

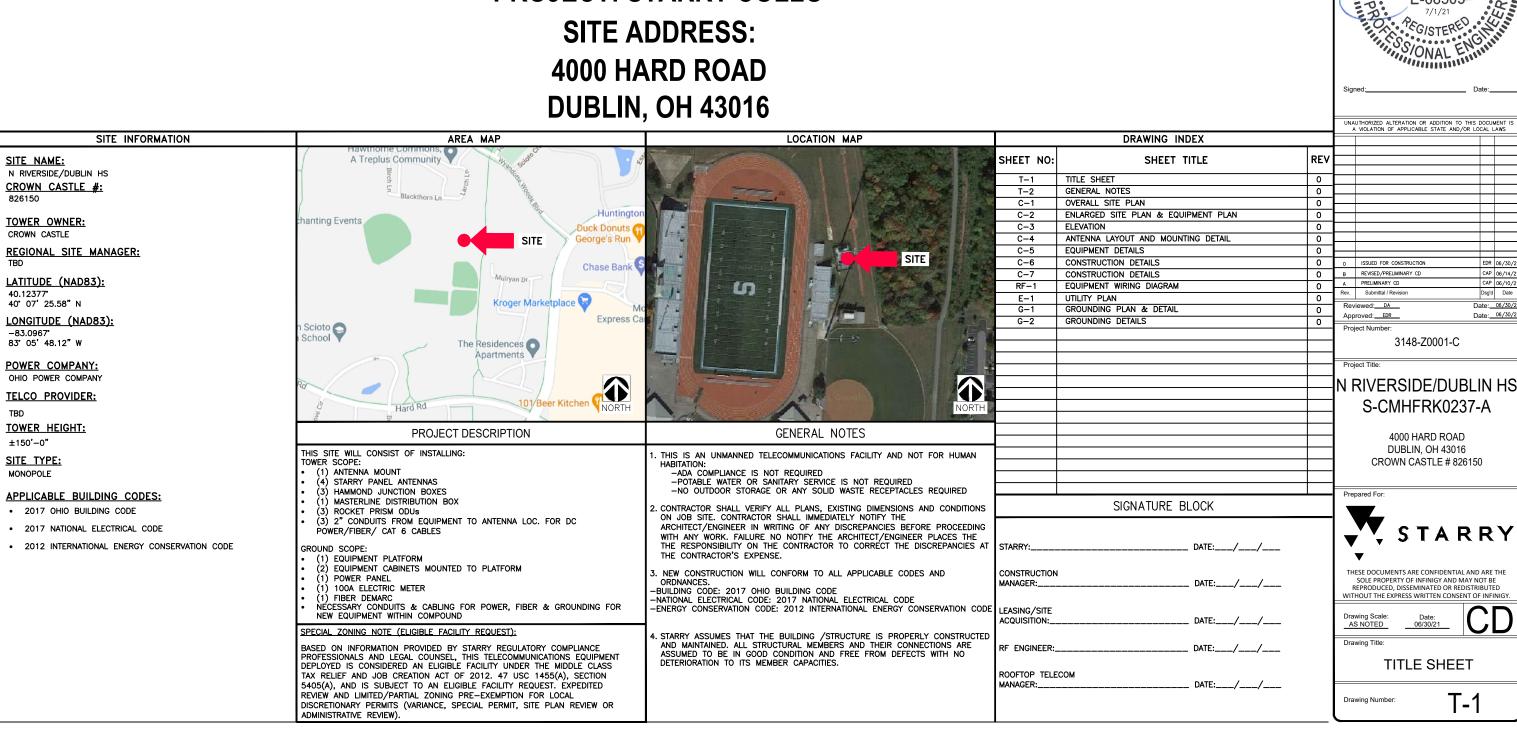
# SITE NAME: N RIVERSIDE/DUBLIN HS SITE ID: S-CMHFRK0237-A

2500 W. HIGGINS RD. SUITE 500 HOFFMAN ESTATES, IL 60169 Phone: 847-648-4068 | Fax: 518-690-0793 www.infinigy.com

ATE OF OHIO

WARREN

PROJECT: STARRY COLLO **SITE ADDRESS: 4000 HARD ROAD** 



# **GENERAL CONSTRUCTION NOTES:**

- FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL
  - GENERAL CONTRACTOR

SUBCONTRACTOR - CONTRACTOR (CONSTRUCTION) OWNER - STARRY

- ALL SITE WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS AND STARRY PROJECT SPECIFICATIONS.
- GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL VISIT THE SITE AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS. GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS, DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER PRIOR TO THE COMMENCEMENT OF WORK
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. GENERAL CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES. RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF WORK.
- ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND JTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, FOUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL
- INSTALLATIONS AS INDICATED ON THE DRAWINGS.
  PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS THE MINIMUM REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS, SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH THE WORK, DETAILS ARE INTENDED TO SHOW DESIGN INTENT, MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF WORK AND PREPARED BY THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH WORK
- THE SUBCONTRACTOR SHALL INSTALL ALL FOUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE
- THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THES DRAWINGS. THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE SPACE FOR APPROVAL BY THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING.
- GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFFTY OF WORK ARFA ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT, WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS AND THE LOCAL JURISDICTION
- GENERAL CONTRACTOR SHALL COORDINATE WORK AND SCHEDULE WORK ACTIVITIES
- WITH OTHER DISCIPLINES.
  ERECTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMEN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST ACCEPTED PRACTICE. ALL MEMBERS SHALL BE LAID PLUMB AND TRUE AS INDICATED ON THE DRAWINGS
- SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED MATERIALS APPROVED BY LOCAL JURISDICTION, SUBCONTRACTOR SHALL KEEP AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DEBRIS.
  WORK PREVIOUSLY COMPLETED IS REPRESENTED BY LIGHT SHADED LINES AND
- NOTES. THE SCOPE OF WORK FOR THIS PROJECT IS REPRESENTED BY DARK SHADED LINES AND NOTES. SUBCONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR OF ANY EXISTING CONDITIONS THAT DEVIATE FROM THE DRAWINGS PRIOR TO BEGINNING
- SUBCONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CONSTRUCTION MANAGER
- 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
  THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION. GENERAL CONTRACTOR SHALL COORDINATE AND MAINTAIN ACCESS FOR ALL TRADES
- AND SUBCONTRACTORS TO THE SITE AND/OR BUILDING.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY OF THE SITE FOR THE DURATION OF CONSTRUCTION UNTIL JOB COMPLETION. THE GENERAL CONTRACTOR SHALL MAINTAIN IN GOOD CONDITION ONE COMPLETE 20 SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS ON THE
- PREMISES AT ALL TIMES THE GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL PROVIDE PORTABLE FIRE EXTINGUISHERS WITH A RATING OF NOT LESS THAN 2-A OR 2-A:10-B:C AND SHALL BE WITHIN 25 FEET OF TRAVEL DISTANCE TO ALL PORTIONS OF WHERE THE WORK IS BEING COMPLETED DURING CONSTRUCTION.
- ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY THE ARCHITECT/ENGINEER. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS SHALL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION, B) CONFINED SPACE, C) ELECTRICAL SAFETY, D) TRENCHING & EXCAVATION.
- ALL EXISTING INACTIVE SEWER WATER GAS FLECTRIC AND OTHER LITILITIES WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED, CAPPED, PLUGGED OR OTHERWISE DISCONNECTED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, AS DIRECTED BY THE RESPONSIBLE ARCHITECT/ENGINEER, AND SUBJECT TO THE APPROVAL OF THE OWNER AND/OR
- THE AREAS OF THE OWNER'S PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.
- SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE FEDERAL AND LOCAL JURISDICTION FOR EROSION AND SEDIMENT CONTROL.
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUNDING. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT
- THE SUBGRADE SHALL BE BROUGHT TO A SMOOTH UNIFORM GRADE AND COMPACTED TO 95 PERCENT STANDARD PROCTOR DENSITY UNDER PAVEMENT AND STRUCTURES AND 80 PERCENT STANDARD PROCTOR DENSITY IN OPEN SPACE. ALL TRENCHES IN PUBLIC RIGHT OF WAY SHALL BE BACKFILLED WITH FLOWABLE FILL OR
- OTHER MATERIAL PRE-APPROVED BY THE LOCAL JURISDICTION.
  ALL NECESSARY RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE
  SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LAWFUL MANNER.

- ALL BROCHURES, OPERATING AND MAINTENANCE MANUALS, CATALOGS, SHOP DRAWINGS, AND OTHER DOCUMENTS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR AT COMPLETION OF CONSTRUCTION AND PRIOR TO PAYMENT. SUBCONTRACTOR SHALL SUBMIT A COMPLETE SET OF AS-BUILT REDLINES TO THE
- GENERAL CONTRACTOR UPON COMPLETION OF PROJECT AND PRIOR TO FINAL
- SUBCONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION.
- THE PROPOSED FACILITY WILL BE UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SEWER SERVICE, AND IS NOT FOR HUMAN HABITAT (NO HANDICAP ACCESS REQUIRED).
- OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION, APPROXIMATELY 2 TIMES PER MONTH, BY STARRY TECHNICIANS.
- NO OUTDOOR STORAGE OR SOLID WASTE CONTAINERS ARE PROPOSED.
  ALL MATERIAL SHALL BE FURNISHED AND WORK SHALL BE PERFORMED IN
  ACCORDANCE WITH THE LATEST REVISION OF STARRY MOBILITY GROUNDING STANDARD "TECHNICAL SPECIFICATION FOR CONSTRUCTION OF GSM/GPRS WIRELESS SITES" AND "TECHNICAL SPECIFICATION FOR FACILITY GROUNDING." IN CASE OF A CONFLICT BETWEEN THE CONSTRUCTION SPECIFICATION AND THE DRAWINGS, THE
- DRAWINGS SHALL GOVERN.
  SUBCONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR CONSTRUCTION. IF SUBCONTRACTOR CANNOT OBTAIN A PERMIT, THEY MUST NOTIFY THE GENERAL CONTRACTOR IMMEDIATELY.
- SUBCONTRACTOR SHALL REMOVED ALL TRASH AND DEBRIS FROM THE SITE ON A INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM SITE VISITS AND/OR DRAWINGS PROVIDED BY THE SITE OWNER. CONTRACTORS SHALL NOTIFY
- ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING NO WHITE STROBE LIGHTS ARE PERMITTED. ANY REQUIRED LIGHTING MUST MEET FAA
- STANDARDS AND REQUIREMENTS.
  ALL COAXIAL CABLE INSTALLATIONS TO FOLLOW MANUFACTURER'S INSTRUCTIONS
- AND RECOMMENDATIONS.
  NO SIGNIFICANT NOISE, SMOKE, DUST OR VIBRATIONS WILL RESULT FROM THIS
- FACILITY. (DISREGARD THIS NOTE IF THIS SITE HAS A GENERATOR) 42. NO ADDITIONAL PARKING TO BE PROPOSED. EXISTING ACCESS AND PARKING TO REMAIN, UNLESS NOTED OTHERWISE.
- NO LANDSCAPING IS PROPOSED AT THIS SITE, UNLESS NOTED OTHERWISE.

### **ELECTRICAL NOTES:**

- ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ANY/ALL ELECTRICAL WORK INDICATED. ANY/ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS AND ANY/ALL APPLICABLE SPECIFICATIONS. IF ANY PROBLEMS ARE ENCOUNTERED BY COMPLYING WITH THESE REQUIREMENTS, CONTRACTOR SHALL NOTIFY 'CONSTRUCTION MANAGER' AS SOON AS POSSIBLE, AFTER THE DISCOVERY OF THE PROBLEMS AND SHALL NOT PROCEED WITH THAT PORTION OF WORK, UNTIL THE 'CONSTRUCTION MANAGER' HAS DIRECTED THE CORRECTIVE ACTIONS TO BE TAKEN.
- ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE HIMSELF WITH ANY/ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATION INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. ALL EXISTING CONDITIONS OF ELECTRICAL EQUIP., LIGHT FIXTURES, ETC., THAT ARE PART OF THE FINAL SYSTEM, SHALL BE VERIFIED BY THE CONTRACTOR, PRIOR TO THE SUBMITTING OF HIS BID. FAILURE TO COMPLY WITH THIS PARAGRAPH WILL IN NO WAY RELIEVE CONTRACTOR OF PERFORMING ALL WORK NECESSARY FOR A COMPLETE AND WORKING
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC AND ALL CODES AND LOCAL ORDINANCES OF THE LOCAL POWER & TELEPHONE COMPANIES HAVING JURISDICTION AND SHALL INCLUDE BUT NOT BE LIMITED TO:
  - NATIONAL FIRE CODES
  - UL UNDERWRITERS LABORATORIES
  - NEC NATIONAL FLECTRICAL CODE
  - NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
  - OSHA OCCUPATIONAL SAFETY AND HEALTH ACT
  - SBC STANDARD BUILDING CODE
- DO NOT SCALE ELECTRICAL DRAWINGS; REFER TO SITE PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT, AND CONFIRM WITH CONSTRUCTION MANAGER' ANY SIZES AND LOCATIONS WHEN NEEDED. EXISTING SERVICES: CONTRACTOR SHALL NOT INTERRUPT EXISTING SERVICES
- WITHOUT WRITTEN PERMISSION OF THE OWNER. CONTRACTOR SHALL PAY FOR ANY/ALL PERMITS, FEES, INSPECTIONS, AND
- TESTING. CONTRACTOR IS TO OBTAIN PERMITS AND APPROVED SUBMITTALS PRIOR TO THE WORK BEGINNING OR ORDERING EQUIPMENT. THE TERM "PROVIDE" USED IN CONSTRUCTION DOCUMENTS AND
- SPECIFICATIONS, INDICATES THAT THE CONTRACTOR SHALL FURNISH AND LIATSMI CONTRACTOR SHALL CONFIRM WITH LOCAL LITILITY COMPANY ANY/ALL
- REQUIREMENTS, SUCH AS THE: LUG SIZE RESTRICTIONS, CONDUIT ENTRY, SIZE OF TRANSFORMERS, SCHEDULED DOWNTIME FOR THE OWNERS' CONFIRMATION, ETC ... ANY/ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER, PRIOR TO BEGINNING ANY WORK
- MINIMUM WIRE SIZE SHALL BE #12 AWG, NOT INCLUDING CONTROL WIRING, UNLESS NOTED OTHERWISE. ALL CONDUCTORS SHALL BE COPPER WITH THWN INSULATION.
- OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET/DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS
- IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF THE CONSTRUCTION. CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING
- ELECTRICAL SYSTEM SHALL BE AS COMPLETELY AND EFFECTIVELY GROUNDED, AS REQUIRED BY SPECIFICATIONS, SET FORTH BY STARRY.
- ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS, WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND SUBJECT TO REGULATORY INSPECTION & APPROVAL BY CONSTRUCTION MANAGER
- ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID NTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
- CONTRACTOR SHALL GUARANTEE ANY/ALL MATERIALS AND WORK FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE.

- 16. THE CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ANY ADDITIONAL CHARGE AND SHALL INCLUDE THE REPLACEMENT OR THE REPAIR OF ANY OTHER PHASE OF THE INSTALLATION, WHICH MAY HAVE BEEN DAMAGED THEREIN.
- ADEQUATE AND REQUIRED LIABILITY INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LOSS AND ANY/ALL PROPERTY DAMAGE FOR THE DURATION OF WORK.
- PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES AND DEVICES FOR ALL OUTLETS AS INDICATED.
- DITCHING AND BACK FILL: CONTRACTOR SHALL PROVIDE FOR ALL UNDERGROUND INSTALLED CONDUIT AND/OR CABLES INCLUDING EXCAVATION, BACKFILLING AND COMPACTION. REFER TO 'FOUNDATION, EXCAVATION, AND BACKFILLING NOTES.
- MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SHALL APPEAR ON THE LIST OF U.L. APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF THE NEC. NEMA. AND IECE.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR MANUFACTURERS CATALOG INFORMATION OF ANY/ALL LIGHTING FIXTURES, SWITCHES, AND ALL OTHER ELECTRICAL ITEMS FOR APPROVAL BY THE CONSTRUCTION MANAGER PRIOR TO INSTALLATION
- ANY CUTTING OR PATCHING DEEMED NECESSARY FOR ELECTRICAL WORK IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY AND SHALL BE INCLUDED IN THE COST FOR WORK AND PERFORMED TO THE SATISFACTION OF THE 'CONSTRUCTION MANAGER' UPON FINAL ACCEPTANCE.
- THE ELECTRICAL CONTRACTOR SHALL LABEL AL PANELS WITH ONLY TYPEWRITTEN DIRECTORIES. ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- DISCONNECT SWITCHES SHALL BE H.P. RATED HEAVY-DUTY, QUICK-MADE AND QUICK-BREAK ENCLOSURES AS REQUIRED BY EXPOSURE TYPE
- 25. ALL CONNECTIONS SHALL BE MADE WITH A PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND SUCH AS "NO-OXIDE A" BY DEARBORNE CHEMICAL CO. COAT ALL WIRE SURFACES BEFORE CONNECTING. EXPOSED COPPER SURFACES, INCLUDING GROUND BARS, SHALL BE TREATED - NO
- RACEWAYS: CONDUIT SHALL BE SCHEDULE 40 PVC MEETING OR EXCEEDING NEMA TC2 1990. CONTRACTOR SHALL PLUG AND CAP EACH END OF SPARE AND EMPTY CONDUITS AND PROVIDE TWO SEPARATE PULL STRINGS - 200 LBS TEST POLYETHYLENE CORD. ALL CONDUIT BENDS SHALL BE A MINIMUM OF 2 FT. RADIUS. RGS CONDUITS WHEN SPECIFIED, SHALL MEET UL-6 FOR GALVANIZED STEEL. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADING RIGID CONDUIT. COAT ALL THREADS WITH 'BRITE ZINC' OR 'GOLD CALV.'
- SUPPORT OF ALL FLECTRICAL WORK SHALL BE AS REQUIRED BY NEC CONDUCTORS: CONTRACTOR SHALL USE 98% CONDUCTIVITY COPPER WITH TYPE THWN INSULATION, 800 VOLT, COLOR CODED. USE SOLID CONDUCTORS FOR WIRE UP TO AND INCLUDING NO. 8 AWG. USE STRANDED CONDUCTORS FOR WIRE ABOVE NO. 8 AWG.
- CONNECTORS FOR POWER CONDUCTORS: CONTRACTOR SHALL USE PRESSURE TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWG AND SMALLER. USE SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWG AND LARGER
- SERVICES: 240/120V. SINGLE PHASE, 3 WIRE CONNECTION AVAILABLE FROM UTILITY COMPANY, OWNER OR OWNERS AGENT WILL APPLY FOR POWER.
- TELEPHONE SERVICE: CONTRACTOR SHALL PROVIDE EMPTY CONDUITS WITH PULL STRINGS AS INDICATED ON DRAWINGS.
- ELECTRICAL AND TELCO RACEWAYS TO BE BURIED A MINIMUM OF 2' DEPTH CONTRACTOR SHALL PLACE TWO LENGTHS OF WARNING TAPE AT A DEPTH OF 12" BELOW GROUND AND DIRECTLY ABOVE ELECTRICAL AND TELCO SERVICE CONDUITS. CAUTION TAPE TO READ "CAUTION BURIED ELECTRIC" OR "BURIED TELCO."
- 34. ALL BOLTS SHALL BE STAINLESS STEEL

# **GROUNDING NOTES:**

- COMPRESSION CONNECTIONS (2), 2 AWG BARE TINNED SOLID COPPER CONDUCTORS TO GROUNDING BAR. ROUTE CONDUCTORS TO BURIED GROUNDING RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
- EC SHALL USE PERMANENT MARKER TO DRAW THE LINES BETWEEN EACH SECTION AND LABEL EACH SECTION ("P," "A," "N," "I") WITH 1" LETTERS. ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING LOCK WASHERS. COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING. ALL
- HARDWARE SHALL BE STAINLESS STEEL 3/8 INCH DIAMETER OR LARGER FOR GROUND BOND TO STEEL ONLY: INSERT A CADMIUM FLAT WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH AN ANTI-OXIDANT
- NUT & WASHER SHALL BE PLACED ON THE FRONT SIDE OF THE GROUNDING BAR AND BOLTED ON THE BACK SIDE.
- NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATION, AND CONNECTION ORIENTATION, PROVIDE AS REQUIRED.
- WHEN THE SCOPE OF WORK REQUIRES THE ADDITION OF A GROUNDING BAR TO AN EXISTING TOWER. THE SUBCONTRACTOR SHALL OBTAIN APPROVAL FROM THE TOWER OWNER PRIOR TO MOUNTING THE GROUNDING BAR TO THE
- ALL ELECTRICAL AND GROUNDING AT THE CELL SITE SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC) NATIONAL FIRE PROTECTION ASSOCIATION (NEPA) 780 (LATEST EDITION), AND MANUFACTURER.

- ENVIRONMENTAL NOTES:

  1. ALL WORK PERFORMED SHALL BE DONE IN ACCORDANCE WITH ISSUED PERMITS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF FINES AND ROPER CLEAN UP FOR AREAS IN VIOLATION.
- CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS DURING CONSTRUCTION FOR PROTECTION OF ADJACENT PROPERTIES, ROADWAYS AND WATERWAYS AND SHALL BE MAINTAINED IN PLACE THROUGH FINAL JURISDICTIONAL INSPECTION & RELEASE OF SITE
- CONTRACTOR SHALL INSTALL/CONSTRUCT ALL NECESSARY SEDIMENT/SILT CONTROL FENCING AND PROTECTIVE MÉASURES WITHIN THE LIMITS OF SITE DISTURBANCE
- NO SEDIMENT SHALL BE ALLOWED TO EXIT THE PROPERTY. THE CONTRACTOR IS RESPONSIBLE FOR TAKING ADEQUATE MEASURES FOR CONTROLLING EROSION.
  ADDITIONAL SEDIMENT CONTROL FENCING MAY BE REQUIRED IN ANY AREAS SUBJECT

- CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY INSPECTIONS AND ANY REPAIRS OF ALL SEDIMENT CONTROL MEASURES INCLUDING SEDIMENT REMOVAL AS NECESSARY
- CLEARING OF VEGETATION AND TREE REMOVAL SHALL BE ONLY AS PERMITTED AND BE HELD TO A MINIMUM. ONLY TREES NECESSARY FOR CONSTRUCTION OF THE FACILITIES SHALL BE REMOVED.
- SEEDING AND MULCHING AND/OR SODDING OF THE SITE WILL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER COMPLETION OF THE PROJECT FACILITIES AFFECTING LAND DISTURBANCE.
- CONTRACTOR SHALL PROVIDE ALL EROSION AND SEDIMENTATION CONTROL
  MEASURES AS REQUIRED BY LOCAL, COUNTY AND STATE CODES AND ORDINANCES
  TO PROTECT EMBANKMENTS FROM SOIL LOSS AND TO PREVENT ACCUMULATION OF SOIL AND SILT IN STREAMS AND DRAINAGE PATHS LEAVING THE CONSTRUCTION AREA. THIS MAY INCLUDE SUCH MEASURES AS SILT FENCES, STRAW BALE SEDIMEN BARRIERS, AND CHECK DAMS.
  RIP RAP OF SIZES INDICATED SHALL CONSIST OF CLEAN, HARD, SOUND, DURABLE,
- UNIFORM IN QUALITY STONE FREE OF ANY DETRIMENTAL QUANTITY OF SOFT, FRIABLE, THIN, ELONGATED OR LAMINATED PIECES, DISINTEGRATED MATERIAL, ORGANIC MATTER, OIL, ALKALI, OR OTHER DELETERIOUS SUBSTANCES.

### **CONCRETE MASONRY NOTES:**

- CONCRETE MASONRY UNITS SHALL BE MEDIUM WEIGHT UNITS CONFORMING TO ASTM C90, GRADE N-1, (F'M=1,500 PSI). MEDIUM WEIGHT (115). MORTAR SHALL BE TYPE "S" (MINIMUM 1,800 PSI AT 28 DAYS)
- GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI AT 28 DAYS. ALL CELLS CONTAINING REINFORCING STEEL OR EMBEDDED ITEMS AND ALL CELLS IN RETAINING WALLS AND WALLS BELOW GRADE SHALL BE SOLID GROUTED
- ALL HORIZONTAL REINFORCING STEEL SHALL BE PLACED IN BOND BEAM OR LINTEL REAM UNITS.
- WHEN GROUTING IS STOPPED FOR ONE HOUR OR LONGER, HORIZONTAL CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE GROUT POUR  $1\!-\!1/2$ " BELOW TOP OF THE UPPERMOST UNIT.
- ALL BOND BEAM BLOCK SHALL BE "DEEP CUT" UNITS.
  PROVIDE INSPECTION AND CLEAN-OUT HOLES AT BASE OF VERTICAL CELLS HAVING GROUT LIFTS IN EXCESS OF 4'-0" OF HEIGHT.
- ALL GROUT SHALL BE CONSOLIDATED WITH A MECHANICAL VIBRATOR
- CEMENT SHALL BE AS SPECIFIED FOR CONCRETE.
  REINFORCING BARS SEE NOTES UNDER "REINFORCING STEEL" FOR REQUIREMENTS.
- PROVIDE ONE BAR DIAMETER (A MINIMUM OF 1/2") GROUT BETWEEN MAIN REINFORCING AND MASONRY UNITS.
- LOW LIFT CONSTRUCTION, MAXIMUM GROUT POUR HEIGHT IS 4 FEET. LIET GROUTED CONSTRUCTION MAY BE USED IN CONFORMANCE WITH PROJECT
- SPECIFICATIONS AND SECTION 2104.6.1 OF CURRENT BUILDING CODE.
  ALL CELLS IN CONCRETE BLOCKS SHALL BE FILLED SOLID WITH GROUT, EXCEPT AS
- NOTED IN THE DRAWINGS OR SPECIFICATIONS.
  CELLS SHALL BE IN VERTICAL ALIGNMENT, DOWELS IN FOOTINGS SHALL BE SET TO
- ALIGN WITH CORES CONTAINING REINFORCING STEEL REFER TO ARCHITECTURAL DRAWINGS FOR SURFACE AND HEIGHT OF UNITS, LAYING
- PATTERN AND JOINT TYPE. SAND SHALL BE CLEAN, SHARP AND WELL GRADED, FREE FROM INJURIOUS AMOUNTS
- OF DUST, LUMPS, SHALE, ALKAU OR ORGANIC MATERIAL. BRICK SHALL CONFORM TO ASTM C-62 AND SHALL BE GRADE MW OR BETTER.

- STRUCTURAL CONCRETE NOTES:

  1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI-301-10
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH FC'=2,500 PSI AT 28 DAYS LINLESS NOTED OTHERWISE REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE, WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185
- WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE.
  THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING
  - STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS: CONCRETE CAST AGAINST FARTH 3 IN CONCRETE EXPOSED TO EARTH OR WEATHER: #6 AND LARGER #5 AND SMALLER & WWF
- SLAB AND WALL 3/4 IN. BEAMS AND COLUMNS 1-1/2 IN

CONCRETE NOT EXPOSED TO EARTH OR WEATHER, NOR CAST AGAINST THE GROUND:

A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE U.N.O.

- IN ACCORDANCE WITH ACL 301 SECTION 4.2.4 HOLES TO RECEIVE EXPANSION/WEDGE ANCHORS SHALL BE 1/8" LARGER IN DIAMETER THAN THE ANCHOR BOLD, DOWEL OR ROD AND SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. LOCATE AND AVOID CUTTING EXISTING REBAR WHEN DRILLING HOLES IN
- ELEVATED CONCRETE SLABS. USE AND INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER ICBO & MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURES.

- STRUCTURAL STEEL NOTES:

  1. ALL STEEL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION. STEEL SECTIONS SHALL BE IN ACCORDANCE WITH W-SHAPES: ASTM A992, 50 KSI
  - ANGLES, BARS CHANNELS: ASTM A36, 36 KSI HSS SECTIONS: ASTM 500, 46 KSI
- PIPE SECTIONS: ASTM A53-E, 35 KSI ALL EXTERIOR EXPOSED STEEL AND HARDWARE SHALL BE HOT DIPPED GALVANIZED. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THI MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION."
- PAINTED SURFACES SHALL BE TOUCHED UP.
- BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE 3/4" Ø CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" Ø ASTM A307 BOLTS UNLESS NOTED OTHERWISE.
- FIELD MODIFICATIONS ARE TO BE COATED WITH ZINC ENRICHED PAINT.



HOFFMAN ESTATES. IL 60169

Phone: 847-648-4068 | Fax: 518-690-0793 www.infinigy.com

Engineer Stamp: TATE OF OH OH CHRISTOPHER J. WARREN 7/1/21
PEG/STERED STATES E-68503

		UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF APPLICABLE STATE AND/OR LOCAL LAWS			
ò					
			_		
			_		
			+		
			+		
			+		
			$\top$		
	0	ISSUED FOR CONSTRUCTION	EDR	06/30	
	В	REVISED/PRELIMINARY CD	CAP	06/14,	
	Α	PRELIMINARY CD	CAP	06/10,	
	Rev.	Submittal / Revision	Dsg'd	Date	
	Reviewed: DA [		Date:_	06/30	
	App	roved: EDR	Date:_	06/30	
	Droi	a at Ni mak an			

3148-Z0001-C

# N RIVERSIDE/DUBLIN HS S-CMHFRK0237-A

4000 HARD ROAD **DUBLIN, OH 43016** CROWN CASTLE # 826150

Prepared For STARRY

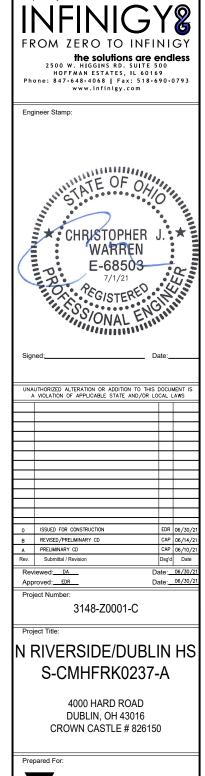
THESE DOCUMENTS ARE CONFIDENTIAL AND ARE THE SOLE PROPERTY OF INFINIGY AND MAY NOT BE REPRODUCED, DISSEMINATED OR REDISTRIBUTED VITHOUT THE EXPRESS WRITTEN CONSENT OF INFINIG

AS NOTED

06/30/21

**GENERAL NOTES** 





STARRY

THESE DOCUMENTS ARE CONFIDENTIAL AND ARE THE SOLE PROPERTY OF INFINIGY AND MAY NOT BE REPRODUCED, DISSEMINATED OR REDISTRIBUTED WITHOUT THE EXPRESS WRITTEN CONSENT OF INFINIGY.

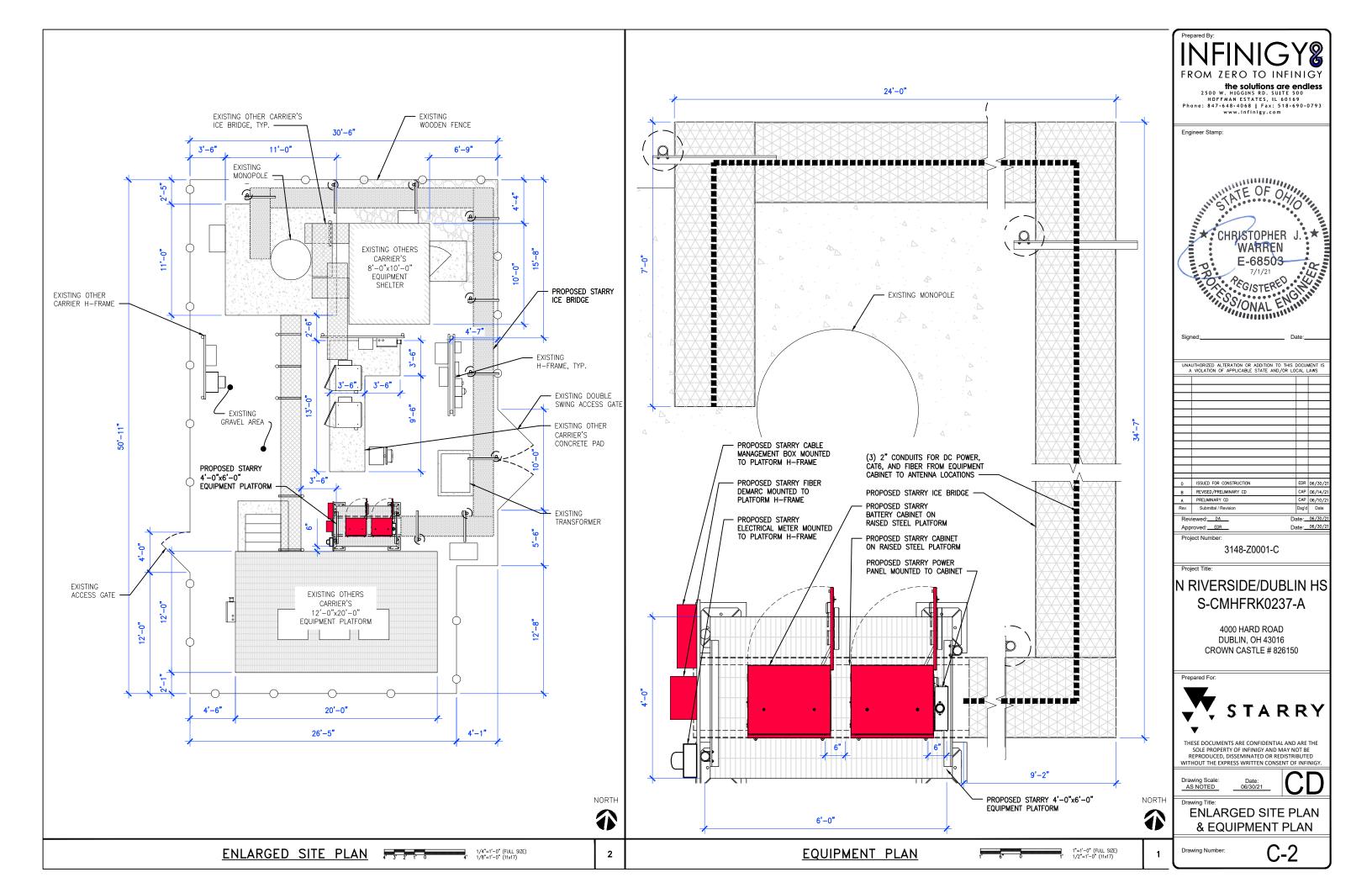
Drawing Scale: AS NOTED

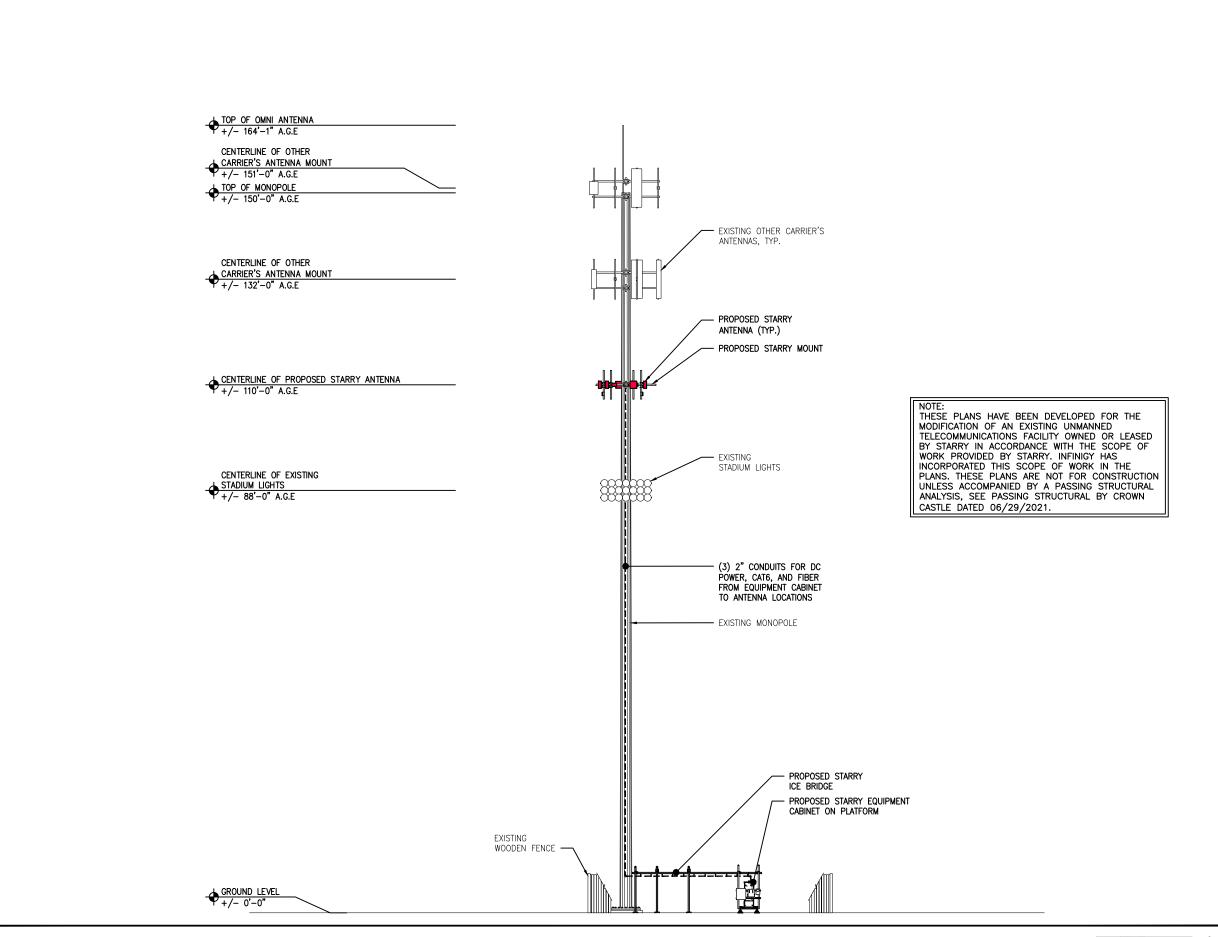
C-1

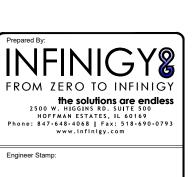
NORTH



1" = 100'-0" (FULL SIZE) 100' 50' 0 100' 1" = 200'-0" (11x17)







WAI.

E-6850

7/1/21

PEG/STERED

NONAL ENGINEERING

EDR 06/30/2 CAP 06/14/2 CAP 06/10/2 0 ISSUED FOR CONSTRUCTION B REVISED/PRELIMINARY CD Rev. Submittal / Revision Date: 06/30/2

3148-Z0001-C

Approved: EDR

# N RIVERSIDE/DUBLIN HS S-CMHFRK0237-A

4000 HARD ROAD **DUBLIN, OH 43016** CROWN CASTLE # 826150



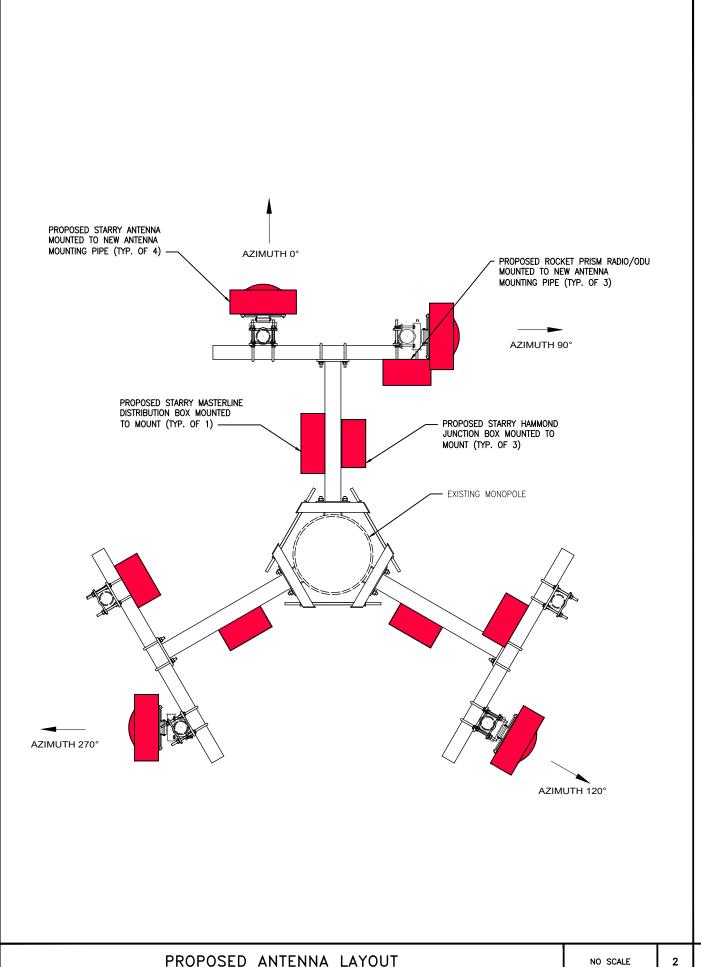
THESE DOCUMENTS ARE CONFIDENTIAL AND ARE THE SOLE PROPERTY OF INFINIGY AND MAY NOT BE REPRODUCED, DISSEMINATED OR REDISTRIBUTED WITHOUT THE EXPRESS WRITTEN CONSENT OF INFINIGY

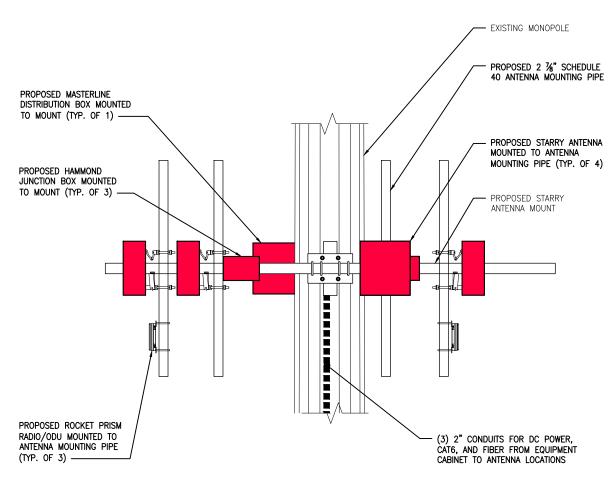
AS NOTED

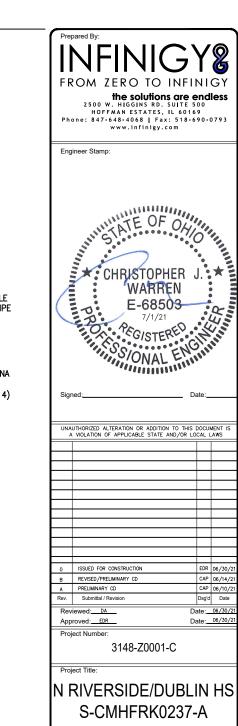
C-3

Date: 06/30/21

**ELEVATION** 







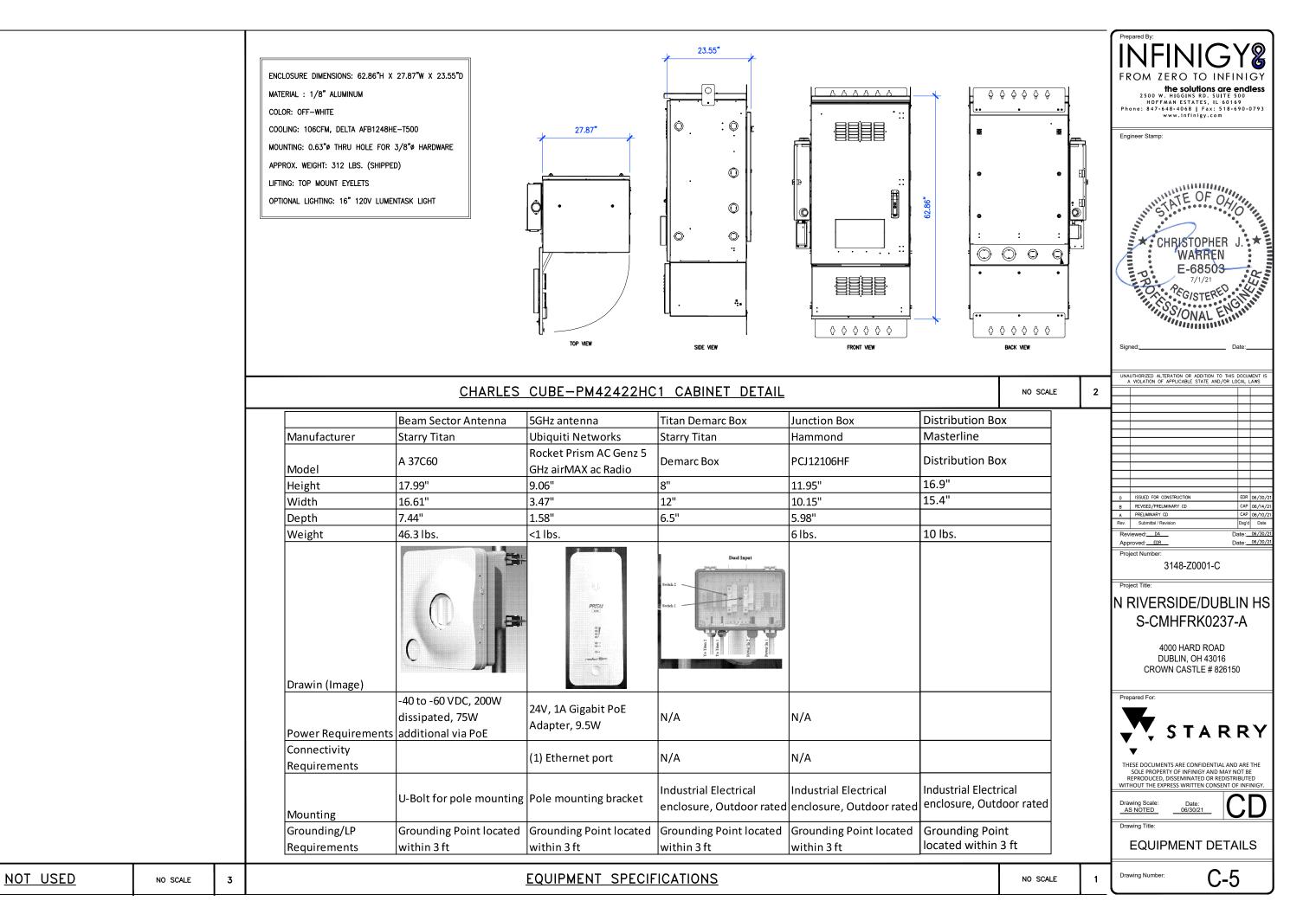
4000 HARD ROAD DUBLIN, OH 43016 CROWN CASTLE # 826150

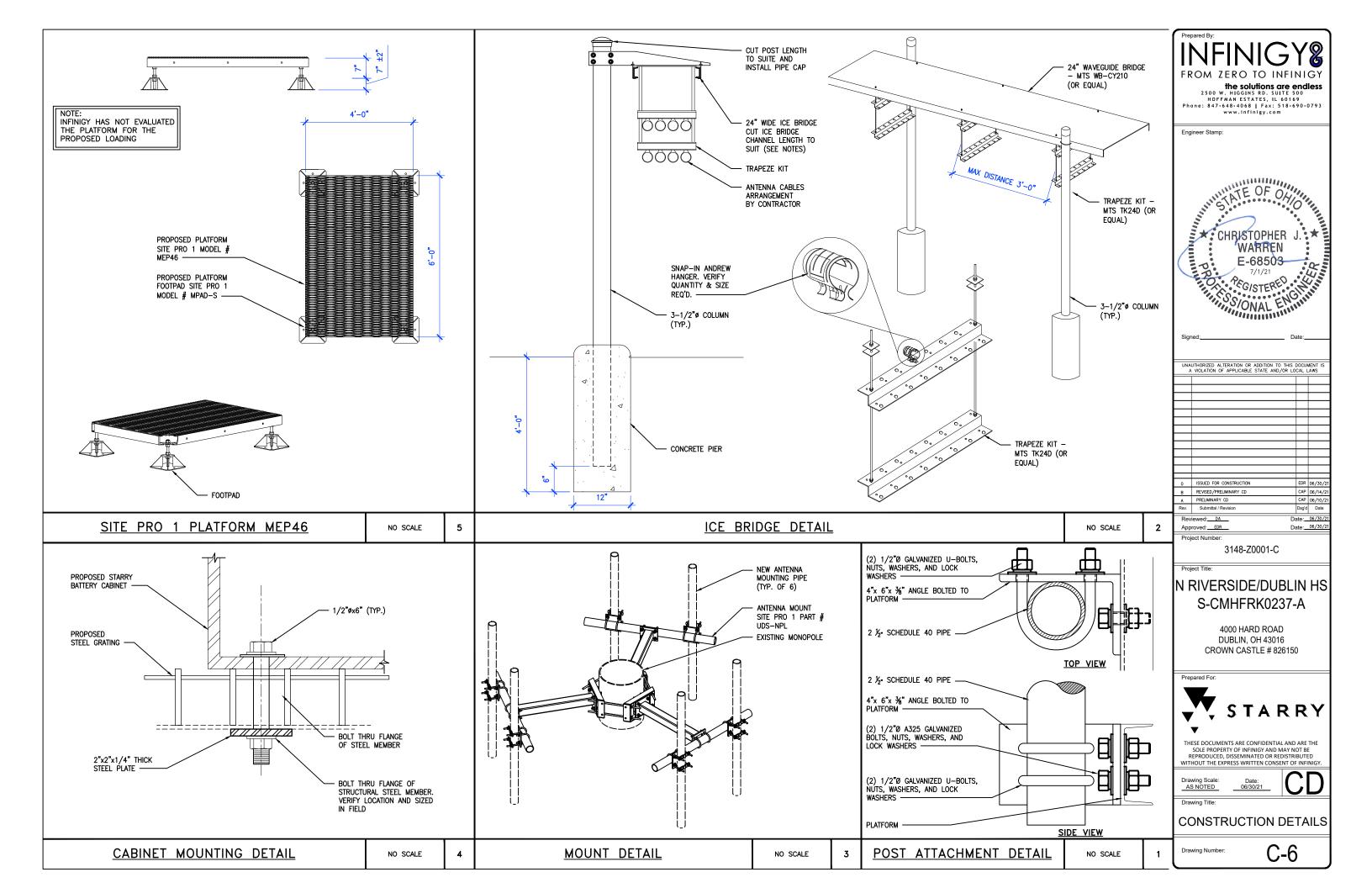


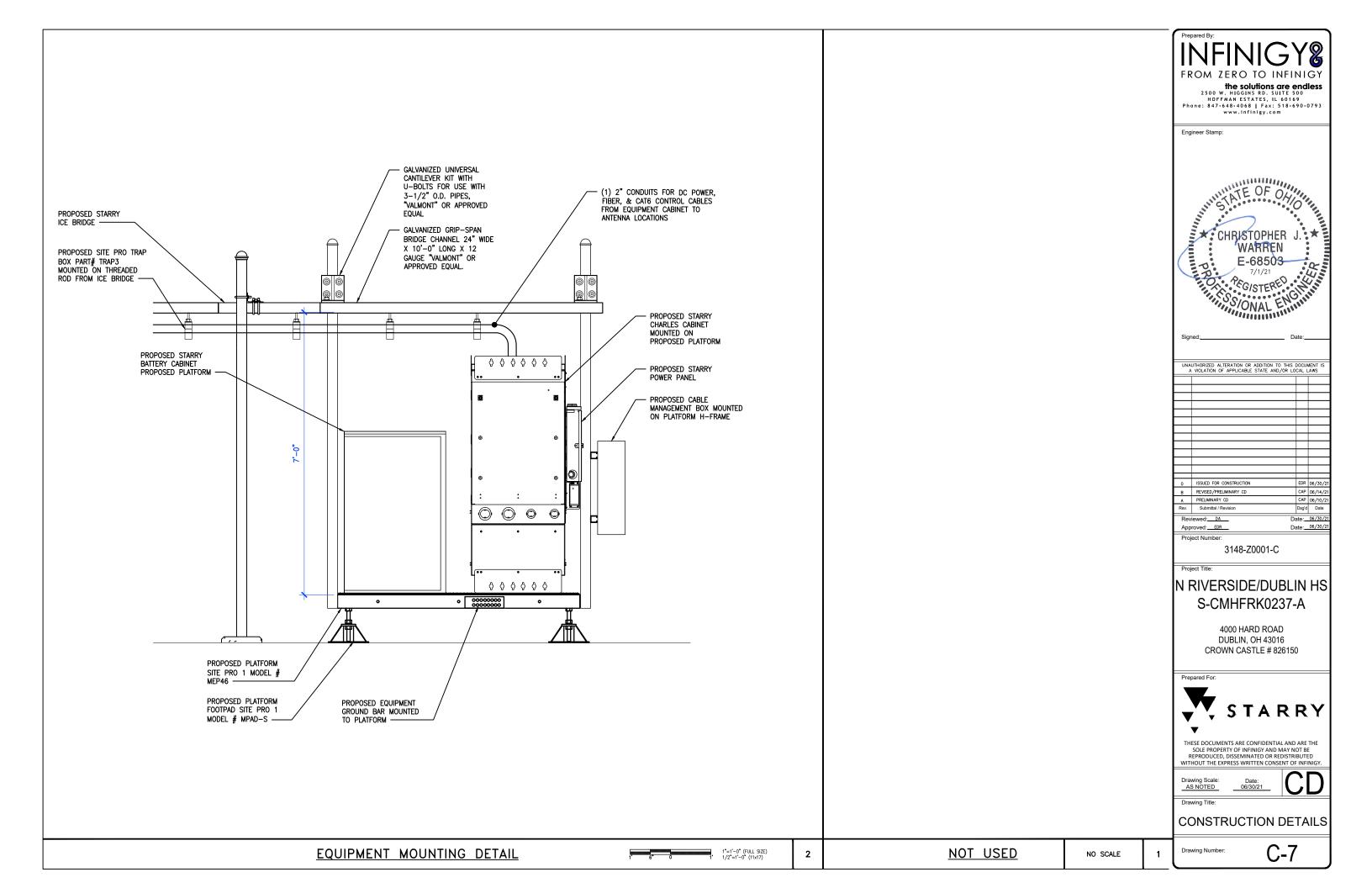
THESE DOCUMENTS ARE CONFIDENTIAL AND ARE THE SOLE PROPERTY OF INFINIGY AND MAY NOT BE REPRODUCED, DISSEMINATED OR REDISTRIBUTED WITHOUT THE EXPRESS WRITTEN CONSENT OF INFINIGY

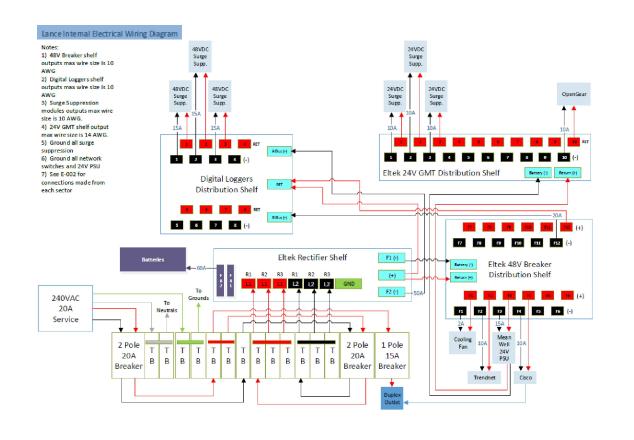
AS NOTED

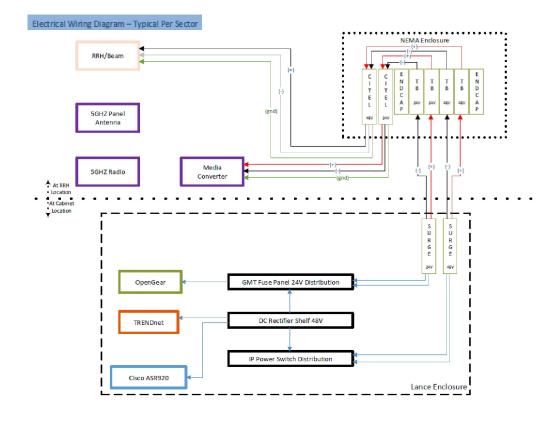
ANTENNA LAYOUT AND MOUNTING DETAIL

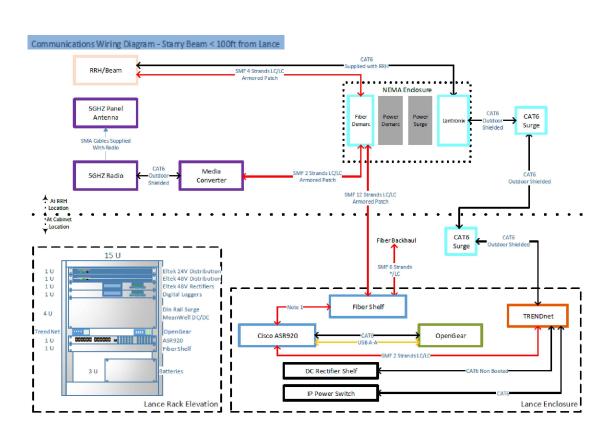


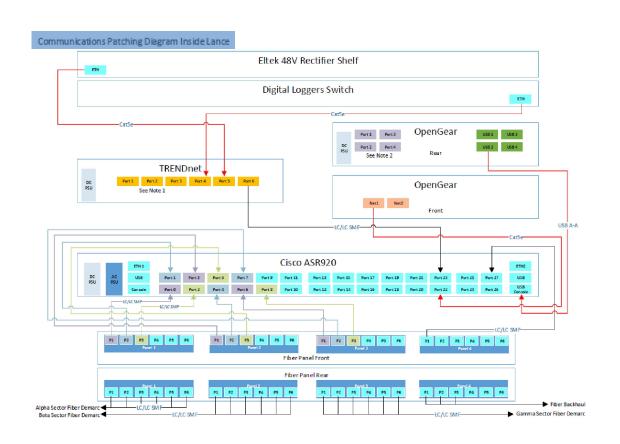


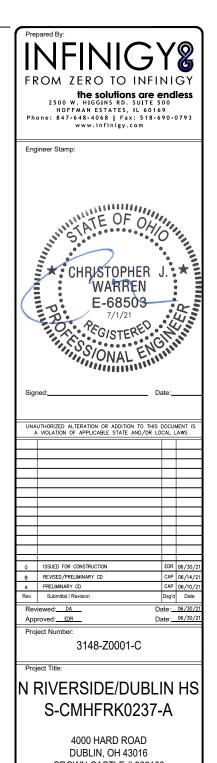












IN RIVERSIDE/DUBLIN HS

CROWN CASTLE # 826150

STARRY

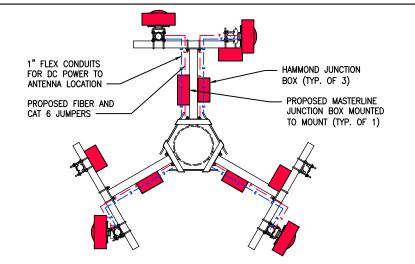
THESE DOCUMENTS ARE CONFIDENTIAL AND ARE THE SOLE PROPERTY OF INFINIGY AND MAY NOT BE REPRODUCED, DISSEMINATED OR REDISTRIBUTED WITHOUT THE EXPRESS WRITTEN CONSENT OF INFINIGY

AS NOTED

06/30/21

RF-1

**EQUIPMENT WIRING DIAGRAM** 



ANTENNA UTILITY PLAN

1. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE

ALL LOCAL AND STATE CODES, LAWS, AND ORDINANCES.

2. ALL UNDERGROUND CONDUIT SHALL BE PVC SCHEDULE 40 UNLESS OTHERWISE INDICATED. SUPPLY UTILITY MARKING

3. ALL CONDUCTORS SHALL BE COPPER WITH THHN/THWN INSULATION. CONTROL CONDUCTORS SHALL BE STRANDED,

BREAKER

ELECTRICAL ONE LINE DIAGRAM

TAPE BURIED 12" BELOW GRADE ALONG ENTIRE LENGTH OF

POWER & LIGHTING CONDUCTORS SHALL BE SOLID FOR #10

& #12 CONDUCTORS AND STRANDED FOR ALL OTHER SIZES.

LATEST VERSION OF THE NATIONAL ELECTRICAL CODE AND

**GENERAL ELECTRICAL NOTES:** 

UNDERGROUND CONDUITS.

STARRY

POWER

PANEL

STARRY POWER PANEL SCHEDULE CHARLES A/C LOAD CENTER CABINET, OR APPROVED EQUAL MODEL VOLTAGE: PHASE: 125 AMPS AIC: 22,000 MAIN BREAKER 100 AMP **BUSS RATING** MOUNT: H-FRAME NEUTRAL BAR: GROUND BAR YES ENCLOSURE TYPE: NFMA 3R N TO GROUND BOND: YES PANEL STATUS: BREAKER BREAKER BREAKER SERVICE SERVICE BREAKER BREAKER BREAKER CKT LOAD DESCRIPTION POLES STATUS LOAD VA FACTOR PHASE A VA PHASE B V LOAD VA STATUS POLES OAD DESCRIPTION SITE SUPPORT 1000 30 ON 400 1.25 ON SURGE ARRESTOR 1.25 800 2 60 400 SERVICE LIGHT ON 400 N/A N/A N/A N/A 0 N/A 16 19 N/A 0 N/A N/A 24 1400 2000 TOTAL KVA

PANEL SCHEDULE

**UTILITY NOTES:** 

INITIATING ANY WORK ON-SITE.

CARRIER. AND ELECTRIC UTILITY.

STANDARDS (LATEST EDITION).

DEGREES OF BEND.

MATCH EXISTING GRADE SURFACE

GEOTEXTILE FABRIC

WARNING TAPE

COMPACTED TRENCH BACKFILL

SELF COMPACTED MATERIAL

NO SCALE

CONNECTION TO EXISTING UTILITIES AND INCOMING POWER AND TELEPHONE SERVICES IS FOR CONCEPT ONLY. THE CONTRACTOR SHALL COORDINATE THE ACTUAL LOCATION WITH THE ELECTRIC AND TELEPHONE UTILITIES AND CARRIER.

ELECTRIC AND TELEPHONE UTILITIES TO ENSURE A TIMELY INSTALLATION OF THE INCOMING POWER AND TELEPHONE SERVICES. THE CARRIER WILL OBTAIN AN

THE CONTRACTOR IS RESPONSIBLE FOR MAKING ARRANGEMENTS WITH THE

ELECTRIC SERVICE ORDER (ESO) FOR THIS SITE PRIOR TO THE CONTRACTOR

3. THE INCOMING ELECTRIC SERVICE SHALL BE INSPECTED BY THE AUTHORITY HAVING JURISDICTION AND A CERTIFICATE OF SUCH INSPECTION SHALL BE FURNISHED TO

5. COORDINATE METER SOCKET REQUIREMENTS AND UTILITY METER ENCLOSURE WITH

6. INCOMING ELECTRIC SERVICES SHALL BE IN CONFORMANCE WITH THE UTILITIES

CONDUIT RUNS SHALL HAVE ONE 18"x18"x8" TRAFFIC RATED PULLBOX AFTER 270

9. CONDUIT RUNS SHALL HAVE A PULLBOX WITH A MAXIMUM SPACING OF 500 LINEAR

1'-6" (MIN)

ELECTRIC & FIBER TRENCH N.T.S.

PROPOSED GRADE

4. ANY UTILITY CHARGES ASSOCIATED WITH THIS SITE SHALL BE PAID BY THE CARRIER AND NO CHARGES, THEREFORE SHALL ACCRUE TO THE CONTRACTOR.

THE CARRIER WITH A COPY FORWARDED TO THAT UTILITY.

7. INSTALL PULL ROPES IN ALL CONDUITS UNLESS NOTED OTHERWISE.

EDR 06/30/2 CAP 06/14/2 Dsg'd Date Date: 06/30/2

# IN RIVERSIDE/DUBLIN HS





REPRODUCED, DISSEMINATED OR REDISTRIBUTED

06/30/21

TE OF OHILL TATE OF OHIO 2 E-6850 PG/STERED STATES ON AL ENGINEERS

Engineer Stamp

the solutions are endless

HOFFMAN ESTATES. IL 60169 Phone: 847-648-4068 | Fax: 518-690-0793 www.infinigy.com

0 ISSUED FOR CONSTRUCTION B REVISED/PRELIMINARY CD Rev. Submittal / Revisi Date: 06/30/2 Approved: EDR

3148-Z0001-C

S-CMHFRK0237-A

4000 HARD ROAD **DUBLIN, OH 43016** CROWN CASTLE #826150



THESE DOCUMENTS ARE CONFIDENTIAL AND ARE THE SOLE PROPERTY OF INFINIGY AND MAY NOT BE WITHOUT THE EXPRESS WRITTEN CONSENT OF INFINIG

AS NOTED

**UTILITY PLAN** 

(2) CONDUITS-

4. ELECTRICAL DRAWINGS ARE IN PART DIAGRAMMATIC. COORDINATE ELECTRICAL WORK WITH SITE CONDITIONS. 5. LOCATE ALL UNDERGROUND UTILITIES BEFORE TRENCHING. TO STARRY IF CONFLICTS ARISE, CONTACT UTILITY COMPANY AND ANTENNAS **ANTENNAS** ENGINEER IMMEDIATELY. ALL EXPOSED CONDUITS SHALL HAVE WEATHERPROOF CAPS NOT DUCT TAPE. PROVIDE 200 LB TEST PULL WIRES IN EACH TELEPHONE DINOMMAH AND POWER CONDUIT. JUNCTION BOX 8. PULL BOXES SHALL BE INSTALLED AS NEEDED PER NEC (TYP. OF 4) UTILITY REQUIREMENTS. TO STARRY ANTENNAS PROPOSED FIBER AND CAT6 JUMPERS TO FROM JUNCTION BOX TO ANTENNA LOCATION 1" FLEX CONDUITS FOR DC POWER TO PROPOSED MASTERLINE ANTENNA LOCATION JUNCTION BOX MOUNTED TO MOUNT (TYP. OF 1) (3) # 4 AND (1) #4G IN 1 1/2" EMT CONDUIT STARRY STRIBUTION (3) 2" CONDUIT FOR CABINET DC POWER, FIBER, & CAT6 CONTROL CABLES FROM EQUIPMENT CABINET TO ANTENNA LOCATIONS SOURCE

(V.I.F)

2" CONDUIT WITH 1"

INNERDUCT FOR

NO SCALE

3

NO SCALE 2 TO SOURCE VERIFY WITH LOCAL POWER COMPANY

NORTH

(3) 2" CONDUITS FOR DC POWER, CAT6, AND FIBER FROM EQUIPMENT CABINET TO ANTENNA LOCATIONS PROPOSED 2" PVC CONDUIT WITH 1" INNERDUCT FOR FIBER SERVICE TO FIBER DEMARC. VERIFY SOURCE WITH LOCAL FIBER COMPANY

PROPOSED STARRY FIBER DEMARC MOUNTED ON PLATFORM H-FRAME PROPOSED STARRY ELECTRICAL METER

MOUNTED ON PLATFORM H-FRAME (1) PROPOSED 2" PVC CONDUIT FOR

POWER FROM POWER SERVICE TO PROPOSED ELECTRIC METER (VERIFY SOURCE WITH LOCAL POWER COMPANY)

SITE UTILITY PLAN

(1) PROPOSED 2" PVC CONDUIT FOR

POWER FROM EQUIPMENT TO

ELECTRIC METER ±7'-0" L.F.

# NOTES:

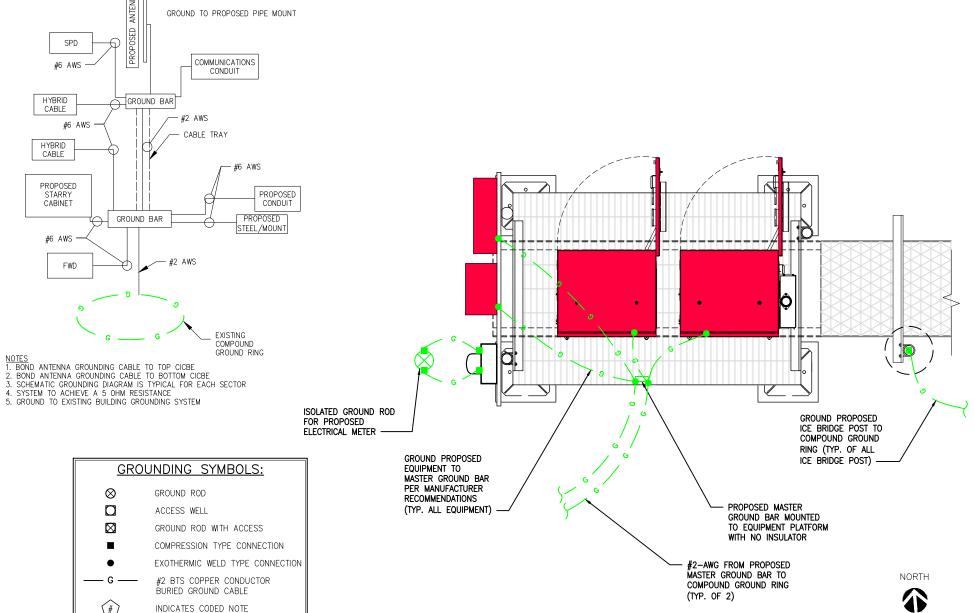
- PROPOSED STARRY EQUIPMENT TO BE GROUNDED TO BUILDING GROUNDING SYSTEM (#2 AWG STRANDED GREEN INSULATED GROUNDING WIRE)
- PROPOSED STARRY MASTER GROUND BAR TO BE GROUNDED TO BUILDING STEEL WITH #2 AWG SOLID TINNED BCW (TYP. OF 2 PLACES)
- BOND PROPOSED STARRY H-FRAME TO PROPOSED STARRY GROUND BAR WITH #2 AWG STRANDED GREEN INSULATED GROUND WIRE.
- PROPOSED STARRY POWER DISTRIBUTION CABINET TO BE GROUNDED PER MANUFACTURER'S **SPECIFICATIONS**

### EXTERIOR GROUNDING NOTES

SYSTEM GROUND RESISTANCE SHALL NOT EXCEED 10 OHMS. A THREE POINT SYSTEM RESISTANCE TEST SHALL BE PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH

PERFORM THREE TESTS AT EACH SITE.

- CONTRACTOR SHALL PROVIDE A WRITTEN REPORT CONSISTING OF THE FOLLOWING: SITE NAME, ADDRESS AND IDENTIFICATION NUMBER, DESCRIPTION OF SITE SOIL AND MOISTURE CONDITION, DESCRIPTION OF WEATHER, MODEL NUMBER OF TESTING EQUIPMENT, DATE OF LAST CALIBRATION, SITE SKETCH SHOWING LOCATION OF TEST PROBES AND ALL FIELD DATA COLLECTED (READINGS, RANGE, TEST, MILLIAMPS, ETC.)
  CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER IF THERE ARE ANY
- DIFFICULTIES PERFORMING SYSTEM RESISTANCE TESTS OR IF MEASUREMENTS ARE ABOVE 10 OHMS. THE CONSTRUCTION MANAGER SHALL PROVIDE INSTRUCTION TO THE CONTRACTOR TO INSTALL ADDITIONAL GROUNDING MEASURES TO MEET THE 10 OHM REQUIREMENT.



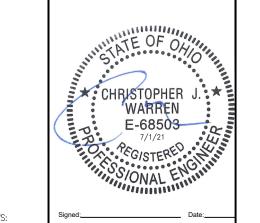
## **GENERAL GROUNDING NOTES:**

- 1. TO ENSURE PROPER BONDING, ALL CONNECTIONS SHALL BE AS FOLLOWS: - #2 Bare tinned solid copper conductor: exothermic weld to robs or ground ring
- LUGS AND BUS BAR (UNLESS NOTED OTHERWISE): SANDED CLEAN, COATED WITH OXIDE INHIBITOR AND BOLTED FOR MAXIMUM SURFACE CONTACT. ALL LUGS SHALL BE COPPER (NO ALUMINUM SHALL BE PERMITTED). PROVIDE LOCK WASHERS FOR ALL MECHANICAL CONNECTIONS FOR GROUND CONDUCTORS. USE STAINLESS STEEL HARDWARE THROUGHOUT.
- 2. ALL GROUNDING CABLE IN CONCRETE OR THROUGH WALLS SHALL BE IN 3/4" PVC CONDUIT. SEAL AROUND CONDUIT THROUGH WALLS. NO METALLIC CONDUIT SHALL BE USED FOR GROUNDING CONDUCTORS.
- 3. OWNER'S REPRESENTATIVE WILL INSPECT EXOTHERMIC WELD AND CONDUCT MEGGER TEST PRIOR TO BURIAL. MAXIMUM 5 OHMS RESISTANCE IS REQUIRED.
- 4. CONTRACTOR TO INSTALL GROUNDING IN CLOSE PROXIMITY TO EQUIPMENT PLATFORM OR PAD.
- 5. MAKE ALL GROUND CONNECTIONS AS SHORT AND DIRECT AS POSSIBLE. AVOID SHARP BENDS. ALL BENDS SHALL BE A MINIMUM 8" RADIUS AND NO GREATER THAN 90 DEGREES.
- 6. ALL EXOTHERMIC WELDS TO BURIED GROUND RING SHALL BE THE PARALLEL TYPE, EXCEPT FOR THE GROUND RODS WHICH SHALL BE THE
- 7. BOND SERVICE CONDUITS TO GROUND RING AS THEY CROSS. DO NOT EXOTHERMICALLY WELD TO CONDUITS.
- 8. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER WHEN THE GROUNDING SYSTEM IS COMPLETE. THE CONSTRUCTION MANAGER SHALL INSPECT THE GROUNDING SYSTEM PRIOR TO BACKFILLING.
- 9. THE MINIMUM SPACING BETWEEN GROUND RODS SHALL BE 10'-0" (MAX.
- 10. BOND CIGBE TO EXTERNAL GROUND RING WITH 2 RUNS OF #2 BARE, TINNED, SOLID COPPER CONDUCTOR IN PVC. CONNECT BAR END WITH 2 HOLE LUG, AND EXOTHERMICALLY WELD THE OTHER END TO THE EXTERNAL GROUND ROD.
- 11. THE PREFERRED LOCATION FOR COAX GROUNDING IS AT THE BASE OF THE TOWER PRIOR TO THE COAX BEND.
- 12. BONDING OF THE GROUNDED CONDUCTOR (NEUTRAL) AND THE GROUNDING CONDUCTOR SHALL BE AT THE SERVICE DISCONNECTING MEANS. BONDING JUMPER SHALL BE INSTALLED PER N.E.C. ARTICLE



HOFFMAN ESTATES, IL 60169 Phone: 847-648-4068 | Fax: 518-690-0793 www.infinigy.com

Engineer Stamp



EDR 06/30, 0 ISSUED FOR CONSTRUCTION B REVISED/PRELIMINARY CO CAP 06/14/ Rev. Submittal / Revisi Dsg'd Date Date: 06/30/ Date: 06/30/2 Approved: EDR

3148-Z0001-C

# IN RIVERSIDE/DUBLIN HS S-CMHFRK0237-A

4000 HARD ROAD **DUBLIN, OH 43016** CROWN CASTLE #826150

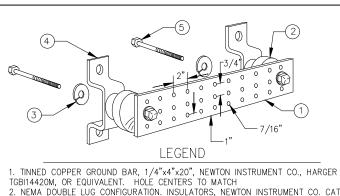


THESE DOCUMENTS ARE CONFIDENTIAL AND ARE THE SOLE PROPERTY OF INFINIGY AND MAY NOT BE REPRODUCED, DISSEMINATED OR REDISTRIBUTED VITHOUT THE EXPRESS WRITTEN CONSENT OF INFINIG

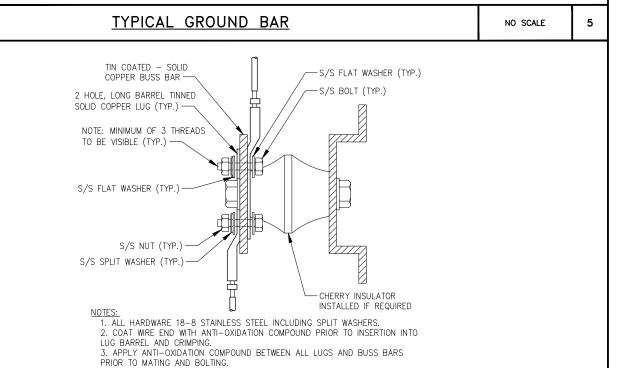
AS NOTED

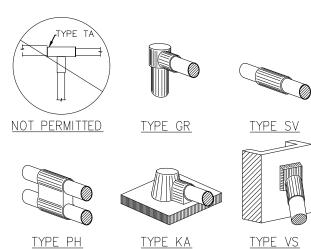
**GROUNDING PLAN** & DETAIL

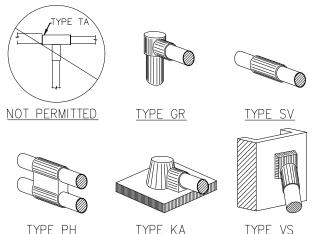
G-1



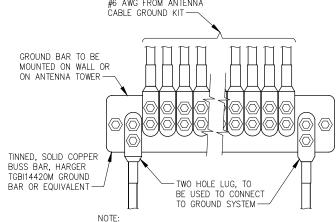
- 2. NEMA DOUBLE LUG CONFIGURATION. INSULATORS, NEWTON INSTRUMENT CO. CAT. NO. 3061-4 OR HARGER EQUIVALENT.
- 3. 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8 OR EQUIVALENT. 4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT. NO. A-6056 OR HARGER
- 5. 5/8-11"x1" H.H.C.S. BOLTS, NEWTON INSTRUMENT CO. CAT. NO. 3012-1 OR HARGER EQUÍVALENT.
- 1. ALL MOUNTING HARDWARE CAN ALSO BE USED ON 6", 12", 18", ETC. GROUND BARS.
- 2. ENTIRE ASSEMBLY AVAILABLE FROM NEWTON INSTRUMENT CO. CAT. NO. 2106060010 OR AS HARGER TGBI14420M.











NOTE:
CONTRACTOR TO UTILIZE KORP-SHIELD (THOMAS & BETTS) OR EQUIVALENT ON ALL LUG CONNECTIONS

S/S FLAT WASHER # S/S FLAT WASHER S/S BOLT (1 OF 2) "DO NOT DISCONNECT" ALL MECHANICAL EXTERNAL TERMINATION SURFACES SHALL BE TREATED WITH T&B TAG ON ALL GROUND BAR INTERCONNECTS -KOPR-SHIELD CP8 ANTI-OXIDATION COMPOUND.

THESE DOCUMENTS ARE CONFIDENTIAL AND ARE THE SOLE PROPERTY OF INFINIGY AND MAY NOT BE REPRODUCED, DISSEMINATED OR REDISTRIBUTED

3148-Z0001-C

N RIVERSIDE/DUBLIN HS

S-CMHFRK0237-A

4000 HARD ROAD

**DUBLIN, OH 43016** 

CROWN CASTLE # 826150

0 ISSUED FOR CONSTRUCT B REVISED/PRELIMINARY CO

Approved: EDR

the solutions are endless

2500 W. HIGGINS RD. SUITE 500 HOFFMAN ESTATES, IL 60169 Phone: 847-648-4068 | Fax: 518-690-0793 www.infinigy.com

WARREN

E-68503

Engineer Stamp:

EDR 06/30,

**GROUNDING DETAILS** 

G-2

TYPICAL ANTENNA GROUND BAR 3 NO SCALE

TYPICAL EQUIPMENT GROUND CONNECTION

NO SCALE