Subnetting will be done in the following order: LAN B, LAN E, LAN D, LAN C, LAN A, Point-to-point Link 1, Point-to-point Link 2.

LAN B is the first subnet, so its address will be the major Network Address: 48.201.0.0

Let n be the minimum number of host bits needed to accommodate 1500 + 2 = 1502 hosts on LAN B. Then: 2n ≥ 1502 => n = 11.

With 11 bits reserved for the host portion, 32 – 11 = 21 bits remain for the mask. As such, the subnet mask is /21.

Flipping the last 11 bits of LAN B’s subnet address from 0 to 1, we get its broadcast address, which is 48.201.7.255.

The address of the next subnet (LAN E) will immediately follow, which is 48.201.8.0

To accommodate 300 + 2 = 302 hosts on LAN E, a minimum of 9 host bits is needed.

The mask will receive 32 – 9 = 23 bits. As such, the subnet mask is /23

LAN E’s broadcast address is 48.201.9.255

Repeating the above process for subsequent subnets, we get the following results:

LAN D’s subnet address: 48.201.10.0

LAN D’s host bits: 8

LAN D’s mask: /24

LAN D’s broadcast address: 48.201.10.255

LAN C’s subnet address: 48.201.11.0

LAN C’s host bits: 6

LAN C’s mask: /26

LAN C’s broadcast address: 48.201.11.63

LAN A’s subnet address: 48.201.11.64

LAN A’s host bits: 4

LAN A’s mask: /28

LAN A’s broadcast address: 48.201.11.79

Point-to-point link 1’s subnet address: 48.201.11.80

Point-to-point link 1’s host bits: 2 (we need 4 addresses, two usable for the routers, one for the subnet, and one for the broadcast)

Point-to-point link 1’s mask: /30

Point-to-point link 1’s broadcast address: 48.201.11.83

Point-to-point link 2’s subnet address: 48.201.11.84

Point-to-point link 2’s host bits: 2 (we need 4 addresses, two usable for the routers, one for the subnet, and one for the broadcast)

Point-to-point link 2’s mask: /30

Point-to-point link 2’s broadcast address: 48.201.11.87

In summary, the subnet addresses and masks of the subnets are:

* LAN B: 48.201.0.0/21
* LAN E: 48.201.8.0/23
* LAN D: 48.201.10.0/24
* LAN C: 48.201.11.0/26
* LAN A: 48.201.11.64/28
* Point-to-point link 1: 48.201.11.80/30
* Point-to-point link 2: 48.201.11.84/30