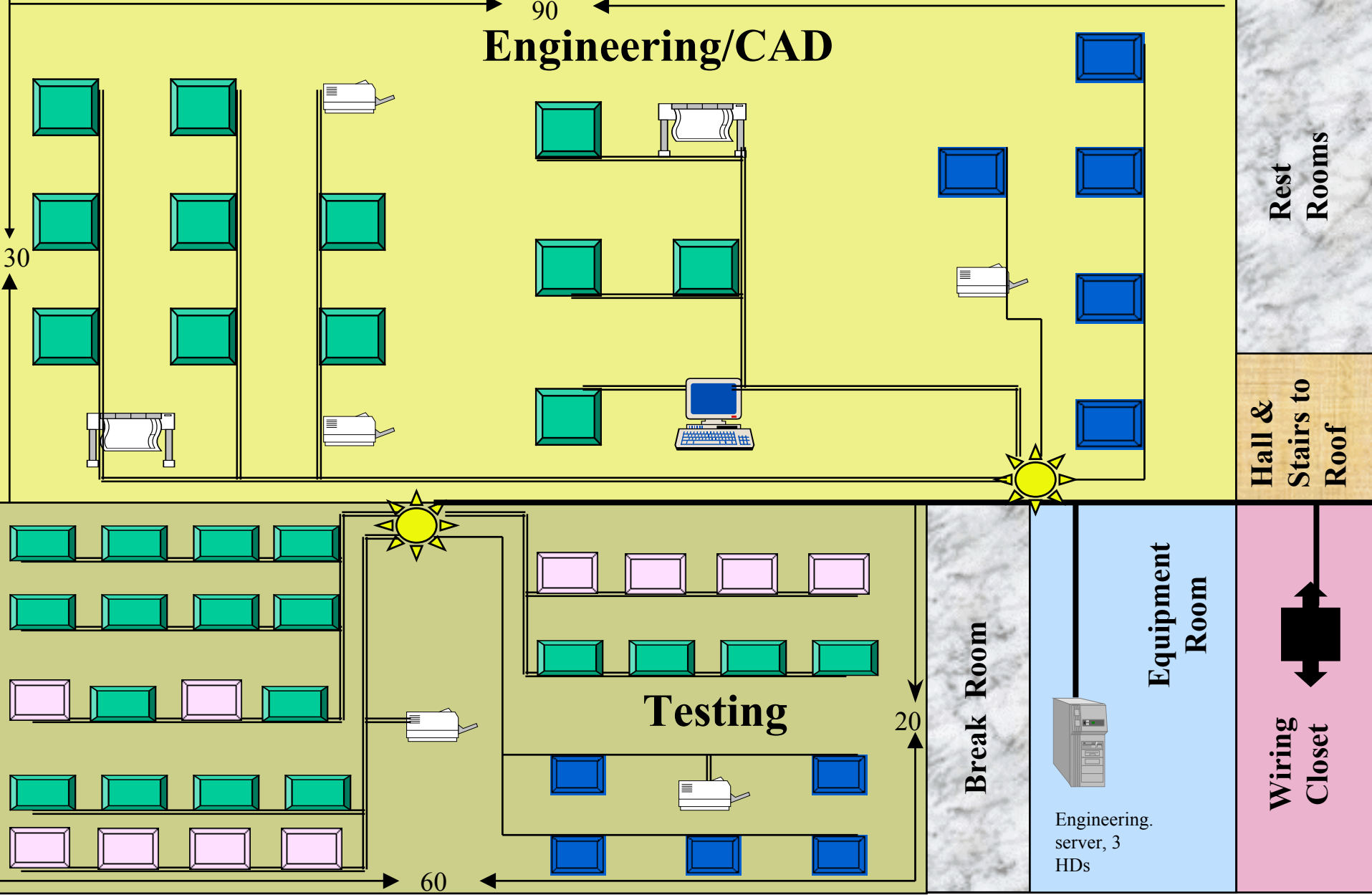
4 pair UTP Category 3



Building 1 - First Floor

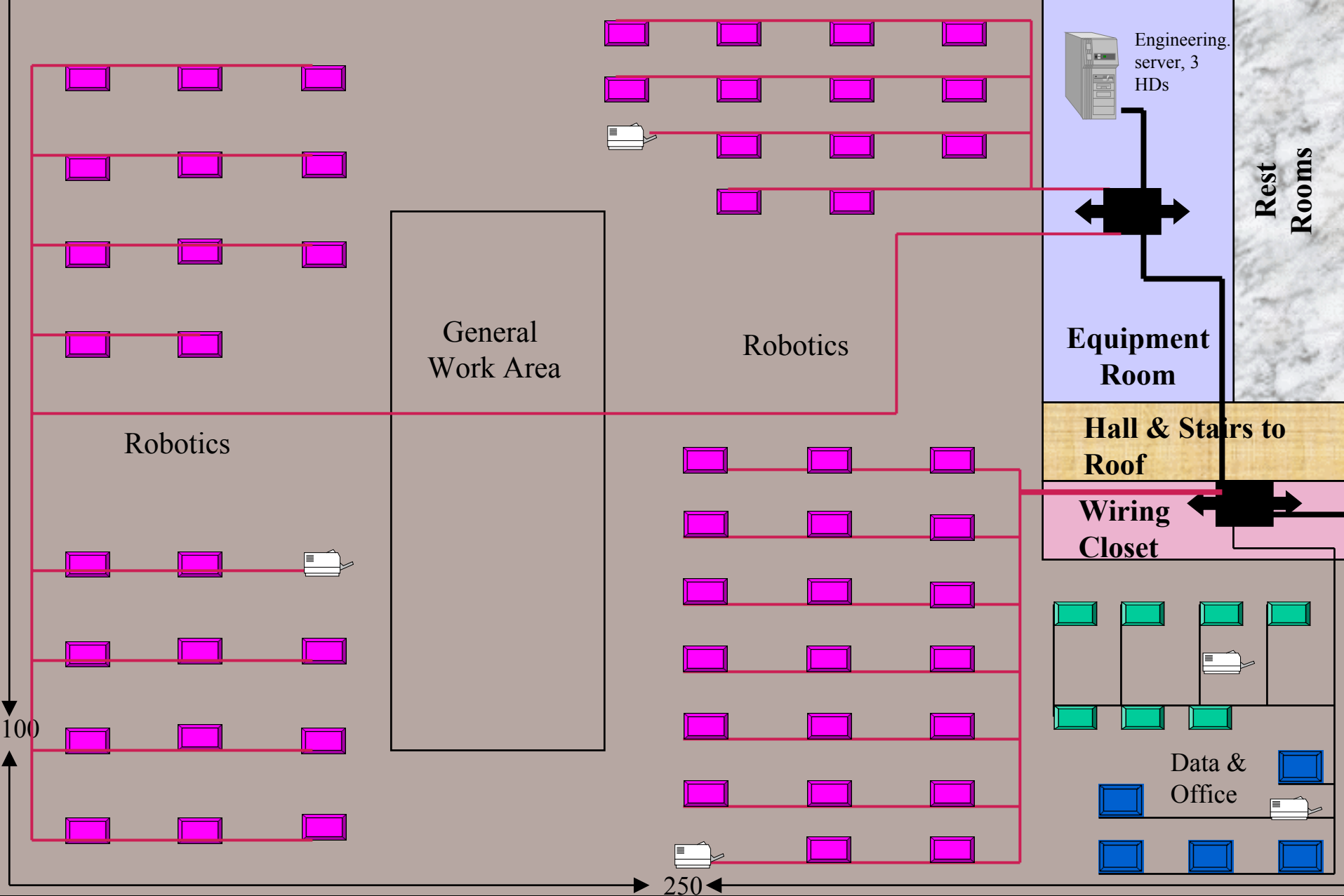
Physical LAN Design


To Legend



Building 1 - 2nd Floor

Physical LAN Design



Building 2 - Manufacturing

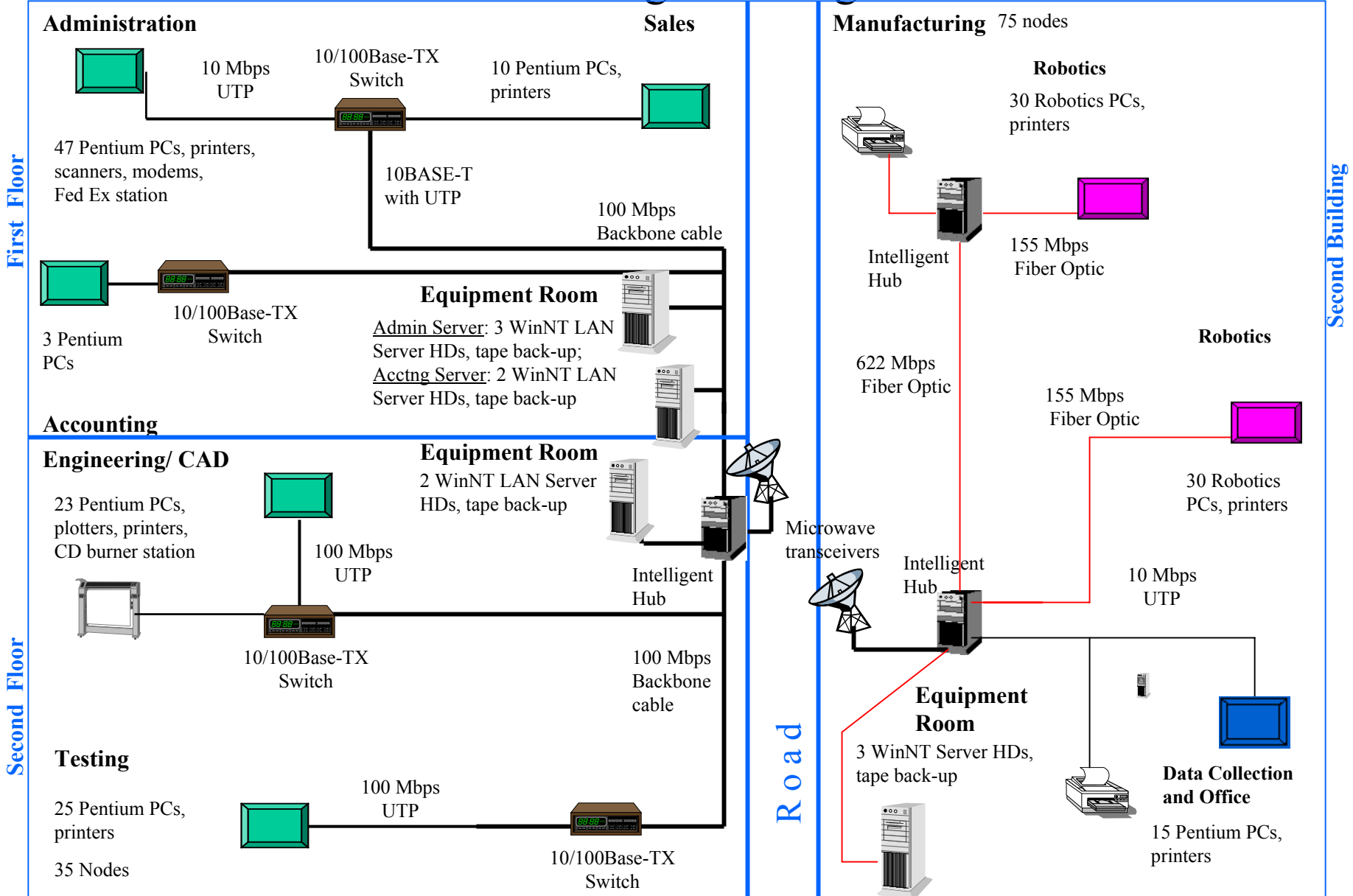
Physical LAN Design

To Legend

Logical LAN Specifications

| Depart. | Location | # of PCs | Type of PCs | Other Node Devices | Network Servers | Total # Nodes in Area | Cabling |
|-------------------|--------------------|----------|---|--|---|-----------------------|--|
| Admin. | Bldg. 1 Floor 1 | 42 | 27 Pentium PCs, 5 Laptop PCs, 10 slower PCs | 4 printers, 1 FedEx station | 3 WinNT servers | 50 | 10Base-T over 2 pairs of existing UTP - Category 3 |
| Sales | Bldg. 1 Floor 1 | 8 | 5 Pentium PCs, 3 Laptop PCs | 2 printers | Use Admin and Acctng servers | 10 | 10Base-T over 2 pairs of existing UTP - Category 3 |
| Acctng | Bldg. 1 Floor 1 | 3 | 3 Pentium PCs | 1 printer | 1 WinNT server | 5 | 10Base-T over 2 pairs of existing UTP - Category 3 |
| Engineer./ CAD | Bldg. 1 Floor 2 | 17 | 12 Pentium PCs 5 slower PCs | 2 Plotters, 2 printers, 1 CD burner | 3 WinNT servers, also used by Testing | 25 | 100Mbps over 4 pairs of existing UTP, and Existing UTP 2 pair - Category 3 |
| Testing | Bldg. 1 Floor 2 | 23 | 10 Multimedia PCs 8 Pentium PCs, 5 slower PCs | 2 printers, 10 Empty Testing nodes | | 35 | 100Mbps over 4 pairs of existing UTP, and Existing UTP 2 pair - Category 3 |
| Manufact. | Bldg. 2 | 67 | 55 Robotics PCs, 7 Pentium PCs, 5 slower PCs | 5 printers | 3 WinNT servers | 75 | Stranded Loose Tube Indoor/Outdoor Fiber Cable, and Existing UTP - Category 3 |

LAN Logical Design



Summary

- The CIS Department Personnel believe this LAN proposal offers the following:
 - innovation
 - up-to-date technology
 - flexibility
 - upgradability
- All efforts were made to assist our new enterprise in remaining competitive while considering cost effectiveness for ABC Labs, Inc.