mobilitie®
intelligent infrastructure

PRESENTED TO:

THE CITY OF NEW YORK DEPARTMENT OF INFORMATION TECHNOLOGY AND TELECOMMUNICATIONS

RESPONSE TO THE DoITT REQUEST FOR PROPOSALS FOR FRANCHISES FOR THE INSTALLATION AND USE OF TELECOMMUNICATIONS EQUIPMENT AND FACILITIES, INCLUDING BASE STATIONS AND ACCESS POINT FACILITIES, ON CITY OWNED STREET LIGHT POLES AND TRAFFIC LIGHT POLES, AND CERTAIN UTILITY POLES AND OTHER FACILITIES LOCATED ON CITY STREETS, IN CONNECTION WITH THE PROVISION OF MOBILE TELECOMMUNICATIONS SERVICES

Submitted by: Mobilitie, LLC
Prepared by: Joseph Sforza
VP, Network Deployment – Mobilitie, LLC
[redacted]@mobilitie.com | [redacted]

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EXHIBIT D
AFFIRMATION

The undersigned proposer or bidder affirms and declares that said proposer or bidder is not in arrears to the City of New York upon debt, contract, or taxes and is not a defaulter, as surety or otherwise, upon obligation to the City of New York, and has not been declared not responsible, or disqualified, by any agency of the City of New York, nor is there any proceeding pending relating to the responsibility or qualification of the proposer or bidder to receive public contracts except
for ECB violations in the normal course of business which are settled by,
and the responsibility of, the Proposer's or Bidder's general contractor.

Full name of Proposer or Bidder
Mobilitie,LLC

Address
660 Newport Center Drive, Ste. 200

City Newport Beach State CA Zip Code 92660

CHECK ONE BOX AND INCLUDE APPROPRIATE NUMBER:

□ A - Individual or Sole Proprietorship*
SOCIAL SECURITY NUMBER _____

□ B - Partnership, Joint Venture or other unincorporated organization
EMPLOYER IDENTIFICATION NUMBER _____

☒ C - Corporation
EMPLOYER IDENTIFICATION NUMBER [redacted]

By _____
Signature
CEO
Title

If a corporation, place seal here:

Must be signed by an officer or duly authorized representative.

* Under the Federal Privacy Act the furnishing of Social Security Numbers by bidders on City contracts is voluntary. Failure to provide a Social Security Number will not result in a bidder's disqualification. Social Security Numbers will be used to identify bidders, proposers, or vendors to ensure their compliance with laws, to assist the City in enforcement of laws as well as to provide the City a means of identifying of businesses which seek City contracts.

BACKGROUND

Mobilitie, LLC ("Mobilitie 1") has owned and controlled since 2007 the Mobile Telecommunications Franchise (the "Mobilitie 1 Franchise") dated as of July 15, 2004 between the City and Nextel, as assigned to and assumed by Mobilitie 1. Mobilitie 1 was also the assignee in 2016 of another Existing Franchise dated as of January 4, 2012 between the City and Xchange Telecom Corp., as assigned to and assumed by Mobilitie 1. Mobilitie 1 recently assigned such Existing Franchise (the "Mobilitie 2 Franchise") to Transmission Network NY LLC ("Mobilitie 2"), a permitted assignee under Section 9.6(b) of the Mobilitie 2 Franchise. This Proposal (the "Mobilitie 1 Proposal") seeks to renew through the RFP and the "Resulting Franchise" process the Mobilitie 1 Franchise. A fully identical proposal is also being submitted to seek a Resulting Franchise for the Mobilitie 2 Franchise, as contemplated by the RFP.

Consequently, the "Existing Franchisees" of Mobilitie1 and Mobilitie 2 are referred to collectively throughout the two identical proposals as **Mobilitie**, **except** in (i) the compensation proposal and (ii) the exhibits 12, 13, 14 and 15 of the Legal Credentials and Authorizations section, where they will be separately broken out as Mobilitie 1 and Mobilitie 2.

If Mobilitie 1 becomes a "Resulting Franchisee" for its Mobilitie 1 Franchise, it agrees to surrender its existing Mobilitie 1 Franchise. Mobilitie 2 makes the same statement in the Mobilitie 2 Proposal.

Mobilitie is the largest privately-held telecommunications infrastructure company in the United States. As a global provider of complete wireless solutions, Mobilitie helps people stay connected on their mobile devices wherever they are. We fund, deploy, and operate next-generation infrastructure, enabling both robust 4G LTE coverage and upcoming 5G services and speeds. Our wireless infrastructure, including communication towers, indoor and outdoor neutral host DAS networks, small cells, and Wi-Fi networks, help deliver wireless connectivity where it is needed. Of particular relevance to New York City, Mobilitie partners with cities and municipalities across the country to deploy next-generation small cell sites and other infrastructure, providing local residents with enhanced mobile connectivity and wireless broadband access to create "smart cities". Our high-density wireless infrastructure is designed to enable the richest, most

interactive mobile experiences for users including real-time video streaming, location-based services, social media, and other mobile applications.

Mobilitie understands its obligations under the existing Mobilitie Franchises and has acted since 2007 as a responsible and responsive New York City franchisee. Mobilitie understands that as a franchisee it has a higher standard than just being a good corporate citizen and that it must act as trustee of New York City assets and Rights of Way.

Finally, Mobilitie acknowledges the City's five principles for allowing use of its physical assets: performance, affordability, equity, choice and privacy. We believe that Mobilitie's deployments to date throughout the City have helped to move towards each of those principles.

TECHNICAL

1. Statement of Services

As a neutral host provider, Mobilitie is at the leading edge of deploying multi-carrier antennas, shared equipment and backhaul as intelligent infrastructure to provide next generation wireless services, including wireless broadband access. In New York City, Mobilitie is in active development of roadmaps with wireless carriers, OEMs, antenna manufacturers, and other fiber providers for multi-carrier and smart city solutions while being respectful of the NYC Public Design Commission aesthetic requirements. We fully anticipate equipment advancements through the DoITT approval process over the next 10 years facilitating fixed wireless and multi-carrier mobile communications within the confines of the approved aesthetic requirements.

2. Mobilitie Equipment and Facilities

Mobilitie has constructed 845 sites within the five boroughs under the two current franchises. Attached as Exhibit 1 and 2 are construction drawings of the Mobilitie installation on a New York City Street Operations Pole (metal) and Street Utility Pole (wooden) complete with equipment cut sheets detailed on pages 4 through 13 of the construction drawings. Currently our sites support one carrier due to current equipment form factors and current shroud size. Mobilitie has investigated approaches to enable multiple carriers on a single pole but has no current multi-tenant sites.

A. Antenna

The City requirement is for the deployment of 1 stick type antenna, no more than 2 inches in diameter and extending no more than 60 inches in length extending vertically from the base at the top of the pole. Mobilitie installations meet those specifications. See Exhibit 3 for antenna specification.

B. Base Station Equipment

All radio equipment is located inside the equipment housing unit. Basic equipment is comprised of Nokia radio, Airspan relay and PCTEL GPS antenna. For specifications and cut sheets for base equipment refer to Exhibit 4 for detail or refer to Exhibits 1 and 2 Construction Drawings.

C. Equipment Housing

Per the RFP, all equipment must be installed in an equipment housing in either of 2 size parameters approved by the City but in either case, the housing volume may be no greater than 2.8 cubic feet. Mobilitie's equipment housing (shroud) meets current City specifications. The shroud encloses the RRU, Backhaul unit, RF filter, AC panel and isolation transformer in one RF transparent material shell. Mobilitie has improved the equipment aesthetic on the pole and facilitated the deployment process as all cables are routed internally. The shroud itself is available in 2 basic colors (gray or brown). See Exhibit 5 for shroud specs or refer to Construction Drawing Exhibits 1 and 2 with cut sheets detailed on pages 4 through 13 of the construction drawings.

D. Site Photograph

Please review Exhibit 6 for a photographic documentation of a completed Mobilitie metal and wood pole site

3. Methods of Installation and Connectivity

Shrouds are band mounted on Street Operations Poles per DOT regulations and as shown on the attached drawings. The shroud on wood pole or a Street Utility Pole is mounted on a sled that includes a meter and power disconnect per Con Ed regulations. The sled is mounted on the Street Utility Pole with two "thru bolts". On DOT Street Operations Poles the antenna is mounted to a replacement pole cap per DOT specifications, allowing internal cabling connections to the equipment and as shown on the attached drawings. On the Street Utility Pole an antenna mount

bracket is used and fabricated per Con Ed specifications. Based on current customer needs Mobilitie is currently using a wireless backhaul solution. However, Mobilitie may during the term of the Resulting Franchises use other forms of backhaul, including fiber. See Exhibit 7 for associated antenna mounting equipment and additional information can be found within Construction Drawing Exhibits 1 and 2 with cut sheets detailed on pages 4 through 13 of the construction drawings.

4. Site Maintenance and Repair

The attached Exhibit 8 (material should be considered CONFIDENTIAL) provides guidelines for Mobilitie's Network Operations. The guidelines include: break-fix process and reporting process flow; approved site access guidance; lockout-tag out procedures; repair and maintenance vendors; nationwide 811 call before you dig information; wood utility pole preventive maintenance; emergency response protocol; disaster recovery; and strategic plans for the Mobilitie Network Operations Center (NOC). Such guidelines have ensured to date and will ensure going forward that all construction and site maintenance and repair will be performed and completed in full compliance with the City's standards and specifications.

Adhering to these guidelines enables Mobilitie Network Operations to (i) perform trend and root-cause analysis, (ii) process improvement initiatives, (iii) control and implement change requests, (iv) audit vendor performance, (v) communicate clearly and concisely with critical stakeholders, and (vi) most importantly, provide efficient emergency response and disaster recovery efforts.

5. Plans for Maintaining City's Property During the Term

As part of every application for attachment to City assets, Mobilitie provides a thorough structural analysis for City review so that the City can be confident in the effects Mobilitie's installation will have on the light pole's physical integrity. Mobilitie maintains Street Operations Poles and equipment in good operating conditions and in accordance with DOITT and DOT requirements. Any trenching or boring is done in accordance

with the Existing Franchise agreement terms, all NYC DOT regulations, and only by NYC approved contractors. Mobilitie's use of wireless backhaul limits the need for street openings and traffic disruptions.

6. Time Period for Installation

Currently Mobilitie has installed over 800 sites in all five boroughs including areas underserved by broadband access and has active reservations for over 1,000 sites. The location of such sites is public information in the Poletop application. A map of Mobilitie's cumulative reserved sites broken down by borough is attached as Exhibit 9. Mobilitie's future buildout plans are based on customer needs for coverage and capacity. Mobilitie has built and will build additional sites throughout the City with the current buildout plan primarily focused on the near future on the 1,000 cumulative reserved but unbuilt sites. Mobilitie values its relationship with the City of New York and the working environment we have developed as an "Existing Franchisee(s)". We would propose the development of a Mobilitie-specific annual plan to discuss specific project plans and objectives and alignment with City goals, (i.e. specific targeting of areas to create additional competition, and the development of infrastructure in under-served areas.) In this manner, both the City and Mobilitie can understand deployment progress, roadblocks, and policy considerations.

7. Future Design and Resiliency

As a neutral host provider, Mobilitie is at the leading edge of deploying multi-carrier antennas, shared equipment and backhaul as intelligent infrastructure to provide next generation wireless services. Mobilitie is in active development of roadmaps with wireless carriers, OEMs, antenna manufacturers, and other fiber providers for multi-carrier solutions while being respectful of the NYC Public Design Commission aesthetic requirements. The equipment housing allows for a clean, standardized look across the City of New York. We fully anticipate equipment advancements through the DoITT approval process over the next 10 years facilitating fixed wireless and mobile communications within the confines of an approved aesthetic. As wireless networks evolve towards 5G and/or

other multi-operator, multi-technology deployments, there are certain design requirements that may need to be taken into consideration to effectively enable co-existence.

5G small cells will take advantage of sophisticated MIMO techniques and utilize millimeter wave spectrum across multiple frequencies which may impact radio form factors. In situations where service offerings in an area demand a solution that requires additional equipment or equipment that that is larger and cannot be accommodated within existing solutions, the enclosure design may need to be revisited. Additionally, a multi-operator, multi-technology design may call for a top/bottom, side by side, or pole straddle option to accommodate multiple carrier, multiple frequency equipment on the same pole. Finally, as we continue to seek creative solutions for site backhaul (BH), microwave may become more prevalent if equipment housing can fit multiple BH antennas. Multiple antennas may allow for multi-hop and multi-operator BH to enhance resiliency of the network by offering multiple paths for packets to get where they need to go.

It should be noted that to enable deployment of 5G and/or multi-operator deployments, additional equipment dimensions, specifically the antenna, should be considered for and/or during the new franchise term. As an example, an antenna that can handle multiple operator or multiple frequencies as well as allow for application of advanced 5G antenna techniques may require an antenna that is greater than 2 inches in diameter.

As it relates to resiliency, Mobilitie predominantly deploys wireless backhaul deployment that can redirect to multiple alternative donor sites in the event of an outage on that donor site or during severe weather events to maximize uptime. The aforementioned multi-hop microwave solution will also allow for enhanced resiliency during severe weather events since each node will have multiple packet routing options. As another consideration, we feel that battery backup solutions would also keep sites on-air in the event of a power outage that affects the specific node.

8. Statement re: Existing Franchises

If Mobilitie 1 becomes a "Resulting Franchisee" for its existing Mobilitie 1 Franchise it agrees to surrender its existing Mobilitie 1 Franchise.

9. Emissions Standards.

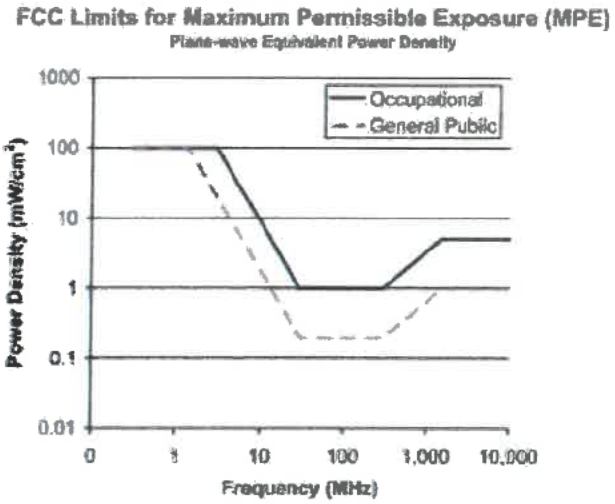
In 1996, the Federal Communication Commission (FCC) adopted regulations for the evaluation of the effects of RF emissions in 47 CFR § 1.1307 and §1.1310. The guideline from the FCC Office of Engineering and Technology is Bulletin 65 (OET Bulletin 65), Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields, Edition 97-01, published August 1997. Since 1996 the FCC periodically reviews these rules and regulations as per the FCC's congressional mandate.

FCC regulations define two separate tiers of exposure limits: Occupational or "Controlled" environment and General Population or "Uncontrolled" environment:

Occupational or Controlled limits - these apply to situations in which persons may be exposed due to job duties and where those persons exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Access to these areas are restricted by barriers and signage is always posted.

General Population or Uncontrolled limits are generally five times more conservative or restrictive than the Occupational limit. These limits apply to accessible areas where workers or the general population may be exposed to Radio Frequency (RF) electromagnetic fields without knowledge of proximity to an RF source. If a site has no access controls or RF warning signage, it is evaluated with General Population thresholds.

The theoretical modeling of the RF electromagnetic fields has been performed in accordance with OET Bulletin 65. The Maximum Permissible Exposure (MPE) limits utilized in this analysis are outlined in the following diagram:



Federal Communication Commission Evaluating Compliance with FCC Guidelines for Human Radiofrequency pg. 67-68

Methodology

Mobilitie uses RoofView®, a powerful, Excel based software analysis tool for evaluating Radio Frequency (RF) field levels at telecommunications sites, along with field measurements to evaluate compliance with FCC OET 65. Mobilitie models the RF output at 100% capacity, all antenna channels transmitting simultaneously, and the radio transmitters operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are more conservative (higher) than the actual signal levels would be during normal operations. The modeling calculations were made for a 40 x 40-foot area with the equipment at the center.

Where required, wireless backhaul is modeled as a User Equipment Relay (UER) or microwave (MW) link operating at an aggressively low height of 17.5 ft. to reflect worst-case exposure. As height increases, the impact of the UER and MW reduces even further. Because of their low power levels compared to the RF antenna, the contribution of the UER and MW to the overall EME of the site is minimal and will not impact the calculated compliance levels for Maximum Permissible Exposure as calculated in this EME report.

Below we show typical deployment scenarios along with Power Density calculations at 6 ft. AGL. These scenarios have been modeled with these assumptions to calculate the maximum RF energy density as a worst-case scenario. If actual power density measurements were made, these are expected to be below the levels shown in this report.

Site architecture heights for NY90XS385C									
								Without UER	With UER
Scenario	Frequency	Power Per port (W)	# ports	Antenna Aperture	Antenna Beamwidth	Antenna Gain (dBi)	Antenna Gain (dBd)	Power Density at 6ft AGL (General Public/ Uncontrolled Exposure Limit)	Power Density at 6ft AGL (General Public/ Uncontrolled Exposure Limit)
Sprint Band 41 2x2 MIMO	2520	20	2	2.5	360	8.5	6.35	0.02	0.05
USCC Band 4 4x4 MIMO	2120	10	4	2.5	65	13.5	11.35	0.11	0.14
Sprint Band 41 4x4 MIMO	2520	10	4	2.5	360	8.5	6.35	0.02	0.05

Additionally, Mobilitie has modeled and field tested a location in the City of New York. Attached please see Exhibit 10 which is an EME report for our typical New York City site located at Third Avenue & 100th St. Brooklyn, New York. Mobilitie understands that the City may require testing, from time to time, by independent experts, at the expense of franchisee to ensure compliance during the new franchise term.

As shown in the sample EME report, the maximum measured RF level was 0.3935 percent of the FCC general population MPE limit, found on the west side of Third Avenue, Brooklyn, NY approximately 100 feet north of 100th Street.

Mobilitie models all deployments to comply with OET Bulletin 65 and works with vendors and carrier partners to ensure all inputs are accounted for and that each site is fully compliant. Multi-carrier deployments have full inventory of necessary antennas and RF sources to allow for an accurate assessment across multiple frequency bands.

MANAGERIAL EXPERIENCE

Mobilitie has significant managerial experience and capabilities to operate this franchise. Attached as Exhibit 11 are short biographies of Mobilitie's senior management team as well as the operations team focused on the New York City franchise. Mobilitie has been operating as a light pole franchisee in New York City since 2007 and has worked closely with DoITT, NYCDOT and the City of New York during that period. Mobilitie provides services to several carriers. However, as stated previously, each site currently is designed to serve one carrier due to shroud size and equipment form factors.

Mobilitie has not been in material default under its multiple light pole franchises and is current with all material obligations. Mobilitie has worked in concert with local communities and local officials and local utilities to the extent necessary for a successful deployment. Mobilitie provides critical broadband infrastructure for its customers and New York City residents and businesses.

Mobilitie has an office at 101 Greenwich Street- Suite 1100D in New York City and personnel in that office are focused on the New York City project.

LEGAL CREDENTIALS AND AUTHORIZATIONS

Mobilitie 1 will create an online account in the new Procurement and Sourcing Solutions Portal (PASSPort) and file all disclosure information. Mobilitie acknowledges the franchise award will be subject to completion of PASSPort Questionnaires and review of certain information contained therein by the Department of Investigation and may be subject to other due diligence reviews by the City.

Attached as Exhibit 12 is the completed Doing Business Data Form (date of births and home addresses should be considered CONFIDENTIAL). Also attached as Exhibit 13 is the Affirmation and attached as Exhibit 14 is the Acknowledgement of Release Date and Addendum, both as required by the RFP.

Mobilitie confirms it has secured all necessary authorizations, approvals, licenses and/or permits required to undertake the activities proposed and acknowledges that it will not undertake such activities unless and until such authorizations, approvals, licenses and/or permits are obtained. Mobilitie 1's application for a Certificate of Public Convenience and Necessity was approved by the State of New York Department of Public Service, which CPCN is attached as Exhibit 15.

Mobilitie confirms that any FCC licenses necessary for microwave transmission of backhaul, if used, have been or will be obtained as needed and prior to installation. The facilities installed by Mobilitie on Street Poles may serve different telecommunications service providers, and the facilities used by such providers that require FCC licensing are, or will be prior to installation, fully licensed by the FCC.

FINANCIAL CREDENTIALS

Mobilitie has significant financial resources and access to capital. As a current franchise holder, Mobilitie is in good standing, has made all payments in a complete and timely manner in New York. Mobilitie is also in good standing on hundreds of franchise or other rights of way and pole attachment agreements across the country with cities such as Chicago, Minneapolis, Los Angeles, San Francisco, Houston, San Antonio, Philadelphia, and Boston.

Mobilitie has among its investors some of the largest and most sophisticated private equity firms in the telecommunication field. Mobilitie has credit facilities from some of the largest and most experienced banks in the telecommunication field. Attached as Exhibit 16 is a list of business references, many of whom are known to DoITT.

COMPENSATION PROPOSAL

Mobilitie 1 will be requesting a franchise for Zone A, Zone B and Zone C with the following compensation price structure:

Zone A	Zone B	Zone C
$399.00	$255.00	$105

EXHIBITS

Exhibit 1. Construction Drawings/metal pole

Exhibit 2. Construction Drawings/wooden pole

Exhibit 3. Antenna Specifications

Exhibit 4. Base Station Specifications

Exhibit 5. Equipment Housing Specifications

Exhibit 6. Site Photos

Exhibit 7. Associated Equipment Specifications

Exhibit 8. Maintenance & Repair Protocol
(CONFIDENTIAL AS TO CERTAIN PROPRIETARY INFORMATION)

Exhibit 9. NYC Deployment Map

Exhibit 10. EME Report

Exhibit 11. Managerial Experience

Exhibit 12. Executed Doing Business Data Form
(CONFIDENTIAL AS TO CERTAIN PROPRIETARY INFORMATION)

Exhibit 13. Executed Affirmation (Exhibit D to RFP)

Exhibit 14. Executed Addendum Receipt Acknowledgement
(Exhibit C to RFP)

Exhibit 15. New York CLEC

Exhibit 16. Financial Credentials- Business References

SITE ID-CANDIDATE LETTER/CASCADE ID-CANDIDATE LETTER:
9NYB002992/NY90XSBJ8C

LATITUDE/LONGITUDE:
40.706054/-73.825939

CROSS STREET:
AUSTIN ST & 126TH ST

CITY, STATE, ZIP:
KEW GARDENS, NY 11415

IF YOU DIG IN ANY STATE DIAL 811 FOR THE LOCAL "ONE CALL CENTER" -- IT'S THE LAW

THE UTILITIES SHOWN HEREIN ARE FOR THE CONTRACTORS CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER/SURVEYOR ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL THE UTILITIES WITHIN THE LIMITS OF THE WORK. ALL DAMAGE MADE TO THE (E) UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

DO NOT SCALE DRAWINGS

CONTRACTORS SHALL VERIFY ALL PLANS, (E) DIMENSIONS & FIELD CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OF EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

PRIOR TO ANY CONSTRUCTION WORK, CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES. ALL UTILITIES SHALL BE MARKED.

THIS DESIGN IS SUBJECT TO ANY JURISDICTIONAL AND OWNER APPROVALS INCLUDING JURISDICTIONAL REQUIREMENTS, RF EQUIPMENT CONFIGURATION, AND FINAL UTILITY COORDINATION WITH PUBLIC POWER AND UTILITY PROVIDERS/ CONTRACTOR TO CONFIRM FINAL REQUIREMENTS WITH OWNER.

SITE INFORMATION

SITE ID:	9NYB002992
CASCADE ID:	NY90XSBJ8C
LATITUDE:	40.706054
LONGITUDE:	-73.825939
CROSS STREET:	AUSTIN ST & 126TH ST
CITY, STATE, ZIP:	KEW GARDENS, NY 11415
COUNTY/BOROUGH:	QUEENS COUNTY
JURISDICTION:	NEW YORK CITY
PROPERTY OWNER:	PUBLIC RIGHT-OF-WAY
APPLICANT:	MOBILITIE, LLC 3475 PIEDMONT ROAD NE; SUITE 1000 ATLANTA, GEORGIA 30305 PHONE: (312) 638-5400

ENGINEER

JACOBS ENGINEERING GROUP, INC.
5449 BELLS FERRY ROAD
ACWORTH, GA 30102

CONTACT: KARL KRATINA
PROJECT MANAGER
TEL: (678) 460-1416
PROJECT: ER600201

LOCATION MAPS

VICINITY MAP

REGIONAL MAP

PROJECT DESCRIPTION

END USER PROPOSES TO INSTALL EQUIPMENT ON AN EXISTING STEEL LIGHT POLE WITHIN AN EXISTING RIGHT-OF-WAY. THE SCOPE WILL CONSIST OF THE FOLLOWING:

- INSTALL PROPOSED BACKHAUL TRANSPORT EQUIPMENT ON AN EXISTING STEEL LIGHT POLE

CODES

INTERNATIONAL BUILDING CODE
NATIONAL ELECTRICAL SAFETY CODE
TIA/EIA-222-G-2 OR LATEST EDITION
LOCAL BUILDING/PLANNING CODE

DRAWING INDEX

SHEET NO:	SHEET TITLE
0.0	TITLE SHEET
1.0	SITE PLAN & EXHIBIT PHOTO
1.1	NYC DOT PLAN
2.0	POLE ELEVATIONS
3.0	ANTENNA MOUNTING DETAILS
3.1	EQUIPMENT MOUNTING DETAILS
3.2	EQUIPMENT DETAILS
GN-1	GENERAL NOTES
GN-2	GENERAL NOTES
GN-3	GENERAL NOTES
4.0	PLUMBING & RISER DIAGRAM
4.1	ELECTRICAL DETAILS
5.0	GROUNDING DETAILS
6.0	VEHICULAR TRAFFIC CONTROL PLAN
6.1	PEDESTRIAN SAFETY PLAN

mobilitie
3475 PIEDMONT ROAD NE;
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

PROJECT NO:	ER600201
DRAWN BY:	B. POTESTA
CHECKED BY:	C. RAMEY

A	08.24.16	FOR REVIEW

STATE OF NEW YORK
PAUL LOUIS MOT
097571
LICENSED PROFESSIONAL ENGINEER

IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT

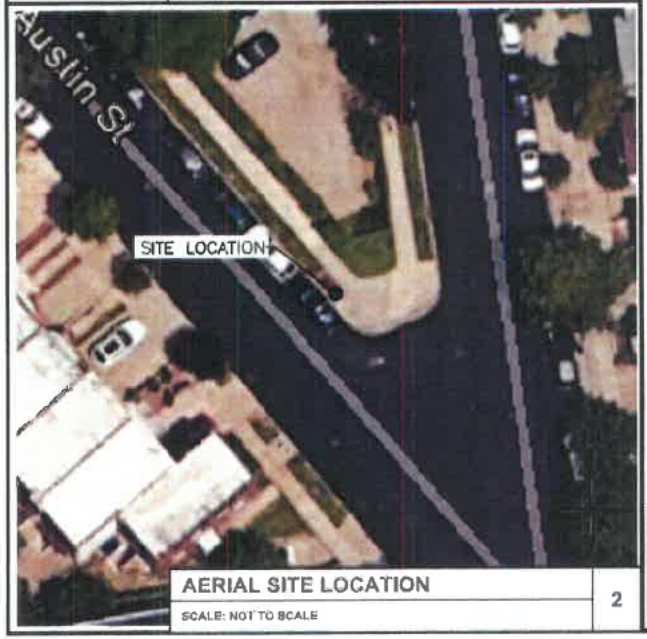
NY90XSBJ8C
9NYB002992
AUSTIN ST &
126TH ST
KEW GARDENS, NY 11415
LIGHT POLE

SHEET TITLE
TITLE SHEET

SHEET NUMBER
0.0

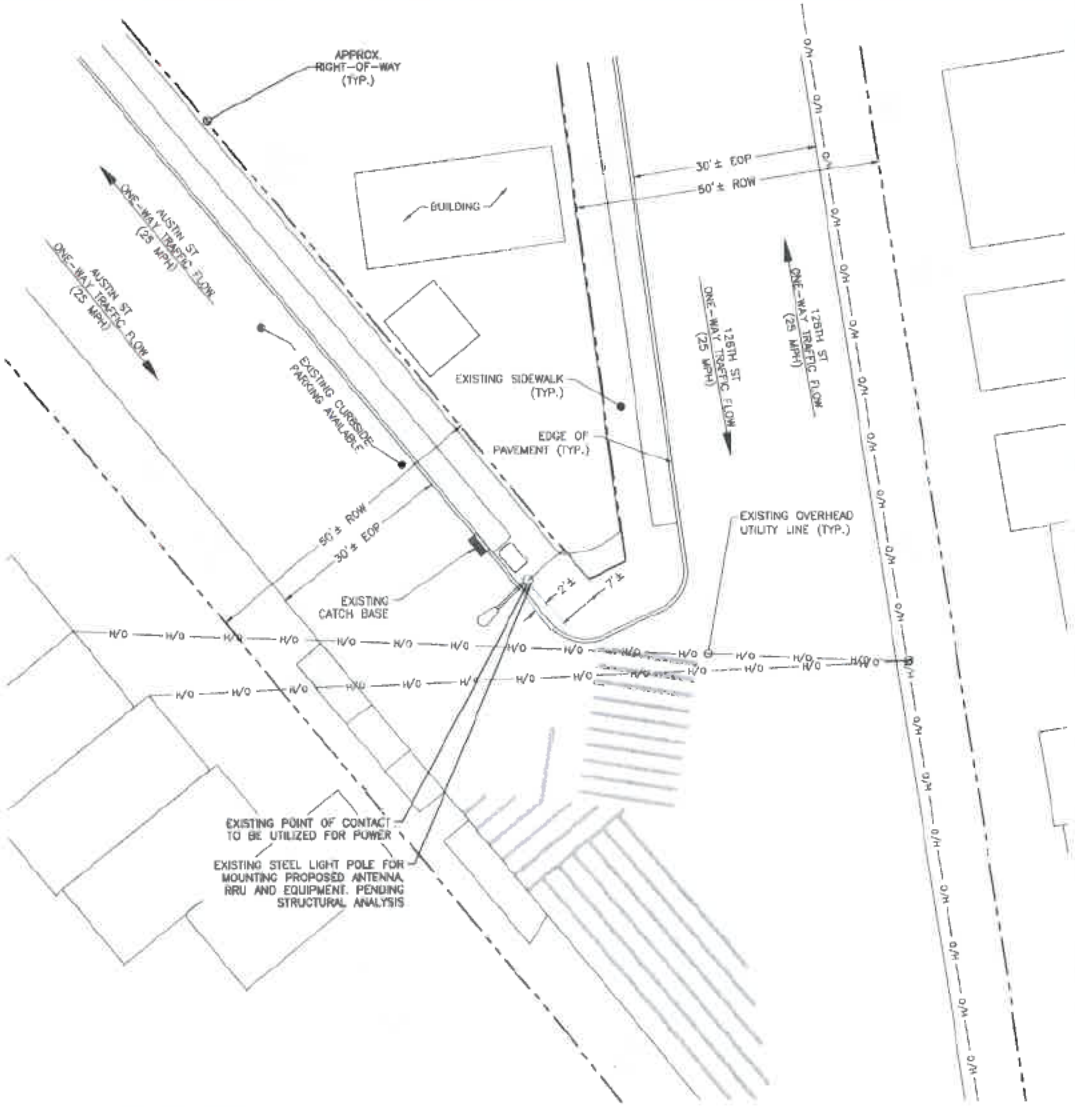
EXHIBIT PHOTO | 1

SCALE: NOT TO SCALE



AERIAL SITE LOCATION | 2

SCALE: NOT TO SCALE



NOTE:
THIS SITE PLAN WAS GENERATED WITHOUT THE USE OF A SURVEY. PROPERTY LINES, RIGHT-OF-WAYS, POWER & TELCO UTILITY POINT CONNECTIONS/ROUTES AND EASEMENTS SHOWN ON THESE PLANS ARE ESTIMATED. ALL ITEMS AND DIMENSIONS SHOULD BE VERIFIED IN THE FIELD.

N

ENLARGED SITE PLAN | 3

SCALE: 1" = 20'-0" (1" = 10'-0" ON 24"x36" SHEET)

mobilitie

3475 PIEDMONT ROAD NE;
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

PROJECT NO:	ER644261
DRAWN BY:	B. POTESTA
CHECKED BY:	C. RAMEY

A	05.24.18	FOR REVIEW

STATE OF NEW YORK
PAUL LOUIS MOSCA
097571
LICENSED PROFESSIONAL ENGINEER

IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT

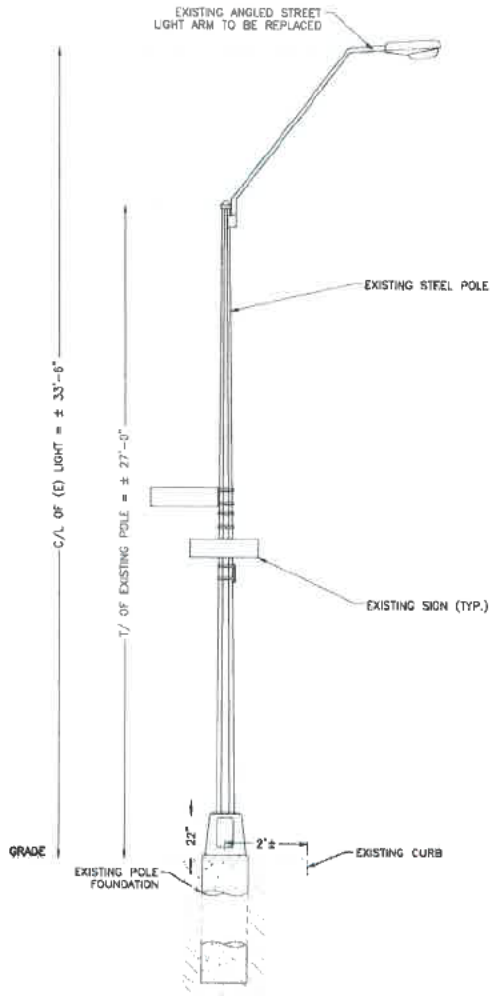
NY90XSBJ8C
SNYB002592
AUSTIN ST &
125TH ST
KEW GARDENS, NY 11415
LIGHT POLE

SHEET TITLE

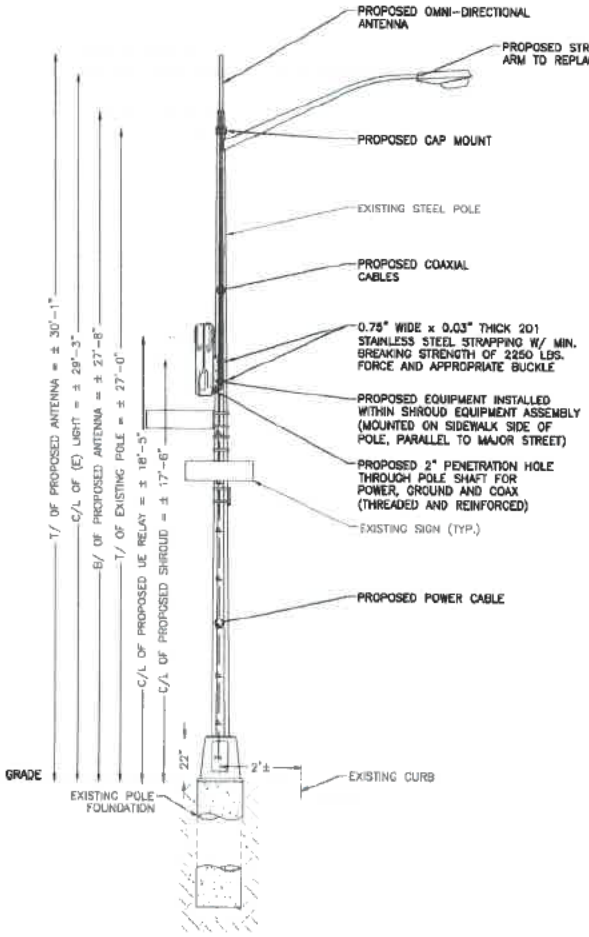
EXHIBIT PHOTO & SITE PLAN

SHEET NUMBER

1.0



EXISTING POLE ELEVATION



PROPOSED POLE ELEVATION

NOTE:
REFER TO STRUCTURAL ANALYSIS REPORT (SEPARATE DOCUMENT) FOR ADDITIONAL STRUCTURAL INFORMATION.

NOTE:
PROJECT SCOPE OF WORK DOES NOT INCLUDE A STRUCTURAL EVALUATION OF THIS POLE OR STRUCTURE. NEW EQUIPMENT SHOWN ON THIS PLAN HAVE NOT BEEN EVALUATED TO VERIFY THE POLE OR STRUCTURE HAS THE CAPACITY TO ADEQUATELY SUPPORT THE EQUIPMENT. PRIOR TO ANY INSTALLATION, A STRUCTURAL EVALUATION OF THE POLE OR STRUCTURE SHOULD BE PERFORMED.

NOTES:

1. ALL HARDWARE SHALL BE STAINLESS STEEL.
2. ALL CABLES SHALL BE SECURED TO POLE EVERY 36" OR LESS.
3. LIGHTNING RODS SHALL BE INCLUDED AS REQUIRED.

PROPOSED SIDE POLE ELEVATIONS 1

mobilitie
3475 PIEDMONT ROAD NE;
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

PROJECT NO:	ER600201
DRAWN BY:	B. POTESTA
CHECKED BY:	C. RAMEY

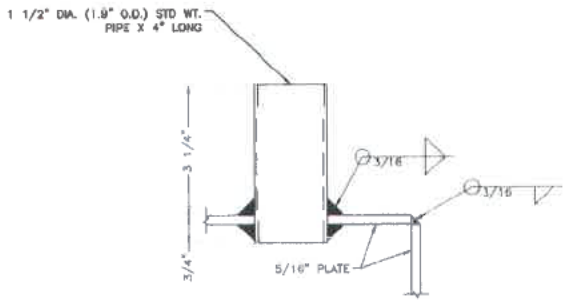
A	05.24.18	FOR REVIEW

STATE OF NEW YORK
PAUL LOUIS [illegible]
097571
LICENSED PROFESSIONAL ENGINEER

NY90XSBJ8C
9NYB002992
AUSTIN ST &
126TH ST
KEW GARDENS, NY 11415
LIGHT POLE

SHEET TITLE
POLE ELEVATIONS

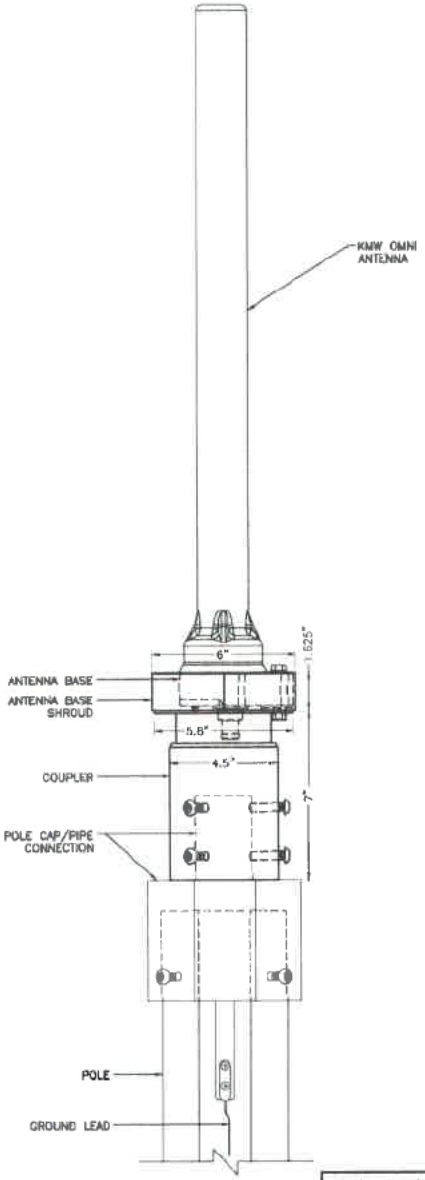
SHEET NUMBER
2.0



POLE CAP/ PIPE CONNECTION

SCALE: NOT TO SCALE

1



ANTENNA MOUNT DETAILS

SCALE: NOT TO SCALE

2

mobilitie
3475 PIEDMONT ROAD NE;
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

PROJECT NO:	BR660301
DRAWN BY:	B. POTESTA
CHECKED BY:	C. RAMEY

A	05.24.18	FOR REVIEW

STATE OF NEW YORK
PAUL LOUIS WOOD
097571
LICENSED PROFESSIONAL ENGINEER

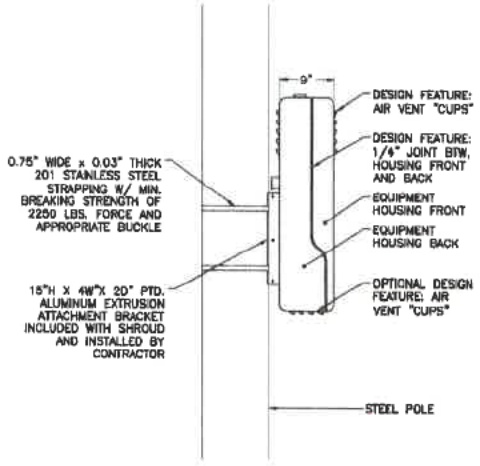
IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT

NY90XSBJ8C
9NYB002982
AUSTIN ST &
126TH ST
KEW GARDENS, NY 11415
LIGHT POLE

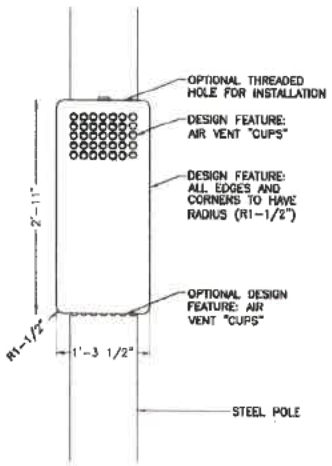
SHEET TITLE
ANTENNA MOUNTING DETAILS

SHEET NUMBER
3.0

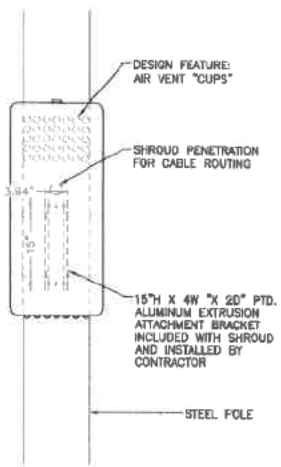
SIDE VIEW



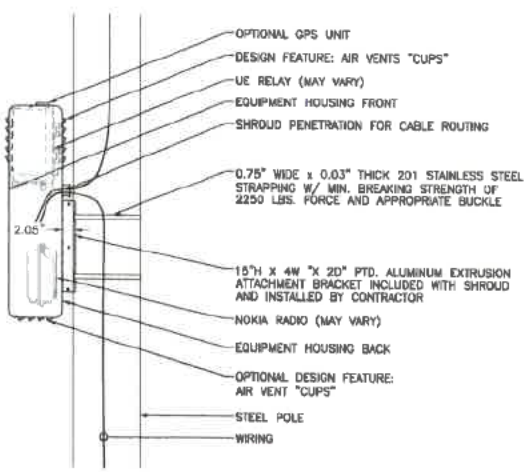
FRONT VIEW



BACK VIEW

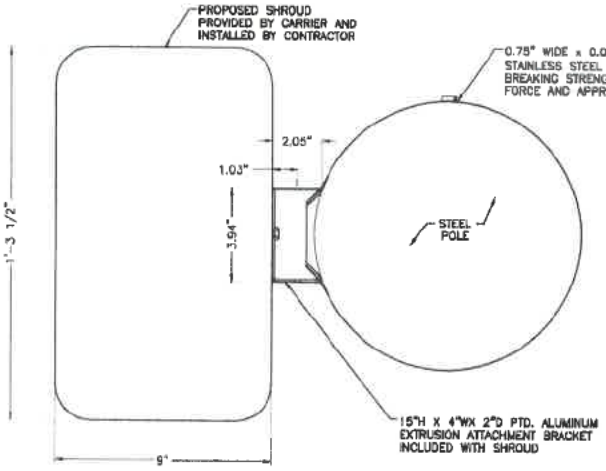


SECTION VIEW



SHROUD MOUNTING DETAILS — 1

SCALE: NOT TO SCALE



PLAN VIEW

OVERALL SHROUD MOUNTING DETAILS — 2

SCALE: NOT TO SCALE

mobilitie

3475 PIEDMONT ROAD NE;
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

PROJECT NO:	ER000201
DRAWN BY:	B. POTESTA
CHECKED BY:	C. RAMEY

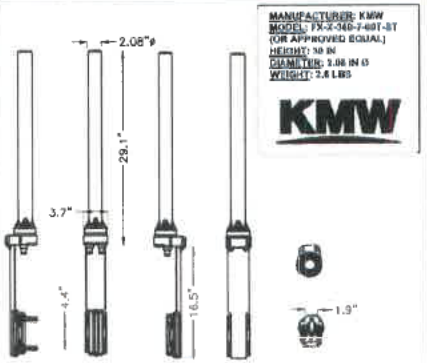
A	10.24.16	FOR REVIEW

STATE OF NEW YORK
PAUL LOUIS NOTO
097571
LICENSED PROFESSIONAL ENGINEER

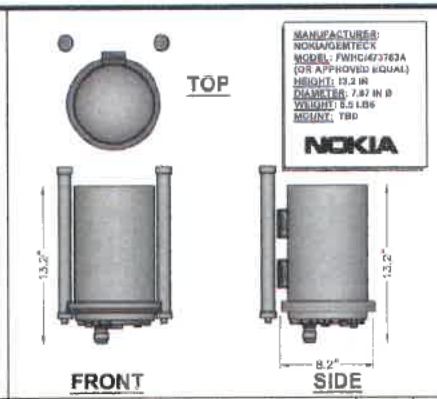
NY90XSBJ8C
9NYB002992
AUSTIN ST &
126TH ST
KEW GARDENS, NY 11415
LIGHT POLE

SHEET TITLE
EQUIPMENT MOUNTING DETAILS

SHEET NUMBER
3.1

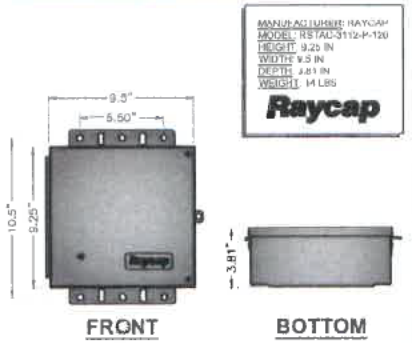


KMW FX-X-360-7-00T-ST | SCALE N.T.S. | 1

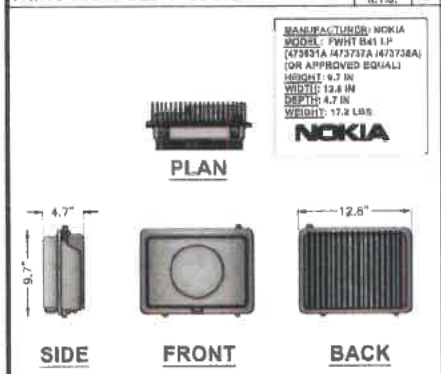


NOKIA/GEMTEK UE RELAY | SCALE N.T.S. | 4

NOT USED | SCALE N.T.S. | 7



RAYCAP RSTAC-3112-P-120 | SCALE N.T.S. | 10

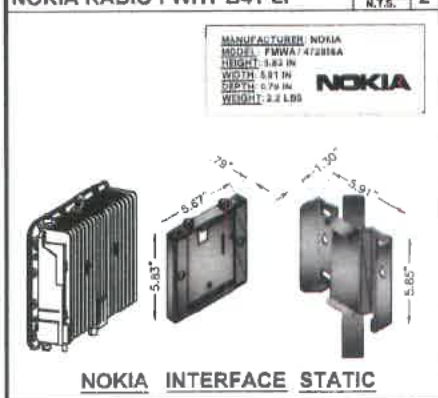


NOKIA RADIO FWHT B41 LP | SCALE N.T.S. | 2

NOT USED | SCALE N.T.S. | 5

NOT USED | SCALE N.T.S. | 8

NOT USED | SCALE N.T.S. | 11



NOKIA RADIO MOUNT | SCALE N.T.S. | 3

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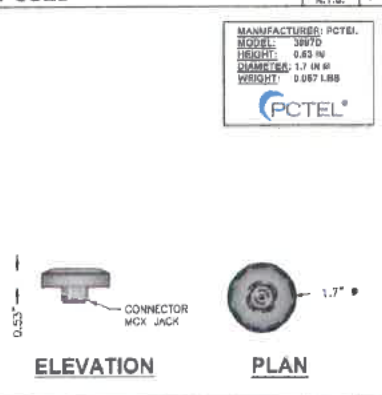


PCTEL 3997D GPS UNIT | SCALE N.T.S. | 9

NOT USED | SCALE N.T.S. | 12

mobilitie
3475 PIEDMONT ROAD NE,
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 636-5400

PROJECT NO:	ER999301
DRAWN BY:	S. POTESTA
CHECKED BY:	C. NAMEY

A	05.24.18	FOR REVIEW

STATE OF NEW YORK
PAUL LOUIS [illegible]
097571
LICENSED PROFESSIONAL ENGINEER

NY90XS8J8C
9NYB002992
AUSTIN ST &
126TH ST
KEW GARDENS, NY 11415
LIGHT POLE

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
3.2

GENERAL

THE CONSTRUCTION DOCUMENT DRAWINGS ARE INTERRELATED. WHEN PERFORMING THE WORK, EACH CONTRACTOR MUST REFER TO ALL DRAWINGS. COORDINATION IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

GENERAL REQUIREMENTS

PART 1 – GENERAL

1. OBTAIN AND SUBMIT RELEASES ENABLING THE OWNER UNRESTRICTED USE OF THE WORK AND ACCESS TO SERVICES AND UTILITIES; INCLUDE OCCUPANCY PERMITS, OPERATING CERTIFICATES AND SIMILAR RELEASES.
2. SUBMIT RECORD DRAWINGS, DAMAGE OR SETTLEMENT SURVEY, PROPERTY SURVEY, AND SIMILAR FINAL RECORD INFORMATION.
3. COMPLETE FINAL CLEAN UP REQUIREMENT, INCLUDING TOUCH-UP PAINTING. TOUCH UP AND OTHERWISE REPAIR AND RESTORE MARRED EXPOSED FINISHES.

PART 2 – FINAL CLEANING

1. COMPLETE THE FOLLOWING CLEANING OPERATIONS BEFORE REQUESTING INSPECTION FOR CERTIFICATION ON COMPLETION.
   A. CLEAN THE PROJECT SITE, YARD AND GROUNDS IN AREAS DISTURBED BY CONSTRUCTION ACTIVITIES, INCLUDING LANDSCAPE DEVELOPMENT AREA, OF RUBBISH, WASTE MATERIALS, LITTER AND FOREIGN SUBSTANCES. SWEEP PAVED AREAS BROOM CLEAN. REMOVE PETRO-CHEMICAL SPILLS, STAINS AND OTHER FOREIGN DEPOSITS. RAKE GROUNDS THAT ARE NEITHER PLANTED NOR PAVED, TO A SMOOTH EVEN-TEXTURED SURFACE.
   B. REMOVE TOOLS, CONSTRUCTION EQUIPMENT, MACHINERY AND SURPLUS MATERIAL FROM THE SITE.
   C. REMOVE SNOW AND ICE TO PROVIDE SAFE ACCESS TO THE SITE AND EQUIPMENT ENCLOSURE.
   D. CLEAN EXPOSED EXTERIOR HARD SURFACED FINISHES TO A DIRT-FREE CONDITION, FREE OF STAINS, FILMS AND SIMILAR FOREIGN SUBSTANCES. AVOID DISTURBING NATURAL WEATHERING OF EXTERIOR SURFACES.
   E. REMOVE DEBRIS FROM LIMITED ACCESS SPACES, INCLUDING HANDHOLES, MANHOLES, AND SIMILAR SPACES.
   F. REMOVE LABELS THAT ARE NOT PERMANENT LABELS.
   G. TOUCH UP AND OTHERWISE REPAIR AND RESTORE MARRED EXPOSED FINISHES AND SURFACES. REPLACE FINISHES AND SURFACES THAT CANNOT BE SATISFACTORILY REPAIRED OR RESTORED, OR THAT SHOW EVIDENCE OF REPAIR OR RESTORATION. DO NOT PAINT OVER "UL" AND SIMILAR LABELS, INCLUDING ELECTRICAL NAME PLATES.
   H. LEAVE THE PROJECT CLEAN AND READY FOR OCCUPANCY.
   I. DUST OFF ALL EQUIPMENT AND ITEMS WITHIN EQUIPMENT ENCLOSURE.
2. REMOVAL OF PROTECTION: REMOVE TEMPORARY PROTECTION AND FACILITIES INSTALLED DURING CONSTRUCTION TO PROTECT PREVIOUSLY COMPLETED INSTALLATIONS DURING THE REMAINDER OF THE CONSTRUCTION PERIOD.

SITE WORK

PART 1 – GENERAL

1. WORK INCLUDED: SEE SITE PLAN.
2. DESCRIPTIONS: IF APPLICABLE, LEASE AREA, AND UNDERGROUND UTILITY EASEMENTS ARE TO BE CONSTRUCTED TO PROVIDE A WELL DRAINED, EASILY MAINTAINED, EVEN SURFACE FOR USE AND ACCESS.
3. QUALITY ASSURANCE
   A. APPLY SOIL STERILIZER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS (AS NEEDED).
   B. APPLY AND MAINTAIN GRASS SEED AS RECOMMENDED BY THE SEED PRODUCER (IF REQUIRED).
   C. PLACE AND MAINTAIN VEGETATION LANDSCAPING, IF INCLUDED WITHIN THE CONTRACT, AS RECOMMENDED BY NURSERY INDUSTRY STANDARDS.
4. SEQUENCING
   A. CONFIRM SURVEY STAKES AND SET ELEVATION STAKES PRIOR TO ANY CONSTRUCTION.
   B. CONSTRUCT TEMPORARY CONSTRUCTION AREA, DESIGNATED AREA TO BE APPROVED BY CONSTRUCTION MANAGER AND LOCAL AUTHORITIES.
   C. APPLY SOIL STERILIZER PRIOR TO PLACING BASE MATERIALS.
   D. GRADE, SEED, FERTILIZE, AND MULCH ALL AREAS DISTURBED BY CONSTRUCTION (INCLUDING UNDERGROUND UTILITY EASEMENTS) IMMEDIATELY AFTER BRINGING LEASE AREA TO BASE COURSE ELEVATION. WATER TO ENSURE GROWTH.
   E. AFTER APPLICATIONS OF FINAL SURFACES, APPLY SOIL STERILIZER TO STONE SURFACES.
5. SUBMITTALS
   A. BEFORE CONSTRUCTION: IF LANDSCAPING IS APPLICABLE TO THE CONTRACT, SUBMIT TWO COPIES OF THE LANDSCAPE PLAN ON NURSERY LETTERHEAD. IF A LANDSCAPE ALLOWANCE WAS INCLUDED IN THE CONTRACT, PROVIDE AN ITEMIZED LISTING OF PROPOSED COSTS ON NURSERY LETTERHEAD
   B. AFTER CONSTRUCTION
      1. MANUFACTURER'S DESCRIPTION OF PRODUCT AND WARRANTY STATEMENT ON SOIL STERILIZER.
      2. MANUFACTURER'S DESCRIPTION OF PRODUCT ON GRASS SEED AND FERTILIZER.
      3. LANDSCAPING WARRANTY STATEMENT
6. WARRANTY
   A. IN ADDITION TO THE WARRANTY ON ALL CONSTRUCTION COVERED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL REPAIR ALL DAMAGE AND RESTORE AREA AS CLOSE TO ORIGINAL CONDITION AS POSSIBLE AT SITE AND SURROUNDINGS.
   B. SOIL STERILIZATION APPLICATION TO GUARANTEE VEGETATION FREE AREAS FOR ONE YEAR FROM DATE OF FINAL INSPECTION.
   C. DISTURBED AREA WILL REFLECT GROWTH OF NEW GRASS COVER PRIOR TO FINAL INSPECTION.
   D. LANDSCAPING, IF INCLUDED WITHIN THE SCOPE OF THE CONTRACT, WILL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL INSPECTION.

PART 2 – PRODUCTS

1. MATERIALS
   A. SOIL STERILIZER SHALL BE EPA-REGISTERED, PRE-EMERGENCE LIQUID:

TOTAL KILL PRODUCT 910 EPA 10292-7 (313) 563-8000	PHASAR CORPORATION P.O. BOX 5123 DEARBORN, MI 48126
AMBUSH HERBICIDE EPA REGISTERED (800) 526-4924	FRAMAR INDUSTRIAL PRODUCTS 1435 MORRIS AVE. UNION, NJ 07083

   B. ROAD AND SITE MATERIALS SHALL CONFORM TO STATE AND LOCAL DOT SPECIFICATIONS FILL MATERIAL (UNLESS OTHERWISE NOTED) – ACCEPTABLE SELECT FILL SHALL BE IN ACCORDANCE WITH STATE DEPARTMENT OF HIGHWAY AND TRANSPORTATION STANDARD SPECIFICATIONS.
   C. SOIL STABILIZER FABRIC SHALL BE MIRAFI 500X.

PART 3 – EXECUTION

1. INSPECTIONS: LOCAL BUILDING INSPECTORS SHALL BE NOTIFIED NO LESS THAN 48 HOURS IN ADVANCE OF CONCRETE POURS, UNLESS OTHERWISE SPECIFIED BY JURISDICTION
2. PREPARATION
   A. CLEAR BRUSH AND DEBRIS FROM LEASE AREA AND UNDERGROUND UTILITY EASEMENTS AS REQUIRED FOR CONSTRUCTION.
   B. UNLESS OTHERWISE INSTRUCTED BY LESSEE, TRANSPORT ALL REMOVED TREES, BRUSH AND DEBRIS FROM THE PROPERTY TO AN AUTHORIZED LANDFILL.
   C. PRIOR TO PLACEMENT OF FILL OR BASE MATERIALS, ROLL THE SOIL.
   D. WHERE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, LINE THE AREAS WITH STABILIZER MAT PRIOR TO PLACEMENT OF FILL OR BASE MATERIAL.
3. INSTALLATION
   A. CLEAR EXCESS SPOILS, IF ANY, FROM JOB SITE AND DO NOT SPREAD BEYOND THE LIMITS OF PROJECT AREA UNLESS AUTHORIZED BY PROJECT MANAGER AND AGREED TO BY LANDOWNER.
   B. PLACE FILL OR STONE IN SIX INCH (6") MAXIMUM LIFTS, AND COMPACT BEFORE PLACING NEXT LIFT.
   C. APPLY SEED, FERTILIZER, AND STRAW COVER TO ALL OTHER DISTURBED AREAS, DITCHES, AND DRAINAGE SWALES, NOT OTHERWISE RIPRAPPED.
   D. APPLY SEED AND FERTILIZER TO SURFACE CONDITIONS WHICH WILL ENCOURAGE ROOTING. RAKE AREAS TO BE SEEDED TO EVEN THE SURFACE AND LOOSEN THE SOIL.
   E. SOW SEED IN TWO DIRECTIONS IN TWICE THE QUANTITY RECOMMENDED BY THE SEED PRODUCER.
   F. ENSURE GROWTH OF SEEDED AND LANDSCAPED AREA, BY WATERING, UP TO THE POINT OF RELEASE FROM THE CONTRACT. CONTINUE TO REWORK THE BARE AREAS UNTIL COMPLETE COVERAGE IS OBTAINED.
4. FIELD QUALITY CONTROL: COMPACT SOILS TO MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557. AREAS OF SETTLEMENT WILL BE EXCAVATED AND REFILLED AT CONTRACTOR'S EXPENSE. INDICATE PERCENTAGE OF COMPACTION ACHIEVED ON AS-BUILT DRAWINGS.
5. PROTECTION
   A. PROTECT SEEDED AREAS FROM EROSION BY SPREADING STRAW TO A UNIFORM LOOSE DEPTH OF 1-2 INCHES, STAKE AND TIE DOWN AS REQUIRED. USE OF EROSION CONTROL MESH OR MULCH NET WILL BE AN ACCEPTABLE ALTERNATE.
   B. PROTECT ALL EXPOSED AREAS AGAINST WASHOUTS AND SOIL EROSION. PLACE STRAW BALES AT THE INLET APPROACH TO ALL NEW OR EXISTING CULVERTS. WHERE THE SITE OR ROAD AREAS HAVE BEEN ELEVATED IMMEDIATELY ADJACENT TO THE RAIL LINE, STAKE EROSION CONTROL FABRIC FULL LENGTH IN THE SWALE TO PREVENT CONTAMINATION OF THE RAIL BALLAST. ALL EROSION CONTROL METHODS SHALL CONFORM TO APPLICABLE BUILDING CODE REQUIREMENTS.

mobilitie
3475 PIEDMONT ROAD NE;
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

PROJECT NO:	ER880201
DRAWN BY:	B. POTESTA
CHECKED BY:	C. RAMEY

A	05.24.18	FOR REVIEW

STATE OF NEW YORK
PAUL LOUIS [illegible]
097571
LICENSED PROFESSIONAL ENGINEER

NY90XSBJ8C
9NYB002992
AUSTIN ST &
126TH ST
KEW GARDENS, NY 11415
LIGHT POLE

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-1

ELECTRICAL

1. CONTRACTOR SHALL REVIEW THE CONTRACT DOCUMENTS PRIOR TO ORDERING THE ELECTRICAL EQUIPMENT AND STARTING THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE ARCHITECT/ENGINEER LISTING ANY DISCREPANCIES OR CONFLICTING INFORMATION.
2. ELECTRICAL PLANS, DETAILS AND DIAGRAMS ARE DIAGRAMMATIC ONLY. VERIFY EXACT LOCATIONS AND MOUNTING HEIGHTS OR ELECTRICAL EQUIPMENT WITH OWNER PRIOR TO INSTALLATION.
3. EACH CONDUCTOR OF EVERY SYSTEM SHALL BE PERMANENTLY TAGGED IN EACH PANELBOARD, PULLBOX, JUNCTION BOX, SWITCH BOX, ETC. THE TYPE OF TAGGING METHODS SHALL BE IN COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (O.S.H.A.)
4. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN GOOD WORKING CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED "U.L." WHERE APPLICABLE. MATERIALS SHALL MEET WITH APPROVAL OF ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, NBFU AND "U.L." LISTED.
5. ALL CONDUIT SHALL HAVE A PULL CORD.
6. PROVIDE PROJECT MANAGER WITH ONE SET OF COMPLETE ELECTRICAL "AS INSTALLED" DRAWINGS AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DIMENSIONS, ROUTINGS, AND CIRCUITS.
7. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED, AND A MINIMUM OF 10,000 A.I.C.
8. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY IBC, NEC AND ALL APPLICABLE CODES.
9. PATCH, REPAIR AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.
10. PLASTIC PLATES FOR ALL SWITCHES, RECEPTACLES, TELEPHONE AND BLANKED OUTLETS SHALL HAVE ENGRAVED LETTERING WHERE INDICATED ON THE DRAWINGS. WEATHERPROOF RECEPTACLES SHALL HAVE SIERRA #WPD-S LIFT COVERPLATES.

SERVICE AND DISTRIBUTION

1. WIRE AND CABLE CONDUCTORS SHALL BE COPPER, 600V, TYPE THHN OR THWN, WITH A MIN. SIZE OF #12 AWG, COLOR CODED.
2. METER SOCKET AMPERES, VOLTAGE, NUMBER OF PHASES SHALL BE NOTED ON THE DRAWINGS. MANUFACTURED BY MILBANK OR APPROVED EQUAL, AND SHALL BE UTILITY COMPANY APPROVED.
3. CONDUIT:
   A. RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH GALVANIZED ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR. RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3.
   B. FLEXIBLE METALLIC CONDUIT SHALL HAVE U.L. LISTED LABEL AND MAY BE USED WHERE PERMITTED BY CODE. FITTINGS SHALL BE "JAKE" OR "SQUEEZE" TYPE. ALL FLEXIBLE CONDUITS SHALL HAVE FULL LENGTH GROUND WIRE.
   C. IT IS REQUIRED AND WILL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO NOTIFY 811 OR OTHER SUCH UTILITY LOCATING AGENCY 3 DAYS BEFORE DIGGING.
4. CONTRACTOR TO COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOKUP COSTS ARE TO BE PAID BY THE CONTRACTOR.
5. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS WITH WHITE ON BLUE BACKGROUND LETTERING (MINIMUM LETTER HEIGHT SHALL BE ONE FOURTH INCH (1/4"). NAMEPLATES SHALL BE FASTENED WITH STAINLESS STEEL SCREWS, NOT ADHESIVE.
6. UPON COMPLETION OF WORK, CONTINUITY, SHORT CIRCUIT, AND FALL POTENTIAL GROUNDING TESTS BY AN INDEPENDENT TESTING SERVICE ENGAGED BY THE CONTRACTOR SHALL BE SUBMITTED FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION.
7. GROUNDING ELECTRODE SYSTEM
   A. PREPARATION
      1. SURFACE PREPARATION: ALL CONNECTIONS SHALL BE MADE TO BARE METAL. ALL PAINTED SURFACES SHALL BE FIELD INSPECTED AND MODIFIED TO ENSURE PROPER CONTACT. NO WASHERS ARE ALLOWED BETWEEN THE ITEMS BEING GROUNDED. ALL CONNECTIONS ARE TO HAVE A NON-OXIDIZING AGENT APPLIED PRIOR TO INSTALLATION.
      2. IF CONDUCTORS MUST RUN THROUGH CONDUIT, BOTH ENDS OF CONDUIT SHALL BE GROUNDED. SEAL BOTH ENDS OF CONDUIT WITH SILICONE CAULK.
   B. EXTERNAL CONNECTIONS
      1. ALL BURIED GROUNDING CONNECTIONS SHALL BE MADE BY THE EXOTHERMIC WELD PROCESS. CONNECTIONS SHALL INCLUDE ALL CABLE TO CABLE, SPLICES, TEE'S, CROSSES, ETC. ALL CABLE TO GROUND RODS, GROUND ROD SPLICES AND LIGHTNING PROTECTION SYSTEMS ARE TO BE AS INDICATED. ALL MATERIALS USED (MOLDS, WELDING METAL, TOOLS, ETC.) SHALL BE BY "ULTRAWELD" AND INSTALLED PER MANUFACTURER'S RECOMMENDED PROCEDURES.
      2. ALL ABOVE GRADE GROUNDING AND BONDING CONDUCTORS SHALL BE CONNECTED BY TWO HOLE CRIMP TYPE (COMPRESSION) CONNECTIONS (EXCEPT FOR THE ACEG AND GROUND ROD). MECHANICAL CONNECTIONS, FITTINGS OR CONNECTIONS THAT DEPEND SOLELY ON SOLDER SHALL NOT BE USED. ALL CABLE TO CABLE CONNECTIONS SHALL BE HIGH PRESSURE DOUBLE CRIMP TYPE CONNECTIONS. CONNECTIONS TO STRUCTURAL STEEL SHALL BE EXOTHERMIC WELDS.
   C. GROUND RODS: ALL GROUND RODS SHALL BE 5/8"-INCH DIAMETER X 10'-0" LONG "COPPERWELD" OR APPROVED EQUAL, OF THE NUMBER AND LOCATIONS INDICATED. GROUND RODS SHALL BE DRIVEN FULL LENGTH VERTICAL IN UNDISTURBED EARTH.
   D. GROUND CONDUCTORS: ALL GROUND CONDUCTORS SHALL BE STANDARD TINNED SOLID BARE COPPER ANNEALED, AND OF SIZE INDICATED ON DRAWINGS UNLESS OTHERWISE NOTED.
   E. LUGS
      1. LUGS SHALL BE 2-HOLE, LONG BARREL, STRAND COPPER UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS. LUGS SHALL BE THOMAS AND BETTS SERIES #54__-__BE OR EQUIVALENT

A.	535 MCM DLO	54880BE
B.	262 MCM DLO	54872BE
C.	#1/0 DLO	54862BE
D.	#4/0 THWN AND BARE	54866BE
E.	#2/0 THWN	54862BE
F.	#2 THHN	54207BE
G.	#6 DLO	54205BE

      2. WHEN THE DIRECTION OF THE CONDUCTOR MUST CHANGE, IT SHALL BE DONE GRADUALLY. THE CURVATURE OF THE TURN SHALL BE DONE IN ACCORDANCE WITH THE FOLLOWING CHART:

GROUNDING CONDUCTOR SIZE	MINIMUM BENDING RADIUS TO INSIDE EDGE
NO. 6 AWG TO NO. 4 AWG	8 INCHES
NO. 2 AWG TO NO 1/0 AWG	8 INCHES
NO. 2/0 AWG TO 4/0 AWG	12 INCHES
250 MCM TO 750 MCM	24 INCHES

8. GROUNDING RESISTANCE TEST REPORT: UPON COMPLETION OF THE TESTING FOR EACH SITE, A TEST REPORT SHOWING RESISTANCE IN OHMS MUST BE SUBMITTED. TWO (2) SETS OF TEST DOCUMENTS FROM THE INDEPENDENT TESTING SERVICE ARE TO BE BOUND AND SUBMITTED WITHIN ONE (1) WEEK OF WORK COMPLETION.

POLES, POSTS, AND STANDARDS (SINGLE MAST AND SELF SUPPORTING TOWERS)

1. GENERAL
   A. LIGHTNING ROD AND EXTENSION PIPE INCLUDING ALL APPURTENANCES, TO BE FURNISHED BY OWNER, IF REQUIRED.
   B. GROUNDING: GROUND METAL POLES WITH A MINIMUM OF #2 AWG TINNED SOLID BARE COPPER CONDUCTOR CADWELDED TO TOWER BASE PLATE.

TELECOMMUNICATIONS WIRING COMPONENTS (COAXIAL ANTENNA CABLE)

1. GENERAL
   A. ALL MATERIALS, PRODUCTS OR PROCEDURES INCORPORATED INTO WORK SHALL BE NEW AND OF STANDARD COMMERCIAL QUALITY.
   B. ALL MATERIALS AND PRODUCTS SPECIFIED IN THE CONTRACT DOCUMENTS SHALL BE SUPPLIED BY THE CONTRACTOR UNLESS NOTED OTHERWISE.
2. MATERIALS:
   A. COAXIAL CABLE:
      1. INSTALL COAXIAL CABLE AND TERMINATIONS BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS WITH COAXIAL CABLES SUPPORTED AT NO MORE THAN 3'-0" O.C. WEATHERPROOF ALL CONNECTORS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE FEET (3') IN EXCESS OF EQUIPMENT LOCATION UNLESS OTHERWISE STATED.
      2. LENGTHS LESS THAN OR EQUAL TO 100 FEET SHALL BE 7/8".
3. ANTENNA AND COAXIAL CABLE GROUNDING
   A. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)
4. COAXIAL CABLE IDENTIFICATION
   A. TO PROVIDE EASY IDENTIFICATION AND UNIFORM MARKING OF ANTENNA CABLING, PLASTIC TAGS SHALL BE USED AT THE FOLLOWING LOCATIONS:
      1. FIRST LOCATION IS AT THE END OF THE COAX NEAREST THE ANTENNA (WHERE THE COAXIAL CABLE AND JUMPER ARE CONNECTED).
      2. SECOND LOCATION IS AT END OF THE COAX NEAREST THE EQUIPMENT.
   B. USE ANDREW CABLE TIES (PT.# 27290) TO SECURE IDENTIFICATION TAGS.
      1. TESTING: LESSEE SHALL PROVIDE AN INDEPENDENT TESTING AGENCY TO PERFORM THE COAXIAL SWEEP TEST & REPORT. THE CONTRACTOR IS TO PROVIDE ONE CLIMBER/QUALIFIED PERSONNEL TO ASSIST IN ANY REPAIRS AND WEATHERPROOFING ONCE THE TEST IS COMPLETE. THE CONTRACTOR IS TO PROVIDE LESSEE WITH A MINIMUM OF 48 HOURS NOTICE PRIOR TO THE TIME OF THE SWEEP TEST.

mobilitie
3475 PIEDMONT ROAD NE,
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

PROJECT NO:	ER600291
DRAWN BY:	B. POTESTA
CHECKED BY:	C. RAMEY

A	05.24.16	FOR REVIEW

STATE OF NEW YORK
PAUL LOUIS MAGLIO
097571
LICENSED PROFESSIONAL ENGINEER

NY90XSBJ8C
9NY8002992
AUSTIN ST &
126TH ST
KEW GARDENS, NY 11415
LIGHT POLE

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-2

UTILITY NOTES

WORK INCLUDES:
THESE NOTES AND ACCOMPANYING DRAWINGS COMPLEMENT THE PROVISIONS AND INSTALLATIONS BY THE ELECTRICAL CONTRACTOR, OF ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO INSTALL THE ELECTRICAL WORK COMPLETE IN CONNECTION WITH THIS UTILITY SITE AND SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:

1. THE PROVISIONS, INSTALLATION AND CONNECTION OF A GROUNDING ELECTRODE SYSTEM COMPLETE WITH SECONDARY GROUNDING, AND CONNECTIONS TO THE INCOMING ELECTRICAL DISTRIBUTION EQUIPMENT.
2. THE PROVISION AND INSTALLATION OF AN OVERHEAD ELECTRICAL SERVICE OR UNDERGROUND ELECTRICAL SERVICE AND ALL ASSOCIATED WIRE AND CONDUIT AS REQUIRED AND/OR INDICATED ON PLANS.
3. THE PROVISION AND INSTALLATION OF CONDUIT AND CONNECTIONS FOR LOCAL FIBER SERVICE.
4. THE FURNISHING AND INSTALLATION OF THE ELECTRICAL SERVICE ENTRANCE CONDUCTORS, CONDUITS, METER SOCKET, AND CONNECTIONS TO THE SERVICE EQUIPMENT.
5. ALL CONDUITS SHOULD BE LEFT WITH NYLON PULL CORD FOR FUTURE USE.
6. EXCAVATION, TRENCHING, AND BACKFILLING FOR CONDUIT(S), CABLE(S) AND EXTERNAL GROUNDING SYSTEM.

CODES, PERMITS AND FEES:

1. ALL REQUIRED PERMITS, LICENSES, INSPECTIONS AND APPROVALS SHALL BE SECURED AND ALL FEES FOR SAME PAID BY CONTRACTOR.
2. THE INSTALLATION SHALL COMPLY WITH ALL APPLICABLE CODES: STATE, LOCAL AND NATIONAL AND THE DESIGN, PERFORMANCE CHARACTERISTICS AND METHODS OF CONSTRUCTION OF ALL ITEMS AND EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST ISSUE OF THE VARIOUS APPLICABLE STANDARD SPECIFICATIONS OF THE FOLLOWING AUTHORITIES:

N.E.C.	NATIONAL ELECTRICAL CODE
A.N.S.I.	AMERICAN NATIONAL STANDARDS INSTITUTE
I.E.E.E.	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
A.S.T.M.	AMERICAN SOCIETY FOR TESTING MATERIALS
N.E.M.A.	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
U.L.	UNDERWRITERS LABORATORIES, INC.
N.F.P.A.	NATIONAL FIRE PROTECTION ASSOCIATION

RACEWAYS AND WIRING:

1. WIRING OF EVERY KIND MUST BY INSTALLED IN CONDUIT, UNLESS NOTED OTHERWISE, OR AS APPROVED BY THE ARCHITECT/ENGINEER.
2. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE COPPER (CU) TYPE THWN, SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND LOCAL CODES.
3. RACEWAYS SHALL BE GALVANIZED STEEL, SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND LOCAL CODES UNLESS OTHERWISE NOTED. ALL RACEWAYS SHALL BE APPROVED FOR THE INSTALLATION.
4. PULL OR JUNCTION BOXES SHALL BE PROVIDED AS REQUIRED TO FACILITATE INSTALLATION OF RACEWAYS AND WIRING. PROVIDE JUNCTION AND PULLBOXES FOR CONDUIT RUNS WITH MORE THAN (360) DEGREES OF BENDS.
5. PROVIDE A COMPLETE RACEWAY AND WIRING INSTALLATION, PERMANENTLY AND EFFECTIVELY GROUNDED IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE AND LOCAL CODES.
6. ALL STEEL CONDUIT SHALL BE BONDED AT BOTH ENDS WITH GROUNDING BUSHING.

GENERAL NOTES:
SEE DETAILS, SCHEDULES AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND INFORMATION. CHECK ARCHITECTURAL, STRUCTURAL, AND OTHER MECHANICAL AND ELECTRICAL DRAWINGS FOR SCALE, SPACE LIMITATIONS, COORDINATION, AND ADDITIONAL INFORMATION, ETC. REPORT ANY DISCREPANCIES, CONFLICTS, ETC. TO ARCHITECT/ENGINEER BEFORE SUBMITTING BID. ALL EQUIPMENT FURNISHED BY OTHERS (FBO) SHALL BE PROVIDED WITH PROPER MOTOR STARTERS, DISCONNECTS, CONTROLS, ETC. BY THE ELECTRICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE. THE ELECTRICAL CONTRACTOR SHALL INSTALL AND COMPLETELY WIRE ALL ASSOCIATED EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S WIRE DIAGRAMS AND AS REQUIRED FOR A COMPLETE OPERATING INSTALLATION. ELECTRICAL CONTRACTOR SHALL VERIFY AND COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF (FBO) EQUIPMENT PRIOR TO ROUGH-IN OF CONDUIT AND WIRING TO AVOID CONFLICTS.

COORDINATION WITH UTILITY COMPANY:
THE ELECTRICAL CONTRACTOR SHALL COORDINATE COMPLETE ELECTRICAL SERVICE WITH LOCAL UTILITY COMPANY FOR A COMPLETE OPERATIONS SYSTEM, INCLUDING TRANSFORMER CONNECTIONS, CONCRETE TRANSFORMER PADS, IF REQUIRED, METER SOCKETS, PRIMARY CABLE RACEWAY REQUIREMENTS, SECONDARY SERVICE, ETC. PRIOR TO SUBMITTING BID TO INCLUDE ALL LABOR AND MATERIALS. THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN THE BID ANY OPTIONAL OR EXCESS FACILITY CHARGES ASSOCIATED WITH PROVIDING ELECTRICAL SERVICE FROM LOCAL UTILITY COMPANY. VERIFY BEFORE BIDDING TO INCLUDE ALL COSTS. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE AVAILABLE FAULT CURRENT WITH THE LOCAL UTILITY COMPANY PRIOR TO SUBMITTING BID. ADJUST A.I.C. RATINGS OF ALL OVER CURRENT PROTECTION DEVICES IN DISTRIBUTION EQUIPMENT AS REQUIRED TO COORDINATE WITH AVAILABLE FAULT CURRENT FROM LOCAL UTILITY COMPANY.

STEEL NOTES

1. INCORRECTLY FABRICATED DAMAGED OR OTHERWISE MIS-FITTING OR NON-CONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE PROJECT MANAGER PRIOR TO REMEDIAL OR CORRECTIVE ACTION.
2. DESIGN AND CONSTRUCTION OF STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", LATEST EDITION.
3. STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36, "STRUCTURAL STEEL", LATEST EDITION, UNLESS OTHERWISE INDICATED.
4. ALL PIPES SHALL CONFORM TO ASTM A501 OR A53 GRADE B (FY=35 KSI MIN.) A500 GRADE B MAY BE USED IF A501 OR A53 STEEL IS NOT AVAILABLE.
5. ALL TUBES SHALL CONFORM TO ASTM A500 GRADE B (FY=46 KSI).
6. ALL THREADED RODS SHALL BE A36, UNLESS OTHERWISE NOTED.
7. SHOP CONNECTIONS SHALL BE WELDED OR BOLTED. FIELD CONNECTIONS SHALL BE BOLTED UNLESS OTHERWISE INDICATED. ALL BOLTED CONNECTIONS SHALL BE MADE WITH HIGH STRENGTH BOLTS.
8. STRUCTURAL CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS AND SHALL CONFORM TO ASTM A325 "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS AND PLAIN HARDENED WASHERS", LATEST EDITION. BOLTS SHALL BE 5/8 DIAMETER, UNLESS OTHERWISE NOTED. NUTS SHALL BE HEAVY HEX. A LOCKING DEVISE SHALL BE INSTALLED ON ALL STEEL TO STEEL CONNECTIONS.
9. CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE, QUALITY OF WELDS AND FOR METHODS USED IN CORRECTIVE WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDS SHALL BE WITH E70 ELECTRODES, UNLESS OTHERWISE NOTED.
10. UNLESS OTHERWISE NOTED, ALL STEEL BOLTS AND U-BOLTS SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION CONFORMING ASTM A153.
11. TRIMMED ENDS OF STEEL AND DISTURBED SURFACES SHALL RECEIVE A COAT OF Z/R/C/ COLD GALVANIZING COMPOUND AS MANUFACTURED BY Z.R.C. CHEMICAL PRODUCTS CO., QUINCY, MASS.
12. ALL SPECIALTY ANCHORS SHALL BE INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
13. ALL MASTS SHALL BE INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
14. ALL MASTS SHALL BE CONTINUOUS (WITHOUT SPLICE) AND INSTALLED PLUMB UNLESS OTHERWISE NOTED.

ANTENNA INSTALLATION NOTES

1. ALL HARDWARE, FASTENERS AND COMPONENTS SHALL BE PAINTED THE COLOR OF THE POLE UPON COMPLETION OF THE INSTALLATION, CONTRACTOR SHALL TOUCH UP PAINT AS REQUIRED.
2. STICKERS AND LABELS ARE NOT PERMITTED ON THE ANTENNA, MOUNT OR FIBER BOX. CONTRACTOR SHALL REMOVE STICKERS AND TOUCH UP PAINTED SURFACES AS REQUIRED.
3. ANTENNA SHALL BE INSTALLED PLUMB.
4. ANTENNA MOUNT SET SCREWS SHALL BE INSTALLED AS FLUSH TO THE POLE AS PRACTICAL. CONTRACTOR SHALL USE THE SHORTEST LENGTH BOLT POSSIBLE.
5. SOME SET SCREWS LOCK THREADED CONNECTIONS; OTHERS LOCK SLIP CONNECTIONS.

mobilitie
3475 PIEDMONT ROAD NE;
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

PROJECT NO:	ER600201
DRAWN BY:	B. POTESTA
CHECKED BY:	C. RAMEY

A	10.24.18	FOR REVIEW

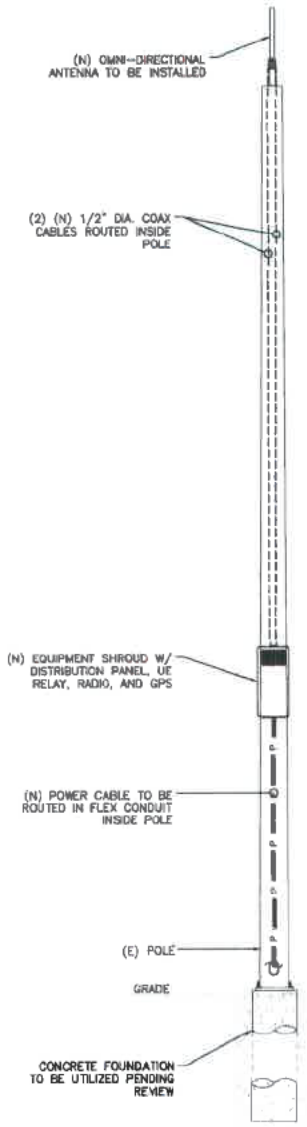
STATE OF NEW YORK
PAUL LOUIS [illegible]
097571
LICENSED PROFESSIONAL ENGINEER

NY90XSBJ8C
9NYB002992
AUSTIN ST &
126TH ST
KEW GARDENS, NY 11415
LIGHT POLE

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-3

NOTE:
(E) POLE MOUNTED EQUIPMENT NOT SHOWN FOR CLARITY.



NOTE:
CABLING DIAGRAM IS FOR CLARITY OF CABLE ROUTE AND TERMINATION ONLY. CONTRACTOR SHALL INSTALL CABLES WITH MINIMAL VISUAL IMPACT ON (E) STEEL POLE. SEE ELEVATION DRAWING FOR EQUIPMENT AND ANTENNA LOCATIONS.

CABLING NOTES:

A) WOOD, CONCRETE AND EXISTING METALLIC POLES
I) FROM GRADE LINE TO 11'-0" ABOVE GRADE, ALL CABLES/CONDUCTORS EXCEPT GROUNDING CONDUCTOR MUST RUN IN RIGID GALVANIZED STEEL CONDUIT (RGS)

II) GROUNDING CONDUCTORS IN EXPOSED LOCATIONS MUST BE INSTALLED IN PVC.

III) IN EARTH INSTALL PVC CONDUIT FOR BACKHAUL AND ELECTRICAL SERVICE. TRANSITION TO RGS AT GRADE LINE.

IV) ABOVE 11'-0" ALL CABLES (POWER, ETHERNET, COAXIAL) MUST RUN IN PVC UTILITY POLE RISER.

(1) AT MAJOR EQUIPMENT, EXTEND UTILITY DUCT IMMEDIATELY ADJACENT TO THE EQUIPMENT. INSTALL CABLES IN THE UTILITY POLE RISER CREATING CABLE DRIP LOOPS NOT LESS THAN THE CABLE BENDING RADIUS.

(2) INSIDE THE UTILITY POLE RISER, UTILIZE ½" COAX BLOCKS WITH LAG SCREWS TO SUPPORT COAX, RADIO AND MW POWER, RF COAX, AND ETHERNET CABLES TO WITHIN 12" OF THE EQUIPMENT BEING SERVED AND ON INTERVALS NOT TO EXCEED 4'.

V) FOR UNDERGROUND HFC/PUBLIC BACKHAUL, ROUTE ETHERNET CABLE IN CONDUIT UP THE POLE AND ENTER THE UTILITY POLE RISER. SEAL EXPOSED END OF CONDUIT WITH A CABLE TERMINATION FITTING.

VI) BY APPROVAL IN SELECT CASES LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LFMC) MAY BE USED IN LENGTHS NOT TO EXCEED 36" TO EXTEND THE ELECTRICAL SERVICE CONDUIT TO THE AC DISTRIBUTION BOX. EXAMPLE: UTILITY-REQUIRED DISCONNECT ON POLE W/ AC DISTRIBUTION BOX ON OPPOSITE SIDE OF POLE. NOT REQUIRED FOR COAX.

B) NEW METALLIC POLES
I) PROCURE NEW POLES WITH SUITABLE HAND HOLES SUCH THAT HAND HOLES EXIST AT ALL EQUIPMENT LOCATIONS.

II) WHERE REQUIRED, INSTALL POLE BASE SUCH THAT THE ELECTRICAL FEED AND BACKHAUL (IF UNDERGROUND) CIRCUIT ENTER THE POLE THROUGH THE POLE BASE.

PLUMBING DIAGRAM

SCALE: NOT TO SCALE

1

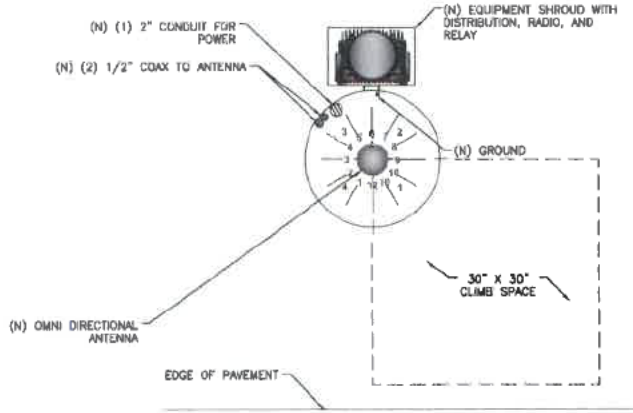
EQUIPMENT CHART							
QTY.	DESCRIPTION	MANUFACTURER	MODEL NUMBER	AZIMUTH	CABLE	DIMENSIONS (HxWxD)	WEIGHT
1	ANTENNA	KMW	FX-X-360-7-00T-ST	TBD	15'±	30" X 2.06" DIAMETER	2.6 LBS
1	UE RELAY	NOKIA/GEMTEK	FTHC/473763A	TBD	3'±	13.2" X 7.87" DIAMETER	5.5 LBS
--	--	--	--	--	--	--	--
1	GPS	PCTEL	38970			0.53" X 1.7" DIAMETER	0.057 LBS
1	RADIO	NOKIA	FWHT B41 LP	--	3'±	9.7" X 12.8" X 4.7"	17.2 LBS
--	--	--	--	--	--	--	--
1	AC DISTRIBUTION PANEL	RAYCAP	RSTAC-3112-P-120	--	TBD	9.25" X 9.5" X 3.81"	14 LBS
--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--

RFDS REVISION TYPE:	NOT FINAL
RFDS REVISION NUMBER:	N/A
RFDS REVISION TIMESTAMP:	N/A

BILL OF MATERIALS

SCALE: NOT TO SCALE

2



RISER ORIENTATION DIAGRAM

SCALE: NOT TO SCALE

3

mobilitie
3475 PIEDMONT ROAD NE;
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

PROJECT NO:	ER600261
DRAWN BY:	S. POTESTA
CHECKED BY:	C. RAMEY

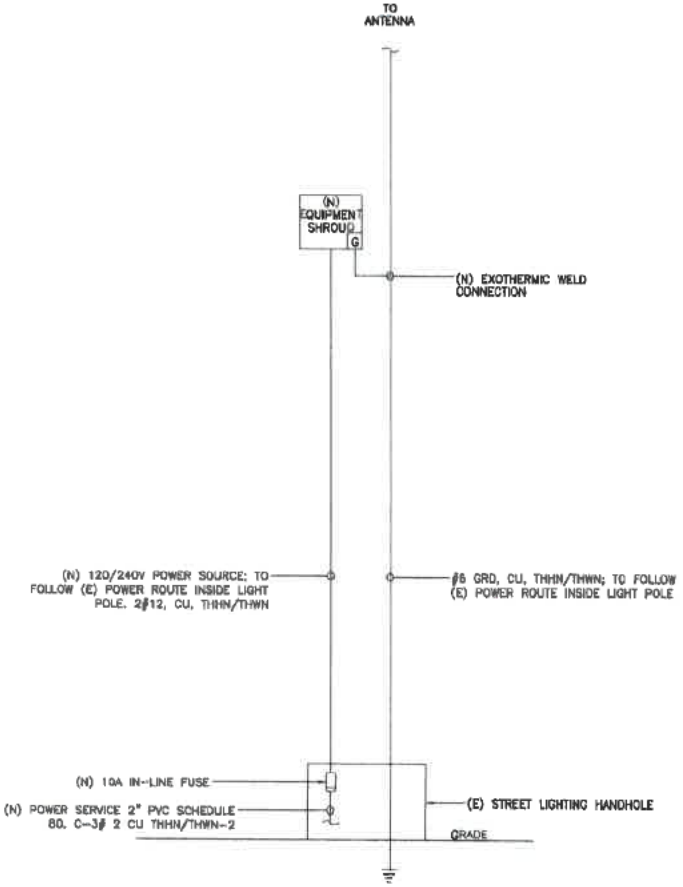
A	05.24.19	FOR REVIEW

STATE OF NEW YORK
PAUL LOUIS MOSCA
097571
LICENSED PROFESSIONAL ENGINEER

NY90XSBJ8C
9NYB002592
AUSTIN ST &
126TH ST
KEW GARDENS, NY 11415
LIGHT POLE

SHEET TITLE
PLUMBING & RISER DIAGRAM

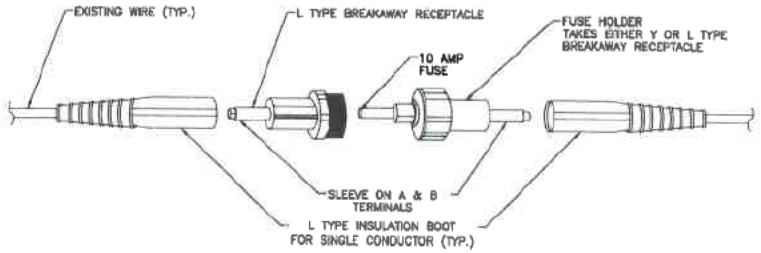
SHEET NUMBER
4.0



ONE-LINE DIAGRAM

SCALE: NOT TO SCALE

1

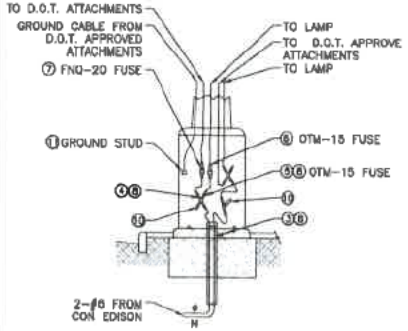


FUSEHOLDER SYMBOL	CRIMP TYPE TERMINALS SYMBOL	AWG COPPER WIRE SIZE TERMINALS WILL TAKE
HEB TAKES 13/32 X 1 1/2 " FUSE-AT RATED VOLTAGE OF FUSE-UP TO 600 VOLTS. (KTK, FNM, BAF, ETC. FUSES)	A	ONE #14, 12, 10 OR 8 SOLID OR STRANDED WIRE TWO #14 OR 12 SOLID OR STRANDED WIRES
	B	ONE #6 OR 4 SOLID WIRE ONE #6 STRANDED WIRE TWO #10 SOLID OR STRANDED WIRES

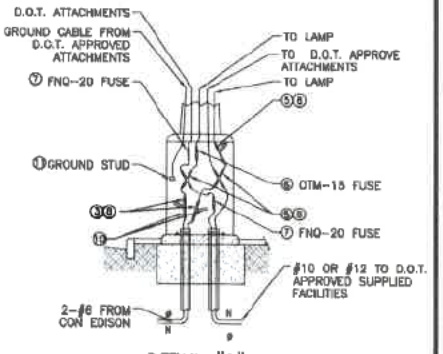
FUSEHOLDER DETAIL

SCALE: NOT TO SCALE

2



DETAIL "B"



DETAIL "C"

BILL OF MATERIAL

ITEM	DESCRIPTION	SPEC OR SPEC.	CLASS/STK
1	30 AMP FUSE HOLDER (TR-31.21 FERRAZ SHAWMUT (#6 TO #12)	--	571-9531
2	1W-2W STREETLIGHT CONNECTOR WITH BOOTED TERMINAL	--	571-9564
3	1W-2W STREETLIGHT CONNECTOR	--	570-4705
4	2W-2W STREETLIGHT CONNECTOR	--	570-9689
5	2W-2W STREETLIGHT CONNECTOR WITH BOOTED TERMINAL	--	571-9562
6	15 AMP FUSE (TRM-15)	--	59-3651
7	20 AMP FUSE FNQ-20	--	592-3594
8	SHRINK SLEEVE FOR #14 TO #6 AWG	--	526-5082
9	SHRINK SLEEVE FOR #6 TO #2 AWG	SO 5072	505-2940
10	SERVICE CAP	--	506-4978
11	GROUND STUD	TG-100004	504-0126

D.O.T. APPROVED CONNECTIONS

SCALE: NOT TO SCALE

3

mobilitie
3475 PIEDMONT ROAD NE;
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

PROJECT NO:	EN600201
DRAWN BY:	B. POTESTA
CHECKED BY:	C. RANEY

A	05.24.19	FOR REVIEW

IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT

NYB0XSBJ8C
SNYB002992
AUSTIN ST &
126TH ST
KEW GARDENS, NY 11415
LIGHT POLE

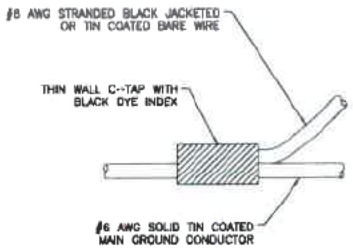
SHEET TITLE

ELECTRICAL DETAILS

SHEET NUMBER

4.1

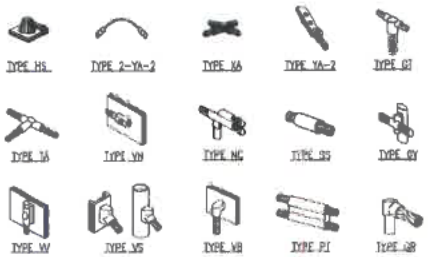
NOTE:
CONTRACTOR TO SURROUND COMPLETED CONNECTION WITH HEAT-SHRINK TUBING TO ENSURE WEATHER PROOF CONNECTION



C-TAP DETAIL

SCALE: NOT TO SCALE

1



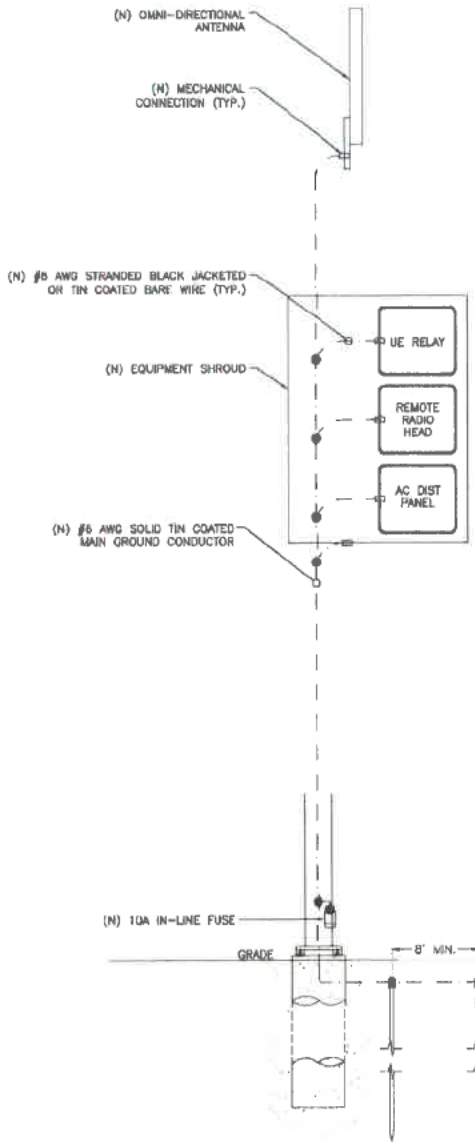
NOTE:

ERICO EXOTHERMIC "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH PROJECT MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.

WELD CONNECTION DETAILS

SCALE: NOT TO SCALE

2



LEGEND

- CADWELD CONNECTION
- MECHANICAL CONNECTION
- COMPRESSION CONNECTION

NOTE:
GROUNDING RISER FOR DIAGRAMMATIC PURPOSES ONLY. SEE ELEVATION DRAWING FOR EQUIPMENT AND ANTENNA LOCATIONS.

NOTES:

1. ALL RODS TO BE GROUNDED AT BOTH ENDS USING GROUNDING BUSHINGS
2. GROUND WIRE TO BE RUN IN 1/2" SCHEDULE 40 PVC.

GROUNDING RISER DIAGRAM

SCALE: NOT TO SCALE

3

mobilitie

3475 PIEDMONT ROAD NE;
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

PROJECT NO:	ER600291
DRAWN BY:	B. POTESTA
CHECKED BY:	C. RAMEY

A	05.24.18	FOR REVIEW

STATE OF NEW YORK
PAUL LOUIS WOOD
097571
LICENSED PROFESSIONAL ENGINEER

NY90XSBJBC
9NYB002992
AUSTIN ST &
126TH ST
KEW GARDENS, NY 11415
LIGHT POLE

SHEET TITLE

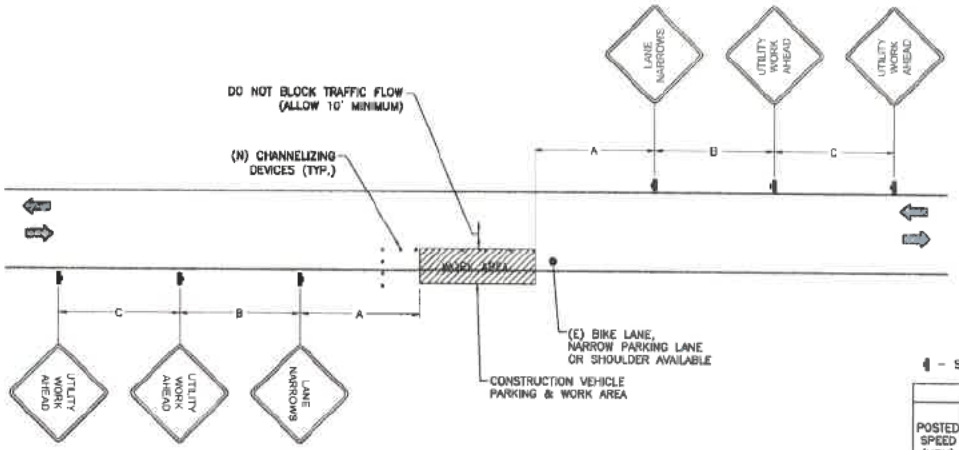
GROUNDING DETAILS

SHEET NUMBER

5.0

PLAN NOTES:

1. PLANS DEPICTED ARE GENERAL GUIDELINES FOR TEMPORARY VEHICULAR TRAFFIC CONTROL PLANS (TCP) TO INCLUDE PEDESTRIAN AND WORKER SAFETY. CONTRACTOR IS REQUIRED TO HAVE PREPARED A SITE-SPECIFIC TCP FOR REVIEW AND APPROVAL BY THE HIGHWAY AUTHORITY HAVING JURISDICTION. IF REQUIRED, THE FIRM PREPARING THE TCP SHALL BE AUTHORIZED OR CERTIFIED BY THE AUTHORITY HAVING JURISDICTION.
2. EXTEND CHANNELIZATION DEVICES INTO SHOULDER WHERE APPLICABLE.
3. DISTANCES AS INDICATED IN TABLE 1 SHOULD BE INCREASED FOR CONDITIONS THAT WOULD AFFECT STOPPING. DISTANCE SUCH AS DOWNGRADES OR LIMITED SIGHT DISTANCES. DISTANCES CAN BE DECREASED FOR LOW-SPEED (RESIDENTIAL) AREAS WITH APPROVAL BY THE AUTHORITY HAVING JURISDICTION. NIGHT-TIME WORK IS PROHIBITED UNLESS IT IS REQUIRED AS A CONDITION OF APPROVAL BY THE HIGHWAY AND LOCAL AUTHORITY HAVING JURISDICTION.
4. SHOULDER TAPERS SHOULD BE 1/3 OF THE ON-STREET TAPER LENGTH.
5. MAINTAIN A MINIMUM LANE WIDTH OF 10'.



◀ - SIGN

TABLE 1

POSTED SPEED (MPH)	DISTANCE BETWEEN SIGNS			TAPER	BUFFER
	A	B	C	L (SEE NOTE)	
15	100'	100'	100'	45'	100'
20	100'	100'	100'	80'	115'
25	100'	100'	100'	125'	155'
30	200'	200'	200'	180'	200'
35	200'	200'	200'	245'	250'
40	350'	350'	350'	320'	305'
45	350'	350'	350'	540'	360'
50	500'	500'	500'	600'	425'
55	500'	500'	500'	660'	495'
60	500'	500'	500'	720'	570'
65	500'	500'	500'	780'	645'

NOTES:

A) DISTANCES IN FEET UNLESS OTHERWISE NOTED.
B) CONTRACTOR TO VERIFY (E) SPEED LIMIT.
C) DISTANCES SHOWN ARE NOT VALID FOR LIMITED ACCESS HIGHWAYS. CONSULT STATE DOT MANUAL FOR DISTANCES.
D) ADJUST DISTANCES TO COMPLY WITH REQUIREMENT OF THE STATE OR LOCAL HIGHWAY AUTHORITY HAVING JURISDICTION. SEE NOTE 1, SHEET TC-2.
E) TAPER LENGTHS SHOWN BASED ON 12' LANE WIDTH. SEE NOTE 1B, SHEET TC-2.

VEHICULAR TRAFFIC CONTROL PLAN - CURBSIDE PARKING

1

SCALE: NOT TO SCALE

mobilitie

3475 PIEDMONT ROAD NE;
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

PROJECT NO:	ER8003201
DRAWN BY:	B. POTESTA
CHECKED BY:	C. RAMEY

A	05.24.18	FOR REVIEW

STATE OF NEW YORK
PAUL LOUIS [illegible]
097571
LICENSED PROFESSIONAL ENGINEER

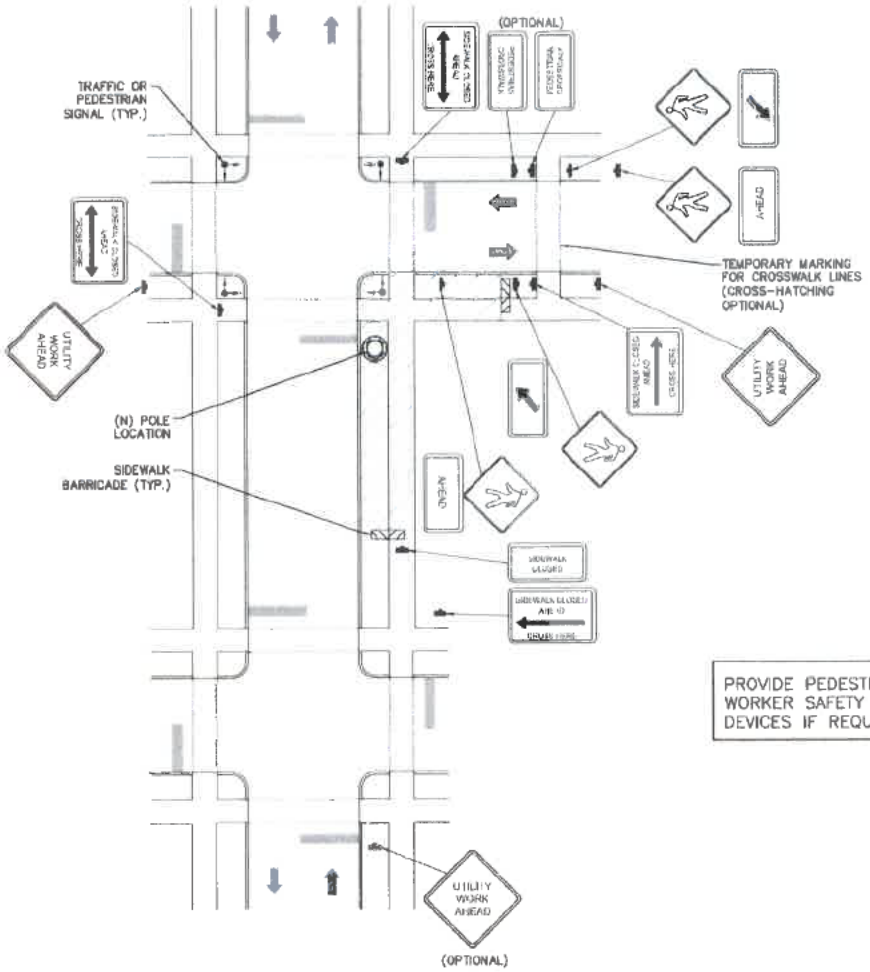
NY90XSBJ8C
9NYB002992
AUSTIN ST &
126TH ST
KEW GARDENS, NY 11415
LIGHT POLE

SHEET TITLE
VEHICULAR TRAFFIC CONTROL PLAN

SHEET NUMBER
6.0

TRAFFIC CONTROL GENERAL NOTES

1. ALL TEMPORARY TRAFFIC CONTROL SIGNAGE, LAYOUTS AND PROCEDURES SHALL COMPLY WITH LOCAL JURISDICTIONAL REQUIREMENTS AND MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION, WHICHEVER IS MORE STRINGENT.
2. PRIOR TO ANY ROAD CONSTRUCTION, TRAFFIC CONTROL SIGNS AND DEVICES SHALL BE IN PLACE.
3. TRAFFIC CONTROL DEVICES FOR LANE CLOSURES INCLUDING SIGNS, CONES, BARRICADES, ETC. SHALL BE PLACED AS SHOWN ON PLANS. SIGNS SHALL NOT BE PLACED WITHOUT ACTUAL LANE CLOSURES AND SHALL BE IMMEDIATELY REMOVED UPON REMOVAL OF THE CLOSURES.
4. SELECTION, PLACEMENT, MAINTENANCE, AND PROTECTION OF TRAFFIC, PEDESTRIANS, AND WORKERS SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) – PART VI "TEMPORARY TRAFFIC CONTROL" AND LOCAL JURISDICTIONAL REQUIREMENTS UNLESS OTHERWISE NOTED IN THE PLANS AND SPECIFICATIONS, AND SHALL BE APPROVED BY THE APPROPRIATE HIGHWAY AUTHORITY HAVING JURISDICTION.
5. ADVANCE WARNING SIGNS, DISTANCES, AND TAPER LENGTHS MAY BE EXTENDED TO ADJUST FOR REDUCED VISIBILITY DUE TO HORIZONTAL AND VERTICAL CURVATURE OF THE ROADWAY AND FOR ACTUAL TRAFFIC SPEEDS IF IN EXCESS OF POSTED SPEED LIMITS.
6. TAPERS SHALL BE LOCATED TO MAXIMIZE THE VISIBILITY OF THEIR TOTAL LENGTH.
7. CONFLICTING OR NON-OPERATING SIGNAL INDICATIONS ON THE (E) TRAFFIC SIGNAL SYSTEMS SHALL BE BAGGED OR COVERED.
8. ALL (E) ROAD SIGNS, PAVEMENT MARKINGS AND/OR PLOWABLE PAVEMENT REFLECTORS WHICH CONFLICT WITH THE (N) TRAFFIC CONTROL PLAN SHALL BE COVERED, REMOVED, OR RELOCATED. ALL TRAFFIC CONTROL DEVICES SHALL BE RESTORED TO MATCH PRE-CONSTRUCTION CONDITION AFTER COMPLETION OF WORK.
9. CONTRACTOR SHALL CONTACT LOCAL AUTHORITY HAVING HIGHWAY JURISDICTION AND PROVIDE ADDITIONAL "FLAGMEN" OR POLICE SUPERVISION, IF REQUIRED.
10. ALL EXCAVATED AREAS WITHIN OR ADJACENT TO THE ROADWAY SHALL BE BACKFILLED AND PLACED ON A MINIMUM 6H:1V SLOPE PRIOR TO END OF EACH WORK DAY. OTHER EXCAVATED AREAS WITHIN THE CLEAR ZONE ARE TO BE EITHER BACKFILLED OR PRECAST CONCRETE CURB BARRIER CONSTRUCTION BARRIER SET TEMPORARILY IN PLACE TO SHIELD VEHICULAR AND PEDESTRIAN TRAFFIC.
11. WHERE DICTATED BY LOCAL CONDITIONS, THE CONTRACTOR SHALL MAKE PROVISIONS FOR MAINTAINING PEDESTRIAN AND WORKER CROSSING LOCATIONS IN ACCORDANCE WITH ALL APPLICABLE CODES AND OSHA REQUIREMENTS.
12. CONSTRUCTION ZONE SPEED LIMIT IF REDUCED FROM POSTED LIMITS SHALL BE IN ACCORDANCE WITH MUTCD AND WILL BE DETERMINED BY THE AUTHORITY HAVING JURISDICTION.
13. THERE SHALL BE NO WORKERS, EQUIPMENT, OR OTHER VEHICLES IN THE BUFFER SPACE OR THE ROLL AHEAD SPACE.
14. DRIVEWAYS AND/OR SIDE STREETS ENTERING THE ROADWAY AFTER THE FIRST ADVANCE WARNING SIGN SHALL BE PROVIDED WITH AT LEAST ONE W20-1 SIGN (ROAD WORK AHEAD) AS A MINIMUM.
15. CONES MAY BE SUBSTITUTED FOR DRUMS AND INSTALLED UPON THE APPROVAL OF THE AUTHORITY HAVING JURISDICTION PROVIDED THEY COMPLY WITH MUTCD.
16. THE SPACING BETWEEN CONES, TUBULAR MARKERS, VERTICAL PANELS, DRUMS, AND BARRICADES SHOULD NOT EXCEED A DISTANCE IN FEET EQUAL TO 1.0 TIMES THE SPEED LIMIT IN MPH WHEN USED FOR TAPER CHANNELIZATION, AND A DISTANCE IN FEET EQUAL TO 2.0 TIMES THE SPEED LIMIT IN MPH WHEN USED FOR TANGENT CHANNELIZATION.
17. WHEN CHANNELIZATION DEVICES HAVE THE POTENTIAL OF LEADING VEHICULAR TRAFFIC OUT OF THE INTENDED VEHICULAR TRAFFIC SPACE, THE CHANNELIZATION DEVICES SHOULD BE EXTENDED A DISTANCE IN FEET OF 2.0 TIMES THE SPEED LIMIT IN MPH BEYOND THE DOWNSTREAM END OF THE TRANSITION AREA.
18. TAPER LENGTHS ARE CALCULATED AS FOLLOWS:
L= WS²/60 (40 MPH AND HIGHER) OR L2= WS (OVER 40 MPH),
WHERE W= OFFSET WIDTH (FT), S= TRAFFIC SPEED (MPH).



PROVIDE PEDESTRIAN/ WORKER SAFETY CONTROL DEVICES IF REQUIRED

TYPICAL PEDESTRIAN / WORKER SAFETY PLAN

SCALE: NOT TO SCALE

1

mobilitie
3475 PIEDMONT ROAD NE;
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

PROJECT NO:	ERI00201
DRAWN BY:	B. POTESTA
CHECKED BY:	C. RAMEY

A	05.24.18	FOR REVIEW

STATE OF NEW YORK
PAUL LOUIS [illegible]
097571
LICENSED PROFESSIONAL ENGINEER

IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

NY90XSBJ8C
9NYB002592
AUSTIN ST &
126TH ST
KEW GARDENS, NY 11415
LIGHT POLE

SHEET TITLE
PEDESTRIAN SAFETY PLAN

SHEET NUMBER
6.1

SITE ID: 9NYB002862D
NY90XSAW4D
HAWTREE CREEK RD &
109TH AVE
SOUTH OZONE PARK, NY 11420

GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OF EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

SITE INFORMATION

PROPERTY OWNER:	PUBLIC RIGHT-OF-WAY
ADDRESS/CROSS ST:	HAWTREE CREEK RD & 109TH AVE
APPLICANT:	MOBILITIE, LLC
APPLICANT ADDRESS:	3475 PIEDMONT ROAD NE; SUITE 1000 ATLANTA, GEORGIA 30305 PHONE: (312) 638-5400
LATITUDE:	40° 41' 4.72" N (40.684645)
LONGITUDE:	73° 48' 48.80" W (-73.813556)
LAT/LONG TYPE:	NAD 83
GROUND ELEVATION:	± 43' AMSL
BOROUGH:	QUEENS
JURISDICTION:	NEW YORK CITY

BEFORE SCALING:

CONTRACTORS SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS & FIELD CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

LOCATION MAPS

VICINITY MAP

REGIONAL MAP

DIG ALERT

811 Know what's below. Call before you dig.

TWO WORKING DAYS BEFORE YOU DIG

PROJECT DESCRIPTION

END USER PROPOSES TO INSTALL EQUIPMENT ON AN EXISTING WOOD UTILITY POLE WITHIN AN EXISTING RIGHT-OF-WAY. THE SCOPE WILL CONSIST OF THE FOLLOWING:

- INSTALL PROPOSED BACKHAUL TRANSPORT EQUIPMENT ON AN EXISTING WOOD UTILITY POLE

CODES

2015 INTERNATIONAL BUILDING CODE
2014 NATIONAL ELECTRICAL CODE

DRAWING INDEX

SHEET NO:	SHEET TITLE
0.0	TITLE SHEET
1.0	SITE PLAN & EXHIBIT PHOTO
2.0	POLE ELEVATIONS
3.0	ANTENNA MOUNTING DETAILS
3.1	EQUIPMENT MOUNTING DETAILS
GN-1	GENERAL NOTES
GN-2	GENERAL NOTES
GN-3	GENERAL NOTES
4.0	TRAFFIC CONTROL PLAN
4.1	TYPICAL PEDESTRIAN / WORKER SAFETY PLAN

ARCHITECT/ENGINEER

JACOBS ENGINEERING GROUP, INC.
5449 BELLS FERRY ROAD
ACWORTH, GA 30102
CONTACT: KARL KRATINA
PROJECT MANAGER
TEL: (678) 460-1416
FAX: (770) 701-2501

mobilitie
3475 PIEDMONT ROAD NE
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

PROJECT NO:	ER660201
DRAWN BY:	R. MARTINEZ
CHECKED BY:	N. HANNA

PRELIM - NOT FOR CONSTRUCTION

A	03.28.17	PRELIM- NOT FOR CONSTRUCTION

NY90XSAW4D
9NYB002862D
HAWTREE CREEK RD &
109TH AVE
SOUTH OZONE PARK, NY 11420
UTILITIY POLE

SHEET TITLE
TITLE SHEET

SHEET NUMBER
0.0

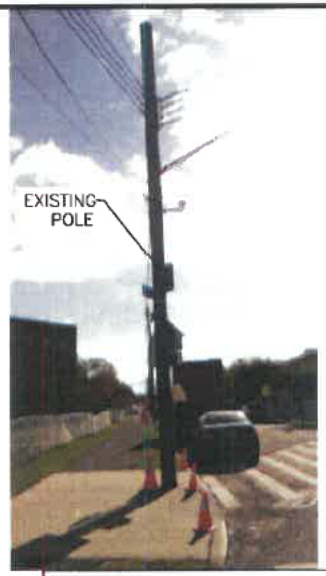
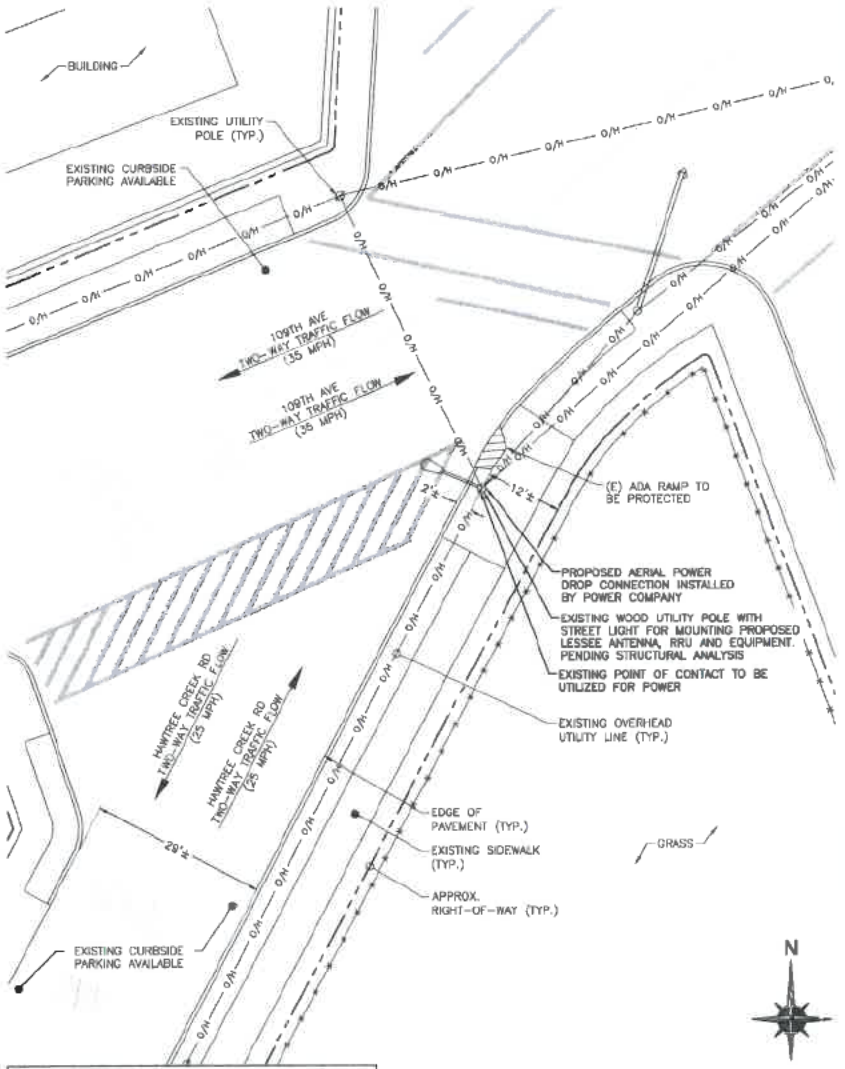


EXHIBIT PHOTO | 1

SCALE: NOT TO SCALE

AERIAL SITE LOCATION | 2

SCALE: NOT TO SCALE



NOTE:
THIS SITE PLAN WAS GENERATED WITHOUT THE USE OF A SURVEY. PROPERTY LINES, RIGHT-OF-WAYS, POWER & TELCO UTILITY POINT CONNECTIONS/ROUTES AND EASEMENTS SHOWN ON THESE PLANS ARE ESTIMATED. ALL ITEMS AND DIMENSIONS SHOULD BE VERIFIED IN THE FIELD.

ENLARGED SITE PLAN | 3

SCALE: 1"=20'-0" (1"=10'-0" ON 22"x34" SHEET)

mobilitie

3475 PIEDMONT ROAD NE
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

PROJECT NO:	ER900291
DRAWN BY:	R. MARTINEZ
CHECKED BY:	N. HANNA

PRELIM - NOT FOR CONSTRUCTION

A	03.28.17	PRELIM - NOT FOR CONSTRUCTION

NY90XSAW4D
9NYB002862D
HAWTREE CREEK RD &
109TH AVE
SOUTH OZONE PARK, NY 11420
UTILITIY POLE

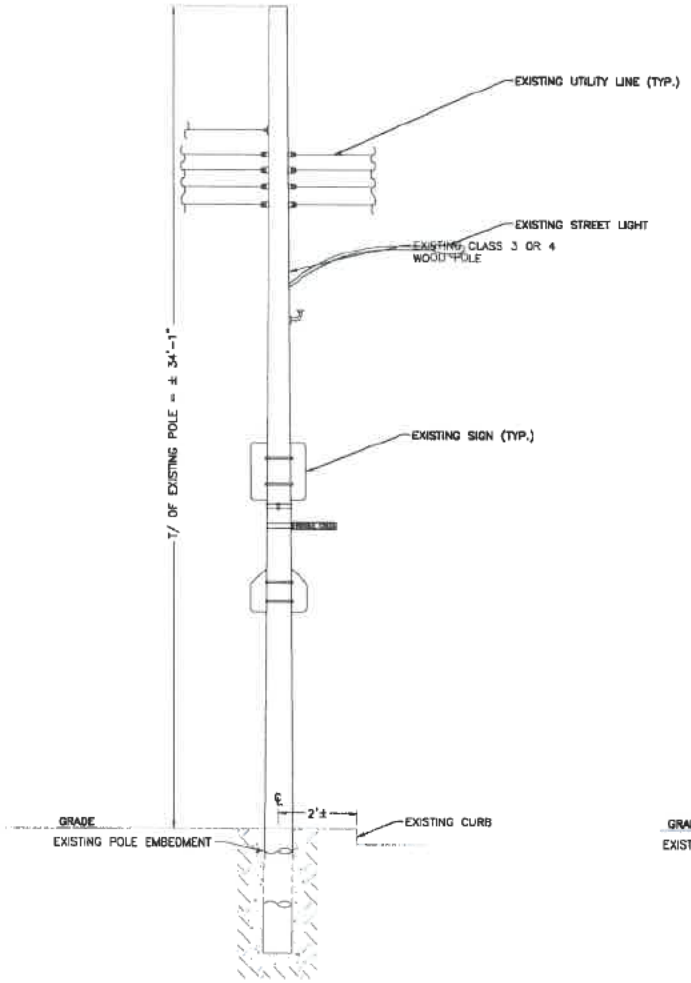
SHEET TITLE

SITE PLAN & EXHIBIT PHOTO

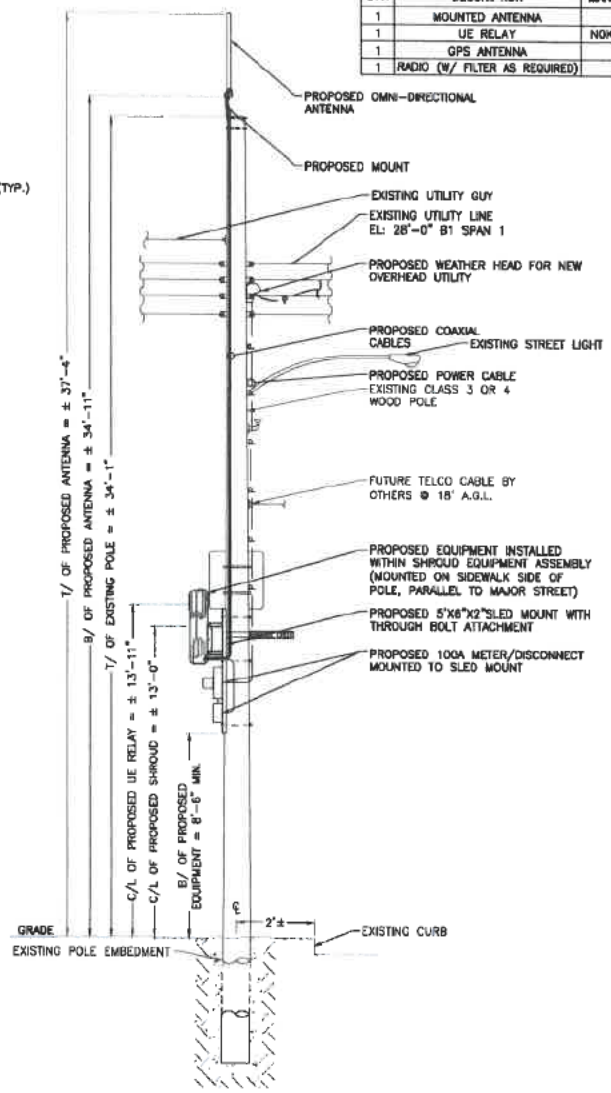
SHEET NUMBER

1.0

BAND 41 (2500MHz) EQUIPMENT CHART					
QTY.	DESCRIPTION	MANUFACTURER	MODEL NUMBER	DIMENSIONS (HxWxD)	WEIGHT
1	MOUNTED ANTENNA	KMW	FX-X-360-7-00T-ST	30" X 2.08" DIAMETER	2.6 LBS
1	UE RELAY	NOKIA/GEMTEK	FTHC/473763A	13.2" X 7.87" DIAMETER	5.5 LBS
1	GPS ANTENNA	PCTEL	39970	0.53" X 1.7" DIAMETER	0.057 LBS
1	RADIO (W/ FILTER AS REQUIRED)	NOKIA	FWHT B41 LP	9.7" X 12.8" X 4.7"	17.2 LBS



EXISTING POLE ELEVATION



PROPOSED POLE ELEVATION

NOTE:
PROJECT SCOPE OF WORK DOES NOT INCLUDE A STRUCTURAL EVALUATION OF THIS POLE OR STRUCTURE. NEW EQUIPMENT SHOWN ON THIS PLAN HAVE NOT BEEN EVALUATED TO VERIFY THE POLE OR STRUCTURE HAS THE CAPACITY TO ADEQUATELY SUPPORT THE EQUIPMENT. PRIOR TO ANY INSTALLATION, A STRUCTURAL EVALUATION OF THE POLE OR STRUCTURE SHOULD BE PERFORMED.

NOTES:

1. ALL HARDWARE SHALL BE STAINLESS STEEL.
2. ALL CABLES SHALL BE SECURED TO POLE EVERY 36" OR LESS.
3. LIGHTNING RODS SHALL BE INCLUDED AS REQUIRED.

PROPOSED SIDE POLE ELEVATIONS | 1

SCALE: 1" = 5'

mobilitie
3475 PIEDMONT ROAD NE
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 636-5400

PROJECT NO:	ER600201
DRAWN BY:	R. MARTINEZ
CHECKED BY:	N. HANNA

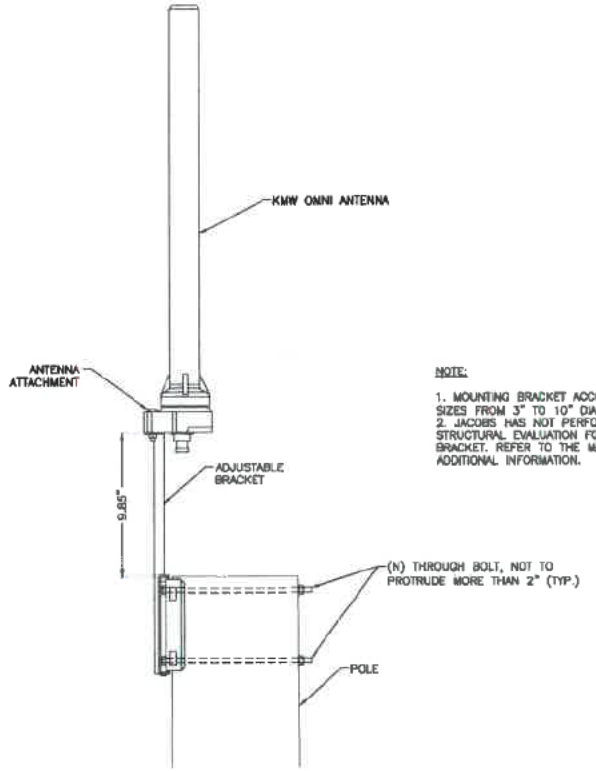
PRELIM - NOT FOR CONSTRUCTION

A	03.28.17	PRELIM- NOT FOR CONSTRUCTION

NY90XSAW4D
9NYB002862D
HAWTREE CREEK RD &
109TH AVE
SOUTH OZONE PARK, NY 11420
UTILITIY POLE

SHEET TITLE
POLE ELEVATIONS

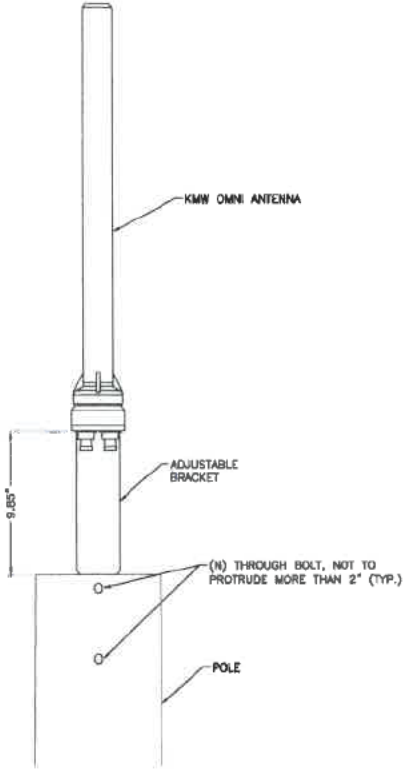
SHEET NUMBER
2.0



SIDE VIEW

NOTE:

1. MOUNTING BRACKET ACCOMMODATES POLE SIZES FROM 3" TO 10" DIAMETER.
2. JACOBS HAS NOT PERFORMED A STRUCTURAL EVALUATION FOR THE MOUNTING BRACKET. REFER TO THE MANUFACTURER FOR ADDITIONAL INFORMATION.



FRONT VIEW

ANTENNA MOUNT DETAILS

SCALE: NOT TO SCALE

1

mobilitie
3475 PIEDMONT ROAD NE
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

PROJECT NO:	ER600201
DRAWN BY:	R. MARTINEZ
CHECKED BY:	N. HANNA

PRELIM - NOT FOR CONSTRUCTION

A	03.28.17	PRELIM- NOT FOR CONSTRUCTION

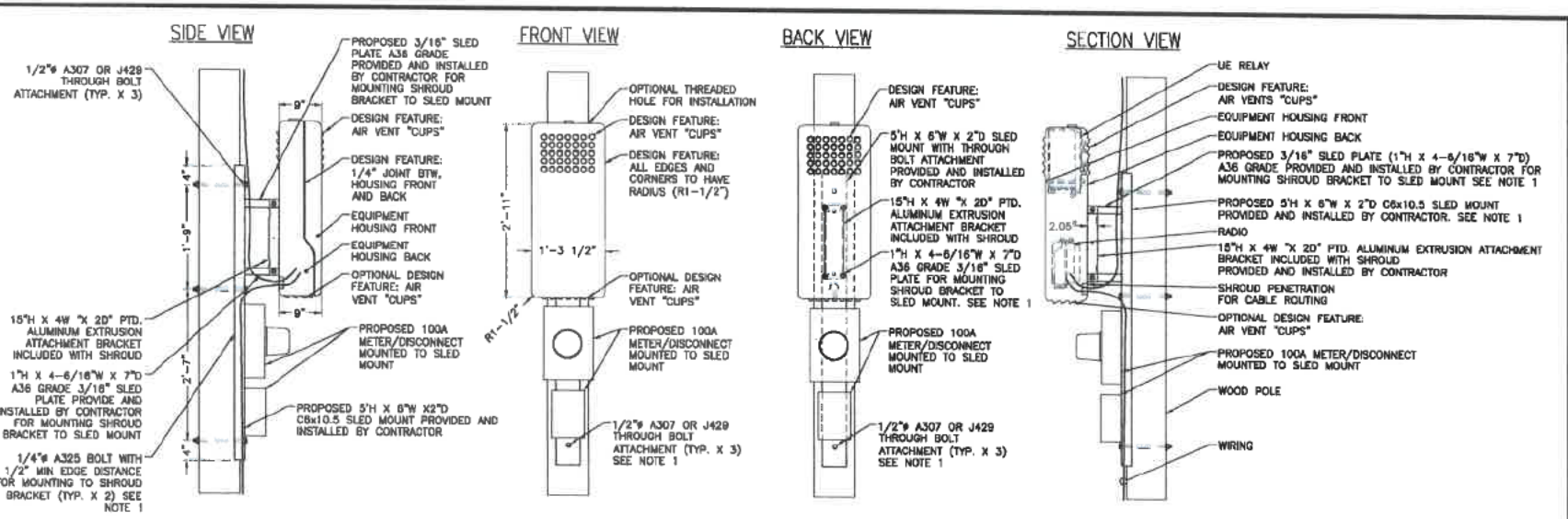
NYBIXSAW4D
9NYB002862D
HAWTREE CREEK RD &
109TH AVE
SOUTH OZONE PARK, NY 11420
UTILITIY POLE

SHEET TITLE

ANTENNA MOUNTING DETAILS

SHEET NUMBER

3.0



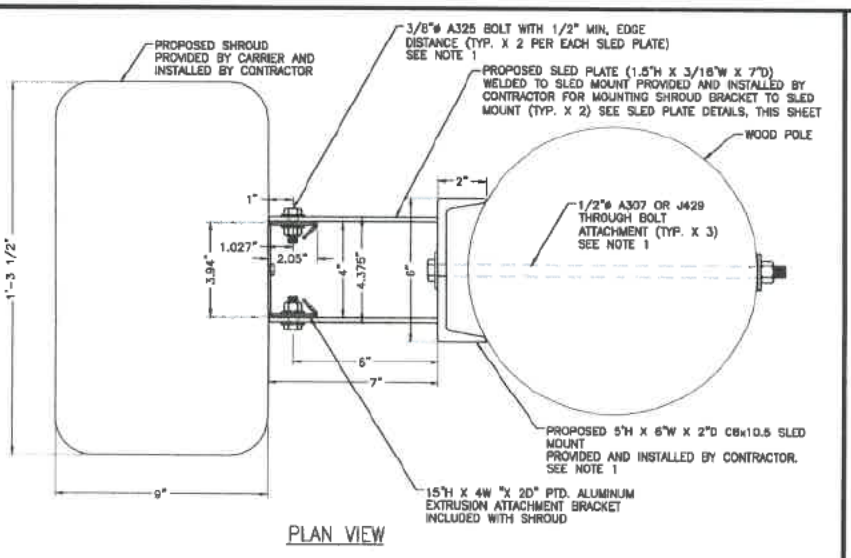
NOTE:

1. CONTRACTOR TO DRILL HOLES IN SHROUD BRACKET TO ALIGN WITH SLED PLATE HOLES.

SHROUD MOUNTING DETAILS

SCALE: NOT TO SCALE

1



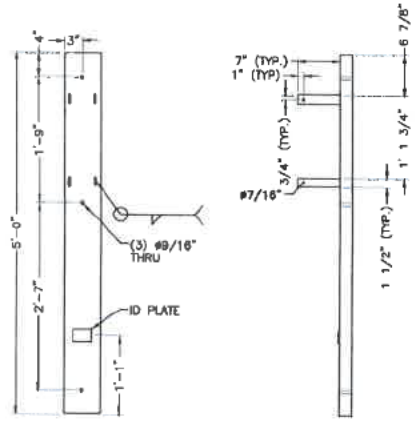
NOTE:

1. CONTRACTOR TO DRILL HOLES IN SHROUD BRACKET TO ALIGN WITH SLED PLATE HOLES.

OVERALL SHROUD MOUNTING DETAILS

SCALE: NOT TO SCALE

2



NOTE:

1. CONTRACTOR TO DRILL HOLES IN SHROUD BRACKET TO ALIGN WITH SLED PLATE HOLES.

SLED DETAILS

SCALE: NOT TO SCALE

3

mobilitie
3475 PIEDMONT ROAD NE
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 636-5400

PROJECT NO:	ER600291
DRAWN BY:	R. MARTINEZ
CHECKED BY:	N. HANNA

PRELIM - NOT FOR CONSTRUCTION

A	03.28.17	PRELIM - NOT FOR CONSTRUCTION

NY90XSAW4D
9NYB0028620
HAWTREE CREEK RD &
109TH AVE
SOUTH OZONE PARK, NY 11420
UTILITIY POLE

SHEET TITLE

EQUIPMENT MOUNTING DETAILS

SHEET NUMBER

3.1

GENERAL

THE CONSTRUCTION DOCUMENT DRAWINGS ARE INTERRELATED. WHEN PERFORMING THE WORK, EACH CONTRACTOR MUST REFER TO ALL DRAWINGS. COORDINATION IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

GENERAL REQUIREMENTS

PART 1 – GENERAL

1. OBTAIN AND SUBMIT RELEASES ENABLING THE OWNER UNRESTRICTED USE OF THE WORK AND ACCESS TO SERVICES AND UTILITIES; INCLUDE OCCUPANCY PERMITS, OPERATING CERTIFICATES AND SIMILAR RELEASES.
2. SUBMIT RECORD DRAWINGS, DAMAGE OR SETTLEMENT SURVEY, PROPERTY SURVEY, AND SIMILAR FINAL RECORD INFORMATION.
3. COMPLETE FINAL CLEAN UP REQUIREMENT, INCLUDING TOUCH-UP PAINTING. TOUCH UP AND OTHERWISE REPAIR AND RESTORE MARRED EXPOSED FINISHES.

PART 2 – FINAL CLEANING

1. COMPLETE THE FOLLOWING CLEANING OPERATIONS BEFORE REQUESTING INSPECTION FOR CERTIFICATION ON COMPLETION.
   - A. CLEAN THE PROJECT SITE, YARD AND GROUNDS IN AREAS DISTURBED BY CONSTRUCTION ACTIVITIES, INCLUDING LANDSCAPE DEVELOPMENT AREA, OF RUBBISH, WASTE MATERIALS, LITTER AND FOREIGN SUBSTANCES. SWEEP PAVED AREAS BROOM CLEAN. REMOVE PETRO-CHEMICAL SPILLS, STAINS AND OTHER FOREIGN DEPOSITS. RAKE GROUNDS THAT ARE NEITHER PLANTED NOR PAVED, TO A SMOOTH EVEN-TEXTURED SURFACE.
   - B. REMOVE TOOLS, CONSTRUCTION EQUIPMENT, MACHINERY AND SURPLUS MATERIAL FROM THE SITE.
   - C. REMOVE SNOW AND ICE TO PROVIDE SAFE ACCESS TO THE SITE AND EQUIPMENT ENCLOSURE.
   - D. CLEAN EXPOSED EXTERIOR HARD SURFACED FINISHES TO A DIRT-FREE CONDITION, FREE OF STAINS, FILMS AND SIMILAR FOREIGN SUBSTANCES. AVOID DISTURBING NATURAL WEATHERING OF EXTERIOR SURFACES.
   - E. REMOVE DEBRIS FROM LIMITED ACCESS SPACES, INCLUDING HANDHOLES, MANHOLES, AND SIMILAR SPACES.
   - F. REMOVE LABELS THAT ARE NOT PERMANENT LABELS.
   - G. TOUCH UP AND OTHERWISE REPAIR AND RESTORE MARRED EXPOSED FINISHES AND SURFACES. REPLACE FINISHES AND SURFACES THAT CANNOT BE SATISFACTORILY REPAIRED OR RESTORED, OR THAT SHOW EVIDENCE OF REPAIR OR RESTORATION. DO NOT PAINT OVER "UL" AND SIMILAR LABELS, INCLUDING ELECTRICAL NAME PLATES.
   - H. LEAVE THE PROJECT CLEAN AND READY FOR OCCUPANCY.
   - I. DUST OFF ALL EQUIPMENT AND ITEMS WITHIN EQUIPMENT ENCLOSURE.
2. REMOVAL OF PROTECTION: REMOVE TEMPORARY PROTECTION AND FACILITIES INSTALLED DURING CONSTRUCTION TO PROTECT PREVIOUSLY COMPLETED INSTALLATIONS DURING THE REMAINDER OF THE CONSTRUCTION PERIOD.

SITE WORK

PART 1 – GENERAL

1. WORK INCLUDED: SEE SITE PLAN.
2. DESCRIPTIONS: IF APPLICABLE, LEASE AREA, AND UNDERGROUND UTILITY EASEMENTS ARE TO BE CONSTRUCTED TO PROVIDE A WELL DRAINED, EASILY MAINTAINED, EVEN SURFACE FOR USE AND ACCESS.
3. QUALITY ASSURANCE
   - A. APPLY SOIL STERILIZER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS (AS NEEDED).
   - B. APPLY AND MAINTAIN GRASS SEED AS RECOMMENDED BY THE SEED PRODUCER (IF REQUIRED).
   - C. PLACE AND MAINTAIN VEGETATION LANDSCAPING, IF INCLUDED WITHIN THE CONTRACT, AS RECOMMENDED BY NURSERY INDUSTRY STANDARDS.
4. SEQUENCING
   - A. CONFIRM SURVEY STAKES AND SET ELEVATION STAKES PRIOR TO ANY CONSTRUCTION.
   - B. CONSTRUCT TEMPORARY CONSTRUCTION AREA. DESIGNATED AREA TO BE APPROVED BY CONSTRUCTION MANAGER AND LOCAL AUTHORITIES.
   - C. APPLY SOIL STERILIZER PRIOR TO PLACING BASE MATERIALS.
   - D. GRADE, SEED, FERTILIZE, AND MULCH ALL AREAS DISTURBED BY CONSTRUCTION (INCLUDING UNDERGROUND UTILITY EASEMENTS) IMMEDIATELY AFTER BRINGING LEASE AREA TO BASE COURSE ELEVATION, WATER TO ENSURE GROWTH.
   - E. AFTER APPLICATIONS OF FINAL SURFACES, APPLY SOIL STERILIZER TO STONE SURFACES.
5. SUBMITTALS
   - A. BEFORE CONSTRUCTION: IF LANDSCAPING IS APPLICABLE TO THE CONTRACT, SUBMIT TWO COPIES OF THE LANDSCAPE PLAN ON NURSERY LETTERHEAD. IF A LANDSCAPE ALLOWANCE WAS INCLUDED IN THE CONTRACT, PROVIDE AN ITEMIZED LISTING OF PROPOSED COSTS ON NURSERY LETTERHEAD
   - B. AFTER CONSTRUCTION
     1. MANUFACTURER'S DESCRIPTION OF PRODUCT AND WARRANTY STATEMENT ON SOIL STERILIZER.
     2. MANUFACTURER'S DESCRIPTION OF PRODUCT ON GRASS SEED AND FERTILIZER.
     3. LANDSCAPING WARRANTY STATEMENT
6. WARRANTY
   - A. IN ADDITION TO THE WARRANTY ON ALL CONSTRUCTION COVERED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL REPAIR ALL DAMAGE AND RESTORE AREA AS CLOSE TO ORIGINAL CONDITION AS POSSIBLE AT SITE AND SURROUNDINGS.
   - B. SOIL STERILIZATION APPLICATION TO GUARANTEE VEGETATION FREE AREAS FOR ONE YEAR FROM DATE OF FINAL INSPECTION.
   - C. DISTURBED AREA WILL REFLECT GROWTH OF NEW GRASS COVER PRIOR TO FINAL INSPECTION.
   - D. LANDSCAPING, IF INCLUDED WITHIN THE SCOPE OF THE CONTRACT, WILL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL INSPECTION.

PART 2 – PRODUCTS

1. MATERIALS
   - A. SOIL STERILIZER SHALL BE EPA-REGISTERED, PRE-EMERGENCE LIQUID:

TOTAL KILL PRODUCT 910 EPA 10282-7 (313) 563-8000	PHASAR CORPORATION P.O. BOX 5123 DEARBORN, MI 48128
AMBUSH HERBICIDE EPA REGISTERED (800) 526-4924	FRAMAR INDUSTRIAL PRODUCTS 1435 MORRIS AVE. UNION, NJ 07083

   - B. ROAD AND SITE MATERIALS SHALL CONFORM TO STATE AND LOCAL DOT SPECIFICATIONS FILL MATERIAL (UNLESS OTHERWISE NOTED) -- ACCEPTABLE SELECT FILL SHALL BE IN ACCORDANCE WITH STATE DEPARTMENT OF HIGHWAY AND TRANSPORTATION STANDARD SPECIFICATIONS.
   - C. SOIL STABILIZER FABRIC SHALL BE MIRAFI 500X.

PART 3 – EXECUTION

1. INSPECTIONS: LOCAL BUILDING INSPECTOR'S SHALL BE NOTIFIED NO LESS THAN 48 HOURS IN ADVANCE OF CONCRETE POURS, UNLESS OTHERWISE SPECIFIED BY JURISDICTION
2. PREPARATION
   - A. CLEAR BRUSH AND DEBRIS FROM LEASE AREA AND UNDERGROUND UTILITY EASEMENTS AS REQUIRED FOR CONSTRUCTION.
   - B. UNLESS OTHERWISE INSTRUCTED BY LESSEE, TRANSPORT ALL REMOVED TREES, BRUSH AND DEBRIS FROM THE PROPERTY TO AN AUTHORIZED LANDFILL.
   - C. PRIOR TO PLACEMENT OF FILL OR BASE MATERIALS, ROLL THE SOIL.
   - D. WHERE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, LINE THE AREAS WITH STABILIZER MAT PRIOR TO PLACEMENT OF FILL OR BASE MATERIAL.
3. INSTALLATION
   - A. CLEAR EXCESS SPOILS, IF ANY, FROM JOB SITE AND DO NOT SPREAD BEYOND THE LIMITS OF PROJECT AREA UNLESS AUTHORIZED BY PROJECT MANAGER AND AGREED TO BY LANDOWNER.
   - B. PLACE FILL OR STONE IN SIX INCH (6") MAXIMUM LIFTS, AND COMPACT BEFORE PLACING NEXT LIFT.
   - C. APPLY SEED, FERTILIZER, AND STRAW COVER TO ALL OTHER DISTURBED AREAS, DITCHES, AND DRAINAGE SWALES, NOT OTHERWISE RIPRAPPED.
   - D. APPLY SEED AND FERTILIZER TO SURFACE CONDITIONS WHICH WILL ENCOURAGE ROOTING. RAKE AREAS TO BE SEEDED TO EVEN THE SURFACE AND LOOSEN THE SOIL.
   - E. SOW SEED IN TWO DIRECTIONS IN TWICE THE QUANTITY RECOMMENDED BY THE SEED PRODUCER.
   - F. ENSURE GROWTH OF SEEDED AND LANDSCAPED AREA, BY WATERING, UP TO THE POINT OF RELEASE FROM THE CONTRACT. CONTINUE TO REWORK THE BARE AREAS UNTIL COMPLETE COVERAGE IS OBTAINED.
4. FIELD QUALITY CONTROL: COMPACT SOILS TO MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557. AREAS OF SETTLEMENT WILL BE EXCAVATED AND REFILLED AT CONTRACTOR'S EXPENSE. INDICATE PERCENTAGE OF COMPACTION ACHIEVED ON AS-BUILT DRAWINGS.
5. PROTECTION
   - A. PROTECT SEEDED AREAS FROM EROSION BY SPREADING STRAW TO A UNIFORM LOOSE DEPTH OF 1-2 INCHES, STAKE AND TIE DOWN AS REQUIRED. USE OF EROSION CONTROL MESH OR MULCH NET WILL BE AN ACCEPTABLE ALTERNATE.
   - B. PROTECT ALL EXPOSED AREAS AGAINST WASHOUTS AND SOIL EROSION. PLACE STRAW BALES AT THE INLET APPROACH TO ALL NEW OR EXISTING CULVERTS. WHERE THE SITE OR ROAD AREAS HAVE BEEN ELEVATED IMMEDIATELY ADJACENT TO THE RAIL LINE, STAKE EROSION CONTROL FABRIC FULL LENGTH IN THE SWALE TO PREVENT CONTAMINATION OF THE RAIL BALLAST. ALL EROSION CONTROL METHODS SHALL CONFORM TO APPLICABLE BUILDING CODE REQUIREMENTS.

mobilitie
3475 PIEDMONT ROAD NE
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

PROJECT NO:	ER606201
DRAWN BY:	R. MARTINEZ
CHECKED BY:	N. HANNA

PRELIM - NOT FOR CONSTRUCTION

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NY90XSAW4D
9NYB002862D
HAWTREE CREEK RD &
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UTILITIY POLE

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-1

ELECTRICAL

1. CONTRACTOR SHALL REVIEW THE CONTRACT DOCUMENTS PRIOR TO ORDERING THE ELECTRICAL EQUIPMENT AND STARTING THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE ARCHITECT/ENGINEER LISTING ANY DISCREPANCIES OR CONFLICTING INFORMATION.
2. ELECTRICAL PLANS, DETAILS AND DIAGRAMS ARE DIAGRAMMATIC ONLY. VERIFY EXACT LOCATIONS AND MOUNTING HEIGHTS OR ELECTRICAL EQUIPMENT WITH OWNER PRIOR TO INSTALLATION.
3. EACH CONDUCTOR OF EVERY SYSTEM SHALL BE PERMANENTLY TAGGED IN EACH PANELBOARD, PULLBOX, JUNCTION BOX, SWITCH BOX, ETC. THE TYPE OF TAGGING METHODS SHALL BE IN COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (O.S.H.A.)
4. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN GOOD WORKING CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED "U.L." WHERE APPLICABLE. MATERIALS SHALL MEET WITH APPROVAL OF ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDAROS ESTABLISHED BY ANSI, NEMA, NBFU AND "U.L." LISTED.
5. ALL CONDUIT SHALL HAVE A PULL CORD.
6. PROVIDE PROJECT MANAGER WITH ONE SET OF COMPLETE ELECTRICAL "AS INSTALLED" DRAWINGS AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DIMENSIONS, ROUTINGS, AND CIRCUITS.
7. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED, AND A MINIMUM OF 10,000 A.I.C.
8. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY IBC, NEC AND ALL APPLICABLE CODES.
9. PATCH, REPAIR AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.
10. PLASTIC PLATES FOR ALL SWITCHES, RECEPTACLES, TELEPHONE AND BLANKED OUTLETS SHALL HAVE ENGRAVED LETTERING WHERE INDICATED ON THE DRAWINGS. WEATHERPROOF RECEPTACLES SHALL HAVE SIERRA #WPD-8 LIFT COVERPLATES.

SERVICE AND DISTRIBUTION

1. WIRE AND CABLE CONDUCTORS SHALL BE COPPER, 600V, TYPE THHN OR THWN, WITH A MIN. SIZE OF #12 AWG, COLOR CODED.
2. METER SOCKET AMPERES, VOLTAGE, NUMBER OF PHASES SHALL BE NOTED ON THE DRAWINGS. MANUFACTURED BY MILBANK OR APPROVED EQUAL, AND SHALL BE UTILITY COMPANY APPROVED.
3. CONDUIT:
   A. RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH GALVANIZED ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR. RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3.
   B. FLEXIBLE METALLIC CONDUIT SHALL HAVE U.L. LISTED LABEL AND MAY BE USED WHERE PERMITTED BY CODE. FITTINGS SHALL BE "JAKE" OR "SQUEEZE" TYPE. ALL FLEXIBLE CONDUITS SHALL HAVE FULL LENGTH GROUND WIRE.
   C. IT IS REQUIRED AND WILL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO NOTIFY 811 OR OTHER SUCH UTILITY LOCATING AGENCY 3 DAYS BEFORE DIGGING.
4. CONTRACTOR TO COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOKUP COSTS ARE TO BE PAID BY THE CONTRACTOR.
5. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS WITH WHITE ON BLUE BACKGROUND LETTERING (MINIMUM LETTER HEIGHT SHALL BE ONE FOURTH INCH (1/4"). NAMEPLATES SHALL BE FASTENED WITH STAINLESS STEEL SCREWS, NOT ADHESIVE.
6. UPON COMPLETION OF WORK, CONTINUITY, SHORT CIRCUIT, AND FALL POTENTIAL GROUNDING TESTS BY AN INDEPENDENT TESTING SERVICE ENGAGED BY THE CONTRACTOR SHALL BE SUBMITTED FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION.
7. GROUNDING ELECTRODE SYSTEM
   A. PREPARATION
      1. SURFACE PREPARATION: ALL CONNECTIONS SHALL BE MADE TO BARE METAL. ALL PAINTED SURFACES SHALL BE FIELD INSPECTED AND MODIFIED TO ENSURE PROPER CONTACT. NO WASHERS ARE ALLOWED BETWEEN THE ITEMS BEING GROUNDED. ALL CONNECTIONS ARE TO HAVE A NON-OXIDIZING AGENT APPLIED PRIOR TO INSTALLATION.
      2. IF CONDUCTORS MUST RUN THROUGH CONDUIT, BOTH ENDS OF CONDUIT SHALL BE GROUNDED. SEAL BOTH ENDS OF CONDUIT WITH SILICONE CAULK.
   B. EXTERNAL CONNECTIONS
      1. ALL BURIED GROUNDING CONNECTIONS SHALL BE MADE BY THE EXOTHERMIC WELD PROCESS. CONNECTIONS SHALL INCLUDE ALL CABLE TO CABLE, SPLICES, TEE'S, CROSSES, ETC. ALL CABLE TO GROUND RODS, GROUND ROD SPLICES AND LIGHTNING PROTECTION SYSTEMS ARE TO BE AS INDICATED. ALL MATERIALS USED (MOLDS, WELDING METAL, TOOLS, ETC.) SHALL BE BY "ULTRAWELD" AND INSTALLED PER MANUFACTURER'S RECOMMENDED PROCEDURES.
      2. ALL ABOVE GRADE GROUNDING AND BONDING CONDUCTORS SHALL BE CONNECTED BY TWO HOLE CRIMP TYPE (COMPRESSION) CONNECTIONS (EXCEPT FOR THE ACEG AND GROUND ROD). MECHANICAL CONNECTIONS, FITTINGS OR CONNECTIONS THAT DEPEND SOLELY ON SOLDER SHALL NOT BE USED. ALL CABLE TO CABLE CONNECTIONS SHALL BE HIGH PRESSURE DOUBLE CRIMP TYPE CONNECTIONS. CONNECTIONS TO STRUCTURAL STEEL SHALL BE EXOTHERMIC WELDS.
   C. GROUND RODS: ALL GROUND RODS SHALL BE 5/8-INCH DIAMETER X 10'-0" LONG "COPPERWELD" OR APPROVED EQUAL, OF THE NUMBER AND LOCATIONS INDICATED. GROUND RODS SHALL BE DRIVEN FULL LENGTH VERTICAL IN UNDISTURBED EARTH.
   D. GROUND CONDUCTORS: ALL GROUND CONDUCTORS SHALL BE STANDARD TINNED SOLID BARE COPPER ANNEALED, AND OF SIZE INDICATED ON DRAWINGS UNLESS OTHERWISE NOTED.
   E. LUGS
      1. LUGS SHALL BE 2-HOLE, LONG BARREL, STRAND COPPER UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS. LUGS SHALL BE THOMAS AND BETTS SERIES #54____BE OR EQUIVALENT

A.	535 MCM DLO	54880BE
B.	262 MCM DLO	54872BE
C.	#1/0 DLO	54862BE
D.	#4/0 THWN AND BARE	54868BE
E.	#2/0 THWN	54862BE
F.	#2 THHN	54207BE
G.	#6 DLO	54205BE

      2. WHEN THE DIRECTION OF THE CONDUCTOR MUST CHANGE, IT SHALL BE DONE GRADUALLY. THE CURVATURE OF THE TURN SHALL BE DONE IN ACCORDANCE WITH THE FOLLOWING CHART:

GROUNDING CONDUCTOR SIZE	MINIMUM BENDING RADIUS TO INSIDE EDGE
NO. 6 AWG TO NO. 4 AWG	6 INCHES
NO. 2 AWG TO NO 1/0 AWG	8 INCHES
NO. 2/0 AWG TO 4/0 AWG	12 INCHES
250 MCM TO 750 MCM	24 INCHES

8. GROUNDING RESISTANCE TEST REPORT: UPON COMPLETION OF THE TESTING FOR EACH SITE, A TEST REPORT SHOWING RESISTANCE IN OHMS MUST BE SUBMITTED. TWO (2) SETS OF TEST DOCUMENTS FROM THE INDEPENDENT TESTING SERVICE ARE TO BE BOUND AND SUBMITTED WITHIN ONE (1) WEEK OF WORK COMPLETION.

POLES, POSTS, AND STANDARDS (SINGLE MAST AND SELF SUPPORTING TOWERS)

1. GENERAL
   A. LIGHTNING ROD AND EXTENSION PIPE INCLUDING ALL APPURTENANCES, TO BE FURNISHED BY OWNER, IF REQUIRED.
   B. GROUNDING: GROUND METAL POLES WITH A MINIMUM OF #2 AWG TINNED SOLID BARE COPPER CONDUCTOR CADWELDED TO TOWER BASE PLATE.

TELECOMMUNICATIONS WIRING COMPONENTS (COAXIAL ANTENNA CABLE)

1. GENERAL
   A. ALL MATERIALS, PRODUCTS OR PROCEDURES INCORPORATED INTO WORK SHALL BE NEW AND OF STANDARD COMMERCIAL QUALITY.
   B. ALL MATERIALS AND PRODUCTS SPECIFIED IN THE CONTRACT DOCUMENTS SHALL BE SUPPLIED BY THE CONTRACTOR UNLESS NOTED OTHERWISE.
2. MATERIALS:
   A. COAXIAL CABLE:
      1. INSTALL COAXIAL CABLE AND TERMINATIONS BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS WITH COAXIAL CABLES SUPPORTED AT NO MORE THAN 3'-0" O.C. WEATHERPROOF ALL CONNECTORS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE FEET (3') IN EXCESS OF EQUIPMENT LOCATION UNLESS OTHERWISE STATED.
      2. LENGTHS LESS THAN OR EQUAL TO 100 FEET SHALL BE 7/8".
3. ANTENNA AND COAXIAL CABLE GROUNDING
   A. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)
4. COAXIAL CABLE IDENTIFICATION
   A. TO PROVIDE EASY IDENTIFICATION AND UNIFORM MARKING OF ANTENNA CABLING, PLASTIC TAGS SHALL BE USED AT THE FOLLOWING LOCATIONS:
      1. FIRST LOCATION IS AT THE END OF THE COAX NEAREST THE ANTENNA (WHERE THE COAXIAL CABLE AND JUMPER ARE CONNECTED).
      2. SECOND LOCATION IS AT END OF THE COAX NEAREST THE EQUIPMENT.
   B. USE ANDREW CABLE TIES (PT.# 27290) TO SECURE IDENTIFICATION TAGS.
      1. TESTING: LESSEE SHALL PROVIDE AN INDEPENDENT TESTING AGENCY TO PERFORM THE COAXIAL SWEEP TEST & REPORT. THE CONTRACTOR IS TO PROVIDE ONE CLIMBER/QUALIFIED PERSONNEL TO ASSIST IN ANY REPAIRS AND WEATHERPROOFING ONCE THE TEST IS COMPLETE. THE CONTRACTOR IS TO PROVIDE LESSEE WITH A MINIMUM OF 48 HOURS NOTICE PRIOR TO THE TIME OF THE SWEEP TEST.

mobilitie
3475 PIEDMONT ROAD NE
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

PROJECT NO:	ER600201
DRAWN BY:	R. MARTINEZ
CHECKED BY:	N. HANNA

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UTILITY POLE

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-2

UTILITY NOTES

WORK INCLUDES:
THESE NOTES AND ACCOMPANYING DRAWINGS COMPLEMENT THE PROVISIONS AND INSTALLATIONS BY THE ELECTRICAL CONTRACTOR, OF ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO INSTALL THE ELECTRICAL WORK COMPLETE IN CONNECTION WITH THIS UTILITY SITE AND SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:

1. THE PROVISIONS, INSTALLATION AND CONNECTION OF A GROUNDING ELECTRODE SYSTEM COMPLETE WITH SECONDARY GROUNDING, AND CONNECTIONS TO THE INCOMING ELECTRICAL DISTRIBUTION EQUIPMENT.
2. THE PROVISION AND INSTALLATION OF AN OVERHEAD ELECTRICAL SERVICE OR UNDERGROUND ELECTRICAL SERVICE AND ALL ASSOCIATED WIRE AND CONDUIT AS REQUIRED AND/OR INDICATED ON PLANS.
3. THE PROVISION AND INSTALLATION OF CONDUIT AND CONNECTIONS FOR LOCAL FIBER SERVICE.
4. THE FURNISHING AND INSTALLATION OF THE ELECTRICAL SERVICE ENTRANCE CONDUCTORS, CONDUITS, METER SOCKET, AND CONNECTIONS TO THE SERVICE EQUIPMENT.
5. ALL CONDUITS SHOULD BE LEFT WITH NYLON PULL CORD FOR FUTURE USE.
6. EXCAVATION, TRENCHING, AND BACKFILLING FOR CONDUIT(S), CABLE(S) AND EXTERNAL GROUNDING SYSTEM.

CODES, PERMITS AND FEES:

1. ALL REQUIRED PERMITS, LICENSES, INSPECTIONS AND APPROVALS SHALL BE SECURED AND ALL FEES FOR SAME PAID BY CONTRACTOR.
2. THE INSTALLATION SHALL COMPLY WITH ALL APPLICABLE CODES: STATE, LOCAL AND NATIONAL AND THE DESIGN, PERFORMANCE CHARACTERISTICS AND METHODS OF CONSTRUCTION OF ALL ITEMS AND EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST ISSUE OF THE VARIOUS APPLICABLE STANDARD SPECIFICATIONS OF THE FOLLOWING AUTHORITIES:

N.E.C.	NATIONAL ELECTRICAL CODE
A.N.S.I.	AMERICAN NATIONAL STANDARDS INSTITUTE
I.E.E.E.	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
A.S.T.M.	AMERICAN SOCIETY FOR TESTING MATERIALS
N.E.M.A.	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
U.L.	UNDERWRITERS LABORATORIES, INC.
N.F.P.A.	NATIONAL FIRE PROTECTION ASSOCIATION

RACEWAYS AND WIRING:

1. WIRING OF EVERY KIND MUST BY INSTALLED IN CONDUIT, UNLESS NOTED OTHERWISE, OR AS APPROVED BY THE ARCHITECT/ENGINEER.
2. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE COPPER (CU) TYPE THWN, SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND LOCAL CODES.
3. RACEWAYS SHALL BE GALVANIZED STEEL, SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND LOCAL CODES UNLESS OTHERWISE NOTED. ALL RACEWAYS SHALL BE APPROVED FOR THE INSTALLATION.
4. PULL OR JUNCTION BOXES SHALL BE PROVIDED AS REQUIRED TO FACILITATE INSTALLATION OF RACEWAYS AND WIRING. PROVIDE JUNCTION AND PULLBOXES FOR CONDUIT RUNS WITH MORE THAN (360) DEGREES OF BENDS.
5. PROVIDE A COMPLETE RACEWAY AND WIRING INSTALLATION, PERMANENTLY AND EFFECTIVELY GROUNDED IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE AND LOCAL CODES.
6. ALL STEEL CONDUIT SHALL BE BONDED AT BOTH ENDS WITH GROUNDING BUSHING.

GENERAL NOTES:
SEE DETAILS, SCHEDULES AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND INFORMATION. CHECK ARCHITECTURAL, STRUCTURAL, AND OTHER MECHANICAL AND ELECTRICAL DRAWINGS FOR SCALE, SPACE LIMITATIONS, COORDINATION, AND ADDITIONAL INFORMATION, ETC. REPORT ANY DISCREPANCIES, CONFLICTS, ETC. TO ARCHITECT/ENGINEER BEFORE SUBMITTING BID. ALL EQUIPMENT FURNISHED BY OTHERS (FBO) SHALL BE PROVIDED WITH PROPER MOTOR STARTERS, DISCONNECTS, CONTROLS, ETC. BY THE ELECTRICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE. THE ELECTRICAL CONTRACTOR SHALL INSTALL AND COMPLETELY WIRE ALL ASSOCIATED EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S WIRE DIAGRAMS AND AS REQUIRED FOR A COMPLETE OPERATING INSTALLATION. ELECTRICAL CONTRACTOR SHALL VERIFY AND COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF (FBO) EQUIPMENT PRIOR TO ROUGH-IN OF CONDUIT AND WIRING TO AVOID CONFLICTS.

COORDINATION WITH UTILITY COMPANY:
THE ELECTRICAL CONTRACTOR SHALL COORDINATE COMPLETE ELECTRICAL SERVICE WITH LOCAL UTILITY COMPANY FOR A COMPLETE OPERATIONS SYSTEM, INCLUDING TRANSFORMER CONNECTIONS, CONCRETE TRANSFORMER PADS, IF REQUIRED, METER SOCKETS, PRIMARY CABLE RACEWAY REQUIREMENTS, SECONDARY SERVICE, ETC. PRIOR TO SUBMITTING BID TO INCLUDE ALL LABOR AND MATERIALS. THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN THE BID ANY OPTIONAL OR EXCESS FACILITY CHARGES ASSOCIATED WITH PROVIDING ELECTRICAL SERVICE FROM LOCAL UTILITY COMPANY. VERIFY BEFORE BIDDING TO INCLUDE ALL COSTS. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE AVAILABLE FAULT CURRENT WITH THE LOCAL UTILITY COMPANY PRIOR TO SUBMITTING BID. ADJUST A.I.C. RATINGS OF ALL OVER CURRENT PROTECTION DEVICES IN DISTRIBUTION EQUIPMENT AS REQUIRED TO COORDINATE WITH AVAILABLE FAULT CURRENT FROM LOCAL UTILITY COMPANY.

STEEL NOTES

1. INCORRECTLY FABRICATED DAMAGED OR OTHERWISE MIS-FITTING OR NON-CONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE PROJECT MANAGER PRIOR TO REMEDIAL OR CORRECTIVE ACTION.
2. DESIGN AND CONSTRUCTION OF STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", LATEST EDITION.
3. STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36, "STRUCTURAL STEEL", LATEST EDITION, UNLESS OTHERWISE INDICATED.
4. ALL PIPES SHALL CONFORM TO ASTM A501 OR A53 GRADE B (FY=35 KSI MIN.) A500 GRADE B MAY BE USED IF A501 OR A53 STEEL IS NOT AVAILABLE.
5. ALL TUBES SHALL CONFORM TO ASTM A500 GRADE B (FY=46 KSI).
6. ALL THREADED RODS SHALL BE A36, UNLESS OTHERWISE NOTED.
7. SHOP CONNECTIONS SHALL BE WELDED OR BOLTED. FIELD CONNECTIONS SHALL BE BOLTED UNLESS OTHERWISE INDICATED. ALL BOLTED CONNECTIONS SHALL BE MADE WITH HIGH STRENGTH BOLTS.
8. STRUCTURAL CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS AND SHALL CONFORM TO ASTM A325 "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS AND PLAIN HARDENED WASHERS", LATEST EDITION. BOLTS SHALL BE 5/8 DIAMETER, UNLESS OTHERWISE NOTED. NUTS SHALL BE HEAVY HEX. A LOCKING DEVISE SHALL BE INSTALLED ON ALL STEEL TO STEEL CONNECTIONS.
9. CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE, QUALITY OF WELDS AND FOR METHODS USED IN CORRECTIVE WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDS SHALL BE WITH E70 ELECTRODES, UNLESS OTHERWISE NOTED.
10. UNLESS OTHERWISE NOTED, ALL STEEL BOLTS AND U-BOLTS SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION CONFORMING ASTM A153.
11. TRIMMED ENDS OF STEEL AND DISTURBED SURFACES SHALL RECEIVE A COAT OF Z/R/C/ COLD GALVANIZING COMPOUND AS MANUFACTURED BY Z.R.C. CHEMICAL PRODUCTS CO., QUINCY, MASS.
12. ALL SPECIALTY ANCHORS SHALL BE INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
13. ALL MASTS SHALL BE INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
14. ALL MASTS SHALL BE CONTINUOUS (WITHOUT SPLICE) AND INSTALLED PLUMB UNLESS OTHERWISE NOTED.

ANTENNA INSTALLATION NOTES

1. ALL HARDWARE, FASTENERS AND COMPONENTS SHALL BE PAINTED THE COLOR OF THE POLE UPON COMPLETION OF THE INSTALLATION, CONTRACTOR SHALL TOUCH UP PAINT AS REQUIRED.
2. STICKERS AND LABELS ARE NOT PERMITTED ON THE ANTENNA, MOUNT OR FIBER BOX. CONTRACTOR SHALL REMOVE STICKERS AND TOUCH UP PAINTED SURFACES AS REQUIRED.
3. ANTENNA SHALL BE INSTALLED PLUMB.
4. ANTENNA MOUNT SET SCREWS SHALL BE INSTALLED AS FLUSH TO THE POLE AS PRACTICAL. CONTRACTOR SHALL USE THE SHORTEST LENGTH BOLT POSSIBLE.
5. SOME SET SCREWS LOCK THREADED CONNECTIONS; OTHERS LOCK SLIP CONNECTIONS.

mobilitie
3475 PIEDMONT ROAD NE
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

PROJECT NO:	ER600261
DRAWN BY:	N. MARTINEZ
CHECKED BY:	N. HANNA

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NY90XSAW4D
9NYB002862D
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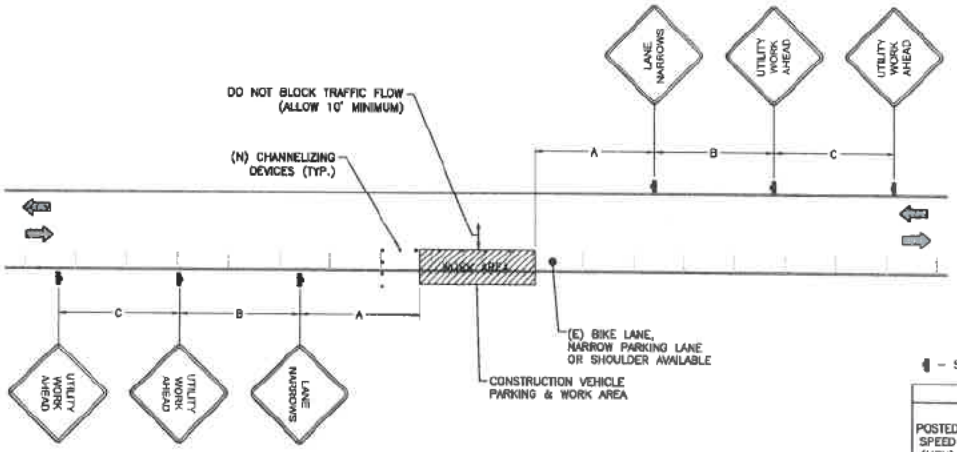
SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-3

PLAN NOTES:

1. PLANS DEPICTED ARE GENERAL GUIDELINES FOR TEMPORARY TRAFFIC CONTROL PLANS (TCP) TO INCLUDE PEDESTRIAN AND WORKER SAFETY. CONTRACTOR IS REQUIRED TO HAVE PREPARED A SITE-SPECIFIC TCP FOR REVIEW AND APPROVAL BY THE HIGHWAY AUTHORITY HAVING JURISDICTION. IF REQUIRED, THE FIRM PREPARING THE TCP SHALL BE AUTHORIZED OR CERTIFIED BY THE AUTHORITY HAVING JURISDICTION.
2. EXTEND CHANNELIZATION DEVICES INTO SHOULDER WHERE APPLICABLE.
3. DISTANCES AS INDICATED IN TABLE 1 SHOULD BE INCREASED FOR CONDITIONS THAT WOULD AFFECT STOPPING. DISTANCE SUCH AS DOWNGRADES OR LIMITED SIGHT DISTANCES. DISTANCES CAN BE DECREASED FOR LOW-SPEED (RESIDENTIAL) AREAS WITH APPROVAL BY THE AUTHORITY HAVING JURISDICTION. NIGHT-TIME WORK IS PROHIBITED UNLESS IT IS REQUIRED AS A CONDITION OF APPROVAL BY THE HIGHWAY AND LOCAL AUTHORITY HAVING JURISDICTION.
4. SHOULDER TAPERS SHOULD BE 1/3 OF THE ON-STREET TAPER LENGTH.
5. MAINTAIN A MINIMUM LANE WIDTH OF 10'.



– SIGN

TABLE 1					
POSTED SPEED (MPH)	DISTANCE BETWEEN SIGNS			TAPER	BUFFER
	A	B	C	L (SEE NOTE)	
15	100'	100'	100'	45'	100'
20	100'	100'	100'	80'	115'
25	100'	100'	100'	125'	155'
30	200'	200'	200'	180'	200'
35	200'	200'	200'	245'	250'
40	350'	350'	350'	320'	305'
45	350'	350'	350'	540'	360'
50	500'	500'	500'	600'	425'
55	500'	500'	500'	660'	495'
60	500'	500'	500'	720'	570'
65	500'	500'	500'	780'	645'

NOTES:

A) DISTANCES IN FEET UNLESS OTHERWISE NOTED.
B) CONTRACTOR TO VERIFY (E) SPEED LIMIT.
C) DISTANCES SHOWN ARE NOT VALID FOR LIMITED ACCESS HIGHWAYS. CONSULT STATE DOT MANUAL FOR DISTANCES.
D) ADJUST DISTANCES TO COMPLY WITH REQUIREMENT OF THE STATE OR LOCAL HIGHWAY AUTHORITY HAVING JURISDICTION. SEE NOTE 1, SHEET TC-2.
E) TAPER LENGTHS SHOWN BASED ON 12' LANE WIDTH. SEE NOTE 18, SHEET TC-2.

VEHICULAR TRAFFIC CONTROL PLAN - CURBSIDE PARKING

1

SCALE: NOT TO SCALE

mobilitie
3475 PIEDMONT ROAD NE
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

PROJECT NO:	ER600201
DRAWN BY:	R. MARTINEZ
CHECKED BY:	N. HANNA

PRELIM - NOT FOR CONSTRUCTION

A	03.30.17	PRELIM - NOT FOR CONSTRUCTION

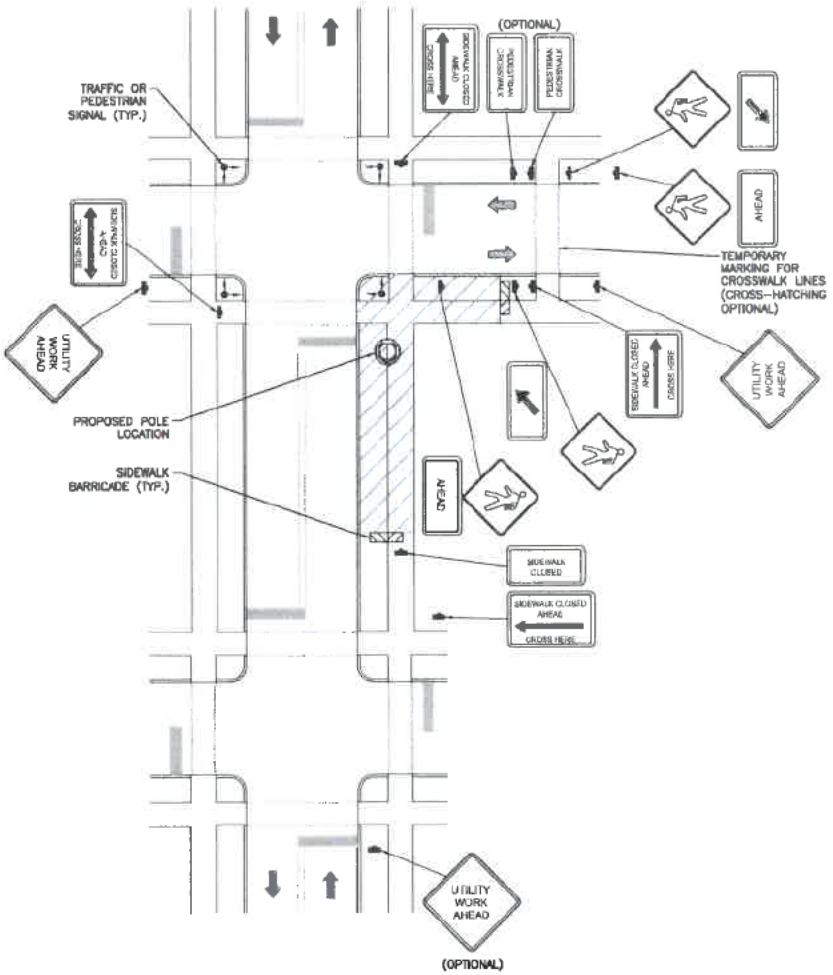
NY90XSAW4D
9NYB002862D
HAWTREE CREEK RD &
199TH AVE
SOUTH OZONE PARK, NY 11420
UTILITY POLE

SHEET TITLE
TRAFFIC CONTROL PLAN

SHEET NUMBER
4.0

TRAFFIC CONTROL GENERAL NOTES

1. ALL TEMPORARY TRAFFIC CONTROL SIGNAGE, LAYOUTS AND PROCEDURES SHALL COMPLY WITH LOCAL JURISDICTIONAL REQUIREMENTS AND MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION, WHICHEVER IS MORE STRINGENT.
2. PRIOR TO ANY ROAD CONSTRUCTION, TRAFFIC CONTROL SIGNS AND DEVICES SHALL BE IN PLACE.
3. TRAFFIC CONTROL DEVICES FOR LANE CLOSURES INCLUDING SIGNS, CONES, BARRICADES, ETC. SHALL BE PLACED AS SHOWN ON PLANS. SIGNS SHALL NOT BE PLACED WITHOUT ACTUAL LANE CLOSURES AND SHALL BE IMMEDIATELY REMOVED UPON REMOVAL OF THE CLOSURES.
4. SELECTION, PLACEMENT, MAINTENANCE, AND PROTECTION OF TRAFFIC, PEDESTRIANS, AND WORKERS SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) – PART VI "TEMPORARY TRAFFIC CONTROL", AND LOCAL JURISDICTIONAL REQUIREMENTS UNLESS OTHERWISE NOTED IN THE PLANS AND SPECIFICATIONS, AND SHALL BE APPROVED BY THE APPROPRIATE HIGHWAY AUTHORITY HAVING JURISDICTION.
5. ADVANCE WARNING SIGNS, DISTANCES, AND TAPER LENGTHS MAY BE EXTENDED TO ADJUST FOR REDUCED VISIBILITY DUE TO HORIZONTAL AND VERTICAL CURVATURE OF THE ROADWAY AND FOR ACTUAL TRAFFIC SPEEDS IF IN EXCESS OF POSTED SPEED LIMITS.
6. TAPERS SHALL BE LOCATED TO MAXIMIZE THE VISIBILITY OF THEIR TOTAL LENGTH.
7. CONFLICTING OR NON-OPERATING SIGNAL INDICATIONS ON THE EXISTING TRAFFIC SIGNAL SYSTEMS SHALL BE BAGGED OR COVERED.
8. ALL EXISTING ROAD SIGNS, PAVEMENT MARKINGS AND/OR PLOWABLE PAVEMENT REFLECTORS WHICH CONFLICT WITH THE PROPOSED TRAFFIC CONTROL PLAN SHALL BE COVERED, REMOVED, OR RELOCATED. ALL TRAFFIC CONTROL DEVICES SHALL BE RESTORED TO MATCH PRE-CONSTRUCTION CONDITION AFTER COMPLETION OF WORK.
9. CONTRACTOR SHALL CONTACT LOCAL AUTHORITY HAVING HIGHWAY JURISDICTION AND PROVIDE ADDITIONAL "FLAGMEN" OR POLICE SUPERVISION, IF REQUIRED.
10. ALL EXCAVATED AREAS WITHIN OR ADJACENT TO THE ROADWAY SHALL BE BACKFILLED AND PLACED ON A MINIMUM 6H:1V SLOPE PRIOR TO END OF EACH WORK DAY. OTHER EXCAVATED AREAS WITHIN THE CLEAR ZONE ARE TO BE EITHER BACKFILLED OR PRECAST CONCRETE CURB BARRIER CONSTRUCTION BARRIER SET TEMPORARILY IN PLACE TO SHIELD VEHICULAR AND PEDESTRIAN TRAFFIC.
11. WHERE DICTATED BY LOCAL CONDITIONS, THE CONTRACTOR SHALL MAKE PROVISIONS FOR MAINTAINING PEDESTRIAN AND WORKER CROSSING LOCATIONS IN ACCORDANCE WITH ALL APPLICABLE CODES AND OSHA REQUIREMENTS.
12. CONSTRUCTION ZONE SPEED LIMIT IF REDUCED FROM POSTED LIMITS SHALL BE IN ACCORDANCE WITH MUTCD AND WILL BE DETERMINED BY THE AUTHORITY HAVING JURISDICTION.
13. THERE SHALL BE NO WORKERS, EQUIPMENT, OR OTHER VEHICLES IN THE BUFFER SPACE OR THE ROLL AHEAD SPACE.
14. DRIVEWAYS AND/OR SIDE STREETS ENTERING THE ROADWAY AFTER THE FIRST ADVANCE WARNING SIGN SHALL BE PROVIDED WITH AT LEAST ONE W20-1 SIGN (ROAD WORK AHEAD) AS A MINIMUM.
15. CONES MAY BE SUBSTITUTED FOR DRUMS AND INSTALLED UPON THE APPROVAL OF THE AUTHORITY HAVING JURISDICTION PROVIDED THEY COMPLY WITH MUTCD.
16. THE SPACING BETWEEN CONES, TUBULAR MARKERS, VERTICAL PANELS, DRUMS, AND BARRICADES SHOULD NOT EXCEED A DISTANCE IN FEET EQUAL TO 1.0 TIMES THE SPEED LIMIT IN MPH WHEN USED FOR TAPER CHANNELIZATION, AND A DISTANCE IN FEET EQUAL TO 2.0 TIMES THE SPEED LIMIT IN MPH WHEN USED FOR TANGENT CHANNELIZATION.
17. WHEN CHANNELIZATION DEVICES HAVE THE POTENTIAL OF LEADING VEHICULAR TRAFFIC OUT OF THE INTENDED VEHICULAR TRAFFIC SPACE, THE CHANNELIZATION DEVICES SHOULD BE EXTENDED A DISTANCE IN FEET OF 2.0 TIMES THE SPEED LIMIT IN MPH BEYOND THE DOWNSTREAM END OF THE TRANSITION AREA.
18. TAPER LENGTHS ARE CALCULATED AS FOLLOWS:
L= $WS^2/60$ (40 MPH AND HIGHER) OR L2= WS (OVER 40 MPH),
WHERE W= OFFSET WIDTH (FT), S= TRAFFIC SPEED (MPH).



TYPICAL PEDESTRIAN / WORKER SAFETY PLAN | 1

SCALE: NOT TO SCALE

mobilitie
3475 PIEDMONT ROAD NE
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

PROJECT NO:	ER680261
DRAWN BY:	R. MARTINEZ
CHECKED BY:	N. HANNA

PRELIM - NOT FOR CONSTRUCTION

A	03.28.17	PRELIM - NOT FOR CONSTRUCTION

NY90XSAW4D
9NYB002862D
HAWTREE CREEK RD &
109TH AVE
SOUTH OZONE PARK, NY 11420
UTILITIY POLE

SHEET TITLE
TYPICAL PEDESTRIAN / WORKER SAFETY PLAN

SHEET NUMBER
4.1

KMW
RF & Microwave Products

Innovative Company

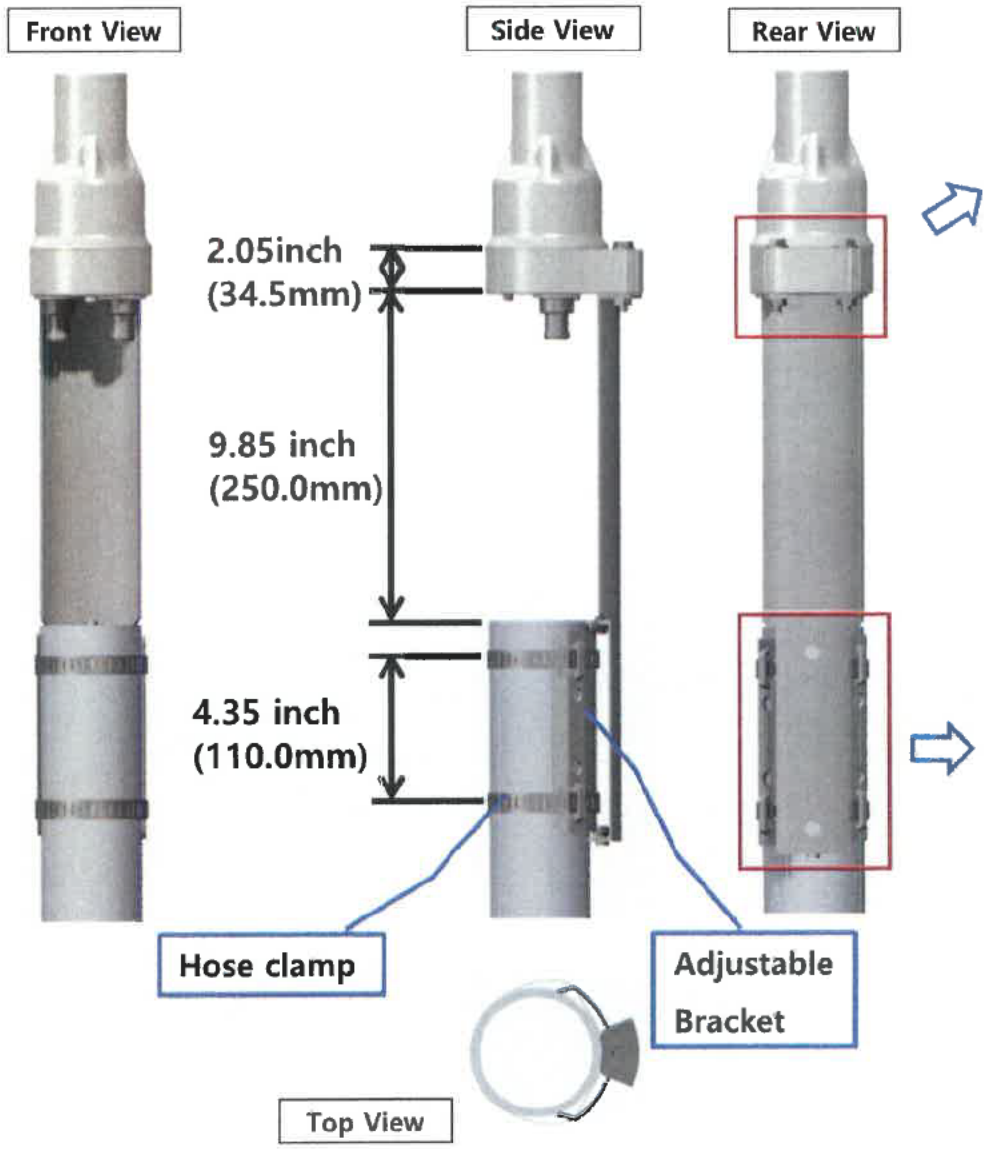
KMW is an innovative and dynamic company
In wireless communications. (www.kmw.co.kr)

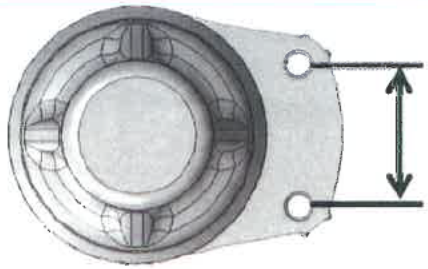
Mount for Omni Antenna

11/25/15

RF R&D

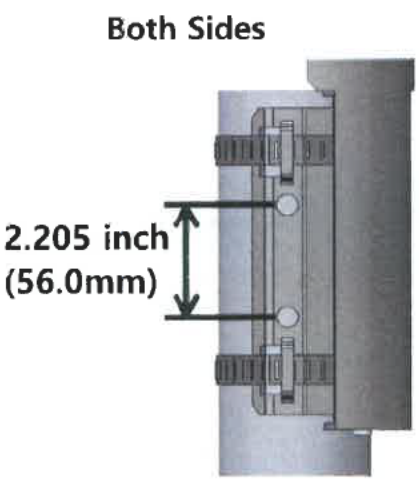
Mount for Omni Antenna



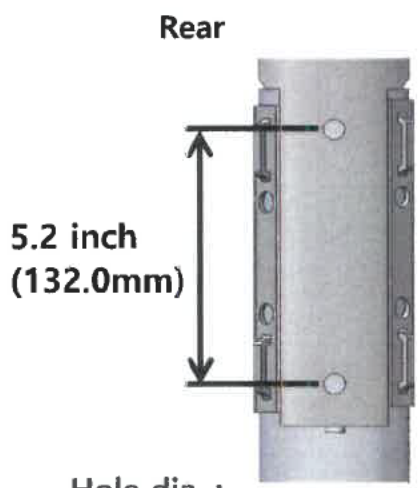


Hole dia. : 2-Φ0.33inch(8.4mm)

• Ant. Hole distance

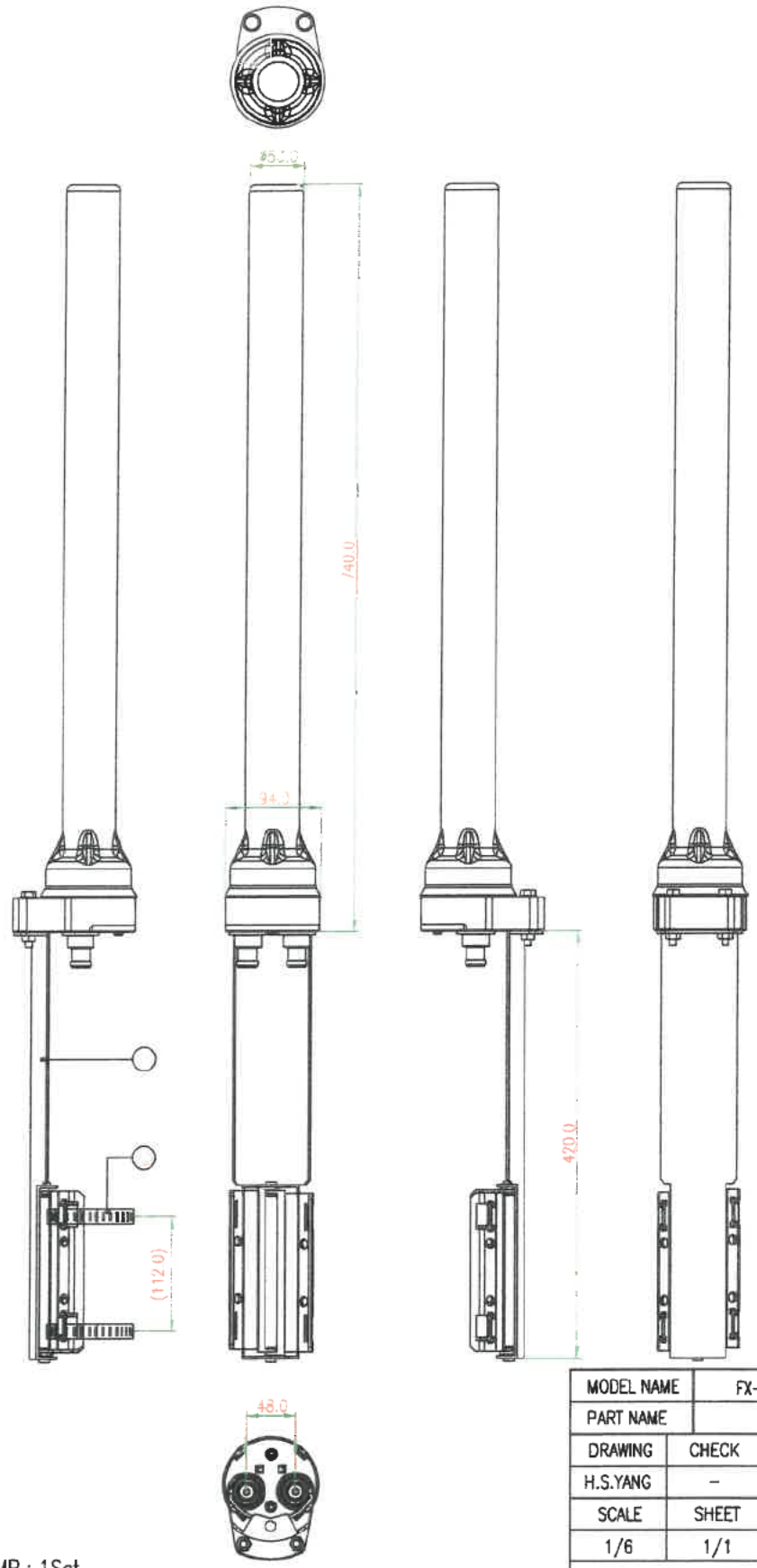


Hole dia. :
4-Φ0.4inch(10.0mm)



Hole dia. :
2-Φ0.4inch(10.0mm)

• Clamp Hole distance



NOTES

1. FIXED CLAMP : 1Set
2. HOSE CLAMP : 2Set

MODEL NAME	FX-X-WM-360-7-00T-ST		
PART NAME	CONFIGRATION		
DRAWING	CHECK	APPROVAL	DATE
H.S.YANG	-	O.H.CHOI	15/08/25
SCALE	SHEET	REVISION	UNITS
1/6	1/1	0.0	mm
3rd ANGLE PROJECTION		GENERAL TOLERANCE	
◎ ◁		± 1.0	0.5°

Outdoor LTE Relay iRelay 460

Airspan's iRelay 460 (iR460) is an innovative standards compliant LTE relay solution.

iR460 is part of the iRelay family, providing a compact Category 6 UE Relay solution which supports multi-band radios to connect to a combination of different Macro eNB.

Innovative features including Plug and Play, Steerable Narrow Beam Antenna, Best Serving eNB Selection, and Mounting assembly significantly reduce the time and experience level to deploy a wireless backhaul solution.

LTE compliant interface minimizes the impact to the existing network architecture, whilst maintaining the same security and reliability requirements.

The Power of HETNETS

As operators struggle to cope with growing customer demand for higher throughput, they are discovering that layering small base stations into a macro cell coverage area, enables a significant increase in network capacity by filling in coverage gaps and addressing actual traffic distribution where demand is highest. iR460 is an ideal back haul solution for the AirHarmony eNB

Integrated Backhaul

iR460 is connected to the AirHarmony eNB via a GigE port supporting data and power (PoE). Tight integration with Airspan's AirHarmony further reduces the deployment time and provides a seamless backhaul for connection with Airspan's element management system.

Physical

Dimensions

Variant	Dimensions[1] (H x W x D)
iR460 (excluding mounting brackets)	Height 330mm (13inches) Diameter 200mm (7inch)

Weight

Variant	Dimensions
Main unit	4 Kg / 8.8 Lbs.
Universal mounting bracket (Including pole straps)	0.5 Kg / 1.1 Lbs.

Operational Tolerances

Type	Details	Standard Compliance
Operating temperature	-45°C to 60°C	ETSI 300 019 1-4
Operating humidity	5% - 100% non-condensing	ETSI 300 019 1-4
Storage temperature	-45°C to 70° C	Non Operational Test
Storage humidity	5% - 100% non-condensing	ETSI 300 019 1-4
Rain and dust ingress protection	IP67	ETSI 300 019 1-4
Operational altitude	70-106 kPa as well as: From -60m to 1800m @ 40°C From 1800m to 4000m @ 30°C	ETSI 300 019 1-4
Solar radiation	1120 W/m^2	ETSI 300 019 1-4

Voltages and Amperage Draws

Mode	Nominal Power Consumption (W)
Max (Scan Mode)	16
Typical (Relay Mode)	12

[1] Dimensions excludes connectors height and protruding screws

Airspan

Steerable Antenna

iR460 contains an integrated steerable, XPOL antenna.
The steerable antenna is a cross polarised (dual slant) design which supports multiple frequency bands.

Steerable Antenna performance

	Band 25	Band 41
Polarisation	Dual slant	Dual slant
Polarisation Discrimination	15dB	18dB
Boresight Gain	8dBi	12dBi
Front to back ratio	18dB	25dB
Azimuth HPBW	65 degrees	35 degrees
Elevation HPBW	65 degrees	35 degrees
Co & X-Pol RPE	EN302-326-3 Class DN2	EN302-326-3 Class DN3
Grounding	DC Grounded	DC Grounded

Steerable Antenna Characteristics

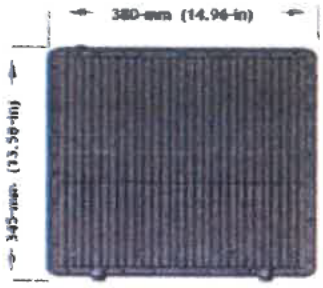
	Parameter
Azimuth Range	360 degrees
Azimuth Resolution	≤1 degrees
Pointing Speed	≥60 degrees/sec
Duty Cycle / Hour	≤25%
Duty Cycle / 24 Hours	≤5%

NOKIA

Nokia Networks

FW2CA 850 MHz 2 x 20W Micro BTS

Front



Side

Back

Bottom

NOKIA

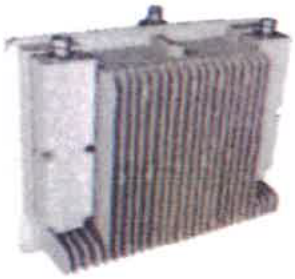
Nokia Networks

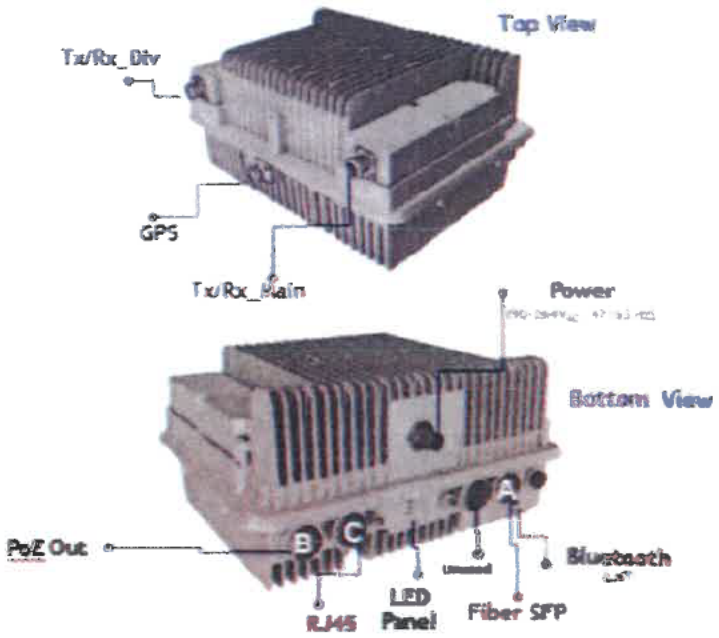
Product	Flexi Zone Micro Outdoor
Backhaul	100/1000 Base-T Copper and Fiber Port Types: 2 RJ45 Ethernet, 1 SFP based Fiber (PoE will be supported on one of the RJ45 ethernet ports) SFPs* Supported: SX, LX, BX, G-PON, E-PON
Antenna	Configuration: 2Tx 2Rx MIMO Type: Integrated Directional, Remote Antenna Connector: 4.1/9.5 Mini-DIN GPS Connector: N-Type Female
Local Maintenance Ports	Bluetooth or Unused RJ45 Port
Input Power	90 – 264 V AC
Status Indicators	Status, Backhaul, Tx
Power Consumption	Max. 360W, Typ. 290W
Mounting Options	Wall or Pole Mount
Emission	TS36.104 Rev-11 Wide Area

* Supported SFPs and SFP+ are product dependent and determined by RFD. Please refer to SFP+ section of the RFD for available options. Flexi Zone Micro Outdoor is shipped with the SFP+ cage installed. Customer is responsible for purchasing SFP+ modules separately. Please refer to Flexi Zone Micro Outdoor Technical Specifications for details.

FWHR 2500 MHz 2 x 20W Micro BTS

Front View





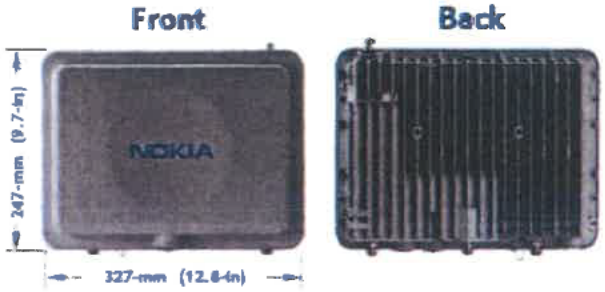
NOKIA

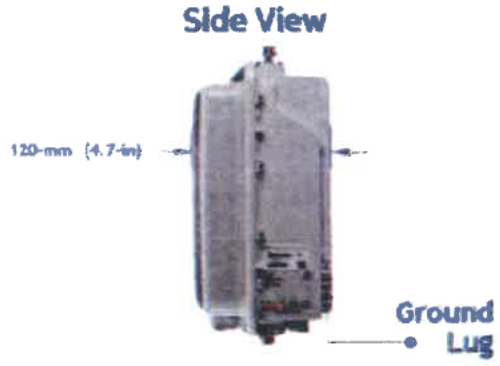
Nokia Networks

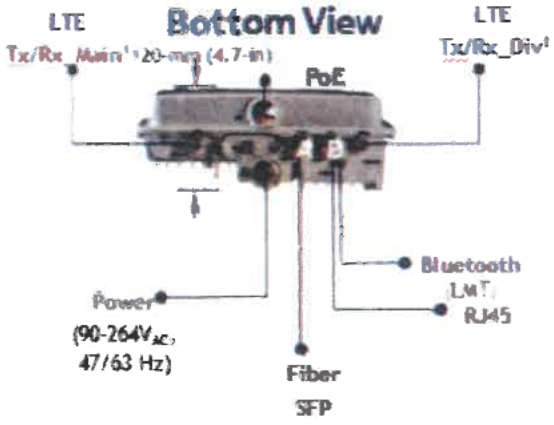
Product	Flexi Zone Micro Outdoor
Backhaul	100/1000 Base-T Copper and Fiber Port Types: 2 RJ45 Ethernet, 1 SFP based Fiber (PoE Out will be supported on one of the RJ45 ethernet ports) SFPs* Supported: SX, LX, BX, G-PON, E-PON
Antenna	Configuration: 2Tx / 2Rx MIMO Type: Remote (Customer Provided) Antenna Connector: 4.1/9.5 Mini-DIN GPS Connector: N-Type Female
Local Maintenance Ports	Bluetooth or Unused RJ45 Port
Input Power	90 — 264 VAC
Status Indicators	Status, Backhaul, Tx
Power Consumption	Max: 360W; Typ: 290W
Fans	No
Mounting Options	Wall or Pole Mount
Emission	TS36.104 Rev-11 Wide Area

NOKIA

FWHT 2500 MHz 2 x 5W Micro BTS





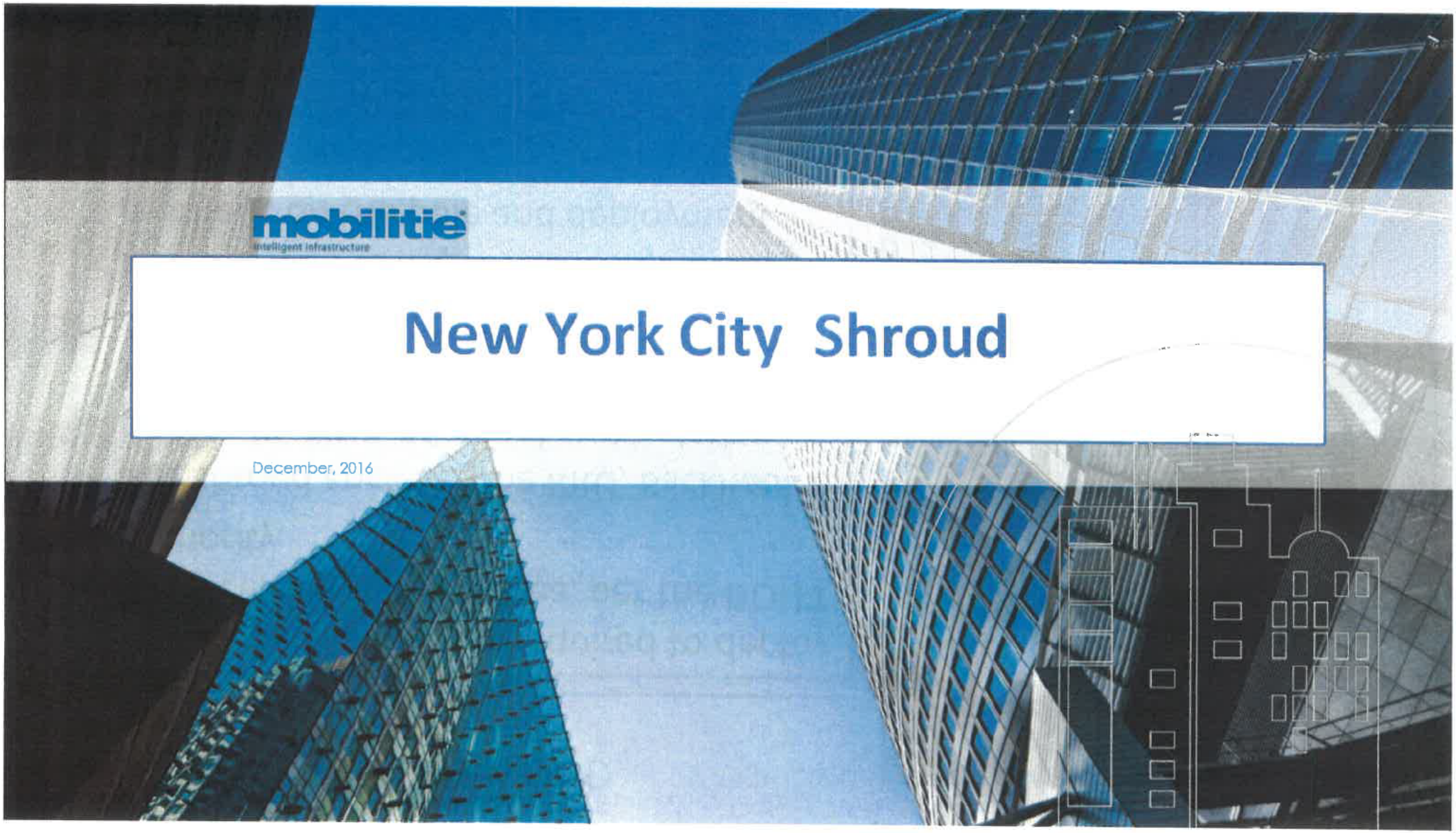


NOKIA

Nokia Networks

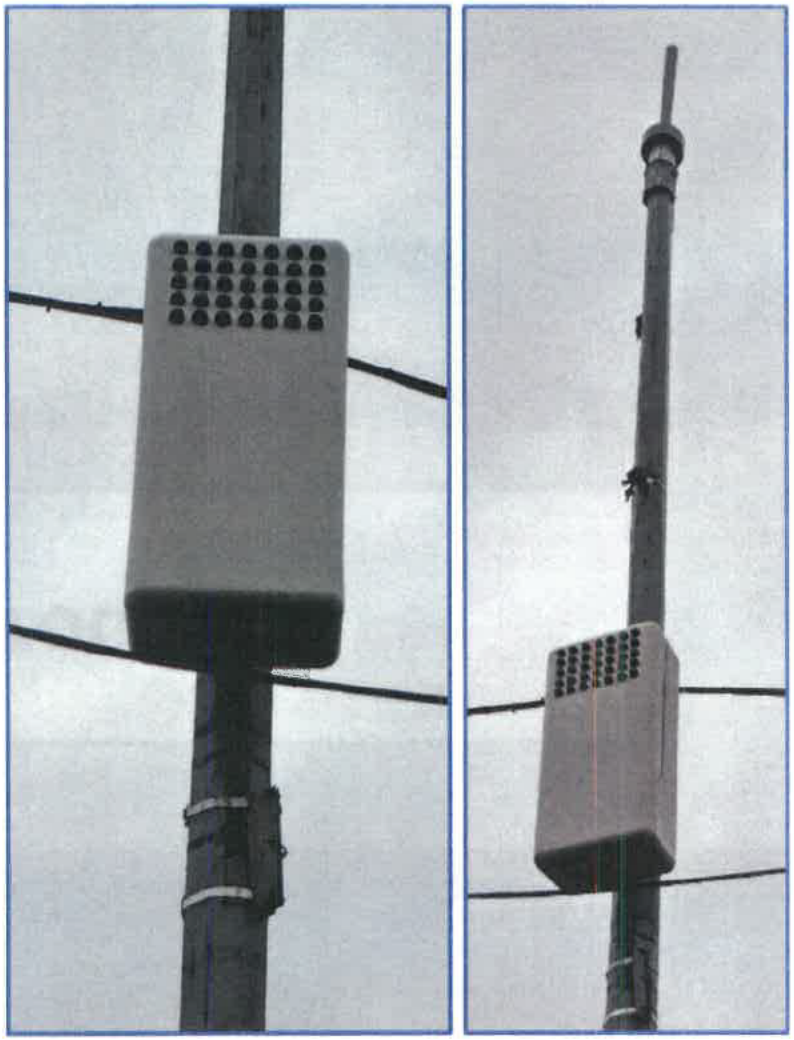
Product	Flexi Zone Micro Outdoor
Backhaul	100/1000 Base-T Copper and Fiber Port Types: 2 RJ45 Ethernet, 1 SFP based Fiber (PoE will be supported on one of the RJ45 ethernet ports) SFPs* Supported: SX, LX, BX, G-PON, E-PON
Antenna	Configuration: 2Tx - 2Rx MIMO Type: Omni, Panel, Remote Antenna Connector: 4.1/9.5 Mini-DIN GPS Connector: N-Type Female
Local Maintenance Ports	Bluetooth or Unused RJ45 Port
Input Power	90 – 264 VAC
Status Indicators	Status, Backhaul, Tx
Power Consumption	Max 135A, Typ 125W
Fans	No
Mounting Options	Wall or Pole Mount
Emission	TS36.124 Rev-11 Medium Area

* [illegible] SFPs [illegible] SFPs [illegible] SFP [illegible] SFP [illegible] SFPs [illegible] SFPs [illegible] SFPs [illegible]


mobilitie
intelligent infrastructure
New York City Shroud
December, 2016

NYC STREET POLE SHROUD SOLUTION

- This design solution is required to deploy small cells in the NYC area, per the DOITT authority.
- The shroud encloses the RRU, Backhaul unit(s), RF filter, AC panel and isolation transformer in one RF transparent material shell.
- It is intended to improve the equipment aesthetic on the pole and deployment process.



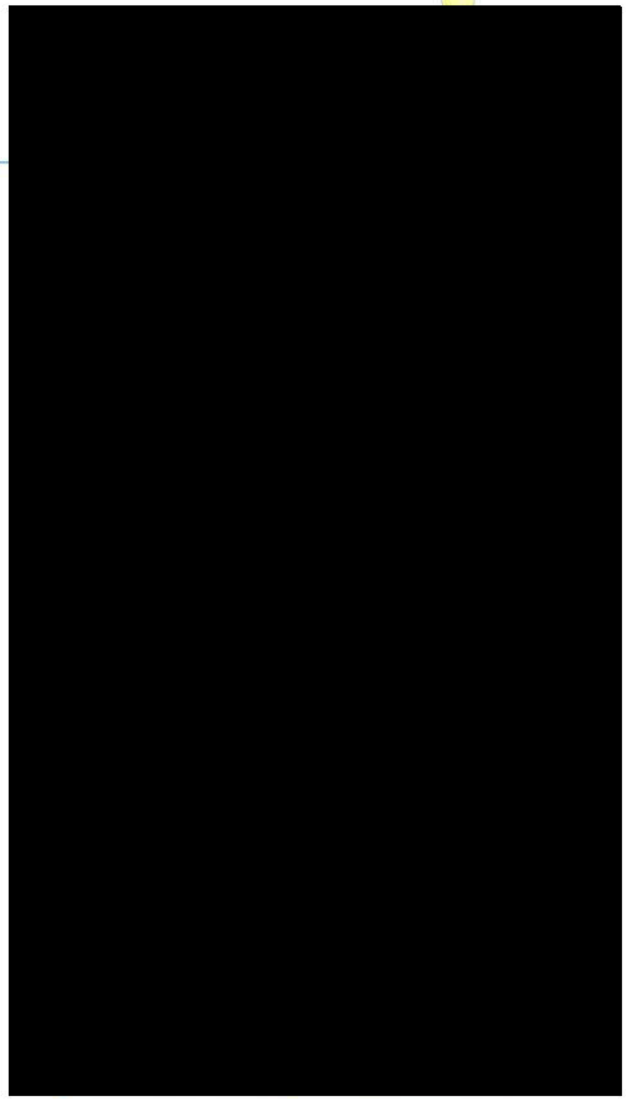
mobilitie

PREASSEMBLED COMPONENTS

The Shroud units will be shipped to market with all internal components preassembled prior to delivery.

The GC will be responsible to finalize the cable entry and connections in the shroud, between components and RF antenna, AC power, and ground lead.

The primary configuration will consist of components displayed here:



ADDITIONAL OEM EQUIPMENT CONFIGURATIONS

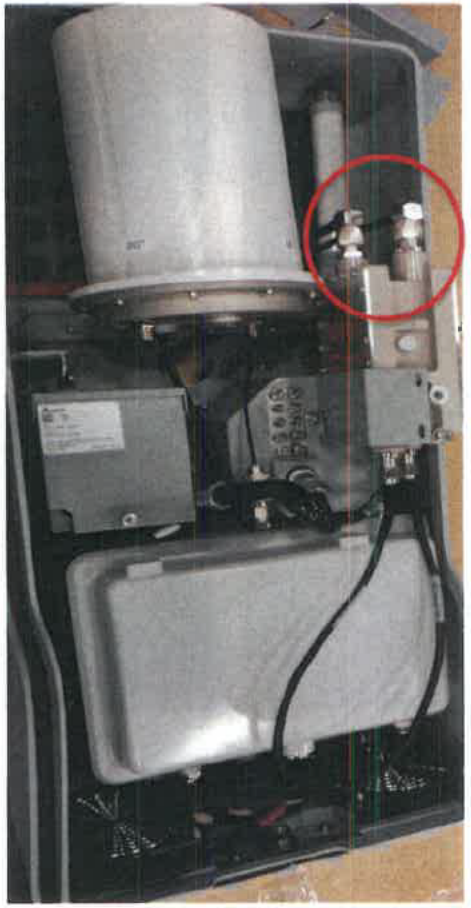
mobilitie

ONSITE ASSEMBLED COMPONENTS – Antenna and RF coax

Finalize the mounting of the shroud to the pole, ensuring the Chase Nipple conduit is secured into the shroud

Route and Terminate the RF cables onto either the RF Filter or the Nokia Radio if no filter is installed.

Terminate the ground cable onto the ground point in the shroud



mobilitie

ONSITE ASSEMBLED COMPONENTS – AC Power in Shroud

Final Items

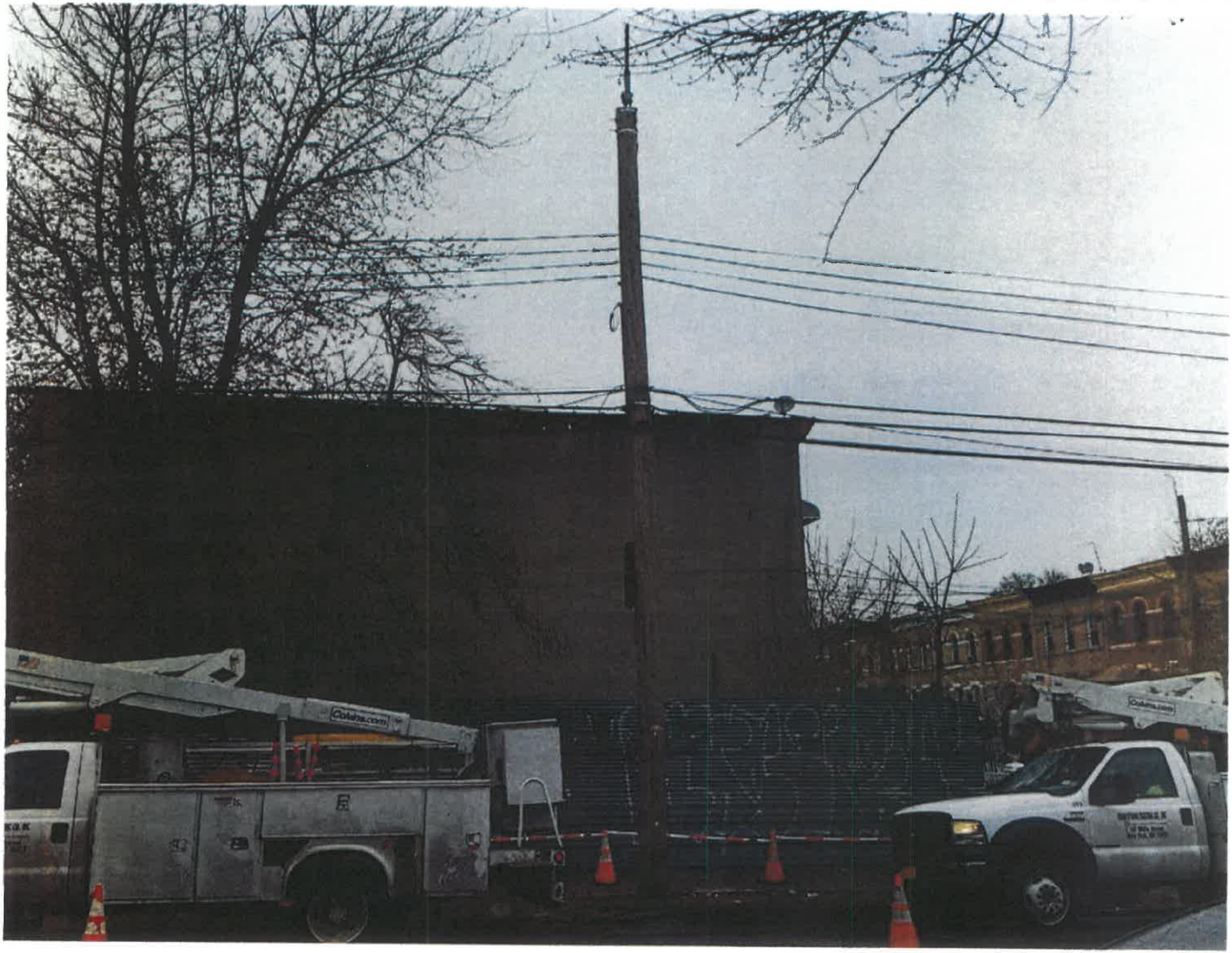
Once all activities and Testing been completed and the CIC releases you from the site

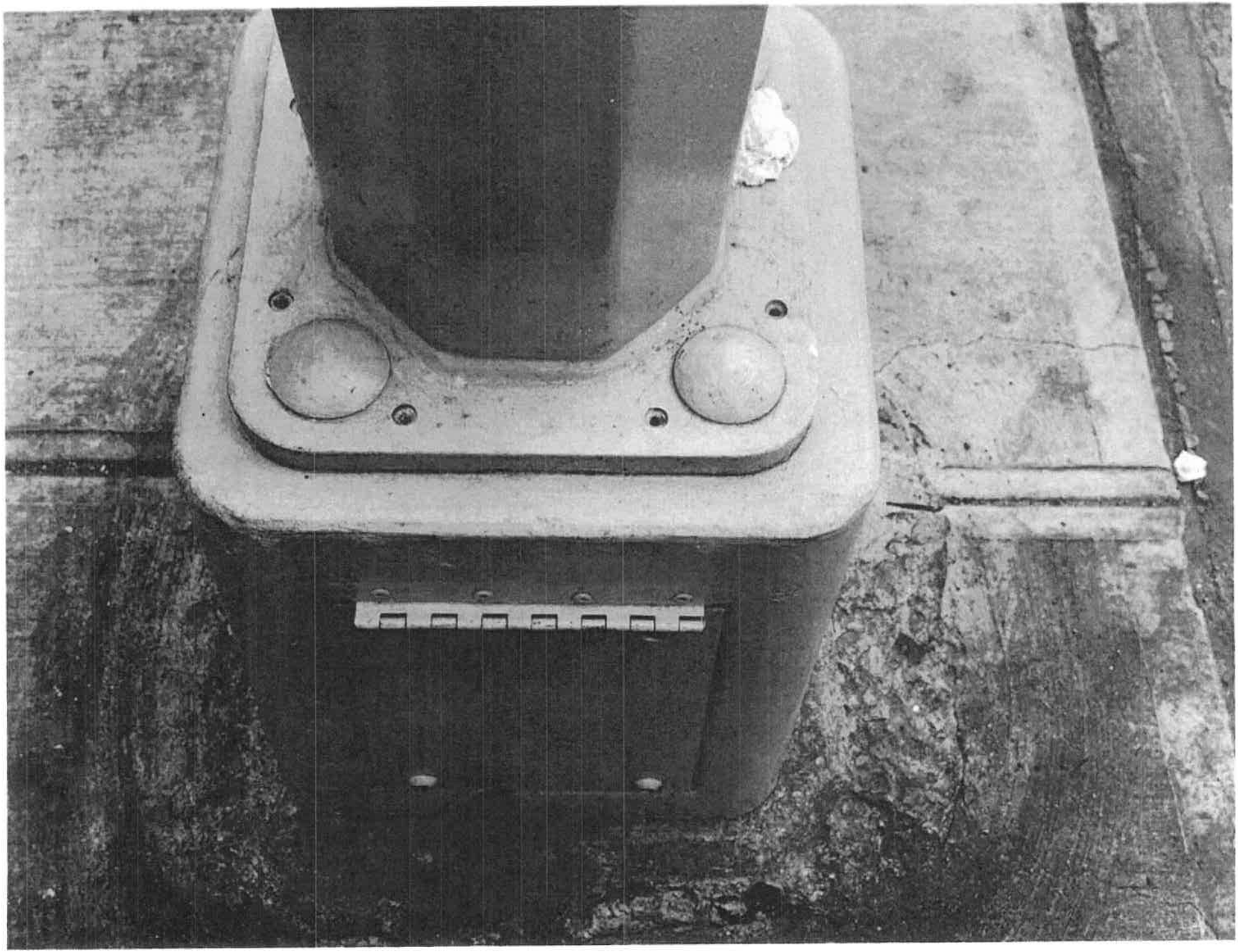
Make the final closure of the shroud and use the security latch to complete the covering.

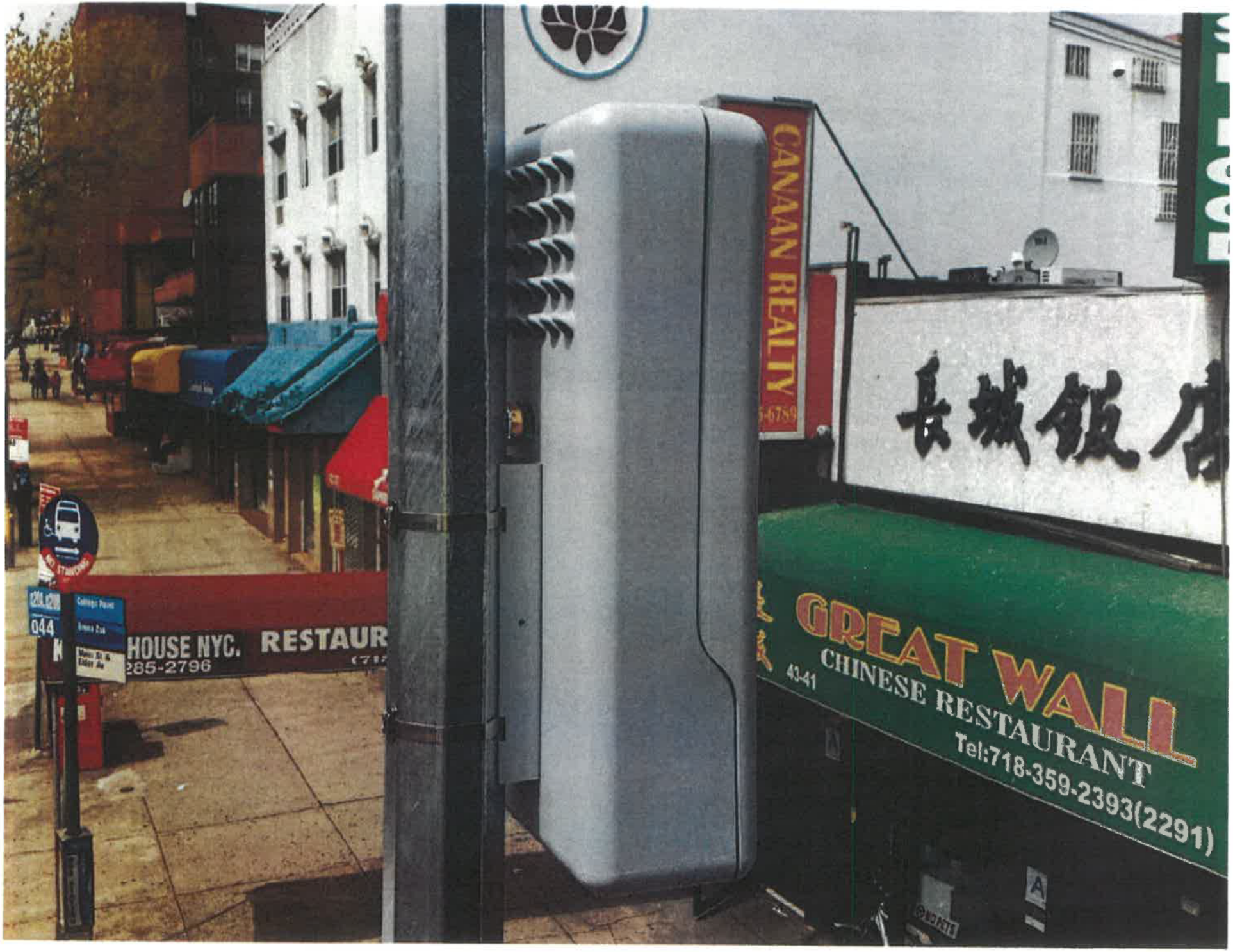
Do not use Combo or Pad locks.

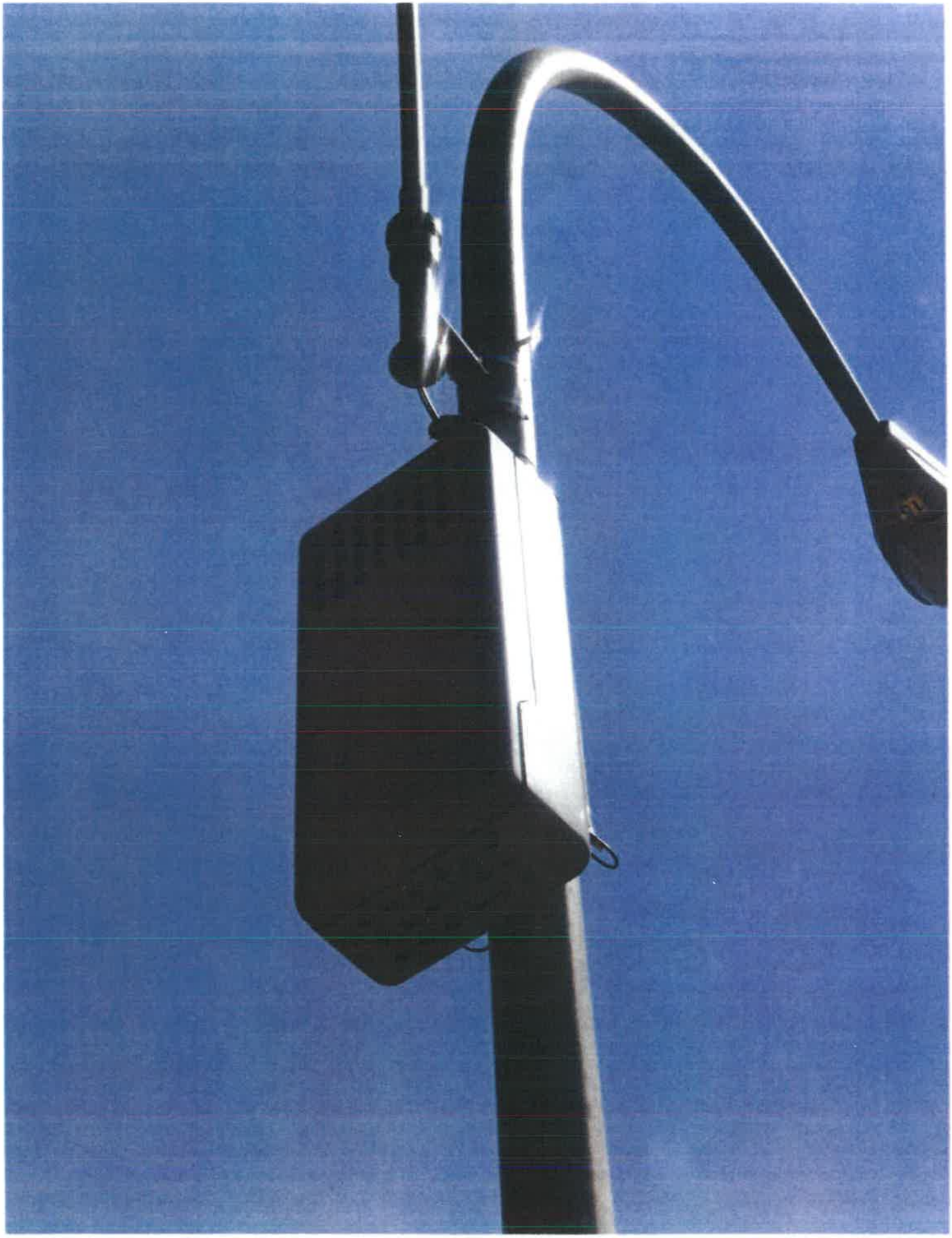
mobilitie

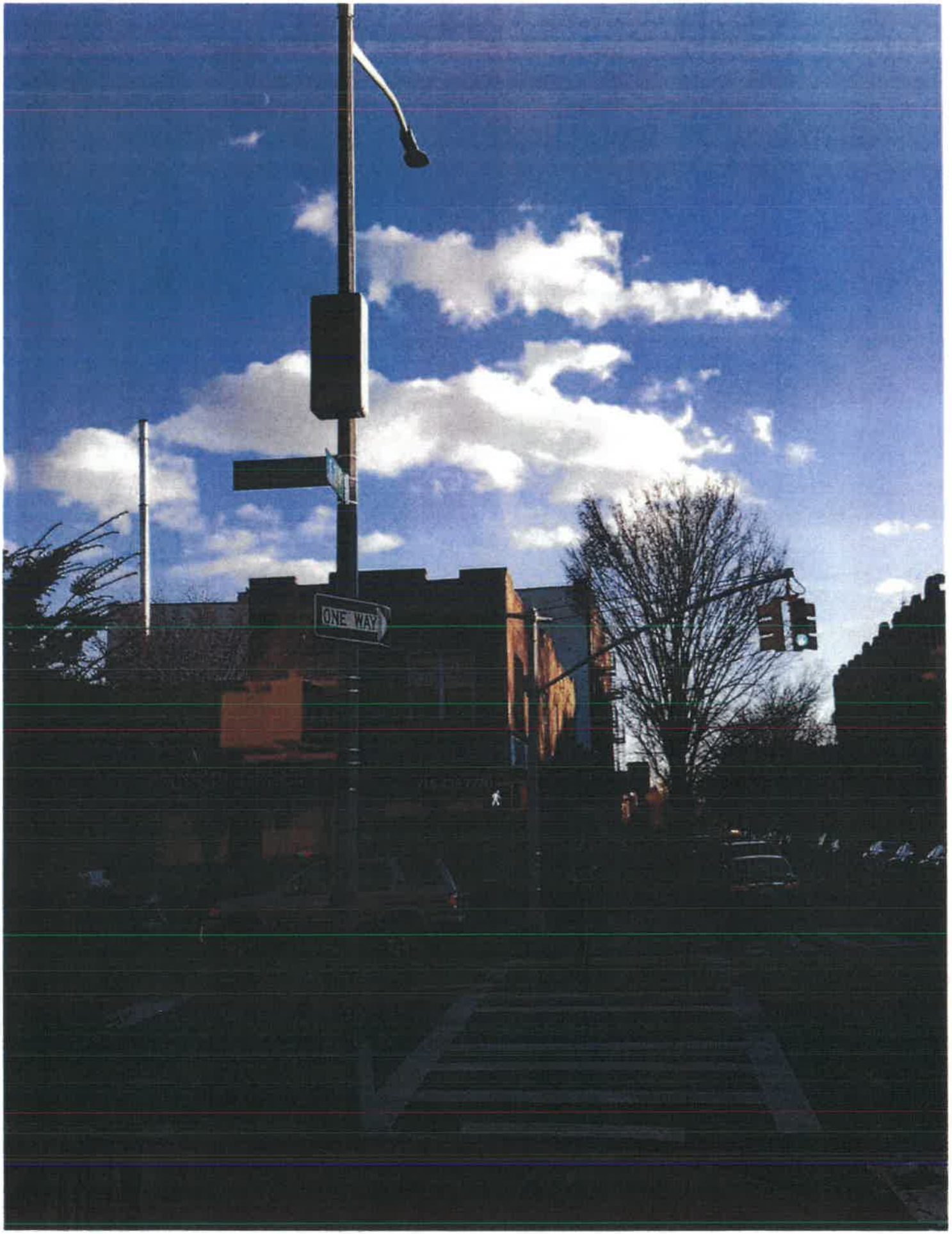

ONE WAY
DELI GROCERY



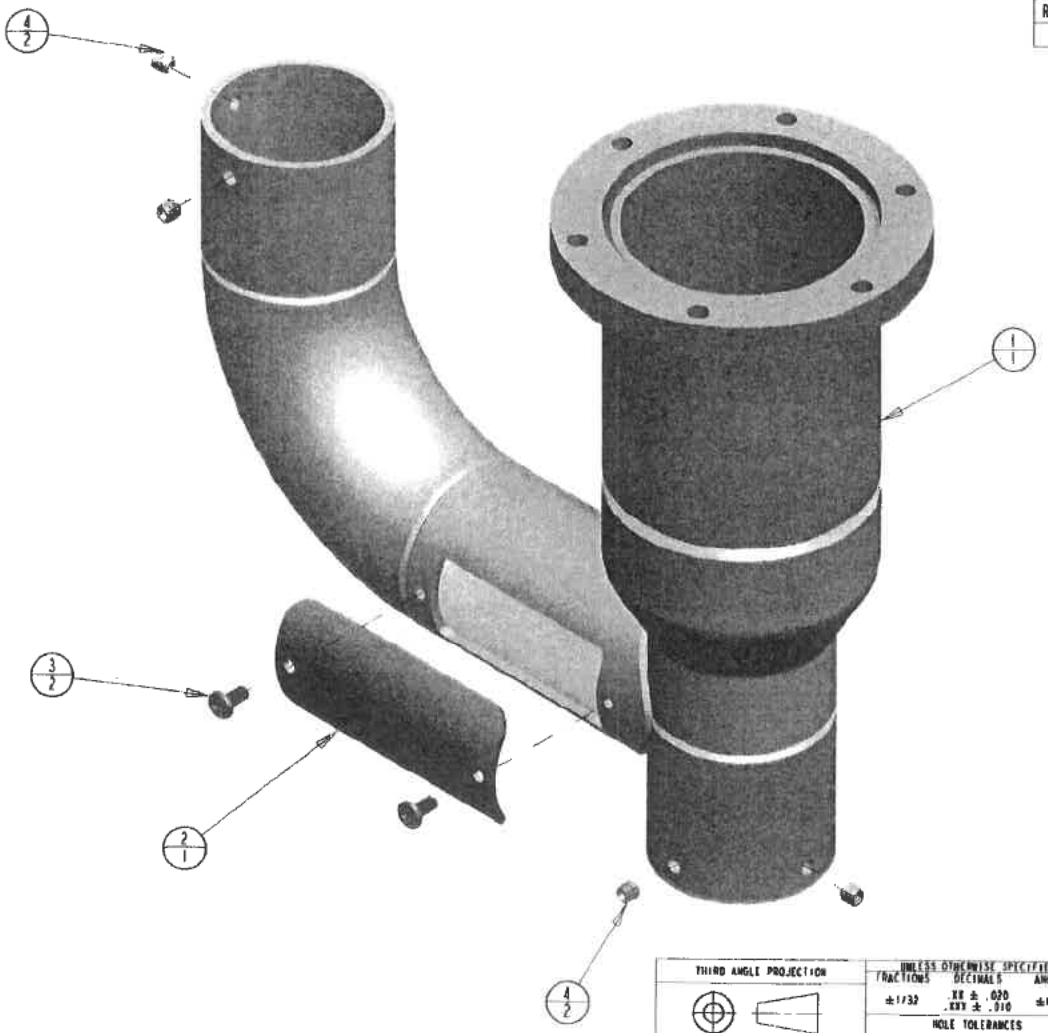



CANAAN REALTY
長城飯店
GREAT WALL
CHINESE RESTAURANT
Tel:718-359-2393(2291)
43-41
HOUSE NYC.
RESTAUR
285-2796




ONE WAY

REVISIONS				APPROVALS			
REV	ECN NO.	DFTR		DFTG	ENGR	REL	DATE



NOTES:

1. INSTALL SETSCREW HARDWARE AFTER PAINT FLUSH TO EXTERIOR SURFACE
2. APPLY LOCTITE 242 TO ACCESS COVER HARDWARE PRIOR TO INSTALLATION.

ITEM	QTY	PART NO.	DESCRIPTION	REV.
1	1	5-00228	COUPLER ANTENNA MOUNT	A
2	1	7-02018	ACCESS COVER PLATE	A
3	2	91772A240	SCREW, 10-24 X 3/8" PHND PHIL, 18-8 STAINLESS	
4	4	92311A533	SET SCREW, 1/4-20 X 1/4, CUP POINT, 18-8 STAINLESS	

PARTS LIST

THIRD ANGLE PROJECTION

ENGLISH

PROPRIETARY NOTE

UNLESS OTHERWISE SPECIFIED

FRACTIONS	DECIMALS	ANGLES
±1/32	.XX ± .020 .XXX ± .010	±1.0°

HOLE TOLERANCES

.013 THRU .125	+.004 -.001	.128 THRU .250	+.005 -.001	.251 THRU .500	+.005 -.001
.501 THRU .750	+.008 -.001	.751 THRU 1.000	+.010 -.001	1.001 THRU 2.000	+.013 -.001

MECHANICAL:
DIMENSIONS ARE IN INCHES
REMOVE BURRS AND SHARP EDGES
PARENTHETICAL INFORMATION IS FOR REFERENCE ONLY

APPROVALS		DATE
DRAWN BY	JBruce	17-Nov-14
ENGINEER	JBruce	11/17/14
CHECKED BY		

MATERIAL: SEE BOM

FINISH: PAINT FS827038 D01 BLACK XCW-F63HXB252TT-4387

Innovative Manufacturing Solutions
1 Innovation Drive
Des Plaines, IL 60016

CUSTOMER: Extenet

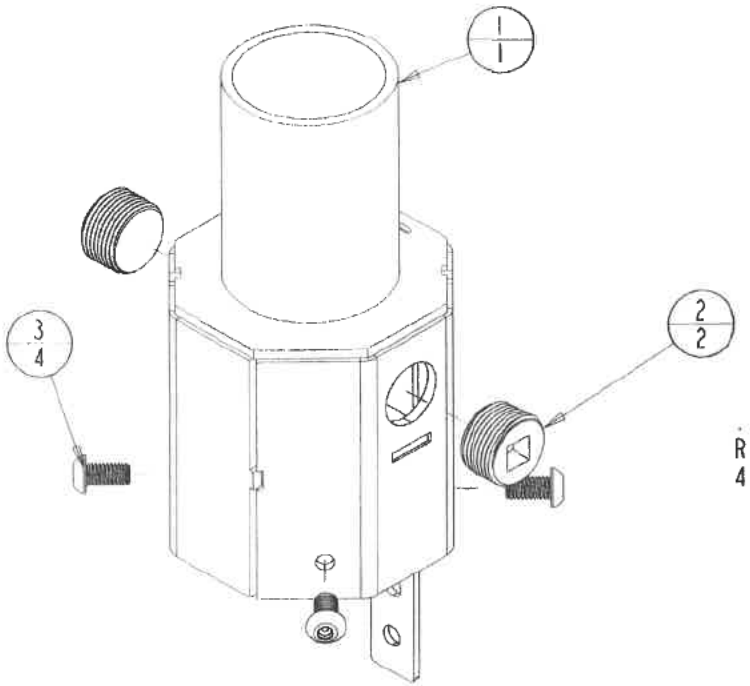
PROJECT: COUPLER ANTENNA MNT

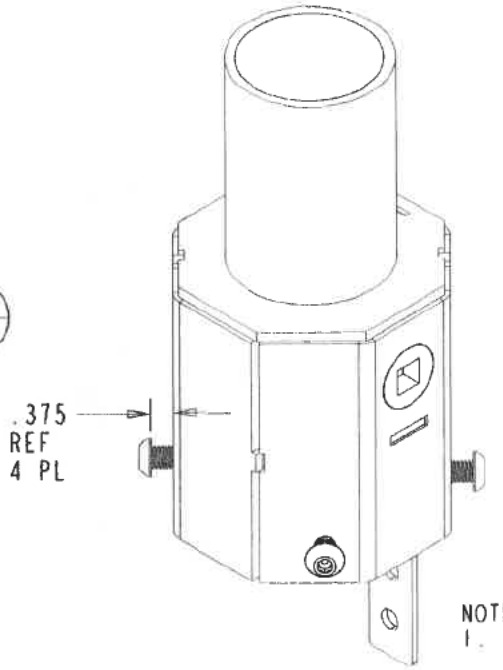
TITLE: COUPLER ANTENNA

SIZE	CLASS	DRAWING NO.	REV
B		1-00066	A

SCALE: 0.667 DO NOT SCALE DRAWING SHEET 1 of 1

REVISIONS				APPROVALS			
REV	ECN NO.	DFTR		DFTG	ENGR	REL	DATE





NOTES:
1. INSERT PLUGS TO BE FLUSH WITH EXTERIOR SURFACE OF PART PRIOR TO PAINT
2. PAINT COMPLETE - EXTERNAL SURFACES ONLY OVERSPRAY PERMISSBLE ON INSIDE
3. INSTALL MOUNTING SCREWS (ITEM 3) AFTER PAINT

P/N	FEDERAL STANDARD COLOR	APPROVED PAINT
1-00048-BRN	FS#:10049-DOT BROWN(BRONZE)	F63HXN25276-4387
1-00048-GRN	RAL6012-DARK GREEN	F63JXG25326-4387
1-00048-GRY	FS#:26373 - DOT GRAY	F63RXA25142-4387
1-00048-BLK	FS#:27038 - DOT BLACK	F63HXB25277-4387

THIRD ANGLE PROJECTION

ENGLISH

PROPRIETARY NOTE

UNLESS OTHERWISE SPECIFIED

FRACTIONS	DECIMALS	ANGLES
±1/32	.XX ± .020 .XXX ± .010	±1.0°

HOLE TOLERANCES

.013 THRU .125	+.004 -.001	.126 THRU .250	+.005 -.001	.251 THRU .500	+.005 -.001
.501 THRU .750	+.008 -.001	.751 THRU 1.000	+.010 -.001	1.001 THRU 2.000	+.012 -.001

MECHANICAL:
DIMENSIONS ARE IN INCHES
REMOVE BURRS AND SHARP EDGES
PARENTHETICAL INFORMATION IS FOR REFERENCE ONLY

ITEM	QTY	PART NO.	DESCRIPTION	REV
1	1	5-00167	ANTENNA MOUNT WELDMENT (FS POLE ADAPTER)	A
2	2	46388719	1" - 11-1/2 PIPE PLUG W/ 1/2" SQUARE-SOCKET DRIVE, ZINC PLT	
3	4	92949A622	3/8"-16 X 3/4", BHMD SOCKET CAP SCREW 18-8 SS	

PARTS LIST

APPROVALS	DATE
DRAWN BY JBruce	04-Mar-14
ENGINEER JBruce	02/26/14
CHECKED BY	

MATERIAL: SEE DRAWING BOM

FINISH: PAINT: SPECIFIED ON ORDER PER NYC FEDERAL COLOR 8 STD

Innovative Manufacturing Solutions
1 Innovation Drive
Des Plaines, IL 60016

CUSTOMER: Extenet

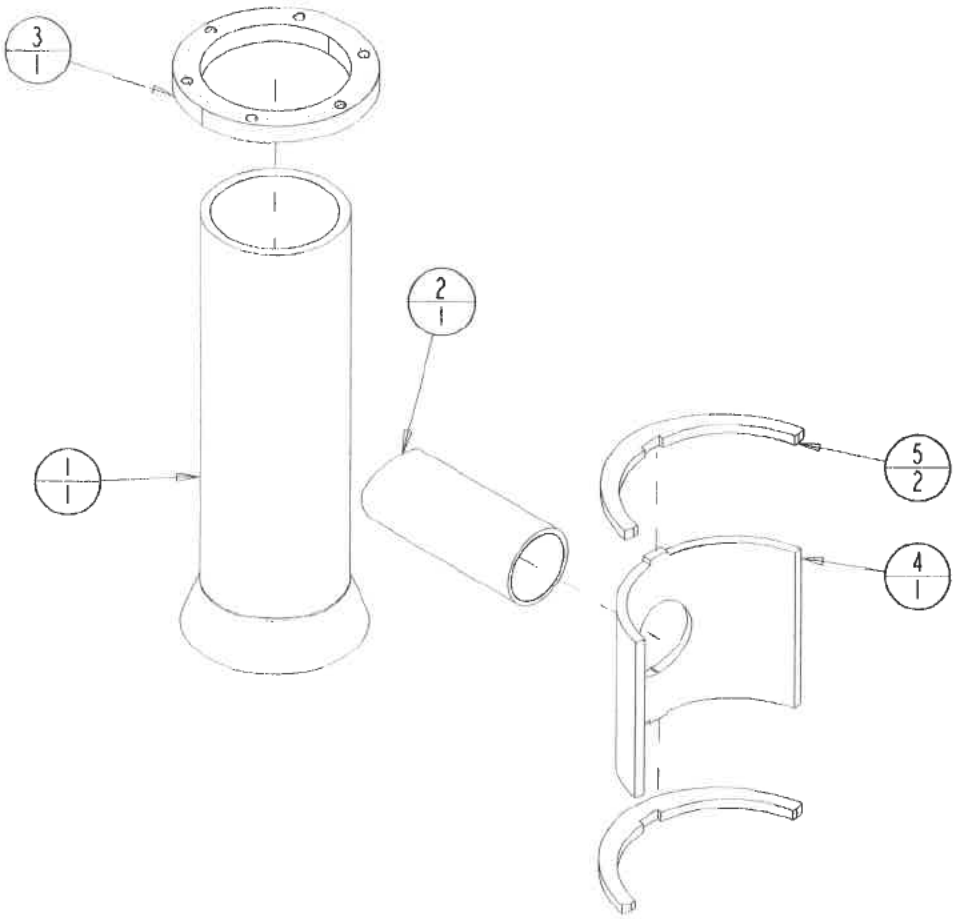
PROJECT: NYC ANTENNA MOUNTS

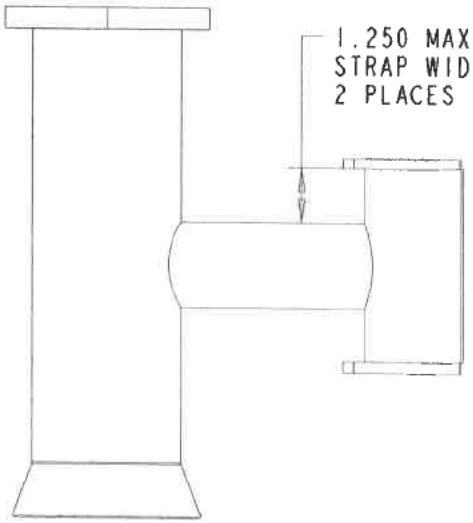
TITLE: TOP ANTENNA MOUNT (ADAPTER FOR FS POLE)

SIZE	CLASS	DRAWING NO.	REV
B		1-00048	B

SCALE: 0.500 DO NOT SCALE DRAWING SHEET 1 of 1

REVISIONS				APPROVALS			
REV	ECN NO.	DFTR		DFTG	ENGR	REL	DATE
B	466		WELDING CHANGE & PAINT CONFIG		JB		





NOTES:
1. PAINT COMPLETE - EXTERNAL SURFACES
INTERNAL SURFACES MUST BE PAINTED ATLEAST 3" DOWN INTO TUBE (BOTH ENDS).

ITEM	QTY	PART NO.	DESCRIPTION	REV
1	1	7-01359	SIDE MOUNT ANTENNA TUBE	B
2	1	7-01360	SUPPORT ARM TUBE - SIDE MNT	A
3	1	7-01361	ANTENNA MOUNT FLANGE	A
4	1	7-01362	POLE SIDE MOUNT PLATE	A
5	2	7-01373	POLE MOUNT PLATE GUIDE	A

PARTS LIST

P/N	FEDERAL STANDARD COLOR	APPROVED PAINT
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5-00170-GRN	RAL6012-DARK GREEN	F63JXG25326-4387
5-00170-GRY	FS#:26373 - DOT GRAY	F63RXA25142-4387
5-00170-BLK	FS#:27038 - DOT BLACK	F63HXB25277-4387

THIRD ANGLE PROJECTION

ENGLISH

PROPRIETARY NOTE

UNLESS OTHERWISE SPECIFIED

FRACTIONS	DECIMALS	ANGLES
±1/32	.XX ± .020 .XXX ± .010	±1.0°

HOLE TOLERANCES

.013 THRU .125	+.004 -.001	.126 THRU .250	+.005 -.001	.251 THRU .500	+.005 -.001
.501 THRU .750	+.006 -.001	.751 THRU 1.000	+.010 -.001	1.001 THRU 2.000	+.012 -.001

MECHANICAL:
DIMENSIONS ARE IN INCHES
REMOVE BURRS AND SHARP EDGES
PARENTHETICAL INFORMATION IS FOR REFERENCE ONLY

APPROVALS	DATE
DRAWN BY JBruce	05-Mar-14
ENGINEER JBruce	09/26/13
CHECKED BY	

MATERIAL: SEE BOM

FINISH: PAINT: SPECIFIED ON ORDER PER NYC FEDERAL COLOR # STD

IMS
Innovative Manufacturing Solutions
1 Innovation Drive
Des Plaines, IL 60016

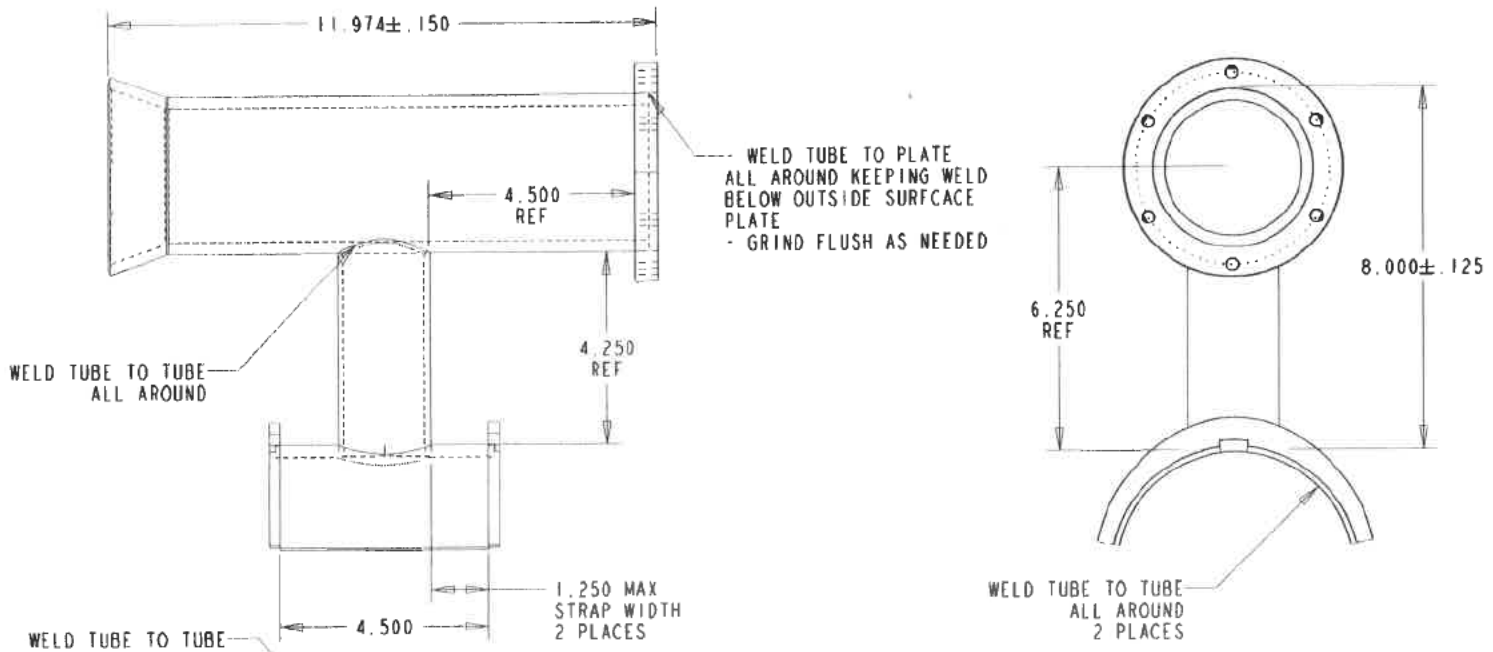
CUSTOMER: Extenet
PROJECT: NYC ANTENNA SIDE MOUNT

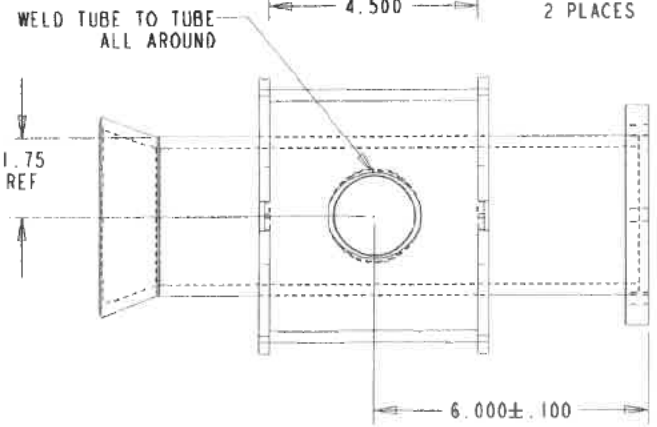
TITLE: SIDE MOUNT ANTENNA WELDMENT FOR BISHOP CROOK

SIZE	CLASS	DRAWING NO.	REV
B		5-00170	B

SCALE: 0.350 DO NOT SCALE DRAWING SHEET 1 of 2

REVISIONS				APPROVALS			
REV	ECN NO.	DFTR		DFTG	ENGR	REL	DATE
B	466		WELDING CHANGE & PAINT CONFIG		JB		





ITEM	QTY	PART NO.	DESCRIPTION	REV
1	1	T-01359	SIDE MOUNT ANTENNA TUBE	B
2	1	T-01360	SUPPORT ARM TUBE - SIDE MNT	A
3	1	T-01361	ANTENNA MOUNT FLANGE	A
4	1	T-01362	POLE SIDE MOUNT PLATE	A
5	2	T-01373	POLE MOUNT PLATE GUIDE	A

PARTS LIST

THIRD ANGLE PROJECTION

ENGLISH

UNLESS OTHERWISE SPECIFIED

FRACTIONS	DECIMALS	ANGLES
±1/32	.XX ± .020 .XXX ± .010	±1.0°

HOLE TOLERANCES

.013 THRU .125	+.004 -.001	.126 THRU .250	+.005 -.001	.251 THRU .500	+.005 -.001
.501 THRU .750	+.008 -.001	.751 THRU 1.000	+.010 -.001	1.001 THRU 2.000	+.012 -.001

MECHANICAL:
DIMENSIONS ARE IN INCHES
REMOVE BURRS AND SHARP EDGES
PARENTHETICAL INFORMATION IS FOR REFERENCE ONLY

APPROVALS	DATE
DRAWN BY JBruce	05-Mar-14
ENGINEER JBruce	09/26/13
CHECKED BY	

MATERIAL: SEE BOM

FINISH: PAINT: SPECIFIED ON ORDER

Innovative Manufacturing Solutions
1 Innovation Drive
Des Plaines, IL 60016

CUSTOMER: Extenet

PROJECT: NYC ANTENNA SIDE MOUNT

TITLE: SIDE MOUNT ANTENNA WELDMENT

SIZE	CLASS	DRAWING NO.	REV
B		5-00170	B

SCALE: 0.375 | DO NOT SCALE DRAWING | SHEET 2 of 2

mobilitie

Network Operations Guidelines

VERSION 2.1

January 16, 2017

mobilitie

Table of Contents

mobilitie

1. Executive Summary

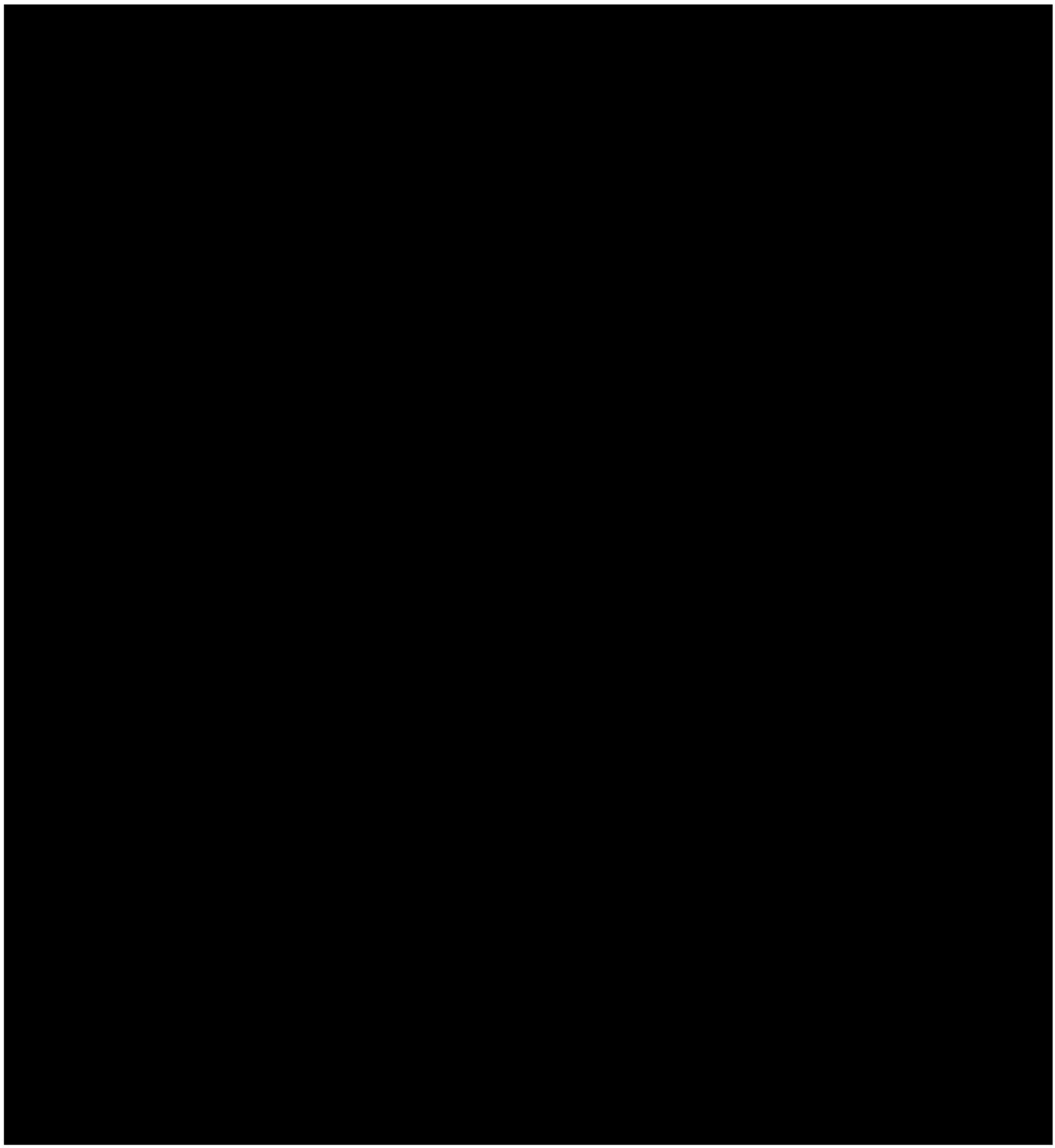
This document provides guidelines for Mobilitie's Network Operations. The guidelines include: break-fix process and reporting process flow; approved site access guidance; lockout-tag out procedures; repair and maintenance vendors; nationwide 811 call before you dig information; wood utility pole preventive maintenance; emergency response protocol; disaster recovery; and strategic plans for the Mobilitie Network Operations Center (NOC).

Adhering to these guidelines enables Mobilitie Network Operations to perform trend analysis, root-cause analysis, process improvement initiatives, controlled change requests implementations, thorough audits of vendors' performance, clear and concise communications, and efficient emergency response and disaster recovery efforts.

As Mobilitie Standards and Requirements are subject to ongoing review, the information contained may be amended by Mobilitie at any time. If a defect, ambiguity, omission or error is discovered in any of these guidelines, notify [redacted]@mobilitie.com immediately.

mobilitie

2. Right-of-Way Site Access Engagement



a. ROW Access Process Flow

b. Emergency Site Access Guidance

In case of an emergency at any Mobilitie site, contact the NOC at 1-877-244-7889. Below is the contact placard that will be visible at all Mobilitie sites and must be adhered to:

Mobilitie, LLC

In case of emergency or equipment access contact:

E-mail: MNOC@mobilitie.com

Phone: (877) 244-7889

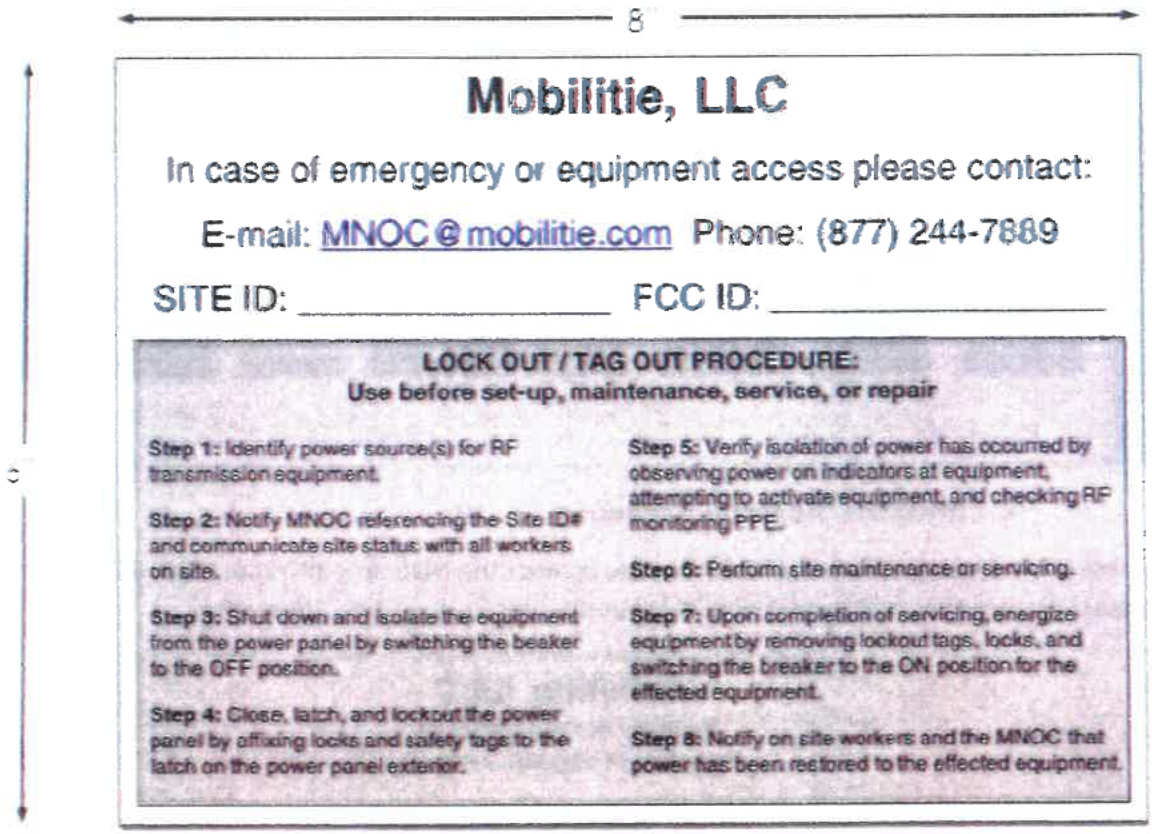
Please reference site ID

SITE ID: _____

FCC ID: _____

3. Lockout-Tag Out Procedures

Mobilitie has established Lockout/Tag-Out Procedures based on jurisdictional requirements to safeguard workers from the unexpected energization or startup of equipment, or the release of hazardous energy during service or maintenance activities. The below signage displays the steps that are to be followed before set-up, maintenance, service, or repair:



4. 811 Call Before You Dig

811 is a nationwide non-profit organization dedicated to preventing damage to underground utilities and promoting public safety. 811 functions as a communications system for parties who are planning mechanized digging activities such as excavation, tunneling, grading, boring and demolition. 811 policies and procedures can vary from state to state, as it is governed by each respective state's laws. Each state's 811 entity is headed by a Board of Directors, comprised of representatives of all utility groups within said state. Here is a detailed 811 guide: (811 Guidelines).

5. Wireless Interference Response Plan

The purpose of this Section is to define the working relationship, communications channels and support processes between Mobilitie, its customers and a jurisdiction with respect to an event of potential wireless interference. The Network Operations ("NOC") wireless interference response plan is designed for 24 hours, 7 days per week, 365 days a year and is based on jurisdictional requirements. The plan objective is to ensure efficient and accurate responses to any potential event. The process for any possible event of wireless interference is as follows:

6. Preventive Maintenance

The purpose of the wood utility pole preventive maintenance plan is to provide information and guidance to operating personnel in performing inspection and maintenance of standing wood utility poles. Included in the plan are methods and procedures for determining the minimum permissible ground line circumferences of wood utility poles. Here is the Wood Utility Pole Preventive Maintenance Plan: (Preventive Maintenance Plan).

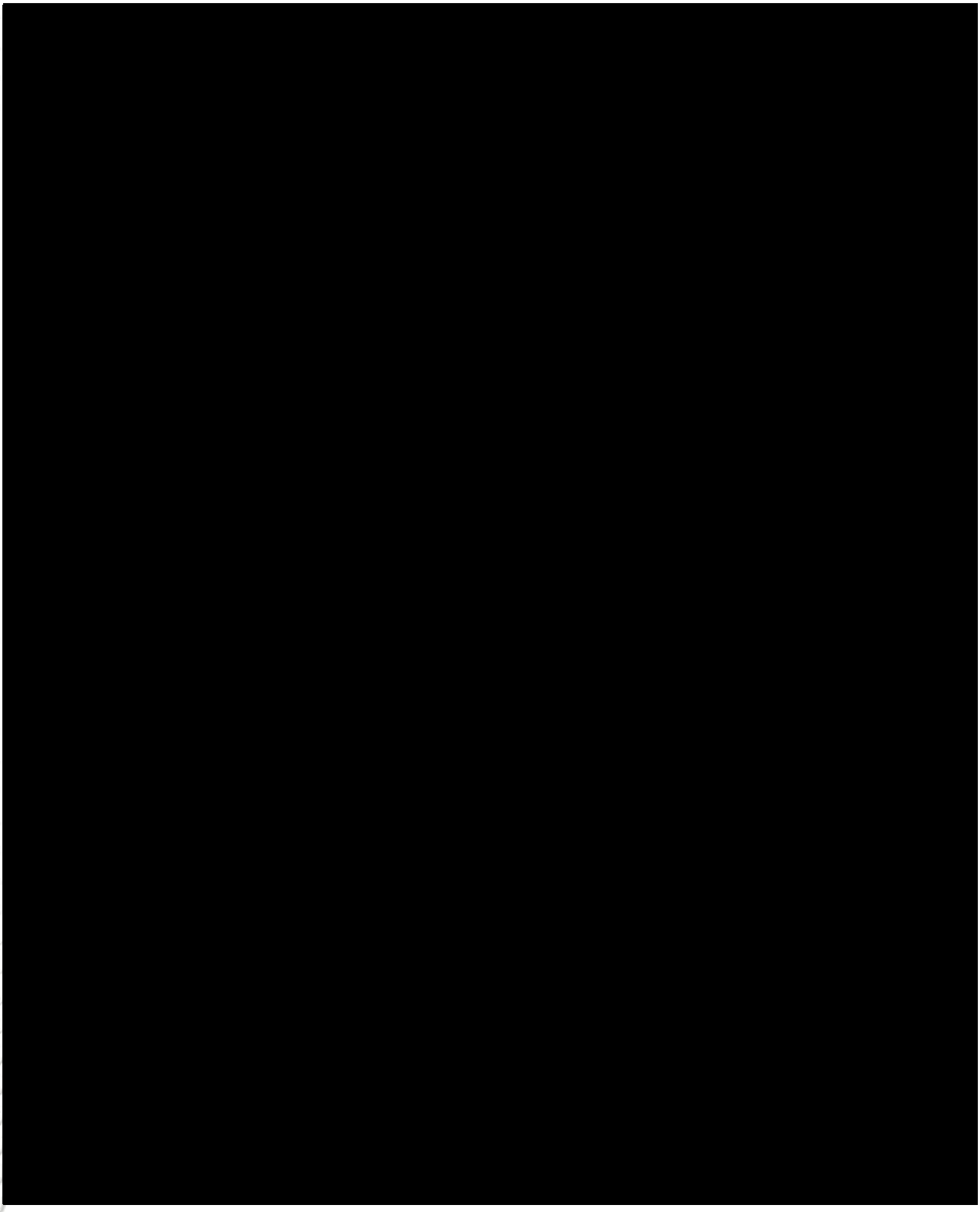
7. Emergency Response Plan

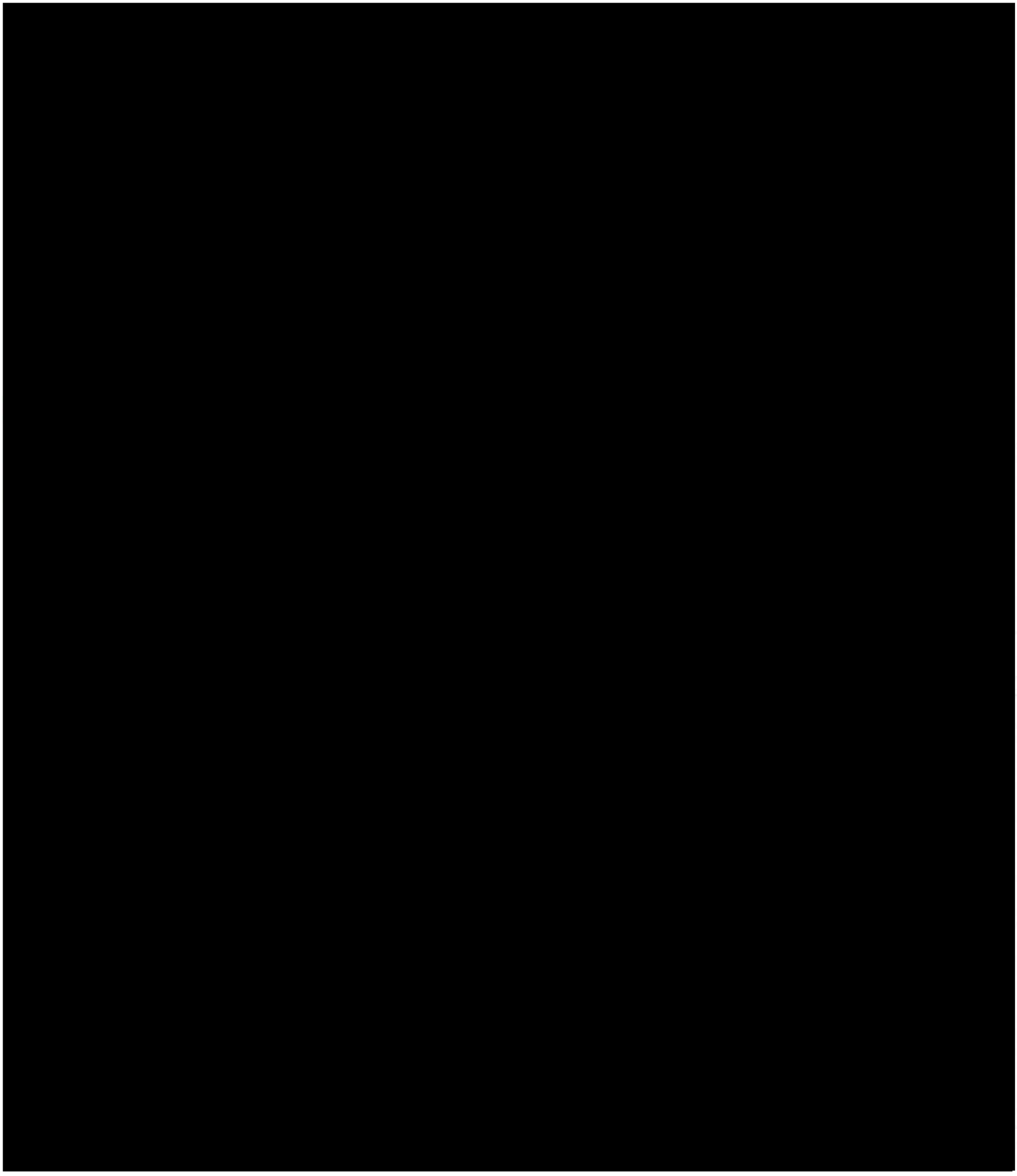
The Network Operations Emergency Response Plan is 24 hours, 7 days per week, and is based on jurisdictional requirements. The objective of the plan is to ensure the ROW is safe by:

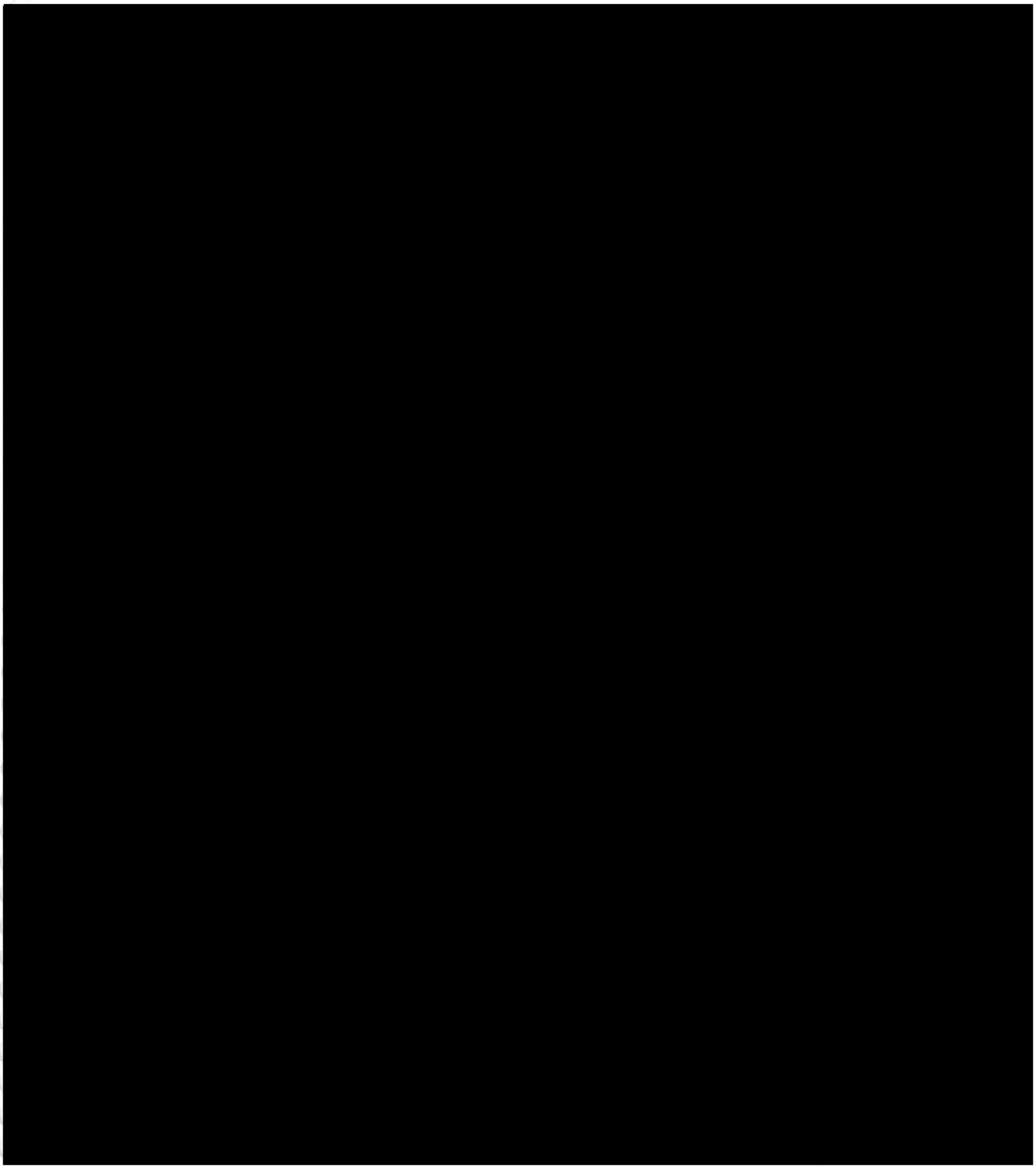
8. **Disaster Recovery Plan**

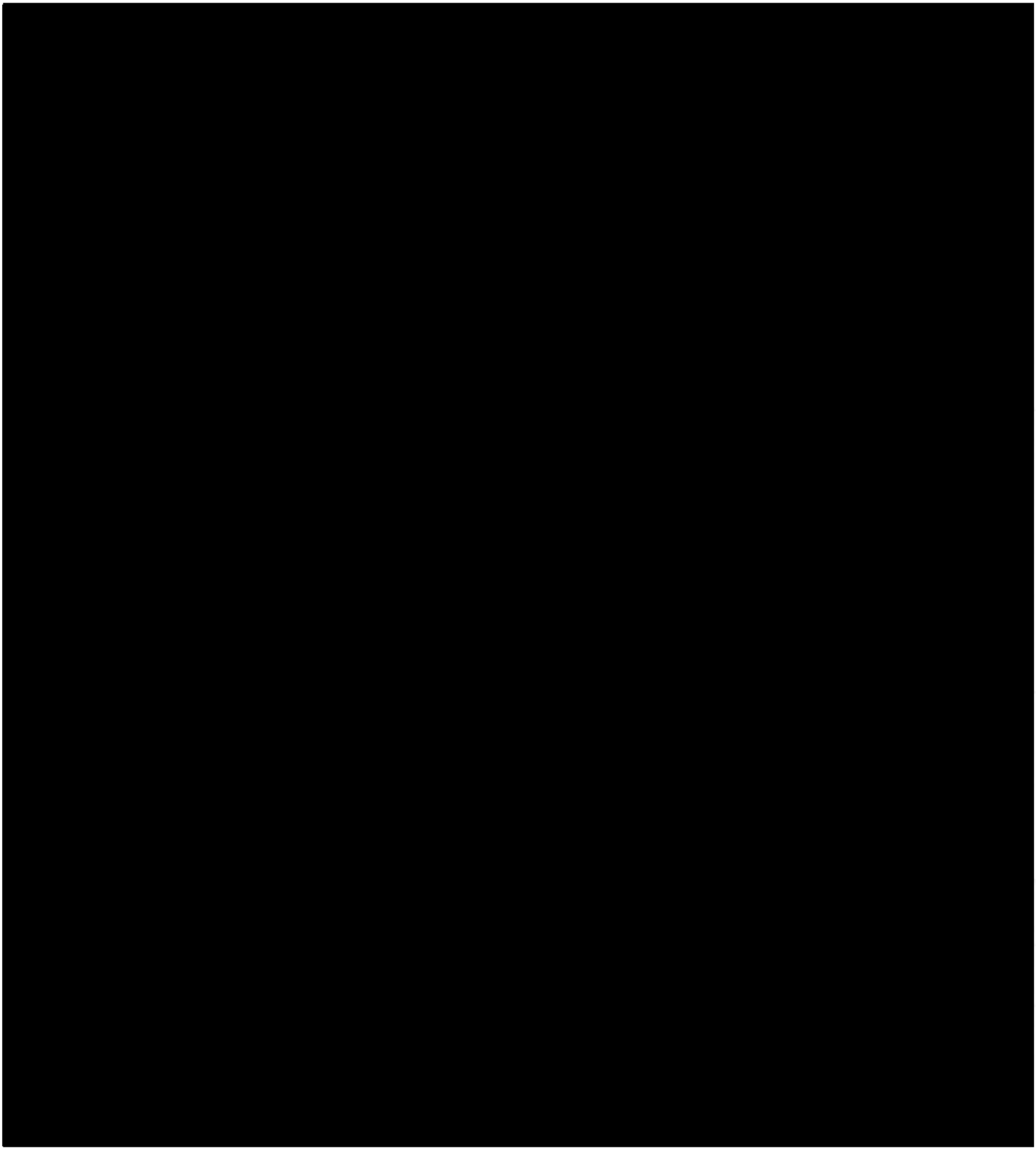
Mobilitie's Disaster Recovery Plan will utilize the National Incident Management System (NIMS). In the event of a tornado, flood, or similar disaster (whether natural or manmade), Incident Command and Control will be implemented to organize both near-term and long-term field-level operations. Here is the full Disaster Recovery Plan: (Disaster Recovery Plan).

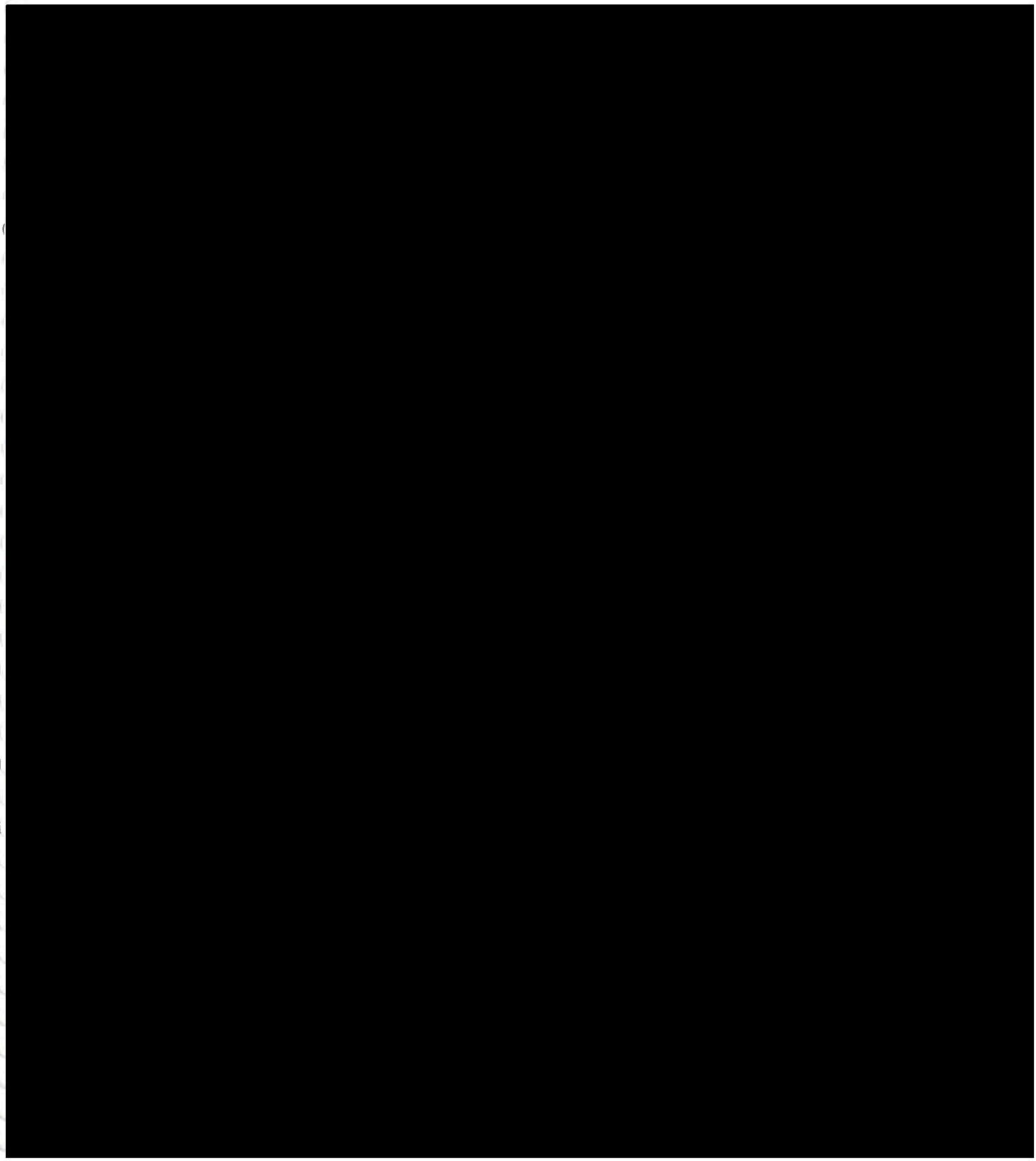
9. **Mobilitie Network Operations Center (NOC) Plan**











Pinnacle Telecom Group
Professional and Technical Services

Antenna Site RF Compliance Assessment and Report

prepared for

Mobilitie

Sprint Site "NY90XS385C"
Third Avenue & 100th Street
Brooklyn, NY

July 14, 2017

14 Ridgedale Avenue, Suite 260 • Cedar Knolls, NJ 07927 • 973-451-1630

Contents

Introduction and Summary

On June 21, 2017, at the request of Mobilitie, Pinnacle Telecom Group (PTG) performed independent expert on-site street-level measurements of potential radiofrequency (RF) exposure at a Sprint antenna site identified as "NY90XS385C", mounted on top of a street light pole on the northeast corner of the intersection of Third Avenue and 100th Street in Brooklyn, NY.

The area at street level around the site is open to the general public; therefore, the site is considered "uncontrolled" and the FCC's "general population" limit for maximum permissible exposure (MPE) is applied in assessing compliance. Measurements of RF levels were performed in normally accessible areas along Third Avenue north and south of the site, as well as along 100th Street east of the site. Representatives of Mobilitie and of the New York City Department of Information Technology & Telecommunications were present during the measurements. David Collins of PTG performed the measurements.

The results of a compliance assessment such as this can most clearly be explained by describing the RF levels as simple percentages of the FCC MPE limit. If the reference for that limit is 100 percent, then RF levels higher than 100 percent indicate the MPE limit is exceeded, while RF levels lower than 100 percent indicate compliance with the limit.

The results of the on-site measurements are as follows:

- Measurements performed at street level around the antenna site indicated a maximum RF level of 0.3935 percent of the FCC general population MPE limit. In other words, the maximum RF level measured at street level at the site was more than 254 times below the most protective limit applicable by law.
- Therefore, the site is clearly in compliance with the FCC requirements for control of RF exposure.

The remainder of this report provides a description of the site, the measurements results and an analysis of those results with respect to RF compliance.

Several appendices are included. Appendix A provides photographs of the site. Appendix B provides a description of the measurement equipment and procedures. Appendix C provides background on the FCC limits for RF exposure, along with a list of FCC references on compliance. Lastly, Appendix D provides a summary of the background and qualifications of the individual certifying compliance for the subject antenna site.

Site Description and Antenna Data

The site consists of one omnidirectional antenna mounted at the top of a street light pole. The site is located on the northeast corner of Third Avenue and 100th Street. The antenna is mounted approximately 29 feet above ground level.

Measurement Results

The results of the measurements, expressed as a percentage of the FCC general population MPE limit, are overlaid on the map (extracted from the *Google Earth* website) shown on the following page. North is at the top of the image. Third Ave runs roughly north-south, and 100th Street runs east of Third Avenue.

As shown, the maximum measured RF level was 0.3935 percent of the FCC general population MPE limit, found on the west side of Third Avenue, approximately 100 feet north of 100th Street.

Compliance Analysis and Conclusion

The results of the on-site measurements indicate that the RF levels at the sites are far below the FCC limit. At street level around the site, the highest RF level measured was 0.3935 percent of the FCC general population MPE limit. Therefore, the site is clearly in compliance with the FCC requirements for the control of RF exposure.

Certification

The undersigned certifies as follows:

1. I have read and fully understand the FCC regulations concerning RF safety and the control of human exposure to RF fields (47 CFR 1.1301 *et seq*).
2. To the best of my knowledge, the statements and information disclosed in this report are true, complete and accurate.
3. The analysis of site RF compliance provided herein is consistent with the applicable FCC regulations, additional guidelines issued by the FCC, and industry practice.
4. The results of the analysis demonstrate compliance with the FCC regulations and limit concerning the control of potential human exposure to the RF emissions from antennas.

Daniel Penesso

Daniel Penesso
Director- RF Engineering
Pinnacle Telecom Group, LLC

7/14/17

Date

Appendix A. Site Photographs

Photographs of the site, taken the day the measurements were performed, are shown below.

Appendix B. Measurement Equipment and Procedure

RF measurements were performed using a Narda model EA5091 RF probe and Narda model NBM-520 RF meter. Both the probe and meter are capable of broadband RF measurements, covering a range of 300 kHz to 50 GHz. The measuring equipment is designed to automatically register all RF levels within the frequency range and report them as percentages of the FCC's overall occupational MPE limit. Converting the measurement result to reference the general population MPE limit is simply a matter of multiplying the readout by five.

The equipment was calibrated by the manufacturer within the past 12 months.

The measurements were taken in a manner consistent with training provided by the equipment manufacturer, including the "RF Field Measurements for Antenna Sites" videotape, developed by Richard Tell Associates and now included as part of the Narda equipment package.

In order to ensure "safe-side" results, maximum RF spot-levels were measured and reported in all areas. In accordance with guidance shared with us by the FCC staff, sufficient time was spent performing the measurements to gather a "real-world" depiction of RF levels.

Appendix C. Background on the FCC MPE Limits

As directed by the Telecommunications Act of 1996, the FCC has established limits for maximum continuous human exposure to RF fields.

The FCC maximum permissible exposure (MPE) limits represent the consensus of federal agencies and independent experts responsible for RF safety matters. Those agencies include the National Council on Radiation Protection and Measurements (NCRP), the Occupational Safety and Health Administration (OSHA), the National Institute for Occupational Safety and Health (NIOSH), the American National Standards Institute (ANSI), the Environmental Protection Agency (EPA), and the Food and Drug Administration (FDA). In formulating its guidelines, the FCC also considered input from the public and technical community – notably the Institute of Electrical and Electronics Engineers (IEEE).

The FCC's RF exposure guidelines are incorporated in Section 1.301 *et seq* of its Rules and Regulations (47 CFR 1.1301-1.1310). Those guidelines specify MPE limits for both occupational and general population exposure.

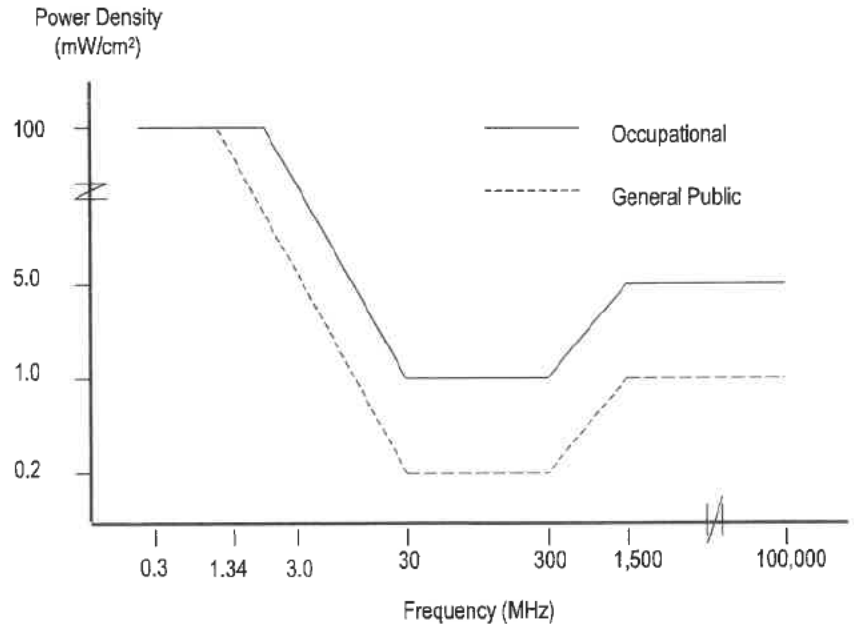
The specified continuous exposure MPE limits are based on known variation of human body susceptibility in different frequency ranges, and a Specific Absorption Rate (SAR) of 4 watts per kilogram, which is universally considered to accurately represent human capacity to dissipate incident RF energy (in the form of heat). The occupational MPE guidelines incorporate a safety factor of 10 or greater with respect to RF levels known to represent a health hazard, and an additional safety factor of five is applied to the MPE limits for general population exposure. Thus, the general population MPE limit has a built-in safety factor of more than 50. Continuous exposure at levels equal to or below the applicable MPE limits is considered to result in no adverse health effects on humans.

The reason for *two* tiers of MPE limits is based on an understanding and assumption that members of the general public are unlikely to have had appropriate RF safety training and may not be aware of the exposures they receive; occupational exposure in controlled environments, on the other hand, is assumed to involve individuals who have had such training, are aware of the exposures, and know how to maintain a safe personal work environment.

The FCC's RF exposure limits are expressed in two equivalent forms, using alternative units of field strength (expressed in volts per meter, or V/m), and power density (expressed in milliwatts per square centimeter, or mW/cm^2). The table on the next page lists the FCC limits for both occupational and general population exposures, using the mW/cm^2 reference, for the different radio frequency ranges.

Frequency Range (F) (MHz)	Occupational Exposure (mW/cm^2)	General Public Exposure (mW/cm^2)
0.3 - 1.34	100	100
1.34 - 3.0	100	$180 / F^2$
3.0 - 30	$900 / F^2$	$180 / F^2$
30 - 300	1.0	0.2
300 - 1,500	F / 300	F / 1500
1,500 - 100,000	5.0	1.0

The diagram below provides a graphical illustration of both the FCC's occupational and general population MPE limits.



Because the FCC's RF exposure limits are frequency-shaped, the exact MPE limits applicable to the instant situation depend on the frequency range used by the systems of interest.

The most appropriate method of determining RF compliance is to calculate the RF power density attributable to a particular system and compare that to the

MPE limit applicable to the operating frequency in question. The result is usually expressed as a percentage of the MPE limit.

For potential exposure from multiple systems, the respective percentages of the MPE limits are added, and the total percentage compared to 100 (percent of the limit). If the result is less than 100, the total exposure is in compliance; if it is more than 100, exposure mitigation measures are necessary to achieve compliance.

References on FCC Compliance

47 CFR, FCC Rules and Regulations, Part 1 (Practice and Procedure), Section 1.1310 (Radiofrequency radiation exposure limits).

FCC Second Memorandum Opinion and Order and Notice of Proposed Rulemaking (FCC 97-303), *In the Matter of Procedures for Reviewing Requests for Relief From State and Local Regulations Pursuant to Section 332(c)(7)(B)(v) of the Communications Act of 1934 (WT Docket 97-192), Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation (ET Docket 93-62), and Petition for Rulemaking of the Cellular Telecommunications Industry Association Concerning Amendment of the Commission's Rules to Preempt State and Local Regulation of Commercial Mobile Radio Service Transmitting Facilities*, released August 25, 1997.

FCC First Memorandum Opinion and Order, ET Docket 93-62, *In the Matter of Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation*, released December 24, 1996.

FCC Report and Order, ET Docket 93-62, *In the Matter of Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation*, released August 1, 1996.

FCC Office of Engineering and Technology (OET) Bulletin 65, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", Edition 97-01, August 1997.

FCC Office of Engineering and Technology (OET) Bulletin 56, "Questions and Answers About Biological Effects and Potential Hazards of RF Radiation", edition 4, August 1999.

"RF Field Measurements for Antenna Sites", (video), Richard Tell Associates Inc., 1997.

"EME Awareness for Antenna Site Safety", (video), Motorola (produced in association with Richard Tell Associates Inc.), 1997.

Appendix D. Summary of Expert Qualifications

Daniel Penesso, Director – RF Engineering, Pinnacle Telecom Group, LLC

Synopsis:	• 19 years of experience in all aspects of wireless RF engineering, including network design and implementation, interference analysis, FCC and FAA regulatory matters, and antenna site compliance with FCC RF exposure regulations • Have performed RF engineering and FCC compliance work for all the major wireless carriers – AT&T, Verizon Wireless, Sprint, T-Mobile, and MetroPCS, as well as Crown Castle • Have served as an expert witness on RF engineering and/or FCC RF compliance more than 100 times before municipal boards in New Jersey and New York
Education:	• Bachelor of Science in Electrical Engineering, DeVry Institute of Technology, Chicago, IL, 1987
Current Responsibilities	• Manages PTG staff work involving FCC RF compliance for wireless antenna sites, including the provision of math- and measurements-based site compliance reports, related expert testimony in municipal hearings, and compliance-related support in client meetings with prospective site landlords and in town meetings • Provides math-based FCC compliance assessments and reports for PTG's wireless clients, including AT&T, Verizon Wireless, T-Mobile, Sprint, MetroPCS, and Crown Castle • Responsible for providing client consulting and in-house training on FCC and OSHA RF safety compliance
Prior Experience:	• Have served as senior RF engineer for four of the five national wireless carriers – AT&T, T-Mobile, Sprint, and MetroPCS – in the New York and New Jersey markets • Served as an RF engineer for Metricom, Triton PCS, Alltel Communications, and Western Wireless • Have worked as an RF engineer for several engineering services companies, including Sublime Wireless, Amirit Technologies, Celcite, and Wireless Facilities Incorporated

Managerial Experience

Senior Management Team

Gary Jabara: Chairman/ Founder: Prior to founding Mobilitie, Gary was a partner at Deloitte& Touche responsible for Wireless Real estate and Infrastructure. He oversaw the negotiation of over 410 billion of telecommunication infrastructure assets on behalf of the Big Six Wireless Carriers. Gary has 23 years' experience in the mobile communication industry starting with the Los Angles Cellular Telephone Company where he led the firm's real estate division. and was responsible for all aspects of site acquisition, budgeting, engineering, and development.

Christos Karmis: President& CEO: Christos serves as President of Mobilitie and oversees all aspects of the company's business. He is responsible for leading the company's growth across its tower, small cell, DAS, fiber, and Wi-Fi solutions. Christos has led the Mobilitie team for the development of thousands of cell towers, DAS, and small cell nodes across the US and international markets. In addition, he has led the company's public venue strategy which has resulted in the deployment of some of the largest in-building DAS and Wi-Fi networks in the country, and installations at stadiums and arenas across all major professional sporting leagues. Before joining Mobilitie, Christos specialized in real estate advisory services and the wireless communications industry with Deloitte Consulting. While at Deloitte, he provided operational and network optimization strategies to the world's largest wireless carriers.

Dana Tardelli: Chief Operating Officer: Dana oversees Mobilitie's wireless infrastructure solutions across the United States for the wireless service providers. Dana has more than 20 years of experience in the mobile industry and oversees Mobilitie's DAS, Small Cell, Towers and Wi-Fi solutions. Prior to Mobilitie, Dana worked for 10 years at AT&T as part of the AT&T Mobility team. His experience includes serving in a key role in AT&T's partnership with Apple on the iPhone, as well as being central to the work with the connected device and connected car segments of AT&T. Dana also has extensive experience leading AT&T's mobile pricing strategy, including tiered data, shared plans, hard bundles and differentiated services.

Lisa Torres: Senior VP-Network Deployment: Lisa oversees the regional deployment teams. Lisa has over 20 years of experience in telecommunications, on both the carrier and asset sides. Most of her career has been focused on the acquisition and construction of networks. Prior to Mobilitie, Lisa held leadership roles at Ericsson, Clearwire and Sprint.

Jason Caliento: Executive VP-Network Strategy: Jason s leads Network Engineering, Real Estate, Government Relations, Construction and Operations for Mobilitie. Jason has 18 years of experience in the telecommunications industry focused on network design and deployment, including some of the nation's largest roll-outs of new technologies and infrastructure. Prior to joining Mobilitie, Jason served as the Chief Operating Officer of SAC Wireless, a Nokia Company, and led the National PMO for Clearwire.

Christopher Glass: Senior VP-General Counsel: Christopher oversees all Mobilitie's Distributed Antenna System networks. He joins Mobilitie with over twelve years of site development and project management experience in the wireless industry. Most recently, Christopher was the Network Deployment Project Manager for Clearwire responsible for the deployment of their 4G WiMax network in Los Angeles. Prior to Clearwire, Christopher spent nearly ten years at Sprint Nextel in various network deployment roles, most recently serving as the Strategic Sites Manager for the West Region. In his role as Strategic Sites Manager, Christopher oversaw the deployment of numerous in-building and outdoor DAS systems for Sprint Nextel, including stadiums, convention centers, casinos and shopping malls.

New York City Team

Mobilitie North East Deployment Organization Includes Decades of experience working with NYC DOITT and DOT, Major carriers and fortune 500 companies. We have constructed over 800 sites in NYC utilizing the DOITT pole top process.

The NYC team is comprised of the following highly qualified members:

Joe Sforza - Northeast Vice President

Joe oversees the North-East deployment team. Joe has over 25 years of experience in telecommunications. Joe has been involved in Construction of fiber optic and wireless networks across the US and Internationally. Prior to Mobilitie, Joe held management roles at DoITT, Reliance Globalcom, TW Telecom and Bell Atlantic.

Lee Fenster – New York Regional Director

Lee oversees the NYC market deployment team which covers the five New York City, Rockland, Westchester and Orange County NY. Lee has over 20 years' experience in the Wireless Industry including Design, Engineering, Backhaul, Permitting and Zoning, Construction, Commissioning, System Performance, Regulatory Compliance, Operations, Maintenance, and Application Development. Prior to Mobilitie, Lee has held Individual contributor and Leadership roles at Ameritech Cellular, AT&T, Ericsson, and Northrop Grumman.

Brian Fernandez - Senior Project Manager

Brian is a Senior Project Manager covering the NYC, Orange, Westchester and Rockland County markets. Brian has over 15 years of experience in telecommunications within the NYC area. Prior to Mobilitie Brian worked at Northrop Grumman supporting DoiTT projects. He has also held technical positions at AT&T and XO Communications.

Ming Eng - Senior Project Manager

Ming is currently a Senior Project Manager covering the NYC market. Ming has over 20 years of experience in telecommunications, on both the carrier and equipment vendor sides. Prior to Mobilitie, Ming has worked for TW Telecom, Smartsan, Dell/Force10 networks, and Carrier Access. Ming holds an Electrical Engineering degree from Rensselaer Polytechnic Institute.

Joshua Ababon - Senior Construction Project Manager

Joshua Ababon is the primary point of contact with NYC DOT, manages the day to day relationship with Mobilitie's General Contractors within the New York City Market, and provides technical support the regional team. Prior to Mobilitie, Joshua held a regional Project Manager and Lead Field Engineer position at Samsung in the American Midwest Region, Lead Field Technician at Clearwire in NYC, and has over 12 years of telecommunications experience.

Greg Russo – New York Network Real Estate Manager:

Oversees the New York City team's permitting efforts in New York City, Rockland, Westchester and Orange county's. Greg brings 23 years of experience in local and regional site acquisition, contract administration, zoning, permitting and property management. Prior to joining Mobilitie, Greg had roles with Nextel, AT&T, T-Mobile and Northrop Grumman.

The City of New York
Mayor's Office of Contract Services
Doing Business Accountability Project

Doing Business Data Form

To be completed by the City Agency prior to distribution			
Agency:		Transaction ID:	
Check One:	Transaction Type (check one):		
☐ Proposal	☐ Concession	☐ Contract	☐ Economic Development Agreement
☐ Award	☐ Franchise	☐ Grant	☐ Pension Investment Contract

Any entity receiving, applying for or proposing on an award or agreement must complete a Doing Business Data Form (see Q&A sheet for more information). Please either type responses directly into this fillable form or print answers by hand in black ink, and be sure to fill out the certification box on the last page. **Submission of a complete and accurate form is required for a proposal to be considered responsive or for any entity to receive an award or enter into an agreement.**

This Data Form requires information to be provided on principal officers, owners and senior managers. The name, employer and title of each person identified on the Data Form will be included in a public database of people who do business with the City of New York; no other information reported on this form will be disclosed to the public. **This Data Form is not related to the City's VENDEX requirements.**

Please return the completed Data Form to the City Agency that supplied it. Please contact the Doing Business Accountability Project at DoingBusiness@cityhall.nyc.gov or 212-788-8104 with any questions regarding this Data Form. Thank you for your cooperation.

Section 1: Entity Information

Entity Name: Mobilitie, LLC

Entity EIN/TIN: [redacted]

Entity Filing Status (select one):

☒ Entity has never completed a Doing Business Data Form. *Fill out the entire form.*

☐ Change from previous Data Form dated _____. *Fill out only those sections that have changed, and indicate the name of the persons who no longer hold positions with the entity.*

☐ No Change from previous Data Form dated _____. *Skip to the bottom of the last page.*

Entity is a Non-Profit: ☐ Yes ☐ No

Entity Type: ☐ Corporation (any type) ☐ Joint Venture ☒ LLC ☐ Partnership (any type)
☐ Sole Proprietor ☐ Other (specify): _____

Address: 660 Newport Center Drive, Ste. 200

City: Newport Beach State: CA Zip: 92660

Phone : [redacted] Fax : [redacted]

E-mail: [redacted]@mobilitie.com

Provide your e-mail address and/or fax number in order to receive notices regarding this form by e-mail or fax.

Section 2: Principal Officers

Please fill in the required identification information for each officer listed below. If the entity has no such officer or its equivalent, please check "This position does not exist." If the entity is filing a Change Form and the person listed is replacing someone who was previously disclosed, please check "This person replaced..." and fill in the name of the person being replaced so his/her name can be removed from the *Doing Business Database*, and indicate the date that the change became effective.

Chief Executive Officer (CEO) or equivalent officer

☐ This position does not exist

The highest ranking officer or manager, such as the President, Executive Director, Sole Proprietor or Chairperson of the Board.

First Name: Christos MI: Last: Karmis

Office Title: CEO/President

Employer (if not employed by entity): Mobilitie Management, LLC

Birth Date (mm/dd/yy): [redacted] Home Phone #: [redacted]

Home Address: [redacted]

☒ This person replaced former CEO: Gary Jabara on date: 9/1/2017

Chief Financial Officer (CFO) or equivalent officer

☐ This position does not exist

The highest ranking financial officer, such as the Treasurer, Comptroller, Financial Director or VP for Finance.

First Name: Dessi MI: Last: Sarabosing

Office Title: CFO

Employer (if not employed by entity): Mobilitie Management, LLC

Birth Date (mm/dd/yy): [redacted] Home Phone #: [redacted]

Home Address: [redacted]

☒ This person replaced former CFO: Kenny Lin on date: 4/17/2017

Chief Operating Officer (COO) or equivalent officer

☐ This position does not exist

The highest ranking operational officer, such as the Chief Planning Officer, Director of Operations or VP for Operations.

First Name: Dana MI: Last: Tardelli

Office Title: COO

Employer (if not employed by entity): Mobilitie Management, LLC

Birth Date (mm/dd/yy): [redacted] Home Phone #: [redacted]

Home Address: [redacted]

☐ This person replaced former COO: N/A on date: N/A

Section 3: Principal Owners

Please fill in the required identification information for all individuals who, through stock shares, partnership agreements or other means, **own or control 10% or more of the entity**. If no individual owners exist, please check the appropriate box to indicate why and skip to the next page. If the entity is owned by other companies, those companies do **not** need to be listed. If an owner was identified on the previous page, fill in his/her name and write "See above." If the entity is filing a Change Form, list any individuals who are no longer owners at the bottom of this page. If more space is needed, attach additional pages labeled "Additional Owners."

There are no owners listed because (select one):

☐ The entity is not-for-profit ☒ There are no individual owners ☐ No individual owner holds 10% or more shares in the entity

☐ Other (explain): _____

Principal Owners (who own or control 10% or more of the entity):

First Name: _____ MI: _____ Last: _____

Office Title: _____

Employer (if not employed by entity): _____

Birth Date (mm/dd/yy): _____ Home Phone #: _____

Home Address: _____

First Name: _____ MI: _____ Last: _____

Office Title: _____

Employer (if not employed by entity): _____

Birth Date (mm/dd/yy): _____ Home Phone #: _____

Home Address: _____

First Name: _____ MI: _____ Last: _____

Office Title: _____

Employer (if not employed by entity): _____

Birth Date (mm/dd/yy): _____ Home Phone #: _____

Home Address: _____

Remove the following previously-reported Principal Owners:

Name: _____ Removal Date: _____

Name: _____ Removal Date: _____

Name: _____ Removal Date: _____

Section 4: Senior Managers

Please fill in the required identification information for all senior managers who oversee any of the entity's relevant transactions with the City (e.g., contract managers if this form is for a contract award/proposal, grant managers if for a grant, etc.). Senior managers include anyone who, either by title or duties, has substantial discretion and high-level oversight regarding the solicitation, letting or administration of any transaction with the City. **At least one senior manager must be listed, or the Data Form will be considered incomplete.** If a senior manager has been identified on a previous page, fill in his/her name and write "See above." If the entity is filing a Change Form, list individuals who are no longer senior managers at the bottom of this section. If more space is needed, attach additional pages labeled "Additional Senior Managers."

Senior Managers:

First Name: Joseph MI: _____ Last: Sforza

Office Title: Vice President, Network Deployment

Employer (if not employed by entity): Mobilitie Management, LLC

Birth Date (mm/dd/yy): [redacted] Home Phone #: [redacted]

Home Address: [redacted]

First Name: Christos Karmis (see above) MI: _____ Last: _____

Office Title: _____

Employer (if not employed by entity): _____

Birth Date (mm/dd/yy): _____ Home Phone #: _____

Home Address: _____

First Name: Dana Tardelli (see above) MI: _____ Last: _____

Office Title: _____

Employer (if not employed by entity): _____

Birth Date (mm/dd/yy): _____ Home Phone #: _____

Home Address: _____

Remove the following previously-reported Senior Managers:

Name: _____ Removal Date: _____

Name: _____ Removal Date: _____

Certification

I certify that the information submitted on these four pages and ____ additional pages is accurate and complete. I understand that willful or fraudulent submission of a materially false statement may result in the entity being found non-responsible and therefore denied future City awards.

Name: Christos Karmis

Signature: _____ Date: _____

Entity Name: Mobilitie, LLC

Title: CEO Work Phone #: [redacted]

Return the completed Data Form to the agency that supplied it.

For information or assistance, call the Doing Business Accountability Project at 212-788-8104.

EXHIBIT D
AFFIRMATION

The undersigned proposer or bidder affirms and declares that said proposer or bidder is not in arrears to the City of New York upon debt, contract, or taxes and is not a defaulter, as surety or otherwise, upon obligation to the City of New York, and has not been declared not responsible, or disqualified, by any agency of the City of New York, nor is there any proceeding pending relating to the responsibility or qualification of the proposer or bidder to receive public contracts except
for ECB violations in the normal course of business which are settled by,
and the responsibility of, the Proposer's or Bidder's general contractor.

Full name of Proposer or Bidder
Mobilitie,LLC

Address
660 Newport Center Drive, Ste. 200

City Newport Beach State CA Zip Code 92660

CHECK ONE BOX AND INCLUDE APPROPRIATE NUMBER:

- ☐ A - Individual or Sole Proprietorship*
  SOCIAL SECURITY NUMBER _____
- ☐ B - Partnership, Joint Venture or other unincorporated organization
  EMPLOYER IDENTIFICATION NUMBER _____
- ☒ C - Corporation
  EMPLOYER IDENTIFICATION NUMBER [redacted]

By _____
Signature
CEO
Title

If a corporation, place seal here:

Must be signed by an officer or duly authorized representative.

* Under the Federal Privacy Act the furnishing of Social Security Numbers by bidders on City contracts is voluntary. Failure to provide a Social Security Number will not result in a bidder's disqualification. Social Security Numbers will be used to identify bidders, proposers, or vendors to ensure their compliance with laws, to assist the City in enforcement of laws as well as to provide the City a means of identifying of businesses which seek City contracts.

EXHIBIT C
ACKNOWLEDGMENT OF RELEASE DATE AND ADDENDUM

APPLICANT'S NAME: Mobilitie, LLC

RFP RELEASE DATE: June 12,

NUMBER OF ADDENDA RECEIVED: 4

ISSUE DATE(S) OF ADDENDA: #4 - July 25, 2018; #3 - July 11, 2018;
#2 - June 29, 2018; #1 - June 27, 2018

STATE OF NEW YORK DEPARTMENT OF PUBLIC SERVICE

THREE EMPIRE STATE PLAZA, ALBANY, NY 12223-1350
Internet Address: http://www.dps.state.ny.us

October 3, 2006

John C. Dodge, Esq.
Cole Raywid & Braveman, LLP
1919 Pennsylvania Avenue, NW
Washington, DC 20006

Re: Case No. 06-C1049

Dear Mr. Dodge:

The application, by Mobilitie, LLC on August 29, 2006, for a Certificate of Public Convenience and Necessity to operate in New York State as a facilities-based provider and reseller of telephone service, without authority to provide local exchange service, is hereby approved. This approval is based upon the accuracy of the information provided in the company's application and may be revoked if the application is found to contain false or misleading information, for failure to file or maintain current tariffs, or for violation of Commission rules and regulations.

The company's tariff, P.S.C. No. 1 – Telephone, is also approved.

The company is not authorized to use its own operators to handle 0- (emergency or non-emergency) calls. Such calls must be routed to another telephone company or operator services provider authorized to handle such calls, until such time as an amended Certificate of Public Convenience and Necessity is obtained pursuant to Part 649.6 of the Commission's rules.

The company must obtain any required consents of municipal authorities before commencing construction of telephone lines. It must also comply with applicable federal laws, New York State Public Service Law and related statutes, and the Commission's rules and regulations.

The company is also required to file a Statement of Gross Intrastate Operating Revenues by March 31 each year. It will be notified in writing each year of the required content and format of this report.

If you have any questions, please contact Jim Kittleman at (518) 486-2812.

By direction and delegation
of the Commission,

Robert H. Mayer
Director
Office of Telecommunications

cc: Maria LeBoeuf
Greg Pattenaude
Central Operations (2)

Business References

Hylan Datacom & Electrical LLC;

Robert DiLeo CEO

[redacted]@HylanGroup.com

[redacted]

950 Holmdel Road Holmdel, New Jersey 07733

ZenFi

Ray La Chance CEO

[redacted]@zenfi.com

[redacted]

Trinity Technologies LLC:

Oscar Carrillo CEO

[redacted]@trintech.net

[redacted]

181 Greenwood Ave Midland Park NJ 07432

Sprint

Mark Walker Northeast Network Vice President

[redacted]@sprint.com

[redacted]

Consolidated Edison

Llewellyn Everard Telecom Applications Management

[redacted]@coned.com

[redacted]

Additional reference available upon request

mobilitie®
intelligent infrastructure

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