Telecommunications and Coastal Permits for AT&T Wireless Telecommunication Sites

Response to Comments and Questions Raised by the City Council and the Public at the Meeting of August 15, 2017 and in Subsequent Correspondence

1. Explain why/how the locations for sites have been chosen.

The purpose of the proposed project is to improve AT&T's wireless telecommunications service throughout the beach portion of the City of Manhattan Beach. In the beach portion of the City generally east of Valley Drive, there are many areas that are not served by AT&T's wireless network due to varying topography. The use of a small-scale distributed antenna system (DAS) will close these gaps in service coverage as part of AT&T's wireless network.

Over the last few decades, jurisdictions have requested that the wireless industry move towards coverage solutions that are smaller in scale with fewer antennas. This proposed DAS project accomplishes the goal of minimizing the size of wireless antenna facilities to serve an area using smaller and fewer antennas and reduced on-site equipment. The DAS project is small-scaled and tailored to fit a given area that would be difficult to serve or cannot be served with a typical larger macro site. Please refer to the signal coverage maps below (Figures 2 and 3) demonstrating the current need for coverage and the proposed coverage that will result from this solution.

Currently, AT&T service in the beach area of the City of Manhattan Beach generally west of Valley Drive is inadequate and this area cannot be served by the existing AT&T "macro" antenna facilities generally located along Sepulveda Boulevard and in the eastern portion of the City. The topography, population density, land use designations and signal coverage solutions in the eastern half of the City are very different than in the western half of the City, which includes the target beach area.

Compared to the western beach area, the eastern half of the City (defined generally as along and east of Sepulveda Boulevard) has relatively-level topography and a lower population density than the western half-beach area portion of the City. In addition, the eastern portion has the bulk of the commercially-zoned properties within the City (particularly of larger, sufficient size) to accommodate macro antenna facilities. Also, the commercially-zoned properties in the eastern half of the City are located throughout that area, giving opportunities for macro antenna facilities. Given its relatively-level topography, low-dense population and available commercially-zoned properties, the eastern portion of the City can be served by typical macro antenna facilities

On the other hand, the western beach area of the City has hilly and varied topography with a far higher population density than the eastern portion of the City. Also, there are far fewer and far smaller commercially-zoned properties in the beach area, which can be characterized as a preponderance of multi-storied, single-family residentially-zoned properties. With the varied topography and the limited number of commercially-zoned properties in appropriate locations, the western beach area of the City cannot be served by new macro antenna facilities.

In addition, the western beach area of the City has exceptionally high demand for wireless services due to a number of factors, including the density of residences, many using multiple wireless devices, and the location of the pier and beach, where many tourists and other pedestrians are using their wireless devices. On an event day, the demand for wireless services in the beach area can be comparable to a sporting event, with many individuals attempting to use their wireless devices at the same time. This unusually high demand, coupled with the topography and limited number of commercially-zoned properties makes it uniquely challenging to provide coverage to the western beach area.

The proposed project helps resolve AT&T's network issue. Any other areas of the City with AT&T coverage issues will be corrected under separate future projects.

The 16 subject nodes serve the general beach area inland to Valley Drive between the City's northern and southern boundaries. The nodes that are the subject of these 16 land use applications are located in the public right-of-way at:

- Manhattan Avenue at 36th Street (MBCH01)
- Highland Avenue at 32nd Place (MBCH02)
- Manhattan Avenue at 29th Street (MBCH03)
- Bayview Drive at 26th Street (MBCH04)
- Marine Avenue at Bayview Drive (MBCH05)
- Highland Avenue at 19th Street (MBCH06)
- Manhattan Avenue at 11th Street (MBCH07)
- Manhattan Avenue at 5th Place (MBCH08)
- Ingleside Drive at 5th Place (MBCH09)
- Morningside Drive at 2nd Street (MBCH13)
- Alma Avenue at 28th Street (MBCH14)
- Ocean Drive at 26th Street (MBCH15)
- North Valley Drive at 9th Place (MBCH16)
- 2nd Street at North Ardmore Drive (MBCH17)
- 13th Street at Church Street (MBCH18)
- Pacific Avenue at Valley Drive (MBCH20)

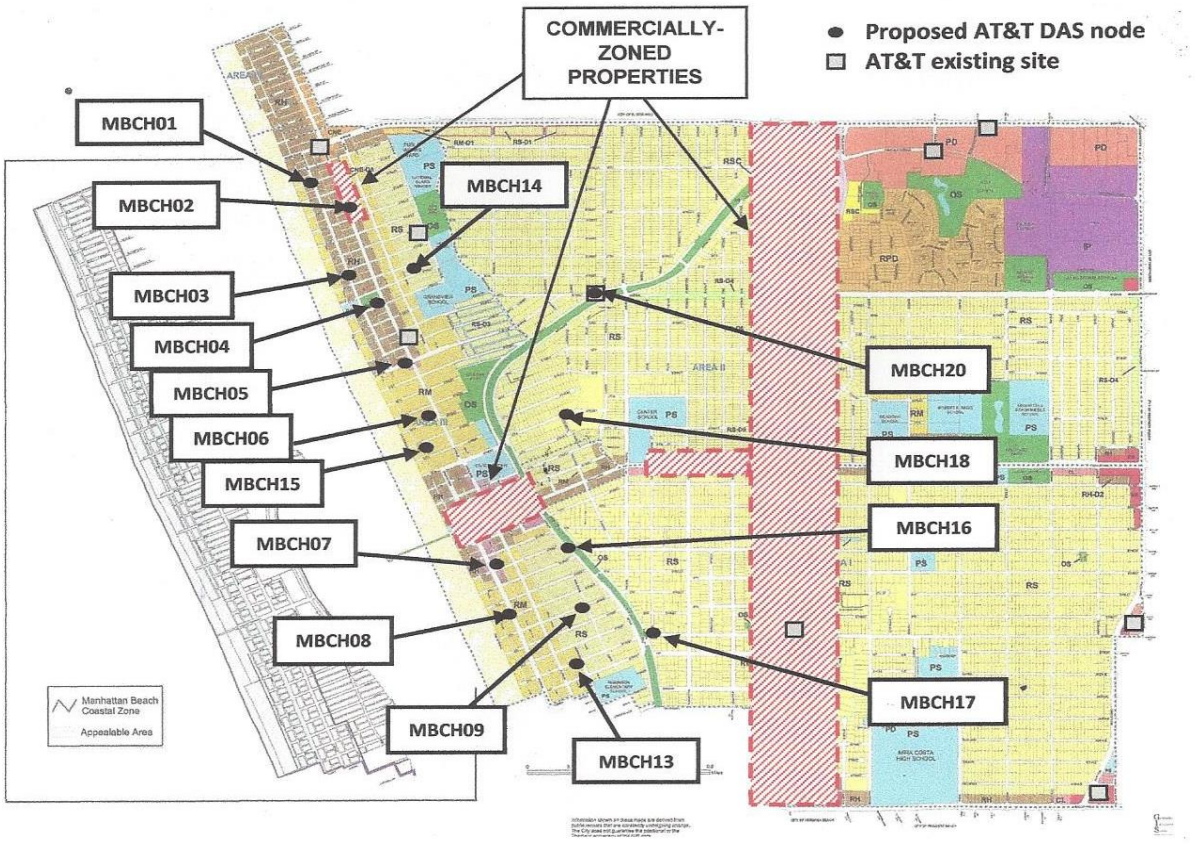


Figure 1 - Figure 1 shows the location of these 16 proposed nodes relative to existing AT&T antenna facilities within the City as well as commercially-zoned properties:

As can be seen in Figure 1 above, the existing AT&T Mobility macro antenna facilities are too far to the east to be modified to serve the beach area and the commercially-zoned properties along Sepulveda Boulevard are also too far to the east to be useful as antenna facilities. It is for this reason that the small-scaled DAS project was selected as a good solution to provide service to this critical beach area of the City. Figure 2 shows the existing AT&T coverage and Figure 3 shows the proposed AT&T coverage under the project.

When existing antenna facilities cannot be modified in any way to serve the intended service areas, AT&T needed to look at local solutions for antennas locations at a far smaller scale. AT&T used the following criteria for selecting suitable light and utility poles for the four nodes:

- They must be optimal node locations that serve a portion of the target service area in balance with adjacent new nodes and signals from the existing macro sites to avoid duplication in serve areas
- Besides location, light standards that are of adequate height are identified
- The area around the suitable poles are surveyed for adequate equipment/meter cabinet space

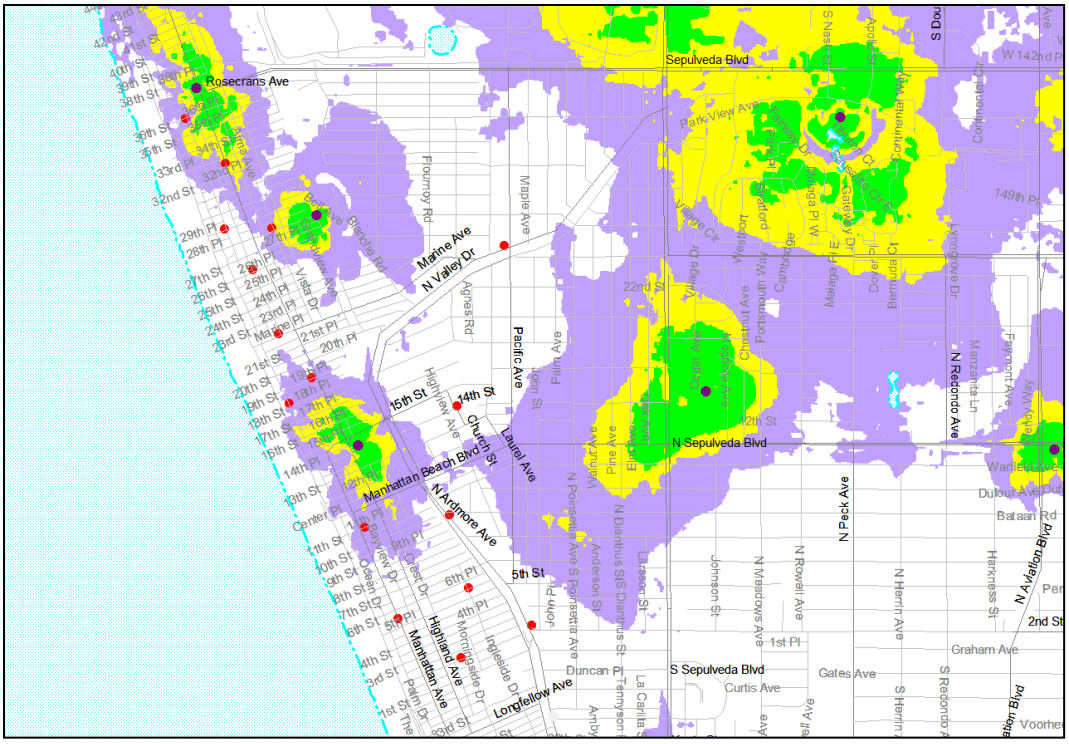


Figure 2 – Signal Coverage Map showing <u>existing</u> AT&T service within the City

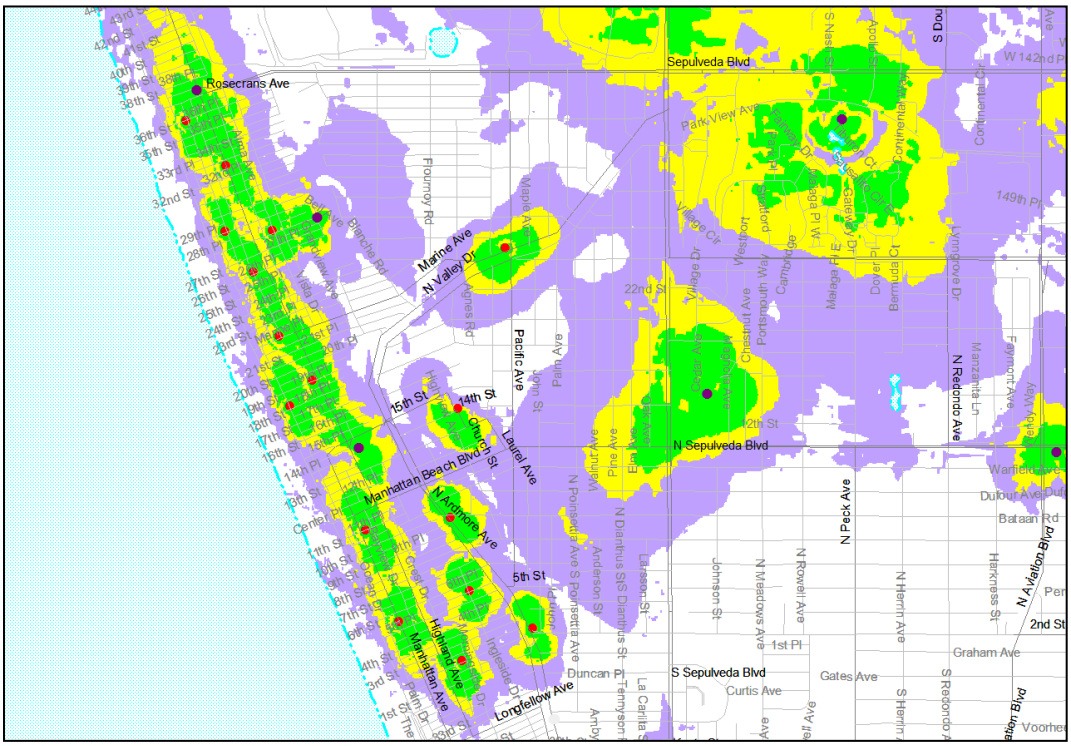


Figure 3 – Signal Coverage Map showing <u>proposed</u> AT&T service in the City with the proposed DAS project antenna nodes

2. Are there other, potentially smaller, technologies that are available as an alternative option?

AT&T's network team and engineers, in concert with City staff, assessed the coverage needs for residents and businesses in the City of Manhattan Beach and developed the proposed 16-Node DAS project to enhance cellular telephone coverage, particularly in the Coastal Zone and adjacent areas. AT&T assesses every network site individually and takes into consideration, coverage needs, area density, topography, and aesthetic concerns. AT&T worked with City staff over the past two years to identify locations that avoid interference with underground utilities, result in no impacts on existing street parking, minimize view and other aesthetic impacts to residents, and do not decrease existing sidewalk accessibility, while providing cellular telephone coverage to underserved areas.

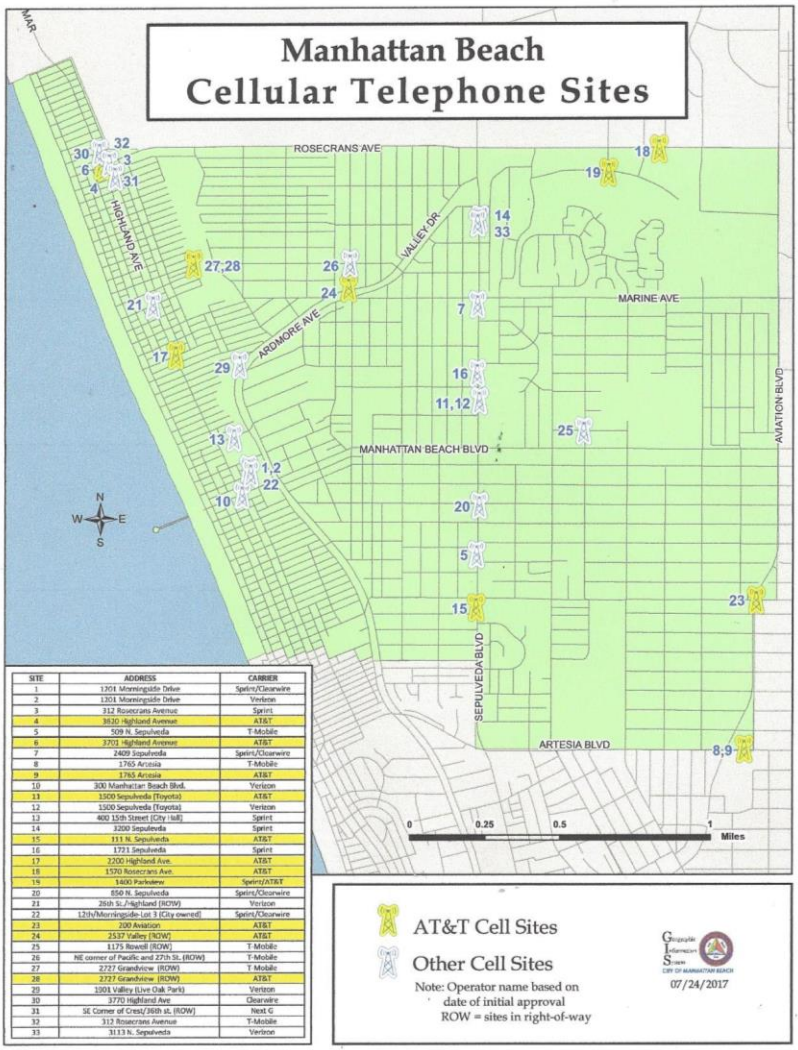
While smaller technologies exist, such technologies come with range limitations and may provide less coverage and/or require more installations to achieve the same coverage. Through the two year collaboration with City staff, AT&T has determined that the proposed 16-Node DAS project is the least intrusive means to achieve the desired increase in coverage in the service area.

AT&T does not pursue the cheapest solution to provide area coverage, it seeks technological installations that are the smallest scale possible to efficiently provide the necessary service. AT&T takes a long range view to anticipate the need for service in an area – particularly in an area with high demand and challenges to providing coverage, such as the western area of Manhattan Beach – and seeks to develop technological strategies to meet that anticipated need. Thus, the technology and the evolution of that technology drives what AT&T needs to do to provide the best quality of service. The proposed 16-Node DAS project will enable AT&T to improve the quality of service in the area. Fewer nodes would result in less coverage.

3) Where are the other carriers' telecommunication sites located and can they be collocated?

As described in our response to Question #1, AT&T Mobility did look into a number of options to provide service to this area. As a matter of course, when considering how to serve a currently unserved or underserve area, AT&T analyzes the possibility of modifying existing antenna sites in the area to see if their signals can be extended or expanded for additional capacity.

Figure 4 below shows the locations of the currently operating wireless facilities within the City and their type (building, tower, etc.) as provided by City Planning staff. The target service areas for the proposed projects and the commercially-zoned properties within the City are shown in Figure 5 below to illustrate the proximity of the existing antenna facilities to the intended service area.



SITE	ADDRESS	CARRIER
1	1201 Morningside Drive	Sprint/Clearwire
2	1201 Morningside Drive	Verizon
3	312 Rosecrans Avenue	Sprint
4	3620 Highland Avenue	AT&T
5	509 N. Sepulveda	T-Mobile
6	3701 Highland Avenue	AT&T
7	2409 Sepulveda	Sprint/Clearwire
8	1765 Artesia	T-Mobile
9	1765 Artesia	AT&T
10	300 Manhattan Beach Blvd.	Verizon
11	1500 Sepulveda (Toyota)	AT&T
12	1500 Sepulveda (Toyota)	Verizon
13	400 15th Street (City Hall)	Sprint
14	3200 Sepulveda	Sprint
15	111 N. Sepulveda	AT&T
16	1721 Sepulveda	Sprint
17	2200 Highland Ave.	AT&T
18	1570 Rosecrans Ave.	AT&T
19	1400 Parkview	Sprint/AT&T
20	850 N. Sepulveda	Sprint/Clearwire
21	26th St./Highland (ROW)	Verizon
22	12th/Morningside-Lot 3 (City owned)	Sprint/Clearwire
23	200 Aviation	AT&T
24	2537 Valley (ROW)	AT&T
25	1175 Rowell (ROW)	T-Mobile
26	NE corner of Pacific and 27th St. (ROW)	T-Mobile
27	2727 Grandview (ROW)	T-Mobile
28	2727 Grandview (ROW)	AT&T
29	1301 Valley (Live Oak Park)	Verizon
30	3770 Highland Ave	Clearwire
31	SE Corner of Crest/36th st. (ROW)	Next G
32	313 Rosecrans Avenue	T-Mobile
33	3113 N. Sepulveda	Verizon

Figure 4 – Existing Wireless Antenna facilities within the City of Manhattan Beach

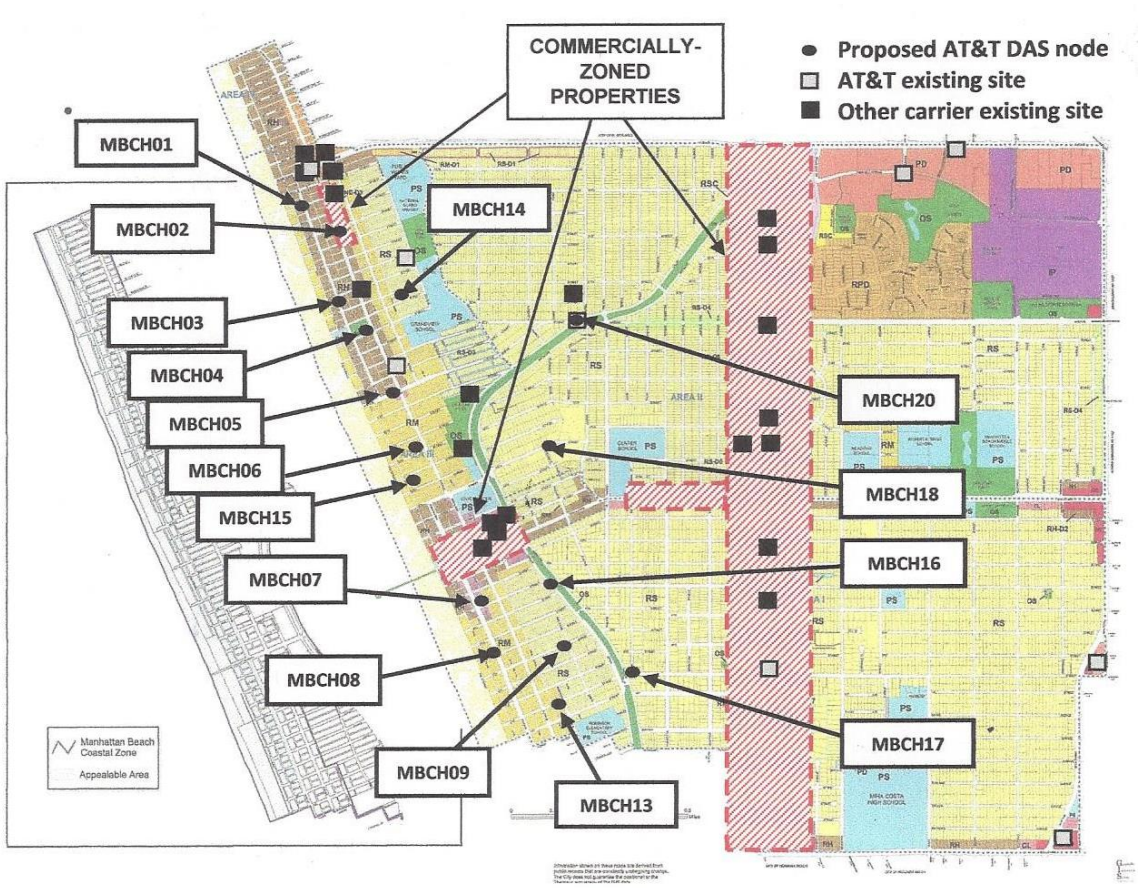


Figure 5 - Map of beach target service area and nearest commercial districts with existing cell sites to show how they will not work to cover the service area

The lack of adequate AT&T signal coverage in the City's beach district generally west of Valley Drive was previously documented above. As shown in Figure 5, the beach area to be served is entirely residential and the closest commercial buildings are 0.75 to 1.25 miles away inland. Also, as previously noted, the target area, the beach portion of the City, has a varied, hilly topography that cannot be served by existing macro antenna facilities within the City.

The commercially-zoned properties are too far inland and the signals from existing macro antenna facilities within the City cannot be extended or changed to serve the target area.

AT&T has determined that each and every proposed DAS location is necessary to provide coverage or capacity for the City. AT&T is motivated to keep the number of facilities to a minimum while providing as complete coverage as possible in addressing customer demand. In addition, in the future it is possible that these new facilities may be used by other carriers to enhance their own coverage.

4. **Why would certain facilities be included in the Master Lease Agreement between AT&T and the City and not others?**

AT&T's current Manhattan Beach DAS project is a total of 16 DAS Nodes, as follows:

- 9 DAS cells designed for concrete street light poles; the city is in escrow to purchase these 9 street light poles (among others) from SCE.
- 1 DAS cell is designed for a banner pole which is a current city asset.
- 6 DAS cells are designed for utility wooden poles currently owned by SCE, and not proposed for sale to the City.

Once the City completes its purchase of the 9 street light poles from SCE, 10 of the DAS Nodes will be located on City property. AT&T has proposed a Master License Agreement to be entered into by AT&T and the City with respect to the 10 Nodes that will be located on City-owned poles. The Master License Agreement will govern the payments to the City and other terms applicable to AT&T's use of the City property. A draft of the Master License Agreement was provided to the City on August 25, 2017.

The 6 DAS Nodes that are located on SCE utility wooden poles do not require a license agreement with the City; AT&T has a separate agreement with SCE with respect to those poles. AT&T will be able to proceed once the permits are issued for those 6 DAS Nodes.

5. **Are there other light poles or antenna poles that are more aesthetically pleasing? What options are out there and were they considered?**

As described above, the locations chosen for the proposed 16-Node DAS project avoid interference with underground utilities, result in no impacts on existing street parking, minimize view and other aesthetic impacts to residents, and do not decrease existing sidewalk accessibility, while providing cellular telephone coverage to underserved areas. Individual alternative site analyses (ASAs) submitted with the applications, which explain why each particular location was selected. As documented therein, the proposed 16-Node DAS project is the least intrusive means to achieve the desired increase in coverage in the service area. Fewer nodes would result in less coverage, and would not meet AT&T's service objectives.

In addition, based on feedback received from City staff and the public, AT&T modified the design for each of the facilities to reduce the size of the equipment cabinets, and in some cases, make other design modifications to the facility as requested by City staff. These design modifications are reflected in the proposed 16-Node DAS project as it will be presented to the City Council on November 16, 2017. Updated ASAs, reflecting the design changes, will be submitted to City staff prior to the Council meeting.

6. Must antenna extend beyond the height of the pole?

The antennae are design to be installed at the top of the pole in order to provide the optimal service to our customers without increasing the height of the current pole. Lowering the height of the antennae to the existing height of the pole would significantly reduce the coverage provided and would potentially necessitate an increase in the number of DAS Nodes necessary to provide comparable coverage. In the alternative, the height of the poles themselves could be increased to the top of the proposed height of the antennae, but that could create an aesthetic issue if certain poles were higher than others, as well as potential cost and structural issues associated with increasing the pole height. For these reasons, AT&T determined that the proposed design is the least intrusive means.

The difference in heights between existing 12 poles and the proposed replacement poles with antennas mounted is detailed below:

- MBCH01 - Manhattan Avenue at 36th Street
  Existing street light pole height = 23' 10"
  Proposed total height with replacement pole and antennas = 26' 1"
  Total increase in height = 2' 1"
- MBCH02 - Highland Avenue at 32nd Place
  Existing banner pole height = 26' 7"
  Proposed total height with replacement pole and antennas = 31' 0"
  Total increase in height = 4' 5"
- MBCH03 - Manhattan Avenue at 29th Street
  Existing street light pole height = 23' 9"
  Proposed total height with replacement pole and antennas = 25' 10"
  Total increase in height = 2' 1"
- MBCH04 - Bayview Drive at 26th Street
  Existing street light pole height = 23' 4"
  Proposed total height with replacement pole and antennas = 27' 0"
  Total increase in height = 3' 8"
- MBCH05 - Marine Avenue at Bayview Drive
  Existing street light pole height = 23' 9"
  Proposed total height with replacement pole and antennas = 29' 0"
  Total increase in height = 5' 3"
- MBCH06 - Highland Avenue at 19th Street
  Existing street light pole height = 29' 0"
  Proposed total height with replacement pole and antennas = 32' 7"
  Total increase in height = 3' 7"
- MBCH07 - Manhattan Avenue at 11th Street
  Existing wooden utility pole height = 33' 10"
  Proposed total height with replacement pole and antennas = same
  Total increase in height = None (antennas mounted at 22' 0" center)

- MBCH08 - Manhattan Avenue at 5th Place
  Existing street light pole height = 24’ 3”
  Proposed total height with replacement pole and antennas = 27’ 5”
  Total increase in height = 3’ 2”
- MBCH09 - Ingleside Drive at 5th Place
  Existing wooden light pole height = 28’ 6”
  Proposed total height with replacement pole and antennas = 28’ 6”
  Total increase in height = None (antennas mounted at 26’ 6” center)
- MBCH13 - Morningside Drive at 2nd Street
  Existing wooden utility pole height = 34’ 10”
  Proposed total height with replacement pole = 39’ 0”
  Total increase in height = None (antennas mounted at 29’ 0” center)
- MBCH14 - Alma Avenue at 28th Street
  Existing street light pole height = 27’ 10”
  Proposed total height with replacement pole and antennas = 28’ 10”
  Total increase in height = 1’ 0”
- MBCH15 - Ocean Drive at 18th Street
  Existing light pole height = 24’ 4”
  Proposed total height with replacement pole and antennas = 26’ 3”
  Total increase in height = 1’ 9”
- MBCH16 - North Valley Drive at 9th Place
  Existing wooden light pole height = 33’ 8”
  Proposed total height with replacement pole and antennas = 38’ 10”
  Total increase in height = 5’ 2”
- MBCH17 - 2nd Street at North Ardmore Drive
  Existing street light pole height = 24’ 2”
  Proposed total height with replacement pole and antennas = 28’ 0”
  Total increase in height = 3’ 10”
- MBCH18 - 13th Street at Church Street
  Existing wooden light pole height = 34’ 0”
  Proposed total height with replacement pole and antennas = 41’ 0”
  Total increase in height = 7’ 0”
- MBCH20 - Pacific Avenue at Valley Drive
  Existing wooden utility pole height = 52’ 2”
  Proposed total height with replacement pole and antennas = 52’ 2”
  Total increase in height = None (antennas mounted at 24’ 11” center)

7. Can antennas be attached to existing commercial buildings?

Antennas can be attached to existing commercial buildings, and AT&T has existing cell sites on commercial facilities in Manhattan Beach including one on the city hall building. However, due to the height and location of the commercial facilities in Manhattan Beach, locating additional antennae on commercial buildings will not provide coverage to the desired areas, particularly the residential areas and Coastal Zone.

Specifically, as shown in Figure 5 above, the beach area to be served is entirely residential and the closest commercial buildings are 0.75 to 1.25 miles away inland. As previously noted, the target area, the beach portion of the City, has a varied, hilly topography. The commercially-zoned properties are too far inland to provide service. Antennae would need to be placed 40-50 feet or higher above the existing commercial buildings in order to clear the surrounding buildings and hilly topography. Installations at such heights are not the least intrusive means to achieve coverage.

8. How would antennas fill gaps in cell phone coverage throughout the City?

The antennas for these 16 DAS nodes projects will not fill in gaps in cell phone coverage throughout the city of Manhattan Beach, but they focus on the beach area west of Valley Drive. The antennas will however provide solutions that will help AT&T's network improve customer wireless call quality and reliability, connecting customers to our wireless services in the area where each DAS node is located. In locations that have high concentrations of users, DAS projects are an effective design in providing quality of service by dividing cellular traffic into smaller, more manageable sections, which enhances quality, capacity and connectivity speeds.

AT&T found that the greatest need and current demand is in the beach area of the City. As can be seen from the coverage analysis provided, the purpose of the proposed 16-Node DAS project is to solve the signal deficiencies along the City's beach area and with the implementation of the proposed project the overall AT&T signal coverage is significantly improved.

However, even with the implementation of AT&T's proposed 16-Node DAS project, there will still be a few areas in the inland portions of the City that will need to have the coverage improved. These areas will be addressed in future projects and are not the subject of this proposed project at this time.

9. Does undergrounding of equipment cabinets (not antennas) add to the cost of the antennas?

As shown in the submitted applications, the above-ground equipment utility cabinets associated with each node would be 63" high by 15" wide by 18" deep on a low concrete base (approximately 9.5 cubic feet in size). The equipment cabinets include the electronic equipment. Edison's new flat power meter can be installed into a hand hold with each antenna node. The amount of electronic equipment at each node is substantially reduced because it is connected to the remote main hub facility where the bulk of the equipment is located. Edison's new Flat Metering policy also reduces the amount of equipment at each node. AT&T Mobility has made every effort to reduce the size of the utility cabinet to the greatest extent possible and to still include all of the necessary equipment and the electrical meter.

To construct an underground concrete vault to accommodate the equipment proposed to be placed within the available public right-of-way sidewalk area in a utility cabinet, the concrete-lined underground vault would not only require area for that equipment, it would also require additional area access to the equipment for servicing. To accommodate the electronic equipment

and provide access to the equipment, the concrete-lined vault to be dropped into the right-of-way would have to be 10 feet long by 7 feet wide by 8 feet deep. To place such are large vault underground within the right-of-way, an excavation would extend far beyond the footprint of the vault itself, about 3-4 feet in all directions which would in some instances spill outside of the sidewalk right-of-way. As can be seen, if the equipment in proposed utility cabinet at each of the propose nodes was to be undergrounded, there could be issues with the available public right of-way sidewalk width, particularly in the beach area of the City were the sidewalks are narrower. For sidewalk excavations, adjacent to existing residences in this area of dense housing, shoring would be required to ensure no damage to adjacent residences.

With any vault installation for the placement of electronics will require stack air vent with an exhaust fan as well as a placement of a sump pump for any water intrusion. A standard vent stack has a footprint of 12 inches in diameter by 36 inches tall. An exhaust blower will be required to be installed in the right-of -way to provide air circulation to protect the electronic from overheating. To also protect the electronics from water intrusion a sump pump with battery back-up will be required to be installed into the vault too.

In short, a typical concrete-lined underground vault to accommodate 23 cubic feet of equipment and a meter would have to have a volume of about 560 cubic feet.

During the approximately five to six weeks' construction process, the sidewalk would be closed and perhaps the adjacent street would have some or all lanes closed for certain construction activities, such as the craning in and lowering of the vault into the excavation.

Undergrounding of only 23 cubic feet of equipment in a 560 cubic feet underground vault would not only substantially increase the cost of individual antenna installations, but it would also create construction-related impacts (noise, vibrations, dust and traffic). Subsequence access to the vault in the future for maintenance, upgrade and repairs could cause traffic and pedestrian disruptions.

10. What are the ramifications of potential sightlines or radiation frequencies of approving the application from AT&T?

Sightlines will not be significantly impacted by the low profile design of AT&T's facilities. While local jurisdictions are not permitted, under federal law, to consider health effects in acting upon applications for wireless facilities, the studies submitted with the applications for the proposed 16-Node DAS project demonstrate that the facilities are in compliance with applicable federal law and regulations pertaining to radiation.