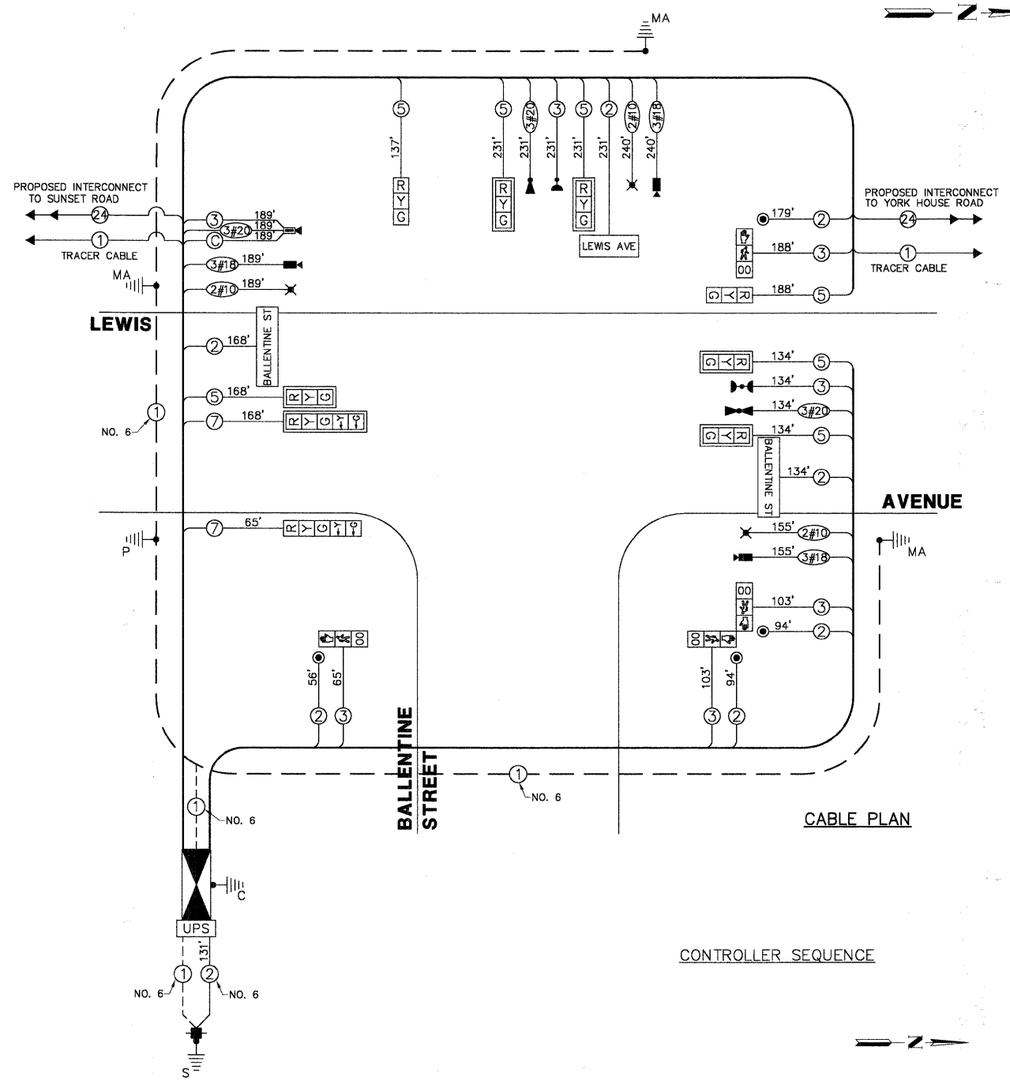
## SCHEDULE OF QUANTITIES

LEWIS AVENUE AT BALLENTINE STREET TRAFFIC SIGNAL MODERNIZATION

| NO. | QUANT. | UNIT | |
|---|---|---|---|
| 1. | 8 | CU.YD. | EARTH EXCAVATION |
| 2. | 25 | SQ.YD. | AGGREGATE BASE COURSE, TYPE B, 4" |
| 3. | 635 | SQ.FT. | PORTLAND CEMENT CONCRETE SIDEWALK, 5" |
| 4. | 68 | SQ.FT. | DETECTABLE WARNINGS |
| 5. | 80 | FOOT | COMBINATION CURB AND GUTTER REMOVAL |
| 6. | 425 | SQ.FT. | SIDEWALK REMOVAL |
| 7. | 2 | EACH | FRAMES AND LIDS TO BE ADJUSTED |
| 8. | 80 | FOOT | COMBINATION CONCRETE CURB AND GUTTER, TYPE B6.12 |
| 9. | 180 | FOOT | THERMOPLASTIC PAVEMENT MARKING - LINE 12" |
| 10. | 45 | FOOT | THERMOPLASTIC PAVEMENT MARKING - LINE 24" |
| 11. | 90 | SQ.FT. | PAVEMENT MARKING REMOVAL |
| 12. | 93 | FOOT | CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL |
| 13. | 26 | FOOT | CONDUIT IN TRENCH, 2-1/2" DIA., GALVANIZED STEEL |
| 14. | 83 | FOOT | CONDUIT IN TRENCH, 3-1/2" DIA., GALVANIZED STEEL |
| 15. | 10 | FOOT | CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL |
| 16. | 16 | FOOT | CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL |
| 17. | 124 | FOOT | CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL |
| 18. | 2 | EACH | HANDHOLE |
| 19. | 1 | EACH | DOUBLE HANDHOLE |
| 20. | 584 | FOOT | ELECTRIC CABLE IN CONDUIT, 600 (EPR-TYPE RHW) 2-1/C NO. 10 |
| 21. | 207 | FOOT | TRENCH AND BACKFILL FOR ELECTRICAL WORK |
| 22. | 3 | EACH | LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, PHOTO-CELL CONTROL 250 WATT |
| 23. | 1 | EACH | FULL-ACTUATED CONTROLLER AND TYPE IV CABINET (SPECIAL) |
| 24. | 1 | EACH | TRANSCEIVER - FIBER OPTIC |
| 25. | 734 | FOOT | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C |
| 26. | 1,013 | FOOT | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C |
| 27. | 1,223 | FOOT | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C |
| 28. | 233 | FOOT | ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C |
| 29. | 131 | FOOT | ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C |
| 30. | 2 | EACH | STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 24 FT (SPECIAL) |
| 31. | 1 | EACH | STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 36 FT (SPECIAL) |
| 32. | 4 | FOOT | CONCRETE FOUNDATION, TYPE A |
| 33. | 4 | FOOT | CONCRETE FOUNDATION, TYPE C |
| 34. | 45 | FOOT | CONCRETE FOUNDATION, TYPE E, 36-INCH DIAMETER |
| 35. | 5 | EACH | SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED |
| 36. | 2 | EACH | SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED |
| 37. | 1 | EACH | SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED |
| 38. | 1 | EACH | SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED |
| 39. | 2 | EACH | PEDESTRIAN COUNTDOWN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED |
| 40. | 1 | EACH | PEDESTRIAN COUNTDOWN SIGNAL HEAD, L.E.D., 2-FACE, BRACKET MOUNTED |
| 41. | 6 | EACH | TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINIUM |
| 42. | 2 | EACH | LIGHT DETECTOR |
| 43. | 1 | EACH | LIGHT DETECTOR AMPLIFIER |
| 44. | 4 | EACH | PEDESTRIAN PUSH-BUTTON |
| 45. | 1 | EACH | TEMPORARY TRAFFIC SIGNAL INSTALLATION |
| 46. | 1 | EACH | REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT |
| 47. | 6 | EACH | REMOVE EXISTING HANDHOLE |
| 48. | 6 | EACH | REMOVE EXISTING CONCRETE FOUNDATION |
| 49. | 1 | EACH | SERVICE INSTALLATION, POLE MOUNT |
| 50. | 405 | FOOT | ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C |
| 51. | 564 | FOOT | ELECTRIC CABLE IN CONDUIT, NO. 20 3C, TWISTED, GROUNDED |
| 52. | 189 | FOOT | ELECTRIC CABLE IN CONDUIT, COAXIAL |
| 53. | 584 | FOOT | ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 18, 3C |
| 54. | 1 | EACH | VIDEO DETECTION SYSTEM (COMPLETE INTERSECTION) |
| 55. | 3 | EACH | L.E.D. INTERNALLY ILLUMINATED STREET NAME SIGN |
| 56. | 1 | EACH | TRAFFIC SIGNAL POST, 16 FT (SPECIAL) |
| 57. | 1 | EACH | REMOTE-CONTROLLED VIDEO SYSTEM |
| 58. | 1 | EACH | UNINTERRUPTIBLE POWER SUPPLY |
| 59. | 1 | EACH | VIDEO ENCODER |

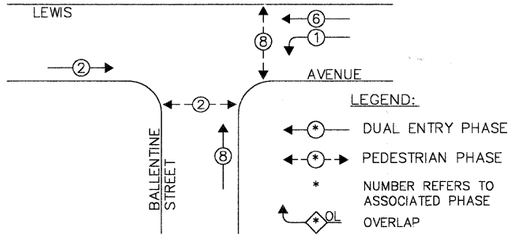



CABLE PLAN

## CABLE PLAN LEGEND

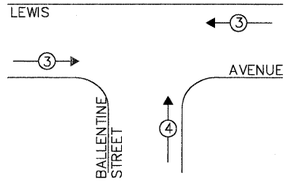
| EXISTING | PROPOSED | |
|---|---|---|
| | | 12" TRAFFIC SIGNAL SECTION |
| | | 12" PEDESTRIAN SIGNAL SECTION WITH COUNTDOWN TIMER |
| | | CONTROLLER CABINET |
| | | SERVICE INSTALLATION |
| | | TELEPHONE INSTALLATION |
| | | VEHICLE DETECTOR, INDUCTION LOOP |
| | | EMERGENCY VEHICLE LIGHT DETECTOR |
| | | CONFIRMATION BEACON |
| | | PUSHBUTTON DETECTOR |
| | | DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| | | GROUND CABLE IN CONDUIT, NO.6 SOLID COPPER (GREEN) |
| | | FIBER OPTIC CABLE IN CONDUIT, 24 SINGLEMODE |
| | | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD |
| | | RAILROAD CONTROL CABINET |
| | | ILLUMINATED SIGN "NO LEFT TURN" |
| | | ILLUMINATED SIGN "NO RIGHT TURN" |
| | | GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H) OR CONTROLER (C) |
| | | GROUND ROD AT POST (P) OR MAST ARM POLE (MA) |
| | | GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| | | BELDEN 1694A RG-6/4 COAXIAL CABLE |
| | | ISDN LINE |
| | | LUMINAIRE |
| | | VIDEO DETECTION CAMERA |
| | | PTZ CAMERA |
| | | VIDEO COMMUNICATIONS CABINET |
| | 1st AV | L.E.D. STREET NAME SIGN |
| | UPS | UNINTERRUPTIBLE POWER SUPPLY |

CONTROLLER SEQUENCE




PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE




| PROPOSED EMERGENCY VEHICLE PREEMPTORS | | |
|---|---|---|
| EMERGENCY VEHICLE PREEMPTOR | 3 | 4 |
| MOVEMENT | → | ↑ |

| L.C.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS | | | | | TOTAL WATTAGE |
|---|---|---|---|---|---|
| TYPE | NO LAMPS | WATTAGE INCAND. | WATTAGE L.E.D. | % OPERATION | |
| SIGNAL (RED) | 9 | 135 | 10 | 0.50 | 45.0 |
| SIGNAL (YELLOW) | 9 | 135 | 19 | 0.10 | 17.1 |
| SIGNAL (GREEN) | 9 | 135 | 11 | 0.40 | 39.6 |
| ARROW | 4 | 135 | 9 | 0.10 | 3.6 |
| PED.SIGNAL | 4 | 90 | 9 | 1.00 | 36.0 |
| CONTROLLER | 1 | - | 100 | 1.00 | 100.0 |
| LUMINAIRE | 3 | - | 250 | 0.50 | 375.0 |
| L.E.D. ST. NAME SIGN | 3 | - | 64 | 0.50 | 96.0 |
| VIDEO SYSTEM | 1 | - | 150 | 1.00 | 150.0 |
| BATTERY BACKUP | 1 | - | 25 | 1.00 | 25.0 |
| | | | TOTAL = | | 887.3 |

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE NTCIP" COMPLIANT.

ENERGY COSTS - BILLED TO: CITY OF WAUKEGAN
(ADDRESS) 100 N. M.L.K. JR. AVENUE
(ADDRESS) WAUKEGAN, IL
ENERGY SUPPLY - CONTACT: NEW BUSINESS
PHONE: (886) 639-3552
COMPANY: COM-ED, LIBERTYVILLE

| FOUNDATION (DEPTH) | (FT.) | CABLE SLACK | (FT.) | VERTICAL | (FT.) |
|---|---|---|---|---|---|
| TYPE A - POST | 4 | HANDHOLE | 6.5 | ALL FOUNDATIONS | 3.5 |
| TYPE D - CONTROLLER | 4 | DOUBLE HANDHOLE | 13 | MAST ARM (L) POLE | 20'+L-2= |
| TYPE E - M.ARM POLE | 15 | SIGNAL POST | 2 | BRACKET MOUNTED | 13 |
| | | CONTROLLER CAB. | 1 | PED. PUSHBUTTON | 4 |
| | | FIBER OPTIC | 13 | ELECTRIC SERVICE | 13.5 |
| | | ELECTRIC SERVICE | 1 | SERVICE TO GROUND | 13.5 |
| | | GROUND CABLE | 1 | POST MOUNTED | 6 |

GHA #4135.800

| FILE NAME = 4135.315-TR1.dwg | USER NAME = GHA | DESIGNED - JRD | REVISED - 9/15/09 (LCDOT) |
|---|---|---|---|
| | | DRAWN - ZCW | REVISED - 9/25/09 (IDOT) |
| | PLOT SCALE = 1" = .08' | CHECKED - DPB | REVISED - 10/19/09 (LCDOT) |
| | PLOT DATE = 10/19/2009 | DATE - 10/19/09 | REVISED - |

Lake County
Division of Transportation

**CABLE PLAN, PHASE DESIGNATION DIAGRAM AND SCHEDULE OF QUANTITIES**
**LEWIS AVENUE AT BALLENTINE STREET**

SCALE: NONE | SHEET NO. 52 OF 86 SHEETS | STA. | TO STA.

| F.A.P. RTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 2730 | 08-00259-00-TL | LAKE | 86 | 52 |
| | | CONTRACT #: | 63344 | |
| | ILLINOIS FED. AID PROJECT | | | |