

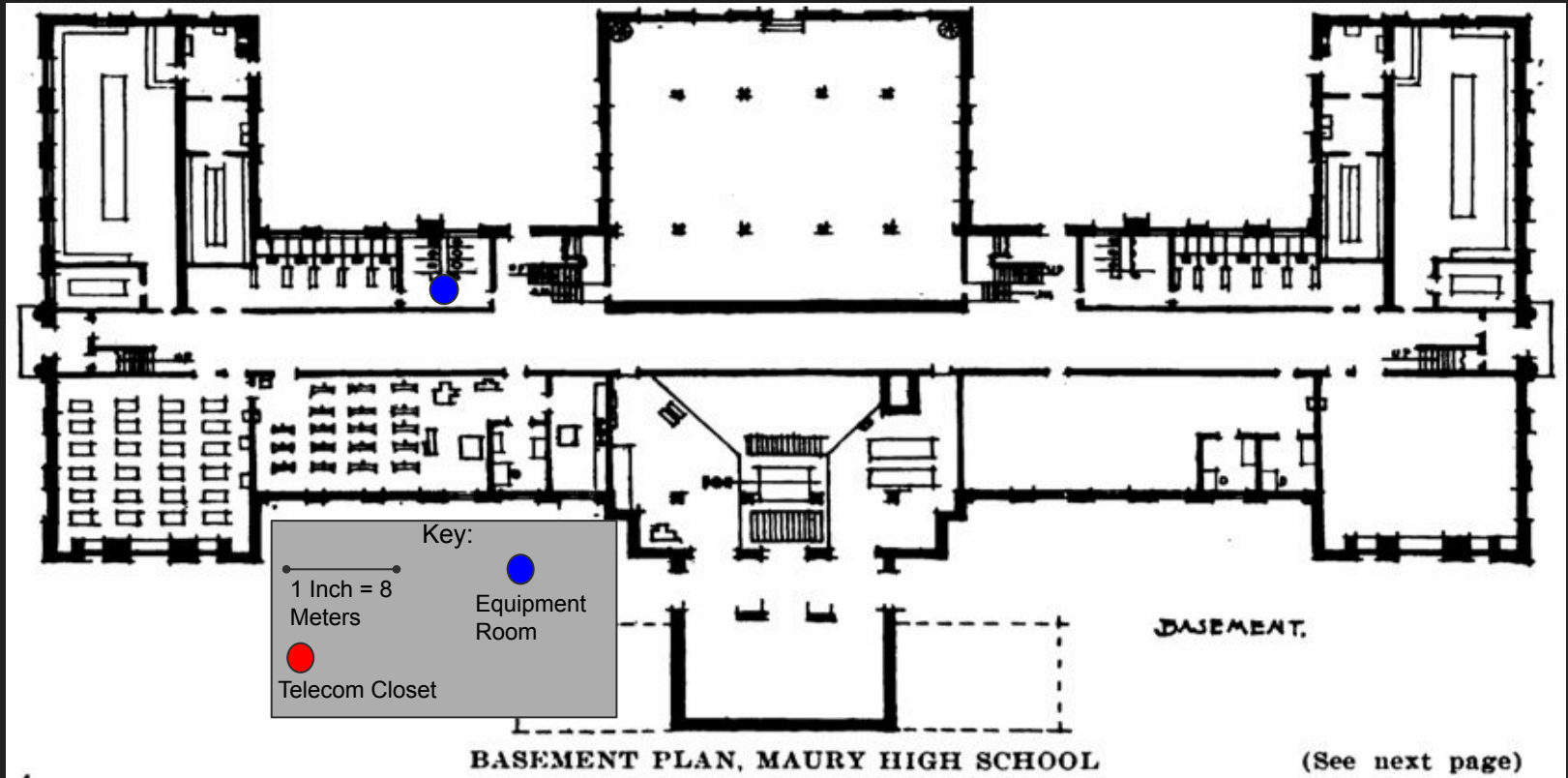
Case Analysis

Justin Landolina
April 24, 2022

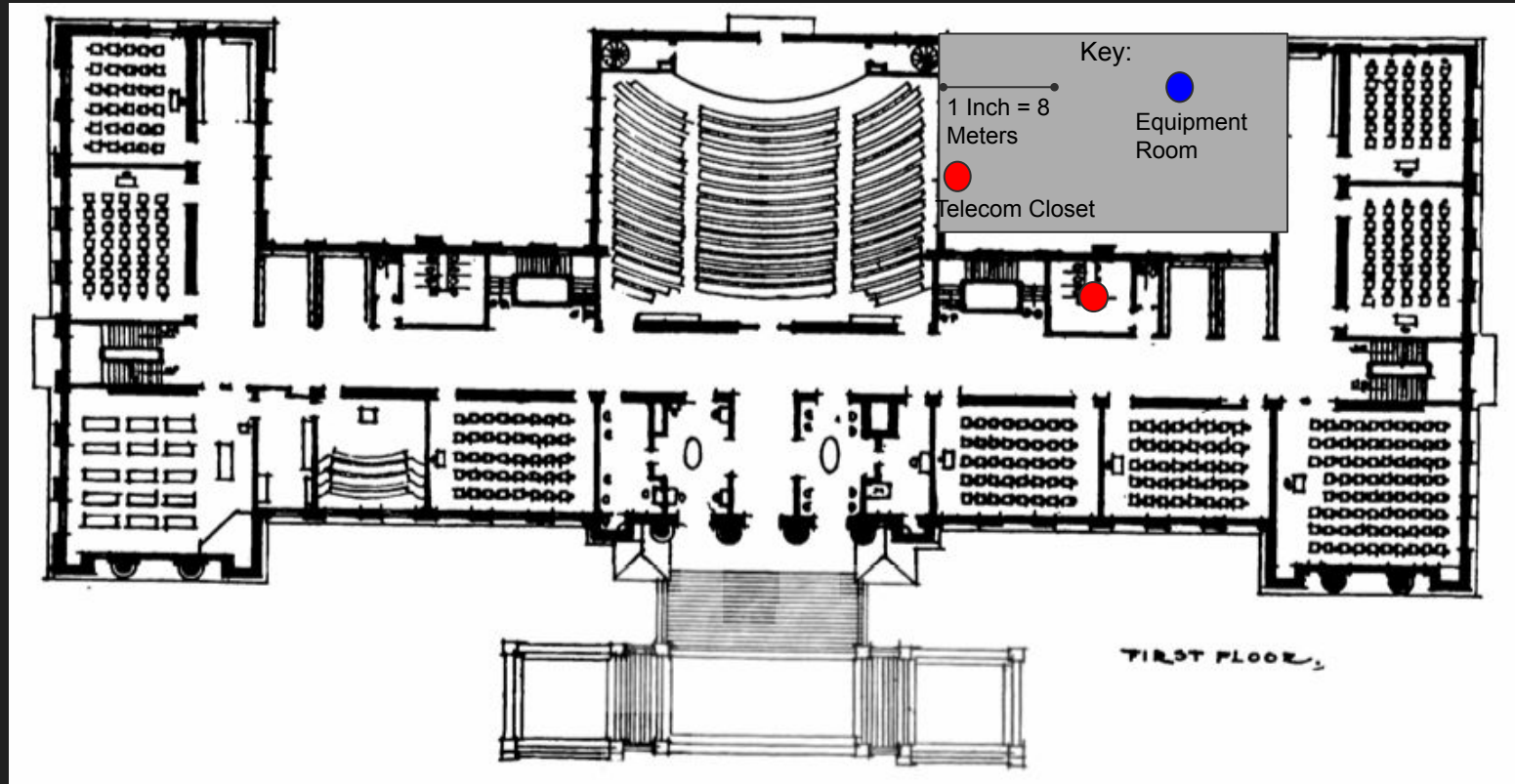
Budget

	Quantity	Price-per-unit	Total
Cat 5e Cable	14	\$84.99	\$1189.86
Ethernet Faceplates	61	\$7.50	\$457.50
Patch Panel	8	\$45.90	\$367.20
Managed Switches	5	\$495.00	\$2475.00
Core Switch	1	\$1855.52	\$1855.52
Fiber Optic	2	\$59.22	\$118.44
Firewall	1	\$4330.00	\$4330.00
Grand Total			\$10,793.52

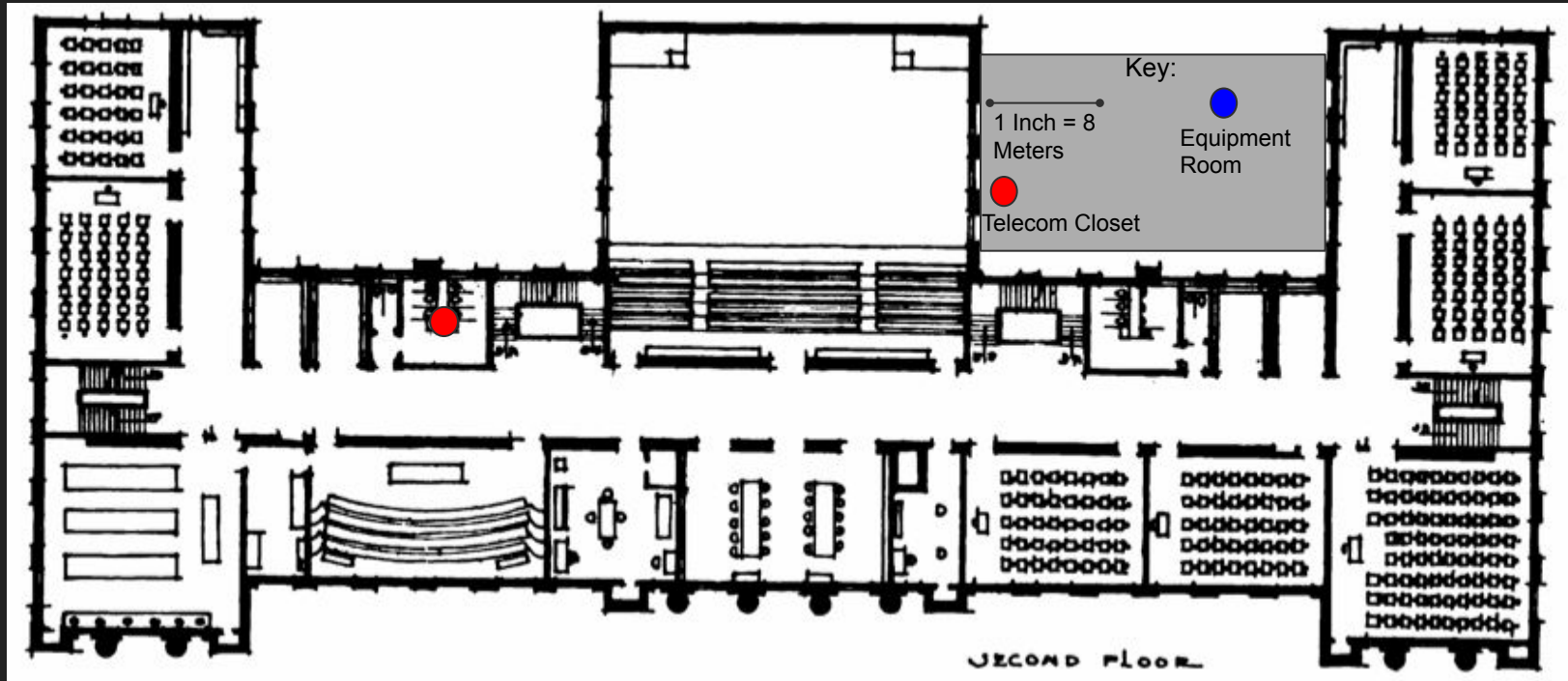
Basement



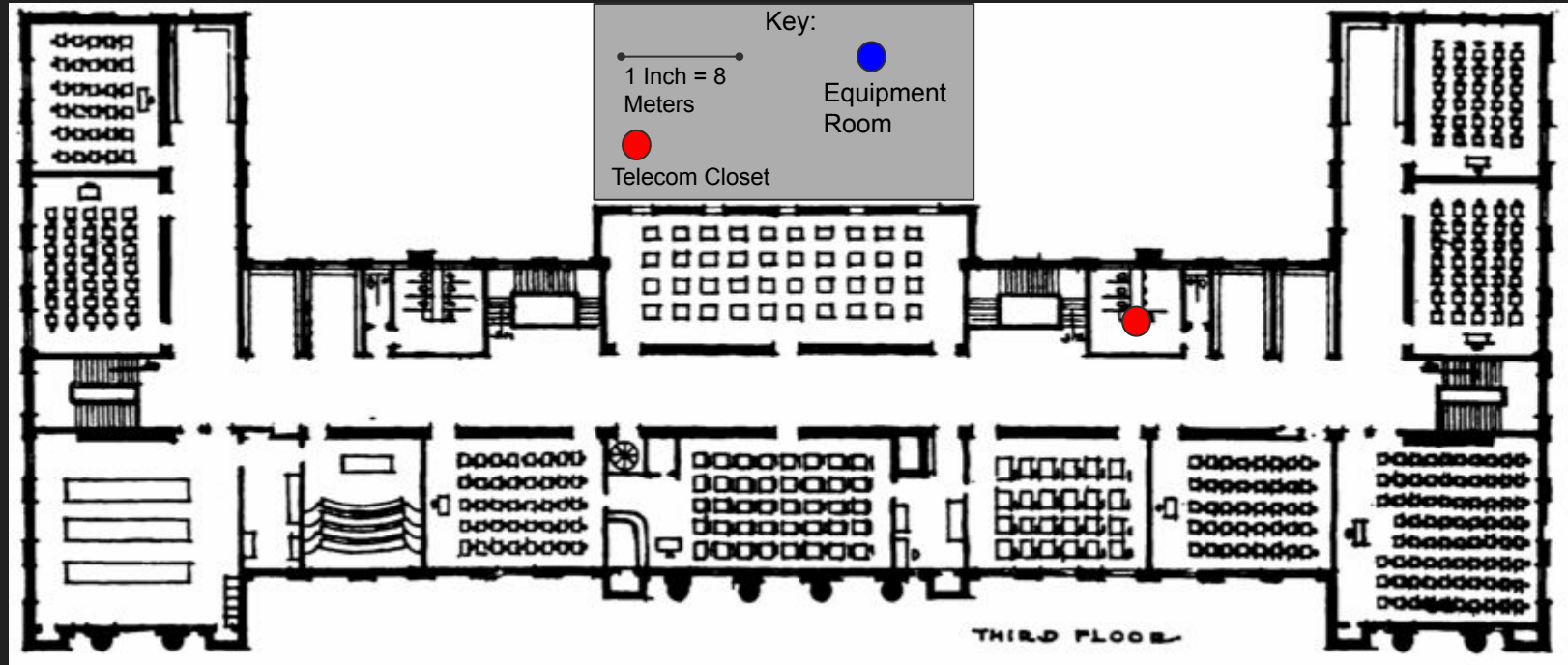
First Floor



Second Floor



Third Floor



Wiring

Basement Equipment Room: Shortest run, 5 meters. Longest run, 64 meters. Average, 35 meters. 36 cables (18 rooms) running to the basement equipment room totaling 1260 meters.

First Floor Telecom Closet: Shortest run, 8 meters. Longest run, 48 meters. Average, 28 meters. 34 cables (17 rooms) running to the first floor closet totaling 952 meters.

Second Floor Telecom Closet: Shortest run, 5 meters. Longest run, 64 meters. Average, 35 meters. 28 cables (14 rooms) running to the second floor closet totaling 980 meters.

Third Floor Telecom Closet: Shortest run, 8 meters. Longest run, 64 meters. Average, 36 meters. 24 cables (12 rooms) running to the third floor closet totaling 864 meters.

Trunk Lines Between Floors: Equipment room to first floor, 50 meter fiber. Equipment room to second floor, 10 meter fiber. Equipment room to third floor, 60 meter fiber.

TOTAL: 4056 meters of category 5e Ethernet cable, 120 meters of fiber-optic cable

Equipment

Basement Equipment Room: Core Switch, Firewall, One TP-Link 48-Port Gigabit L2 Managed Switch, two 24 port patch panels

First Floor Telecom Closet: Two TP-Link 48-Port Gigabit L2 Managed Switches, two 24 port patch panels

Second Floor Telecom Closet: One TP-Link 48-Port Gigabit L2 Managed Switch, two 24 port patch panels

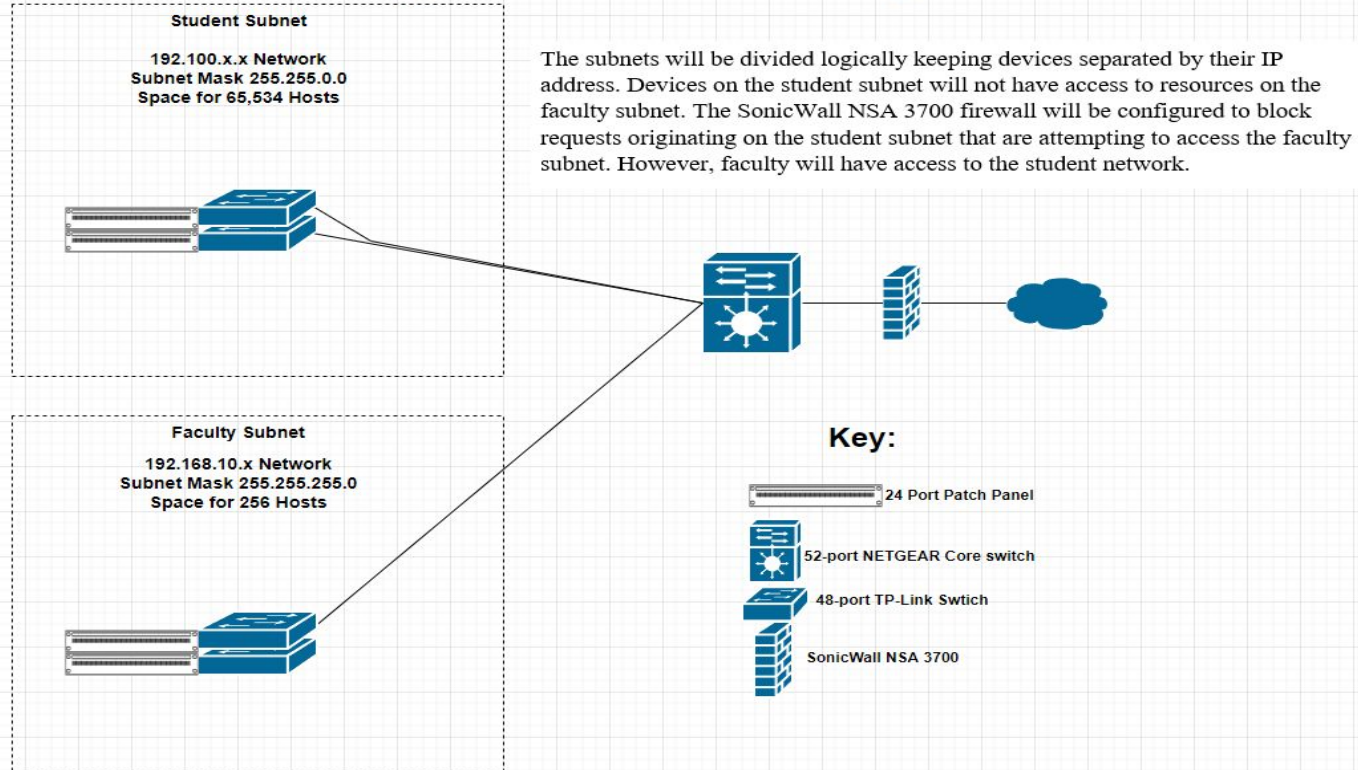
Third Floor Telecom Closet: One TP-Link 48-Port Gigabit L2 Managed Switch, two 24 port patch panels

Firewall

<https://www.sonicguard.com/NSA-3700.asp>

SonicWall NSA 3700

Logical Network Diagram



Pricing Information Sources

- <https://www.amazon.com/VIVO-Cat5e-Ethernet-Cat-5e-CABLE-V001/dp/B0092TG31>
 - Cat 5e Ethernet Cable
- <https://www.amazon.com/Cable-Matters-2-Port-Keystone-Ethernet/dp/B07LCT2Z3W>
 - Two port faceplate, Cat 5e compatible
- https://www.amazon.com/Keystone-Support-Rapink-Pass-Thru-Removable/dp/B09FZKHH2G/ref=sr_1_3?keywords=Network%2BPatch%2BPanel&qid=1644169390&sr=8-3&th=1
 - 24 port Patch Panel
- <https://www.newegg.com/p/0XP-001U-000V1>
 - TP-Link 48-Port Gigabit L2 Managed Switch
- <https://www.newegg.com/netgear-gsm4352s-100nes-48-port-1000base-t-2-port-10gbase-t-all-independent-2-port-10gbase-x-all/p/N82E16833122835>
 - NETGEAR Gigabit Managed 52-Port Core Switch
- <https://www.amazon.com/Meter-Multimode-Duplex-Fiber-Optic/dp/B00551K11C>
 - Fiber optic Cable

Network Diagram

