

SA Reports





# T-Mobile PH37393A -Waste Management - Hole 16 Temporary WCF

APPLICATION INFORMATION							
LOCATION:	LOCATION: 17020 N Hayden Rd APPLICANT: Declan Murphy						
PARCEL: 215-08-001D COMPANY: Coal Creek Consulting							
Q.S.:	37-46	ADDRESS:	8283 N Hayden Rd Ste 3258 Scottsdale, AZ 85258				
ZONING:	OS PCD	PHONE:	(602) 326-0111				
Request: T-Mobile co-location on the multi carrier temporary wireless communication facility located west of hole 16							

<u>tequest:</u> T-Mobile co-location on the multi carrier temporary wireless communication facility located west of hole 16

on the TPC golf course.

#### **STIPULATIONS**

- 1. Plans submitted for permits shall be consistent with the plans submitted by **Terra Dynamic Engineering, LLC** and **T-Mobile** with a date of **8/19/21** and approved by City Staff on **11/1/21**.
- 2. This approval is temporary. When the temporary WCF shall be removed, and any disturbed earthwork shall be returned to its original condition.
- 3. Permits shall not be issued until a fully executed license agreement is completed with the City's Asset Management division.
- 4. Chain link fence around COW and associated equipment shall contain a sold tan or brown colored wind screen to screen equipment from view.
- 5. Obtain a Minimum Electric Generator permit from the One Stop Shop for each of the generators. Submit cut-sheets for the generator and fuel tank that clearly indicate the Kw and number of gallons of fuel storage.
- 6. A Pre-construction meeting is required prior to the start of any setup or construction activities. The Pre-construction meeting shall include Chris Walsh, Parks and Recreation Manager, Brian Dick from the City of Scottsdale Inspection Services, John Goff from the Thunderbirds tournament setup, and Brad Williams and Roby Robertson from the TPC Scottsdale. Contact Chris Walsh to coordinate at 480-312-2551.
- 7. Obtain any permits that may be required by the One Stop Shop.

#### CONSTRUCTION DOCUMENT PLAN REVIEW SUBMITTAL REQUIREMENTS

Submit one copy of	triis app	proval letter, and construction drawings digitally offline.
PLANS:		Submit construction drawings on-line at the following line
	http	os://eservices.scottsdaleaz.gov/bldgresources/Plans

Plans to be reviewed by: Building, Planning & Fire.

#### **Planning and Development Services**

Expiration of Development Review (Minor) Approval						
This approval expires two (2) years from date of approval if a permit has not been issued, or if no permit is required,						
work for which approval has been granted has not been completed.						
Staff Signature:	Weith Niederer, 480-312-2953	Date:	11-1-2021			

# Type 1 or 2 WCF Development Review (Minor)

# Administrative Staff Approval Development Application Checklist

or)	
CITY	OF TO TO
<b>SCOT</b>	TSBALE

	OFFICIA	L USE ONLY		
City Staff Contact: PI	hone: _	Email:		
Project Name:				
Property's Address:		A.P.N.:		
Property's Zoning District Designation:				
Application Request:				
Owner:		Applicant:		
Company:		Company:		
Address:		Address:		
Phone:		Phone:		
E-mail:		E-mail:		
Please submit materials requested b Project No.:PA	elow. <b>A</b>	Requirements:  Il digital files must be uploaded in PDF format.  Key Code: tsdaleaz.gov/bldgresources/Cases/DigitalMenu		
Completed Application (this form) and Application \$ (fee subject to change every July)	Fee	Affidavit of Authority to Act for Property Owner, letter of authorization, or signature below.		
Narrative – the WCF request. This shall include effor made to minimize the visual impact of the antennas equipment cabinets.		Preliminary Drawings - Include site survey, site plan, existing and proposed elevations, detail sheet of antennas, radio equipment, and cabinets.		
Request to Submit Concurrent Development Applic	ations	Material Samples – branches, fronds, etc.		
Request for Site Visits and/or Inspections form		Map of service area for proposed WCF		
Color photographs of site – include area of request		Map showing other existing or planned WCF's that will be		
<b>Photo Simulations of WCF.</b> In ESL areas, include phofrom nearest single family lots.	otosim	used by Provider making the application (describe heigh mounting style & number of antennas on WCF).		
Property Owners Association Input		RF - EME Study		
Community Notification Documentation. Notify all property owners within 750 feet of site. Submit names and addresses of all properties that were notified, submit a copy of the letter that was sent and the date that letter was mailed. Letters shall be mailed at least 15 days prior to submittal.		Other:		
Please indicate in the checkbox below the requested review methodology (see the descriptions on Page 2):				
<b>Enhanced Application Review:</b> I hereby authorize the city of Scottsdale to review this application utilizing the Enhanced Application Review methodology.				
Standard Application Review: I hereby authorize the Application Review methodology.	ne city o	of Scottsdale to review this application utilizing the Standard		
Owner Signature		Agent/Applicant Signature		

# **Planning and Development Services**

7447 E. Indian School Road, Suite #105, Scottsdale, AZ 85251 • www.ScottsdaleAZ.gov

# **Development Review**

# Methodologies and Required Notice



#### **Review Methodologies**

The city of Scottsdale maintains a business and resident friendly approach to new development and improvements to existing developments. In order to provide for flexibility in the review of Development Applications, and Applications for Permitting, the city of Scottsdale provides two methodologies from which an owner or agent may choose to have the city process the application. The methodologies are:

#### 1. Enhanced Application Review Methodology

Within the parameters of the Regulatory Bill-of-Rights of the Arizona Revised Statutes, the Enhanced Application Review method is intended to increase the likelihood that the applicant will obtain an earlier favorable written decision or recommendation upon completion of the city's reviews. To accomplish this objective, the Enhanced Application Review allows:

- the applicant and city staff to maintain open and frequent communication (written, electronic, telephone, meeting, etc.) during the application review;
- City staff and the applicant to collaboratively work together regarding an application; and
- City staff to make requests for additional information and the applicant to submit revisions to address code, ordinance, or policy deficiencies in an expeditious manner.

Generally, the on-going communication and the collaborative work environment will allow the review of an application to be expedited within the published Staff Review Time frames.

#### 2. Standard Application Review Methodology:

Under the Standard Application Review, the application is processed in accordance with the Regulatory Bill-of-Rights of the Arizona Revised Statutes. These provisions significantly minimize the applicant's ability to collaboratively work with city Staff to resolve application code, ordinance, or policy deficiencies during the review of an application. After the completion the city's review, a written approval or denial, recommendation of approval or denial, or a written request for additional information will be provided.

The city is not required to provide an applicant the opportunity to resolve application deficiencies, and staff is not permitted to discuss or request additional information that may otherwise resolve a deficiency during the time the city has the application. Since the applicant's ability to collaboratively work with Staff's to resolve deficiencies is limited, the total Staff Review Time and the likelihood of a written denial, or recommendation of denial is significantly increased.

#### **Required Notice**

Pursuant to A.R.S. §9-836, an applicant may receive a clarification from the city regarding interpretation or application of a statute, ordinance, code or authorized substantive policy statement. A request to clarify an interpretation or application of a statute, ordinance, code, policy statement administered by the Planning and Development Services Division shall be submitted in writing to the One Stop Shop to the attention of the Planning and Development Services Director or designee. All such requests must be submitted in accordance with the A.R.S. §9-839 and the city's applicable administrative policies available at the Planning and Development Services Division's One Stop Shop, or from the city's website: <a href="http://www.scottsdaleaz.gov/planning-development/forms">http://www.scottsdaleaz.gov/planning-development/forms</a>

Planning and Development Services One Stop Shop Planning and Development Services Director 7447 E. Indian School Rd, Suite 105 Scottsdale, AZ 85251

# **Planning and Development Services**

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# **Development Application Process**

# **Enhanced Application Review**

Staff Approval (SA), Wash Modification (WM), & Preliminary Plat (PP)



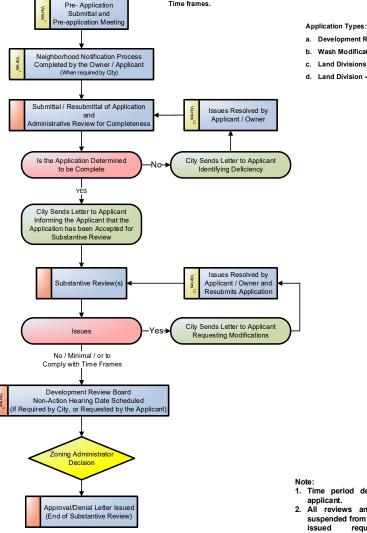
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- the applicant and City staff to maintain open and frequent communication (written, electronic, telephone, meeting, etc.) during the application review;
- City staff and the applicant collaboratively work together regarding an application;
- City staff to make requests for additional information and the applicant to submit revisions to address code, ordinance, or policy deficiencies in an expeditious

Generally, the on-going communication and the collaborative work environment will allow the review of an application to be expedited within the publish Staff Review

# a. Development Review - Minor (SA)

- h Wash Modifications (WM)
- c. Land Divisions Condominium Plat (PP)
- d. Land Division Minor Subdivision (PP)



- 1. Time period determined by owner/ applicant.
- 2. All reviews and time frames are suspended from the date a the letter is issued requesting additional information until the date the City receives the resubmittal from the owner/applicant.
- Owner/applicant may agree to extend the time frame by 25 percent

Time Line Substative Review Approval/Denial

# Planning and Development Services

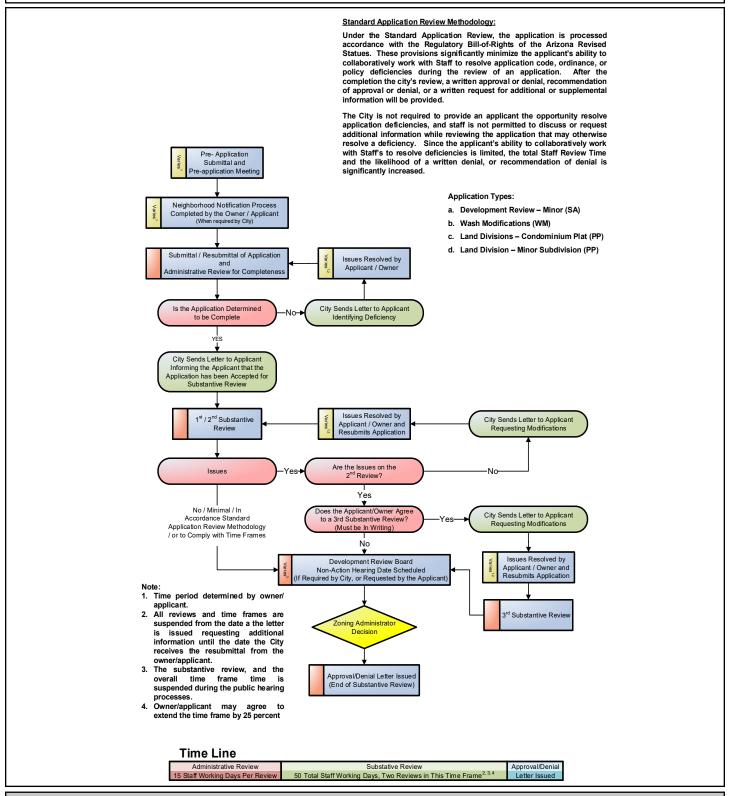
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# **Development Application Process**

## Standard Application Review

Staff Approval (SA), Wash Modification (WM), & Preliminary Plat (PP)





# **Planning and Development Services**

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# Type 1 or 2 WCF Development Review (Minor)

# Administrative Staff Approval Arizona Revised Statues Notice



- A. A municipality shall not base a licensing decision in whole or in part on a licensing requirement or condition that is not specifically authorized by statute, rule, ordinance or code. A general grant of authority does not constitute a basis for imposing a licensing requirement or condition unless the authority specifically authorizes the requirement or condition.
- B. Unless specifically authorized, a municipality shall avoid duplication of other laws that do not enhance regulatory clarity and shall avoid dual permitting to the maximum extent practicable.
- C. This section does not prohibit municipal flexibility to issue licenses or adopt ordinances or codes.
- D. A municipality shall not request or initiate discussions with a person about waiving that person's rights.
- E. This section may be enforced in a private civil action and relief may be awarded against a municipality. The court may award reasonable attorney fees, damages and all fees associated with the license application to a party that prevails in an action against a municipality for a violation of this section.
- F. A municipal employee may not intentionally or knowingly violate this section. A violation of this section is cause for disciplinary action or dismissal pursuant to the municipalities adopted personnel policy.
- G. This section does not abrogate the immunity provided by section 12-820.01 or 12-820.02

# Affidavit of Authorization to Act for Property Owner



ı	Thi	in affidavit appearant the fallow	ing paraal of la	ndı		
١.	1111	is affidavit concerns the follov	ang parcer or ia	na.		
		Street Address:				
		County Tax Assessor's Paro				
	c.	General Location: Parcel Size:				
	е.	Legal Description:				
		(If the land is a platted lot, number and date. Other description.)		,	•	
2.	aut	m the owner of the land or I a thority from the owner to sign on I am the agent for all of the	this affidavit o	n the owner'	s behalf. If the land has m	ore than one owner,
3.	rev pla eve acc	ave authority from the owner riews, zoning map amendments, lot splits, lot ties, use per description involving the liquire) an interest, and all approximents, commitments, waive	ents, general p mits, building p and, or involvin lications, dedica	lan amendm permits and g g adjacent o ations, paym	nents, development varian other land use regulatory or nearby lands in which the ents, assurances, decision	ces, abandonments, or related matters of e owner has (or may
1.	day	e City of Scottsdale is autho ys after the day the owner do partment a written statement	elivers to the D	irector of the		
5.	De	vill immediately deliver to the partment written notice of a ner.				
6.		nore than one person signs t his affidavit, and each of ther				
7.	cor inv dev hav	der penalty of perjury, I war mplete. I understand that an alidate approvals or other a velopment of the land, and move not signed this form may becesses.	y error or incor ctions taken by ay expose me a	mplete inform y the City o and the owne	nation in this affidavit or a f Scottsdale, may otherwi er to other liability. I undersi	ny applications may se delay or prevent and that people who
١	Nam	e (printed)	Date		Signature	
			_	, 20		
				, <u></u> , 20		
-						
-				, 20		
_				, 20		

# **Planning and Development Services**

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# Request for Site Visits and/or Inspections

# **Development Application (Case Submittals)**



This request concerns all property identified in the development application.				
Pre-application No:PA				
Project Name:				
Project Address:				
STATEMENT OF AUTHORITY:				
1. I am the owner of the property, or I am the duly and lawfully appointed agent of the property and have the authority from the owner to sign this request on the owner's behalf. If the land has more than one owner, then I am the agent for all owners, and the word "owner" refer to them all.				
2. I have the authority from the owner to act for the owner before the City of Scottsdale regarding any and all development application regulatory or related matter of every description involving all property identified in the development application.				
STATEMENT OF REQUEST FOR SITE VISITS AND/OR INSPECTIONS				
1. I hereby request that the City of Scottsdale's staff conduct site visits and/or inspections of the property identified in the development application in order to efficiently process the application.				
2. I understand that even though I have requested the City of Scottsdale's staff conduct site visits and/or inspections, city staff may determine that a site visit and/or an inspection is not necessary, and may opt not to perform the site visit and/or an inspection.				
Property owner/Property owner's agent:				
Print Name				
Signature				
City Use Only:				
Submittal Date: Case number:				
Planning and Development Services  7447 E Indian School Road, Suite 105, Scottsdale, AZ 85251 ◆ www.ScottsdaleAZ.gov				

# Type 1 or 2 WCF Development Review (Minor)

# Administrative Staff Approval Development Application Checklist

or)
CITY OF TO TO
SCOTTSDALE

OFFICIAL USE ONLY  City Staff Contact: Keith Niederer Phone: 480-312-2953 Email:						
Project Name: PH37393A - Waste Management - Hole 16						
Property's Address: 17020 N Hayden Road	<b>A.P.N.</b> : 215-46-001F					
Property's Zoning District Designation: OS	·					
<b>Application Request:</b> COW to provide coverage for 202	22 Phoenix Open at the 16th Hole					
Owner: BOR	Applicant: Declan Murphy					
Company:	Company: Coal Creek Consulting for T-Mobile					
Address: 23636 N 7th Street, Phoenix AZ 85024	Address: 8283 N Hayden Road, 3258 Scottsdale AZ					
Phone: 623 773 6200	Phone: 602 326 0111					
E-mail:	E-mail: dmurphy@coal-creek.com					
Please submit materials requested below. $ extit{ iny P}$ Project No.: $\underline{874}$ PA- $\underline{2021}$	Requirements: All digital files must be uploaded in PDF format. Key Code: $\_11N41$ tsdaleaz.gov/bldgresources/Cases/DigitalMenu					
Completed Application (this form) and Application Fee \$575.00 (fee subject to change every July)	Affidavit of Authority to Act for Property Owner, letter of authorization, or signature below.					
Narrative – the WCF request. This shall include efforts made to minimize the visual impact of the antennas and equipment cabinets.	Preliminary Drawings - Include site survey, site plan, existing and proposed elevations, detail sheet of antennas, radio equipment, and cabinets.					
Request to Submit Concurrent Development Applications	Material Samples – branches, fronds, etc.					
Request for Site Visits and/or Inspections form	☐ Map of service area for proposed WCF					
<b>✓ Color photographs of site</b> – include area of request	☐ Map showing other existing or planned WCF's that will be					
Photo Simulations of WCF. In ESL areas, include photosim from nearest single family lots.	used by Provider making the application (describe height, mounting style & number of antennas on WCF).					
Property Owners Association Input	RF - EME Study					
Community Notification Documentation. Notify all property owners within 750 feet of site. Submit names and addresses of all properties that were notified, submit a copy of the letter that was sent and the date that letter wa mailed. Letters shall be mailed at least 15 days prior to submittal.						
Please indicate in the checkbox below the requeste	Please indicate in the checkbox below the requested review methodology (see the descriptions on Page 2):					
Enhanced Application Review: I hereby authorize the city of Scottsdale to review this application utilizing the Enhanced Application Review methodology.						
Standard Application Review: I hereby authorize the city Application Review methodology.	of Scottsdale to review this application utilizing the Standard					
Owner Signature	Agent/Applicant Signature					

# **Planning and Development Services**

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# **Request for Site Visits and/or Inspections**





This request concerns all property identified in the development application.					
Pre-application No: 874 -PA- 2021					
Project Name: PH37393A - Wa	Project Name: PH37393A - Waste Management - Hole 16				
Project Address: 17020 N Hayo	den Road, Scottsdale AZ 85255				
STATEMENT OF AUTHORITY:					
have the authority from the owner to	or I am the duly and lawfully appointed agent of the property and sign this request on the owner's behalf. If the land has more than owners, and the word "owner" refer to them all.				
and all development application r	2. I have the authority from the owner to act for the owner before the City of Scottsdale regarding any and all development application regulatory or related matter of every description involving all property identified in the development application.				
STATEMENT OF REQUEST FOR SITE VI	STATEMENT OF REQUEST FOR SITE VISITS AND/OR INSPECTIONS				
1. I hereby request that the City of Scottsdale's staff conduct site visits and/or inspections of the property identified in the development application in order to efficiently process the application.					
2. I understand that even though I have requested the City of Scottsdale's staff conduct site visits and/or inspections, city staff may determine that a site visit and/or an inspection is not necessary, and may opt not to perform the site visit and/or an inspection.					
Property owner/Property owner's agent: _	Declan Murphy				
Troperty owner, Property owner sugent.	Print Name				
	Signature				
	City Use Only:				
ubmittal Date: Case number:					

#### **Planning and Development Services**

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# **Affidavit of Authorization to Act for Property Owner**



1.	. This affidavit concerns the followi	ng parcel of lan	d:		
	a. Street Address: 17020 N Hayden R	Road, Scottsdale AZ 852	255		
	b. County Tax Assessor's Parce				
	c. General Location: TPC 16th Hole				
	d. Parcel Size: 10+ Acres e. Legal Description: See attached				
	(If the land is a platted lot, the number and date. Otherw description.)				
2.	I am the owner of the land or I an authority from the owner to sign then I am the agent for all of the o	this affidavit on	the owner	's behalf. If the land has	more than one owner,
3.	I have authority from the owner to reviews, zoning map amendmer plats, lot splits, lot ties, use pern every description involving the la acquire) an interest, and all applie documents, commitments, waiver	nts, general pla nits, building pe nd, or involving cations, dedica	an amendmermits and adjacent of tions, paym	nents, development varia other land use regulatory or nearby lands in which the nents, assurances, decision	nces, abandonments, or related matters of he owner has (or may
4.	<ul> <li>The City of Scottsdale is authorized days after the day the owner del Department a written statement re</li> </ul>	ivers to the Dir	ector of the		
5.	<ul> <li>I will immediately deliver to the Department written notice of any owner.</li> </ul>				
6.	<ul> <li>If more than one person signs the in this affidavit, and each of them</li> </ul>				
7.	. Under penalty of perjury, I warra complete. I understand that any invalidate approvals or other ac development of the land, and may have not signed this form may be processes.	error or incom tions taken by y expose me ar	plete inforr the City o nd the owne	mation in this affidavit or of Scottsdale, may otherver or to other liability. I under	any applications may vise delay or prevent stand that people who
1	Name (printed)	Date		Signature	
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-	·	October 25th	, 20 <u>21</u>		
-			, 20		
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			20		

# **Planning and Development Services**

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#### PH37393A – Waste Management - Hole 16 17020 N Hayden Road, Scottsdale AZ 85255 Parcel: 215-46-001F

#### **Purpose of Request**

T-Mobile is committed to improving coverage and expanding network capacity to meet customer demand throughout the City of Scottsdale. T-Mobile is proposing to co-locate on the Temporary Cell-Site On Wheels (COW) to be located on the Golf Course at 17020 N Hayden Road (16<sup>th</sup> Hole).

The proposed COW will provide visitors and businesses with high quality reliable wireless service for both personal & business, in addition to enhancing emergency services during the upcoming 2020 WM Phoenix Open event.

#### **Details of Request**

The proposed COW will be placed in cooperation with Verizon/AT&T for the duration of the 2022 Phoenix Open event.

Please let me know if you need any additional information.

Sincerely,

Declan Murphy

Deelen Hugh

Coal Creek Consulting for T-Mobile

8283 N Hayden Road, Suite 258, Scottsdale AZ 85258

Tel: (602) 326-0111

Email: dmurphy@coal-creek.com



## **FCC NEPA Compliance study for T-Mobile**

PH37393A - Waste Management Hole 16

**Site number:** PH37393A

**Site name:** Waste Management Hole 16

**NAD 83:** LAT: 33.637397°/ LONG: -111.915957°

#### Introduction.

A substantial amount of scientific research conducted all over the world over many years demonstrates that radio signals within established safety levels emitted from mobile telephones and their base stations present no adverse effects to human health.

There exist national and international safety guidelines for exposure of the public to radio waves:

- International Commission on Non- Ionizing Radiation Protection (ICNIRP): Guidelines for limiting exposure to time varying electric, magnetic and electromagnetic fields. Health Physics 1998 74(4): 494-522.
- Institute of Electrical and Electronics Engineers (IEEE): IEEE Standard for safety levels with respect to human exposure to radio frequency electromagnetic fields, 3 kHz to 300 GHz. IEEE C95.1-1991 (revision of ANSI C95.1-1982) New York 1992.
- CENELEC: Human exposure to electromagnetic fields. High frequency (10 kHz to 300 GHz). European prestandard ENV 50166-2, Brussels 1995.

The most widely accepted standards are those developed by the International Commission on Non-Ionizing Radiation Protection (ICNIRP) and Institute of Electrical and Electronics Engineers (IEEE). Nokia Base Stations must be installed according to instructions specified by Nokia, as well as taking any country-specific regulations for Non-Ionizing radiation protection into account.

#### FCC Guidelines for Evaluating Exposure to RF Emissions

In 1985, the FCC first adopted guidelines to be used for evaluating human exposure to RF emissions. The FCC revised and updated these guidelines on August 1, 1996, as a result of a rule-making proceeding initiated in 1993. The new guidelines incorporate limits for Maximum Permissible Exposure (MPE) in terms of electric and magnetic field strength and power density for transmitters operating at frequencies between 300 kHz and 100 GHz. Limits are also specified



for localized ("partial body") absorption that are used primarily for evaluating exposure due to transmitting devices such as hand-held portable telephones.

Implementation of the new guidelines for mobile and portable devices became effective August 7, 1996.

The FCC's MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP)6 and, over a wide range of frequencies, the exposure limits developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines.7 Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

#### Definitions.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure.

Therefore, members of the general public would always be considered under this category when exposure is not employment-related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

The FCC's limits, and the NCRP and ANSI/IEEE limits on which they are based, are derived from exposure criteria quantified in terms of specific absorption rate (SAR). The basis for these limits is a whole-body averaged SAR threshold level of 4 watts per kilogram (4 W/kg), as averaged over the entire mass of the body, above which expert organizations have determined that potentially hazardous exposures may occur. The new MPE limits are derived by incorporating safety factors that lead, in some cases, to limits that are more conservative than the limits originally adopted by the FCC in 1985. Where more conservative limits exist they do not arise from a fundamental change in the RF safety criteria for whole-body averaged SAR, but from a precautionary desire to protect subgroups of the general population who, potentially, may be more at risk.

Tower-mounted ("non-rooftop") antennas that are used for PCS telephone warrant a somewhat different approach for evaluation. While there is no evidence that typical installations in these services cause groundlevel exposures in excess of the MPE limits, construction of these towers has been a topic of ongoing public controversy on environmental grounds, and we believe it necessary to ensure that there is no likelihood of excessive exposures from these antennas.

Although we believe there is no need to require routine evaluation of towers where antennas are mounted high above the ground, out of an abundance of caution the FCC requires that tower-mounted installations be evaluated if antennas are mounted lower than 10 meters above ground and the total power of all channels being used is over 1000 watts effective radiated power (ERP), or 2000 W ERP for broadband PCS.

These height and power combinations were chosen as thresholds recognizing that a theoretically "worst case" site could use many channels and several thousand watts of power. At such power levels a height of 10 meters above ground is not an unreasonable distance for which an evaluation generally would be advisable.

For antennas mounted higher than 10 meters, measurement data for cellular facilities have indicated that ground-level power densities are typically hundreds to thousands of times below the new MPE limits.



*General population/uncontrolled* exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

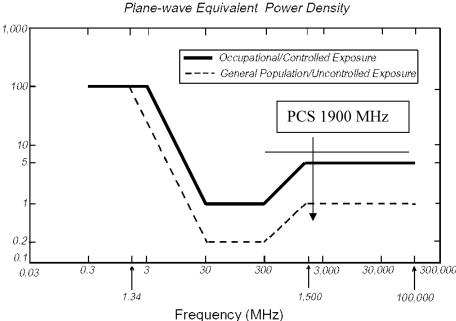


Figure 1. FCC Limits for Maximum Permissible Exposure (MPE)

#### **Limits for General Population/Uncontrolled exposure:**

-0.08 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 1.6 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube).

Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 4 W/kg, as averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube).

General Population/Uncontrolled limits apply when the general public may be exposed, or when persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or do not exercise control over their exposure.

(D)	Limite for	Conoral	Donulation/	Uncontrolled	Evnosuro
(15)	Limits for	Ceneral	- Poniiiation/i	Duconfrollea	E.X DOSH PE

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f <sup>2</sup> )*	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

f = frequency in MHz

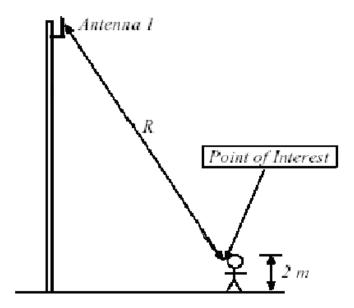
<sup>\*</sup>Plane-wave equivalent power density



#### Calculation.

Compliance with SAR limits can be demonstrated by laboratory measurement techniques or by computational modeling, as appropriate. Methodologies and references for SAR evaluation are described in technical publications including "IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave," IEEE C95.3-1991, and further guidance on measurement and computational protocols is being developed by the IEEE and others.

For T-Mobile site  $PH37393A-TPC\ COW$ , the field situation can be described by the Drawing #1.



#### Near-Field Region.

In the near-field, or Fresnel region, of the main beam, the power density can reach a maximum before it begins to decrease with distance. The extent of the near-field can be described by the following equation (1) having  $\mathbf{D}$  and  $\lambda$  in same units:

$$R_{nf} = \frac{D^2}{4\lambda} \tag{1}$$

where: Rnf = extent of near-field

D = maximum dimension of antenna (diameter if circular)

 $\lambda$  = wavelength

Therefore,

Value ft
$$\lambda = 0.518$$
 $D = 5.5$ 

R nf = 14.6

# T··Mobile·

For sector-type antennas, power densities can be estimated by dividing the net input power by that portion of a cylindrical surface area corresponding to the angular beam width of the antenna. Mathematically, this can be represented by Equation (3) in which the angular beam width,  $\theta$ \_BW, can be taken as the appropriate azimuthal "power dispersion" angle for a given reflector.

$$S = \left(\frac{180}{\theta_{\text{BW}}}\right) \frac{P_{\text{net}}}{\pi R h} \tag{3}$$

where:

S = power density

Pnet = net power input to the antenna

 $\theta$  BW = beam width of the antenna in degrees

R = distance from the antenna

h = aperture height of the antenna

For example, for the case of a 60-degree azimuthal beam width, the surface area should correspond to 1/6 that of a full cylinder. This would increase the power density near the antenna by a factor of three over that for a purely omni-directional antenna. For example, a conservative estimate could be obtained by using the 3 dB (half-power) azimuthal beam width for a given sectorized antenna. Equation (3) can be used for any vertical collinear antenna, even omni-directional ones.

In case of T-Mobile site PH37393A – Waste Management Hole 16, antennas will be installed at 55ft+/- above ground level or approx. 1676.4 cm. This distance is more than three times the near field space calculated in table (2). Antenna aperture (vertical dimension) is 8ft or 243 cm. Therefore, the formula (3) returns:

Pnet =28000	mWatt	
$\theta$ _BW =50	3dB degree	
R =1676.4	cm	(4)
h =243	cm	, ,
MPE= 0.0794	mW/cm^2	
IVIPE- 0.0794	IIIVV/CIII*2	
Exposure limit= 1.00	mW/cm^2	

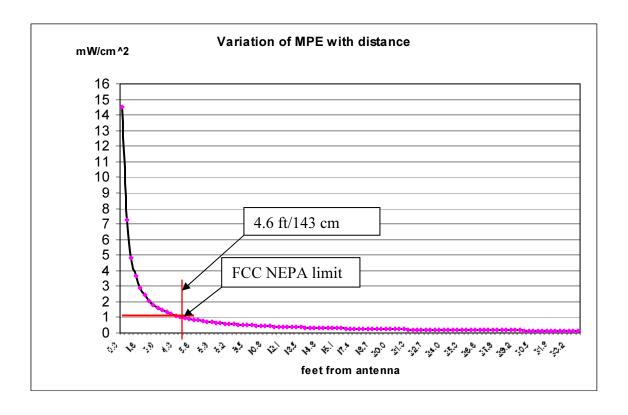
Fig.1

The results of the analysis indicate that the actual exposure received by an individual standing for 30 minutes at the base of T-Mobile facility will be only 7.5% of the Maximum Permissible Exposure. In order to reach the limit of maximum exposure, an individual must stay strictly at the base of T-Mobile tower for 6.51 continuous hours, which is very unlikely to occur.



#### Conclusion.

Based on equation (3) the results are plotted to the following graph (5) and will indicate how close to a T-Mobile one sector antenna should be one person placed for more than 30 minutes in order to receive an electromagnetic exposure grater than the MPE specified by FCC rules.



General Population/uncontrolled exposure limits are specified by FCC at a value of 1 mW/cm<sup>2</sup>. In order to exceed the above limit one person should be placed closer than 4.7 ft (or 145 cm) in front of the antenna. This situation is very unlikely to occur since the T-Mobile antennas (in the case of site PH37393A – Waste Management Hole 16) are mounted 55ft above ground level.

T-Mobile RF Department August 2021



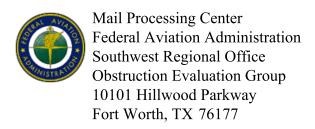
## PH37393A – AT&T - T-Mobile COW - 2018 - Waste Management - Hole 16 17020 N Hayden Road, Scottsdale AZ 85255 Parcel: 215-46-001F





## PH37393A – AT&T - T-Mobile COW - 2018 - Waste Management - Hole 16 17020 N Hayden Road, Scottsdale AZ 85255 Parcel: 215-46-001F





Aeronautical Study No. 2021-AWP-10070-OE Prior Study No. 2020-AWP-10296-OE

Issued Date: 07/15/2021

DEE COKER AT&T 208 S. Akard St. Room 2100 Dallas, TX 75202

#### \*\*DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE\*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Cell-On-Wheels Waste Management Open Hole 16

Location: Scottsdale, AZ

Latitude: 33-38-15.02N NAD 83

Longitude: 111-54-57.91W

Heights: 1528 feet site elevation (SE)

72 feet above ground level (AGL)

1600 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

#### \*\*SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION\*\*

This determination cancels and supersedes prior determinations issued for this structure.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination did not include an evaluation of the permanent structure associated with the use of this temporary structure. If the permanent structure will exceed Title 14 of the Code of Federal Regulations, part 77.9, a separate aeronautical study and FAA determination is required.

This determination concerns the effect of this temporary structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Aviation Administration Flight Procedures Office if the structure is subject to the issuance of a Notice To Airman (NOTAM).

If you have any questions, please contact our office at (404) 305-6337, or nick.goodly@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2021-AWP-10070-OE

Signature Control No: 486415180-488081166

(TMP)

Nick Goodly Technician

#### Additional Condition(s) or Information for ASN 2021-AWP-10070-OE

**Proposal:** To construct and/or operate a(n) Cell-On-Wheels to a height of 72 feet above ground level, 1600 feet above mean sea level.

**Location:** The structure will be located 0.88 nautical miles northwest of 7726 Airport reference point.

#### Case Description for ASN 2021-AWP-10070-OE

Applicant requests study for proposed 72' COW.

#### Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

#### Preliminary FAA study indicates that the above mentioned structure would:

have no effect on any existing or proposed arrival, departure, or en route instrument/visual flight rules (IFR/VFR) minimum flight altitudes.

not exceed traffic pattern airspace

Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

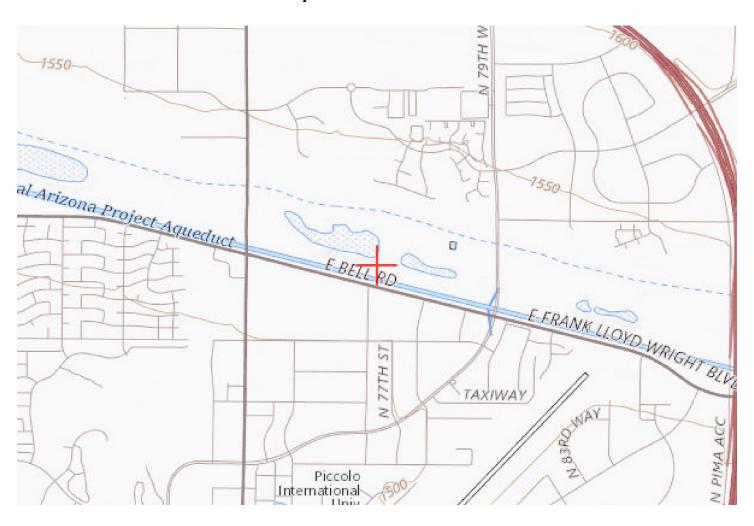
It is required that the manager of SCOTTSDALE, (480) 312-2321 be notified at least 3 business days prior to the temporary structure being erected and again when the structure is removed from the site.

It is required that the manager of Scottsdale ATCT - (480) 609-7585 be notified at least 3 business days prior to the temporary structure being erected and again when the structure is removed from the site. Additionally, please provide contact information for the onsite operator in the event that Air Traffic Control requires the temporary structure to be lowered immediately.

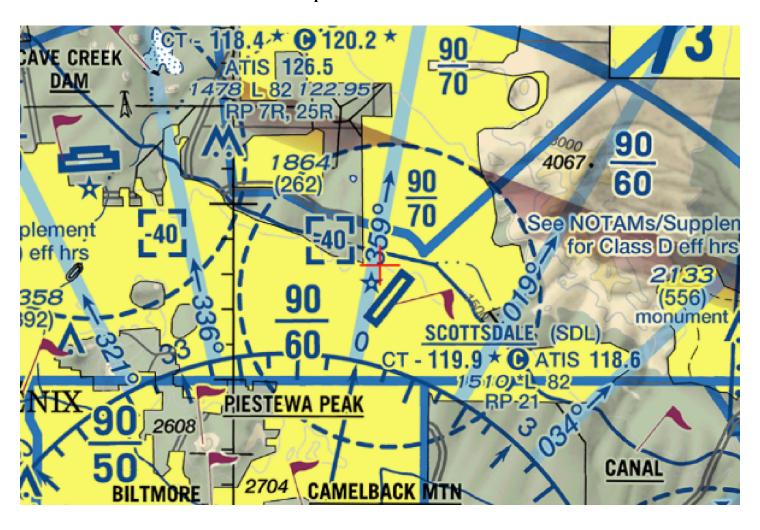
This determination expires on 01/15/2023 unless extended, revised, or terminated by the issuing office.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

### TOPO Map for ASN 2021-AWP-10070-OE



#### Sectional Map for ASN 2021-AWP-10070-OE



# - Mobile®-

SITE #: SITE NAME:

STATE:

**DESIGN TYPE:** 

PH37393A

**WASTE MANAGEMENT** 

**ARIZONA** 

**TEMPORARY COW** 

1330 W. SOUTHERN AVE. STE A-102 TEMPE, ARIZONA, 85282 PHONE: (480) 638-2600 FAX: (480) 638-2852

- CLIENT-

# **COAL CREEK** CONSULTING

8283 N. HAYDEN RD., STE 258 SCOTTSDALE, ARIZONA 85258 HONE: (602) 429-0533 FAX: (480) 638-2852

-ENGINEER OF RECORD-TERRA DYNAMIC ENGINEERING, LLC



P.O. BOX 22131, PHOENIX, AZ 85028 PHONE: (602) 482-1603 EMAIL: ROBERT@TERRADYNAMIC.US

#### CODE COMPLIANCE:

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES ADOTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

#### ACCESSIBILITY REQUIREMENTS:

THIS FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS REQUIREMENTS ARE NOT REQUIRED IN ACCORDANCE WITH THE CURRENT INTERNATIONAL BUILDING CODE

#### **ENGINEERS NOTES:**

- IF A DISCREPANCY ARISES BETWEEN THE DRAWINGS AND FIELD CONDITIONS, OR WHERE A DETAIL IS DOUBTFUL OF INTERPRETATION, OR AN UNANTICIPATED FIELD CONDITION, SO AND UNANTICIPATED FIELD CONDITION IS ENCOUNTERED, THE ENGINEER SHALL BE CALLED IMMEDIATELY FOR PROCEDURE TO BE STOLLOWED. SUCH INSTRUCTIONS SHALL BE CONFIRMED IN WRITING AND DISTRIBUTED TO ALL AFFECTED
- 2. THE ENGINEER WILL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, SAFETY PRECAUTIONS, OR PROGRAMS UTILIZED IN CONNECTION WITH THE WORK, AND WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONSTRUCTION DRAWING AND/OR DOCUMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER LAYOUT OF IMPROVEMENTS BASED SETBACKS/ PROPERTY LINE LOCATION. DIMENSIONAL RELATIONSHIPS TO EQUIPMENT ARE OXIMATE AND ARE FOR ILLUSTRATIVE PURPOSES ONLY.
- CONTRACTOR TO MAINTAIN ALL DRAINAGE PATHS FREE FROM ANY OBSTRUCTIONS (I.E.
- CONTRACTOR TO PROVIDE POSITIVE DRAINAGE AWAY FROM EQUIPMENT
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE ONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR AND ENGINEER OF RECORD.

 SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL DIFFER TEATS AND/OR SHALL ADD NEW TRAYS AS NECESSARY.
SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR. ROUTING OF
TRENCHING SHALL BE APPROVED BY CONTRACTOR.

#### **UTILITY NOTES:**

- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO CONTACT BLUESTAKE AT LEAST TWO
- 2. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO LOCATE ALL STRUCTURES, UNDERGROUND PIPELINES, ELECTRIC AND TELEPHONE CONDUITS, EITHER SHOWN OR NOT SHOWN ON THE PLANS PRIOR TO ANY CONSTRUCTION, AND TO GESERVE ALL POSSIBLE PRECAUTIONS TO AVOID ANY DAMAGE TO THESE FACILITIES. THE ERNINEERING AND/OR DEVELOPER WILL NOT GUARANTEE ANY ELEVATIONS OR LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THESE DIAMS.
- 3. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF ALL UTILITY CONNECTIONS.

#### PROJECT SUMMARY

LAND OWNER: USA BUREAU OF RECLAMATION

ZONING CLASSIFICATION: O-S

APN.

JURISDICTION: CITY OF SCOTTSDALE I AT: 33°38'14.9"N (NAD83) 33.637472

LONG: 111°54'57.8"W (NAD83) -111.916056

215-46-001F

1530.0' (NAVD88) GROUND ELEV:

#### PROJECT DESCRIPTION

T-MOBILE PROPOSES THE FOLLOWING ITEMS:

ADD EQUIPMENT CABINETS AND RADIO MODULES TO SKID (TYP. OF 2)

ADD A TEMPORARY MOBILE GENERATOR

ADD A TEMPORARY FUEL CONTAINMENT BERM BELOW GENERATOR

ADD (1) 3-SECTOR RING MOUNT WITH (1) SECTOR ANTENNA MOUNT

ADD (1) TEMPORARY HI-CAP ANTENNA

ADD (1) ANTENNA

#### **PROJECT TEAM**

PROJECT MANAGER:

T-MOBILE 2625 S. PLAZA DR. #400 TEMPE, AZ 85282 CONTACT: KEVIN BRANTLEY PHONE: (480) 638-2600 FAX: (480) 638-2850

CONSTRUCTION MANAGER:
MEQ CONSTRUCTION MANAGEMENT
7040 W. KATHERINE WAY PEORIA, AZ 85383 CONTACT: MIKE LALLA (602) 481-1309

SITE ACQ. CONSULTANT: COAL CREEK CONSULTING 2166 E. UNIVERSITY DR., STE 201 TEMPE, ARIZONA 85281 CONTACT: JOE VAN GALDER PHONE: (608) 931-0820

A&E DESIGN:
COAL CREEK CONSULTING
2166 E. UNIVERSITY DR., STE 201 TEMPE, ARIZONA 85281 CONTACT: SHAWN EVANS PHONE (602) 758-5829

CIVIL ENGINEER: TERRA DYNAMIC ENGINEERING, LLC P.O. BOX 22131 PHOFNIX ARIZONA 85028 CONTACT: ROBERT ORLANDO PHONE (602) 482-1603 EMAIL:ROBERT@TERRADYNAMIC.US

#### SHEET INDEX

T-1TITLE SHEET, VICINITY MAP & GENERAL INFO.

LS-1OVERALL SITE LS-2 SURVEY DETAIL

CIVIL:

SITE PLAN

Life Time

SITE LOCATION-

ENLARGED SITE PLAN ELEVATION

-PROJECT INFORMATION-JOB: 04-218-04 PH37393A

NO. - DATE - DESCRIPTION -

REVIEW

DRK

1 08/19/21

WASTE MANAGEMENT

-SHEET TITLE-

#### TITLE SHEET, VICINITY MAP & GENERAL INFORMATION

-JURISDICTIONAL APPROVAL-

**DRIVING DIRECTIONS** 

VICINITY MAP

DIRECTIONS TO THE SITE FROM THE T-MOBILE OFFICE:
TAKE S. PRIEST DR. SOUTH AND TURN LEFT TO MERGE ONTO THE AZ-60 E. TAKE EXIT 176B AND MERGE ONTO THE
101-LOOP N. TAKE EXIT 38 AND CONTINUE NORTH ON N. PIMA RD.. TURN LEFT ON N. FRANK LLOYD WRIGHT
BLVD. TURN RIGHT ON N. GREENWAY HAYDEN LOOP. THE EXISTING ENTRANCE TO THE GOLF COURSE WILL BE ON
THE LEFT WHEN YOU REACH E. BELL RD.

-SHEET NUMBER

I **-** 1

