Currently this FAQ is a running list of questions. As we get more questions, we will organize them into categories.

Can we assume that there are a consistent 45 buses reserved for failure recovery?

It's fine to work with that assumption, yes. But remember: a good design can respond well to changing requirements. If your design relies on exactly 45 buses being available at all times — not, say, 44 — it's not going to respond well to changing requirements.

Can bus routes share a stop? How does that affect the route's frequency constraint?

Bus routes can share a stop (think, e.g., about multiple bus routes that pass through Kendall Square). If route $x$ includes stop $y$, then route $x$ must service stop $y$ roughly every twenty minutes.

Can security cameras see the entire bus?

Yes. In terms of counting passengers, though, there will always be configurations that are hard to deal with (e.g., a short passenger surrounded by multiple hard cameras is difficult to see even if cameras capture multiple view angles).

The passenger-count data is 95-98% accurate? What does that mean? What other information do we have about the algorithms?

95-98% of the time, the passenger-count data is correct. You know nothing about what happens the remainder of the time, but it's reasonable to assume that it's not ridiculous (it won't report, e.g., 100 people on a bus with two passengers).

Can we re-run the computer-vision algorithms to get more accurate data?

Assume that those algorithms are as accurate as they can get at this point. Designing better computer-vision algorithms is a project for another class (and allocating more hardware resources to computer-vision algorithms is not something the MBTA can afford).

Are we expected to verify payments (e.g., reject passengers with empty Charlie Cards)?
No. You’re not responsible for handling customer payments, though you may (or may not!) find that data useful.

In the MBTA warehouse, a single server handles receiving/transmitting data — Who specifies which server that is?

You do, as part of your design.

Is 446,700 daily bus passengers an average or a maximum?

Average.

Do we have to worry about non-MBTA users impersonating buses (i.e., do we have to worry about authentication the bus connections with the MBTA warehouse)?

No. You can assume an authentication protocol is already in place.