

Title: Fixed Network Facilities – In-building and External

No.	Question	Response
1.	JB13 usually used for 4 houses, can it be used for more than 4 houses?	Yes, it should be ok as long as the manhole has dedicated ducting to each house.
2.	For fibre testing, which one is better, using 1310 or 1150?	Using 1310 is better since it is less bending sensitivity.
3.	How can we determine the cable is low smoke halogen?	Manufacturer shall able to determine the cable is low smoke zero halogen type.
4.	For fibre testing method, is there any specific method to be used?	Yes but not limited to using OLTS, Power Meter or OTDR.
5.	How to identify if the fibre certified or not?	The fibre shall be provided by the certified supplier.
6.	Is high rise building/ commercial building also comply at 2.3 dB loss?	Yes, the loss 2.3 dB is good for the underground but it is also good for the high-rise building.
7.	Do we have any SIRIM standards for the fibre cable?	Not specifically on SIRIM standards, but other international standards are also allowed to be used.
8.	Is the height of FTB for residential house and shop lot development fixed to be 2m?	To comply with OSH, range of height shall be from 2m to 3m. To avoid from vandalisme or damage, FTB shall be installed at a minimum of 2m height.
9.	Can we place FTB inside the landed house unit?	It is recommended to put FTB outside the landed house because FTB serves as a demarcation point for troubleshooting between internal and external.
10.	Is the Local Council or JKR approved for cable or pipe crossing the drain?	In the current TC, we allowed the cable or pipe crossing the drain in case for the big drain. However, for the small drain it is not advisable. The WG takes note of the current situation in which the Local Council and JKR are not allowed to cross the drain. WG will discuss and revise this requirement.

Title: Basic Civil Works Requirement

No.	Question	Response
1.	SPAN has informed Telco not to use blue colour coding for HDPE pipe since it was dedicated for water.	Agreed, this is the reason why these TCs were developed. From now onward Telco will use yellow colour coding
2.	Can the system of CBYD be shared to JKR as the owner of the road?	JKR should have access to CBYD, hence JKR can make further contact to MAFB for registration.
3.	If the manhole maximum distance is 250 m, is it allowed to extend the distance due to the hill site?	Can extend up to 300 m depends on the location, methods and cable type used.
4.	Is it necessary to remill after the microtrench process? There is guideline on this from Local Council	No need to remill since the open is too small. Further discussion to be made with that Local Council and to provide recommendations based on this TCs.
5.	If I am the road contractor, how can I identify/mark on any fibre way on the road site?	No clear marking and indicator, refer to manhole location as a guidance to predict the location of the cable.
6.	What is the maximum distance between manhole to manhole? JC9C to JC9C?	Regardless of any manhole size, the distance is between 50m to 250m
7.	Is it compulsory to have ducts to be 1500 mm depth? because there are a lot of other services at that level, and the telephone duct location is around 3 ft.	Previous it was 1200 mm. Currently we are adopting 1500 mm as specified by JKR. Different depth is allocated for different utilities.
8.	Is there any specifications for the manhole cover because most of the cases happen it is due to manhole cover crack?	Yes, we have the specification on the manhole cover loading in the TC. The broken portion is most probably due to mishandling or unmatched specification.
9.	Is there any problem if the fibre cable from the service providers is sorting parallelly? For example, the lowest layer is TNB cable, then above TNB cable is TM cable while above TM cable is Celcom cable?	For TNB, it is in different layer. While for Telco - regardless TM or Celcom etc, they will share the same layer. Usually the cable will be put side by side or sometimes the opposite road side. In case of no available space, the newcomer will use a lower layer. WG will consider to include the spec for multi telco in the same route in the next TC revision.

Title: Technical Standards and Infrastructure Requirements: Radiocommunications Network Infrastructure (External)

No.	Question	Response
1.	Utk pembinaan tiang menara jenis monopole, bagaimana garis panduan pemasangannya?	Tiang Monopole biasa lebih tinggi dari tiang lampu biasa, i.e. 24m ke 34m, keperluan keselamatan adalah lebih ketat terutamanya "set-back". Iaitu keperluan jarak jauh orangramai atau rumah kediaman boleh berdekatan dengan sesuatu tapak monopole. Boleh rujuk garis panduan menara.
2.	Sekiranya ada permohonan permit di pbt perlu mendapatkan sokongan dari jabatan atau agensi utk keselamatan yang terlibat ke?	Kebenaran agensi selain PBT adalah JKR, Bomba, TNB dan MCMC.
3.	Bagaimana dengan kawasan lapangan terbang yang ditetapkan ada had maksimum untuk pemasangan Pole. Adakah cadangan alternative lain untuk isu ini?	<p>Boleh letakkan pole yang tinggi seperti lamp pole sedia ada. Untuk monopole yang tidak dibenarkan oleh DCA, boleh menggunakan saiz ketinggian bagi lamp pole di kawasan Airport.</p> <p>In most instance, airport does not have any pre-planned infra for outdoor cellular implementation. Airport planners in general do not incorporate such public needs and it is left for Authorities to plan the addition of cellular infrastructure only after an airport is built</p>
4.	1 monopole or lamp pole how far is the coverage?	Tertakluk kepada frekuensi yang ditetapkan dan digunakan. Cthnya 2G and 3G boleh meliputi kawasan sejauh beberapa Kilometer tetapi 5G kurang daripada 1 km. Pole yang rendah boleh meliputi kawasan yang kecil sahaja manakala pole yang tinggi boleh meliputi kawasan yang lebih besar.

Title: Radiocommunication Network Facilities – Smart Pole

No.	Question	Response
1.	Berapakah jarak antara 1 pole ke pole yang lain yang dibenarkan?	Tiada spesifik jarak yang ditetapkan di dalam TC ini tetapi ianya akan mengikut keperluan bilangan Smart Pole dan kebenaran daripada PBT.
2.	Untuk smartpole, ianya mandatori untuk ada fibre backhaul, adakah bermakna pole yang tiada fibre backhaul atau tidak mengguna pakai fibre tidak boleh dikategori sebagai smartpole?	<p>Didalam Technical Code ini ada menggariskan keperluan bagi setiap smart pole dilengkapi dengan fibre backhaul bagi memastikan “smart features” dapat digunakan dengan baik.</p> <p>Keperluan fibre penting untuk pelaksanaan alat pintar yang perlu internet kapasiti tinggi serupa CCTV, video dalam papan iklan, WiFi untuk rakyat ramai, etc.</p>
3.	Adakah PBT menyemak butiran ini semasa permohonan untuk permit/kebenaran?	Untuk melaksanakan pembinaan smart pole, PBT disarankan untuk merujuk kepada TC daripada MTSFB. Namun, ianya terpulang kepada PBT kerana PBT juga mempunyai kategori setiap struktur di atas tanah termasuk smart pole.
4.	Apakah cabaran utk telco menggunakan BTS hotel	<p>Hotel BTS ini adalah skop diluar Technical Code on Smart Pole. Hotel BTS adalah konsep di mana alat2 kabinet dikumpulkan di suatu tempat dan pemancar di setiap lokasi berlainan (lamp pole). Cabaran yang ada adalah design dan menarik backhaul daripada antenna sedia ada ke kabinet yang berdekatan. Kos juga adalah lebih mahal.</p> <p>Kekuatan pancaran rangkaian biasanya kurang jauhnya kerana frekuensi berbagai pihak telco akan dikumpul dalam pancaran antenna yang sama dan ini akan mengurangkan kekuatan pancaran.</p>
5.	Target when can have 5G for the whole Malaysia? if using 5G can we just just lamp pole instead of smart pole since we need to obtain 5G signal?	5G release date is depend on KKMM to decide, i.e. Federal govt. 5G system can be installed on all the different category of structure as listed in first presentation, not just smart pole, i.e. Tower, monopole, pbts, etc. Smart pole is one of structure that can also cater 5G install and with the addition of smart devices such as cctv, display board, etc
6.	Saya ingin tahu sama ada smart pole boleh sediakan infra 5G?	Yes smart pole can be used to install 5G and also older 4G n 3G too.
7.	berapakah jarak di antara setiap smart pole (jika ingin dijadikan sebagai lampu jalan) agar infra 5G dapat digunakan sepenuhnya oleh penduduk?	There is no limitation of distance between smart pole. They can be installed two at the same location if more or too many smart devices cannot be put in one pole. Since smart pole is normally same height as normal lamp pole, the distance will be same as standard lamp pole distance
8.	Is the max 15 m height for Smartpole is a mandatory? Because the height of the pole is based on the coverage requirement from operator.	Yes. Limit of 15 m is mandatory according to MTSFB guideline for reason of public safety and also need to be safe for public to approach the pole for services like electric charge of vehicle, pay cashless parking, press emergency button, etc... Application that requires people to be near to the pole. As mentioned if telco needs higher height to install system, they can choose a higher monopole or even tower to be build there if allowed by PBT

Title: Radiocommunications Network Facilities – Street Furniture

No.	Question	Response
1.	Perbezaan antara street furniture dan low impact facility	Street furniture atau perabut jalan adalah salah satu elemen di dalam low impact facility atau kemudahan berimpak rendah. Ianya merangkumi segala peralatan telekomunikasi yang dipasang dan struktur perabut jalan seperti perabut jalan yang sediaada, penggantian pada perabut jalan yang sediaada dan binaan perabut jalan yang baru seperti tiang lampu jalan yang berintegrasi bersama peralatan telekomunikasi dengan spesifikasi yang telah ditetapkan di dalam Kod Teknikal.

Title: Radiocommunications Network Facilities – In-Building

No.	Question	Response
1.	<p>Bagaimana industry dan PBT akan memberi liputan selular yang baik untuk pengguna lif dalam bangunan yang tinggi, lebih lagi dalam bangunan yang ada high-rise elevator di mana tiada ruang untuk memasang antena di lobi lif</p>	<p>Salah satu cara adalah dengan penggunaan leaky feeder didalam lift shaft, tertakluk kepada kelulusan JKPP, Bomba, dan pihak berwajib yang lain.</p> <p>Penggunaan leaky feeder atau radiating feeder ini telah di guna pakai di negara lain, sebagai contoh di Shanghai Tower</p> <p>https://www.microwavejournal.com/articles/20914-rfs-radiating-cables-enable-communications-in-chinas-tallest-building</p> <p>solution kedua adalah dengan menggunakan repeater di dalam lift cart dan sebuah panel antenna di bahagian paling atas,tengah, bawah tertakluk kepada ketinggian. Ini juga tertakluk kepada kelulusan pihak berwajib</p> <p>Yang ketiga adalah melalui penggunaan small cell di lift cart. Ini juga tertakluk kepada kelulusan pihak berwajib</p>
2.	<p>Ada apa2 inisiatif untuk membolehkan telco atau pemilik bangunan ubah regulation yang akan membolehkan pemasangan leaky cable dalam lif shaft buat masa ini</p>	<p>Telco have approached Jabatan berwajib pada tahun 2018, dan contoh pemasangan di shanghai tower telah dikepilkan bersama tetapi masih direject.</p>
3.	<p>In Building Coverage is one of the requirements for building to gain CCC?</p>	<p>No at the moment but hopefully in the future it will include as one of the requirements for CCC. As we know, now days mobile coverage is part of the essential services as important as water and electric supply.</p>
4.	<p>what is the maximum service provider allowed for 1 antenna? 1 antenna coverage area?</p>	<p>Theoretically, maximum is 3 signals are allowed to avoid the intermodulation.</p> <p>The telcos have tested in which, there were 5 operator combined in 1 das via Point of Interchange (PoI) at a Mall in Shah Alam and so far, the interference able to be mitigated.</p> <p>On the 1 antenna coverage area, it's dependent on the frequency use, as lower the frequency, the lamda or the area will be larger. It's also depending on the link budget calculated during the das design</p>
5.	<p>Any equipment to test the signal strength? SI unit in dB or dBm?</p>	<p>The usual tools for coverage testing used is Nemo, there were also many more brand used in the industries.</p> <p>For a surface check, user can use a free apps from Play store ie netmonitor or g-net track</p> <p>The unit for coverage strength is dBm</p>
6.	<p>Liputan dalam bangunan tidak bermaksud perlu ada in-building system. Bagaimana/bila untuk menilai sama ada in-building system diperlukan atau tidak?</p>	<p>Beberapa faktor perlu diambil kira sebab itu ia masih belum dimasukkan di dalam keperluan CCC. Sesetengah bangunan tidak perlu in-building kerana bangunan itu sudah boleh dicapai oleh liputan daripada BTS yang terdekat.</p>

No.	Question	Response
	Siapa yang layak membuat penilaian tersebut?	<p>Faktor investment atau cost juga adalah salah satu faktor untuk diambil kira, kerana system ibc memerlukan modal yang agak besar jika dibandingkan dengan outdoor site. Buat masa sekarang, pihak SP akan sedaya upaya untuk memberikan coverage melalui outdoor site.</p> <p>Mencadangkan jika mobile coverage dapat dimasukkan sebagai salah sebuah keperluan CCC, di mana kita boleh copy paste seperti mana pihak fix lined lakukan, infra ibc bolehlah di sediakan oleh pemaju bangunan dan pihak sp boleh menggunakan infra tersebut.</p>

Q&A Session End
