

GENERAL NOTES

- ALL WORK SHALL CONFORM TO LOCAL BUILDING CODE AND ORDINANCES.
- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS PORTION OF WORK WITH OTHER PORTIONS OF THE WORK.
- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, AND SAFETY TO THE PUBLIC AND TO THE PROPERTY BOTH PRIVATE AND PUBLIC.
- ELECTRICAL CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH HIS PORTION OF WORK.
- TEMPORARY LIGHT AND POWER FOR THE PROJECT (INSTALLATION, EQUIPMENT, MATERIALS AND MAINTENANCE) SHALL BE INCLUDED AS PART OF THE ELECTRICAL WORK, IN A MANNER CONSISTENT WITH NORMAL PRACTICE.
- ELECTRICAL CONTRACTOR SHALL BALANCE LOADS AT PANELS AND MAIN SERVICES SO THAT LOADS ARE BALANCED AND NO OVERLOADING SUBFEEDS, BRANCH CIRCUITS, ETC.
- BRANCH CIRCUITING IS DIAGRAMATIC IN NATURE AND INDICATES WHICH DEVICES ARE TO BE ON SAME CIRCUIT OR CONTROLLED FROM SAME SWITCH.
- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ELECTRICAL WORK WITH GENERAL CONTRACTOR, HVAC CONTRACTOR AND PLUMBING CONTRACTOR.
- ELECTRICAL CONTRACTOR SHALL REVIEW ARCHITECTURAL, MECHANICAL AND PLUMBING DRAWINGS TO ASCERTAIN EXACT LOCATION OF ELECTRICAL EQUIPMENT & PROVIDE ELECTRICAL SERVICE TO EQUIPMENT WHETHER OR NOT INDICATED ON ELECTRICAL DRAWINGS.
- ELECTRICAL CONTRACTOR SHALL OBTAIN AND ACQUAINT HIMSELF WITH MECHANICAL AND PLUMBING DRAWINGS FOR EXACT EQUIPMENT LOCATION, QUANTITY, HORSEPOWER RATING AND VOLTAGE PRIOR TO BIDDING. ADDITIONAL COST TO CONTRACT WILL NOT BE ACCEPTED FOR FAILURE TO PERUSE ALL CONTRACT DOCUMENTS.
- EXCAVATION AND BACKFILL FOR INSTALLATION OF ELECTRICAL WORK SHALL BE PART OF THE ELECTRICAL WORK.
- ELECTRICAL CONTRACTOR SHALL PROVIDE FLOOR AND WALL FIRE STOPPING FOR ALL PIPE AND CONDUIT PENETRATIONS THROUGH FLOOR CONSTRUCTION (3 HOUR) AND ANY OTHER RATED WALLS SUCH AS ELEVATOR SHAFTS (2 HOUR) OR STAIRWELLS (1 HOUR). FIRE STOP SHALL BE 'SPEC SEAL' AS MANUFACTURED BY SPECIFIED TECH. INC. OR APPROVED EQUAL.
- ANY CUTTING, CHANNELING, SLEEVES, OPENINGS FOR ELECTRICAL INSTALLATION SHALL BE PART OF THE ELECTRICAL WORK. BEFORE ANY WORK IS STARTED, WRITTEN APPROVAL MUST BE OBTAINED FROM ARCHITECT AND ANY DAMAGE SHALL BE REPAIRED AT ELECTRICAL CONTRACTOR'S EXPENSE.
- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL SUPPORTS FOR CABLE, BOXES, CONDUITS, ETC.  
ALL SUPPORTS SHALL ONLY BE ANCHORED TO BUILDING STRUCTURE. CEILING SUPPORTS SHALL NOT BE USED TO SUPPORT CABLE, BOXES, CONDUITS, ETC.
- ALL SUSPENDED CEILING GRIDS, MECHANICAL SYSTEMS, AUTOMATIC SPRINKLER SYSTEMS, ELECTRICAL SYSTEM COMPONENTS, AND PLUMBING SYSTEMS SHALL BE SUPPORTED ONLY FROM THE TOP OF BAR JOIST AND/OR STRUCTURE ABOVE. SUPPORT FROM BOTTOM CHORDS OF BAR JOIST IS NOT PERMITTED.
- ALL LAY-IN CEILING FIXTURES SHALL BE SECURED TO CEILING GRID PER ARTICLE #410 (c) 2005 N.E.C.
- EMERGENCY LIGHTING AND EXIT SIGNS SHALL BE BATTERY BACK-UP TYPE. SAID EQUIPMENT SHALL BE SPACED AND LOCATED THROUGHOUT ALL OCCUPIED SPACES TO MEET APPLICABLE CODES AND ARE SUBJECT TO THE APPROVAL OF THE LOCAL FIRE MARSHAL.
- ELECTRICAL CONTRACTOR SHALL ROUTE CONDUIT SERVING ROOFTOP EQUIPMENT WITH MECHANICAL PIPING.
- CONTROLS & OPERATING DEVICES WILL BE MOUNTED NO HIGHER THAN 54" FOR SIDE REACH AND 48" FOR FORWARD REACH. OUTLETS, ETC., WILL BE MOUNTED NO LESS THAN 15" ABOVE THE FLOOR [IAC 400.310(r)].

- PROVIDE ONE (1) NEMA 5-20R-WP-GFI RECEPTACLE NEXT TO EACH NEW RTU ON THE ROOF. REFER TO THE DRAWINGS FOR EXACT LOCATIONS.
- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE REMOVAL OF ALL EXISTING ELECTRICAL FIXTURES, PANELS, AND DEVICES, ALONG WITH RELATED WIRING AND CONDUIT. ELECTRICAL CONTRACTOR SHALL VISIT THE SITE TO DETERMINE THE EXACT SCOPE OF ELECTRICAL DEMOLITION. ALL WALLS INDICATED FOR REMOVAL SHALL INCLUDE ALL ELECTRICAL DEVICES AND RELATED WIRING AND CONDUIT. ALL SALVAGE VALUE SHALL BE RETURNED TO OWNER. ELECTRICAL CONTRACTOR SHALL CORRDINATE ALL ELECTRICAL SHUTDOWN AND DEMOLITION OF ALL ELECTRICAL EQUIPMENT AND FIXTURES WITH THE PROJECT MANAGER AND WITH ARECHITECTURAL PLANS. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECTING ALL EQUIPMENT TO BE REMOVED OR RELOCATED. COORDINATE DISCONNECTION WITH PROJECT MANAGER AND ARCHITECTURAL PLANS.
- VERIFY LOCATION AND REQUIREMENTS OF SIGNS PRIOR TO ROUGH-IN OF JUNCTION BOXES. SIGNS FURNISHED WITH DISCONNECT SWITCHES BY SIGN CONTRACTOR.
- IN ACCESSIBLE UNITS ALL ELECTRICAL DEVICES: SWITCHES, RECEPTACLES, PANELS, ETC.; MOUNTING HEIGHTS SHALL COMPLY WITH ADA AND CITY OF OAK PARK REQUIREMENTS.
- IN GENERAL, CONDUIT SHALL BE CONCEALED, AND CONDUIT CAN BE EXPOSED IN UNFINISHED AREA OR WHERE OTHER MECHANICAL TRADES INSTALLED EXPOSED PIPING. EXPOSED CONDUIT SHALL BE RUN PARALLEL AND PERPENDICULAR TO BUILDING WALLS. VERIFY SURFACE RACEWAY AND EXPOSED CONDUIT INSTALLATIONS WITH ARCHITECT PRIOR TO INSTALLATION. CONDUIT INSTALLED IN FLOOR SLAB AND/OR IN GRADE SHALL BE GRH.
- TELEPHONE/DATA SYSTEM WORK SHALL BE PERFORMED BY ELECTRICAL CONTRACTOR.
- USE NO WIRE SMALLER THAN NO. 14 AWG COPPER, RATED AT 600 VOLTS, FOR POWER AND LIGHTING BRANCH CIRCUITS AND NO SMALLER THAN NO.14 AWG COPPER FOR CONTROL WIRING. BRANCH CIRCUIT CONDUCTORS FOR 20 AMPERE, 120 VOLT CIRCUITS SHALL BE NO. 12 AWG COPPER, WITH CONDUCTOR FROM PANELBOARD TO THE FIRST OUTLET AS FOLLOWS:  

0- 75 FEET	-----	*12 AWG (COPPER)
75-150 FEET	-----	*10 AWG (COPPER)
150-250 FEET	-----	*8 AWG (COPPER)
250-350 FEET	-----	*6 AWG (COPPER)

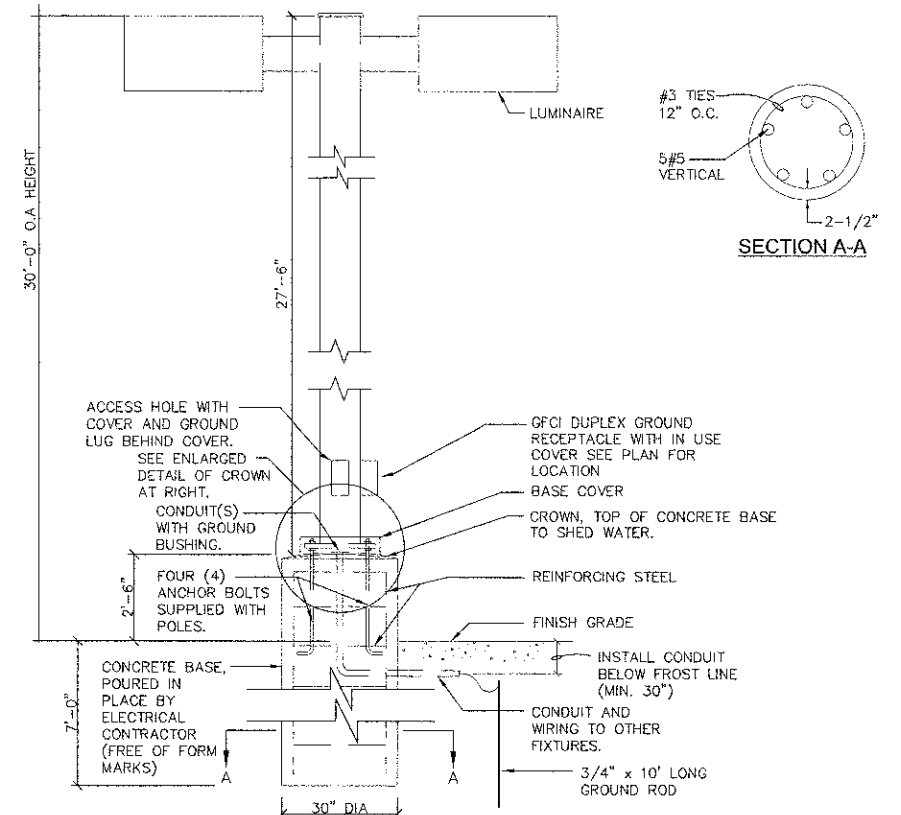
- OUTDOOR WIRELESS ACCESS POINT SYSTEM
- OUTDOOR WIRELESS ACCESS POINT SHALL BE WITH DUAL RADIO SYSTEM WITH DUAL BAND RADIOS, 3 DUAL BAND ANTENNAS, BATTERY BACK-UP POE-OUT PORT FOR SECURITY CAMERA POIVER, MOUNTING KIT, POWER OPTION, NEMA 4X ENCLOSURE.
  - WIRELESS AP's SHALL BE EQUAL TO THE FOLLOWING CISCO 1552 E OUTDOOR WIRELESS MESH APS  
 AP TYPE: ALR-CAP 1552E-A-K9  
 SOFTWARE OPTION: S155W8K9 - 12423JA  
 ANTENNA: AIR-ANTEZ547V-N  
 MTG KIT: AIR-ACCPMK1550  
 POWER OPTION: AIR-PWR-ST-LT-R3P  
 BATTERY BACK-UP: AIR-1520-BATT-6AH
  - SYSTEM INSTALLATION SHALL BE PERFORMED BY A QUALIFIED CISCO WIRELESS MESH PARTENER WITH MINIMUM OF 5 YEARS OF INSTALLATION EXPERIENCE, QUALIFIED INSTALLER SHALL BE RESPONSIBLE FOR A COMPLETED & OPERATING INSTALLATION INCLUDING A SITE SURVEY TO ENSURE COVERAGE OF ENTIRE ENTRANCE DRIVEWAY UP TO KIOSKS & FOR EACH OUTDOOR SECURITY CAMERA LOCATION.

- CLOSED CIRCUIT CAMERA SYSTEM SCOPE
- CLOSED CIRCUIT SECURITY CAMERA SYSTEM SCOPE EQUAL TO FOLLOWING & SHALL BE COMPATIBLE WITH THE MILESTONE ENTERPRISE VERSION 7.00 OR LATER.
- POLE MOUNTED CAMERAS SHALL BE WITH PAN TILE ZOOM DAY-NIGHT PTZ, DOME, NEMA 4X AT ENCLOSURE, 12X OPTICAL ZOOM POWER OVER ETHERNET CAPABILITY, MOUNTING BRACKET AXIS 5512-E PTZ DOME NETWORK CAMERA W/ POE 802, 3of CLASS 3 (CAMERAS POWERED FROM POLE MOUNTED CISCO 1552 WIRELESS ACCESS POINT)
  - CEILING MOUNTED CAMERA IN KIOSK IS SIMILAR TO ITEM 1 EXCEPT NEMA 1 ENCLOSURE & 3X ZOOM & POWER OVER ETHERNET MIDSPAN, AXIS M5014 PTZ DOME NETWORK CAMERA.
  - SYSTEM INSTALLED SHALL BE PERFORMED BY A QUALIFIED CLOSED CIRCUIT SECURITY CAMERA INSTALLER WITH MINIMUM 5 YEARS OF EXPERIENCE WITH POE. TECHNOLOGY. QUALIFIED INSTALLER SHALL BE RESPONSIBLE FOR A COMPLETE & OPERATING SYSTEM.

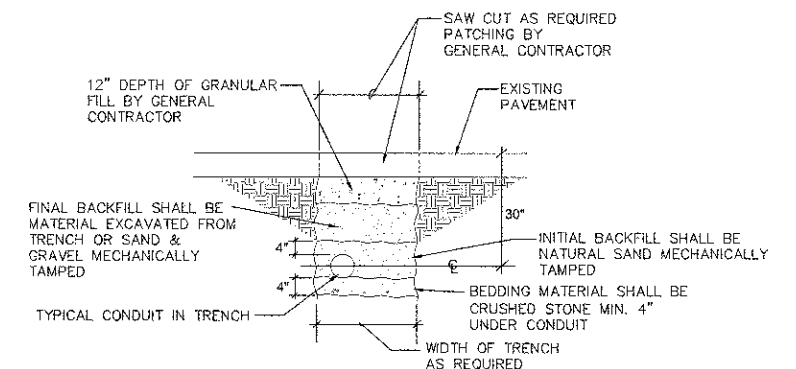
LIGHT FIXTURE SCHEDULE

TAG	MANUFACTURER DESCRIPTION	LAMP	VOLTS	WATTS	REMARKS
F1	HADCO #RX2120H5NAMNNAN OR EQUAL	LED	-	285	12 SINGLE FIXTURE MOUNTED TO ROUND POLE. SEE DRG E1.0
F2	HADCO RX2120H3NAMNNAN OR EQUAL	LED	-	285	SIMILAR TO F1
F3	HADCO RX2120H4NAMNNAN OR EQUAL	LED	-	285	NEW FIXTURE MOUNTED TO EXISTING POLE F&I MOUNTING HARDWARE
F4	HADCO RX2120H3NAMNNAN OR EQUAL	LED	-	285 EACH	SAME AS F1 EXCEPT 2 FIXTURE MOUNTED AT 180 DEG.
F5	ACDC 1032 OR EQUAL	LED	120V		GRADE MOUNTED SIGN LIGHT. SEE DETAIL
F6	ANP BLO201 OR EQUAL	LED	120V		42" BOLLARD LIGHT FIXTURE SEE DETAIL
F7	EMERGE WXP OR EQUAL	LED	120V		GRADE MOUNTED WALL WASH FIXTURE
F8	HADCO RX2120H3NAMNNAN OR EQUAL	LED	240V	285	NEW FIXTURE MOUNTED TO EXISTING POLE. F&I MOUNTING HARDWARE
F9	SCHREDER ENYO ENYO-3-3500-8 OR EQUAL	LED 3500K	120V	30	COLUMN MOUNTED LED FLOOD LIGHT SEE DRG. E1.2
F10	SCHREDER NEOS 1 30-3500-46 OR EQUAL	LED 3500K	120V	30	LED FLOOD LIGHT MOUNTED ON ROOF OF KIOSK SEE DR. E1.2
F11		LED	120V		EXTERIOR KIOSK MOUNTED LED FIXTURE FOR PRICING SIGN LIGHTING FURNISHED INSTALLED & WIRED BY EC
F12	SQ1 PRECISION LTG SN-1845-60120, WG-XX/TG-5052 HOUSING	COLD CATHODE	120V	720	WELCOME SIGN LIGHTING FURN. WITH LOW VOLT XMFR & HOUSING. XMFR & HOUSING COLOR TO BE SELECTED BY C2S

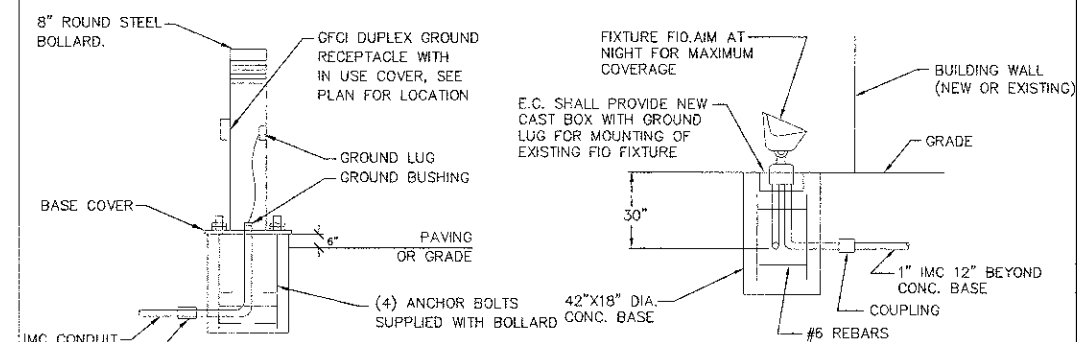
NOTE:  
 1. FIXTURES F1 THRU F10 & F12 SHALL BE CONTROLLED VIA WIRELESS LUMINAIRE CONTROLLER, INSTALLED & WIRED WITHIN LUMINAIRE BY LUMINAIRE MFR. WIRELESS LUMINAIRE CONTROLLER SHALL BE OWLET-SCHREDER LTG MODEL NO. LC-MD-US-120V.  
 2. CONTRACTOR SHALL F&I LIGHTING SYSTEM SEGMENT CONTROLLER FOR INTERFACE WITH BROOKFIELD ZOO'S EXISTING CAMPUS LIGHTING CONTROL SYSTEM. SEGMENT CONTROLLER SHALL BE OWLET SC-3G-US120-10-A. COORDINATE INSTALLATION WITH BROOKFIELD ZOO.



LIGHT POLE & CONCRETE BASE DETAIL  
 NOT TO SCALE  
 TYPICAL FOR FIXTURES F1



CONDUIT INSTALLATION DETAIL



"F6" BOLLARD DETAIL

MOUNTING DETAIL OF F5, F7 FIXTURE