

2018 APPENDIX B
<b>BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS</b>
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)

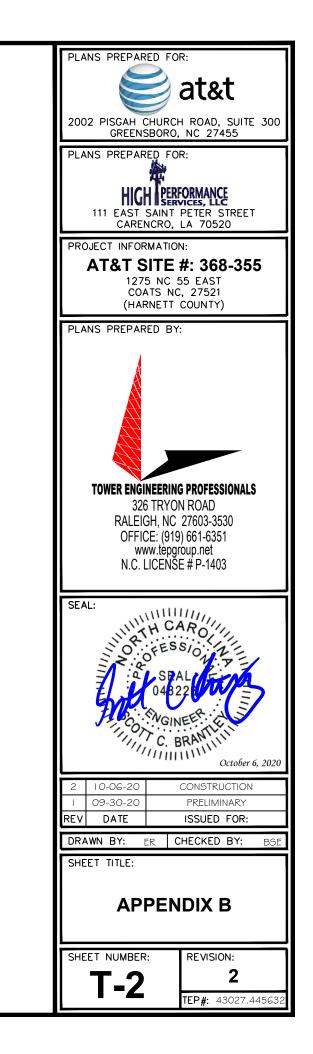
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project	: AT&T 368-355 FA# 1003455	5					
Address: 1275 NC 55 EAST COATS, NC Zip Code 27521							
Owner/Authorized Agent: KEN WELKER (AT&T)   Phone # (_336_) 549 - 9987   E-Mail							
Owned By: City/County Private State							
Code Enforceme	_	CityCOATS	County	_			
		eny <u>comb</u>		0.00			
CONTACT:		Tower Engineering Profe	essionals				
DESIGNER Architectural	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL		
Civil	Tower Engineering Profession	nals Scott C. Brantley	048226	(919) 661-6351	sbrantley@tepgroup.net		
Electrical	Tower Engineering Profession		042109	(919)661-6351	mquakenbush@tepgroup.net		
Fire Alarm				()			
Plumbing				()			
Mechanical	pipe			()			
Structural							
	>5' High						
Other				<u>()</u>			
("Other" should	include firms and indivi	duals such as truss, p	recast, pre-engine	eered, interior desi	gners, etc.)		
2018 NC BUILDING CODE:   New Building X Addition   Renovation     □   1st Time Interior Completion     □   Shell/Core - Contact the local inspection jurisdiction for possible additional procedures and requirements     □   Phased Construction - Shell/Core- Contact the local inspection jurisdiction for possible additional procedures and requirements							
2018 NC EXISTING BUILDING CODE: EXISTING:   Prescriptive   Repair   Chapter 14     Alteration:   Level I   Level II   Level III     Historic Property   Change of Use							
CONSTRU	<b>CTED:</b> (date)	_					
RENOVAT							
RENOVATED:   (date)   PROPOSED OCCUPANCY(S) (Ch. 3):     OCCUPANCY CATEGORY (Table 1604.5):   Current:   I   II   III   IV     Proposed:   I   X   II   III   IV							
BASIC BUILD							
Construction T		🗌 II-A	□ III-A	ΠIV	□ V-A		
(check all that an		□ II -B	ПШ-В		□ V-B		
Sprinklers:	No Partial			PA 13R 🗌 NF	PA 13D		
Standpipes: $\square$ No $\square$ Yes Class $\square$ I $\square$ III $\square$ III $\square$ Wet $\square$ Dry							
Fire District: X No Yes Flood Hazard Area: X No Yes							
Special Inspections Required: $\boxtimes$ No $\square$ Yes (Contact the local inspection jurisdiction for additional							
Special Inspects	ions required. Ex 100		s and requiremen		<u>aanoonun</u>		

	Gro	ss Building Area Table	
FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	Sub-Тот
3 <sup>rd</sup> Floor		N/A	
2 <sup>nd</sup> Floor		N/A	1.
Mezzanine		N/A	
1 <sup>st</sup> Floor			<u></u>
Basement			$\mathbf{\Sigma}$
TOTAL			
		₩ ₩	
	Δ		
Primary Occur	ancy Classification(s): <u>Select</u>	NEW (SQ FT) N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	Select one Select one
Assembly	$\Box A-1 \Box A-2 \Box A-3$		<u>beleet one</u> <u>beleet one</u>
Business			
		$\sim$	
Educational			
Factory	F-1 Moderate F-2 Lov		
Hazardous		flagrate 🗌 H-3 Combust [	_ H-4 Health _ H-5 HP
Institutional	I-1 Condition 1		
		2	
	$\Box$ I-3 Condition $\Box$ 1 $\Box$	$2 \sqcup 3 \sqcup 4 \sqcup 5$	i
	∐ I-4		
Mercantile		_	
Residential	🗌 R-1 🗌 R-2 🗌 R-3	🗌 R-4	
Storage	S-1 Moderate 🔀 S-2 L	ow 🗌 High-piled	
	🗌 Parking Garage 🗌 Open	Enclosed Repair Ga	rage
Utility and I	Miscellaneous		
Accessory Occu	pancy Classification(s): <u>N/A</u>		
Incidental Uses	(Table 509): N/A		
Special Uses (C	hapter 4 – List Code Sections)	• N/A	
•	ons: (Chapter 5 – List Code Se		
Mixed Occupar	·	Separation: Hr.	Exception:
	n-Separated Use (508.3) - The r	-	•
		ing the height and area limit	
		pancies to the entire building	
	const	ruction, so determined, shall	apply to the entire buildin
	arated Use (508.4) - See below		n story, the area of the occu
			actual floor area of each u
	the allowal		not exceed 1.
Actu	al Area of Occupancy A +	Act	$R \leq 1$
	ble Area of Occupancy A		$\frac{B}{1 + 1} = \frac{1}{2}$
110000			<i>icy 2</i>
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2018 NC Administrative Code and Policies

2018 NC Administrative Code and Policies



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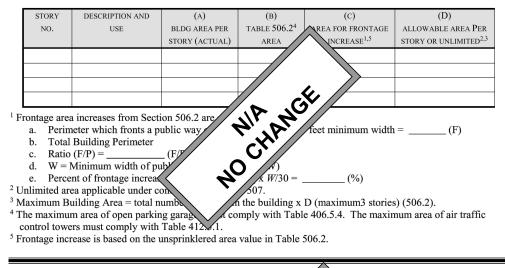
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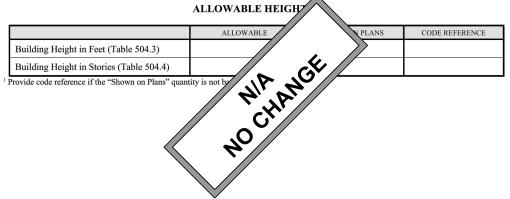
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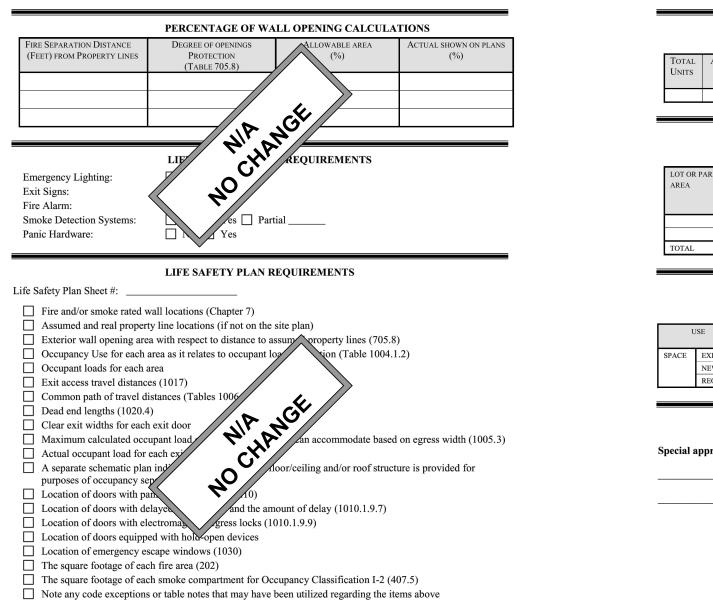


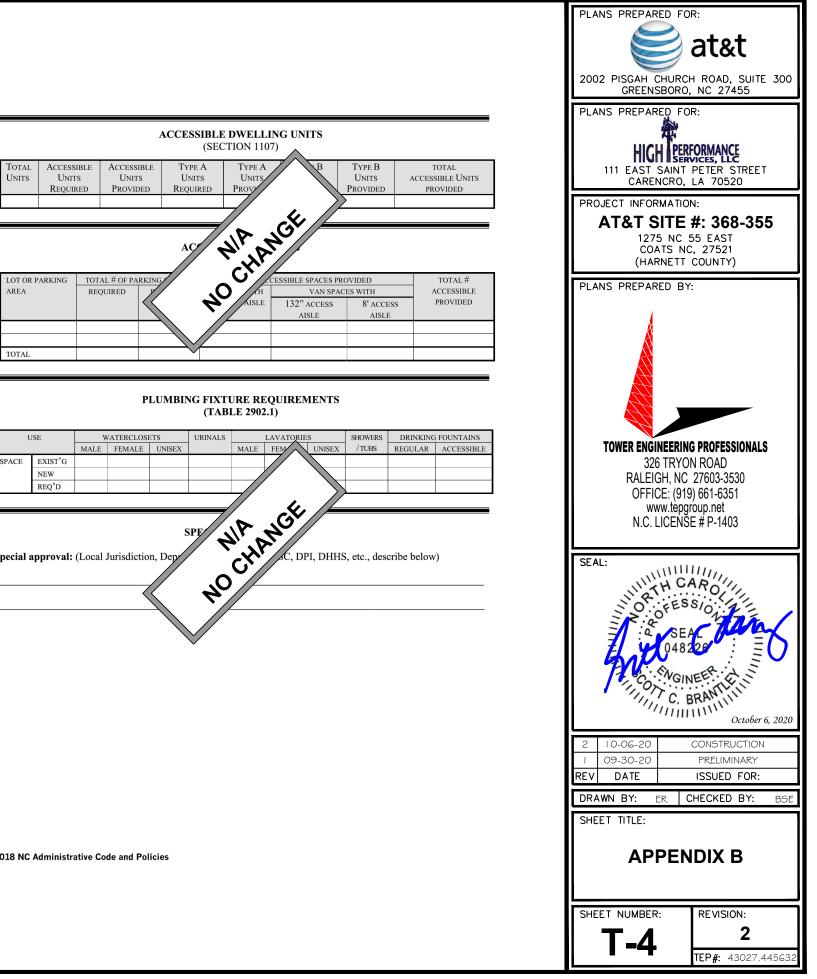
FIRE PROTECTION REQUIREMENTS							
BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	REQ'D	RATING PROVIDED (W/* REDUCTION)	DETAIL # AND SHF	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
Structural Frame, including columns, girders, trusses			NIA NOCHA				
Bearing Walls				A.			
Exterior				<u> </u>			
North				5//			
East							
West			GY (				
South			$\cap$	ĺ			
Interior			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				
Nonbearing Walls and Partitions							
Exterior walls							
North							
East				$\square$			
West				V/ `			
South							
Interior walls and partitions							
Floor Construction Including supporting beams and joists Floor Ceiling Assembly			NIA NOCHA	MOF			
Columns Supporting Floors			CX.	$\square$			
Roof Construction, including supporting beams and joists			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	<u> </u>			
Roof Ceiling Assembly			~//~				
Columns Supporting Roof							
Shaft Enclosures - Exit							
Shaft Enclosures - Other							
Corridor Separation Occupancy/Fire Barrier Separat	ion						
Party/Fire Wall Separation							
Smoke Barrier Separation							
Smoke Partition							
Tenant/Dwelling Unit/ Sleeping Unit Separation							
Incidental Use Separation							
Indicate section number perm	ittin o no decotion		1				

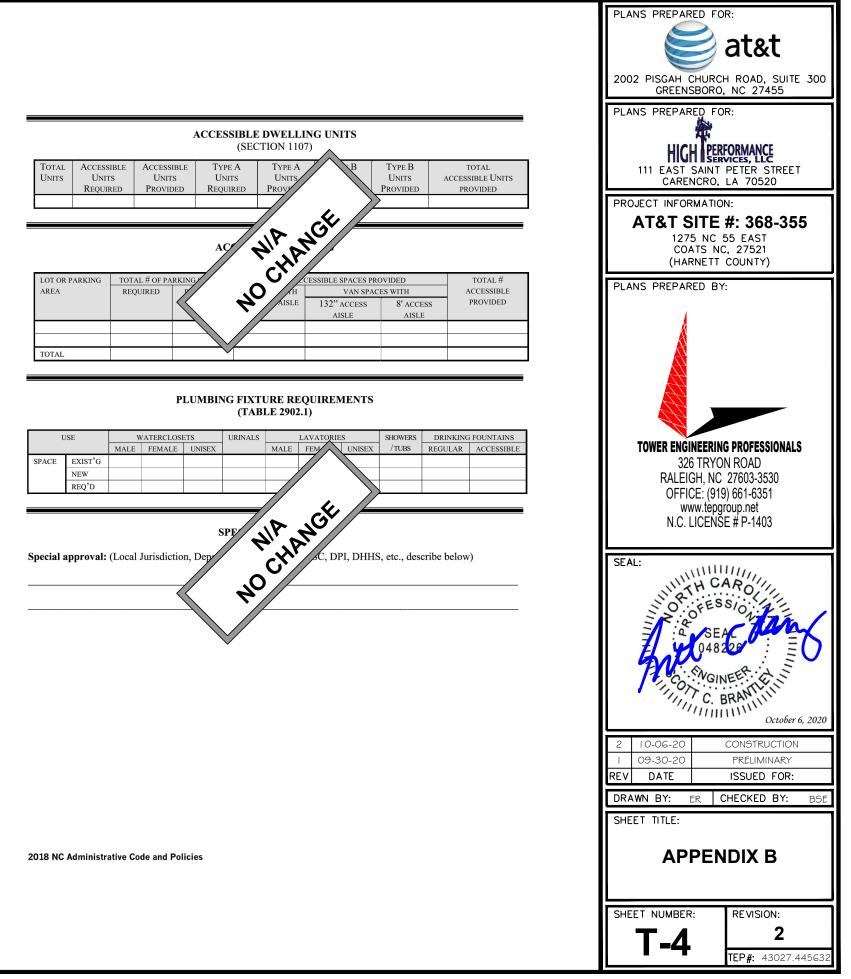
\* Indicate section number permitting reduction

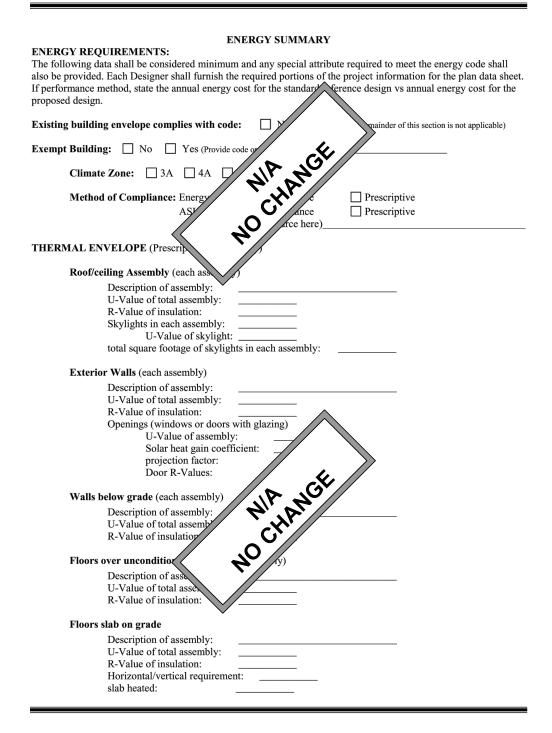
#### 2018 NC Administrative Code and Policies





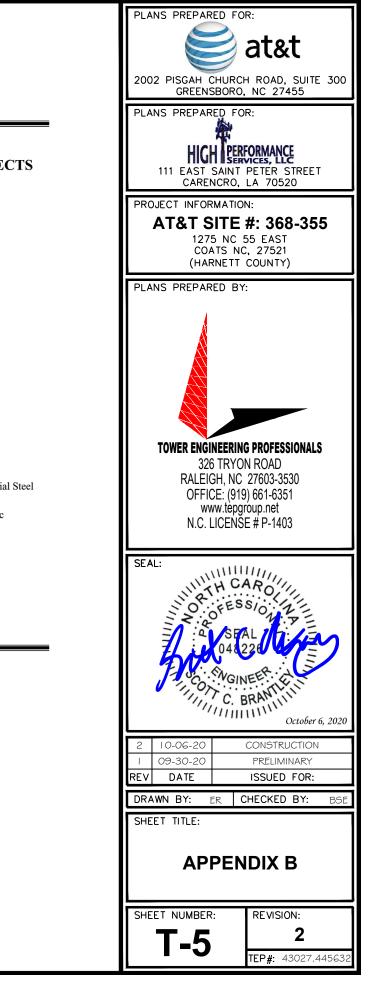


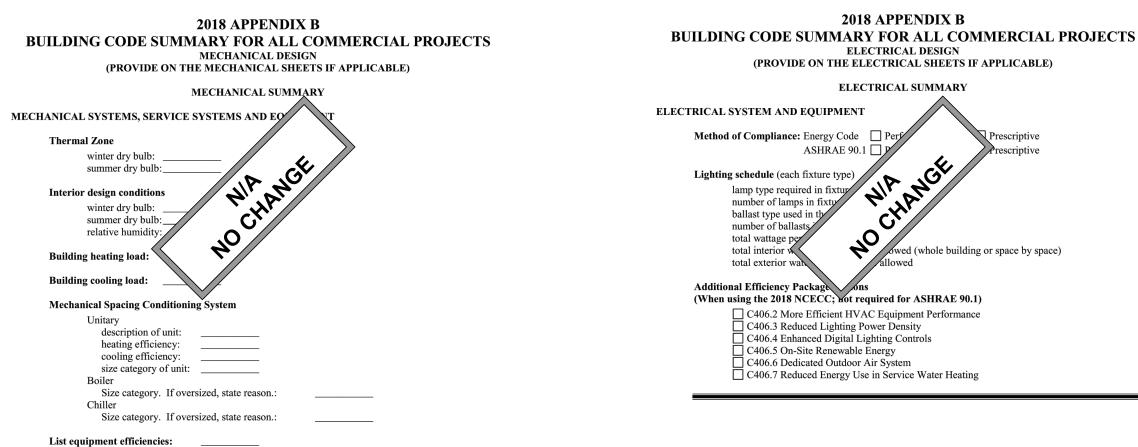






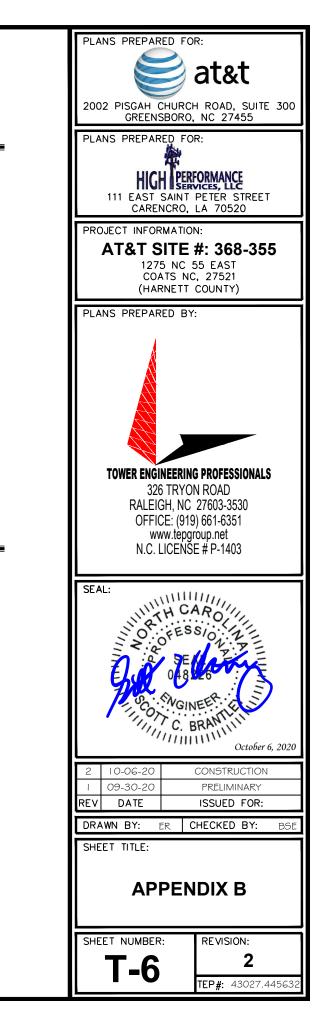
2018 NC Administrative Code and Policies





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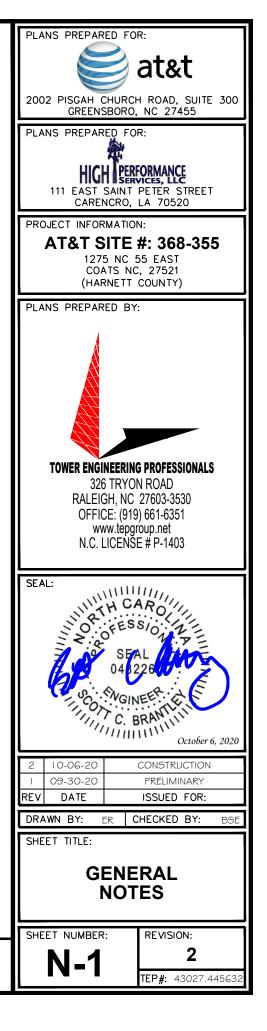
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- ALL REFERENCES MADE TO OWNER IN THESE DOCUMENTS SHALL BE CONSIDERED AT&T OR IT'S DESIGNATED 1. REPRESENTATIVE.
- WORK PRESENTED ON THESE DRAWINGS MUST BE COMPLETED BY THE CONTRACTOR UNLESS NOTED 2. OTHERWISE. THE CONTRACTOR MUST HAVE CONSIDERABLE EXPERIENCE IN PERFORMANCE OF WORK SIMILAR TO THAT DESCRIBED HEREIN. BY ACCEPTANCE OF THIS ASSIGNMENT, THE CONTRACTOR IS ATTESTING THAT HE DOES HAVE SUFFICIENT EXPERIENCE AND ABILITY, THAT HE IS KNOWLEDGEABLE OF THE WORK TO BE PERFORMED AND THAT HE IS PROPERLY LICENSED AND PROPERLY REGISTERED TO DO THIS WORK IN THE STATE OF NORTH CAROLINA
- THE STRUCTURE SHALL BE DESIGNED IN ACCORDANCE WITH ANSI/TIA-222-G-2-2009. THIS CONFORMS 3. TO THE REQUIREMENTS OF THE NORTH CAROLINA BUILDING CODE, 2018 EDITION.
- WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE NORTH CAROLINA BUILDING CODE, 2018 EDITION.
- 5 UNLESS SHOWN OR NOTED OTHERWISE ON THE CONTRACT DRAWINGS, OR IN THE SPECIFICATIONS, THE FOLLOWING NOTES SHALL APPLY TO THE MATERIALS LISTED HEREIN, AND TO THE PROCEDURES TO BE USED ON THIS PROJECT
- ALL HARDWARE ASSEMBLY MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED EXACTLY AND SHALL 6. SUPERSEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.
- IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE STRUCTURE AND IT'S COMPONENT PARTS DURING ERECTION AND/OR FIELD 7. MODIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY BRACING, GUYS OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER THE COMPLETION OF THE PROJECT.
- 8. ALL DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS SHOWN ON THE DRAWINGS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING ANY MATERIALS ORDERING, FABRICATION OR CONSTRUCTION WORK ON THIS PROJECT. CONTRACTOR SHALL NOT SCALE CONTRACT DRAWINGS IN LIEU OF FIELD VERIFICATION. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND THE OWNER'S ENGINEER. THE DISCREPANCIES MUST BE RESOLVED BEFORE THE CONTRACTOR IS TO PROCEED WITH THE WORK. THE CONTRACT DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE OWNER AND/OR THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE PROTECTIVE MEASURES OR THE PROCEDURES.
- ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW AND OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY AND ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED IN WRITING BY THE OWNER AND ENGINEER PRIOR TO INSTALLATION. 9. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF THE MATERIALS AND EQUIPMENT BEING SUBSTITUTED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR INSURING THAT THIS PROJECT AND RELATED WORK COMPLIES WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES AND REGULATIONS GOVERNING THIS WORK. 10. RENTAL CHARGES, SAFETY, PROTECTION AND MAINTENANCE OF RENTED EQUIPMENT SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- 11 ACCESS TO THE PROPOSED WORK SITE MAY BE RESTRICTED. THE CONTRACTOR SHALL COORDINATE INTENDED CONSTRUCTION ACTIVITY, INCLUDING WORK SCHEDULE AND MATERIALS ACCESS, WITH THE AT&T PROJECT MANAGER
- BILL OF MATERIALS AND PART NUMBERS LISTED ON CONSTRUCTION DRAWINGS ARE INTENDED TO AID 12. CONTRACTOR/OWNER. CONTRACTOR/OWNER SHALL VERIFY PARTS AND QUANTITIES WITH MANUFACTURER PRIOR TO BIDDING AND/OR ORDERING MATERIALS.
- ALL PERMITS THAT MUST BE OBTAINED ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS. 13.
- 14. 24 HOURS PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, THE CONTRACTOR MUST NOTIFY THE APPLICABLE JURISDICTIONAL (STATE, COUNTY OR CITY) ENGINEER.
- THE CONTRACTOR SHALL REWORK (DRY, SCARIFY, ETC.) ALL MATERIAL NOT SUITABLE FOR SUBGRADE IN ITS PRESENT STATE. AFTER REWORKING, IF THE MATERIAL REMAINS UNSUITABLE, THE CONTRACTOR SHALL UNDERCUT THIS MATERIAL AND REPLACE WITH APPROVED MATERIAL. ALL SUBGRADES SHALL BE PROOFROLLED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK PRIOR TO PAVING. ANY SOFT MATERIAL SHALL BE REWORKED OR REPLACED.
- THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL PIPES, DITCHES, AND OTHER DRAINAGE STRUCTURES 16. FREE FROM OBSTRUCTION UNTIL WORK IS ACCEPTED BY THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES CAUSED BY FAILURE TO MAINTAIN DRAINAGE STRUCTURE IN OPERABLE CONDITION.
- THE OWNER SHALL HAVE A SET OF APPROVED PLANS AVAILABLE AT THE SITE AT ALL TIMES WHILE WORK IS BEING PERFORMED. A DESIGNATED RESPONSIBLE EMPLOYEE SHALL BE AVAILABLE FOR 17. CONTACT BY GOVERNING AGENCY INSPECTORS.

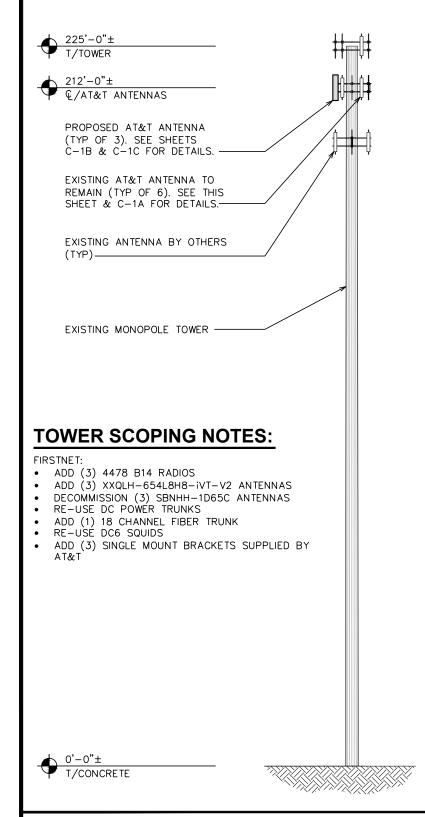
- ANY BUILDINGS ON THIS SITE ARE INTENDED TO SHELTER EQUIPMENT WHICH WILL ONLY BE PERIODICALLY MAINTAINED AND ARE NOT INTENDED FOR HUMAN OCCUPANCY.
- TEMPORARY FACILITIES FOR PROTECTION OF TOOLS AND EQUIPMENT SHALL CONFORM TO LOCAL REGULATIONS 19 AND SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- THE CONTRACTOR AND ITS SUBCONTRACTORS SHALL CARRY LIABILITY INSURANCE IN THE AMOUNTS AND FORM IN ACCORDANCE WITH AT&T SPECIFICATIONS. CERTIFICATES DEMONSTRATING PROOF OF COVERAGE SHALL BE PROVIDED TO AT&T PRIOR TO THE START OF THE WORK ON THE PROJECT. 20.
- THE CONTRACTOR SHALL CONTACT ALL APPLICABLE UTILITY SERVICES TO VERIFY LOCATIONS OF EXISTING 21 UTILITIES AND REQUIREMENTS FOR NEW UTILITY CONNECTIONS PRIOR TO EXCAVATING.
- THE CONTRACTOR SHALL MAINTAIN THE JOB CLEAR OF TRASH AND DEBRIS. ALL WASTE MATERIALS SHALL BE REMOVED FROM THE SITE PRIOR TO SUBSTANTIAL COMPLETION AND PRIOR TO FINAL ACCEPTANCE. THE CONTRACTOR SHALL FURNISH ONE 55 GALLON BARREL, AND TRASH BAGS, AND SHALL REMOVE TRASH, 22. DEBRIS, ETC., ON A DAILY BASIS.
- THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL CONDITIONS PRIOR TO SUBMITTING HIS PROPOSAL. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS WITH THOSE AT THE SITE. ANY VARIATION WHICH REQUIRES PHYSICAL CHANGE SHALL BE BROUGHT TO THE 23. ATTENTION OF THE AT&T PROJECT ENGINEER FOR FACILITIES/CONSTRUCTION.
- THE CONTRACTOR SHALL GUARANTEE THE WORK PERFORMED ON THE PROJECT BY THE CONTRACTOR AND ANY OR ALL OF THE SUBCONTRACTORS WHO PERFORMED WORK FOR THE CONTRACTOR ON THIS PROJECT. THE GUARANTEE SHALL BE FOR A FULL YEAR FOLLOWING ISSUANCE OF THE FINAL PAYMENT OF RETAINAGE. 24 ALL MATERIALS AND WORKMANSHIP SHALL BE WARRANTED FOR ONE YEAR FROM ACCEPTANCE DATE.

## GENERAL NOTES



## NOTES:

- I. PROPOSED CABLES TO BE ROUTED PER SPECIFICATIONS OF STRUCTURAL ANALYSIS.
- 2. THE TOWER DRAWING IS ONLY A GRAPHIC REPRESENTATION OF THE STRUCTURE. THE ACTUAL TOWER IN THE FIELD MAY VARY.



TOWER ELEVATION

SCALE: 1'' = 20'

## **GENERAL NOTES:**

- 1. THIS ANTENNA ORIENTATION PLAN IS A SCHEMATIC. THE CONTRACTOR SHALL VERIFY TOWER ORIENTATION AND FIELD COORDINATE REQUIRED ADJUSTMENTS TO ACHIEVE THE DESIRED ANTENNA AZIMUTHS.
- 2. ANTENNA CENTERLINE HEIGHT BASED ON TOP OF FOOTING ELEVATION.
- 3. ALL ANTENNAS, CABLES AND MOUNTS SHALL BE INSTALLED IN ACCORDANCE WITH THE STRUCTURAL ENGINEER'S RECOMMENDATIONS IN A MANNER CONSISTENT WITH THE STRUCTURAL ANALYSIS REPORT.
- 4. ALL ANTENNA BRACKETS PER ANTENNA MANUFACTURER, OR EQUAL. CONTRACTOR TO COORDINATE REQUIRED MECHANICAL DOWN TILT WITH AT&T.
- 5. ALL ANTENNA INFORMATION TO BE CONFIRMED WITH AT&T RF DESIGN PRIOR TO INSTALLATION.
- 6. TEP DID NOT PERFORM A STRUCTURAL ANALYSIS ON THE MOUNT. IT IS THE CARRIER'S RESPONSIBILITY TO ENSURE MOUNT CAN SUPPORT ADDITIONAL LOADS.
- 7. EXISTING LOADING INFORMATION PROVIDED BY HIGH PERFORMANCE SERVICES RFDS ID: 4092139.

#### **EXISTING ANTENNA/CABLE SCHEDULE** MANUFACTURER/ AZIMUTH RAD ELEC. ТМА COAX/ SURGE ANT. TECH. SECTOR MARK (TN) CENTER D-TILT MODEL MODEL # CABLE PROTECTION (1) FIBER<sub>18</sub> KMW (1) 2: A1 ALPHA LTE ÁWS LTE 1900 0° 212' (2) DC POWER DC6-48-60-18-8F EPBQ-652L8H8 (1) ¾" RET (2) 1%" COAX KATHREIN (2) RFS ALPHA JMTS 1900 2° Α4 0° 212' 741-989 ATM192012-0 \*GSM 1900 \*COMMSCOPE 212' \*\*(2) 1%" COAX Α5 ALPHA 0° (INACTIVE) SBNHH-1D65C LTE 700 LTE AWS LTE 1900 KMW (1)2 B1 ΒΕΤΑ (2) DC POWER 120° 212' EPBQ-652L8H8 DC6-48-60-18-8F KATHREIN (2) RFS 2° (2) 1<sup>5</sup>/<sub>8</sub>" COAX Β4 BETA UMTS 1900 120° 212' 741-989 ATM192012-0 \*GSM 1900 \*COMMSCOPE 212' \*\*(2) 1%" COAX Β5 ΒΕΤΑ 120° (INACTIVE) SBNHH-1D65C 700 KMW LTE AWS LTE 1900 2 C1 GAMMA 240° 212' EPBQ-652L8H8 KATHREIN (2) RFS 2° (2) 1%" COAX C4 GAMMA UMTS 1900 240° 212' 741-989 ATM192012-0 KGSM 1900 \*COMMSCOPE C5 GAMMA 240° 212' \*\*(2) 1%" COAX (INACTIVE) SBNHH-1D65C

\* - EXISTING AT&T EQUIPMENT & TECHNOLOGY TO BE REMOVED

\*\* - INACTIVE COAX TO BE REMOVED

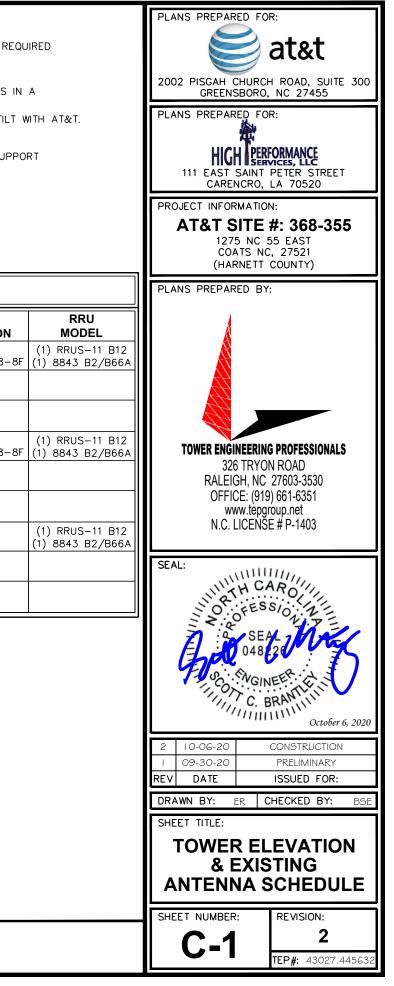
# **EXISTING ANTENNA/CABLE SCHEDULE**

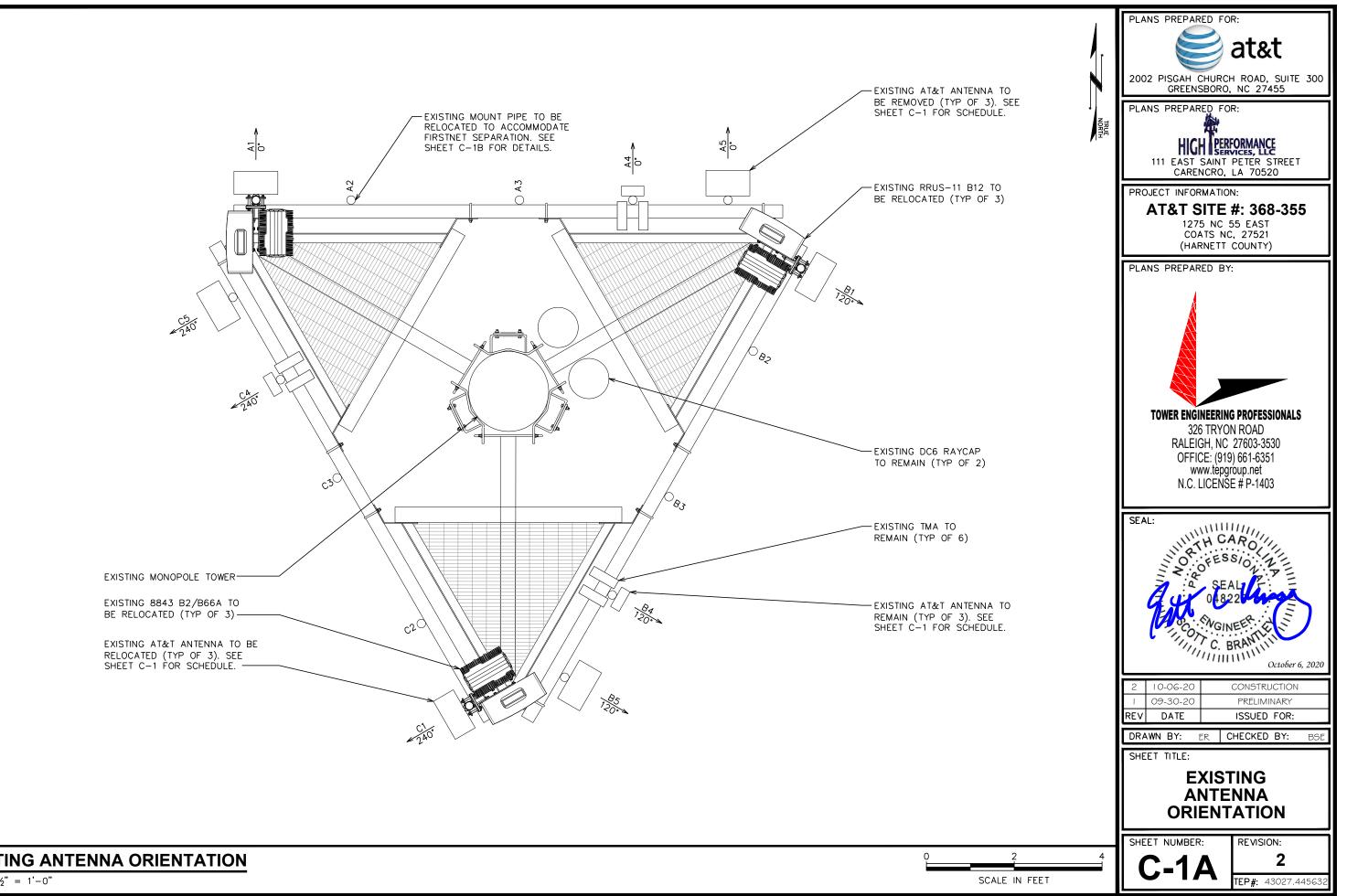
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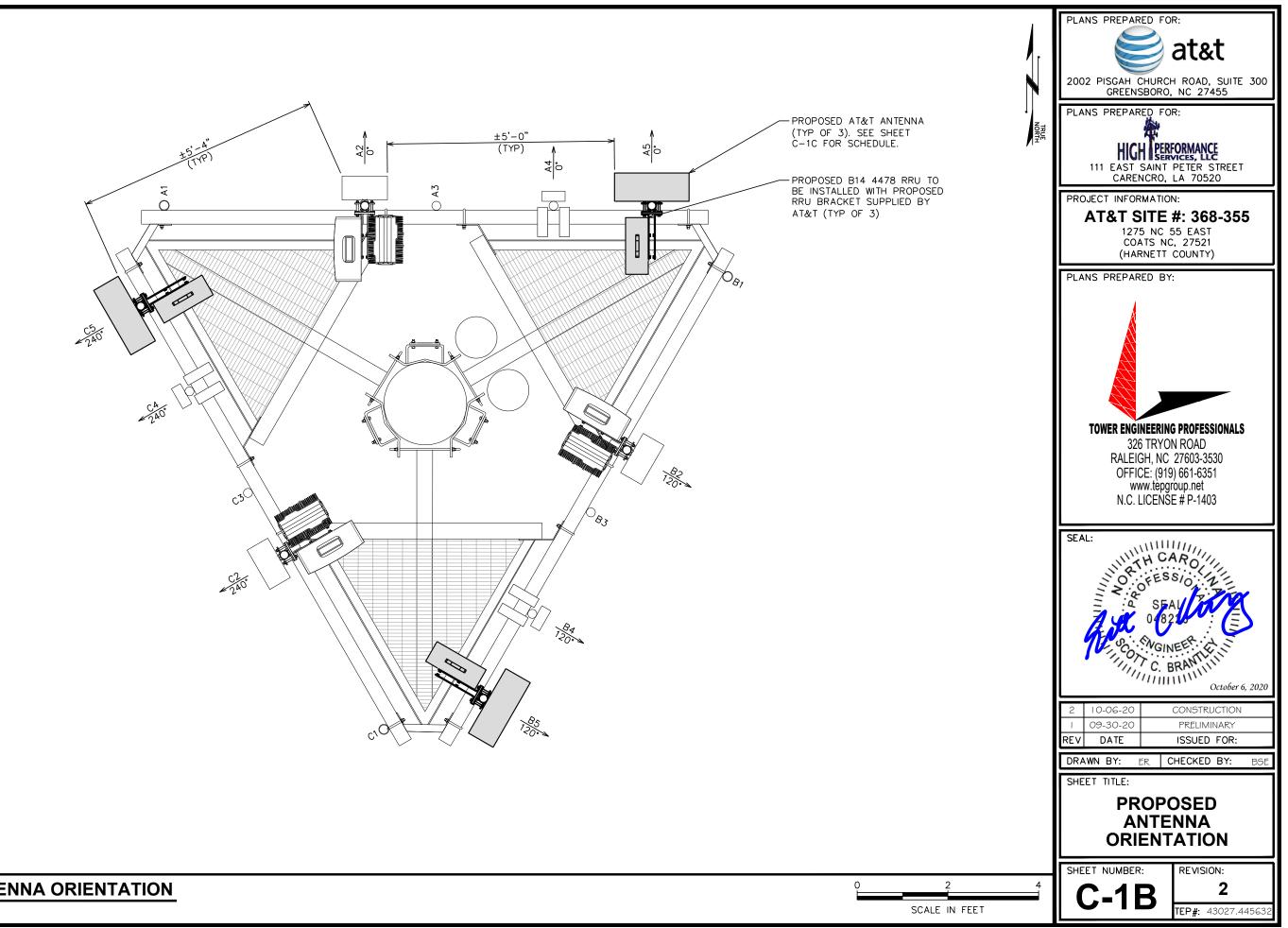
SCALE IN FEET





# **EXISTING ANTENNA ORIENTATION**

SCALE:  $\frac{1}{2}$  = 1'-0"



## **PROPOSED ANTENNA ORIENTATION**

SCALE:  $\frac{1}{2}$  = 1'-0"

## **GENERAL NOTES:**

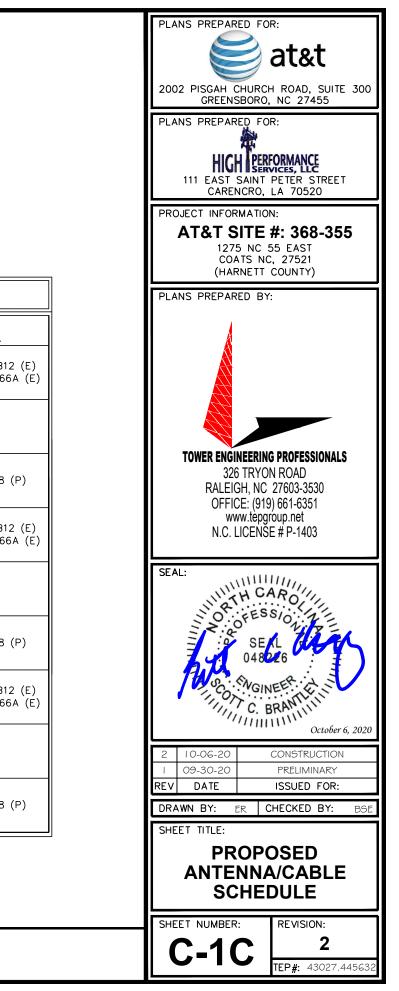
- 1. THIS ANTENNA ORIENTATION PLAN IS A SCHEMATIC. THE CONTRACTOR SHALL VERIFY TOWER ORIENTATION AND FIELD COORDINATE REQUIRED ADJUSTMENTS TO ACHIEVE THE DESIRED ANTENNA AZIMUTHS.
- 2. ANTENNA CENTERLINE HEIGHT BASED ON TOP OF FOOTING ELEVATION.
- 3. ALL ANTENNAS, CABLES AND MOUNTS SHALL BE INSTALLED IN ACCORDANCE WITH THE STRUCTURAL ENGINEER'S RECOMMENDATIONS IN A MANNER CONSISTENT WITH THE STRUCTURAL ANALYSIS REPORT.
- 4. ALL ANTENNA BRACKETS PER ANTENNA MANUFACTURER, OR EQUAL. CONTRACTOR TO COORDINATE REQUIRED MECHANICAL DOWN TILT WITH AT&T.
- 5. ALL ANTENNA INFORMATION TO BE CONFIRMED WITH AT&T RF DESIGN PRIOR TO INSTALLATION.
- 6. TEP DID NOT PERFORM A STRUCTURAL ANALYSIS ON THE MOUNT. IT IS THE CARRIER'S RESPONSIBILITY TO ENSURE MOUNT CAN SUPPORT ADDITIONAL LOADS.
- 7. EXISTING LOADING INFORMATION PROVIDED BY HIGH PERFORMANCE SERVICES RFDS ID: 4092139.
- 8. CABLE LENGTH TAKEN FROM AT&T RFDS. CONTRACTOR TO VERIFY LENGTH PRIOR TO ORDERING MATERIALS.

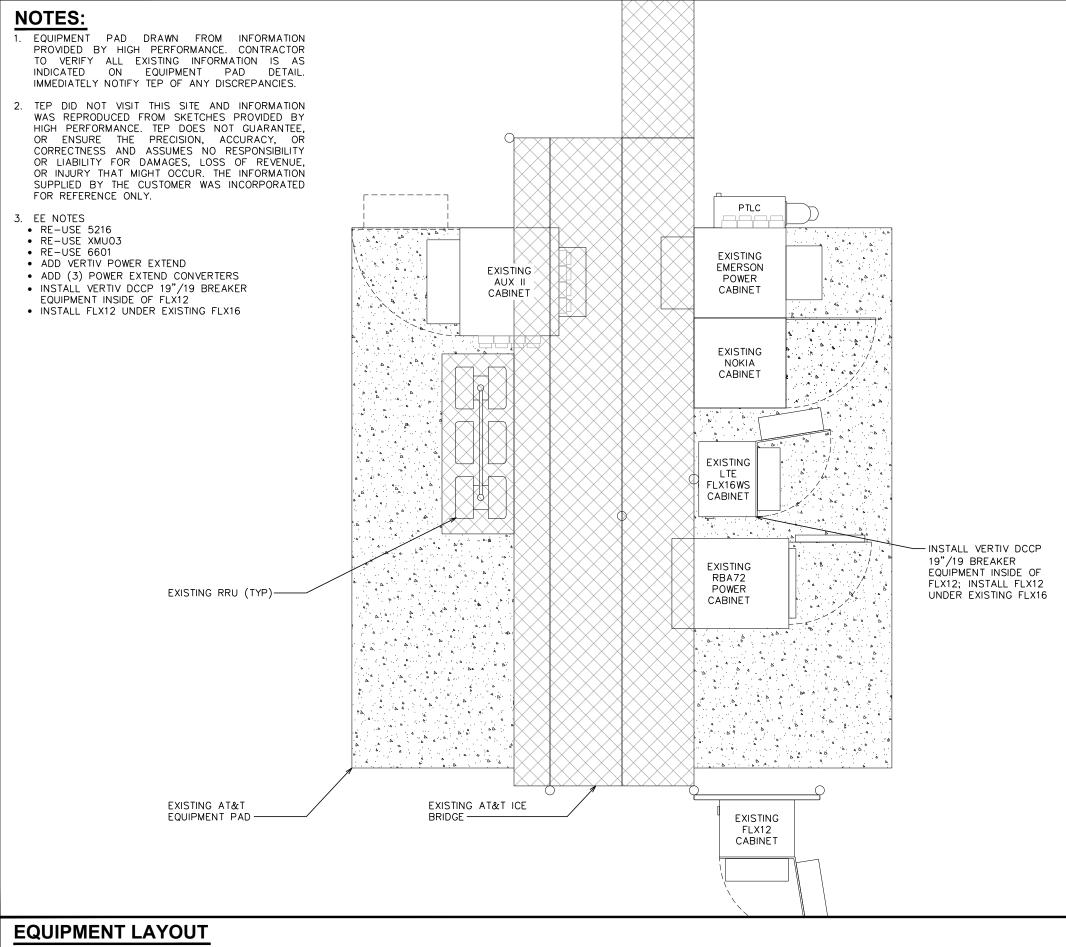
#### **PROPOSED ANTENNA/CABLE SCHEDULE** DIMS AZIMUTH RAD ELEC. MANUFACTURER/ TMA COAX/ CABLE SURGE RRU ANT. SECTOR TECH. STATUS MARK MODEL # (HxWxD) (TN) CENTER D-TILT MODEL CABLE LENGTH PROTECTION MODEL (E) LTE 700 (1) H 99.6 (1) FIBER<sub>18</sub> (E) (1) RRUS-11 B12 (E) (E) LTE AWS (E) KMW DC6-48-60-18-8F A2 ALPHA EXISTING 0° 2° 262'± W 12.0 212' (2) DC POWER (E) (1) 8843 B2/B66A (É) EPBQ-652L8H8 (E) LTE 1900 2° (E) D 6.3" (2) RFS H 51.3" (2) 1%" COAX (E) (E) KATHREIN ATM192012-0 Α4 ALPHA (E) UMTS 1900 EXISTING W 6.1" 0° 212' 2° 262'± 741-989 (1) ⅔"RET (E) (E) D 2.7" (P) ACE Н 99.0' (P) LTE 700 PROPOSED 2° (1) B14 4478 (P) Α5 ALPHA XXQLH-654L8H8-W 19.7 0° 212' IVT-V2 D 7.5" (E) LTE 700 (1)H 99.6 (1) FIBER<sub>18</sub> (P) (1) RRUS-11 B12 (E) (E) LTE AWS (E) KMW DC6-48-60-18-8F EXISTING 262'± Β2 ΒΕΤΑ W 12.0" 120° 212' 2 (2) DC POWER (E) (1) 8843 B2/B66A (E) EPBQ-652L8H8 (E) LTE 1900 2° (E) D 6.3" H 51.3" (2) RFS (E) KATHREIN ATM192012-0 | (2) 1%" COAX (E) (E) UMTS 1900 EXISTING 2° 262'± B4 BETA 120° 212' W 6.1" , 741–989 (E) D 2.7" Н 99.0' (P) ACE (P) LTE 700 2° (1) B14 4478 (P) Β5 BETA PROPOSED XXQLH-654L8H8-W 19.7 120° 212' IVT-V2 D 7.5" (E) LTE 700 H 99.6' (1) RRUS-11 B12 (E) (E) LTE AWS (E) KMW C2 GAMMA EXISTING W 12.0" 240° 212' 2 (1) 8843 B2/B66A (E) (E) LTE 1900 EPBQ-652L8H8 2. D 6.3" (2) RFS H 51.3' (E) KATHREIN ATM192012-0 (2) 1%" COAX (E) (E) UMTS 1900 EXISTING 2° 262'± C4 GAMMA W 6.1" 240° 212' 741-989 (E) D 2.7" (P) ACE H 99 0' 2° C5 GAMMA (P) LTE 700 PROPOSED XXQLH-654L8H8-W 19.7 240° (1) B14 4478 (P) 212' IVT-V2 D 7.5"

(E) - EXISTING AT&T EQUIPMENT & TECHNOLOGY

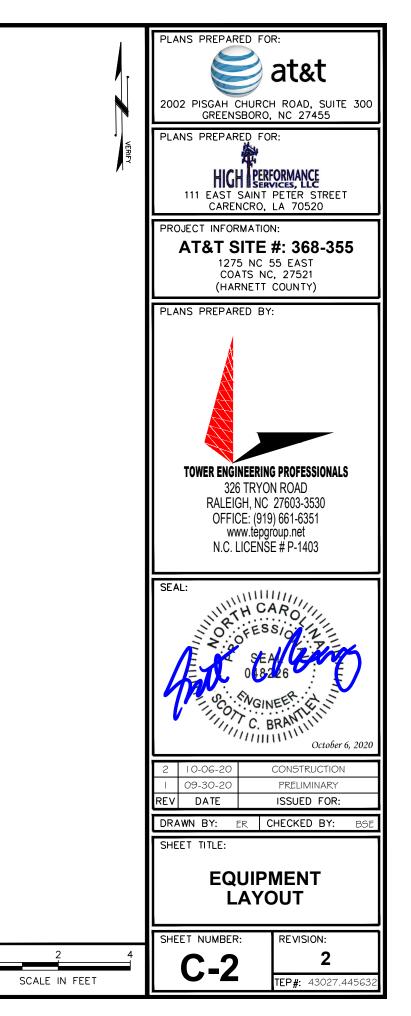
(P) - PROPOSED AT&T EQUIPMENT & TECHNOLOGY

## **PROPOSED ANTENNA/CABLE SCHEDULE**





SCALE: ⅔" = 1'-0"



### SCOPE:

1. PROVIDE LABOR, MATERIALS, INSPECTION, AND TESTING TO PROVIDE CODE COMPLIANCE FOR ELECTRIC, TELEPHONE, AND GROUNDING/LIGHTNING SYSTEMS.

#### CODES:

A

- 1. THE INSTALLATION SHALL COMPLY WITH APPLICABLE LAWS AND CODES. THESE INCLUDE BUT ARE NOT LIMITED TO THE LATEST ADOPTED EDITIONS OF:
  - THE NATIONAL ELECTRICAL SAFETY CODE D. LOCAL AND STATE AMENDMENTS
  - B. THE NATIONAL ELECTRIC CODE NFPA-70

C. REGULATIONS OF THE SERVING UTILITY COMPANY

- E. THE INTERNATIONAL ELECTRIC CODE IEC (WHERE APPLICABLE)
- 2. PERMITS REQUIRED SHALL BE OBTAINED BY THE CONTRACTOR
- 3. AFTER COMPLETION AND FINAL INSPECTION OF THE WORK, THE OWNER SHALL BE FURNISHED A CERTIFICATE OF COMPLETION AND APPROVAL.

#### TESTING:

1. UPON COMPLETION OF THE INSTALLATION, OPERATE AND ADJUST THE EQUIPMENT AND SYSTEMS TO MEET SPECIFIED PERFORMANCE REQUIREMENTS. THE TESTING SHALL BE DONE BY QUALIFIED PERSONNEL.

#### GUARANTEE:

- 1. IN ADDITION TO THE GUARANTEE OF THE EQUIPMENT BY THE MANUFACTURER, EACH PIECE OF EQUIPMENT SPECIFIED HEREIN SHALL ALSO BE GUARANTEED FOR DEFECTS OF MATERIAL OR WORKMANSHIP OCCURRING DURING A PERIOD OF ONE (1) YEAR FROM FINAL ACCEPTANCE OF THE WORK BY THE OWNER AND WITHOUT EXPENSE TO THE OWNER.
- 2. THE WARRANTEE CERTIFICATES & GUARANTEES FURNISHED BY THE MANUFACTURERS SHALL BE TURNED OVER TO THE OWNER.

#### UTILITY CO-ORDINATION:

1. CONTRACTOR SHALL COORDINATE WORK WITH THE POWER AND TELEPHONE COMPANIES AND SHALL COMPLY WITH THE SERVICE REQUIREMENTS OF EACH UTILITY COMPANY.

#### **EXAMINATION OF SITE:**

1. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL VISIT THE SITE OF THE JOB AND SHALL FAMILIARIZE HIMSELF WITH THE CONDITIONS AFFECTING THE PROPOSED ELECTRICAL INSTALLATION AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. FAILURE TO COMPLY WITH THE INTENT OF THIS SECTION WILL IN NO WAY RELIEVE THE CONTRACTOR OF PERFORMING THE WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM OR SYSTEMS.

#### **CUTTING, PATCHING AND EXCAVATION:**

- 1. COORDINATION OF SLEEVES, CHASES, ETC., BETWEEN SUBCONTRACTORS WILL BE REQUIRED PRIOR TO THE CONSTRUCTION OF ANY PORTION OF THE WORK. CUTTING AND PATCHING OF WALLS, PARTITIONS, FLOORS, AND CHASES IN CONCRETE, WOOD, STEEL OR MASONRY SHALL BE DONE AS PROVIDED ON THE DRAWINGS.
- 2. NECESSARY EXCAVATIONS AND BACKFILLING INCIDENTAL TO THE ELECTRICAL WORK SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWING.
- 3. SEAL PENETRATIONS THROUGH RATED WALLS, FLOORS, ETC., WITH APPROVED METHOD AS LISTED BY UL.

### **RACEWAYS / CONDUITS GENERAL:**

- 1. CONDUCTORS SHALL BE INSTALLED IN LISTED RACEWAYS. CONDUIT SHALL BE RIGID STEEL, EMT, SCH40 PVC, OR SCH80PVC AS INDICATED ON THE DRAWINGS. THE RACEWAY SYSTEM SHALL BE COMPLETE COMPLETE BEFORE INSTALLING CONDUCTORS.
- 2. EXTERIOR RACEWAYS AND GROUNDING SLEEVES SHALL BE SEALED AT POINTS OF ENTRANCE AND EXIT. THE RACEWAY SYSTEM SHALL BE BONDED PER NEC.

#### **EXTERIOR CONDUIT:**

- 1. EXPOSED CONDUIT SHALL BE NEATLY INSTALLED AND RUN PARALLEL OR PERPENDICULAR TO STRUCTURAL ELEMENTS. SUPPORTS AND MOUNTING HARDWARE SHALL BE HOT DIPPED GALVANIZED STEEL.
- 2. THE CONDUIT SHALL BE RIGID STEEL AT GRADE TRANSITIONS OR WHERE EXPOSED TO DAMAGE.
- 3. UNDERGROUND CONDUITS SHALL BE RIGID STEEL, SCH40 PVC, OR SCH80 PVC AS INDICATED ON THE DRAWINGS.
- 4. BURIAL DEPTH OF CONDUITS SHALL BE AS REQUIRED BY CODE FOR EACH SPECIFIC CONDUIT TYPE AND APPLICATION, BUT SHALL NOT BE LESS THAN THE FROST DEPTH AT THE SITE.
- 5. CONDUIT ROUTES ARE SCHEMATIC. CONTRACTOR SHALL FIELD VERIFY ROUTES BEFORE BID. COORDINATE ROUTE WITH WIRELESS CARRIER AND/OR BUILDING OWNER.

### INTERIOR CONDUIT:

- 1. CONCEALED CONDUIT IN WALLS OR INTERIOR SPACES ABOVE GRADE MAY BE EMT OR PVC.
- 2. CONDUIT RUNS SHALL USE APPROVED COUPLINGS AND CONNECTORS. PROVIDE INSULATED BUSHING FOR ALL CONDUIT TERMINATIONS. CONDUIT RUNS IN A WET LOCATION SHALL HAVE WATERPROOF FITTINGS.
- 3. PROVIDE SUPPORTS FOR CONDUITS IN ACCORDANCE WITH NEC REQUIREMENTS. CONDUITS SHALL BE SIZED AS REQUIRED BY NEC.

#### EQUIPMENT:

- 1. DISCONNECT SWITCHES SHALL BE SERVICE ENTRANCE RATED, HEAVY DUTY TYPE.
- 2. CONTRACTOR SHALL VERIFY MAXIMUM AVAILABLE FAULT CURRENT AND COORDINATE INSTALLATION WITH THE LOCAL UTILITY BEFORE STARTING WORK. CONTRACTOR WILL VERIFY THAT EXISTING CIRCUIT BREAKERS ARE RATED FOR MORE THAN AVAILABLE FAULT CURRENT AND REPLACE AS NECESSARY.
- 3. NEW CIRCUIT BREAKERS SHALL BE RATED TO WITHSTAND THE MAXIMUM AVAILABLE FAULT CURRENT AS DETERMINED BY THE LOCAL UTILITY.

### CONDUCTORS:

- 1. FURNISH AND INSTALL CONDUCTORS SPECIFIED IN THE DRAWINGS. CONDUCTORS SHALL BE COPPER AND SHALL HAVE TYPE THWN (MIN) (75° C) INSULATION, RATED FOR 600 VOLTS.
- 2. THE USE OF ALUMINUM CONDUCTORS SHALL BE LIMITED TO THE SERVICE FEEDERS INSTALLED BY THE UTILITY.
- 3. CONDUCTORS SHALL BE PROVIDED AND INSTALLED AS FOLLOWS:
  - A. MINIMUM WIRE SIZE SHALL BE #12 AWG.
  - B. CONDUCTORS SIZE #8 AND LARGER SHALL BE STRANDED. CONDUCTORS SIZED #10 AND #12 MAY BE SOLID OR STRANDED.
  - C. CONNECTION FOR #10 AWG #12 AWG SHALL BE BY TWISTING TIGHT AND INSTALLING INSULATED PRESSURE OR WIRE NUT CONNECTIONS.
  - D. CONNECTION FOR #8 AWG AND LARGER SHALL BE BY USE OF STEEL CRIMP-ON SLEEVES WITH NYLON INSULATOR.
- 3. CONDUCTORS SHALL BE COLOR CODED IN ACCORDANCE WITH NEC STANDARDS.

### UL COMPLIANCE:

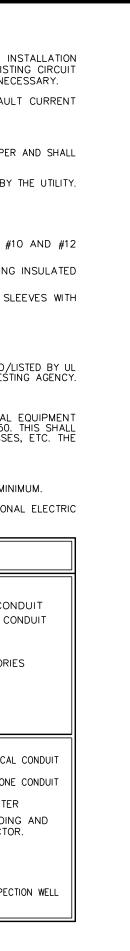
1. ELECTRICAL MATERIALS, DEVICES, CONDUCTORS, APPLIANCES, AND EQUIPMENT SHALL BE LABELED/LISTED BY UL OR ACCEPTED BY JURISDICTION (I.E., LOCAL COUNTY OR STATE) APPROVED THIRD PARTY TESTING AGENCY.

#### GROUNDING:

- 1. ELECTRICAL NEUTRALS, RACEWAYS AND NON-CURRENT CARRYING PARTS OF ELECTRICAL EQUIPMENT AND ASSOCIATED ENCLOSURES SHALL BE GROUNDED IN ACCORDANCE WITH NEC ARTICLE 250. THIS SHALL INCLUDE NEUTRAL CONDUCTORS, CONDUITS, SUPPORTS, CABINETS, BOXES, GROUND BUSSES, ETC. THE NEUTRAL CONDUCTOR FOR EACH SYSTEM SHALL BE GROUNDED AT A SINGLE POINT.
- 2. PROVIDE GROUND CONDUCTOR IN RACEWAYS PER NEC.
- 3. PROVIDE BONDING AND GROUND TO MEET NFPA 780 "LIGHTNING PROTECTION" AS A MINIMUM.
- 4. PROVIDE GROUNDING SYSTEM AS INDICATED ON THE DRAWINGS, AS REQUIRED BY THE NATIONAL ELECTRIC CODE, RADIO EQUIPMENT MANUFACTURERS, AND MOTOROLA R56 (AS APPLICABLE).

## ABBREVIATIONS AND LEGEND

	А	_	AMPERE	PNLBD	_	PANEL	LBOARD
I	AFG	_	ABOVE FINISHED GRADE	PVC	-	RIGID	NON-METALLIC CC
I	ATS	-	AUTOMATIC TRANSFER SWITCH	RGS	-	RIGID	GALVANIZED STEEL C
I	AWG	_	AMERICAN WIRE GAUGE	SW	-	SWITC	H
I	BCW	_	BARE COPPER WIRE	TGB	-	TOWER	R GROUND BAR
I	BFG	-	BELOW FINISHED GRADE	UL	-	UNDEF	RWRITERS LABORATOR
I	BKR	-	BREAKER	V	-	VOLTA	AGE
I	С	_	CONDUIT	W	-	WATTS	S
I	СКТ	_	CIRCUIT	XFMR	-	TRANS	SFORMER
I	DISC	-	DISCONNECT	XMTR	-	TRANS	SMITTER
I	EGR	-	EXTERNAL GROUND RING	·			
I	EMT	-	ELECTRIC METALLIC TUBING		_		
I	FSC	_	FLEXIBLE STEEL CONDUIT		E -		UNDERGROUND ELECTRIC
I	GEN	-	GENERATOR		т-		UNDERGROUND TELEPHON
I	GPS	-	GLOBAL POSITIONING SYSTEM		_		
I	GRD	-	GROUND	ι	≞		KILOWATT-HOUR MET
I	IGB	-	ISOLATED GROUND BAR				UNDERGROUND BONDI
I	IGR	-	INTERIOR GROUND RING (HALO)				GROUNDING CONDUCT
I	КW	-	KILOWATTS		Ø		GROUND ROD
I	NEC	-	NATIONAL ELECTRIC CODE		•		CADWELD
I	PCS	-	PERSONAL COMMUNICATION SYSTEM		_		
I	PH	-	PHASE		×		GROUND ROD WITH INSPE
	PNL	-	PANEL				





- WITH LOCAL UTILITIES PRIOR TO TRENCHING.
- WITH 75°C RATED CONDUCTORS OPERATING AT 75°C.
- 4. RECEPTACLES.
- ONLY.
- 6. WHITE/NEUTRAL, GREEN/GROUND SHALL BE MAINTAINED THROUGHOUT THE SITE ELECTRICAL SYSTEM (TAPE WILL NOT BE ACCEPTABLE).
- SHALL BE NEMA 3R RATED.
- THROUGHOUT, UNLESS OTHERWISE NOTED.
- 10K AIC MINIMUM, HIGHER RATINGS SHALL BE REQUIRED WHERE AVAILABLE FAULT CURRENT EXCEEDS THIS VALUE. WITH LOCAL UTILITY BASED ON EXACT CONDITIONS (XFMR SIZE, PERCENT IMPEDANCE, LENGTH OF CONDUCTORS, ETC),
- DOES NOT EXCEED SYSTEM CAPABILITY.

- DETAILS
- THE CONDUIT SCHEDULE.
- EQUIPMENT TO SUPPORT LTE 4C:

  - FLX16

MARK	QUANT.	<b>DUIT</b> SIZE	QUANT.	CABL SIZE	<b>E</b> GROUND SIZE	REMARKS		
1	1	2"		BELDIN C		ALARM CONTROL FROM RBA72 TO L IMC REQUIRED.		
2	1	2"		FIBER 12	-PAIR	FIBER FROM UPC TO LTE/FLX16-MU		
3	1	2"		BELDIN C	ABLES	ALARM CONTROL FROM UPC TO LTE IMC REQUIRED.		
4	1	2"	1	#2	#2	DC POWER FROM RBA72 TO LTE PD		
5			1	#8	#8	DC POWER FROM RBA72 TO DC-6 S		
6	1	2"	1	#8	#8	DC POWER FROM RBA72 TO DC-6 S		
$\langle 7 \rangle$	]		1	#8	#8	DC POWER FROM RBA72 TO DC-6 S		
8			1	#8	#8	DC POWER FROM RBA72 TO DC-6 S		
9	1	2"	1	#8	#8	DC POWER FROM RBA72 TO DC-6 S		
(10)	]		1	#8	#8	DC POWER FROM RBA72 TO DC-6 S		
(11)	1	2"	FIBER 18-PAIR			FIBER FROM LTE/FLX16-MU TO RAY		
(12)	1	2"		3PR DC #	8 AWG	DC POWER FROM DC-6 SURGE SUP		
(13)	1	2"	3PR DC #8 AWG			DC POWER FROM DC-6 SURGE SUP		

