A. ELECTRICAL GENERAL NOTES:

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF N.E.C., AASHTO, AND LOCAL ORDINANCES AND REGULATIONS. COORDINATE ALL ELECTRICAL WORK WITH IDOT AND ALL OTHER CONTRACTORS ON THE SITE.

2. INDOOR ELECTRICAL CONTROL CABINETS SHALL HAVE A MINIMUM NEMA-12 RATING OR AS INDICATED. ALL OUTDOOR CABINETS SHALL BE STAINLESS STEEL TYPE 316, AND SHALL BE NEMA 4X RATED UNLESS OTHERWISE NOTED.

3. LOCATIONS AND DIMENSIONS OF ELECTRICAL EQUIPMENT AND ASSOCIATED DEVICES AND CONDUIT RUNS ARE APPROXIMATE BASED ON EXISTING CONDITIONS AND BEST AVAILABLE PERTINENT INFORMATION AND PLANS. HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING EXACT LOCATIONS AND PROPOSED EQUIPMENT DIMENSIONS AS PART OF THE CONSTRUCTION AND SHOP DRAWING SUBMITTAL PROCESS. AS-BUILT-DRAWINGS SHALL BE BASED ON APPROVED SHOP DRAWINGS AND ON ACTUAL FIELD SURVEYS, MEASUREMENTS, AND APPROVED INSTALLED EQUIPMENT ONLY.

4. FURNISH AND INSTALL ALL REQUIRED CONDUIT, WIRE AND CABLE, FITTINGS, BOXES, HARDWARE, ETC. IN ORDER TO MAKE A COMPLETE ELECTRICAL/ COMMUNICATION SYSTEM READY FOR OPERATION. DRAWINGS FOR APPROVAL SHOWING LAYOUT DETAILS SHALL BE SUBMITTED PRIOR TO ANY INSTALLATION WORK.

5. ALL CONDUIT AND WIRING FURNISHED AND INSTALLED UNDER THIS CONTRACT SHALL BE NEW AND MEET NEC AND AASHTO CODE REQUIREMENTS. EXISTING WIRING NOT USED SHALL BE DISCONNECTED AND CLEARLY MARKED AS SUCH. CONDUIT NOT REMOVED AND NOT USED SHALL BE CAPPED. ALL CONDUIT AND FITTINGS SHALL BE HOT- DIP GALVANIZED RIGID STEEL. ADDITIONALLY, ALL EXTERNAL CONDUITS SHALL BE PVC-COATED. MOUNT ALL CONDUIT RUNS ON PVC-COATED GALVANIZED STEEL UNISTRUT (KINDORF) CHANNELS OR APPROVED EQUAL. MOUNTING HARDWARE SHALL BE STAINLESS STEEL, TYPE 316.

6. EXACT CONDUITS, JUNCTION AND PULL BOX LOCATIONS, MOUNTING HARDWARE AND SUPPORTS, AND STUB-UP LOCATIONS ARE TO BE DETERMINED BASED ON FIELD CONDITIONS AS SPECIFIED AND SHOWN ON THE PLANS.

7. PROVIDE EXPANSION AND DEFLECTION CONDUIT FITTINGS OF THE APPROVED TYPE AT THE LOCATIONS WHERE CONDUIT PASSES THROUGH STRUCTURAL EXPANSION JOINTS OTHER CRITICAL LOCATIONS, OR MINIMUM EVERY 300 FEET ON STRAIGHT RUNS.

8. PITCH CONDUIT RUNS TOWARD PULL BOXES TO PREVENT MOISTURE ACCUMULATION. ON LOWEST POINT OF ALL BOXES AND OTHER ELECTRICAL EQUIPMENT SUBJECT TO WATER ACCUMULATION, PROVIDE NECESSARY DRAIN OPENINGS, FITTINGS, CONDUITS, ETC.

9. PERFORM ALL CUTTING, DRILLING AND CORE DRILLING AS NECESSARY TO PROVIDE PENETRATIONS THROUGH WALLS AND FLOORS FOR ELECTRICAL INSTALLATION WORK. CORE DRILL DIAMETER SHALL NOT BE MORE THAN 25 PERCENT LARGER THAN THE CONDUIT OUTSIDE DIAMETER. ALL CONDUITS PENETRATING WALLS AND FLOORS SHALL BE INSTALLED IN A GALVANIZED STEEL SLEEVE WITH FLOOR SUPPORTS . PATCH AND RESTORE SURROUNDING AREA OF PENETRATIONS TO ITS ORIGINAL CONDITION TO THE SATISFACTION OF THE ENGINEER. OPENINGS THROUGH SLAB AND WALL FOR CONDUITS SHALL BE FIRE STOPPED IN AN APPROVED MANNER UTILIZING "3M" COMPANY SEALING SYSTEM #7904 SERIES OR APPROVED EQUAL.

10. ALL EQUIPMENT CABINETS SHALL BE FURNISHED WITH ONE THERMOSTATICALLY-CONTROLLED STRIP HEATER, AND 125V, 20A RATED DUPLEX RECEPTACLE.

11. CONTRACTOR SHALL NOTIFY IDOT FOR EXISTENCE OF ASBESTOS AFFECTED BY THE INSTALLATION OF ELECTRICAL AND CONTROL SYSTEMS.

12. FURNISH AND INSTALL TAGS FOR CONDUITS AND CABLES TO BE INSTALLED UNDER THIS CONTRACT. TAG IDENTIFICATIONS SHALL BE IN ACCORDANCE WITH THE CONTRACT DRAWINGS, OR AS DIRECTED BY THE ENGINEER.

13. PRIOR TO COMMENCEMENT OF WORK, SUBMIT DETAILED STAGING PLANS TO THE ENGINEER FOR APPROVAL. COORDINATE WITH THE ENGINEER ALL CONSTRUCTION ACTIVITIES THAT MAY AFFECT OPERATIONS.

14. COMPLETE ELECTRICAL INSTALLATION SHALL BE PERMANENTLY AND EFFECTIVELY GROUNDED TO GROUND RODS AND/OR STRUCTURAL STEEL IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE AND AASHTO CODE RQUIREMENTS. WHETHER OR NOT SUCH CONNECTIONS ARE SPECIFICALLY IDENTIFIED, MEASURED RESISTANCE TO GROUND TO BE 5 OHMS MAXIMUM.

15. ALL 600V POWER AND CONTROL CABLE SHALL BE TYPES RHH, RHW, XHHW-2 OR USE. THE CABLE SHALL RATED AT A MINIMUM OF 90°C DRY AND 75°C WET AND SHALL BE SUITABLE FOR INSTALLATION IN WET AND DRY LOCATIONS, AND SHALL BE RESISTANT TO OILS AND CHEMICALS, SHALL CONSIST OF STRANDED COPPER CONDUCTORS INSULATED WITH CHEMICALLY CROSS-LINKED POLYETHYLENE, XLPE.

16. THE CONTRACTOR SHALL PERFORM FULL CONTINUITY, INSULATION AND GROUNDING INTEGRITY TESTS UPON COMPLETION OF THE ELECTRICAL INSTALLATIONS. THE CONTRACTOR SHALL PERFORM FULL ACCEPTANCE TESTS OF ALL INDIVIDUAL NEW CCTV SYSTEM COMPONENTS, THE FULL SYSTEM'S INTEGRATION TO EXISTING IDOT CCTV MONITORING SYSTEM, AND ALL AUXILIARY EQUIPMENT. THE CONTRACTOR SHALL ALSO PERFORM FULL CONTINUITY TEST ON REMAINING SPARE FIBER OPTIC STRANDS IN EACH INSTALLED F.O. CABLE.

17. FOR ADDTIONAL INFORMATION REGARDING EXISTING ROADWAY, BRIDGE, AND OTHER INFRASTRUCTURE AND SYSTEMS, REFER TO BRIDGE'S ROADWAY AND VARIOUS ROOMS CONTRACT - WEST CONGRESS STREET BRIDGE OVER SOUTH BRANCH - CHICAGO RIVER. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING INSTALLATIONS, AND SHALL PREPARE CONSTRUCTION DOCUMENTATION BASED ON VERIFIED FIELD MEASUREMENTS AND INSTALLATIONS.

18. ALL POWER EQUIPMENT SHALL BE GROUNDED. COPPER GROUNDING TERMINATION DETAILS, AS INDICATED ON DRAWINGS AND SPECIFICATIONS.

19. SUBMIT DETAIL DRAWINGS OF ALL EQUIPMENT PRIOR TO FABRICATION.

20. ALL EQUIPMENT SHOULD BE ARRANGED TO PERMIT EASY ACCESS FOR OPERATION AND MAINTENANCE.

21. ALL SURFACES DAMAGED IN THE COURSE OF WORK SHALL BE RESTORED TO THE ORIGINAL CONDITION AT NO ADDITIONAL COSTS TO THE OWNER.

22. UPON REMOVAL OF ANY EQUIPMENT, REMOVE ALL SUPPORTS AND HANGERS ASSOCIATED WITH THE EQUIPMENT AND RESTORE THE SURFACE TO MATCH THE SURROUNDING AREAS.

23. REMOVAL OF HAZARDOUS MATERIALS SHALL FOLLOW PROCEDURES APPROVED BY IDOT AND OTHER LOCAL AUTHORITIES HAVING JURISDICTION.

24. ELECTRICAL EQUIPMENT SHALL NOT BE INSTALLED DIRECTLY OVER HEAT PRODUCING EQUIPMENT SUCH AS WALL/SPACE HEATERS AND TRANSFORMERS.

25. ALL SALVACABLE EQUIPMENT SHALL BE RETURNED TO IDOT AT NO ADDITIONAL COST.

10/21/2013

LICENSED PROFESSIONAL ENGINEER
JAMES W. GUINAN
062-053407
STATE OF ILLINOIS

James William Guinan
IL PE 062.053407
Parsons Brinckerhoff
Applicable to
drawing sheets 3 through 10
And 12 through 25

T:\16843A\CCTV\Files from NY\09-17-2013\16843A-CCTV-E01-06_NotesGen_DwgIndex.dgn
21-OCT-2013 15:43

PARSONS BRINCKERHOFF 230 West Monroe Street Suite 900 Chicago, IL 60606	USER NAME = pateld	DESIGNED - D. DRAKULICH	REVISED -	
	FILE NAME	DRAWN - E. MALUSEL	REVISED -	
	PLOT SCALE = NONE	CHECKED - S. STERN	REVISED -	
	PLOT DATE = 10/18/2013	DATE - 10/18/2013	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CCTV SYSTEM, I-90/94 TO CONGRESS PARKWAY
GENERAL ELECTRICAL NOTES

SCALE: AS SHOWN | SHEET NO. OF SHEETS | STA. 353+46.00 TO STA. 382+50.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2013-026-I	COOK	37	3
		CONTRACT NO. 60W49		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		