ARLINGTON COUNTY, VIRGINIA

County Board Agenda Item
Meeting of March 13, 2010

DATE: March 2, 2010

SUBJECT: U-3248-10-1 USE PERMIT for public utility/telecommunications for one (1) microwave/dish antenna located at 5100 8th Road South (RPC #22-014-131).

Applicant:
Clearwire Wireless Broadband

By:
Adam Knubel
Clearwire Wireless Broadband
7380 Coca Cola Drive, Suite 106
Hanover, Maryland 21076

C.M. RECOMMENDATION:

Approve the use permit for addition of one (1) dish antenna to an existing telecommunications facility subject to the conditions of the staff report.

ISSUES: The applicant is requesting a use permit to install one (1) dish antenna at an existing telecommunications facility on the roof of a multifamily building, and no issues have been identified.

SUMMARY: The applicant, Clearwire Wireless Broadband, is requesting a use permit for the addition of one (1) microwave dish antenna to an existing telecommunications facility on the roof of the Park Warren Towers Apartments. The one (1) dish antenna is proposed to be mounted lower than the height of the chimney on the building, and will not create an additional visual impact. The proposal is consistent with the *Interim Guidelines for Telecommunications Facilities on County-Owned Property* (Telecommunications Guidelines), which is used as a guide on privately owned property and encourages the placement of antennas on existing structures. The Columbia Heights West Civic Association has been contacted. At the date of this report, staff has not received any comments about the use permit request. Therefore, staff recommends that the use permit be approved subject to the conditions of the staff report.

BACKGROUND: The applicant is proposing to mount one (1) additional dish antenna to an existing telecommunications facility on the roof of the Park Warren Towers Apartments. The site

is located at 5100 8th Road South, and is described as follows:

Site: The 392,196 square foot site is bound on the south by Columbia Pike, on the east by South Dinwiddie Street, and on the west by South Frederick Street. The site consists of a residential multifamily building.

Zoning: The site is zoned "RA14-26" Apartment Dwelling Districts.

Land Use: The site is designated on the General Land Use Plan (GLUP) as "Low-Medium" Residential (16-36 units/acre).

Neighborhood: The site is located within the Columbia Heights West Civic Association. The civic association has been contacted. At the date of this report, no issues have been raised by the civic association or citizens about the use permit request.

DISCUSSION: The applicant, Clearwire Wireless Broadband, is requesting a use permit for the placement of one (1) dish antenna on the roof of the Park Warren Towers Apartments. The roof of the subject multifamily building contains an existing telecommunications facility consisting of a number of panel, microwave dish, and GPS antennas. The existing equipment shelter is adjacent to the building on a separate, freestanding platform. The applicant's proposal includes mounting one (1) dish antenna on an existing rooftop chimney structure located on the southwest corner of the building at a height of 54' from grade and installing a 2" innerduct with cables routed inside an existing covered cable tray leading towards the rooftop antennas. The subject microwave dish antenna measures approximately sixteen (16) inches in diameter.

The *Interim Guidelines for Placement of Telecommunications Facilities on County-Owned Property* (Telecommunications Guidelines), were used to evaluate the application. The Telecommunication Guidelines offer direction in the way of design, visual impact, and compliance with Federal Communications Commission (FCC) regulations, among other things. The Telecommunication Guidelines can be applied to telecommunication facilities on privately owned as well as County-owned property. The Telecommunications Guidelines encourage the location of new antennas on existing structures, as opposed to constructing a new pole. The proposed dish antenna meets these criteria. Attached are plans depicting the location and appearance for the proposed dish antenna.

The proposal will not have a visual impact on the surrounding residences. The chimney on the subject building reaches a height of 56' from grade, and the proposed antenna will not exceed that height at 54' from grade. Moreover, the applicant indicates that all cables will be hidden under a new innerduct routed inside an existing covered cable tray leading to the rooftop antennas. The existing telecommunications facility will continue to be unmanned, and no ground space will be used in association with this proposal.

CONCLUSION: Staff supports the applicant's proposal because it is consistent with the Telecommunications Guidelines and it will not create an additional visual impact. The Columbia Heights West Civic Association has been contacted. At the date of this report, staff has not received any comments about the use permit request. Therefore, staff recommends that the use

permit for Clearwire Wireless Broadband for the placement of one (1) microwave dish antenna to an existing telecommunications facility at 5100 8th Road South be approved subject to the following conditions.

Conditions:

1. The applicant agrees that the one (1) Clearwire dish antenna on the existing building at 5100 8th Road South will be installed as shown on plans dated February 9, 2010. Any additional antennas on the site will require a use permit amendment.

2. The applicant shall identify a community liaison who shall be available to address any concerns regarding the facility operation. The name and telephone number of the liaison shall be provided to the Columbia Heights West Civic Association and the Zoning Administrator.

3. The applicant agrees that the antenna shall be removed within ninety (90) days after any cessation of use.

PREVIOUS COUNTY BOARD ACTIONS:

June 4, 1960	Denied a use permit (U-1390-60-1) for operating the principal offices of physicians, surgeons or dentists (2) (Apartments 101 and 104) at 5100 8th Road South.

SHEET INDEX

NO.	DESCRIPTION
T-1	TITLE SHEET
C-1	OVERALL SITE PLAN
C-1A	SITE PLAN
C-2	SHELTER PLAN
C-3	SITE ELEVATION
C-4	ANTENNA DETAILS
C-5	ANTENNA LINE DIAGRAM & NOTES

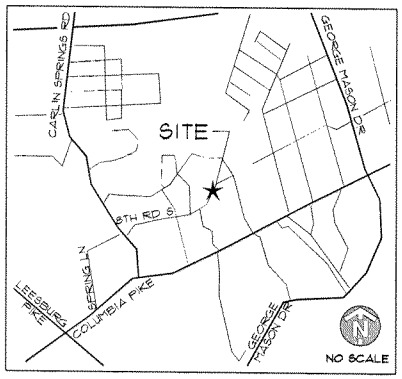
DRIVING DIRECTIONS

DEPART FROM CLEARWIRE OFFICE:

593 HERNDON PKWY, HERNDON, VA 20170.

TURN RIGHT ONTO SPRING ST. TAKE RAMP RIGHT ONTO SR-7100 TOWARDS VA-7100/FAIRFAX CO PKWY. TURN LEFT TOWARDS VA-267-TOLL/WASHINGTON. MERGE ONTO SR-267, AT EXIT 18, STAY ON SR-267 EAST. MERGE ONTO I-66. AT EXIT 69, TURN RIGHT ONTO RAMP TOWARDS US-29/VA-237/ WASHINGTON BLVD/LEE HWY. BEAR LEFT ONTO FAIRFAX DR, THEN IMMEDIATELY TURN RIGHT ONTO US-29. TURN LEFT ONTO SR-7. BEAR LEFT ONTO US-50 TOWARDS US-50/WASHINGTON. TAKE RAMP LEFT ONTO US-50 TOWARDS US-30. KEEP RIGHT ONTO RAMP TOWARDS CARLIN SPRINGS RD. TURN RIGHT ONTO S CARLIN SPRINGS RD. TURN LEFT ONTO 8th RD S. ARRIVE AT SITE.

VICINITY MAP



clearwire®
wireless broadband

SITE NAME

PARKGLEN

SITE NUMBER

DC-WSH5475-A (VA2193 HOST)

SITE ADDRESS

5100 8th ROAD S
ARLINGTON, VA 22204

PROJECT TYPE

4G BACKHAUL

PROJECT INFORMATION

- NEW BACKHAUL EQUIPMENT INSIDE EXISTING SHELTER
- TELECOMMUNICATION BACKHAUL DISH ANTENNAS MOUNTED ON EXISTING BUILDING
- SITE PLANS AND CONSTRUCTION DETAILS ARE PROVIDED WITHIN
- CODES REFERENCED: IBC 2005 EDITION

ELECTRICAL INFORMATION

- CODES REFERENCED: NATIONAL ELECTRICAL CODE, 2002 EDITION

PROJECT SUMMARY

SITE NAME:	PARKGLEN
SITE NO:	DC-WSH5475-A (VA2193 HOST)
SITE ADDRESS:	5100 8th ROAD S ARLINGTON, VA 22204
JURISDICTION:	ARLINGTON COUNTY
ZONING:	RA14-26
PARCEL ID #:	22014131
PROPERTY OWNER:	AMERICAN TOWER
APPLICANT:	CLEARWIRE WIRELESS BROADBAND 593 HERNDON PKWY HERNDON, VA 20170
FAX:	(703) 547-5400

SITE COORDINATES FROM CANDIDATE PACKAGE

LATITUDE:	N. 38° 51' 22.68"	(NAD 83)
LONGITUDE:	W. 77° 06' 52.56"	(NAD 83)
GROUND ELEVATION:	232 FT. AMSL	(NAVD 88)
CONSTRUCTION MANAGER:	JEROME FUCHS	
PHONE:	(443) 904-5418	

HANDICAPPED REQUIREMENTS

FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAP ACCESS REQUIREMENTS NOT REQUIRED.

PLUMBING REQUIREMENTS

FACILITY HAS NO PLUMBING.

ENGINEER'S LICENSE

I CERTIFY THAT THESE DRAWINGS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND CONTROL AND TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE REQUIREMENTS OF THE IBC 2005 EDITION

LICENSED ENGINEER - STATE OF VIRGINIA

EXPIRES: SIGNED:

APPROVALS

CONSTRUCTION		DATE
RF		DATE
OPS		DATE
LANDLORD		DATE

DRAWING SCALED TO 11"x17"

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CHECKED BY: FD

APPROVED BY: MB

#	DATE	DESCRIPTION	INT
	6/10/09	CONSTRUCTION	HA
	10/29/09	REV. CONSTRUCTION	HA
	11/10/09	PERMIT/CONST.	HA
	2/09/10	REV. PERMIT/CONS.	HA

DATE SIGNED: _____

SITE NAME

PARKGLEN

SITE NUMBER

DC-WSH5475-A (VA2193 HOST)

SITE ADDRESS

5100 8th ROAD S
ARLINGTON, VA 22204

SHEET NAME

TITLE SHEET

SHEET NUMBER

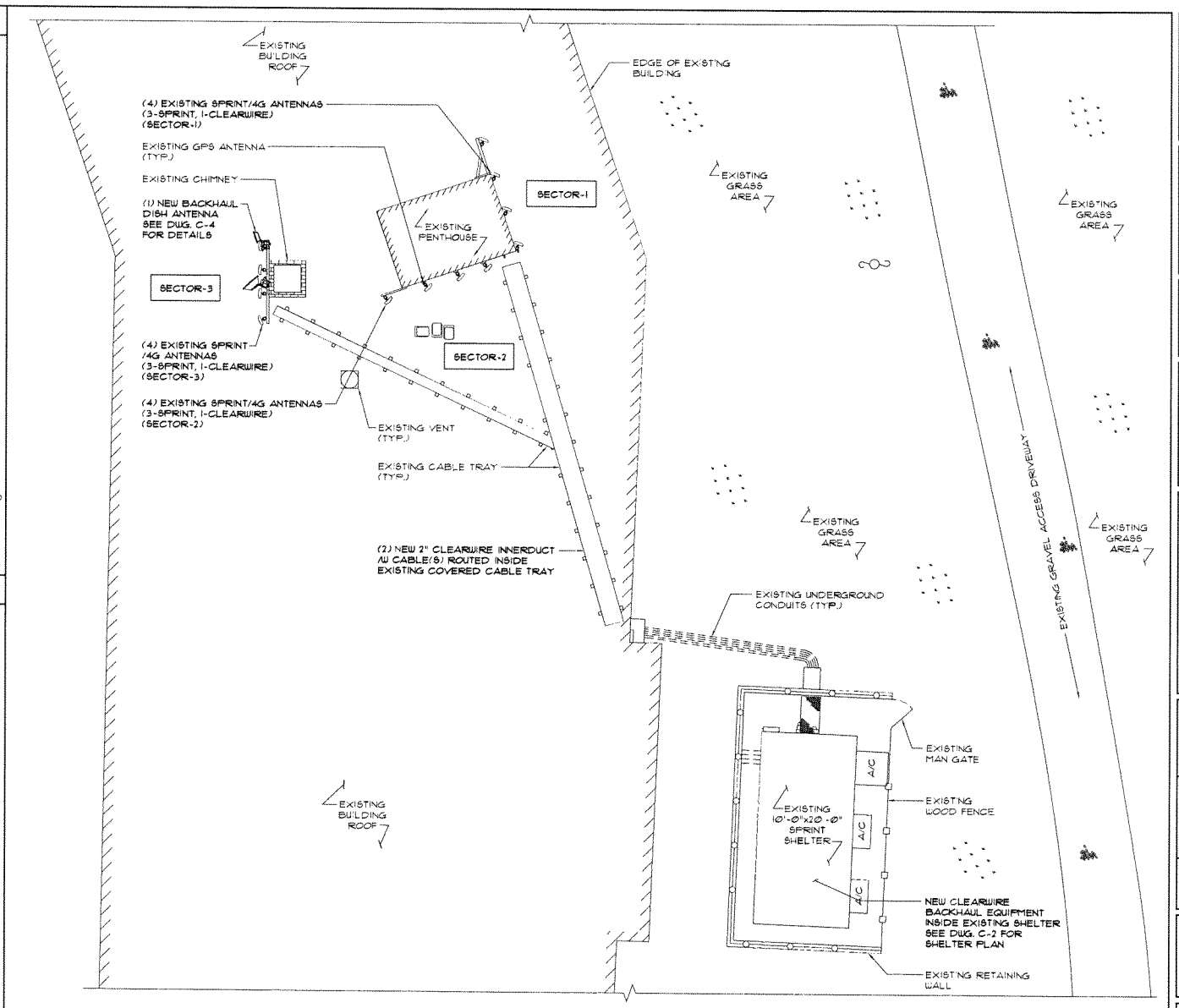
T-1

ABBREVIATIONS

4G	4th GENERATION
AFF	ABOVE FINISHED FLOOR
AGL	ABOVE GRADE LEVEL
AMSL	ABOVE MEAN SEA LEVEL
APPROX	APPROXIMATE
AWG	AMERICAN WIRE GAUGE
BH	BACKHAUL
BLDG	BUILDING
BTS	BASE TRANSMISSION STATION
CAB	CABINET
COL	COLUMN
CONC	CONCRETE
CND	CONDUIT
DWG	DRAWING
FT	FOOT(FEET)
EGB	EQUIPMENT GROUND BAR
ELEC	ELECTRICAL
EMT	ELECTRICAL METALLIC TUBING
ELEV	ELEVATION
EQUIP	EQUIPMENT
(E)	EXISTING
FND	FOUNDATION
GALV	GALVANIZED
GPS	GLOBAL POSITIONING SYSTEM
GND	GROUND
MAX	MAXIMUM
MFR	MANUFACTURER
MGB	MASTER GROUND BAR
MIN	MINIMUM
(N)	NEW
NEC	NATIONAL ELECTRIC CODE
NTS	NOT TO SCALE
OE/OT	OVERHEAD ELECTRIC/TELCO
(P)	PROPOSED
PCS	PERSONAL COMMUNICATIONS SERVICES
POS	POSITION
RGS	RIGID GALVANIZED STEEL
IN	INCHES)
LB(S)	POUND(S)
SF	SQUARE FOOT
STL	STEEL
TYP	TYPICAL
UE/UT	UNDERGROUND ELECTRIC/TELCO
UNO	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD
W/	WITH
XFMR	TRANSFORMER
℄	CENTERLINE
⅊	PLATE

SYMBOLS

- UTILITY POLE
- WORK POINT
- REVISION
- MASONRY
- BRICK
- CONCRETE
- EARTH
- STEEL
- GRAVEL
- CENTER LINE
- PROPERTY LINE
- LEASE LINE
- EASEMENT LINE
- X — X — CHAIN LINK FENCE
- WOOD FENCE
- UE — BELOW GRADE ELECTRIC
- UT — BELOW GRADE TELEPHONE
- OE/OT — OVERHEAD ELECTRIC/TELEPHONE
- SECTION REFERENCE



SITE PLAN
SCALE: 3/32" = 1'-0"

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DATE SIGNED: _____

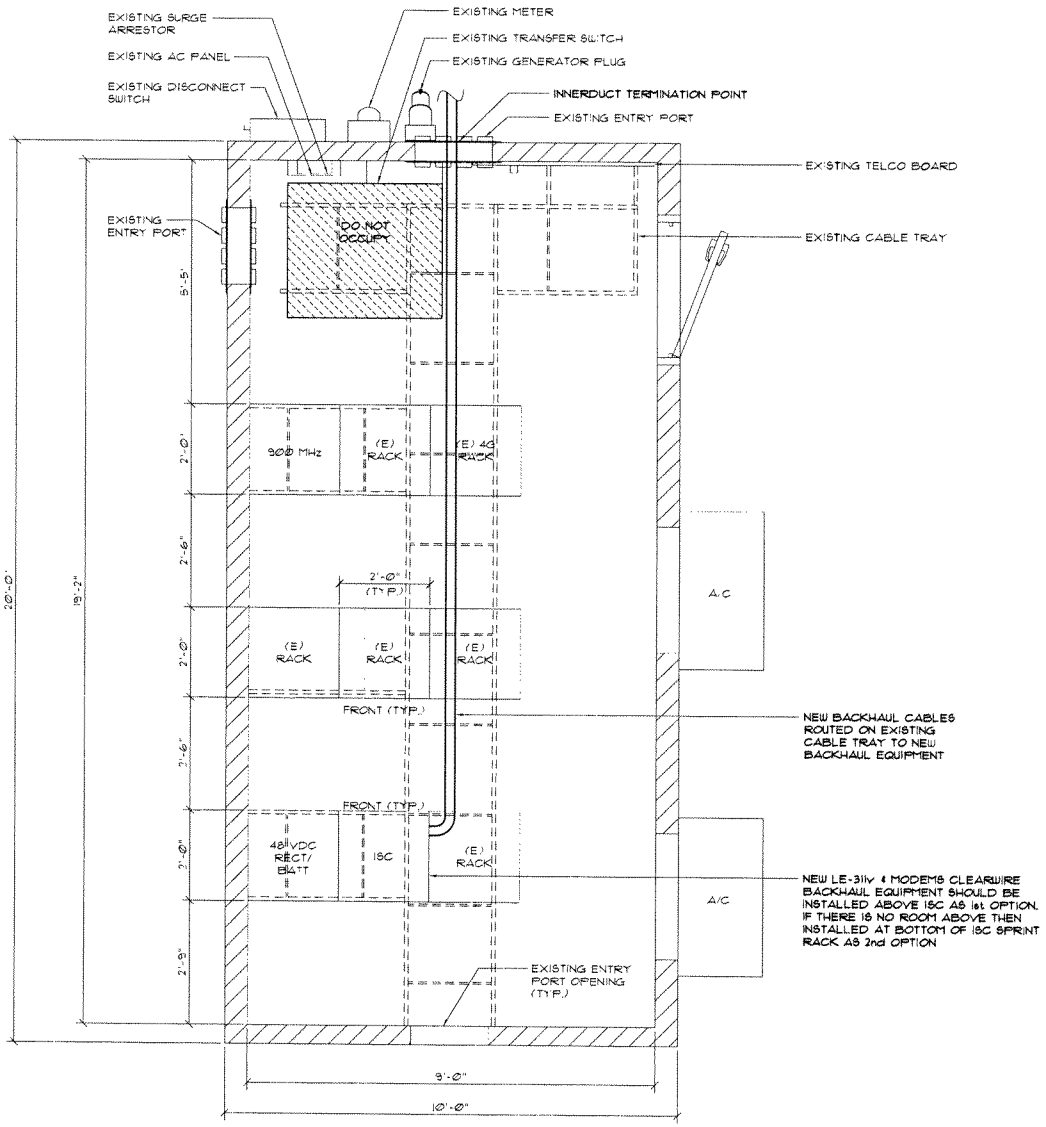
SITE NAME
PARKGLEN

SITE NUMBER
DC-WSH5475-A
(VA2193 HOST)

SITE ADDRESS
5100 8th ROAD S
ARLINGTON, VA 22204

SHEET NAME
SITE PLAN

SHEET NUMBER
C-1A



SHELTER PLAN

SCALE: 3/8" = 1'-0"

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SITE ADDRESS

5100 8th ROAD S
ARLINGTON, VA 22204

SHEET NAME

SHELTER PLAN

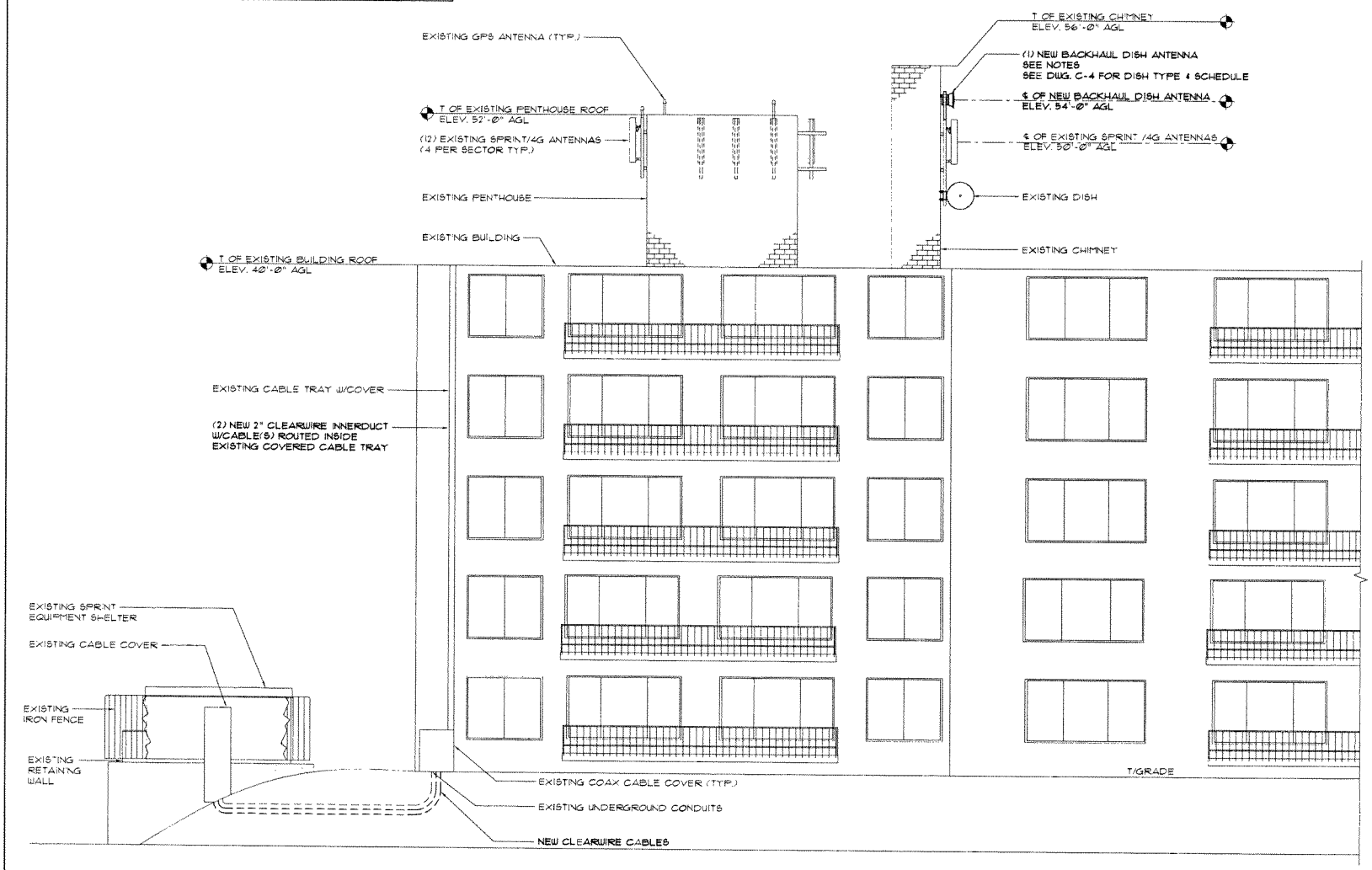
SHEET NUMBER

C-2

NOTES:

DISH ATTACHMENT SHALL BE ONE OF THE FOLLOWING PER CONSTRUCTION MANAGER:

1- REPLACE EXISTING PIPE WITH NEW PIPE OF LONGER & LARGER DIAMETER
2- INSTALL NEW PIPE AND USE PIPE CLAMP CONNECTION TO EXISTING PIPE
3- EXISTING PIPE TO BE SHIFTED UP/DOWN TO ACCOMMODATE NEW DISH



SITE ELEVATION

SCALE: 1/8" = 1'-0"

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DATE SIGNED: _____

SITE NAME

PARKGLEN

SITE NUMBER

DC-WSH547S-A
(VA2193 HOST)

SITE ADDRESS

5100 8th ROAD S
ARLINGTON, VA 22204

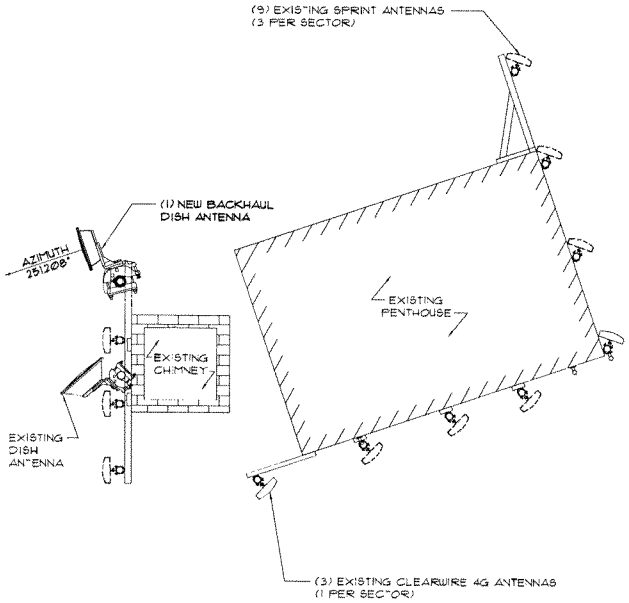
SHEET NAME

SITE ELEVATION

SHEET NUMBER

C-3

ANTENNA TYPE	
(E) 4G	(N) MW
(E) SPRINT	



NEW ANTENNA CONFIGURATION

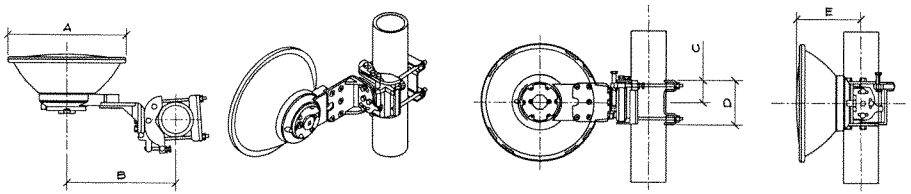
SCALE: N.T.S.

DISH ID	MODEL NO.	DISH TYPE	DISH DIA. (FT)	AZIMUTH (DEGREES)	FREQUENCY (GHz)	DISH ℄ (FT.)	CABLE QTY.	CABLE SIZE	CABLE LENGTH (FT.)	RADIO TYPE	COLOR CODE	B END SITE ID NUMBER
DISH #1	ANDREW VHLP1-23	HIGH PERFORMANCE	1	251.2°	23	54	2	CAT-5e	180	HC HP	1 GREY 1 GREY/ 1 BLUE	DC-WSH5949

BACKHAUL DISH ANTENNA & CABLE SCHEDULE

SCALE: N.T.S.

12" DISH		A	B	C	D	E
	IN.	15.3	14.1	2.8	5.6	8.7



BACKHAUL DISH ANTENNA DETAILS

SCALE: N.T.S.

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ARLINGTON, VA 22204

SHEET NAME

ANTENNA DETAILS

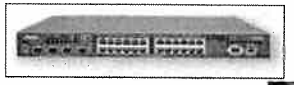
SHEET NUMBER

C-4

COAX COLOR CODING FOR MW BACKHAUL:

1. UTILIZE SIMPLE COLOR CODING AS MUCH AS POSSIBLE
2. PROPOSED TO USE SINGLE COLOR (GREY) FOR MW, "GREY" WAS CHOSEN AS PER COORDINATION WITH OPS/MW/CM
3. NUMBER OF STRIPES CORRESPONDS TO THE DISH NUMBER ON A SITE BASED ON AZIMUTH FROM LOWEST TO HIGHEST (0-360)
4. FOR EXAMPLE, WE HAVE 3 DISHES ON A SITE AND HAVE FOLLOWING AZIMUTHS 35°, 160°, 328°
5. ONE GREY STRIPE IS THE DISH WITH 35° AZIMUTH (1st DISH)
6. TWO STRIPES IS THE DISH WITH 160° AZIMUTH (2nd DISH)
7. THREE GREY STRIPES IS THE DISH WITH 328° AZIMUTH (3rd DISH)
8. AND SO ON AND DO FORTH....
9. IF THERE'S A CASE THAT WE WILL NEED TWO (2) LINES IN ONE DISH, IT IS SUGGESTED TO ADD A STRIPE (BLUE) ON THE 2nd LINE TO DESIGNATE THAT THIS IS THE 2nd LINE ON THAT DISH (1 GREY & 1 BLUE-2nd LINE OF 1st DISH)

DISH COLOR CODING NOTES | 1



LE-311v

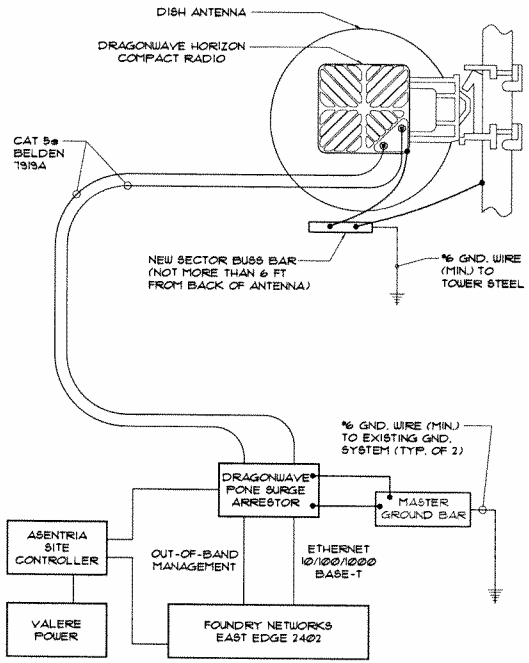
NEW LE-311v & MODEMS CLEARWIRE BACKHAUL EQUIPMENT SHOULD BE INSTALLED ABOVE 15C AS 1st OPTION. IF THERE IS NO ROOM ABOVE THEN INSTALLED AT BOTTOM OF 15C SPRINT RACK AS 2nd OPTION

CLEARWIRE EQUIPMENT | 2

1. ANTENNA INSTALLATION SHALL BE CONDUCTED BY FIELD CREWS EXPERIENCED IN THE ASSEMBLY AND ERECTION OF RADIO ANTENNAS, TRANSMISSION LINES, AND SUPPORT STRUCTURES.
2. CONTRACT COMPANIES AND THEIR EMPLOYEES SHALL OBSERVE AND PRACTICE ALL O.S.H.A. SAFETY GUIDELINES WHILE PERFORMING SERVICE FOR CLEARWIRE.
3. CONTRACTOR SHALL PERFORM A SAFETY INSPECTION PRIOR TO COMMENCING ALL WORK ACTIVITIES AT A CLEARWIRE, LEASED OR OWNED SITE. CLEARWIRE, SHOULD BE IMMEDIATELY NOTIFIED OF SAFETY HAZARD(S) FOUND CURING THE INSPECTION THAT COULD CAUSE DAMAGE TO PROPERTY. ALL WORK SHALL BE HALTED UNTIL SUCH TIME THE REPORTED SAFETY HAZARD IS CORRECTED. THE SAFETY HAZARD, IF POSSIBLE, SHOULD BE CORRECTED BY THE CONTRACTOR WHILE ON SITE. AFTER THE CONTRACTOR HAS NOTIFIED CLEARWIRE TO PERFORM THE CORRECTION.

ANTENNA INSTALLATION NOTES | 3

NOT USED | 4



COMPACT SINGLE LINE DIAGRAM | 5

1. ALL BASE TRANSCEIVER SITE EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE NATIONAL ELECTRICAL CODE (NEC), LIGHTNING PROTECTION CODE (NFPA 780) AND CLEARWIRE STANDARDS.
2. THE ELECTRICAL SERVICE TO THE SITE SHALL BE GROUNDED AT THE SERVICE DISCONNECTING MEANS AS REQUIRED IN ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE AND IN ACCORDANCE WITH ANY LOCAL CODE.
3. ALL UNDERGROUND (BELOW GRADE) GROUNDING CONNECTIONS SHALL BE MADE BY THE EXOTHERMIC PROCESS (MECHANICAL LUG ATTACHMENTS BELOW GRADE ARE NOT ACCEPTABLE). CONNECTIONS SHALL INCLUDE ALL CABLE TO CABLE SPLICES (TEES, X's, ETC.), ALL CABLE CONNECTIONS TO GROUND RODS, GROUND ROD SPLICES, AND LIGHTNING PROTECTION SYSTEM AS INDICATED. ALL MATERIALS USED (MOLDS, WELDING METAL, TOOLS, ETC.) SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATION AND PROCEDURES.
4. ALL GROUNDING AND BONDING CONDUCTORS THAT ARE CONNECTED ABOVE GRADE OR INTERIOR TO A BUILDING SHALL BE CONNECTED USING TWO HOLE CRIMP TYPE (COMPRESSION) CONNECTIONS FOR #2 AND #6 AWG INSULATED COPPER CONDUCTOR.
5. ALL GROUNDING CONNECTIONS, INTERIOR AND EXTERIOR, MADE THROUGHOUT THIS DOCUMENT SHALL BE MADE USING AN ANTI-OXIDATION COMPOUND. THE ANTI-OXIDATION COMPOUND SHALL BE THOMAS AND BETTS KOPR-SHIELD (TM OF JET LUBE INC.) OR APPROVED EQUAL. COAT ALL WIRES BEFORE CONNECTING.
6. ALL CONNECTIONS SHALL BE MADE TO BARE METAL. ALL PAINTED SURFACES SHALL BE FIELD INSPECTED AND MODIFIED TO ENSURE PROPER CONTACT. PRIOR TO EXOTHERMICALLY CONNECTING, GALVANIZING SHALL BE REMOVED BY GRINDING SURFACE TO BARE METAL. "SLAG" FROM EXOTHERMIC CONNECTION MUST BE REMOVED AND SHALL BE SPRAYED WITH COLD GALVANIZE AFTER COMPLETION.
7. FERROUS METAL CLIPS WHICH COMPLETELY SURROUND THE GROUNDING CONDUCTOR SHALL NOT BE USED. CLIPS OF THE FOLLOWING MATERIALS AND TYPES MAY BE USED TO SUPPORT GROUNDING CONDUCTORS.
   PLASTIC CLIPS
   STAINLESS STEEL CLIPS WHICH DO NOT COMPLETELY SURROUND THE GROUNDING CONDUCTOR.
   FERROUS METAL CLIPS WHICH DO NOT COMPLETELY SURROUND THE GROUNDING CONDUCTOR.
8. ALL HARDWARE, BOLTS, NUTS, WASHERS AND LOCK WASHERS SHALL BE 18-8 STAINLESS STEEL. EVERY CONNECTION SHALL BE BOLT-FLAT WASHER-BUSS-LUG-FLAT WASHER-LOCK WASHER-NUT IN THAT EXACT ORDER, WITH NUT FACING OUTWARD. BACK-TO-BACK LUGGING, BOLT-FLAT WASHER-LUG-FLAT WASHER-LUG-BUSS-LUG-FLAT WASHER-LOCK WASHER-NUT, IN THAT EXACT ORDER IS ACCEPTED WHERE NECESSARY TO CONNECT MANY LUGS TO A BUSS BAR. STACKING OF LUGS, BUSS-LUG-LUG, IS NOT ACCEPTABLE.

GROUNDING NOTES | 6

clearwire
wireless broadband
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FAX: 847-292-0206

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CHECKED BY:	FD
APPROVED BY:	MB

*	DATE	DESCRIPTION	INT
	6/10/09	CONSTRUCTION	HA
	10/29/09	REV. CONSTRUCTION	HA
	11/10/09	PERMIT/CONST.	HA
	2/09/10	REV. PERMIT/CONS.	HA

DATE SIGNED: _____

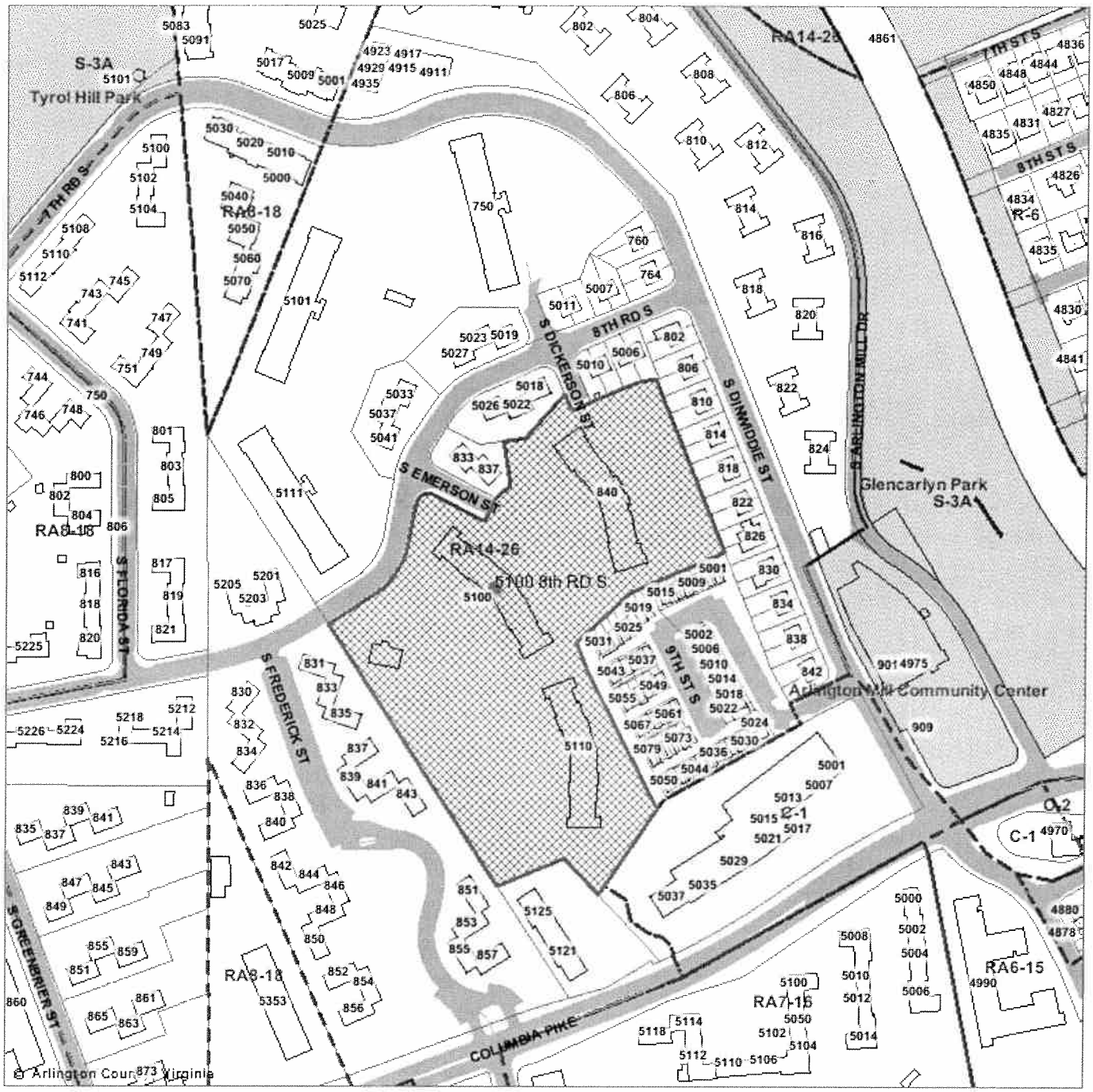
SITE NAME
PARKGLEN

SITE NUMBER
DC-WSH5475-A
(VA2193 HOST)

SITE ADDRESS
5100 8th ROAD S
ARLINGTON, VA 22204

SHEET NAME
ANTENNA LINE DIAGRAM & NOTES

SHEET NUMBER
C-5



U-3248-10-1
5100 8th Rd S;
RPC: 22-014-131

Not To Scale

Case Location(s)

Note: These maps are for property location assistance only.
They may not represent the latest survey and other information.

Department of Community Planning, Housing and Development

Planning Division